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Prevalence of Mental Health Stigma Among Practicing PAs in Regard to Personal Experience and Patient Exposure

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PREVALENCE OF MENTAL HEALTH STIGMA AMONG PRACTICING PAS IN REGARD TO PERSONAL EXPERIENCE AND PATIENT EXPOSURE

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ABSTRACT

Stigmatizing attitudes can be destructive to both the emotional and physical wellbeing of individuals living with mental illness. In fact, individuals with a mental illness are more likely to be seen as responsible for their illness and more likely to be falsely accused of a violent crime (Rüsch, Angermeyer, & Corrigan, 2005). Current research on mental health stigma in healthcare has involved a variety of occupations, but published research has yet to examine stigma held by physician assistants (PAs). This research study attempted to answer the following question: What effect, if any, does personal experience with a family member, friend, or romantic partner, and exposure to patients with a mental illness have on the level of mental health stigma held by a practicing PA? To do so, an electronic survey was distributed to members of the Michigan Academy of Physician Assistants via email. Included in the survey were questions pertaining to demographics, personal experience, and exposure to individuals with mental illness. Stigma was measured by utilizing components of two established survey tools, the Community Attitudes to Mental Illness (CAMI) and Attitudes to Mental Illness Questionnaires (AMIQ). Multiple regression statistical analysis was used to evaluate the data. Results revealed subtle correlations, but ultimately no statistically significant relationships existed between personal experience and exposure to individuals with mental illness, and the level of mental health stigma held by practicing PAs.

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Chapter 1: Introduction

Introduction

The following is a research study on the prevalence of mental health stigma among practicing physician assistants (PAs). This study also focused on factors that influence the development of stigmatizing attitudes within this population. These factors include personal experience with mental illness and exposure to those with a mental illness. Chapter 1 will discuss pertinent background on the stigma, will highlight the problem statement, and will outline the purpose of the study as well as the significance it holds for the healthcare community. The section will conclude with the presentation of the research question and a discussion on the limitations and biases that exist within the study.

Background

In 2015, the Substance Abuse and Mental Health Services Administration (SAMHSA) conducted a National Survey on Drug Use and Health (NSDUH). The NSDUH estimated that in the United States, 43.4 million American adults and 3 million American adolescents had a mental illness (Bose et al., 2016). The Diagnostic and Statistical Manual of Mental Disorders (DSM), a handbook that helps to define and categorize mental illness, defines a mental illness as a syndrome that causes significant disruptions in an individual's ability to regulate their emotions, behaviors, and cognition (American Psychiatric Association, 2013).

The survey conducted by SAMHSA demonstrates that a large number of Americans are living with a mental illness. Despite the high prevalence of these disorders, individuals with mental illness often experience stigma. Stigma is a multi-faceted concept that assigns negative attributes to individuals or groups of people based on false assumptions (Goffman, 2009). Stigma can be very destructive, especially when it is directed at those with a mental illness. For example,

an individual with a mental illness is more likely to be seen as responsible for causing their illness, are less likely to be hired for a job over a person without a mental illness and are more likely to be falsely accused of a violent crime (Rüsch, Angermeyer, & Corrigan, 2005). Stigmatizing attitudes can lead to the deterioration of an individual's well-being, by decreasing their sense of self-worth and trust for others (Dockery et al., 2015).

Statement of Problem

Stigma can exist in healthcare, and when present among healthcare providers it can negatively impact patient outcomes. One research study found that when a patient feels stigmatized by their healthcare provider, they are less likely to return for follow up visits, more likely to abuse substances, and more likely to attempt suicide (Dockery et al., 2015). Healthcare stigma can be coined *iatrogenic stigma*, or stigma that originates from healthcare providers and negatively impacts patients (Merriam-Webster Dictionary, 2017a). Current research on iatrogenic stigma has represented a limited number of healthcare workers, including physicians, nurses, and social workers (Jorm, Korten, Jacomb, Christensen, & Hendersen, 1991). Research has neglected to focus on the level of stigma that exists among practicing physician assistants (PAs). Yet, stigmatizing attitudes that are held by PAs can be just as destructive to a patient's health as those held by other healthcare professionals. Physician assistants are considered advanced practice providers. They are trained to work alongside physicians in a number of specialties, have direct contact with patients, and like physicians, are responsible for a patient's wellbeing and treatment (American Academy of Physician Assistants [AAPA], 2017c). Taking into consideration the destructive nature of iatrogenic stigma, further research is needed to evaluate the prevalence of stigmatizing attitudes across all healthcare professionals, including PAs.

Significance of Study

Patients with a mental illness who experience some form of stigma during their medical care are less likely to seek out and participate in mental health care in the future (Corrigan, Druss & Perlick, 2014). In 2011, only 59.6% of individuals with a mental illness, such as anxiety, depression, schizophrenia, and bipolar disorder reported receiving treatment because of stigma (Corrigan et al., 2014). Ideally, healthcare professionals should strive to avoid stigmatizing patients; however, avoiding the use of stigma is not always practiced. Negative outlooks on patients with a mental illness may cause providers to focus on disease states more than the patient. When this occurs, providers are less focused on patient recovery (Corrigan et al., 2014). Focusing on the mental illness and overlooking other pertinent details may lead healthcare providers to neglect patient referrals for necessary and beneficial consultations and follow-up appointments (Corrigan et al., 2014).

When patients are stigmatized within the healthcare system, they can internalize the discrimination and develop self-stigma. Self-stigma results in the patient's belief that recovery is unattainable, that they are undeserving of care, and that they are dangerous or responsible for their illness (Corrigan et al., 2014). Any stigma the patient experiences in the healthcare system is further reinforced by self-stigma, which can result in patients denying their need for help and their refusal to seek out care (Corrigan et al., 2014). Psychological scientist Patrick W. Corrigan explains, "The prejudice and discrimination of mental illness is as disabling as the illness itself. It undermines people attaining their personal goals and dissuades them from pursuing effective treatments" (Corrigan, 2014, para. 3).

Stigma is often perpetuated by others outside of the healthcare community. Public health, educational facilities, and the media must also make efforts to facilitate supportive, non-

discriminatory access and treatment for mental health patients (Owen, 2012). The aim of this study was to evaluate the stigma that practicing PAs hold toward patients with mental illness. With little research surrounding stigma among PAs, this study will contribute to a greater understanding of the improvements that must be made within the healthcare system.

Purpose

The purpose of this study was to identify the prevalence of mental health stigma among practicing PAs, specifically in the state of Michigan. This study aimed to describe several factors which may influence iatrogenic stigma, including personal experience with mental illness and exposure to those with a mental illness.

At this point in time, very little knowledge is available on the prevalence of mental health stigma among practicing PAs in regard to personal experience and exposure to patients with a mental illness. As the PA profession continues to experience growth, and as the number of individuals suffering from mental illness remains high, the need for acknowledgement of mental health stigma among this specific healthcare provider exists. Iatrogenic stigma influences treatment outcomes for those living with a mental illness, and therefore, the prevalence of this form of stigma among PAs and the factors contributing to it, should be further examined and conveyed to other healthcare professionals (Dockery et al., 2005).

Research Question

The following research question was addressed in this study: What effect, if any, does personal experience of having a family member, friend, or romantic partner with mental illness and exposure to patients with mental illnesses have on the level of mental health stigma held by a PA?

Definition of Terms

The following terms were used in this study:

Iatrogenic: induced inadvertently by a physician or surgeon or by a medical treatment or diagnostic procedures (Merriam-Webster Dictionary, 2017a, para. 1).

Iatrogenic Stigma: stigma held by healthcare workers

Mental Illness: a syndrome characterized by a clinically significant disturbance in an individual's cognition, emotional regulation, or behavior that reflects a dysfunction in the psychological, biological or developmental processes underlying mental functioning (American Psychiatric Association, 2013, p. 20).

Self-Stigma: when a mentally ill individual applies discriminating attitudes towards themselves (Lau et al., 2017).

Stigma: a multifaceted concept that involves the stereotyping and discrimination of individuals who do not fit into perceived social norms (Dockery et al., 2015).

Conclusion

In conclusion, identifying the prevalence of mental health stigma among practicing PAs is important, as stigma negatively impacts patients with mental illnesses in a variety of ways. (Docker et al., 2005). In the following section, Chapter 2 will consist of an introduction of terms and ideas, will describe the specific impacts of iatrogenic stigma on those suffering from mental illness, and will present a literature review of the research that has been conducted on this topic up to this point in time. Finally, the purpose of this research will be expanded upon and the PA profession will be introduced.

Chapter 2: Literature Review

Introduction

The following section will include definitions of stigma, factors which contribute to stigma, and a historical review of mental illness. Chapter 2 will also summarize existing research related to the prevalence of mental health stigma among healthcare workers, as well as the impact stigma has on patient health outcomes. Finally, the significance and purpose of this research will be expanded upon.

Stigma: A Multifaceted Concept

The Merriam-Webster dictionary defines stigma as, "a mark of shame or discredit" (Merriam-Webster Dictionary, 2017b, para. 1). The term stigma was first coined by the Greeks to describe cuts or burns that were made on a human body in order to proclaim something bad about an individual's moral status. These symbols served to warn society that such "blemished" people must be avoided at all costs (Goffman, 2009). Today, stigma is a multifaceted concept that involves the stereotyping and discrimination of individuals who do not fit into perceived social norms (Dockery et al., 2015).

In the book *Stigma: Notes on the management of spoiled identity*, Erving Goffman elaborates on the defining characteristics of stigma. Goffman defines stigma as an attribute that is a product of, "social discrepancy between virtual and actual social identity" (Goffman, 2009, p. 11). He describes how human beings unconsciously categorize people into social identity groups. These groups are composed of an individual's defining characteristics, including their personality traits, occupation, sexual preferences and religious views (Goffman, 2009). Social identities allow human beings to form normative expectations of human behavior; yet, these expectations can be harmful when they are not based on fact (Goffman, 2009). Individuals may

be assigned a *virtual social identity*, or one that does not reflect attributes that an individual actually possesses (Goffman, 2009). Stigma occurs when there is a discrepancy between an individual's true character, defined as their *actual social identity*, and the character attributes that are assigned to them by others, or their *virtual social identity* (Goffman, 2009). Stigma can take many forms and is destructive in nature, as it has the ability to turn individual differences into something to be feared and discriminated against. Stigma can be especially dangerous when it is found within the healthcare system.

Iatrogenic Stigma

The term *iatrogenic stigma* can be used to describe stigma that exists among healthcare professionals. The word iatrogenic is defined as being "induced inadvertently by a physician or surgeon or by a medical treatment or diagnostic procedures" (Merriam-Webster Dictionary, 2017a, para. 1). Iatrogenic stigma is a broad term that can be used to describe any form of healthcare intervention that negatively impacts the health of a patient. Stigma among healthcare professionals can be a large barrier for treatment, especially among patients with a mental illness. A systematic review conducted in 2015 found that iatrogenic stigma was the, "fourth most frequently reported barrier to mental healthcare" (Dockery et al., 2015, p. 613).

According to the *Diagnostic and Statistical Manual of Mental Disorders (DSM)*, a mental illness is defined as a, "syndrome characterized by a clinically significant disturbance in an individual's cognition, emotional regulation, or behavior that reflects a dysfunction in the psychological, biological or developmental processes underlying mental functioning." (American Psychiatric Association, 2013, p. 20). There are a number of mental illnesses, among which include schizophrenia, depression, anorexia, and alcoholism, just to name a few. Iatrogenic stigma is a barrier to mental healthcare because it can lead to patients feeling devalued by their

providers (Dockery et al., 2015). When a patient is stigmatized by a healthcare professional, they are less likely to return for follow up visits (Dockery et al., 2015). This in turn can lead to the deterioration of an individual's health and an increase in emergency service visits (Dockery et al., 2015). Research has also shown that treatment delays for affective disorders, such as bipolar disorder, are associated with worsened outcomes and an increase in the risk of substance misuse and attempts of suicide (Dockery et al., 2015). Iatrogenic stigma can perpetuate the development of *self-stigma*, which occurs when an individual suffering from mental illness begins to accept the stigma placed upon them, leading to the application of the discriminating attitudes towards themselves (Lau et al., 2017). The concept of stigma has existed within society for centuries, and today, research continues to demonstrate how destructive stigmatizing attitudes can be to the patient-provider relationship.

Historical Review of Mental Illness

Misconceptions surrounding mental illness date back well before the twentieth century. In the 1950s and 1960s, the public failed to recognize the extent to which the lives of those diagnosed with a mental illness were impacted by stigma (Gaebel, Rossler & Sartorius, 2017). During that time, mental illness was considered chronic and untreatable, and furthermore, stigma was not addressed as an issue (Gaebel et al., 2017). The first large-scale study on mental health stigmatization was conducted by sociologists Elaine and John Cumming in 1952.

