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Investigating Barriers to Mental Health Care in Law Enforcement Officers

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Investigating Barriers to Mental Health Care in Law Enforcement Officers

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ABSTRACT

Investigating Barriers to Mental Health Care in Law Enforcement Officers

by

Samantha F. Johnson

The profession of law enforcement is an inherently stressful job. Although the physical stress of the job is often discussed, the mental health impact on officers is often ignored, resulting in poor mental health and increased risk for suicide. The purpose of the current study was to investigate factors related to the reluctance of law enforcement officers (LEOs) to seeking treatment, as well as to gain an understanding of the prevalence rates of disorders in a law enforcement population. Convenience sampling was used to recruit participants (N = 306) across a variety of agencies. Correlation, moderated regression analysis, and structural equation modeling (SEM) was used in order to model barriers to care among officers. Findings suggest that the presence of psychological disorders was not predictive of willingness to seek treatment. However, perceived stigma did predict lower willingness to seek treatment. General conclusions suggest that increasing unit cohesion and unit support may make a positive impact in decreasing stigma and increasing officers' willingness to seek treatment.

DEDICATION

This dissertation is dedicated to all law enforcement officers. Your dedication, sacrifice, and bravery are above and beyond. For those we have lost, rest easy, we will take it from here. For those still fighting, stand strong and hold the line, I've got your six.

ACKNOWLEDGEMENTS

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CHAPTER 1

INTRODUCTION

Law enforcement work is inherently stressful and includes a range of both chronic, organizational stressors, as well as unique traumatic stressors. For example, organizational stressors ranked highest in a study by Violanti and Aron (1994) included shift work, inadequate support from supervisors, inadequate support from the department, and excessive discipline. Such job stress, defined as "the harmful physical and emotional responses that occur when the requirements of the job do not match the capabilities, resources, or needs of the worker" (Centers for Disease Control, CDC, p. 6, ND) can often result in poor physical and psychological health and lost productivity costing at least $4,489 per officer annually (Fox et al., 2012). In addition to organizational stress, however, officers also experience unique traumatic stressors, events not experienced by the general population. For example, whereas daily hassles and stressors are a general part of everyday life and paperwork, long hours, and interactions with the general public may be stressors inherent to several lines of work, law enforcement officers (LEOs) are much more likely to experience extreme and uncommon events such as investigating the abuse and/or death of a child, arriving on scene to a mass trauma, or being shot at, or having to shoot an individual in the line of duty (Koch, 2010; National Alliance on Mental Health, n.d).

Research investigating the ill effects of chronic job stress in police populations has shown increases in the risk for sleep disorders, heart disease, absenteeism, and burnout (Fekedulegn et al., 2013; Franke et al., 2010; Hartley, Burchfiel, Fekedulegn, Andrew, & Violanti, 2011; Wright, Barbosa-Leiker, & Hoekstra, 2011). Traumatic stressors can lead to post-traumatic stress disorder (PTSD) symptoms and diagnoses (Corneil, Beaton, Murphy, Johnson, & Pike, 1999),

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while both chronic stressors and critical incidents (an event that is stressfully impactful to the point of undermining an individual's normally sufficient coping skills) may result in increased levels of burnout (Woody, 2006), anxiety and depression (Carleton, Peluso, Collimore, & Asmundson, 2011; Leen-Feldner, Feldner, Reardon, Babson, & Dixon, 2008), alcohol or drug abuse, intimate partner violence, general aggression, and suicide attempts (Chopko, Palmieri, & Adams, 2012; Jakupcak et al., 2007; Ménard & Arter, 2013; Pienaar, Rothmann, & van de Vijver, 2007; Slottje et al., 2007).

These stress-related outcomes are not unique to LEOs; however, research suggests that LEOs experience poor physical and psychological health at a disproportionate rate as compared to the general population (Hartley et al., 2011). Although research has cited many of the poor physical health outcomes for LEOs (e.g., Franke et al., 2010; Hartley et al., 2011; Joseph et al., 2009; Wright et al., 2011), the same rate of research examining mental health disparities within law enforcement has not occurred. Therefore, the disproportionality of LEO psychological health is unknown due to a scarcity of research. Coupled with the lack of research is an inconsistency in the reported prevalence rates of mental health outcomes in general for this population. For example, some researchers suggest that suicide rates for LEOs are higher than the general population (Violanti; 2008; Violanti, Hartley, Mnatsakanova, Andrew, & Burchfiel, 2012), while other researchers report the opposite (Hem, Berg, & Ekeberg, 2001). The same inconsistencies can be found for other psychological concerns. Perhaps such inconsistencies stem from a "police culture" in which there remains an unwillingness to report officer deaths as suicides (Violanti, 2008; Violanti, Hartley, et al., 2012; Voilanti, Vena, & Petralia, 1998), as well as reluctance among officers to seek help or treatment (Violanti, 1995). Again, there remains a lack of empirical research investigating such reluctance to help seeking. Anecdotal evidence and articles

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published in police specific magazines suggest that stigma plays a vital role in unwillingness to seek treatment. For example, in an article published in *The Denver Post,* officers have cited fears of job demotion or loss, as well as loss of trust from supervisors and fellow officers as reasons for avoiding treatment (McGhee, 2014). Other news articles reporting on officer suicides also cite concern of stigma (Wilson & Buckley, 2008) as well as lack of departmental support (Rossi, 2014), fear of being found unfit for duty and reassigned, and the "blue wall of silence"; a term for officers not only staying silent about their own mental health concerns, but concern for other officers, as well (Perin, 2007).

Research Aims

Presently, there is a scarcity of research about the prevalence rates of diagnosable psychological disorders and symptoms, as well as a lack of understanding as to why LEOs are resistant to help seeking. The purpose of this research is to understand the factors related to the reluctance of LEOs to seeking treatment, as well as to gain an understanding of the prevalence rates of disorders in a law enforcement population. There are three aims for the current project. Aim 1 was to investigate the prevalence of diagnosable symptoms of the most common psychological disorders found in law enforcement populations (i.e., depression, anxiety, PTSD, alcohol abuse). Aim 2 was to examine if the severity of depression, anxiety, PTSD, and alcohol abuse relates to willingness to seek treatment, particularly for individuals who experience clinically significant mental health problems. Aim 3 was to create a theoretical model depicting barriers to care and treatment seeking at the individual level.

CHAPTER 2

LITERATURE REVIEW

Police Stress

Although all jobs maintain some level of stress, police work is far more stressful that most other occupations (Reiser, 1974; Violanti & Aron, 1993;1994;1995) and has been cited as one of the most stressful occupations in the world (Anshel, 2000). Law enforcement is one of the few careers that carry with it a very real threat of serious injury or death on a daily basis. Moreover, stress that is experienced as a LEO can be divided into two categories; organizational stressors and inherent stressors (Martelli, Waters, & Martelli, 1989). Organizational stressors might be considered chronic stressors, or those characteristic of the administrative and professional duties in law enforcement and found in other occupations (e.g., lack of departmental support, authoritarian personnel, competition for advancement, and insufficient personnel) (Reiser, 1974, Spielberger, Westberry, Grier, & Greenfield, 1981; Violanti & Aron, 1995). Among such organizational stressors, a study of officers by Violanti and Aron (1995) showed inadequate department support to be ranked highest by the officers surveyed. Organizational stressors, perhaps due to their chronicity, are suggested to impact LEOs more than inherent stressors (Violanti & Aron, 1993).

Inherent stressors might be those considered as the "stresses of being a policeman" (Symonds, 1970, p. 155). Such stressors include events that involve danger, as well as everyday events characteristic of police work (e.g., shiftwork, negative interactions with the public, boredom, and dealing with death) (Spielberger, et al., 1981). Some of these stressors might appear in other careers, while others (e.g., using deadly force, witnessing a partner or fellow

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LEO be injured or killed in the line of duty), are not only unique to law enforcement, but also unique *within* law enforcement. In other words, officers are more likely than the general population to use deadly force against another individual, or to witness their partner or fellow LEO be injured or killed in the line of duty, but such events have a low likelihood of occurring within policing, as well. However, although these events are thought to be rare, even within law enforcement, a study by Weiss et al. (2010) found that as many as 25% of the 719 officers sampled reported killing or seriously injuring somebody in the line of duty and 38% reported being shot at, at least once in their career.

Given the examples provided above, one might expect officers to remain at a constantly higher level of arousal than non-officers. In fact, due to the inordinate amount of time spent in a physiological aroused state, research suggests that officers experience disproportionately higher rates of cardiovascular disease and metabolic syndrome (Franke et al., 2010; Hartley et al., 2011; Joseph et al., 2009; Wright et al., 2011) and a relatively higher risk of death compared to the general population. Psychologically, symptoms of depression, anxiety, PTSD, and alcohol use and abuse may appear at a higher rate in police populations (Larson, Eyerman, Foster, & Gfoerer, 2007), as well as increased interpersonal problems, as job stress begins to bleed into interpersonal relationships (Woody, 2006). In the next section, I discuss officers' health outcomes related to job stress followed by disparities found in law enforcement populations that are attributed, at least in part, to both organizational and inherent police stress.

Physical Health Outcomes

Research has shown that high levels of job stress, both organizational and inherent, are strongly related to poor health outcomes (Evans, Becker, Zahn, Bilotta, & Keesee, 2012;

Farquharson et al., 2013; Pflanz & Ogle, 2006), across occupations. However, research suggests that police officers may actually have a higher risk of physical health problems and early death compared to the general population for a variety of reasons (Violanti et al., 2013). In an epidemiological study, Violanti and colleagues compared the life expectancy of male police officers from Buffalo, NY to the life expectancy of males in the United States general population using an abridged life table method. Results showed that officers in this particular sample had a significantly lower life expectancy by nearly 22 years. This effect was more pronounced in younger officers. Additionally, psychological stress can have negative outcomes on both psychological and physical well-being. For example, when compared to general population samples, police officers have a higher risk of cardiovascular disease (Franke et al., 2010; Hartley et al., 2011; Joseph et al., 2009; Wright et al., 2011) and metabolic syndrome (Hartley et al., 2011).   Moreover, compared to the general population comparison samples, officers are more likely to show an increased risk for, and to be diagnosed with cardiovascular disease. In a study that examined the death certificates of over 125,000 males across 27 states and 11 years found that individuals who had been in some sort of law enforcement career (e.g., sheriffs, police, public safety, etc.) had the highest rate of ischemic heart disease mortality rates (Calvert, Merling, & Burnett, 1999). In a cross-sectional sample of police officers, Rajaratnam and colleagues (2011) found that close to half of the sample (40%) screened positive for at least one sleep disorder and were more likely to have higher levels of absenteeism, uncontrolled anger toward suspects, to have fallen asleep at the wheel, and to make errors at work than those who did not screen positive for a sleep disorder. The authors suggested that psychological stress due to the characteristics of the job may influence such a high mortality rate.

Psychological Health Outcomes

Across the general population, job stress is related to a variety of psychological health outcomes including increased rates of anxiety (Kukleta & Franc, 2000; Stallman, 2010), depression (Olsen, Mortensen, & Bech, 2004; Patten et al., 2010), substance abuse (Greenfield, Back, Lawson, & Brady, 2010; McCart et al., 2011), and for severe stress or traumatic events, PTSD (Alegria, et al., 2011; Lukaschek et al., 2013; Perrin et al., 2014). Unfortunately, the abundance of research investigating the impact of law enforcement job stress on physical health outcomes is not matched in regards to psychological outcomes. In fact, aside from research on mental health outcomes following traumatic events, which supports an increase in PTSD symptoms (Hartley, Violanti, Sarkisian, Andrew, & Burchfiel, 2013; Martin, Marchand, & Boyer, 2009; Martin, Marchand, Boyer, & Martin, 2009), there is little research that examines the prevalence rates of specific mental health disorders and other psychological health outcomes in relationship to other stressors associated with the job.

Regardless of the lack of reported prevalence rates and comparisons to the general population, there is evidence to support that psychological problems among officers continue to increase (Collins & Gibbs, 2003). Collins and Gibbs (2003) compared findings from reports of occupational stress in 1990 and 1993 to assess how stress, and in turn, mental health, has changed among LEOs. Findings showed that not only had stress-related mental health issues not improved over the past decade, but that measurable symptoms of mental health had doubled (Collins & Gibbs, 2003). Indeed, more recent research shows that as perceived work stress increases, an increase in depression and anxiety symptoms also occur (Gershon, Barocas, Canton, Li, & Vlahov, 2009; Hartley et al., 2011), as well as an increase in aggression and interpersonal conflict (Gershon et al., 2009). Furthermore, symptoms of PTSD are related to

increased levels of job stress, particularly the experience of critical incidents (Komarovskaya et al., 2011; Violanti et al., 2006).

PTSD. Given an increased likelihood that officers may at some point experience a traumatic event, the development of PTSD or PTSD symptoms is a concern for this population. In a study of 400 police officers, nearly 70% reported being exposed to at least one event in which they felt direct threat to their own lives, while about 10% reporting having to kill or seriously injure someone in the line of duty, an action that was significantly related to PTSD symptoms (Komarovskaya et al., 2011). Unfortunately, the exact rates of PTSD in law enforcement are difficult to determine. Part of the variance in prevalence reporting is found in whether diagnosable or subthreshold levels of PTSD symptoms are being measured. For the most part, studies reporting diagnosable levels of PTSD suggest that prevalence rates range between 7% and 13% (Berger et al., 2012; Carlier, Lamberts, & Gersons, 1997; Robinson, Sigman, & Wilson, 1997), whereas rates of subthreshold PTSD symptoms can be as high as 35% (Carlier et al., 1997; Darensburg et al., 2006). Investigations of the relationship between critical incidents and PTSD symptoms find that PTSD symptoms put officers at higher risk for depression and anxiety symptoms, are associated with the perpetration of IPV (Oehme, Donnelly, & Martin, 2012), influence how officers interpret situations on the job, such that traumatic events are less manageable (Carlier, Lamberts, & Gersons, 2000), and may increase the risk for suicide (Steyn, Vawda, Wyatt, Williams, & Madu, 2013; Stuart, 2008; Violanti, 2004). To further complicate the problems associated with PTSD, research has shown that symptoms of PTSD are related to higher symptoms of physical health problems such as sleep disorders, metabolic syndrome, and cardiovascular disease (Violanti, Andrew, et al., 2006; Violanti, Fekedulegn, et al., 2006). In order to cope with PTSD symptoms, as well as symptoms of anxiety and depression, officers

may attempt to self-medicate, rather than seek mental health treatment. This may be why an increased rate of alcohol abuse is often reported with law enforcement officers (Chopko, Palmieri, & Adams, 2013).

Alcohol Abuse. Alcohol use, including binge drinking behavior has also been shown to be related to higher rates of occupational stress. According to Substance Abuse and Mental Health Services Administration (SAMHSA), 8.7% of "protective services" personnel have abused alcohol in the past month (Larson et al., 2007) compared to 6.8% in the general adult population (SAMSHA, 2014), and a study by Davey and colleagues (2000) suggested that of the officers who fell within the range of harmful alcohol consumption on the Alcohol Use Disorders Identification Test (AUDIT), nearly 73% reported that they did not have a drinking problem, suggesting a lack of insight into a larger problem that impacts law enforcement. Furthermore, when questioned about reasons for drinking, officers reported socialization and celebration as the largest contributing factors; however Davey, Obst, & Sheehan (2001) found that factors relating to stress were more predictive of risk scores on the AUDIT, providing further evidence of a lack of insight to problem behavior. This aligns with other research demonstrating that officers are more likely to engage in higher rates of alcohol abuse than the general population due to elevated rates of occupational stressors (Kohan & O'Connor, 2002; Swatt, Gibson, & Piquero, 2007). In several studies that investigated the relationship between alcohol use, stress, and PTSD symptoms, alcohol use was significantly related to work-related traumatic distress and symptoms of PTSD (Chopko et al., 2013; Ménard & Arter, 2013; Violanti et al., 2011) and has been found to increase as officer training progressed (Obst, Davey, & Sheehan, 2001). Such an increase in alcohol use and abuse throughout officer training suggests that there may be an aspect of police culture that encourages alcohol consumption, perhaps as a means of self-medication in order to

block symptoms of distress rather than seeking treatment for underlying problems (Chopko et al., 2013; Obst et al., 2001).

Police Suicide. Perhaps the topic that receives the most attention in regard to job stress and law enforcement is that of police suicide. There is no question that suicide risk is a problem within law enforcement. However, due to the nature of police culture and the likelihood that officer suicides are underreported, researching the exact rates of suicide has proven to be difficult (O'Hara, Violanti, Levenson, & Clark, 2013).

Within the empirical literature there has been a lack of clarity in regards to the officer suicide rates. Some researchers have suggested that officer suicide rates are higher than the suicide rates within the general population, while other researchers suggest that any disproportionality of rates can be explained by the fact that law enforcement is a white, male dominated career that provides easy access to firearms - traits that are all predictive of higher rates of suicide within the general population. Therefore, when comparing officer suicide rates to a demographically matched population, suicide rates appear to be the same, if not lower for officers (Aamodt & Stalnaker, 2001; Loo, 2003). However, other research still supports the idea that police suicide occurs at a higher rate than that of the general population (Lester, 1992; Vena, Violanti, Marshall, & Fiedler, 1986).

Adding to the difficulty in determining officer suicide rates and how they might compare to the general population is the fact that several databases that maintain statistics on officer deaths, such as the Federal Bureau of Investigation's Law Enforcement Officers Killed and Assaulted (LEOKA) and the Officer Down Memorial Page, do not report suicide data (LEOKA,

2012; Officer Down Memorial Page, 2014). This lack of reporting not only adds to the

uncertainty of prevalence rates, but also suggests an inherent stigma attached to officer suicide.

In light of the underreporting, lack of consensus among researchers, and the lack of

information provided by databases, a series of studies, known as The National Surveillance of

Police Suicide (NSOPS), have been conducted using web surveillance data in order to determine

more precise rates of office suicide (O'Hara & Violanti, 2009; O'Hara et al., 2013). In the

NSOPS, approximately 55,000 suicide-specific websites were reviewed to obtain information

about officer suicides in the United States. Results show approximately 126 police suicides in

2012, a decrease of about 12% since 2009, where approximately 143 officer suicides occurred

(O'Hara et al., 2013). Although the decrease is encouraging, it still remains that more officers die

by suicide than by felonious murder (Miller, 2006; Officer Down Memorial Page, 2014). On the

one hand this may be surprising due to the fact that officers are put through stringent

psychological evaluations in order to assess health (Cochrane, Tett, & Vandecreek, 2003;

McMichael, 1976; Tarescavage, Corey, & Ben-Porath, 2015). On the other, exposure to stress

events coupled with PTSD symptomatology and increased alcohol use increases the odds of

suicidal ideation ten-fold compared to officers who report lower trauma levels (Violanti, 2004).

Risk factors for police suicide range from logistics, or access to means to complete

suicide, to aspects of police culture inherent to the job. For example, officers have immediate

access to a firearm, as they often carry their service weapon home, therefore increasing the risk

of impulsive suicide behavior (Miller, 2006). This is further supported by previous research that

shows that more than 95% of officer suicides were completed with the use of the officer's

service weapon (O'Hara et al., 2013; Violanti, 1995). Given that officers have extremely easy

access to firearms, this is not necessarily surprising. However, other aspects of police culture

might also influence police suicide as an alternative to seeking outside help for mental health concerns. For instance, a culture centered on self-reliance emphasizes a need for officers to "handle problems on their own" and can increase reluctance to speak to anyone outside the force (Mahandie & Hatcher, 1999; Miller, 2006). Additionally, officers often show a strong need for social approval, particularly among fellow officers. To seek help or speak about personal problems or mental health concerns may make the officer appear untrustworthy and unable to live up to expectations (Mahandie & Hatcher, 1999; Miller, 2006). Unfortunately, although anecdotal evidence strongly supports these assumptions, there is little empirical evidence to back these claims. Therefore it seems as if police officer mental health concerns are similar to an iceberg, such that police suicide is tip of the iceberg, unable to be masked as well as the underlying, and often unaddressed mental health problems beneath.

Stigma

Job stress can lead not only to the poor physical and psychological health outcomes discussed above, but can also seriously impact job performance and increase turnover, absenteeism, and burnout (Shane, 2010; Tang & Hammontree, 1992). Increased negative interactions with community members can also erode trust in law enforcement and result in a loss of community support (Gershon et al., 2009). Given the negative impact job stress can have on all areas of an individual's daily life, it is important that officers have access to, and take advantage of, mental health treatment. Unfortunately, anecdotal evidence suggests that officers are reluctant to seek out mental health care and often attribute the reluctance to the stigma that exists around treatment seeking.

Stigma can broadly be defined as "an attribute that is deeply discrediting" (Goffman, 1963, p. 3). Since Goffman's original definition was published, research surrounding the concept has flourished, resulting in a wide variety of updated definitions of stigma have resulted. Link and Phelan (2001) expanded this definition, stating that stigma is contingent on five aspects: labeling, stereotyping, separation, status loss, and discrimination, all of which occur in the context of power differentials. Such conceptualization of stigma can be considered public stigma, or negative beliefs held by individuals and influence the likelihood of fear, rejection, and discrimination against those who possess the stigmatized trait (Corrigan & Penn, 1999).

From public stigma, an individual may adopt personal feelings about the stressor such as embarrassment, shame, or deviance, as well as project such feelings onto others. This combination of public- and self-stigma, which is the internalization of public stigma attitudes, resulting in lowered self-esteem and self-efficacy (Corrigan & Watson, 2002; Corrigan, Watson, & Barr; 2006) can be conceptualized as *perceived stigma* (Mickelson, 2001) and has implications for mental health outcomes and help seeking behaviors. Research supports a positive relationship between experienced stigma and poor mental health outcomes, including psychological distress, depression, and increased risk for suicide (McGarrity, Huebner, & McKinnon, 2013; Meyer, 1995; Mickelson, 2001). Additionally, a meta-analysis investigating the impact of perceived discrimination on health behaviors found a relationship between increased perceived discrimination toward unhealthy behaviors such as alcohol use, reduced medication adherence, and missed doctor's appointments (Pascoe & Richman, 2009). However, at a time when social support may be most beneficial, the same stigma can also increase an individual's fear of rejection leading to the perception that social support is not available, which can result in reduced socialization with family and friends (Mickelson, 2001). Moreover, such fear of

rejection can be associated with less effective support-seeking behavior which have been related to unsupportive responses and even rejection (Williams & Mickelson, 2008). Specifically, individuals with higher levels of perceived stigma show increased rejection sensitivity and therefore rely more on indirect means of seeking support, not involving disclosure. In turn, indirect help-seeking behavior results in rejecting behaviors from the support network, creating a paradox or, self-fulfilling prophecy (Williams & Mickelson, 2008).

Additionally, perceived stigma may couple with *anticipated stigma*, or the expectation of devaluation from others should they know about a stigmatized and concealable identity (Quinn & Chaudoir, 2009), such as a mental illness, further increasing reluctance to engage in any sort of help seeking behavior. According to Quinn and Chaudoir (2009), anticipated stigma may occur more often for individuals with a concealable identity because they are unsure how others may react once the stigmatizing identity becomes known. This may become more difficult for individuals familiar with the ways in which people devalue others who have the same identity that is currently being concealed. In this instance, as the stereotypes and stigmatization of the concealable identity become personally relevant, anticipated stigma may become stronger for the individual (Link, 1987; Link, Cullen, Struening, Shrout, & Dohrenwend, 1989) as they have witnessed the stigmatization or degradations of others (Wahl, 1999). For example, police officers may overhear fellow officers making disparaging statements about mental illness and the influence an illness can have on job ability and thus choose not to speak about mental health concerns nor seek treatment for such concerns.

Stigma of Mental Illness

Unfortunately, despite education efforts, the stigma and stereotypes surrounding individuals with mental illness still exist and are often endorsed as socially acceptable beliefs to hold (Link, 1987; Phelan, Link, Stueve, & Pescosolido, 2000). Moreover, in a comparison of public attitudes toward mental illness in 1950 and 1996, researchers found that although individuals have conceptualized mental illness to extend beyond psychoses, the perception that individuals with a mental illness are violent or frightening has drastically increased rather than decreased as expected (Phelan et al., 2000). Unfortunately, part of the stigma associated with mental illnesses is the idea that many people attribute causality to individuals with mental illness. In other words, as opposed to a physical disability, which is not viewed as being caused by the individual, those with a mental illness are held accountable for their status (Corrigan, River, et al., 2000; Mak, Chong, & Wong, 2014). Additionally, those with mental illness are often viewed as incompetent (Hayward & Bright, 1997) and uncontrollable (Mak et al., 2014). This in turn decreases acceptance and impacts behavior, such as the likelihood that an individual will seek treatment for a mental health concern.   `

Mental Health Stigma and Help Seeking. Extensive research has investigated the impact stigma may have on an individual's willingness to seek needed mental health treatment across a variety of populations. Some research supports the idea that a general, or nonspecific, labeling effect influences stigma, suggesting that regardless of the mental illness or diagnosis an individual has, stigma is more severe than for those with any other health condition (Corrigan et al., 2000) and influences how others might treat an individual with a stigmatizing condition, including a reduced likelihood to hire individuals who have been labeled mentally ill (Link, 1987). Therefore, stigma experienced by an individual with a mental illness is likely to reduce

the occurrence of help seeking behavior (Corrigan & Rüsch, 2002). Indeed, studies have found that less than 40% of those with mental health concerns seek professional help (Kessler et al., 2001) and when investigating specific disorders, as high as 70% of college students with depressive symptoms had not received any type of treatment (Herman et al., 2011). One explanation for these outcomes may be the amount of stigma experienced when individuals do engage in help seeking behaviors. For example, Ben-Porath (2002) compared samples of individuals with depression who either sought outpatient therapy or did not. Although compared to individuals with a back injury, all individuals with depression were viewed to be more emotionally unstable; those who were depressed and also sought treatment were considered to be most unstable. This presents an interesting paradox –individuals are often encouraged to seek help for mental health concerns but are then considered more unstable should they do just that. Therefore, the experience of public stigma leads to decreased help seeking, which may then be internalized as self-stigma, further decreasing the likelihood that an individual will seek treatment.

Self-Stigma of Mental Illness. Self-stigma consists of the same components as public-stigma: prejudice, stereotype, and discrimination turned inward (Corrigan & Watson, 2002). In terms of stereotype, self-stigma applies the public's negative belief about a group and applies the belief to the self (i.e., "I am weak and incompetent"). Self-prejudice than leads to a negative emotional reaction to the self and may lead to low levels of self-esteem and self-efficacy, such that an individual internalizes an attitude of failure and incompetence. Finally, self-discrimination becomes the behavioral outcome of self-prejudice, resulting in a lack of action such as failure to seek help or opportunities due to the expectation of failure.

Yet, though aware of public stigma, not everyone internalizes the stigma against them (Hayward & Bright, 1997), and may actually experience anger toward the experience of discrimination and prejudice (Deegan, 1990), increasing self-esteem in response to the experience of public stigma (Crocker & Major, 1989). This may lead to a sense of empowerment such that individuals choose to reject the stigmatizing beliefs and positive self-beliefs begin to emerge instead (Corrigan & Watson, 2000). However, the awareness of public stigma (perceived stigma), as well as the concern for experiencing discrimination (anticipated stigma), and the internalizing of attitudes against mental illness (self-stigma) work against the likelihood that an individual will seek mental health treatment, particularly in cultures or organizations that may hold negative attitudes toward mental health illness and endorse self-reliance. Police culture tends to fall within these characteristics, as the nature of the job as well as attitudes endorsed through training and work experience may influence mental health stigma and increase reluctance to seek mental health treatment.

Police Culture

Officers tend to avoid help seeking behavior (Violanti, 1995) and label those who do seek help as weak (Toch, 2002). The avoidance of help seeking is similar to reasons that may be found in the general population, and discussed above. However, due to the influence of police culture, these reasons appear to be magnified (Greenstone, 2000). Although there is a scarcity of research that investigates mental health services utilization, one study found that less than 10% of officers who endorsed symptoms of anxiety or depression sought mental health services (Berg et al., 2006).

Although there is an extremely limited amount of research investigating law enforcement's stigmatization of mental health, there is evidence of a police culture that may increase the likelihood that mental health is stigmatized within the organization. Police organizations are often characterized by a set of values and norms that are reinforced through extensive socialization (Blumenstein, Fridell, & Jones, 2012; Dempsey & Forst, 2005) and the ever present sense of danger that underlies the profession (Woody, 2005). At times, officers may adopt a "warrior" mindset such that they should be both physically and mental "tough". More specifically the warrior mindset refers to a mental resolve that should be adopted in a dangerous situation in which the officer should "survive a bad situation no matter the odds or difficulty, to not give up even when it is mentally and physically easier to do so" (Stoughton, 2015, para. 3). This intense socialization can lead to the internalization of the values and beliefs, impacting how an officer self-identifies, and in turn may influence behaviors on and off the job (Karaffa & Tochkov, 2013), including that of help seeking. Consequently the likelihood of seeking treatment for mental health concerns is sure to be impacted. For example, police culture emphasizes and encourages masculinity, or machoism, self-reliance and emotional control, and a mistrust of outsiders (Karaffa & Tochkov, 2013). To an extent, these values may be necessary for on-the-job activities in order to maintain control of often chaotic situations. However, off the job, these values can have negative implications for help seeking behavior.

A sense of self-reliance and independence may be beneficial during critical incidents when officers are expected to "fall back on their training" and personal resources (Wester & Lyubelsky, 2005). Officers internalize traditional masculine gender roles that do not allow for an individual to appear weak or vulnerable. Indeed, individuals who endorse traditional roles are more likely to endorse self-stigmatizing attitudes related to seeking professional help (Pedersen

& Vogel, 2007; Vogel, Heimerdinger-Edwards, Hammer, & Hubbard, 2011; Wester, Arndt, Sedivy, & Arndt, 2010) including a sense of failure, loss of control, and feelings of weakness (Addis & Mahalki, 2003). Entrenched within the value of self-reliance is that of emotional control. Officers are taught that to remain in control of one's emotions is to remain in control of a situation and an officer's inability to maintain emotional control may result in the suggestion that the officer is weak and not reliable for backup. (Karaffa & Tochkov, 2013). Further, officers are trained to trust themselves and other officers but to remain vigilant against "outsiders". Officers are trained to question the motives of others and to protect each other from the scrutiny of outsiders (Kappeler, Sluder, & Alpert, 1998). This can lead to secrecy, closing off, and the "blue wall of silence" (Dempsey & Forst, 2005, p. 127). This perhaps creates the greatest difficulty when discussing options for mental health care (Woody, 2005) or encouraging officers to seek treatment.

Although research suggests a general acknowledgement of the need for officers to seek stress-related mental health services, there remains a gap between acknowledgement and action (Toch, 2002). Of the limited research that has investigated reasons for this gap, concerns for confidentiality and occupational concerns top the list of restraining variables (Dowling, Moyhnihan, Genet, & Lewis, 2006). Due to the scarcity of research within this realm, research on military populations proves useful in trying to understand reasons officers may not seek treatment, as the two populations overlap somewhat due to the military training model and language used for training police officers (Lindorff, 1999). Empirical research with military populations supports anecdotal evidence provided by police officers.

A review of pertinent literature suggests that military and police populations experience similar health disparities due to job stress and the experience of traumatic events. Therefore,

research that investigates barriers to mental health care within military samples seems to be a good starting point in understanding why police officers may be reluctant to seek professional help for their own mental health concerns. Overall, when investigating reasons why military personnel may be reluctant to seek mental health treatment, stigma was overwhelming endorsed (Hoge et al., 2004; Mittal, et al., 2013; Vogt et al., 2014), as well as beliefs about mental health disorders (Vogt, 2011), feelings of failure or weakness (Warner, Appenzeller, Mullen, Warner, & Grieger, 2008), logistical issues (Oiumette et al., 2011), and fears of the impact mental health treatment may have on an individual's career opportunities (Hoge et al., 2004; Kim, Britt, Klocko, Riviere, & Adler, 2011). Of particular concern is the reluctance of individuals with diagnosable levels of mental health symptoms to seek help (Chapman et al., 2014; Hoge et al., 2004) It is expected that similar results will be found in police populations.

Current Project

Given the dearth of mental health research within police populations, including a lack of reporting and consensus of mental health disorders related to job stress, willingness to seek treatment, and barriers to seeking mental health treatment, further research is necessary to fill such gaps. Therefore, the current study seeks to obtain a prevalence of mental health symptomatology, to understand if the severity of an individual's mental health symptomatology influences the choice to seek treatment, and to investigate barriers to seeking mental health treatment. Understanding why officers may not seek mental health treatment can help inform interventions that can be applied at a departmental and training level.