The Cumming study encompassed a six-month intervention to reduce stigma that ostracized people with mental illness from society (Gaebel et al, 2017). The intervention relied on small group interactions and personal communication, taking advantage of events such as films, radio shows, newspaper releases, and group discussions (Gaebel et al., 2017). It focused on the stereotyping of patients with mental illness in a time when asylums were widely utilized

and diagnoses were frightening (Gaebel et al., 2017). Surprisingly, the word *stigma* was only referenced twice in the entire manuscript (Gaebel et al., 2017). The Cumming study was one of the first movements to reduce mental health stigma, and ultimately their efforts to change public attitudes towards mental illness were not as effective as they had hoped (Gaebel et al., 2017). Ultimately there was no change in attitude or difference between experimental and control groups when the pre and post intervention assessments were analyzed (Gaebel et al., 2017). Secondly, several participants chose to withdraw from participating, asking to not be shown any more films about mental illness (Gaebel et al., 2017). This disappointing conclusion of the study suggests how poorly mental health stigma was defined and understood nationwide during that time, as well as how difficult it would be to educate people about this issue.

The Media

Despite how prevalent mental illness is, stigma toward individuals with mental illness is still present. Mass media largely contributes to the problem, due to its widespread exposure (Canadian Mental Health Association [CMHA], 2009). News and entertainment industries have the ability to misinform the general public about the reality of mental illness through negative and often inaccurate portrayals. This can lead to misunderstandings of mental illness, as well as negative implications, such as conflicts, delayed treatment, and confusion. (CMHA, 2009). A study conducted by MIND, a U.K. mental health charity, described the harmful impact that negative media coverage can have on those suffering from a mental illness. A survey was distributed to 515 individuals with mental illness, and over half of the respondents felt that their health was negatively influenced by media portrayals of mental illness (CMHA, 2009). Participants reported increased feelings of isolation, depression, and anxiety. They also admitted to receiving increased belligerent behavior from neighbors and peers (CMHA, 2009).

Opportunities exist for the media to accurately depict the complexity of a mental illness, correct false ideas, and avoid relating those with a mental illness to violence; however, this is many times not the case (Wahl, 1992). Public news stories and films often depict those with a mental illness in unfavorable ways, and this only adds to the already existing negative attitudes held toward mental illness. Ultimately, these incidents have the potential to overpower efforts that have already been made to reduce mental health stigma (Wahl, 1992).

In 2012, Patricia Owen, an affiliate of St. Mary's Department of Psychology in San Antonio, Texas, conducted a study that analyzed the content of 41 films released between 1990 and 2010 for their portrayal of mental illness. Only 20% of the reviewed films provided an accurate depiction of mental illness, and many films failed to convey how disruptive these illnesses can be to an individual's personal life (Owen, 2012). Mass media is quick to portray the unpredictability and violence of those with a mental illness, and by doing so, the media largely ignores the underlying challenges these individuals face. Misrepresentation of mental illness in the media can further confirm stereotypes that are already held by the general public (Owen, 2012).

Violent public outbreaks and events involving individuals with a suspected mental illness often receive extensive news coverage, serving as a catalyst for the association of those with a serious mental illness to violence (McGinty, Webster, Jarlenski, & Barry, 2014). Researchers predict that violent portrayals of individuals with a mental illness directly contribute to negative public attitudes, worsening any stigma that is present before a violent public outbreak (McGinty et al., 2014). One study, published in the the *American Journal of Public Health*, compiled and analyzed content from a random sample of news media between 1997 and 2012. From that sample, only 16% of news stories clarified that most individuals with a mental illness are not

actually violent (McGinty et al., 2014). In order to improve public understanding of the complexity of mental illness, and to avoid attributing violent acts to mental illness alone, accurate media portrayal of individuals with mental illness is necessary.

Iatrogenic-Induced Stigma

Healthcare providers can also contribute to the problem of mental health stigma. Studies reveal that healthcare providers display at least equal, and sometimes even stronger negative beliefs and attitudes toward individuals with mental illness, when compared to the general public (Gaebel et al., 2017). Healthcare providers are exposed to the same stereotypes as the general public before experiencing any formal education; therefore, stigma held prior to formal medical training has the potential of being reinforced over many years. Attitudes and opinions tend to be difficult to change, especially when reinforced, and it is seen that providers relate similar stereotypes to their patients with mental illness (Gaebel et al., 2017).

In addition to the negative attitudes held towards those with a mental illness, healthcare providers may lack stigma awareness, inadvertently practice therapeutic pessimism, or possess inadequate skills and training for the appropriate treatment of patients with mental illness (Knaak, Mantler & Szeto, 2017). Therapeutic pessimism occurs when providers hold overly doubtful or negative views about the reality of recovery for patients, leading to a decrease in likelihood that help and treatment will be sought (Knaak et al., 2017). When providers contribute to mental health stigma, the barrier to seeking care is greater, eventually leading to worsened patient outcomes and experiences. Individuals with a mental illness commonly report feeling devalued, dismissed, and dehumanized after having contact with healthcare providers. (Knaak et al., 2017). The themes that surround these poor patient experiences include exclusion from

treatment decisions, threats of coercive treatment, insufficient information regarding diagnosis or treatment options, and being treated in a paternalistic or demeaning manner (Knaak et al., 2017).

Patient Impact

When present in healthcare, stigma can detrimentally affect the outcome of patients. Mental health professionals often see patients with a mental health diagnosis as uncooperative, hostile, and manipulative, and although stereotypes vary across diagnoses, there are several that are repeatedly applied to most patients. They include: unpredictability, incompetence, and incurability (Gaebel et al., 2017).

The effects of mental health stigma can significantly diminish a patient's quality of life. In some cases, the mere diagnosis of having a mental illness reduces the chance of receiving adequate attention and care within the healthcare system (Gaebel et al., 2017). Patients with mental illness often have reduced access to primary care, negative diabetes outcomes, increased cardiovascular diseases, improper attention in emergency departments, and higher levels of infectious complications after surgery (Gaebel et al., 2017). Consequently, people with mental illness display increased mortality rates, and evidence shows that the life expectancy of patients with a mental illness is 10-15 years lower than the general public (Gaebel et al., 2017).

A study conducted by Colton and Manderscheid in 2006 observed and compared mortality rates of mental health patients with those of the general public by utilizing standardized measures. Between 1997 and 2000, data was collected from eight U.S. states including Arizona, Missouri, Oklahoma, Rhode Island, Texas, Utah, Vermont, and Virginia. (Colton & Manderscheid, 2006). Results showed that the causes of death among mental health patients were similar to the most common causes of death among the general public (Colton & Manderscheid, 2006). Major causes included heart disease, cancer, cerebrovascular, respiratory,

and lung diseases (Colton & Manderscheid, 2006). Ideally, mental health patients would receive identical treatment for these diseases and display equivalent mortality rates; however, mental health patients across all eight states displayed higher age-adjusted death rates and standardized mortality ratios than the general public (Colton & Manderscheid, 2006). In addition, those diagnosed with a major mental illness showed an increased number of potential years of life lost than those without a mental illness (Colton & Manderscheid, 2006).

The causes of higher mortality rates are largely attributed to preventable conditions such as smoking, obesity, hypercholesterolemia, diabetes mellitus and hypertension (Parks, Svendsen, Singer, Foti & Mauer 2006). The reason for earlier death rates in the mental health community, however, is explained by a different cause. Situations specific to those diagnosed with a serious mental illness, such as higher rates of homelessness, victimization, unemployment, poverty, incarceration, and social isolation put individuals with mental illness at a higher risk of morbidity and mortality (Parks et al., 2006). All of these factors contribute to poor access to healthcare and can lead to negative outcomes. Limited access to healthcare can be explained by numerous factors including the fact that patients may feel unmotivated, fearful, or socially unstable (Parks et al., 2006). In addition, providers may hold stigmatizing beliefs and feel confronted with competing demands (Parks et al., 2006). Competing demands may include situations when healthcare providers attempt to prioritize patient complaints during a limited amount of time spent with patients. These situations lead to the potential for providers to ignore the mental illness component and either refer the patient or confront the issue at a follow up visit. The healthcare system itself is fragmented as a result of mental health stigma and the dynamic relationship between varying stages or severities of the mental illness at hand (Parks et al., 2006). Research suggests that lack of emotional support and social networks, low socioeconomic class,

and substance abuse all result in poorer outcomes for mental health patients (Colton & Manderscheid, 2006).

In terms of quality care, patients with a mental illness may not receive equal treatment for a variety of reasons. The most common poor-quality measures, as explained by Parks et al., include underuse and misuse (2006). The idea behind these poor-quality measures is that individuals diagnosed with a mental illness display a higher use of somatic emergency services, fewer routine preventative services, reduced diabetes care, and are at an increased risk for infection during medical hospitalization (Parks et al., 2006). Somatic symptoms are characterized by an intense focus on physical symptoms that cause the patient to experience distress or interfere with daily functioning (Dimsdale, 2017). Something many healthcare professionals overlook are the side effects of psychiatric medications, which can lead to increased risk factors for patients with mental illness. In their study, Parks, Svendsen, Singer, Foti & Mauer stated, "antipsychotic medications have become highly associated with weight gain, diabetes, dyslipidemia, insulin resistance and metabolic syndrome" (2006, p. 6). This suggests that when a patient finds the courage to seek medical assistance, their risk factors for chronic illnesses increase with their medication usage, and in addition, they acquire a label that is associated with mental health stigma (Parks et al., 2006).

Furthermore, systemic healthcare issues worsen access to healthcare for many individuals. Issues such as lack of reimbursement for health education, poor public support and family services all diminish a patient's willingness to seek care (Parks et al., 2006). Research reveals that patients may experience discrimination, which in turn leads to the deterioration of the patient-provider relationship (Parks et al., 2006). The discomfort healthcare providers experience surrounding a patient's situation, or the decreased expectations of patients as partners

in care, are two components that help to describe why patients with a serious mental illness experience discrimination (Parks et al., 2006). Stigma held by healthcare providers concerning mental health patients may also be explained by a form of provider bias.

Provider Bias

Provider bias can come in many forms. Healthcare providers may misattribute physical signs and symptoms to concurrent mental disorders, which can lead to the underdiagnosis and mistreatment of physical conditions (Gaebel et al., 2017). Alternatively, providers can utilize therapeutic privilege unnecessarily when faced with a patient with mental illness. Therapeutic privilege defines situations where healthcare providers withhold information from a patient, because sharing the information would pose a threat to the patient's overall wellbeing. The decision providers make in order to determine if a behavior warrants treatment, hospitalization, or therapy is crucial to the outcome of the patient. Negative opinions held by healthcare professionals regarding mental illness may also be attributed to how seldom a provider witnesses successful management of the illness, characterized as therapeutic pessimism (Gaebel et al., 2017).

Treating mental illness is a sensitive area and patients may feel stigmatized and discriminated against regardless of any efforts made by the healthcare professional. A semi-structured interview study performed in 2017 by Brondani, Alan, and Donnelly attempted to describe patient perceptions of mental health stigma. From the perspective of participants battling various mental illnesses, participants believed that stigma was due to the lack of understanding by healthcare professionals regarding their life conditions (Brondani, Alan, & Donnelly, 2017). As explained previously, patients are typically hesitant to seek treatment and therefore suffer the consequences of decreased access to healthcare.

Because healthcare providers hold such important roles in patient recovery and treatment, their attitudes and beliefs toward those with a mental illness factor largely into the prognosis and outlook of patients. As mentioned, iatrogenic stigma is known to exist, and therefore, a large amount of research has been devoted to the implementation of healthcare de-stigmatization programs. However, few studies have actually assessed the specific attitudes held by healthcare professionals towards patients with mental illness (Calicchia, 1981). In addition, the research that has been completed on interventional programs strongly suggest that iatrogenic stigma is not closely related to the knowledge level held by the healthcare professional (Nordt, Rossler, & Lauber, 2006). For those studies that have assessed the beliefs and underlying factors that may play a role in mental health stigma, familiarity/personal experience is seen to be one of the only consistent contributing factors affecting attitudes towards those having a mental illness (Calicchia, 1981). As will be seen in the review of research, however, specific results are somewhat divided (Schulze, 2006).

Review of Research

One prominent New York study aimed to compare stigmatizing attitudes between healthcare professionals and non-healthcare professionals (Calicchia, 1981). Through this research, John Calicchia revealed that although non-healthcare professionals were the most stigmatizing between the two, both groups held negative beliefs. Specifically, healthcare professionals considered individuals with a mental illness to be undesirable, worthless, and unpredictable (Calicchia, 1981). Calicchia's study sheds some conflicting messages regarding healthcare professionals. After completing a questionnaire, it was shown that professionals believe that people with mental illness are battling noncontagious diseases and should be accepted into society; however, their own attitudes demonstrate rejection by classifying

individuals with mental illness as undesirable and dangerous (Calicchia, 1981). Results from a German study (Nordt et al., 2006) aiming to specifically compare stigmatizing attitudes and knowledge levels of healthcare professionals supported the results of the New York study (Nordt et al., 2006). Carlos Nordt and his fellow researchers found that even though healthcare professionals have obtained higher knowledge levels of mental illness than the general public, this neither leads to increased acceptance and willingness to interact with individuals with mental illness nor reduced stereotyping, as compared to the general public (Nordt et al., 2006).

An additional study conducted in Australia revealed similar yet slightly different findings. In 1991, *The Australian & New Zealand Journal of Psychiatry* published a study that reported increased negative views held by healthcare providers towards those with a mental illness, as compared to the general public (Jorm et al., 1991). In this study, questionnaires involving patient scenarios, were distributed to psychiatrists, general healthcare practitioners, and psychologists. This data regarding mental health stigma was then analyzed based on several concepts: patient prognosis, intervention efficacy, likelihood of discrimination, and long-term functional ability. Healthcare professionals held *more* negative long-term views than the general public regarding those with mental illness. In addition, it was also seen that healthcare providers believe that discrimination against these individuals is more likely (Jorm et al., 1991). It is often assumed that because healthcare professionals have more experience in working with individuals with mental illness, they would hold fewer negative beliefs; however, again this is not the case. One possible explanation given by A. F. Jorm (1991) and his fellow researchers surrounding the increased negative beliefs with increased personal experience and knowledge has to do with the realistic assessment of long-term outcomes. Healthcare professionals have greater knowledge as to realistic outcomes for patients with mental illness, and in addition, they have had more contact

with severely afflicted patients during times of recurrent problems when they have been at their lowest points of treatment (Jorm et al., 1991).

Although the data collected throughout the studies mentioned above reveal similar results, there has not been a large focus on this topic in general, and this indicates a need for additional research. According to a past study published in *The Journal of Community Psychology,* in 2010 only 19 research studies had been published on the attitudes and beliefs of healthcare professionals toward mental illness, even though much more data exists on ways to prevent the stigma (Wahl & Aroesty-Cohen, 2010). The article further mentions that this lack of research on stigmatizing beliefs may be due to assumptions that are made toward providers of mental illness. Assumptions that mental healthcare providers hold positive attitudes toward individuals with mental illness due to their personal and professional decision to dedicate themselves to this specific patient population exist; however, as explained by past studies, this is not necessarily true (Wahl & Aroesty-Cohen, 2010).

Knowledge Gap

The small amount of research and inconsistent ideas surrounding iatrogenic stigma and mental health represent a significantly large knowledge gap and a need for additional focus. Furthermore, the majority of current research is represented by a limited focus-population of healthcare professionals, including: physicians, nurses, social workers, psychologists, and students (Jorm et al., 1991). Today, many more healthcare providers interact closely with individuals suffering from mental illness, yet their attitudes toward this population have been widely ignored. Physician assistants (PAs) are relatively new to the healthcare field, just recently celebrating their 50th anniversary of the profession (AAPA, 2017b). Although PAs interact with

patients very similarly to physicians, they have not been utilized in current research, and this further stresses the importance of our research purpose.

As explained by the American Academy of Physician Assistants, PAs are certified and state-licensed medical practitioners who are able to treat patients and diagnose illness under the supervision of a physician (2017c). Physician assistants are trained in general medicine but are able to practice in virtually an unlimited number of specialties, such as psychiatry, cardiology, surgery, family practice, internal medicine, oncology, and critical care, just to name a few (AAPA, 2017c). The first PA class was created in 1965, in order to help alleviate the shortage of physicians that the United States faced at the time. Still today, PAs reduce shortages of providers and allow for increased access to healthcare nationwide (AAPA, 2017a). With this said, PAs have obtained vital and primary roles as healthcare providers for many individuals, and this includes those suffering from mental illness.

In order to provide for a more inclusive body of knowledge regarding the iatrogenic stigmatization of mental illness, it is important to extend research focus to all providers caring for individuals with mental illness, including PAs. According to the National Commission on Certification of Physician Assistants (NCCPA) and the 2016 Statistical Profile of Certified PAs, since 2010, the PA profession has grown by 44%. At the end of 2016, there were 115,547 certified and practicing PAs working in all 50 states across the U.S. This number is only expected to increase, as the Bureau of Labor Statistics estimates that the PA profession will grow 30% by the year 2024 (Jeffery, Morton-Rias, Mauldin, & Cohn, 2017). With this said, in order to obtain accurate and consistent data on mental health stigma by healthcare providers, PAs must be included in the research.

Conclusion

Mental illness significantly impacts a large part of the American population. This year, one in five Americans will suffer from a mental illness, translating to a total of more than 40 million individuals across the nation (Mental Health America, 2017). Although healthcare reform has led to a general increase in access to insurance and treatment, still 56% of the American adult population suffering from mental illness will not receive treatment due to reasons which may be exacerbated by iatrogenic stigma (Mental Health America, 2017). Not only are individuals with mental illness less likely to seek treatment, but when treatment is sought, mortality rates are often higher than in the general population (Parks, Svendsen, Singer, Foti & Mauer, 2006). Physician assistants contribute largely to the care provided to individuals with mental illness. With continued growth of this profession estimated, attention to the problem of iatrogenic stigma toward mental health is necessary if alleviation of negative outcomes for these patients is to occur.

This study was conducted in order to identify the prevalence of mental health stigma that exists among practicing members of the Michigan Academy of Physician Assistants (MAPA). Our intent was to document several contributing factors that may affect the attitudes and beliefs held by these PAs including: personal experience and past exposure. Through MAPA, a survey tool was distributed to assess the attitudes and values held by these practicing PAs. The following section will further describe the methodological approach taken in this research study.

Chapter 3: Methodology

Introduction

Multiple regression statistical analysis was used in this research study in order to identify relationships and develop predictions between mental health stigma and the factors of personal experience and exposure to individuals with a diagnosed mental illness. The study aimed to identify the prevalence of mental health stigma among practicing PAs, specifically members of the Michigan Academy of Physician Assistants. Our research aimed to answer this study's research question: what effect, if any, does personal experience of having a family member, friend, or romantic partner with mental illness and exposure to patients with mental illnesses have on the level of mental health stigma held by a PA? The following chapter contains information regarding the study population, study design, survey tools, data collection, methodological procedures, as well as potential limitations and delimitations of the study design.

Study Population

The inclusion criteria for participants of this research study consisted of practicing physician assistants (PAs) who are current members of Michigan Academy of Physician Assistants (MAPA). MAPA is a member-based academy extended to PAs who are certified in the state of Michigan. MAPA provides valuable healthcare information, as well as a community of support to its members, with the intent of improving the PA profession (Michigan Academy of Physician Assistants [MAPA], 2018b). In order to practice as a certified PA, the individual must have obtained a degree in physician assistant studies. The degrees of Bachelor of Science in Physician Assistant Studies, Master of Physician Assistant Studies, and Physician Assistant Doctorate were all accepted. Members of MAPA represented the target population of this study and consequently, the majority of participants were likely represented by PAs practicing in Michigan. It was not, however, a MAPA requirement to reside in Michigan in order to become a

member. Therefore, it is a possibility that some participants represented practicing PAs from alternative states. PAs working in any medical specialty were included, as feedback from all areas of medicine was valued in this research.

Several exclusionary aspects also existed. For the purpose of this research, students and alternative healthcare professionals were not allowed to participate in this study. PA students were excluded, as our intended purpose was to evaluate the level of mental health stigma held by practicing PAs. In addition, alternative healthcare professionals, such as physicians, nurses and social workers, who have largely been the focus of prior research on mental health stigma, were excluded. Several studies have evaluated the level of mental health stigma held by these healthcare professionals, but research has neglected to focus on stigma held by PAs, which is of equal importance due to their high level of patient contact (Jorm et al., 1991).

According to the executive director of Michigan Academy of Physician Assistants, there are currently 1,500 MAPA members, 300 of which are students (T. Gormas, personal communication, July 24, 2018). As mentioned, students were excluded from this research and therefore, the estimated response rate for this study was based off of the MAPA count of 1,200 certified PA members. We aimed to obtain a target response rate of 10%, correlating to 120 survey responses. A minimum of 40-50 survey responses were needed for effective statistical analysis.

Study Design

This study represented quantitative, survey-based research aimed at evaluating mental health stigma among practicing PAs. Qualtrics online survey software was used to collect participant attitudes towards mental illness, and the survey consisted of demographic questions relating to gender, area and length of clinical practice, personal experience, and exposure to

those with a mental illness. Following the demographic information, specific questions were asked to assess participant attitudes towards individuals with a mental illness. A Likert scale was used to score the participant responses. Results were interpreted numerically, and correlations were made by utilizing statistical analysis to determine what effect, if any, personal experience and exposure to those with mental illness have on mental health stigma.

Experimental Procedures

In February of 2018, an email was sent to Michigan Academy of Physician Assistants (MAPA) to introduce the research project and ourselves as researchers. The executive director of MAPA was reached and a brief overview of the purpose of this research was explained. In addition, research participant approval was inquired. MAPA required that all prospective research be approved by the Michigan Academy of Physician Assistants Executive Committee before participant permission was granted (Appendix A). The research and survey requirements policy were outlined and a list of materials to be submitted before research participant approval is to be granted was described. The research requirements policy included: a description and discussion of the problem outlined by the prospective research, the project's research hypothesis, survey methodology including instrumentation, prospective project timeline, literature review, and Institutional Review Board (IRB) approval (Appendix B).

A document including the above stated requirements was combined and sent to MAPA for initial survey review by the MAPA Research Review Committee. The MAPA Research Review Committee ensured that all of the research proposal requirements were submitted and that all guidelines were followed before making a final recommendation to MAPA's Executive Committee. The Research Review Committee also reviewed research methodology and applicability to MAPA members, as well as to the physician assistant profession. After further

consideration and review by the MAPA Executive Committee, approval to use the survey instrument was given. Following approval, permission was granted, and the research study was able to proceed. The survey was distributed to an expert panel of several practicing PAs prior to its official distribution to MAPA members. This expert panel review served to confirm the validity and reliability of the condensed survey.

In September of 2018, a 22-question survey was opened for a two-week period and distributed via email to members of Michigan Academy of Physician Assistants (MAPA). Email information was obtained through MAPA and all members were contacted. A link to this research study's survey were included in the email to recipients. Prior to opening the survey link, participants were presented with an informed consent (Appendix C) and their permission was obtained through their decision to continue with the survey. Once the link was selected, recipients were directed to the Qualtrics survey website. Responses, as well as failure to complete the survey, were recorded by Qualtrics. One week after the initial invitation to participate in the survey was distributed, a reminder email was sent to recipients who had not yet completed the survey. This reminder encouraged participation prior to the survey's closure. Following the two-week period of open survey, the link to Qualtrics expired and recipients were no longer be able to respond. By the end of September 2018, survey responses were collected and analyzed.

Institutional Review Board

Approval from the Michigan Academy of Physician Assistant Executive Board to participate in research was obtained prior to approval by Bethel University's Institutional Review Board (IRB). A research project proposal defense was presented to the research chair and

committee member of this project. After Bethel University IRB approval, this research study was able to move forward with survey distribution and collection of data.

Data Collection

Qualtrics survey software was utilized for the survey distribution and data collection of this research project. Qualtrics is an online tool that allows individuals to create and test surveys, all while collecting and storing data to be used in data analysis. Qualtrics aids in analysis by allowing researchers to create visualized reports of their collected data using charts, tables, and graphs (Qualtrics, 2018). All survey responses from participants were contained on Qualtrics using a password-locked account, and no personal identifying information were utilized or reported in the analysis of participant responses.

The survey used in this research (Appendix D) consisted of seven demographic questions, along with fifteen questions regarding mental health stigma adapted from the *Community Attitudes to Mental Illness* (CAMI) survey and the *Attitudes to Mental Illness Questionnaire* (AMIQ). CAMI is a reputable survey tool that allows for free, online access to the public for research purposes. Permission to utilize the CAMI survey was granted through agreement to the terms and conditions listed on the CAMI Scale website (Appendix E). AMIQ is an additional survey tool that has been utilized in past mental health stigma research by psychologist Dr. Jason Luty. Permission to utilize his adapted version of the AMIQ was granted through email correspondence with Dr. Luty himself (Appendix F). The full length AMIQ was used, along with a shortened version of the CAMI survey that measured participants' level of authoritarianism views on mental illness. Demographic questions in the survey included inquiries about area and length of clinical practice, personal experience with mental illness, exposure to mental illness, and gender.