Research Aims and Hypotheses

Aim 1. To gain an understanding of the current prevalence rates of symptoms psychological disorders in the study sample. There is no hypothesis for this aim because it is descriptive.

Aim 1.1: Determine the prevalence rate for the presence of any psychological disorder.

Aim 1.2: Determine the prevalence rate for the presence of PTSD.

Aim 1.3: Determine the prevalence rate for the presence of depression and/or anxiety.

Aim 1.4: Determine the prevalence rate for the presence of alcohol abuse.

Aim 2. To understand whether participants who endorse symptoms of psychological disorders are more or less willing to seek treatment. It is hypothesized that LEOs who show diagnosable levels of depression, anxiety, PTSD, or alcohol abuse will be less likely to endorse a willingness to seek treatment.

Aim 2.1 To determine moderators that may increase officer reluctance to seek treatment.

Aim 2.2 To determine moderators that may increase officer willingness to seek treatment.

Aim 3. To create a model of barriers to treatment seeking in a police population.

Aim 3.1 To understand individual factors that influence barriers to treatment.

CHAPTER 3

METHOD

Participants

Participants ($N = 306$) were recruited through a variety of methods, including recruitment

from local law enforcement departments throughout East Tennessee and online recruitment.

Online recruitment was completed via "cold-calling" police departments throughout the United

States, however, the departments that were willing to participate were mainly located within the

Southeast region of the US. In addition, advertisements for the study were posted on various

social media outlets, including Facebook and Instagram. A total of nine local agencies were

invited to participate in the survey, four departments accepted. A total of 191 sworn officers

invited to respond to the survey packets. The response rate for paper and pencil surveys was

42.8% (80 responses). The remainder of the sample was from online recruitment. A grand total

of 310 individuals attempted the survey. Four participants' data were deleted due to a majority of

responses missing.

The sample was predominately male ($n = 267$; 87%). Ages of participants ranged from

22-69 years ($M = 39.6$; $SD = 9.14$). The sample was also majority White/Caucasian ($n = 273$;

89.2%). Seventeen participants identified as Black/African American (5.6%). The largest

proportion of the sample endorsed having a bachelor's degree ($n = 132$; 43.1%), with the next

highest percentage being participants who had some college experience ($n = 57$; 18.6%). About

64% of the sample was married ($n = 195$), 52 were single (17%), 29 were divorced (9.5%), 15

were cohabitating (4.9%), and 6 were in a long-term relationship (2%).

A large portion of the sample were ranked as patrol officers ($n = 129$; 42.2%). However, all ranks up to deputy chief were represented. Additionally, the majority of officers who responded to the study worked for a municipality ($n = 235$; 76.8%). County, or Sheriff's offices, represented 19% of the sample ($n = 59$), state police accounted for .7% ($n = 2$), and 2.6% accounted for college or university police ($n = 8$). Finally, the majority of officers in the sample worked a rotating, or swing, shift ($n = 210$; 68.6).

Procedure

Data were collected using either an online research software (Checkbox) or through pencil and paper packets. Data collection took place between May 2016 – August 2016. Local law enforcement agencies provided responses to the questionnaires using the paper packets. Packets were brought to each department and disseminated. Officers were instructed to fill out the packets and bring the sealed packets back to the department where packets were held in a safe location for pick up. In order to maintain confidentiality, only the contact person from each department and myself collected the packets which remained sealed until in my possession. Online participants were provided with the survey link and conveyed their consent by proceeding to the questions. I was the only individual with access to the responses for online participants. To ensure anonymity for all participants, no identifying questions were asked (e.g., department, location, name, etc.). Furthermore, participants were free to skip any questions they were not comfortable answering. Participants were given the option to enter their name and contact information separately from their survey answers in order to be entered into a drawing for a Visa gift card.

Measures

Demographics

Demographic information including age, ethnicity, marital status, rank, and years as an officer was collected. A copy of this questionnaire can be found in Appendix A.

PTSD

Symptoms of PTSD was measured using the PTSD Checklist – Civilian for DSM-IV (PCL-C; Weathers, Litz, Huska, & Keane, 1994). The scale is derived from the symptom criteria of the DSM-IV, and is a 20-item self-report checklist of symptoms (e.g., *In the past month, how much were you been bothered by: "Repeated, disturbing, and unwanted memories of the stressful experience?"*). Participants respond to each question using a Likert scale ranging from 0 (*"Not at all"*) to 4 (*"Extremely"*). Responses were summed such that higher scores reflect higher symptoms of PTSD ($M = 10.66$; $SD = 15.13$; $\pm = .967$). The cut score for a diagnosis of PSTD within a civilian sample is recommended at e 38. Twenty-seven (8.8%) individuals met said criteria. The PCL is one of the most often used measure to assess for symptoms of PTSD and multiple studies have been conducted to support the validity and reliability of the measure in a variety of populations (Chiu et al., 2011; Conybeare, Behar, Soloman, Newman, & Borkovec, 2012; Wilkins, Lang, & Norman, 2011). A copy of this measure can be found in Appendix B.

Depression

Depressive symptoms were measured using the Patient Health Questionnaire (PHQ-9; Spitzer, Kroenke, & Williams, 1999). The measure is made up of 9 Likert scale questions. Participants were asked to respond to statements describing how they might have felt within the

past two weeks (e.g., *"Little interest or pleasure in doing things"; "Feeling tired or having little energy"*). Responses ranged on a scale from 0 (*Not at all*) to 3 (*Nearly every day*). Scores were summed such that higher scores represent more depressive symptoms ($M = 4.53$; SD $= 5.36$; $\pm =$ .909). The measure was created for use in a clinical setting as a screening tool (Kung et al., 2013; Spitzer et al., 1999), and a cut point ≥ 10 is considered diagnosable of depressive disorder (Spitzer et al., 1999). Forty-eight participants (15.7%) met the cut point criteria within the current sample. Studies have shown the measure to be reliable and valid for use with general populations (Kocalevent, Hinz, & Brähler, 2013; Thibodeau & Asmundson, 2014). In a study comparing the PHQ-9 to the longer, but also popular Beck Depression Inventory-II, researchers found the two scales to be highly correlated and easily interchangeable (Kun et al., 2013). Furthermore, a comparison of the PHQ-9 to other short and widely used depression measures (i.e., CESD-10 and PROMIS), showed no significant differences between the measures and acceptable validity and reliability (Amtmann et al., 2014). A copy of this questionnaire can be found in Appendix C.

Anxiety

Symptoms of anxiety were measured with the Generalized Anxiety Disorder Scale (GAD-7; Spitzer, Kroenke, Williams, & Löwe, 2006). The scale is made up of 7 self-report items. Participants responded to a checklist of symptoms they may have experienced within the previous two weeks (e.g., *"Feeling nervous, anxious, or on edge"; "Becoming easily annoyed or irritable"*) using a Likert scale ranging from 0 (*Not at all*) to 3 (*Nearly every day*). Scores were summed such that higher scores represent more symptoms of generalized anxiety disorder (GAD) ($M = 4.11$; $SD = 4.98$; $\pm =$ .926). In a clinical sample, scores ≥ 10 are considered a cut point for diagnosing GAD (Spitzer et al., 2006). Although this measure was created as a quick

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and easily available means to diagnose GAD in a clinical setting, research has shown the

measure to be valid and reliable for use in general populations, as well (Löwe et al., 2008).

Forty-seven participants (15.4%) met or exceeded the recommended cut point for diagnosis in

the current sample. A copy of this scale can be found in Appendix D.

Alcohol Use

In order to assess for problem alcohol use the Alcohol Use Disorders Identification Test –

Consumption (AUDIT-C), a shortened version of the traditional 10-item AUDIT created by the

World Health Organization was employed. The AUDIT-C is used to screen for indictors of

alcohol use and dependence, but due to its shortened nature, is easier to administer in settings

that may not allow for the amount of time needed for the full length version (Meneses-Gaya et

al., 2010). The AUDIT-C uses the first three questions found on the full length version (i.e.,

"How often do you have a drink containing alcohol?"; "How many standard drinks containing

alcohol do you have on a typical day?"; "How often do you have six or more drinks on one

occasion"). Each question has five answer choices and scored from 0 points to 4 points and total

scores can range from 0-12. Higher scores reflect more problem alcohol use. More specifically, a

positive identification for problem drinking is a score of 4 or more for males and a score of 3 or

more for women. Studies supporting the validity of AUDIT-C have been conducted within

general populations (Aalto, Alho, Halme, & Seppä, 2009; Dawson, Grant, Stinson, & Zhou,

2005; Reinert & Allen, 2002), as well as within military samples (Crawford, Fulton, Swinkels,

Beckham, & Calhoun, 2013). Moreover, the AUDIT-C has been compared to the full-length

version of the AUDIT, as well as other shortened versions of the same measure and has been

shown to be just as efficient, if not better, at detecting significant levels problem drinking

(Meneses-Gaya et al., 2010). Within the current sample the scores ranged between 0 and 10 (M=

2.32; SD = 2.04; ±= .613). Among male participants, 70 (26.2%) met the criteria for problem

drinking. Additionally, among female participants, 12 (34.3%) met the criteria for problem

drinking. A copy of this measure can be found in Appendix E.

Willingness to Seek Care

Participants' willingness to seek care for mental health issues was assessed through the

use of scenarios that were followed with two questions "*How strongly do you agree the person in*

the scenario should seek help for mental health concerns" (should you questions) and "*Imagine*

you are the person in the scenario, how strongly do you agree that you would seek help for

mental health concerns" (would you questions). Three scenarios were created and varied in

necessity of help seeking behavior (e.g., potential problem drinking vs. suicidality). Responses

ranged from 1 (*Strongly Disagree)* to 5 (*Strongly Agree*). "Should You" and "Would You"

responses were average across the three scenarios for an average score for "Should You" (*M* =

4.28; *SD* = 1.08; ±= .751) and an average score of "Would You" (*M* = 4.07; *SD* = .77; ±= .707).

Higher scores are reflective of higher levels of agreement for seeking treatment. A copy of this

measure can be found in Appendix F.

Department Cohesion

Department cohesion was measured using an adapted measure used by Mitchell,

Gallaway, Millikan, & Bell (2012) for a study investigating the influence of unit cohesion on

military suicides. The measure consists of three questions beginning with the same stem: "*The*

members of my department…" with the following questions "*…cooperate with each other*.";

"*…know they can depend on each other*."; "*…stand up for each other*." Participants responded

using a Likert scale ranging from 0 (*Strongly Disagree*) to 4 (*Strongly Agree)*. Responses were

summed so that higher scores reflect higher levels of department cohesion (*M*= 10.86; *SD* = 2.86; ± = .898). A copy of this measure can be found in Appendix G.

Unit Support

Unit support was measured using an adapted version of Deployment Social Support (King, King, Vogt, Knight, & Samper, 2006). Part of a larger inventory of measures to assess risk and resilience during military deployment, the measure was adapted to reflect terminology related to police departments (e.g., "shift" rather than "unit"). The measure consists of 14 questions to assess the extent participants feel they are supported, encouraged, and assisted from supervisors and fellow officers. Questions are answered on a 5-point Likert scale (1 = *Strongly Disagree*; 5 = *Strongly Agree*). Responses were summed so that higher scores reflect higher levels of perceived support (*M* = 49.69; *SD* = 15.64; ± = .943). The measure is used in Veteran's Affairs setting, as well as by researchers, and has been shown to be valid and reliable (King et al., 2006; Vogt et al., 2013). A copy of this measure can be found in Appendix H.

Barriers to Care

Barriers to care was assessed using an adapted version of Perceived Stigma and Barriers to Seeking Mental Health Services (Hoge et al., 2004). Originally created for use within military populations, the measure was adapted to reflect terminology used within police departments. The measure consists of 15 questions that assess both logistical barriers to treatment (e.g., *"I don't have adequate transportation"*) as well as issues surrounding treatment (e.g., *"I don't trust mental health professionals").* Responses to each question can range from 1 (*Strongly Disagree*) to 5 (*Strongly Agree*). Responses are summed so that higher scores suggest increased barriers to care (*M* = 35.99; *SD* = 13.38; ± = .904). The measure is highly cited within military research and

has been shown to be valid and reliable (Chapman et al., 2014). A copy of this measure can be found in Appendix I.

Stigma

In order to assess for stigma that may increase reluctance to seek care, the Endorsed and Anticipated Stigma Inventory (EASI; Vogt et al., 2014) will be used. The measure was originally created to provide a validated measure for use in a military population addresses several areas that might influence an individual's desire to seek treatment. The measure consists of several subscales that address endorsed stigma: personal beliefs about mental illness (e.g., *"People will mental health problems cannot be counted on"*) and mental health treatment (*"Medications for mental health problems are ineffective"*), as well as anticipated stigma from loved ones (e.g., *"If I had a mental health problem and friends and family knew about it, they would see me as weak."*) and coworkers (e.g., *"If I had a mental health problem and people at work knew about it, my career/job options would be limited"*). Each domain of the inventory consists of 8 items, in which participants respond on a Likert scale ranging from 1 (*Strongly Disagree*) to 5 (*Strongly Agree*). All responses are summed so that higher scores indicate higher levels of endorsed and anticipated stigma. The domains included were Family (EASI-Family; *M* = 18.59; *SD* = 7.57; ± = .958), Treatment Beliefs (EASI-TX; *M* = 19.23; *SD* = 5.18; ±= .851), Mental Health Beliefs (EASI-MHBELIEF; *M* = 19.63; *SD* = 5.25; ±= .848), Health Seeking (EASI-SEEKING; *M* = 25.26; *SD* = 7.57; ± = .907), and Work (EASI-WORK; *M* = 25.68, *SD* = 7.26; ±*.936*). Additionally, a total score was computed, as well (EASI-TOTAL; *Range* = 41 – 182; *M* = 108.40; *SD* = 25.05; ±= .951) A copy of this measure can be found in Appendix J.

Social Desirability

In order to assess social desirability, a shortened, 13-item version of the Marlowe-Crowne Social Desirability Scale created by Reynolds (1982) was used. The measure is made up of statements to which participants respond with a true or false answer. Items answered in a manner endorsing social desirability are scored and scores can range from 0-13 such that higher scores reflect high social desirability ($M = 7.8$; $SD = 3.23$; $\pm = .724$). The shorter version has been validated in several populations (Fischer & Flick, 1993; Reynolds, 1982), including a police population (Greenberg & Weiss, 2012). A copy of this measure can be found in Appendix K.

Police Culture

Police culture was assessed using a short, 6-item measure created by Karaffa and Tochkov (2013). Using a 5-point Likert scale (1 = *strongly disagree;* 5 = *strongly* agree), the measure assessed various components of police culture such as bravery ("*Police officers should be brave and prove themselves in dangerous situations*") and emotion control ("*Police officers should always remain in control of their emotions*"). Scores were summed such that higher scores reflect stronger endorsement of police culture traits ($M = 14.66$; $SD = 5.19$; $\pm = .601$). A copy of this measure can be found in Appendix L.

CHAPTER 4

RESULTS

Bivariate Correlations

Tables 1 – 6 show the correlation matrixes for the outcome variables, "should you" and "would you", and the predictor variables. Statistically significant correlations are noted within the table.

Table 1

Correlations Between Outcome Variables and Mental Health Variables

Variables	1	2	3	4	5	6	7
1. SHOULD-YOU	--	.655*	.348*	.166*	0.063	-0.029	0.026
2. WOULD-YOU		--	.173*	-0.092	-0.068	-0.072	-0.035
3. DESIRABILITY			--	0.056	-.148*	-.136*	-.195*
4. AUDIT				--	.187*	.185*	.211*
5. PHQ					--	.802*	.780*
6. PCL-C						--	.773*
7. GAD							--

Note: SHOULD-YOU; WOULD-YOU = Treatment Seeking Questionnaire;
DESIRABILITY = Marlowe-Crowne Social Desirability Scale; AUDIT = Alcohol
Use Disorders Identification Test; PHQ = Patient Health Questionnaire; PCL-C =
PTSD Checklist - Civilian Version; GAD = Generalized Anxiety Disorder 7-item Scale
*Significant at or beyond $p < .05$.

Table 2

Correlations Between Outcome Variables and Organizational and Demographic Variables

Variables	1	2	3	4	5	6	7	8	9
1. SHOULD-YOU	--	.655*	.497*	.335*	.209*	.375*	0.064	0.114	0.06
2. WOULD-YOU		--	.207*	-.145*	0.115	0.024	0.089	0.116	0.031
3. UNIT SUPPORT			--	.40*	.447*	.314*	-.158*	-0.097	-.121*
4. CULTURE				--	.120*	.448*	-.161*	-.185*	-0.115
5. COHESION					--	.130*	-.124*	-0.078	-0.042
6. AGE						--	.595*	.510*	-.135*
7. LEO-LENGTH							--	.867*	0.026
8. DEPT-LENGTH								--	0.061
9. DEPT-SIZE									--

Note: SHOULD-YOU; WOULD-YOU = Treatment Seeking Questionnaire; UNIT SUPPORT =
Deployment Social Support; CULTURE = Police Culture Questionnaire; COHESION = Unit Cohesion
*Significant at or beyond $p < .05$.

Table 3

Correlations Between Outcome Variables and Barriers to Treatment Variables

Variables	1	2	3	4	5	6	7	8	9
1. SHOULD-YOU	--	.655*	.232*	-.089	-.232*	-.187*	-.192*	-.124*	-.208*
2. WOULD-YOU		--	-.271*	-.198*	-.272*	-.422*	-.287*	-.340*	-.406*
3. BARRIERS			--	.466*	.309*	.485*	.302*	.467*	.550*
4. EASI-WORK				--	.306*	.408*	.327*	.569*	.717*
5. EASI-TX					--	.553*	.700*	.378*	.724*
6. EASI-SEEKING						--	.559*	.541*	.815*
7. EASI-MHBELIEF							--	.411*	.743*
8. EASI-FAMILY								--	.795*
9.EASI-TOTAL									--

Note: SHOULD-YOU; WOULD-YOU = Treatment Seeking Questionnaire; BARRIERS = Percived Stigma and Barriers to Seeking Mental Health Services; EASI-WORK; TX; SEEKING; MHBELIEF; FAMILY; TOTAL = Endorsed and Anticipated Stigma Inventory (Subscales: Anticipated Stigma from Work; Family; Personal Beliefs about Mental Health, Treatment, and Treatment Seeking).

*Significant at or beyond $p < .05$.

Table 4

Correlations Between Mental Health Variables and Organizational and Demographic Variables

Variables	1	2	3	4	5	6	7	8	9	10	11	12
1. DESIRE	--	0.056	-.148*	-.136*	-.195*	.410*	.388*	.134*	.373*	-.087	-.073	-.019
2. AUDIT		--	.187*	.185*	.211*	.139*	.261*	.088	.136*	-.084	-.059	.042
3. PHQ			--	.802*	.780*	-.140*	.154*	-.204*	.026	.065	-.042	-.015
4. PCL-C				--	.773*	-.149*	.190*	-.248*	.055	0.105	.006	-.062
5. GAD					--	-.154*	.187*	-.242*	-.023	.045	-.007	-.066
6. UNIT SUPPORT						--	.401*	.447*	.314*	-.158*	-.097	-.121
7. CULTURE							--	.120*	.448*	-.161*	.185*	-.115
8. COHESION								--	.130*	-.124*	-.078	-.042
9. AGE									--	.595*	.510*	-.135*
10. LEO-LENGTH										--	.867*	.026
11. DEPT-LENGTH											--	.061
12. DEPT-SIZE												--

Note: DESIRE = Marlowe-Crowne Social Desirability Scale; AUDIT = Alcohol Use Disorders Identification Test; PHQ = Patient Health Questionnaire; PCL-C = PTSD Checklist Civilian Version; GAD = Generalized Anxiety Disorder 7-item Scale; UNIT SUPPORT = Deployment Social Support; CULTURE = Police Culture Questionnaire; COHESION = Unit Cohesion Questionnaire

*Significant at or beyond $p < .05$.

Table 5

Correlations Between Barriers to Care Variables and Organizational and Demographic Variables

Variables	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1. UNIT SUPPORT	--	.401*	.441*	.314*	-.15*	-.097	-.121*	.100	-.232*	-.085	-.105	-.0085	-.148*	-.179*
2. CULTURE		--	.120*	.448*	-.161*	-.185*	-.115	.543*	.147*	.113*	.247*	.154*	.190*	.231*
3. COHESION			--	.130*	-.124*	-.078	-.042	-.133*	-.157*	.003	.022	-.014	-.056	-.058
4. AGE				--	.595*	.510*	-.135*	.252*	-.032	-.178*	-.115	-.160*	.044	-.101
5. LEO-LENGTH					--	.867*	.026	-.104	.028	-.199*	-.212*	-.180*	.023	-.128*
6. DEPT-LENGTH						--	.061	-.185*	-.060	-.193*	-.209*	-.181*	-.008	-.160*
7. DEPT-SIZE							--	-.124*	.050	-.164*	-.172*	-.145*	-.049	-.116
8. BARRIERS								--	.466*	.309*	.485*	.302*	.467*	.550*
9. EASI-WORK									--	.306*	.408*	.327*	.569*	.717*
10. EASI-TX										--	.553*	.700*	.378*	.724*
11. EASI-SEEKING											--	.559*	.541*	.815*
12. EASI-MHBELIEF												--	.411*	.743*
13. EASI-FAMILY													--	.795*
14.EASI-TOTAL														--

Note: UNIT SUPPORT = Deployment Social Support; CULTURE = Police Culture Questionnaire; COHESION = Unit Cohesion Questionnaire; BARRIERS = Percived Stigma and Barriers to Seeking Mental Health Services; EASI-WORK; TX; SEEKING; MHBELIEF; FAMILY; TOTAL = Endorsed and Anticipated Stigma Inventory (Subscales: Anticipated Stigma from Work; Family; Personal Beliefs about Mental Health, Treatment, and *Significant at or beyond $p < .05$.

Table 6

Correlations Between Barriers to Treatment Variables and Mental Health Variables

Variables	1	2	3	4	5	6	7	8	9	10	11	12
1. DESIRE	--	0.056	-.148*	-.136*	-.195*	.138*	-.146*	-.143*	-.153*	-.100	-.146*	-.183*
2. AUDIT		--	.187*	.185*	.211*	.255*	.110	.070	.162*	.086	.064	.133*
3. PHQ			--	.802*	.780*	.380*	.245*	.053	.138*	.033	.228*	.200*
4. PCL-C				--	.773*	.356*	.227*	.047	.134*	.058	.257*	.206*
5. GAD					--	.379*	.197*	.060	.183*	.078	.208*	.204*
6. BARRIERS						--	.466*	.309*	.485*	.302*	.467*	.550*
7. EASI-WORK							--	.306*	.408*	.327*	.569*	.717*
8. EASI-TX								--	.553*	.700*	.378*	.724*
9. EASI-SEEKING									--	.559*	.541*	.815*
10. EASI-MHBELIEF										--	.411*	.743*
11. EASI-FAMILY											--	.795*
12.EASI-TOTAL												--

Note: DESIRE = Marlowe-Crowne Social Desirability Scale; AUDIT = Alcohol Use Disorders Identification Test; PHQ = Patient Health Questionnaire; PCL-C = PTSD Checklist Civilian Version; GAD = Generalized Anxiety Disorder 7-item Scale; BARRIERS = Percived Stigma and Barriers to Seeking Mental Health Services; EASI-WORK; TX; SEEKING; MHBELIEF; FAMILY; TOTAL = Endorsed and Anticipated Stigma Inventory (Subscales: Anticipated Stigma from Work; Family; Personal Beliefs about Mental Health, *Significant at or beyond $p < .05$.

Aim 1

The purpose of Aim 1 was to understand the current prevalence rates of psychological disorder symptomatology within the study sample. In order to assess this aim, descriptive statistics were computed using SPSS version 23. Means, standard deviations, minimum, and maximum values for the mental health variables can be found in Table 7.

Table 7

Descriptive Statistics of Mental Health Variables and Outcome Variables

Variable	Min.	Max.	M	SD
AUDIT	0	10	2.32	2.04
PHQ	0	25	4.53	5.36
PCL-C	0	68	10.66	15.13
GAD	0	20	4.11	4.98
SHOULD	0	5	4.28	1.08
WOULD	1	5	4.07	0.77

Of particular interest to the current study was to examine prevalence rates of PTSD, anxiety, depression, and problematic alcohol use within a law enforcement sample. Table 8 shows the number of participants who reported at clinical cut-off levels for any disorder. Of the entire sample, 82 (26.8%) participants reported problematic alcohol use. Furthermore, 39.2% reported at least one disorder, and of those participants, 15% of the entire sample reported two or more disorders. Across both males and females, problematic alcohol use was reported most often (Males = 70 (26.2%); Females = 12 (34.3%)). Furthermore, comorbidities were also investigated among the sample. Table 9 shows the proportion of males and females who reported one, two, three, or four disorders. One hundred and two (38.25%) male participants and 18 (51.5%) female participants reported at least one disorder, of those participants, 37 (13.9%) males and 9 (25.8%) females reported two or more disorders.

Table 8

Number of Participants Reporting Any Disorder

Variable	Male (%)	Female (%)	Total (%)
AUDIT	70 (26.2)	12 (34.3)	82 (26.8)
PHQ	40 (15)	8 (22.9)	48 (15.7)
PTSD	23 (8.6)	4 (11.4)	27 (8.8)
GAD	37 (13.9)	10 (48.6)	47 (15.4)

Table 9

Participant Comorbidity

Number of Disorders Reported	Male (%)	Female (%)	Total (%)
1	65 (24.3)	9 (25.7)	74 (24.3)
2	15 (5.6)	3 (8.6)	18 (5.9)
3	13 (4.9)	5 (14.3)	18 (5.9)
4	9 (3.4)	1 (2.9)	10 (3.3)
Totals	102 (38.2)	18 (51.5)	120 (39.3)

As a means of assessing for which disorders were comorbid more often, a principal components analysis was run. Figure 1 shows the scree plot of the analysis and Table 10 shows the component variance. Eighty-nine percent of the variance can be accounted for by two factors. Table 11 shows the structure matrix, in which AUDIT loads onto one factor by itself, while PHQ, PTSD, and GAD load onto the second factor together. Based on this, as well as the high correlations between PHQ, PTSD, and GAD, I did not find it necessary to run an analysis to assess which disorders were comorbid with each other. However, Table 12 shows the number of participants who met clinical criteria for *any* PTSD, PHQ, or GAD cutoff scores *and* met the clinical criteria for problematic drinking on the AUDIT. Of the male participants, 70 met the criteria for problematic alcohol use and of that subsample, 17 (24.3%) met the cutoff criteria for at least one of the other disorders (i.e., PTSD, PHQ, and/or GAD). For female participants, 12 met the criteria for problematic alcohol use. Of that subsample, 4 (33.3%) met the cutoff criteria for at least one of the other disorders.
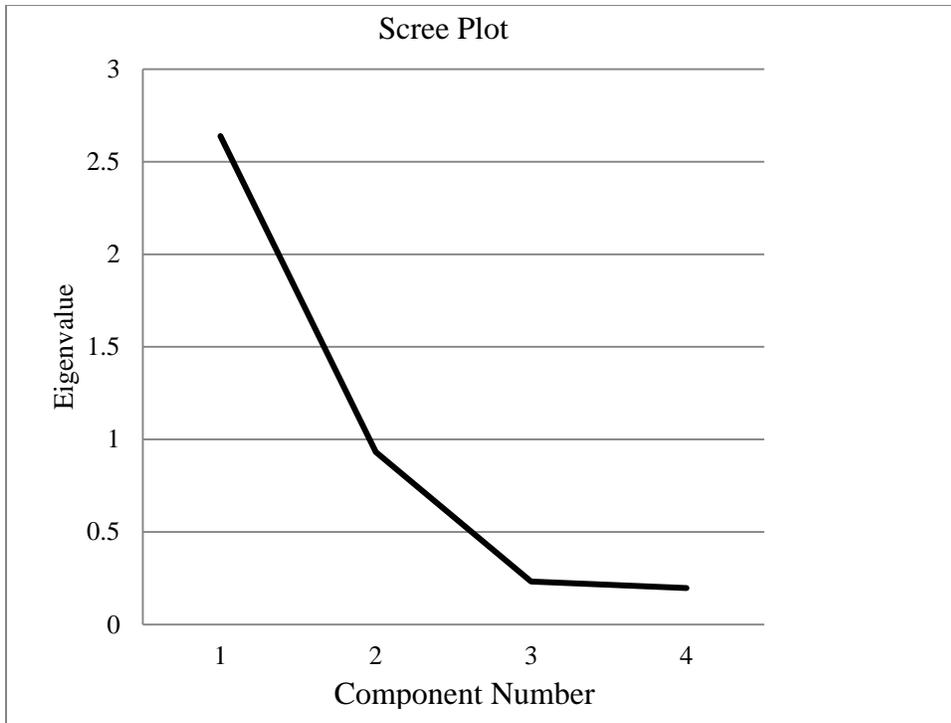
Figure 1. Scree Plot for Mental Health Principal Components Analysis

Table 10

Component Variance for AUDIT, PHQ, PTSD, and GAD

	Initial Eigenvalues		
Component	Total	% of Variance	Cumulative %
1	2.639	65.97	65.97
2	0.932	23.296	89.267
3	0.232	5.805	95.072
4	0.197	4.928	100

Table 11

Structure Matrix for AUDIT, PHQ, PTSD, and GAD

	Component	
Variable	1	2
AUDIT	0.209	1
PHQ	0.931	0.184
PTSD	0.928	0.181
GAD	0.918	0.216

Table 12

Participants Who Meet Clinical Criteria for any PTSD, PHQ, or GAD, AND AUDIT

Number of Disorders Reported (PTSD, PHQ, GAD)	Male (%)	Female (%)	Total (%)
1	9 (12.9)	1 (8.3)	10 (12.2)
2	3 (8.6)	2 (16.7)	5 (6.1)
3	5 (14.3)	1 (8.3)	6 (7.3)
Totals	17 (24.3)	4 (33.3)	21 (25.6)

Note: Total N = 82 (F = 12)

Aim 2

The overall goal of Aim 2 was to understand the willingness of participants to seek treatment given that they experience mental health issues or endorse diagnosable levels of depression, anxiety, PTSD, or alcohol abuse. As research conducted with military populations has found that individuals who endorse experiencing symptoms of psychological disorders are least likely to endorse a willingness to seek treatment (Dingfelder, 2009; Hoge et al., 2004; Warner, Appenzeller, Mullen, Warner, & Greiger, 2008), I hypothesized that I would find similar results in the law enforcement population: as the presence of psychological disorder symptoms increase, willingness to seek treatment will decrease. The outcome variable assessed for a differences between an officer's recognition that treatment should be sought given various scenarios ("should you") versus their overall willingness to seek treatment should they be the individual experience symptoms of mental health concerns ("would you"). A paired samples t-test was run using SPSS in order to assess for significance between the two responses in treatment seeking. The difference was statistically significant ($t = 11.440$; $p < .001$). Additionally, Cohen's d was computed in order to examine the effect size of the mean difference. The SD of the change scores was used to calculate the effect size and show that there was a medium effect size between "should you" and "would you" ($d = .668$).

Due to the non-perfect correlation ($r = .655$) between "would you" and "should" two separate moderation regressions were run for each dependent outcome, as it was assumed that different relationships would exist between each outcome and the predictor variables. For both models, all mental health variables (i.e., PTSD, depression, anxiety, and alcohol use) and their interactions were entered first. Next, I tested for moderators of the relationship between symptoms of psychological disorders and willingness to seek treatment. Again, two moderated regression models were fit to the data using SPSS for the two dependent variables - "should you" and "would you". For each outcome variable, two models were run. Model one included the mental health variables and their interactions as tested in the baseline model as well as organizational variables (i.e., police culture, unit support, and department cohesion). The change in R^2 and the F change test statistic was compared to the "baseline" model (i.e., the previously tested model) to assess if the addition of variables was significant. Next, I entered the mental health variables and the organizational variables from model 1 and a block of pairwise interactions between mental health and organizational variables. Again, the change in R^2 and the F change test statistic was used in order to assess for the significance of the addition of the block of interaction variables conditional on the mental health and organizational variables being included in the model. Due to anticipated collinearity, there was no expectation that the individual effects would add much to the interpretation of the overall model, therefore, individual coefficients were not interpreted and block testing was done to understand which sets of variables (organizational vs. mental health) may be more influential to the outcome of willingness to seek treatment.