The full-length CAMI scale includes questions that measure four domains in regard to mental illness, including authoritarianism, benevolence, social restrictiveness, and community mental health ideology. The scale was deemed internally and externally valid and reliable when compared to a similar scale utilized in Toronto, that measured the public's perception of mental hospitals (Taylor & Dear, 1981). For the purpose of this study, ten questions regarding authoritarianism were utilized. These questions measured survey participants' attitudes towards individuals with mental illness in terms of their irresponsibility and inability to make their own decisions. A shortened version of the CAMI survey was used in order to keep the survey brief, with the hope of increasing survey participation. The questions taken from the CAMI survey were scored using a 5-point Likert scale ranging from "strongly agree" to "strongly disagree." The survey was divided in half, with five of the questions displaying pro-authoritarianism statements, and the other half displaying anti-authoritarianism statements. A "strongly disagree" response to an anti-authoritarianism statement was assigned five points, and a "strongly agree" response to a similar statement was assigned one point. Pro-authoritarianism questions were reverse scored; therefore, responses that reflected agreement with authoritarianism views on mental illness were assigned more points. In total, a higher overall score was indicative of a higher degree of authoritarian views regarding individuals with mental illness.

The AMIQ is an additional questionnaire that can be used to measure an individual's view on mental illness. The AMIQ was validated and deemed reliable in a study conducted in 2006 (Luty, Fekadu, Umoh & Gallagher). According to the study, the AMIQ is a short instrument that displays, "good stability, test-retest reliability, alternative test reliability, face construct and criterion validity" (Luty, Fekadu, Umoh & Gallagher, 2006, para. 2). The AMIQ involves a fictional vignette discussing a highly stigmatized individual with mental illness.

Participants are asked to read the vignette and respond to questions regarding their perception of the individual being portrayed. For this study, a fictional vignette about a man with schizophrenia was utilized. The AMIQ was scored using a point system, with a response of "strongly agree" or "very likely" assigned a +2 score, and with a response of "strongly disagree" or "very unlikely" assigned a -2 score. Questions one, four, and five in the survey were reverse scored. A participant also had the option of answering "neutral" or "I don't know", both of which were assigned a zero point. The scores ranged from -10 to +10, with a higher score indicating more positive views towards the individual with mental illness portrayed in the vignette. Because the survey consisted of both the *Attitudes to Mental Illness Questionnaire* (AMIQ) and an adapted version of the *Community Attitudes to Mental Illness* (CAMI) survey tool, an expert panel review was conducted. The survey was distributed to a limited panel of practicing physician assistants in attempt to determine whether or not the condensed survey accurately measured mental health stigma. Validity and reliability was confirmed through this process and appropriate changes were made following the results of the expert panel review.

Statistical Analysis

The Qualtrics data collected from the distributed survey was converted to numerical values using a Likert scale and represented visually onto graphs, charts, and tables. Real Statistics Microsoft Excel software was utilized for the statistical analysis of this study's collected survey data. Multiple regression was selected as the statistical method of choice for this study. Multiple regression allows researchers to study relationships between the independent and dependent variables of a study and to develop formulas to predict outcomes based on the independent variables (Osborne, 2000). We ran separate regressions for CAMI and AMIQ against the independent variables of patient exposure and personal experience. The outcomes and

impact on the dependent variable of mental health stigma were compared between the two survey tools. Therefore, this study aimed to identify relationships between mental health stigma among members of the Michigan Academy of Physician Assistants and factors relating to personal experience with a family member, friend, or romantic partner with mental illness and exposure to patients with mental illnesses.

Conclusion

In conclusion, this study was conducted in order to determine the prevalence of mental health stigma among practicing physician assistants (PAs). This research aimed to both quantify the level of mental health stigma among practicing PAs, as well as highlight any factors, such as personal experience with mental illness and exposure to individuals with mental illness, that may influence and potentially predict the level of stigma present. The survey was distributed via email to members of the Michigan Academy of Physician Assistants (MAPA). It consisted of 22 questions, including 7 demographic questions and 15 questions adapted from the *Attitudes to Mental Illness Questionnaire* (AMIQ) and *Community Attitudes to Mental Illness* (CAMI) survey. Responses from participants completed the survey were recorded and stored by Qualtrics, an online survey tool, into a password-protected account. Responses to the AMIQ and CAMI questions, were measured based on a 5-point Likert scale and analyzed numerically using a multiple regression method.

In the following section, Chapter 4 will display the results of the survey and discuss the statistical analysis performed on the collected data. The significance of the survey results will be explained and any correlations between mental health stigma and the independent variables of personal experience with mental illness and mental illness exposure with patients will be highlighted. If significant, the correlations will be used to develop formulas predicting the level

of mental health stigma that may be held by PAs based on the independent factors studied in this research. The results and significance they may hold for healthcare providers, specifically physician assistants, will be discussed and interpreted at length in Chapters 4 and 5.

Chapter 4: Data Analysis and Results

Introduction

The aim of this chapter is to display and explain the survey results of the current study. In the first part of the survey, demographic information was collected. Relationships between the physician assistant (PA) participants and demographic factors of medical specialty, years of experience practicing as a PA, and gender were collected. Next, interpretation of the independent variables of this study, including personal experience of a family member or friend with a mental illness and exposure to patients with mental illnesses were examined. Finally, questions relating to the CAMI and AMIQ survey tools were explored. Real Statistics Microsoft Excel was used to perform analytical operations of the Qualtrics data. This statistical information will be expanded upon in Chapter 5.

Techniques of Data Analysis

As mentioned in Chapter 3, surveys were distributed to practicing Michigan Academy of Physician Assistant (MAPA) members using Qualtrics, an online survey software system. Survey access was delivered to MAPA through mass email distribution and participants had open access to the survey for a time period of two weeks. One reminder email was delivered at the one-week point by MAPA, in order to increase survey participation. Informed consent was also included in the MAPA email and obtained through the participants' completion of the survey.

A total of 89 survey responses were collected from Qualtrics; however, incomplete surveys were excluded from data analysis. Therefore, the data used in survey analysis included 83 survey responses, which corresponded with an approximate 7% response rate from MAPA. The included data was analyzed through multiple regression using Real Statistics Microsoft

Excel software. Select survey questions were also entered into Microsoft Excel for the creation of figures and tables, which are visualized below.

Demographics

The first five questions of the Qualtrics survey were utilized to evaluate the participant population. Demographic questions inquired about participant gender, length of clinical practice, and current area of medical practice. This information aided the upcoming data by providing an overall image of the participant population of this research project. Any correlations and trends will be expanded upon in Chapter 5.

As previously stated, 83 survey responses were analyzed in this study. Demographic analysis of these responses began with evaluation of participant gender. In Figure 1, the display includes 68 participants who identified as “female”, 14 as “male”, and one as “other”. This classification equates to nearly 82% of the survey population identifying with the female gender.

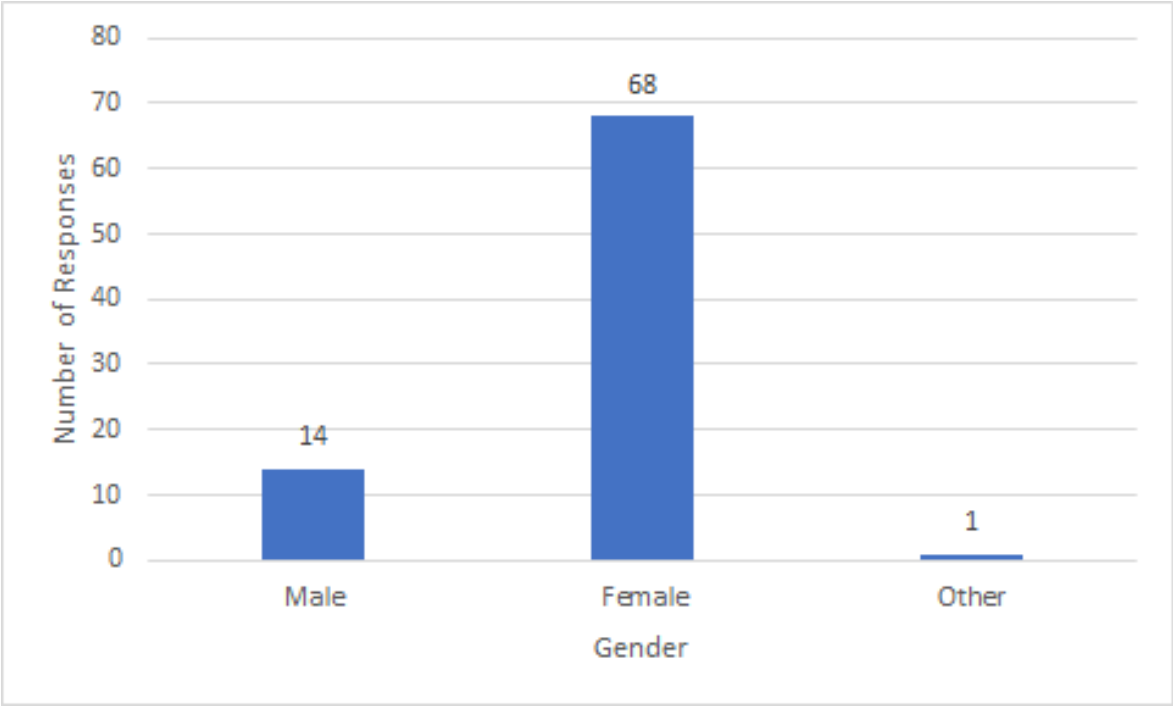

Figure 1. Gender identification among the survey participants.

The next demographic explored was length of clinical practice as a physician assistant (PA). This information can be found in Figure 2. The average number of years practiced among survey participants was 11.5, with a minimum of one year, and a maximum of 35 years of clinical practice as a PA. The most common length of PA clinical practice was two years. Over half (52%) of survey participants reported practicing for ten years or less.

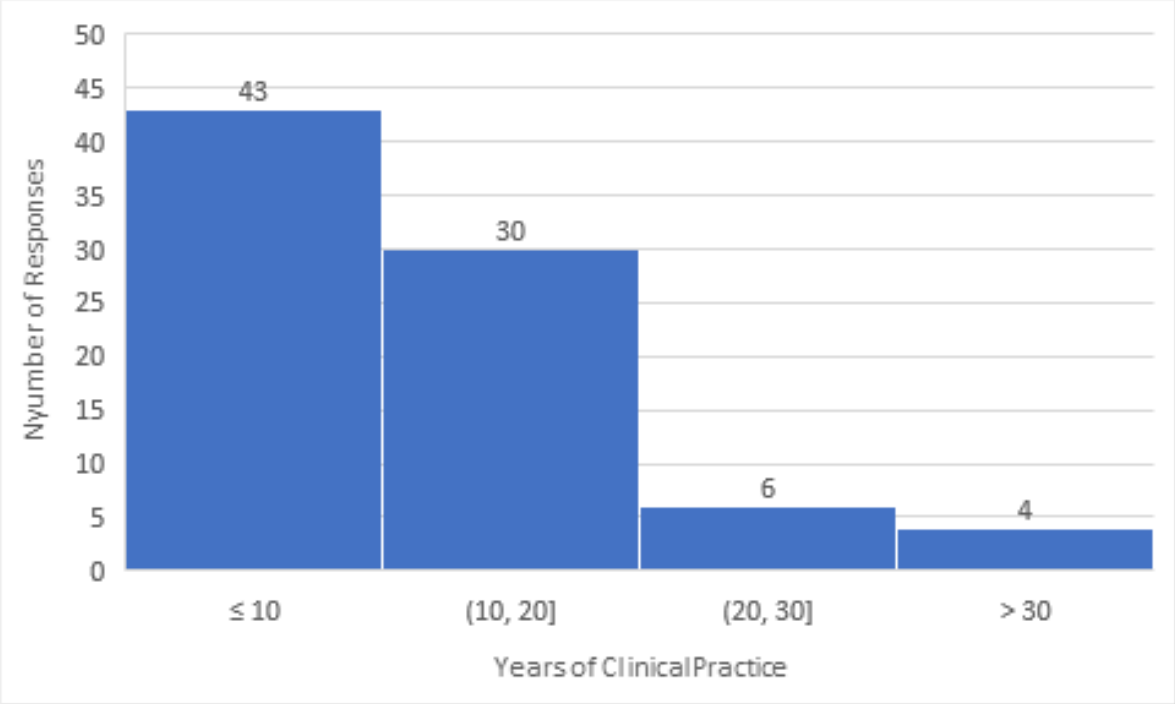

Figure 2. Participant length of clinical practice as a physician assistant.

The final demographic question of this survey asked participants to report their current area of clinical practice as a physician assistant (PA). This demographic varied greatly among the survey participants. A variable response was to be expected, since PAs practice in a wide variety of medical specialties. Thirty survey participants (36%) reported working in primary care, and only one participant reported working in psychiatry. Over half (63%) of the participants selected "other specialty" and were additionally asked to identify their specific area of clinical practice. These participants specified working in areas of medicine such as emergency medicine,

urgent care, surgery specialties, cardiology, dermatology, and internal medicine to name a few. This variation is demonstrated in Figure 3.