"Should You"

The first model including the mental health variables and their interactions was statistically significant (F = 2.734; p = .003); however, the variance explained with the mental health variables was relatively small (R^2 = .054). The second model with the addition of the organizational variables was statistically significant (R^2 = .292; F = 10.605; p < .001) and significantly added to the overall model, as well (R^2 change = .237; F change = 33.785; p < .001), suggesting that organizational variables are stronger predictors of LEOs willingness to suggest a need to seek treatment than mental health predictors. Finally, the addition of the block of interactions between mental health variables and organizational variables increased the overall variance that was explained (R^2 = .415), and also significantly added to the overall model (R^2 change = .141; F change = 6.080; p < .001). Table 13 includes the regression results.

"Would You"

The overall "would you" model did not explain a statistically significant proportion of variance (R^2 = .006; F = 1.162; p = .317) in the first model. However, the addition of the organizational variables made the model statistically significant, but the amount of variance explained was small (R^2 = .084; F = 3.052; p < .001) Moreover, the change in R^2 was statistically significant (R^2 change = .085; F change = 9.017; p < .001). Finally, the addition of the block of interactions between mental health variables and organizational variables increased the overall variance explained but was not statistically significant. Table 14 shows the regression results for the "would you" model.

Table 13

Regression Results for "Should"

Model 1				
Variable	B	SE	t	*p*
AUDIT	0.096	0.032	2.978	.003*
PHQ	0.047	0.024	1.966	0.05
PTSD	-0.010	0.009	-1.117	0.265
GAD	-0.002	0.022	-0.111	0.912
PTSDXPHQ	-0.002	0.001	-1.247	0.213
PTSDXGAD	-0.001	0.002	-0.757	0.449
PTSDXAUDIT	0.001	0.004	0.167	0.868
PHQXGAD	0.007	0.004	1.571	0.117
PHQXAUDIT	0.003	0.009	0.325	0.745
GADXAUDIT	-0.019	0.011	-1.741	0.083
Model 2				
AUDIT	0.034	0.029	0.063	0.246
PHQ	0.038	0.021	0.19	0.062
PTSD	-0.008	0.008	-0.115	0.293
GAD	0.007	0.019	0.033	0.707
PTSDXPHQ	-0.001	0.001	-0.178	0.274
PTSDXGAD	-0.002	0.001	-0.222	0.166
PTSDXAUDIT	-0.001	0.003	-0.024	0.796
PHQXGAD	0.009	0.004	0.345	0.021*
PHQXAUDIT	0.005	0.008	0.060	0.479
GADXAUDIT	-0.012	0.01	-0.112	0.223
UNIT	0.030	0.004	0.439	0.000*
CULTURE	0.270	0.012	-0.130	0.023*
COHESION	0.002	0.021	0.005	0.935
Model3				
AUDIT	0.052	0.027	1.910	0.057
PHQ	0.015	0.02	0.727	0.468
PTSD	0.001	0.008	0.118	0.906
GAD	0.001	0.02	0.041	0.967
PTSDXPHQ	-0.001	0.001	-0.943	0.346
PTSDXGAD	-.002	0.001	-1.348	0.179
PTSDXAUDIT	0.002	0.003	0.482	0.630
PHQXGAD	0.007	0.004	1.800	0.073
PHQXAUDIT	0.003	0.008	0.363	0.717
GADXAUDIT	-0.017	0.01	-1.840	0.067
UNIT	0.014	0.005	2.967	0.003*
CULTURE	-0.002	0.012	-0.172	0.864
COHESION	0.037	0.022	1.653	0.099
PHQXCOHESION	-0.007	0.007	-0.905	0.366
PHQXCULTURE	0.001	0.005	0.177	0.860
PHQXUNIT	-0.004	0.002	-1.792	0.074
PTSDXCOHESION	0.004	0.003	1.439	0.151
PTSDXCULTURE	0.001	0.002	0.410	0.682
PTSDXUNIT	0.000	0.001	0.416	0.677
GADXCOHESION	0.001	0.006	0.168	0.867
GADXCULTURE	-0.001	0.003	-0.305	0.761
GADXUNIT	0.000	0.001	0.155	0.877
AUDITXCOHESION	0.012	0.011	1.047	0.296
AUDITXCULTURE	-0.011	0.006	-1.838	0.067
AUDITXUNIT	-0.010	0.002	-4.167	0.000

*Significant at or beyond *p* < .05.

Table 14

Regression Results for "Would"

Model 1				
Variable	B	SE	t	*p*
AUDIT	-0.036	0.024	-1.469	0.143
PHQ	-0.013	0.018	-0.738	0.461
PTSD	0.004	0.007	0.655	0.513
GAD	0.013	0.016	0.820	0.413
PTSDXPHQ	-0.001	0.001	-0.682	0.496
PTSDXGAD	-0.002	0.001	-1.534	0.126
PTSDXAUDIT	0.000	0.003	-0.175	0.861
PHQXGAD	0.005	0.003	1.519	0.130
PHQXAUDIT	0.004	0.007	0.679	0.498
GADXAUDIT	-0.008	0.008	-1.014	0.312
Model 2				
AUDIT	-0.033	0.024	-1.371	0.171
PHQ	-0.013	0.017	-0.770	0.442
PTSD	0.007	0.006	1.148	0.252
GAD	0.024	0.016	1.520	0.130
PTSDXPHQ	-0.001	0.001	-0.795	0.427
PTSDXGAD	-0.002	0.001	-1.908	0.057
PTSDXAUDIT	-0.001	0.003	-0.247	0.805
PHQXGAD	0.006	0.003	1.978	0.049*
PHQXAUDIT	0.005	0.006	0.737	0.461
GADXAUDIT	-0.010	0.008	-1.256	0.210
UNIT	0.015	0.004	3.689	0.000*
CULTURE	-0.035	0.010	-3.364	0.001*
COHESION	0.018	0.019	0.920	0.359
Model3				
AUDIT	-0.024	0.025	-0.984	0.326
PHQ	-0.012	0.018	-0.673	0.502
PTSD	0.009	0.007	1.208	0.228
GAD	0.015	0.018	0.807	0.421
PTSDXPHQ	-0.001	0.001	-0.838	0.403
PTSDXGAD	-0.002	0.001	-1.691	0.092
PTSDXAUDIT	0.001	0.003	0.498	0.619
PHQXGAD	0.006	0.004	1.509	0.133
PHQXAUDIT	0.003	0.007	0.364	0.716
GADXAUDIT	-0.010	0.009	-1.130	0.260
UNIT	0.015	0.004	3.455	0.001*
CULTURE	-0.037	0.011	-3.356	0.001*
COHESION	0.018	0.021	0.859	0.391
PHQXCOHESION	-0.001	0.007	-0.122	0.903
PHQXCULTURE	0.007	0.005	1.391	0.166
PHQXUNIT	-0.002	0.002	-0.920	0.358
PTSDXCOHESION	-0.001	0.003	-0.444	0.657
PTSDXCULTURE	0.000	0.002	-0.215	0.830
PTSDXUNIT	0.001	0.001	0.775	0.439
GADXCOHESION	-0.003	0.006	-0.498	0.619
GADXCULTURE	0.001	0.003	0.195	0.845
GADXUNIT	0.000	0.001	0.247	0.805
AUDITXCOHESION	0.000	0.011	0.000	1.000
AUDITXCULTURE	-0.011	0.006	-1.925	0.055
AUDITXUNIT	0.001	0.002	0.308	0.758

*Significant at or beyond *p* < .05.

Aim 3

Finally, a model of barriers to treatment was proposed and validated using structural equation modeling (SEM) in Mplus (Muthén & Muthén, 1998-2012). The proposed model to be tested assessed how individual perceptions and characteristics may influence the willingness to seek treatment. Following Hu and Bentler's (1999) suggestions for cutoff values: a Comparative Fit Index (CFI) of .95 or greater, an SRMR value of .08 or less, and an RMSEA of .06 were used as measurements for goodness of fit. Two latent variables were first modeled – "illness" using three indicator variables (PTSD, depression, and anxiety), and "stigma" using four indicator variables of endorsed or anticipated stigma within different areas of one's life (work, family, treatment, and mental illness). The model fit for the measurement model showed a significant chi square (χ^2 (18) = 72.94, $p < .001$), however the other fit statistics showed relatively good fit (CFI = 0.955; RMSEA = 0.100, RMSEA CI = 0.077 - 0.124; SRMR = 0.077).

Although separate models were fit for each dependent outcome: "Should You" and "Would You" (see Figure 2 and Figure 4), the same proposed pathways were used for each. Additionally, modification indices were examined to inform any theoretically justifiable adjustments to the model adjustments. So long as justification could be provided for adjustments, this process continued until an acceptable fit was achieved. It is necessary to note however, that although a model with a good fit was found for both outcome variables, it is not necessarily the true causal model of barriers to mental health, nor does it suggest that models of similarly good fit are equivalent based on theoretical grounds. Instead, the use of indices suggestive of good fit can rule out incorrect causal theories and be used to create a basis for future research and testing of causal models.

"Should You"

Figure 2 shows the original proposed model for the "should you" outcome variable. Statistically significant pathways ($p < .05$) are bolded and nonsignificant pathways are dotted. The original model did not have a good overall fit (ς^2 (62) = 330.392, $p < .001$; CFI = 0.852; RMSEA = 0.119, RMSEA CI = 0.107 - 0.132; SRMR = 0.102). Therefore, modification indices were investigated in order to achieve a better model fit. Additional paths added to the model based on modification indices were added if they were theoretically supported. For example, in the proposed model, a pathway was not included between unit support and cohesion, however, the path was included into the modified model as it makes theoretical sense that increased perceptions of unit cohesion would lead to increased views of unit support. From there, a path was also added from unit support to stigma as research has shown that social support may mitigate felt stigma in relation to mental illness. Figure 3 shows the final model. Again, significant pathways are bolded and nonsignificant pathways are dotted. The final model showed a good fit when assessing the cut-off values (ς^2(57) 130.701; $p < .001$; CFI = 0.959; RMSEA = 0.065; RMSEA CI = 0.050 – 0.080; SRMR = 0.065). Additional pathways that were suggested and added included social desirability to stigma, police culture to unit support and unit cohesion, unit cohesion to unit support, and police culture to barriers to treatment.

The results of the final model for outcome "should you" can be found in Figure 3 and Table 15. Mental health did not directly influence participants' endorsement of willingness to seek treatment, as measured by "should you". However, cohesion and unit support positively influenced willingness. Stigma negatively influenced willingness to seek treatment, while barriers to care positively predicted willingness.

Furthermore, the presence of mental illness positively and significantly influenced scores on AUDIT, as well as the endorsement of police culture, and was negatively related to cohesion. Interestingly, cohesion was positively related to stigma, while unit support was negatively related to stigma. Finally, police culture was positively related to increased social desirability, perceived unit support and cohesion, and barriers to treatment.

Although mental health did not have a direct effect on willingness ("should you"), there were indirect pathways (or mediation variables) from mental health to willingness. For example, mental health showed an indirect effect on willingness via stigma, barriers, and cohesion.

"Would You"

Figure 4 shows the proposed model. Statistically significant pathways are bolded; nonsignificant pathways are dotted. The proposed model for willingness to seek treatment using the •would you• outcome variable did not show a good overall fit ($\zeta^2(66) = 300.621$; $p < .001$; CFI = 0.864; RMSEA = 0.108; RMSEA CI = 0.096 – 0.120; SRMR = 0.098). Given that the model was not a good fit, modification indices were investigated and pathways were added based on theoretical justification. The modified model did show a good fit ($\zeta^2(56) = 119.743$ $p < .001$; CFI = 0.963; RMSEA = 0.061; RMSEA CI = 0.046 – 0.076; SRMR = 0.030). Figure 5 and Table 16 show the results of the final adjusted model. Again, significant pathways are bolded and nonsignificant pathways are dotted.

As in the "should you" model, mental health did not have a significant direct effect on willingness, this time measured via "would you". However, mental health was negatively related to stigma and cohesion, but had positively direct effects on police culture, AUDIT, and barriers. Moreover, police culture had a positive direct effect on social desirability, cohesion, unit support,

barriers, and AUDIT scores. Social desirability was positively related to perceived unit support

and negatively related to stigma. Cohesion was negatively related to barriers, but was positively

related to unit support and stigma. In contrast, increased unit support showed a decrease in

endorsement of stigma. Finally, barriers was positively related to stigma, while stigma was

negatively related to willingness.

Of note, there were three pathways that had significant direct effects in the "should you"

final model, but were not significant in the "would you" final model: barriers to willingness;

cohesion to willingness; and unit support to willingness.
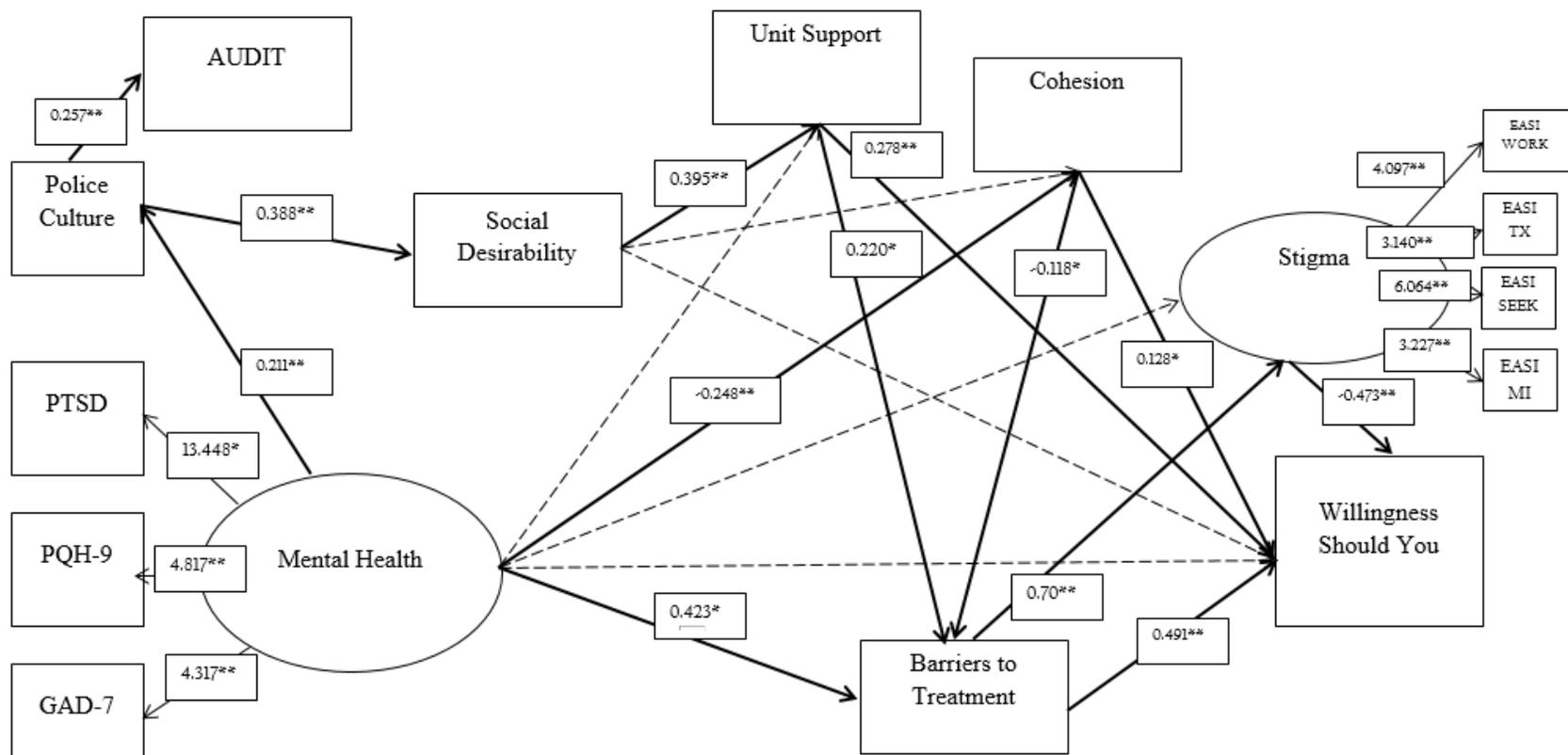
Note: *p < .05; **p < .01
Statistically significant pathways are bold; nonsignificant pathways are dotted.