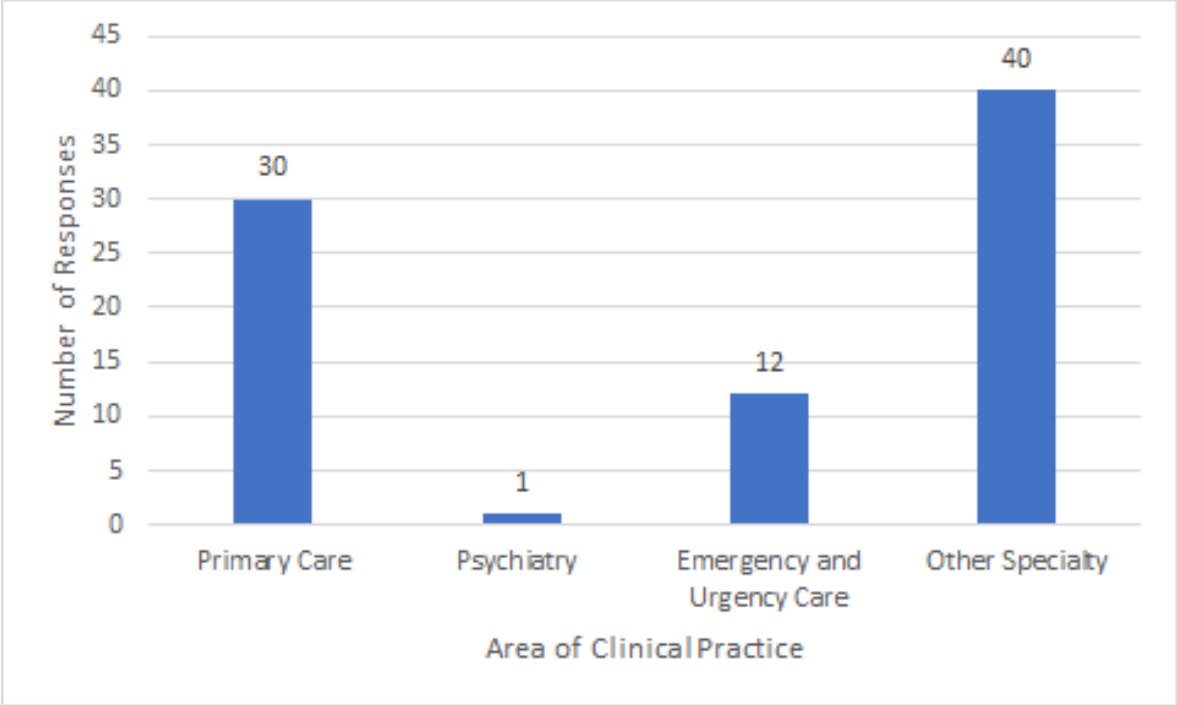

Figure 3. Participant area of clinical practice.

Overview of Data Analysis

As outlined in the research question, the independent variables of personal experience and exposure to individuals with mental illnesses were additionally examined among the participating physician assistants (PAs). These variables were measured based on survey participants having family members with a diagnosed mental illness, having had a close friend with a diagnosed mental illness, having ever been in a romantic relationship with someone with a diagnosed mental illness, and having had exposure to patients within their clinical practice with a diagnosed mental illness. Data for the 83 survey participants was collected and interpreted based on these factors. The collected information was further used to analyze correlations between the independent variables and the mental health stigma held among the survey participants, as demonstrated by the CAMI and AMIQ survey results.

The independent variables of personal experience and exposure to individuals with mental illness were examined in Figure 4, which displays the number of survey participants who reported a family member with diagnosed mental illness. Out of the 83 survey participants, 56 participants stated "yes" and 27 of the participants stated "no". In other words, 67% of survey participants have been exposed to family members with diagnosed mental illnesses and 33% have not. By asking the participants specifically whether or not they have had family members with a *diagnosed* mental illness, we aimed to exclude family members who may be living with an undiagnosed mental illness or situations in which participants merely believed that a family member may have a mental illness. This concept was also applied to the remaining survey questions relating to the independent variables.

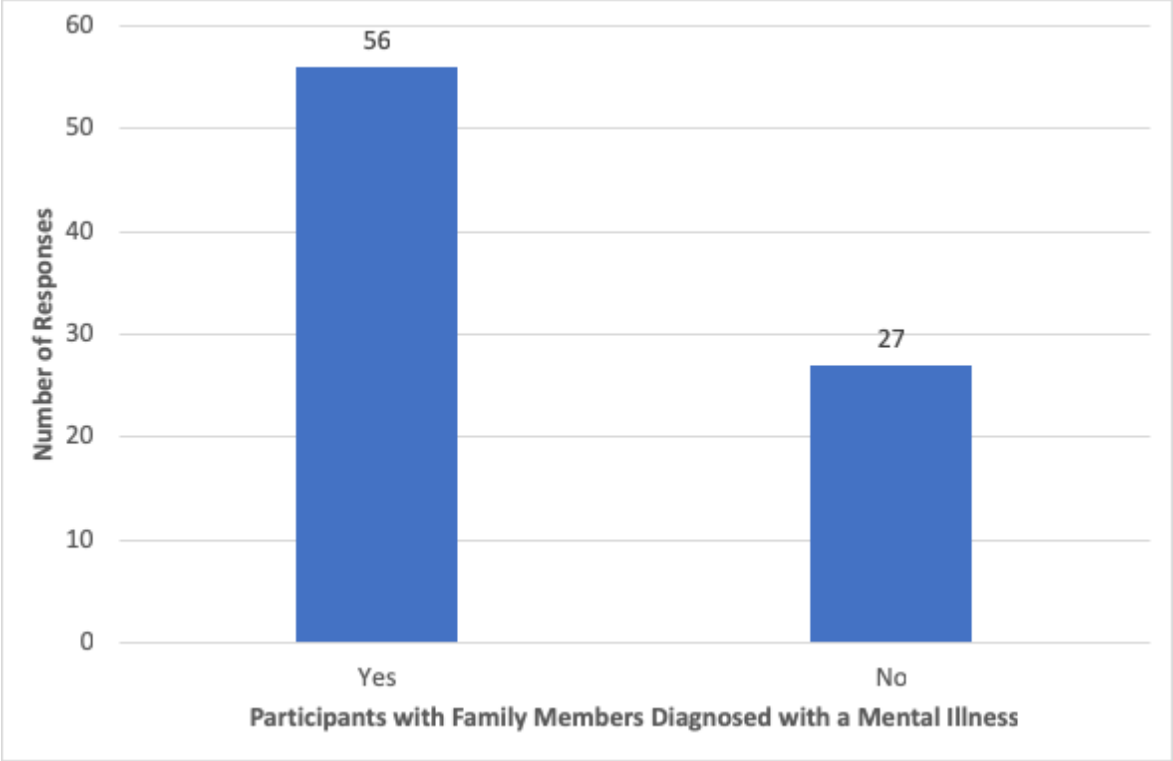

Figure 4. Number of participants having family members with a diagnosed mental illness.

Personal experience and exposure were also examined by looking at how many survey participants have ever been in a romantic relationship with someone with a mental illness.

Results are displayed in Figure 5. According to the survey, only 20 out of 83 participants answered “yes” and 63 out of 83 participants answered “no”. This equates to only 24% of survey participants having been in a romantic relationship with someone diagnosed with a mental illness and 76% of survey participants who have not. The findings related to this specific question were vastly different from those collected through the alternative two questions measuring personal experience and exposure, which were related to family members and close friends.

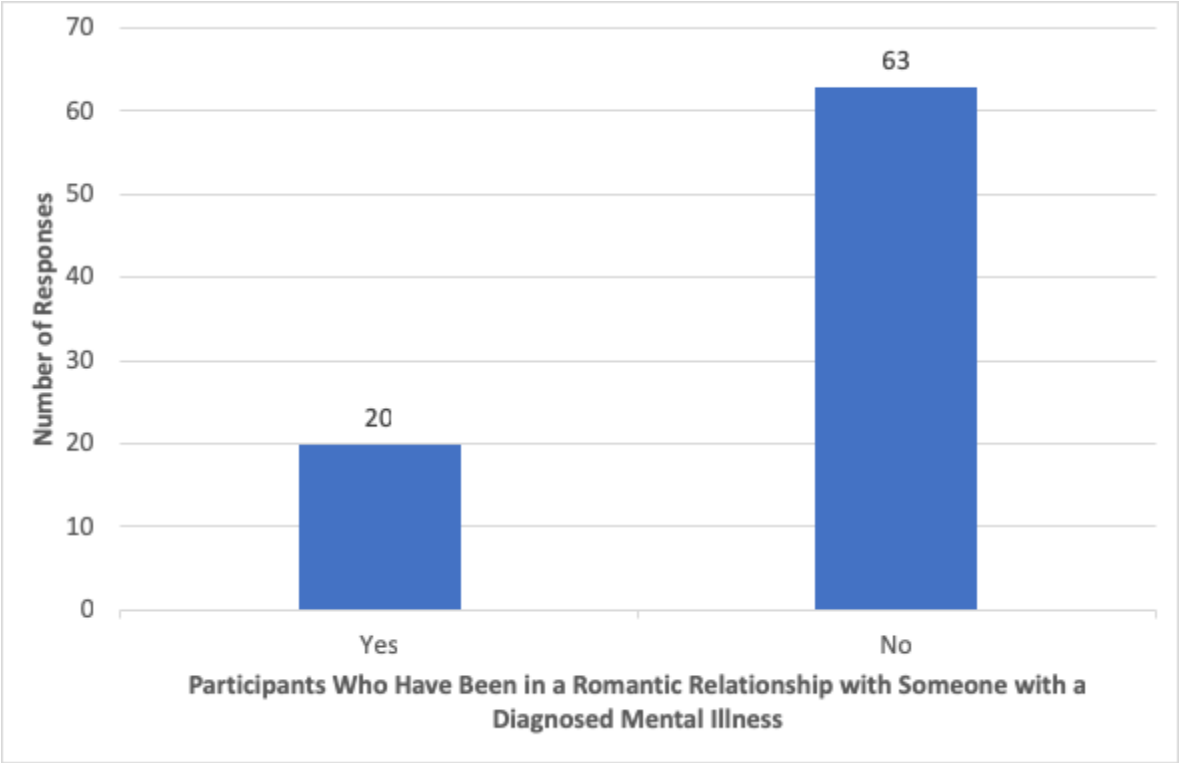

Figure 5. Number of participants who have been in a romantic relationship with someone with a diagnosed mental illness.

Exposure and personal experience were similarly examined by determining how many survey participants have ever had a close friend with a diagnosed mental illness. The data represented in Figure 6 identically matched the number of survey participants who previously reported having ever had a family member with a diagnosed mental illness. Out of the 83 survey participants, 56 participants responded “yes”, and 27 participants responded “no”. This collected

data displays that 67% of survey participants have had a close friend with a diagnosed mental illness and 33% of survey participants have not.

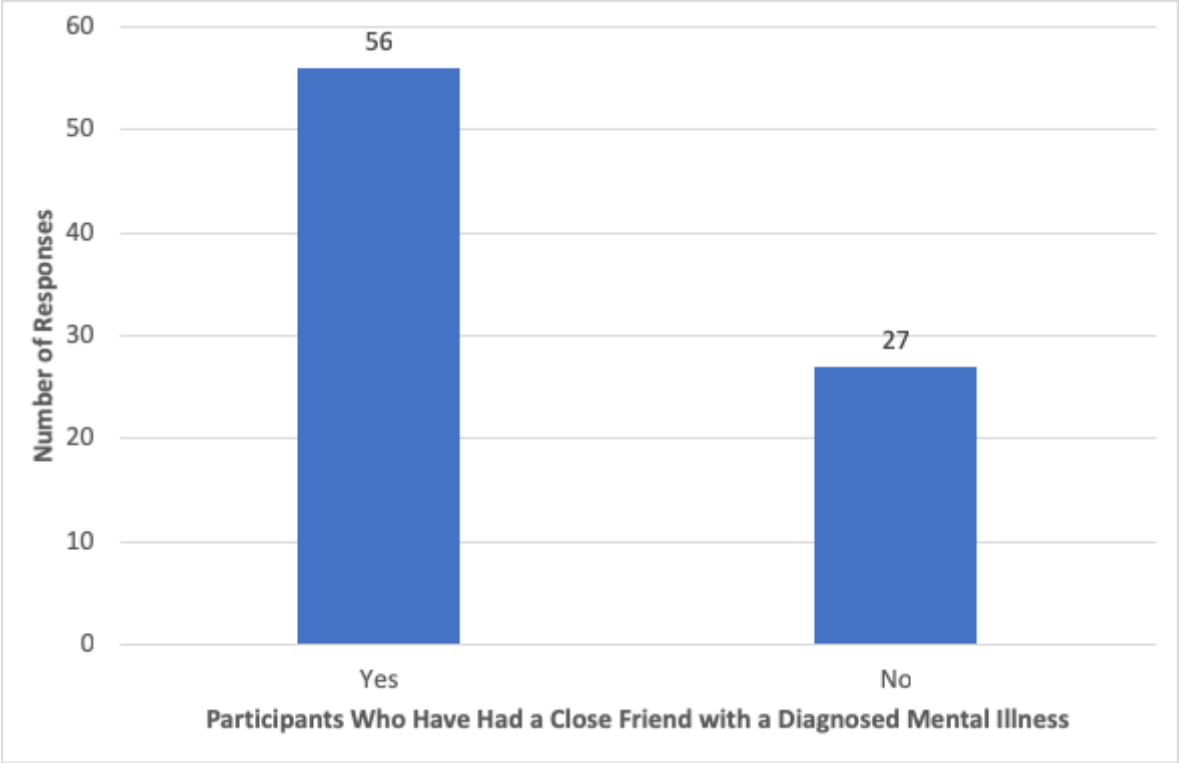

Figure 6. Number of participants who have had a close friend with a diagnosed mental illness.

The final question examining the independent variables of personal experience and exposure to individuals with mental illness asked participants to identify their exposure to patients with a diagnosed mental illness within their clinical practice. Participants were asked to report how many patients with a diagnosed mental illness they see within a week. The collected data is displayed in Figure 7. According to the survey, the participants are exposed to an average of 15 patients per week with a diagnosed mental illness. However, this average may be slightly inflated due to a single outlier of one participant reportedly seeing 120 mentally ill patients during a given week. A more fitting maximum, excluding the outlier, is 50 patients. Overall,

61% of survey participants (51 out of 83) stated that they were exposed to ten or less patients per week with a diagnosed mental illness. The mode for this data set was equal to ten patients.

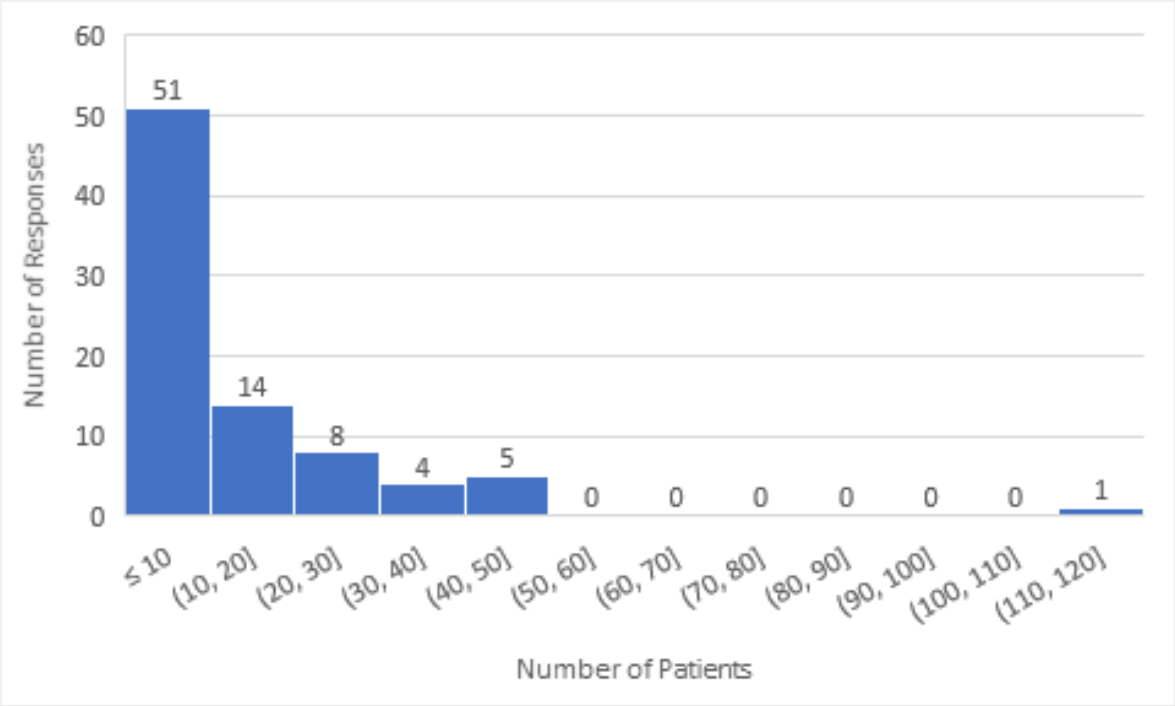

Figure 7. Number of patients seen by participants per week with a diagnosed mental illness.

Analysis of Correlation Coefficients

Several notable findings were uncovered relating to the independent variables described above and mental health stigma, as measured by the Attitudes to Mental Illness Questionnaire (AMIQ). Specific AMIQ results will be discussed later in this chapter; however, correlation coefficients for the independent variable dataset are summarized below in Table 1. The correlation coefficients reflecting positive numerical values revealed that increased personal experience having family members or close friends with a diagnosed mental illness, and increased exposure to mentally ill patients in clinical practice corresponded with higher levels of mental health stigma held by the survey participant. In contrast, the correlation coefficient relating to romantic partners was discovered to have a negative numerical value. This

corresponded with the finding that survey participants held lower levels of mental health stigma if they had ever been in a romantic relationship with an individual having a diagnosed mental illness. Although the meanings behind the correlation coefficients were explored, it can be seen later in this chapter that once multiple regression was run on the dataset, it was found that no statistically significant correlations relating to the factors of personal experience or patient exposure existed within this research study.

Table 1

Correlations between Independent Variables and Mental Health Stigma

Correlations				
	How many patients with mental illness do you see each week?	Do you have a family member with a diagnosed mental illness?	Have you ever been in a romantic relationship with someone with a diagnosed mental illness?	Have you ever had a close friend with a diagnosed mental illness?
Pearson Correlation	.060	.114	-.130	.133

Community Attitudes to Mental Illness Questionnaire

The next set of survey questions focused on the free survey tools that were utilized in this research project. This section of the survey asked participants to respond with their level of agreement, or disagreement, regarding a number of authoritarian statements about individuals with a mental illness. A large majority of the survey responses to the ten authoritarian statements displayed anti-authoritarian opinions. At least 65%, or 54 individuals out of the total 83 survey participants, displayed anti-authoritarian views toward individuals with a mental illness for eight out of the ten CAMI statements. These statements can be seen in Table 2 and include #1-3, 5-7, and 9-10. In contrast, only one of the statements evoked a pro-authoritarian-weighted response. The majority of survey participants (42%) in statement #8 displayed pro-authoritarian opinions.

Statement #4 reflected neutral viewpoints, as 44% of survey participants selected the "neither agree nor disagree" option.

Table 2

CAMI Responses

#	Question	Strongly Disagree		Disagree		Neither		Agree		Strongly Agree	
1	As soon as the person shows signs of mental illness he should be hospitalized.	40%	33	43%	36	16%	13	0%	0	1%	1
2	Mental illness is an illness like any other.	4%	3	12%	10	14%	12	40%	33	30%	25
3	There is something about the mentally ill that makes it easy to tell them from normal people.	30%	25	54%	45	14%	12	0%	0	1%	1
4	Less emphasis should be placed on protecting the public from the mentally ill.	7%	6	14%	12	43%	36	30%	25	5%	4
5	Mental patients need the same kind of control and discipline as a young child.	14%	12	51%	42	29%	24	6%	5	0%	0
6	The mentally ill should not be treated as outcasts of society.	5%	4	1%	1	1%	1	42%	36	51%	42
7	The best way to handle the mentally ill is to keep them behind locked doors.	72%	59	22%	18	4%	3	1%	1	1%	1
8	Mental hospitals are outdated means of treating the mentally ill.	7%	6	36%	30	34%	28	17%	14	6%	5
9	One of the main causes of mental illness is a lack of self-discipline and will power.	59%	49	33%	27	5%	4	1%	1	2%	2
10	Virtually anyone can become mentally ill.	0%	0	2%	2	13%	11	47%	39	37%	31

The responses to the ten authoritarian CAMI statements were then scored using a Likert scale and analyzed using multiple regression. A summary of the data is displayed in Table 3. Pro-authoritarian responses were given a higher value of points and anti-authoritarian responses were given a lower value. Point values ranged from one to five. For the purposes of this research project, we focused on the R^2 and Significant F Change variables represented in the model summary of the CAMI multiple regression analysis. R^2 demonstrated the percentage of variance of the dependent variable that could be explained by the independent variables. From the data

reported by the survey participants and collected through Qualtrics, it is shown that only 1.9% of variance of the dependent variable of mental health stigma could be explained by the independent variables listed earlier in this chapter. Furthermore, the Significant F Change variable displayed in Table 3 represented the p-value. The p-value for the CAMI dataset was 0.830 and greater than 0.05. This data was therefore not statistically significant.

Table 3

CAMI Data Analysis

Model Summary									
Model	R	R^2	Adjusted R^2	Std. Error of the Estimate	Change Statistics				
					R^2 Change	F Change	df1	df2	Sig. F Change
1	.136	.019	-.032	3.91342	.019	.369	4	78	.830

Attitudes to Mental Illness Questionnaire

Questions 11 and 12 in the survey included the Attitudes Towards Mental Illness Questionnaire (AMIQ). As mentioned in previous chapters, the AMIQ involves a fictional vignette about a man with schizophrenia named Michael. The participants were asked to read the short patient scenario and respond to statements based upon their views. The AMIQ was scored using a point system, with a response of "strongly agree" or "very likely" assigned a +2 score, and with a response of "strongly disagree" or "very unlikely" assigned a -2 score. The AMIQ point total ranged from -10 to +10, with a higher score indicating more positive views towards the man with a mental illness portrayed in the fictional vignette.

Table 4 demonstrates the frequency of point totals among the 83 survey participants. The point totals ranged from -2.00 to +10.00. Given this information, the +4.00-point total was seen to have the highest frequency among survey participants at 33.7%. The dataset also revealed that

90.2% of participants received a point total above zero and only two participants received an overall negative score.

Table 4

AMIQ Data Frequency

AMIQ					
		Frequency	**Percent**	**Valid Percent**	**Cumulative Percent**
Valid	-2.00	2	2.4	2.4	2.4
	.00	6	7.2	7.2	9.6
	2.00	18	21.7	21.7	31.3
	4.00	28	33.7	33.7	65.1
	6.00	19	22.9	22.9	88.0
	8.00	4	4.8	4.8	92.8
	10.00	6	7.2	7.2	100.0
	Total	83	100.0	100.0	

The AMIQ data was additionally analyzed using multiple regression, and a summary of the results are displayed in Table 5. The R^2 change was .071 indicating that only 7.1% of variance of the dependent variable of mental health stigma could be explained by the independent variables of this study. The significant F change or p-value for the AMIQ dataset was .214. This value is greater than .05 and therefore the AMIQ data was also not statistically significant.

Table 5

AMIQ data analysis

Model Summary									
Model	R	R^2	Adjusted R^2	Std. Error of the Estimate	Change Statistics				
					R^2 Change	F Change	df1	df2	Sig. F Change
1	.266	.071	.023	2.65565	.071	1.489	4	78	.214

Conclusion

Overall, data analysis identified the survey population to be primarily representative of female physician assistants (PAs) practicing clinically for less than ten years. Only one survey participant reported working in psychiatry, while the majority of others selected primary care or sub-specialty areas of medical practice. The data analysis also aimed to investigate the relationship between the independent variables of this study and the level of mental health stigma held by survey participants. No direct correlations were identified by this research; however, several notable findings within the data were uncovered. One finding revealed that the PA participants held a higher level of mental health stigma if they had previous experience with and/or exposure to a family member or close friend with a mental illness. An alternative finding demonstrated that a lower level of mental health stigma was held by participants if they had ever been in a romantic relationship with an individual with a diagnosed mental illness. Ultimately, multiple regression analysis of the data revealed that despite these subtle trends, no statistically significant correlations existed between the independent variables of this study and the level of mental health stigma held by the survey participants. Further discussion of the significance of these results is included in Chapter 5.

Chapter 5: Discussion and Conclusion

Introduction

The purpose of this research was to determine the level of mental health stigma held among practicing physician assistants in regard to personal experience and exposure. To examine the correlation between these factors, an electronic survey was distributed to members of the Michigan Academy of Physician Assistants (MAPA). This chapter aims to highlight the significance of the survey findings, discuss delimitations/limitations of this study, and provide recommendations for further research regarding mental health stigma.