Figure 2. Proposed model of barriers to care with "should" outcome variable

Note *$p < .05$; **$p < .01$; ***$p < .001$
Statistically significant pathways are solid; nonsignificant pathways are dotted.

Figure 3. Final modified model of barriers to care with "should" outcome variable

Note: *p < .05; **p < .01
Statistically significant pathways are bold; nonsignificant pathways are dotted.
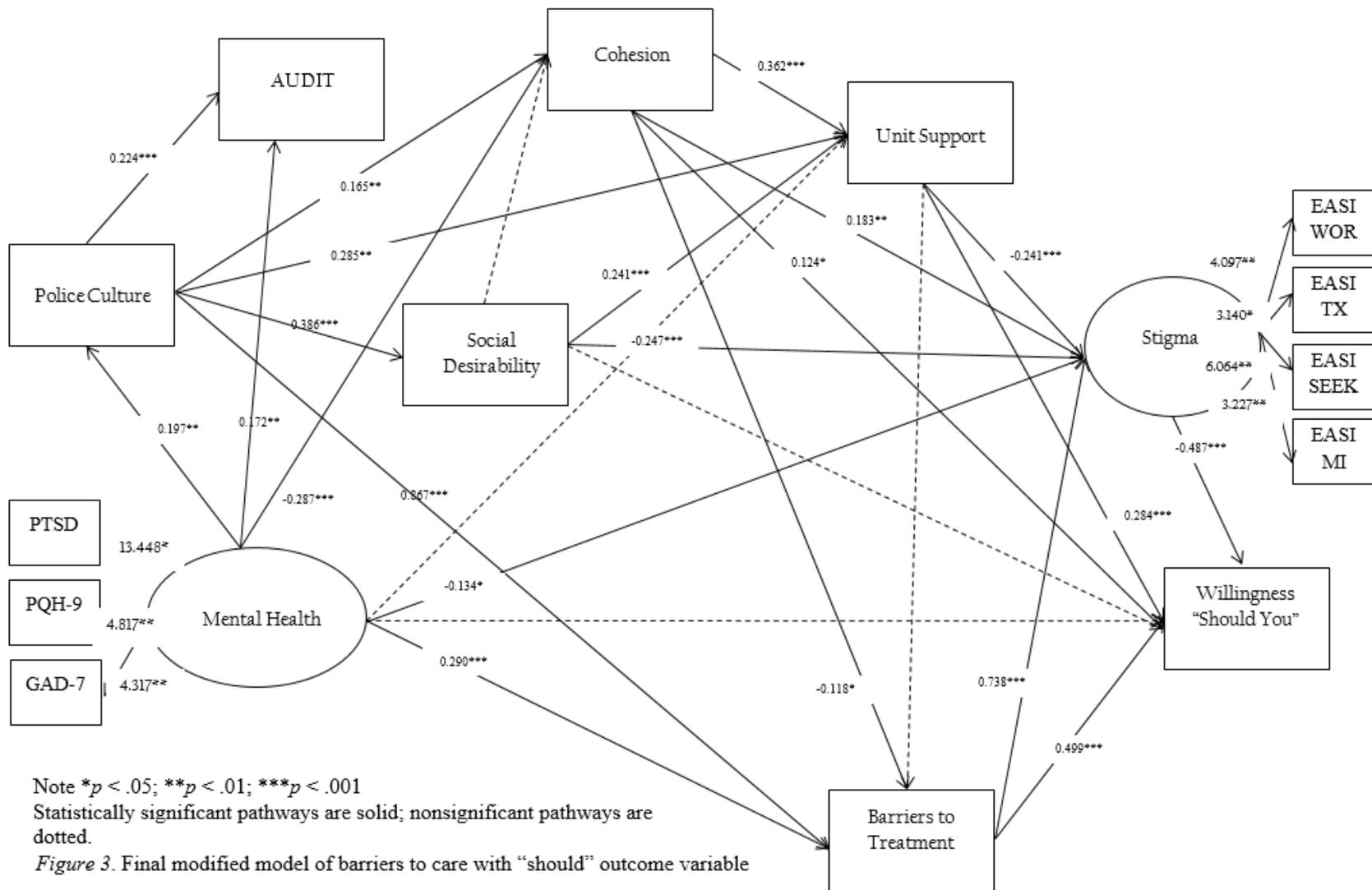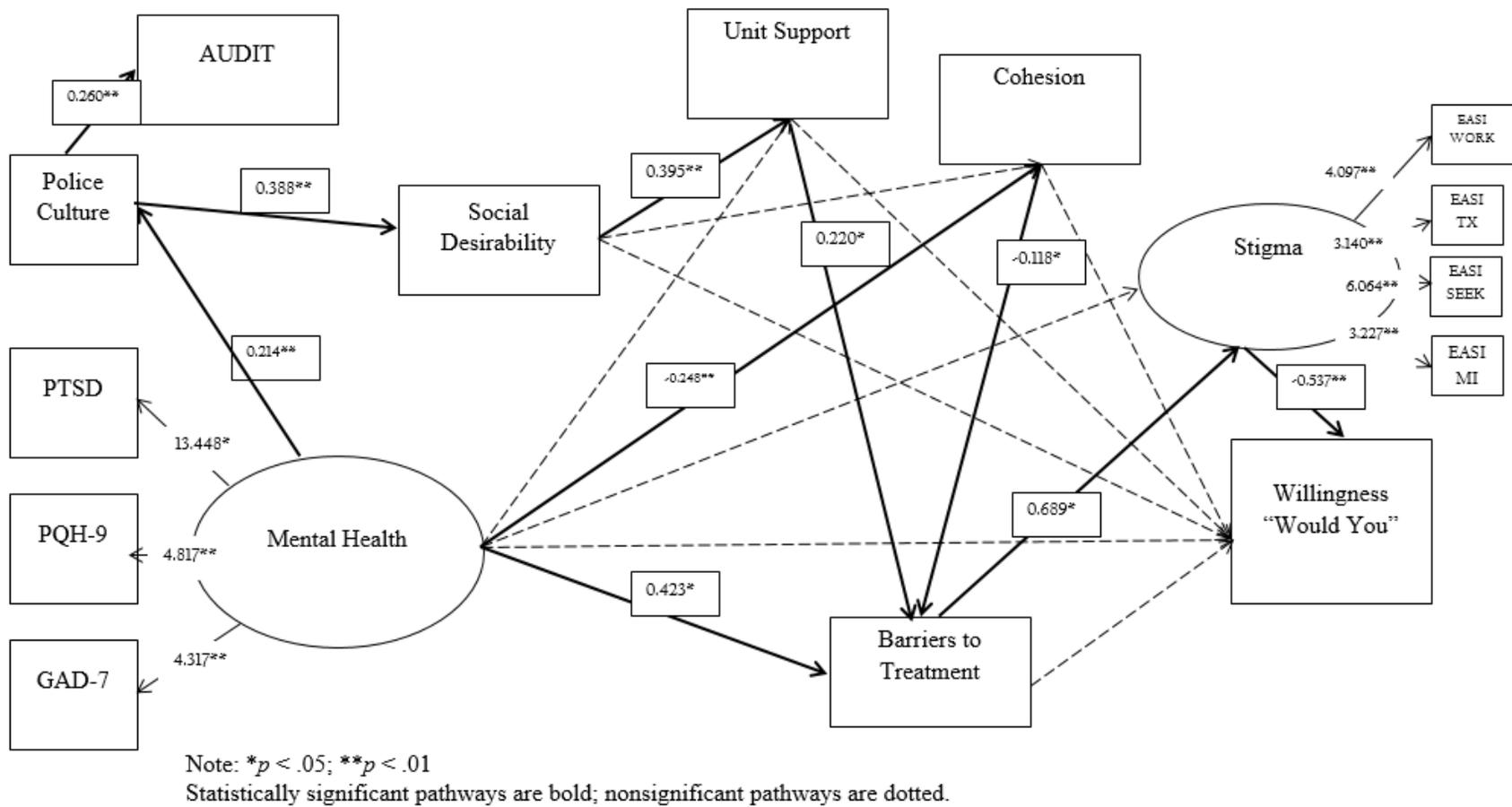
Figure 4. Proposed model of barriers to care with "would" outcome variable

Note *p < .05; **p < .01; ***p < .001
Statistically significant pathways are solid; nonsignificant pathways are dotted.

Figure 5. Final modified model of barriers to care with "would" outcome variable
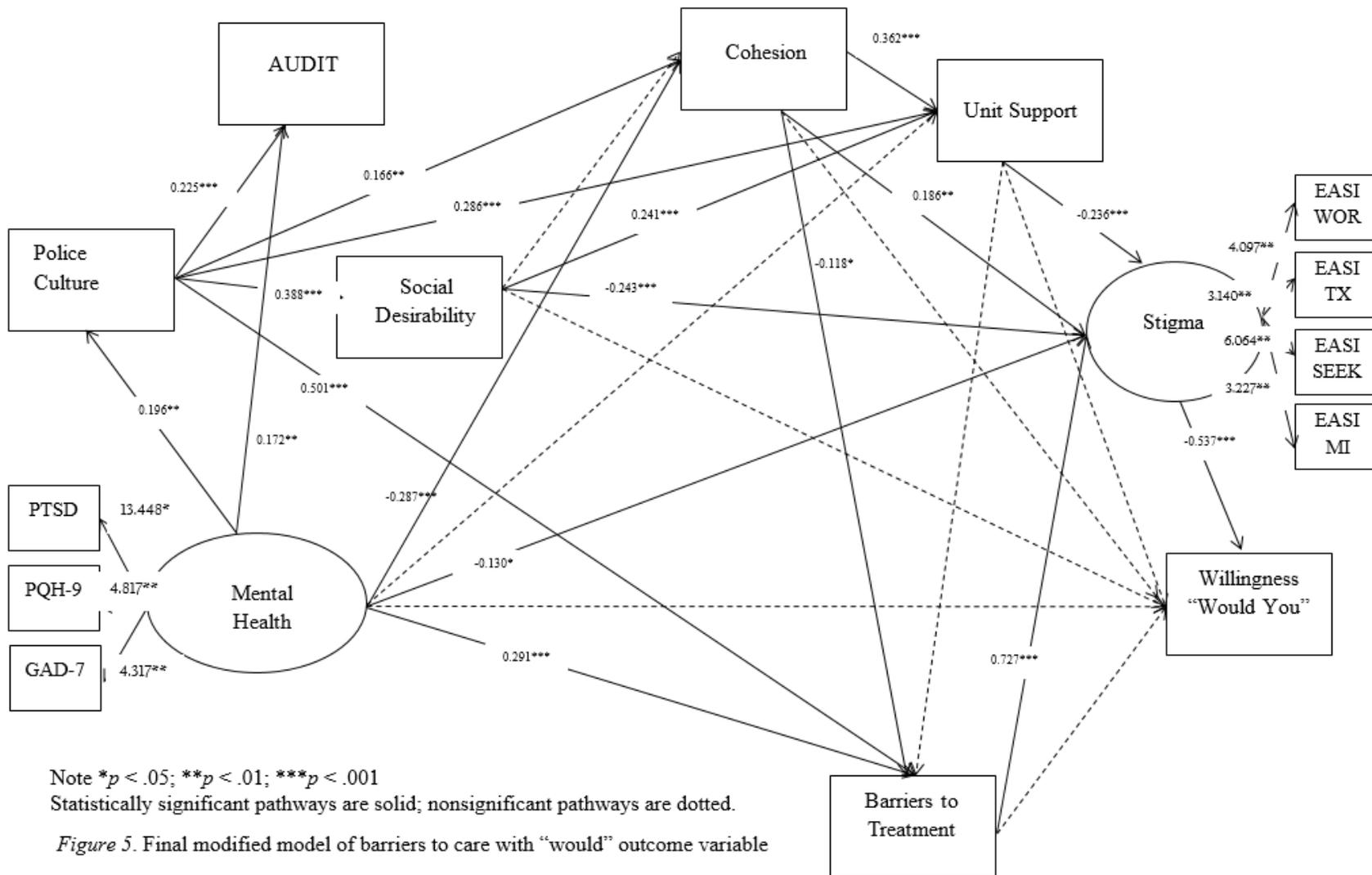
Table 15

Parameters for "Should" Structural Equation Model Direct Effects

From	To	Parameter	SE	p
Mental Health	Should	0.006	0.058	0.916
Mental Health	Barriers	0.290	0.049	<0.001*
Mental Health	Unit Support	-0.086	0.053	0.101
Mental Health	Stigma	-0.134	0.063	0.032*
Mental Health	Police Culture	0.197	0.058	0.001*
Mental Health	AUDIT	0.172	0.057	0.003*
Mental Health	Cohesion	-0.287	0.058	<0.001*
Police Culture	AUDIT	0.224	0.054	<0.001*
Police Culture	Social Desirability	0.388	0.049	<0.001*
Police Culture	Cohesion	0.166	0.061	0.007*
Police Culture	Barriers	0.501	0.047	<0.001*
Police Culture	Unit Support	0.286	0.051	<0.001*
Social Desirability	Cohesion	0.027	0.062	0.666
Social Desirability	Unit Support	0.241	0.051	<0.001*
Social Desirability	Stigma	-0.247	0.057	<0.001*
Social Desirability	Should	0.049	0.056	0.385
Cohesion	Unit Support	0.362	0.046	<0.001*
Cohesion	Stigma	0.183	0.059	0.002*
Cohesion	Should	0.124	0.055	0.025*
Cohesion	Barriers	-0.118	0.051	0.019*
Unit Support	Barriers	-0.002	0.054	0.966
Unit Support	Stigma	-0.241	0.063	<0.001*
Unit Support	Should	0.284	0.059	<0.001*
Barriers	Stigma	0.738	0.052	<0.001*
Barriers	Should	0.499	0.084	<0.001*
Stigma	Should	-0.487	0.082	<0.001*

*Significant at or beyond $p < .05$.

Table 16

Parameters for "Would" Structural Equation Model Direct Effects

From	To	Parameter	SE	p
Mental Health	Would	0.071	0.064	0.271
Mental Health	Barriers	0.291	0.049	<0.001*
Mental Health	Unit Support	-0.086	0.053	0.103
Mental Health	Stigma	-0.130	0.062	0.036*
Mental Health	Police Culture	0.196	0.058	0.001*
Mental Health	AUDIT	0.172	0.057	0.003*
Mental Health	Cohesion	-0.287	0.058	<0.001*
Police Culture	AUDIT	0.225	0.054	<0.001*
Police Culture	Social Desirability	0.388	0.049	<0.001*
Police Culture	Cohesion	0.166	0.061	0.007*
Police Culture	Barriers	0.501	0.047	<0.001*
Police Culture	Unit Support	0.286	0.051	<0.001*
Social Desirability	Cohesion	0.027	0.062	0.661
Social Desirability	Unit Support	0.241	0.051	<0.001*
Social Desirability	Stigma	-0.243	0.057	<0.001*
Social Desirability	Would	0.056	0.062	0.369
Cohesion	Unit Support	0.362	0.046	<0.001*
Cohesion	Stigma	0.186	0.059	0.002*
Cohesion	Would	0.099	0.066	0.136
Cohesion	Barriers	-0.118	0.051	0.019*
Unit Support	Barriers	-0.002	0.054	0.966
Unit Support	Stigma	-0.236	0.062	<0.001*
Unit Support	Would	0.099	0.075	0.186
Barriers	Stigma	0.727	0.052	<0.001*
Barriers	Would	0.117	0.102	0.254
Stigma	Would	-0.537	0.090	<0.001*

*Significant at or beyond $p < .05$.

CHAPTER 5

DISCUSSION

Law enforcement work is an inherently stressful career field (Koch, 2010). In the first

half of 2016, law enforcement line of duty deaths are totaled at 101 and fatalities by gunshot is

74% higher as compared to 2015 (Officer Down Memorial Page, 2016). Again, these totals do

not include suicide, although a recent study by The Badge of Life Organization found that 52

officers committed suicide in the last six months of 2015 (Badge of Life, 2016). As stated

earlier, although there is a number of research that cites disparities in the physical health of law

enforcement officers as compared to the general population (Franke et al., 2010; Hartley et al.,

2011; Joseph et al., 2009; Wright et al., 2011), the same body of literature does not exist when

examining mental health and help seeking behavior. Therefore, the overarching purpose of the

current study was to examine reasons why law enforcement officers may be unlikely to seek out

treatment for mental health concerns. An additional aim of the research was to examine

prevalence rates of depression, anxiety, PTSD, and problematic alcohol use and comorbidities

amongst those disorders.