Demographics Revisited

The demographic section of this study's survey inquired about clinical area of practice as a physician assistant (PA), number of years practicing as a PA, and participant gender. No statistical analysis was actually performed on this information; however, it served to provide for a better understanding of the participant population. As expected, the area of clinical practice among survey participants varied greatly. The variety of responses was not surprising, as PAs work in many different areas of medicine. While no statistical analysis was performed, determining the number of PAs working in psychiatry was of interest to this study. Ultimately, only one survey participant identified with the clinical field of psychiatry. Therefore, determining any existing relationship between clinical area of practice, and the level of mental health stigma held was difficult to adequately assess.

Through gender analysis, survey results revealed that approximately 82% of the participants identified with the female gender. The female participation represented in this survey was slightly above the 2016 national average of certified female PAs at 67.7% (Bureau of Labor Statistics, 2017). For gender comparison purposes, ideally the survey responses would be

evenly represented by both male and female participants. Due to the overwhelming majority of female participants, no reliable correlation could be made between gender and mental health stigma. Finally, no statistical analysis was performed on the relationship between number of years of clinical practice and mental health stigma. However, most participants who completed the survey have practiced for less than ten years. In summary, the intent of the demographic questions of the survey was to enable discussion, while the data collected using the CAMI and AMIQ survey tools provided insight into the level of mental health stigma held by participants.

Discussion of Results

After evaluating the correlations between the independent variables of personal experience and exposure to individuals with mental illness and mental health stigma, as measured by the survey tools CAMI and AMIQ, data analysis and support for past research appeared to be mixed. Ultimately, this research revealed that no statistically significant relationship existed between the factors above. The survey results demonstrated no ability to predict the level of mental health stigma held by a practicing physician assistant (PA) based on their personal experience of having a family member, friend, or romantic partner with a diagnosed mental illness. Additionally, data analysis revealed that the number of mentally ill patients a participant sees each week during their clinical practice could not be used to predict the level of mental health stigma held by the practicing PA. Of note, a large majority (68%) of practicing PAs admitted to having both a family member or close friend with a diagnosed mental illness. Conversely, far fewer PAs (25%) admitted to having ever been in a romantic relationship with someone who has been diagnosed with a mental illness. It may be reasonable to speculate that underreporting may have been to blame for this low response of romantic relationships.

Due to the statistically insignificant results obtained through the research survey, this study was unable to formally support previous research that healthcare professionals, in this case PAs, hold higher levels of mental health stigma with increased exposure and experience with individuals and/or patients having a diagnosed mental illness (Jorm et al., 1991). A review of past research relating to mental health stigma was summarized in Chapter 2 and stated that stigma ultimately involves the stereotyping and discrimination of individuals who do not fit into perceived social norms (Dockery et al., 2015). Previous research reported that stigma exists among healthcare workers and is coined iatrogenic stigma. Iatrogenic stigma was seen to negatively influence patient care in past studies and was noted to be the fourth most frequently reported barrier to mental healthcare (Dockery et al., 2015, p. 613). Research up to this point has revealed that healthcare providers display at least equal, and sometimes even stronger negative beliefs and attitudes toward individuals with mental illness, when compared to the general public (Gaebel et al., 2017).

Although the data represented in this research was deemed not statistically significant, relation to past research of mental health stigma could be made using the raw data obtained by the survey. Overall, the raw data findings relating to the independent variables of this study partially supported past research. As noted in Chapter 4, it was revealed that participants held higher levels of mental health stigma if they had ever had a family member or close friend with a diagnosed mental illness. In contrast, an opposite finding was revealed regarding romantic relationships. Survey results demonstrated that a lower level of mental health stigma was held by participants if they had ever been in a romantic relationship with an individual with a diagnosed mental illness. Although these findings were demonstrated by the data, due to the statistical insignificance of this study's results, they could not be used to develop correlations between

personal experience or exposure to individuals with mental illness and the level of mental health stigma held by MAPA members. There was additionally no data within this study to compare to stigma held by the general public. Therefore, the constraints of this study continue to highlight the need for further research focused on mental health stigma, specifically among PAs in comparison to the general public.

The interpreted data obtained from the survey results for the Community Attitudes to Mental Illness Questionnaire (CAMI) was also deemed not statistically significant. The aim of this survey tool was to describe relationships between pro-authoritarian or conversely, anti-authoritarian viewpoints with the level of mental health stigma held by a practicing PA. As described in Chapter 4, the majority of survey respondents displayed agreement with anti-authoritarian viewpoints toward individuals with a mental illness. Therefore, the majority of survey participants believed that the government should not hold strict authority and control over individuals with mental illness. Although one might speculate that a relationship exists between anti-authoritarian viewpoints and low levels of mental health stigma held by the practicing PA based on the results of this study's survey, the data did not support this conclusion. Based on the interpretation of this dataset, no relationship existed between authoritarian or anti-authoritarian viewpoints and the level of mental health stigma held by a practicing PA. Previous research regarding healthcare professionals has not specifically analyzed the relationship between pro/anti-authoritarian viewpoints towards individuals with mental illness and the level of mental health stigma held by the healthcare provider. Up until this point in time, the data received using the CAMI's authoritarian statements has served to measure the level of mental health stigma held by the general public. In order to further describe mental health stigma among various healthcare providers using authoritarian viewpoints as a scale, additional research conducted using the

CAMI survey tool is required. Nevertheless, the raw data obtained by the selected CAMI portion of this survey demonstrated a lack of support for past research. Analyzed CAMI results reflected more *non-stigmatizing* viewpoints held by practicing PAs due to largely anti-authoritarian responses.

Furthermore, the survey utilized the Attitudes to Mental Illness Questionnaire (AMIQ) to gather additional data about mental health stigma among practicing PAs. As previously described in Chapter 4, the AMIQ included a fictional vignette portraying an individual with schizophrenia. Participants were asked to read the vignette and answer corresponding questions. The point-totals for the AMIQ ranged from -10 to +10, with positive point-totals indicating more favorable views of the man being portrayed, and negative point-totals indicating less favorable and more stigmatizing views. Data analysis demonstrated no statistically significant correlation between a participant's level of stigma, as measured by their point-total, and their experience or exposure to individuals with a mental illness. However, a large majority of survey participants received positive point-totals, with only 12% of participants receiving a total less than +2. This finding demonstrated that in general, the PAs who participated in the study held more positive views towards Michael, the individual with mental illness portrayed in the vignette. Despite this notable finding, there was not a statistically significant correlation between the two independent variables in the study and the participant's level of mental health stigma held, as measured by the AMIQ. The relationship between the raw AMIQ dataset and past research demonstrated similar findings to the data obtained through the CAMI analysis. As mentioned above, the majority of survey participants displayed low stigmatizing views toward individuals with mental illness. The low stigma held by the survey participants does not support past research, as the majority of

research up to this point has demonstrated high levels of mental health stigma held by healthcare professionals (Jorm et al., 1991).

Delimitations

Several delimitations existed in our proposed study. Delimitations include conscious decisions made during the development of a research design, which serve to define the boundaries of a study (Simon & Goes, 2013). First, due to confined access of practicing PAs, this research was limited to practicing members of Michigan Academy of Physician Assistants (MAPA). All six regions of Michigan are represented by members of MAPA (Michigan Academy of Physician Assistants [MAPA], 2018a). In addition, it is not a requirement to reside in Michigan in order to be considered a member of MAPA, and therefore, Michigan may not have been the only state represented by its MAPA members. According to the Bureau of Labor Statistics in May of 2016, a broad estimate of the number of employed and practicing PAs in Michigan was between 2,620 and 5,290 (Bureau of Labor Statistics, 2017). Additionally, the executive director of MAPA stated that approximately 6,000 certified PAs currently practice within the state (T. Gormas, personal communication, July 24, 2018). This large population of practicing PAs increased the potential sample size of our study and added to the validity of this research.

Physician assistant (PA) students were not included in this study. A significant amount of research has focused on the implementation of programs aimed to destigmatize individuals with mental illness in the setting of formal medical education (Mukherjee, Fialho, Wijetunge, Checinski, & Surgenor, 2002). In addition, all healthcare professionals who are not practicing PAs were excluded from this research. The research that currently exists on the topic of iatrogenic mental health stigma has been conducted on physicians, nurses, pharmacists, and

social care workers, just to name a few (Jorm et al., 1991). This research instead focused on identifying the mental health stigma that exists in a specific subset of practicing healthcare providers that has not yet been studied: PAs.

A survey was used as the method of data collection for this research study. Utilizing a survey not only allowed for greater distribution to practicing PAs, increasing this study's sample size, but it was also more time efficient and aimed to reduce responder bias that may have been present if the participants were questioned in an interview format. The survey consisted of questions from two separate survey tools, the *Attitudes to Mental Illness Questionnaire* (AMIQ) and the *Community Attitudes to Mental Illness* (CAMI) survey, and because of this, several delimitations arose. Because we utilized an adapted survey tool, the validity and reliability of those tools may have been reduced. However, the specifically selected CAMI and AMIQ sections were not altered in an attempt to preserve as much validity and reliability as possible, and in order to utilize the same grading scales that were used in the original survey tools.

Finally, the sample population of this study was not limited to psychiatry PAs but instead included all specialties of practicing PA members of MAPA. PAs practice in a large variety of settings, with potential exposure to patients suffering from mental illness in all specialties (AAPA, 2017c). In order to obtain a more inclusive body of research, a variety of specialty areas of PA practice were included.

Limitations

Constraints arising from methodological decisions and study design refer to limitations of a research study. These limitations cannot be fully controlled for; however, they may ultimately influence the outcome and data of the research (Simon & Goes, 2013). In this study, the population of practicing physician assistants (PAs) being sampled through survey administration

was limited, as access to a large population of practicing PAs across the nation was neither attainable nor realistic. Consequently, this research may not truly represent a random sample population, nor apply to the full profession. Although the target population size for this research study was met with 83 survey participants, an ideal sample size for complete statistical analysis is closer to 200-250. Larger sample sizes allow for a better probability of obtaining statistically significant results. The small sample size of this study potentially had large ramifications on the significance of the survey results. In addition, because the population size did not encompass all practicing PAs in the United States, some response bias may have been present. Response bias occurs when the sample size of a study does not fully represent all members of that population (Pannucci & Wilkins, 2011).

Although the goal of utilizing a survey as the method of data collection for this research was to ultimately minimize limitations, some factors could not be controlled for. Because the survey was distributed to participants via email, a lack of accountability of survey completion and a limited completion time due to logistical constraints of this study may have negatively influenced the response rates of the population being sampled. An additional dimension of response bias may have also been present surrounding survey answers. Because the target population of practicing PAs was aware that the research was being conducted by PA students, the participants may have been motivated to respond in ways that provided non-destructive images of the PA profession. These untruthful images could have included fabricated responses aimed to minimize existing mental health stigma. Lastly in relation to the survey, the portions of the AMIQ and CAMI which were selected for survey use were not modified in any way. All wording, genders, and mental illness conditions were preserved to maintain validity and reliability of the survey tools. Because of the unaltered portions of the survey tools, survey

interpretation by research participants may have been unintentionally impacted, and this may have been reflected in the data collection and statistical analysis.

Finally, due to the relatively small amount of research that has been conducted and published on the prevalence of mental health stigma among healthcare professionals, publication bias may have provided an additional constraint on this research study. Publication bias occurs when published information is not fully representative of all conducted research (Rothstein, Sutton, & Borenstein, 2005). In particular, when conflicting research results differ from the majority of conducted research at whole, reviewers may be in danger of obtaining inaccurate conclusions. This type of bias may be especially prevalent among meta-analyses, which combine and compare the results of many research studies (Rothstein et al., 2005). Due to time constraints and limited data availability regarding this topic, some data from a meta-analysis was included in the literature review portion of this research.

Recommendations for Further Research

A knowledge gap exists in regard to mental health stigma held by practicing physician assistants (PAs). The aim of this research study was to expand upon prior literature in order to analyze stigmatizing attitudes that exist among this specific healthcare professional. For this reason, the results obtained in this study could not be directly compared to past research, as published data relating to mental health stigma among PAs does not yet exist. Furthermore, this research study was not applied to the general public; and therefore, a comparison could not be made. Nonetheless, this research does serve as a starting point for more inclusive research relating to mental health stigma as a whole.

Further research is needed to expand upon the prevalence of mental health stigma in the healthcare community and the impact such stigma has on patient care. Physician assistants (PAs)

play an important role within the healthcare team and continue to be utilized across all specialties. Despite this growth, very little research has been conducted on the prevalence of mental health stigma among practicing PAs. Research has demonstrated that stigmatizing attitudes can lead to poor health outcomes and higher mortality rates among individuals with mental illness; however, current literature has failed to include physician assistants (Gaebel et al., 2017). With this study only focusing on practicing PAs from the state of Michigan, the healthcare community could benefit from a larger-scale study that analyzes stigma among practicing PAs nationwide. A need also exists for additional research aimed at quantifying the direct impact that stigmatizing attitudes have on the health outcomes of those with mental illness. Finally, mental health stigma is not limited to healthcare workers, so additional research which analyzes stigmatizing attitudes within the general population would be beneficial for comparison purposes.

Conclusion

In closing, this research aimed to determine whether a correlation existed between personal experience and exposure to individuals with a mental illness, and the level of mental health stigma held among practicing physician assistants (PAs). In attempt to identify a correlation, PAs from the Michigan Academy of Physician Assistants (MAPA) were asked to take part in this research study. A majority of participants identified with the female gender, have been practicing for ten years or less, and work in a variety of clinical areas of medicine. Over one third of survey participants currently work in primary care; however, the majority reported working within a sub-specialty area of medicine.

Ultimately, the data received through the survey results revealed no statistically significant relationship between personal experience and exposure to individuals with mental

illness, and the level of mental health stigma held by practicing physician assistants. Further research is needed, however, and may suggest a different outcome. Several limitations influenced the results of this study. The relatively small sample size and limited timing for survey distribution placed constraints on the survey, but if broadened in the future, could impact the significance of the data. Publication bias and response bias could have additionally played a role in survey responses. Finally, to maintain the integrity of the surveys used in past research, the original wording of the CAMI and AMIQ survey tools was used. Although somewhat outdated, preserving the original terminology and vignette left no room to question whether responses would have been significantly different from past research due to updated terminology and an alternative fictional vignette.

Past published research has not yet evaluated mental health stigma held by physician assistants (PAs), and this study can act as a starting point for continued research on a larger scale. Physician assistants are becoming increasingly popular members of the healthcare team, and they continue to work in a variety of areas of medicine. The literature reviewed by this research demonstrated how stigma held towards those with a mental illness can affect the health and wellbeing of that individual. Once perfected, survey tools similar to the survey used in this study could be utilized within healthcare organizations and educational PA programs to guide efforts aimed at decreasing mental health stigma and improving patient care.

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APPENDIX A

MICHIGAN ACADEMY OF PHYSICIAN ASSISTANTS RESEARCH PERMISSION

MICHIGAN ACADEMY of PHYSICIAN ASSISTANTS

June 18, 2018

Dear Bethel University Research Team,

The MAPA Executive Board has approved your research project to be conducted with the MAPA membership. Please work with Alecia Powell, MAPA Academy Administrator for distribution of your survey to our members and future communications.

Contact Information:

Alecia Powell, CMP
Academy Administrator
1390 Eisenhower Place
Ann Arbor, MI 48108
Phone: (734) 353-4752
apowell@michiganpa.org

Sincerely,

Thadd Gormas
Executive Director
Michigan Academy of Physician Assistants

1390 Eisenhower Place • Ann Arbor, MI • 48108
Phone 734.353.4752 • Toll Free 877.YES.MAPA • Fax 734.677.2407
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APPENDIX B

INSTITUTIONAL REVIEW BOARD (IRB) APPROVAL

July 26, 2018

Allison, Bailey, and Madeline;

As granted by the Bethel University Human Subjects committee as the program director, I write this letter to you in approval of Level 3 Bethel IRB of your project entitled: "Prevalence of Mental Health Stigma among Practicing PAs in regard to Personal Experience and Patient Exposure." This approval is good for one year from today's date. You may proceed with data collection and analysis. Please let me know if you have any questions.

Sincerely;

Wallace Boeve, EdD, PA-C
Program Director
Physician Assistant Program
Bethel University
w-boeve@bethel.edu
651 308-1398 cell
651 635-1013 office
651 635-8039 fax
http://gs.bethel.edu/academics/masters/physician-assistant

CC: Bethel IRB Chair
Faculty Chair Advisor
PA Program Research Coordinator

APPENDIX C

RESEARCH SURVEY INFORMED CONSENT

Consent Form for Level 3 Survey Research

You are invited to participate in a study relating to the prevalence of mental health stigma among practicing PAs. We hope to learn about possible factors that may contribute to the level of stigma held by the PA provider. You were selected as a possible participant in this study because you are a current member of Michigan Academy of Physician Assistants. This research is being conducted at Bethel University as a part of a master's thesis project for the PA program.

If you decide to participate, we will utilize a survey and ask you questions regarding your demographics, your reactions to statements regarding individuals with mental illness, and your views surrounding a mental health patient case. The survey will consist of 12 questions and will take approximately 5-10 minutes to complete. Data will be recorded through Qualtrics, an online survey tool. This study may include questions that could reveal sensitive information or lead to possible offense. The collected data may benefit the PA profession and medical community as a whole by adding to the general knowledge held regarding the prevalence of stigma in the healthcare community.

Any information obtained in connection with this study that can be identified with you will remain confidential and will be disclosed only with your permission. In any written report or publication, no one will be identified, and only aggregate data will be presented. No information will be released to anyone or any agency. Furthermore, all collected data will be stored on a locked computer and safe-locked USB in the Bethel University PA Program department.

Your decision whether or not to participate will not affect your future relations with Bethel University and Michigan Academy of Physician Assistants in any way. Your participation in this study is completely voluntary. If you decide to participate, you are free to discontinue participation at any time without affecting such relationship.

This research project has been approved by Bethel University's PA Program Director with Bethel's Levels of Review for Research with Humans. If you have any questions about the research and/or research participants' rights or wish to report a research-related injury, please contact:

Bailey Hanson (Researcher): bailey-hanson@bethel.edu
Allison Hoy (Researcher): a-hoy@bethel.edu
Madeline Lieberson (Researcher): madeline-lieberson@bethel.edu
Wallace Boeve (Bethel University Faculty Sponsor): w-boeve@bethel.edu

By completing and returning the survey, you are granting consent to participate in this research.

APPENDIX D

MENTAL HEALTH STIGMA SURVEY

Mental Health Stigma Survey

Q1 I have read the terms outlined in the informed consent invitation email. By completing this survey, I agree to participate in this research.

- ○ Continue with the survey

Q2 Are you practicing currently as a PA?

- ☐ Yes
- ☐ No (If no, will redirect to end of survey)

Q3 What is your current area of practice?

- ○ Primary Care
- ○ Psychiatry
- ○ Specialty Care: Please Specify: _____

Q4 How many years have you been in practice as a PA?

_____

Q5 What gender do you identify with?

- ○ Male
- ○ Female
- ○ Other: Please Specify: _____
- ○ Prefer not to answer

Q6 How many patients with mental illness do you see each week?

_____

Q7 Do you have a family member with a diagnosed mental illness?

- ○ Yes
- ○ No

Q8 Have you ever been in a relationship with someone with a diagnosed mental illness?

- ○ Yes
- ○ No

Q9 Have you ever had a close friend with a diagnosed mental illness?

- ○ Yes
- ○ No

Q10 Please respond to the following statements about mental illness.

	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree
As soon as a person shows signs of mental disturbance, he should be hospitalized.	○	○	○	○	○
Mental illness is an illness like any other.	○	○	○	○	○
There is something about the mentally ill that makes it easy to tell them from normal people.	○	○	○	○	○
Less emphasis should be placed on protecting the public from the mentally ill.	○	○	○	○	○
Mental patients need the same kind of control and discipline as a young child.	○	○	○	○	○
The mentally ill should not be treated as outcasts of society.	○	○	○	○	○

The best way to handle the mentally ill is to keep them behind locked doors.	○	○	○	○	○
Mental hospitals are outdated means of treating the mentally ill.	○	○	○	○	○
One of the main causes of mental illness is a lack of self-discipline and will power.	○	○	○	○	○
Virtually anyone can become mentally ill.	○	○	○	○	○

Q11 Please read the following patient scenario and answer according to which answer best reflects your views.

"Michael has schizophrenia. He needs an injection of medication every 2 weeks. He was detained in hospital for several weeks 2 years ago because he was hearing voices from the Devil and thought that he had the power to cause earth-quakes. He has been detained under the Mental Health Act in the past."

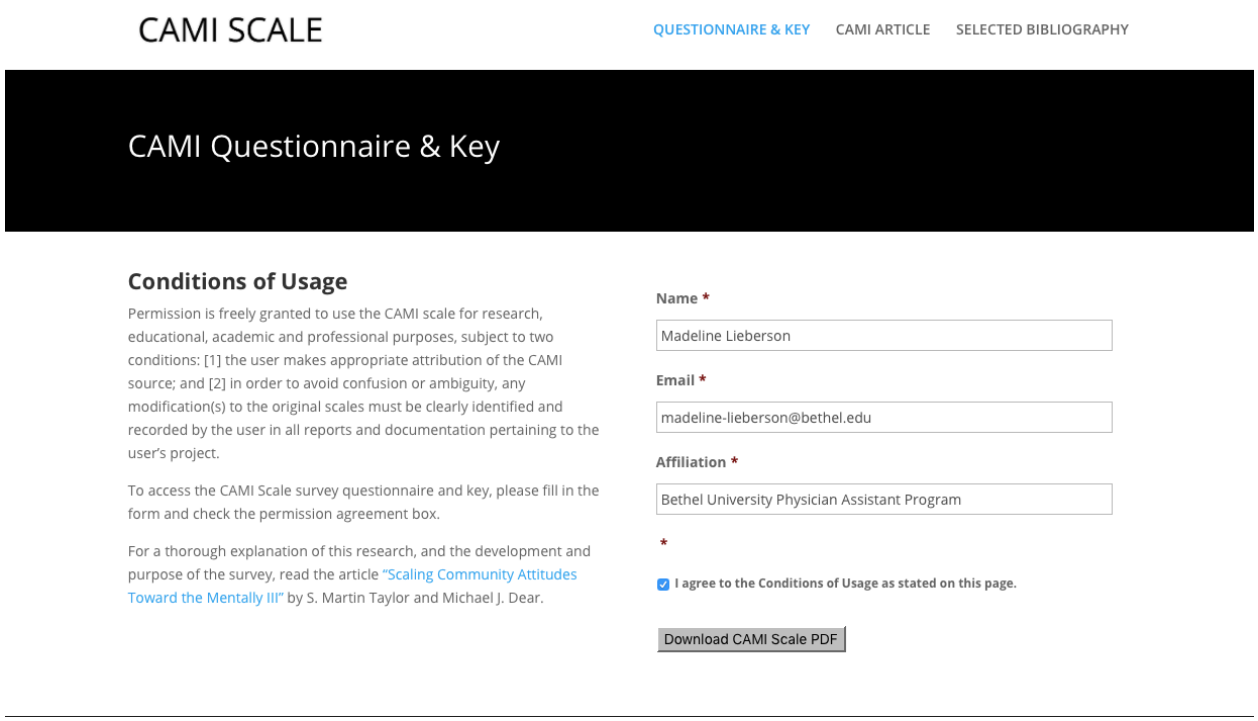
	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree	I Don't Know
Do you think that this would damage Michael's career?	○	○	○	○	○	○
I would be comfortable if Michael was my colleague at work.	○	○	○	○	○	○
I would be comfortable about inviting Michael to a dinner party.	○	○	○	○	○	○

Q12 Please answer according to which answer best reflects your views about Michael.

	Very Unlikely	Unlikely	Neutral	Likely	Very Likely	I Don't Know
How likely do you think it would be for Michael's wife to leave him?	○	○	○	○	○	○
How likely do you think it would be for Michael to get in trouble with the law?	○	○	○	○	○	○

APPENDIX E

COMMUNITY ATTITUDES TO MENTAL ILLNESS SURVEY PERMISSION



CAMI SCALE

QUESTIONNAIRE & KEY CAMI ARTICLE SELECTED BIBLIOGRAPHY

CAMI Questionnaire & Key

Conditions of Usage

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To access the CAMI Scale survey questionnaire and key, please fill in the form and check the permission agreement box.

For a thorough explanation of this research, and the development and purpose of the survey, read the article "Scaling Community Attitudes Toward the Mentally Ill" by S. Martin Taylor and Michael J. Dear.

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*

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APPENDIX F

ATTITUDES TO MENTAL ILLNESS QUESTIONNAIRE PERMISSION

Dr. Luty,

My name is Madeline Lieberson. I am a student at Bethel University's Physician Assistant program in Minnesota. For my graduate thesis, myself and two of my colleagues are conducting a study on mental illness stigma among practicing physician assistants. We will be collecting data through an electronic survey and were hoping to use the AMIQ Questionnaire. We are looking to gain permission to utilize the questionnaire and schizophrenia vignette for our research purpose. Are you able to grant us permission or would you be able to direct us to someone who can? Thank you for your time.

Respectfully,

Jason Luty Apr 6 (4 days ago)

to me

By all means use the MIQ - the full reference is adapted from Cunningham 1993 and is in the original paper.
Dr Jason Luty