Prevalence Rates, Comorbidities, and Willingness to Seek Treatment

The prevalence rate for PTSD that was found in the current study matched previously

reported rates in other law enforcement populations. The current study found a prevalence rate of

8.8%, as compared to rates that range between 7 – 13% (Berger et al., 2012; Carlier et al 1997;

Robinson et al., 1997). However, calculated prevalence rates for depression, anxiety, and

problematic alcohol use were much higher than rates reported either for the general population

(in regards to anxiety and depression) or in past law enforcement research (i.e., alcohol use).

General population prevalence rates for major depression for adults 18 or older, as reported by the National Institute of Mental Health (NIMH) is about 6.6% (NIMH, 2016). Within the current sample, a prevalence rate of 15.7% was found. Similar results were found for anxiety, as well. NIMH reports a 12-month prevalence rate for generalized anxiety disorder at 3.1% within the general population of adults, 18 and older (NIMH, n.d.). When looking within particular age groups, the lifetime prevalence of generalized anxiety disorder varies slightly; 18-29 year olds show a lifetime prevalence rate of 4.1%; 30-44 year olds a rate of 6.8%; and 45-59 year olds a prevalence rate of 7.7% (NIMH, n.d.). Within the current sample, a prevalence rate of 15.4% was reported. These findings support the disparity among law enforcement when compared to the general population. Moreover, the findings for alcohol use, as measured by the AUDIT, showed a prevalence rate of problematic alcohol use at three to four times higher than previously reported rates (Larson et al., 2007). Larson and colleagues reported a prevalence rate of 8.7% for problematic alcohol use within a LEO sample. In the current sample, 26.2% of males and 34.3% of females met the criteria for alcohol abuse. Furthermore, scores on the AUDIT were positively and significantly related to the endorsement of a particular "police culture". Previous research found similar findings, such that the more one ascribes to a particular culture, or ideal of what it means to be a police officer, the more likely one is endorse a higher number of problematic drinking behaviors as well (Obst et al., 2001). It may be that police culture influences the acceptance of such behavior (Chopko et al., 2013; Obst et al., 2001). Furthermore, scores on the AUDIT were positively related to the endorsement that one should seek treatment. However, there was a nonsignificant relationship between the endorsement that one *would* seek treatment. These results were shown again in the moderation analysis. Police culture may be playing a role in the difference between knowing one should and the willingness of following through with

such knowledge. Although generalizations cannot be drawn from one study, the current findings

do point toward a higher rate of problematic drinking behaviors than previously reported in past

literature.

Examining comorbidities among the current sample, of those who endorsed one disorder,

about 36% of males and 50% of females met the criteria for two or more disorders. As previous

research suggests that alcohol use may be a means of self-medication from other mental health

disorders or concerns, further analysis was completed to assesse for the percentage of males and

females who met criteria for problematic alcohol use *and* any mental health disorder (PTSD,

depression, or anxiety). Of males who met the clinic cutoff on the AUDIT, 24% also met the

cutoff criteria for at least one other disorder and 33% of females met the same criteria. These

findings may provide additional evidence to previous findings that stress may be more predictive

of AUDIT scores and that such alcohol use may be used as a means to deal with not only the

stress of the job, but also the symptoms of other disorders (Chopko et al., 2013; Obst et al.,

2001).

Mental Health, Organizational Variables, and Willingness to Seek Treatment

Aim 2, in particular, sought to examine what might be most predictive of participants'

willingness to seek treatment. In a moderated multiple regression analysis, blocks of variables

and their interactions were entered separately in order to examine the influence mental health

variables (PTSD, GAD, PHQ, and AUDIT) and organizational variables (unit support, cohesion,

and police culture) had on willingness to seek treatment. A paired samples t-test was run first in

order to assess for a statistically significant difference between means. There was a statistically

significant difference, which suggests that although an individual may endorse the understanding

or knowledge that the examples presented in the scenarios were indicative of problematic or concerning behavior that would constitute a need to seek help, the willingness to actually do so was quite different.

Moreover, as compared to military research that found a relationship between increased symptoms of mental disorders and a decrease in willingness to seek treatment (Chapman et al., 2014; Hoge et al., 2004), the current research did not find similar results. Alcohol use was the only measure that was related to the endorsement that one should seek treatment. This finding did not remain when looking at participants' *would you* scores. Again, this may relate to one's recognition that such behavior may be problematic for others, but in relation to one's own drinking behavior, it may not be perceived as problematic enough to actually carry through with the behavior. This may provide further evidence to earlier findings that suggest LEOs may not have similar insight to one's own problematic behaviors (Davey et al., 2000). However, an alternative, and perhaps more compelling explanation for the current findings is not that officers lack insight, but that they are very much aware of the implications of their drinking behavior and what may occur should the behavior rise to the awareness of supervisors within the department. It may be that there is a recognition of the problematic behavior but that recognition also coincides with the potential consequences should the officer seek treatment for such behavior.

Of the organizational variables that were predictive of willingness to seek treatment, unit support and police culture were significant for both 'should you' and 'would you' outcomes. In both cases, unit support was positively predictive of willingness to seek treatment. This suggests that social support, via unit support might influence the willingness to endorse that one should seek treatment. However, police culture was positively related to willingness to seek treatment in the 'should you' outcome, but negatively related to 'would you'. It appears as if those who

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endorse ideas that being an officer involves emotional control and resolving conflict without the help of others, may allow these ideas to translate to one's mental health, as well. Research into police culture supports these findings, such that LEOs are less likely to seek help in general (Violanti, 1995) and endorsing police culture may further amplify such behaviors (Greenstone, 2000). Interestingly to this study, although the endorsement of police culture reduced the willingness that one would seek treatment, it was positively related to the endorsement that one should seek treatment, suggesting that although officers may hold themselves to police culture values, this does not extend to expectations held for other officers to follow the same "code".

Organizational Variables, Perceived Barriers, and Willingness to Seek Treatment

The final aim of the current study was to propose and validate a model of barriers to treatment seeking. Once again, contrary to military research, mental health was not significantly related to willingness to seek treatment in either the 'should you' or 'would you' models. However, there were organizational and perceived barriers that influenced one's willingness to seek treatment.

"Should You"

In the structural equation model for the 'should you' outcome, stigma was negatively related to the endorsement of treatment seeking. This is similar to the large body of evidence that suggests that anticipated stigma will decrease an individual's willingness to seek treatment (Ben-Porath, 2002; Link, 1987; Link et al., 1989; Wahl, 1999). Additionally, this particular variable also measured the participant's own endorsement of stigma about mental disorders, treatment, and the impact it would have on work and family. Therefore, both anticipated stigma from others, as well as one's own personal beliefs combine to decrease the likelihood that one would

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even endorse that someone should seek treatment for problematic symptoms of mental disorders or behavior. Higher unit support was related to increased willingness to suggest that one should seek treatment. Similar findings were shown for department cohesion. This suggest that at least the willingness to endorse that one should seek treatment for mental health concerns can be positively influenced by increased team or unit building and support. However, because the current findings suggest that there is a significant difference between the endorsement that one *should* seek treatment and that one actually *would*, perhaps the main benefit to increased cohesion and perceived unit support within platoons and departments in general may increase the likelihood that LEOs may suggest to others who are showing problematic behaviors that they should seek treatment.

Interestingly, however, there were differences in direction between unit cohesion and stigma and unit support and stigma. Cohesion showed a positive direct effect with stigma, while unit support showed a negative direct effect. It may be that the way the questions were worded influenced how participants perceived the difference between cohesion and support. Cohesion may suggest that one's platoon works well together and they can depend on each other in work related areas, whereas unit support infers that one's unit is "tight knit" in a more emotional and personal manner. Therefore, it appears that an emphasis may be placed more on departments moving beyond a seamless and cohesive unit and moving more toward a sort of closeness beyond work.

Mental health had a positive direct effect on AUDIT scores, which further validates the idea that alcohol use may be used as a means of self-medication. Taken with the fact that mental health also had a direct positive effect on police culture, which in turn was positively related to the AUDIT, the implications may suggest that those who are struggling with symptoms of PTSD,

depression, and/or anxiety, maybe further endorse attitudes about police culture as a means to assimilate, and perhaps attempt to conceal symptoms. Moreover, police culture was positively related to social desirability, further suggesting that individuals who endorse greater agreement with police culture are also more likely to answer in manners that they feel will help them get along with other officers. This provides further evidence to previous findings that police culture influences problematic drinking behavior in law enforcement (Davey et al., 2000). Unfortunately, police culture also increased endorsement of barriers to treatment. Interestingly, barriers to treatment was positive related to willingness to endorse that one *should* seek treatment. Again, however, there seems to be an obvious breakdown between the endorsement that one should take the steps toward seeking help and actually carrying this behavior out.

"Would You"

Again, because there was a statistically significant difference between the endorsement of "should you" and "would you", two SEM analyses were completed. The same pathways were included in each model. As with the "should you" model, mental health was not significantly related to willingness to seek treatment. It was however, negatively related to cohesion, as well as negatively related to anticipated and endorsed stigma. The negative relationship between cohesion and mental health makes sense, as previous research has suggested, if an individual hears others speaking negatively about individuals who hold similar characteristics, it can increase anticipated stigma (In this instance, as the stereotypes and stigmatization of the concealable identity become personally relevant, anticipated stigma may become stronger for the individual (Link, 1987; Link et al., 1989; Wahl, 1999). In turn the officer may feel less cohesion among his or herself and the other officers. Additionally, less cohesion is related to increased perception of barriers to treatment. However, at first glance the negative relationship between

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mental health and stigma does not necessarily match previous research. This result may be due to the limitations of using self-report methods with a generally secretively group. However, the measure of stigma was a measure anticipated and endorsed stigma. Therefore, participants who have symptoms of mental health disorders may recognize that he or she is capable of holding a job and maintaining work and intimate relationships, and thus may be less likely to endorse such stigmatic ideas.

As compared to the "should you" model, there was no relationship between barriers and willingness as endorsed through "would you". Morever, cohesion and unit support was not significantly related to willingness to seek treatment in the "would you" model. Again, this points to the difference between willingness to endorse that one should seek treatment and actually following through with such behavior when one is in that particular situation.

Differences Between "Should You" and "Would You"

Of particular interest were the differences between the models of willingness when analyzing the outcomes of "should you" and "would you". The idea that social support, as measured through unit support, would increase one's willingness to seek treatment was supported when modeling the "should you" outcome. However, it did not have a significant influence on the "would you" outcome. Recent research has shown that there is a difference between "intention" to seek help and actual help seeking behavior. Nagai (2015) found that in terms of social support, participants reported increased intentions of seeking help, but that did not necessarily result in actual help seeking behavior. Additionally, an individual's subjective need influenced the difference between intention and actual behavior. This may be the case within the current study, as well. Participants were instructed to read scenarios and to first

imagine that if another officer was experiencing the situation and problematic symptoms should they seek help. Next, the participants were then instructed to imagine that they were the one experience the describe scenario and to rate how likely they would be to seek treatment. In finding the difference between responses, it may be that subjective need was influencing whether they should get help. Moreover, as police culture positively related to unit support, it could be that those who ascribed more to a generalized "police culture" also saw a reduced subjective need, as well. Research within the general population supports this finding that social support does not necessarily increase the likelihood that one will seek treatment for PTSD (Sripada, Pfeiffer, Rauch, & Bohnert, 2015). This finding may be magnified within law enforcement populations.

In addition, the help seeking "paradox" may also help to explain why there was a difference between models. Individuals may recognize the need to seek treatment when talking to or imagining another person in a given scenario or situation. However, as Ben-Porath (2002) found, those who are encouraged to seek help may then face stigma for doing just that. From this perspective, stigma of help seeking behavior, coupled with police culture, and perceived unit support may lead to an increase in intentioned behavior, but a decrease in actual help seeking action.

Implications, Limitations, and Future Research

One main take away from the current findings is that stigma about psychological disorders and treatment seeking behavior must be decreased in order to increase, not only the intention of seeking treatment, but also the actual behavior of help seeking. The natural response may be to engage in basic mental health training within departments. However, training and interventions should certainly be more specified. A study of a general mental health training for

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LEOs mean to improve empathy, communication skills, and the ability to de-escalate situations when officers are interacting with citizens who have a mental illness found that although there were significant changes in overt behaviors toward individuals with a mental illness, the officers' attitudes about mental illness did not change (Krameddine, DeMarco, Hassel, & Silverstone, 2013). Therefore, it appears it may not be enough to just give general training sessions of how to interact with individuals who have a psychological disorder, as it does not influence how one thinks about mental illness in and of itself. Instead, interventions should focus on changing attitudes about mental health and those who seek treatment.

One means of doing this may be to teach officers that the responses they have to job stressors are normal, psychologically and physiologically (Karaffa & Koch, 2016). In doing so, it may be possible to shift officers' attitudes that having problems sleeping, increased drinking, being anxious, etc. should not be responses that should cause shame and self-stigma. Additionally, training should challenge the idea that other officers hold similar, negative ideas about mental health and help seeking. Karaffa and Koch (2016) found that a mediating factor in perceived stigma and help seeking was that of pluralistic ignorance, such that officers believed that fellow officers were less like to seek treatment for mental health concerns. In turn, this decreased the likelihood that the responding officer would endorse willingness to seek treatment, as well. Taking these findings in light of the current research findings, it may be that pluralistic ignorance may be further influenced by police culture and social desirability. Therefore, training that challenges such misperceptions of pluralistic ignorance may also impact the influence that cohesion and unit support may have beyond intentioned help seeking behavior and move officers toward actual behavior. Finally, capitalizing on the impact cohesion and unit support may have on help seeking behavior, Karaffa and Tochkov (2013) found that officers that provide

"testimony" of their own mental health concerns and help seeking experiences may provide a large benefit to other officers who may need to seek help but are hesitant.

General limitations to the current study include response rate of officers and willingness to be open. In order to reach a large enough sample size for analysis, recruitment had to be extended to online use, as the initial plan to recruit from local agencies did not result in a large response rate. Relying on a convenience sampling strategy makes generalization of findings more difficult. Therefore, a more systematic approach to participant selection should be used in future research to increase the generalizability of results. Additionally, officers seemed hesitant to share basic information such as age (e.g., one officer wrote "older than 40, younger than 60"). Therefore, the willingness of officers to be open about even more personal questions regarding symptoms of psychological disorders should be considered. Length of the survey may have been influential, as well. Officers may have chosen to complete the survey while they were working and therefore length would be important. Also related to the questionnaires, the current study did not assess for previous help seeking. This may certainly influence attitudes toward stigma of psychological disorders and willingness to seek treatment. Future research should account for this variable. Additionally, because the original SEM models did not show good fits, modification indices were used. In doing so, a good fit was achieved, but the ability to generalize from the final models is limited, as model fit statistics are less meaningful. Moreover, because of the cross sectional nature of the study, it is difficult to ascertain that the direction of the arrows and paths are correct. Longitudinal research would be a beneficial design to address this limitation.

Finally, although a great effort was made to recruit a wide range of officers from sheriff's offices (i.e., county departments), university police, and municipalities (i.e., city police),

municipality officers were overrepresented. There may be cultural differences within each type

of department, which may influence responses and outcomes. Future research should make a

greater attempt to recruit a wider range in order to examine whether systematic differences exist

among type of department in terms of willingness to discuss mental health variables.

Future directions should look toward implementing the suggestions above, as well as

potential interventions and trainings previously discussed. Pre- and post-test analyses would be

helpful to understand how education about psychological disorders should be approached. Given

that unit support influences the endorsement that one *should* seek treatment, it would be of

particular interest if hearing that fellow officers, particularly those in leadership positions, have

sought treatment would influence other officers, as well.

In general, law enforcement departments place an emphasis on physical health and

training. However, there appears to be a tendency to shy away from mental health training. This

tendency appears to be on a wide scale and not only within specific departments. As stated by an

officer in an article about police suicide

> I attended the 2015 Police Memorial Week last year in Washington DC. The role-call
>
> included 127 of line of duty deaths (LODD) in 2014. That, however, did not include the
>
> officers who had fallen due to mental health issues brought on by duty related
>
> events. These LEOs also deserve to be recognized and honored for their services and
>
> sacrifices. These individuals put up a courageous battle for as long as they could, and
>
> also belong on the wall of heroes (Kulbarsh, Time to Change the Stigma of Police Officer
>
> Suicide section, para. 13).

In order to aid in the overall mental health and well-being of officers, the same emphasis should be placed on the importance of taking care of one's psychological health, as well.

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APPENDICES

APPENDIX A

Demographics

Please respond to the following questions. At no point will the information you provide be linked to you. Your responses will be identified with a predetermined, randomly created, ID number. At no time will I request information that can specifically identify you.

1. What is your age? _____

2. What is your gender?

____ Male

____ Female

3. What is your highest level of education attained?

_____High school

_____Some college

_____Associate's degree

_____Bachelor's degree

_____Advanced degree (i.e., Master's or PhD)

4. How do you describe yourself?

____ Not Hispanic of Latino

____ Hispanic or Latino or of Spanish origin

5. What is your ethnicity (choose all that apply)

_____ American Indian/ Alaska Native

_____ Asian

_____ White

_____ Black/African America

_____ Native Hawaiian/Pacific Islander

6. What is your marital status?

_____Married

_____Divorced

_____Widowed

_____Cohabiting

_____Civil union

_____Long-term relationship

7. How long have you been a law enforcement officer? _____

    a. How long have you been employed with this particular department?_____

8. What is your rank within this department? _____

9. Do you work a rotating shift (i.e., swing shift)?_____

PCL-C

Below is a list of problems that people sometimes have in response to a very stressful experience. Please read each problem carefully and then circle one of the numbers to the right to indicate how much you have been bothered by that problem **in the past month**.

In the past month how much were you bothered by:	Not at all	A little bit	Moderately	Quite a bit	Extremely
1. Repeated, disturbing, and unwanted memories of the stressful experience?	0	1	2	3	4
2. Repeated, disturbing dreams of the stressful experience?	0	1	2	3	4
3. Suddenly feeling or acting as if the stressful experience were actually happening again (*as if you were actually back there reliving it)?*	0	1	2	3	4
4. Feeling very upset when something reminded you of the stressful experience?	0	1	2	3	4
5. Having strong physical reactions when something reminded you of the stressful experience (*for example, heart pounding, trouble breathing, sweating*)?	0	1	2	3	4
6. Avoiding memories, thoughts, or feelings related to the stressful experience?	0	1	2	3	4
7. Avoiding external reminders of the stressful experience (*for example, people, places, conversations, activities, objects, or situations*)?	0	1	2	3	4
8. Troubling remembering important parts of the stressful experience?	0	1	2	3	4
9. Having strong negative beliefs about yourself, other people, or the world (*for example, having thoughts such as: I am bad, there is something seriously wrong with me, no one can be trusted, the world is completely dangerous*)?	0	1	2	3	4
10. Blaming yourself or someone else for the stressful experience or what happened after it?	0	1	2	3	4
11. Having strong negative feelings such as fear, horror, anger, guilt, or shame?	0	1	2	3	4

12. Loss of interest in activities that you used to enjoy?	0	1	2	3	4
13. Feeling distant or cut off from other people?	0	1	2	3	4
14. Trouble experiencing positive feelings (*for example, being unable to feel happiness or have loving feelings for people close to you*)?	0	1	2	3	4
15. Irritable behavior, angry outbursts, or acting aggressively?	0	1	2	3	4
16. Taking too many risks or doing thing that could cause you harm?	0	1	2	3	4
17. Being "superalert" or watchful or on guard?	0	1	2	3	4
18. Feeling jumpy or easily startled?	0	1	2	3	4
19. Having difficulty concentrating?	0	1	2	3	4
20. Trouble falling or staying asleep?	0	1	2	3	4

APPENDIX C

Patient Health Questionnaire (PHQ-9)

Over the last 2 weeks, how often have you been bothered by any of the following problems?

	Not at all	Several days	More than half the days	Nearly every day
Little interest or pleasure in doing things	0	1	2	3
Feeling down, depressed, or hopeless.	0	1	2	3
Trouble falling or staying asleep, or sleeping too much	0	1	2	3
4. Feeling tired or having little energy	0	1	2	3
5. Poor appetite or overeating	0	1	2	3
6. Feeling bad about yourself – or that you are a failure or have let yourself or your family down	0	1	2	3
7. Trouble concentrating on things, such as reading the newspaper or watching television	0	1	2	3
8. Moving or speaking so slowly that other people could have noticed. Or the opposite – being so fidgety or restless that you have been moving around a lot more than usual	0	1	2	3
9. Thoughts that you would be better off dead, or of hurting yourself	0	1	2	3

APPENDIX D

Generalized Anxiety Disorder 7-item (GAD-7) Scale

Over the last 2 weeks, how often have you been bothered by the following problems?

	Not at all sure	Several days	Over half the days	Nearly everyday
1 Feeling nervous, anxious, or on edge	0	1	2	3
2 Not being able to stop or control worrying	0	1	2	3
3 Worrying too much about different things	0	1	2	3
4 Trouble relaxing	0	1	2	3
5 Being so restless that it's hard to sit still	0	1	2	3
6 Becoming easily annoyed or irritable	0	1	2	3
7 Feeling afraid as if something awful might happen	0	1	2	3

If you checked off any problems, how difficult have these made it for you to do your work, take care of things at home, or get along with other people?

Not difficult at all _____
Somewhat difficult _____
Very difficult_____
Extremely difficult_____

AUDIT-C

Please answer the following questions using the scale provided.

	0	**1**	**2**	**3**	**4**
How often do you have a drink containing alcohol?	Never	Monthly or less	2-4 times a month	2-3 times a week	4 or more times a week
How many standard drinks containing alcohol do you have on a typical day?	1 or 2	3 or 4	5 or 6	7 to 9	10 or more
How often do you have six or more drinks on one occasion?	Never	Less than monthly	Monthly	Weekly	Daily or almost daily

Willingness to Seek Care

Please read the following scenarios and respond to the questions that follow.

A. Officer Smith is a fellow patrol officer on your shift. Recently, you both responded to an incident involving a combative man. When you arrived on the scene the man was agitated, yelling at you, and had a gun. After being on scene for about 20 minutes trying to convince the man to put down his gun he suddenly points the gun at another responding officer. Smith fires his weapon, striking the man. The man receives care at the area hospital for non-lethal injuries, and the shooting is deemed a good shoot.

In the weeks following the event, Smith has been acting a bit more distant. He no longer accepts invitations to hang with other officers, appears overly tired when coming to work, and seems a bit more jumpy on the job. One night at shift change, the incident comes up in conversation. In passing, Smith mentions that he hasn't been sleeping well and has had a couple nightmares about the incident. It seems as if Smith may be experiencing some difficulties handling what occurred.

A. To what extent do you agree that Officer Smith should talk to a professional about the issues surrounding the incident?

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

B. Now, imagine that you are in Officer Smith's position. How strongly would you agree that you would talk to a professional surrounding the incident?

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

B. One night a group of fellow officers and their significant others meet at a local restuarnt to watch a football game. You arrive about 30 minutes after the rest of the group. When you sit down you notice everyone has ordered beers, so you order one, as well. As the night progresses you notice that one of the officers, Andrews, has drank much more than everyone else. The football game ends and Andrews and his wife go home. After he leaves you and other officers joke about how much Andrews can drink. "He can definitely put them down", you say. Others nod, laughing. One officer adds, "He always out drinks me". Finally his zone partner speaks up and mentions that Andrews always talk about going home and finishing off a 12-pack before bed to help him sleep. Other officers talk about how they like to have a few to take the edge off before bed. The conversation soon trickles out as other officers leave. On the way out, Andrews' zone partner says to you in strict confidence, "I can't be sure, but I think Andrews came to work one shift with alcohol still on his breath. It didn't seem to affect him on the job, so I haven't felt like I should say thing to Lt."

A. To what extent do you agree that Officer Andrews should talk to a professional about the issues surrounding the incident?

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

B. Now, imagine that you are in Officer Andrews' position. How strongly would you agree that you would talk to a professional surrounding the incident?

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

3. You and your zone partner, Wilkins, get a call about a domestic violence situation. When you arrive you see that there are also two small children at the home, but they do not appear to have any noticeable signs of physical abuse. You've responded to this house before and know that there are weapons in the home. The husband has been drinking and refuses to let you and Wilkins in the home. He starts yelling, "You better not try to take my wife and kids, or I'll kill every single person here." It appears not that not only have you responded to domestic abuse, but this may turn into a hostage situation. By this time, other officers have to come back you and Wilkins. As you are talking to the husband, asking him to let the kids and wife out of the house, you notice he has a gun in the back of his pants. After an hour negotiation, the husband allows the kids out of the house. They are removed from the property and taken down the street. As time goes on the husband becomes more and more agitated, pulls out the gun, and starts making threats against his wife, himself, and the officers. Finally, the front door opens, the husband has his wife by the arm and shoves her out the door before stepping out as well, pointing the gun at Wilkins. Wilkins fires, killing the man.

It's been two months since the incident; the shoot was ruled a good shoot and Wilkins has been cleared for duty. However, Wilkins has been drinking excessively, is not sleeping, and has talk about how he can't get that day out of his head. He is jumpy, anxious, and talks about death, a lot. His wife is threatening to leave with their kids because she doesn't like how Wilkins has been acting since the shooting occurred. One night, Wilkins' wife calls you and asks you to check on him because has been able to get a hold of him all day. You should to Wilkins' house and see that he is sitting in his chair, beer cans strewn about, and a piston on the side table. You knock on the door and walk in. Upon seeing you, Wilkins immediately breaks down and tells you that he has been thinking about killing himself because he can't handle what happened at the shooting.

A. To what extent do you agree that Officer Wilkins should talk to a professional about the issues surrounding the incident?

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

B. Now, imagine that you are in Officer Wilkins' position. How strongly would you agree that you would talk to a professional surrounding the incident?

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

APPENDIX G

Department Cohesion

Below are three statements that may describe your department. Please rate the extent to which you agree or disagree with each statement.

	Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree
The members of my department…					
…cooperate with each other.	0	1	2	3	4
…know they can depend on each other.	0	1	2	3	4
…stand up for each other	0	1	2	3	4

APPENDIX H

Unit Support Scale (Adapted)

The statements below are about your relationships with other law enforcement personnel. Please read each statement and describe how much you agree or disagree by circling the number that best fits your answer.

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
My fellow officers (those on my shift, etc.) are like family to me.	1	2	3	4	5
I feel a sense of camaraderie between myself and other officers on my shift.	1	2	3	4	5
Members of my shift understand me.	1	2	3	4	5
Most people on my shift are trustworthy.	1	2	3	4	5
I could go to most people on my shift for help when I have a personal problem.	1	2	3	4	5
My supervisor(s) are interested in what I think and how I feel about things.	1	2	3	4	5
I am impressed by the quality of leadership on my shift.	1	2	3	4	5
My superiors make a real attempt to treat me as a person.	1	2	3	4	5
The supervisor(s) on my shift are supportive of my efforts.	1	2	3	4	5
I feel like my efforts really count to the department.	1	2	3	4	5
The department appreciates my service.	1	2	3	4	5
I am supported by the department.	1	2	3	4	5
Supervisors would be supportive if I wanted to seek help for personal problems.	1	2	3	4	5
Supervisors would be supportive if I wanted to seek help for mental health symptoms.	1	2	3	4	5

Perceived Barriers to Treatment (Adapted Version)

Please rate each of the possible concerns that might affect your decisions to receive mental health counseling or services if you ever had a problem. Use the following scale

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1. I don't trust mental health professionals	1	2	3	4	5
2. I don't know where to get help.	1	2	3	4	5
3. I don't have adequate transportation.	1	2	3	4	5
4. It is difficult to schedule an appointment.	1	2	3	4	5
5. There would be difficulty getting time off work for treatment.	1	2	3	4	5
6. Mental health care costs too much money.	1	2	3	4	5
7. It would be too embarrassing.	1	2	3	4	5
8. It would harm my career.	1	2	3	4	5
9. Members of my shift might have less confidence in me.	1	2	3	4	5
10. My shift leadership might treat me differently.	1	2	3	4	5
11. My leaders would blame me for the problem.	1	2	3	4	5
12. I would be seen as weak.	1	2	3	4	5
13. Mental health care doesn't work.	1	2	3	4	5
14. Evidence of mental health care in my medical records could harm my career.	1	2	3	4	5
15. I wouldn't agree to take any medications for my mental health problems.	1	2	3	4	5

APPENDIX J

Endorsed and Anticipated Stigma

Please use the following scale to rate how strongly you agree or disagree with each statement. There is no right or wrong answer.

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

Beliefs about Mental Illness

1. People with mental health problems cannot be counted on.
2. People with mental health problems often use their health problems as an excuse.
3. Most people with mental health problems are just faking their symptoms.
4. I don't feel comfortable around people with mental health problems.
5. It would be difficult to have a normal relationship with someone with mental health problems.
6. Most people with mental health problems are violent or dangerous.
7. People with mental health problems require too much attention.
8. People with mental health problems can't take care of themselves.

Beliefs about Mental Health Treatment

1. Medications for mental health problems are ineffective
2. Mental health treatment just makes things worse.
3. Mental health providers don't really care about their patients.
4. Mental health treatment generally does not work.
5. Therapy/counseling does not really health for mental health problems.
6. People who seek mental health treatment are often required to undergo treatments they don't want.
7. Medications for mental health problems have too many negative side effects.
8. Mental health providers often make inaccurate assumptions based on their group membership (e.g., race, sex, occupation).
9. Mental health providers that have not had similar experiences will not be helpful to me (e.g., a mental health provider who has never been in law enforcement will not be helpful to me).

Beliefs about Treatment Seeking

1. A problem would have to be really bad for me to be willing to seek mental health care.
2. I would feel uncomfortable talking about my problems with a mental health provider.
3. If I had a mental health problem, I would prefer to deal with it myself rather than to seek treatment.
4. Most mental health problems can be dealt with without seeking professional help.
5. Seeing a mental health provider would make me feel weak.
6. I would think less of myself if I were to seek mental health treatment.
7. If I were to seek mental health treatment, I would feel stupid for not being able to fix the problem on my own.
8. I wouldn't want to share personal information with a mental health provider.

Concerns about Stigma from Loved Ones

If I had a mental health problem and friends and family knew about it, they would…

1. …think less of me.
2. …see me as weak.
3. …feel uncomfortable around me.
4. …not want to be around me.
5. …think I was faking.
6. …be afraid that I might be violent or dangerous.
7. …think that I could not be trusted.
8. …avoid talking to me.

Concerns about Stigma in the Workplace

If I had a mental health problem and people at work knew about it…

1. My coworkers would think I am not capable of doing my job.
2. People at work would not want to be around me.
3. My career/job options would be limited.
4. Coworkers would feel uncomfortable around me.
5. A supervisor might give me less desirable work.
6. A supervisor might treat me unfairly.
7. People at work would think I was faking.
8. Co-workers would avoid talking to me.

APPENDIX K

Social Desirability Scale (Short Form)

Listed below are a number of statements concerning personal attitudes and traits. Read each item and decide whether the statement is **true or false** as it pertains to you personally.

1. It is sometimes hard to go on with my work if I am not encouraged.
2. I sometimes feel resentful when I don't get my way.
3. On a few occasions, I have given up doing something because I thought too little of my ability.
4. There have been times when I felt like rebelling against people in authority even when I knew they were right.
5. No matter who I'm talking to, I'm always a good listener.
6. There have been occasions when I took advantage of someone.
7. I'm always willing to admit it when I make a mistake.
8. I sometime try to get even rather than to forgive and forget.
9. I am always courteous, even to people who are disagreeable.
10. I have never been irked when people expressed ideas very different from my own.
11. There have been times when I was quite jealous of the good fortune of others.
12. I am sometimes irritated by people who ask favors of me.
13. I have never deliberately said something that hurt someone's feelings.

Police Culture

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
Police officers should be aggressive in order to maintain control.	1	2	3	4	5
Police officers should always remain in control of their emotions.	1	2	3	4	5
Police officers should be able to respond to conflicts without help from others.	1	2	3	4	5
Police officers should not talk about the department with civilians.	1	2	3	4	5
I am bothered when civilians become involved in police matters.	1	2	3	4	5

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