STIGMA, PLURALISTIC IGNORANCE, AND

ATTITUDES TOWARD SEEKING MENTAL

HEALTH SERVICES AMONG POLICE OFFICERS

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Abstract: Due to the stressors inherent in the law enforcement profession, police officers may be at increased risk for a variety of personal and mental health-related concerns. Despite these tendencies, officers have historically refrained from seeking psychological services. Several factors have been identified to explain their hesitance, including public stigma and self-stigma regarding mental health issues. In this study, sworn police officers in Texas and Oklahoma completed a 62-item online survey related to their attitudes toward seeking mental health services, mental health stigma, willingness to seek services, and perceptions of other officers' willingness to seek services. The first objective of the study was to identify the role of public stigma and self-stigma in predicting attitudes toward seeking mental health services among police officers. Consistent with the study hypotheses, the results indicate that public stigma and self-stigma were negatively correlated with attitudes toward seeking professional psychological help. Furthermore, self-stigma fully mediated the relationship between public stigma and attitudes toward seeking help, and the overall model explained 56% of the variance in attitude scores. Previous research has suggested that officers may tend to underestimate their colleagues' willingness to seek psychological services, thus demonstrating the concept of pluralistic ignorance. The second objective of the study was to develop a more comprehensive understanding of the pluralistic ignorance effect as it pertains to help-seeking attitudes among police officers, with regard to several common presenting concerns. As expected, results suggest that officers underestimated their colleagues' willingness to seek mental health services for family issues, depression, posttraumatic stress disorder, substance abuse, and physiological complaints due to stress. In other words, officers tended to believe that their peers were less willing to seek mental health services than they actually were. Implications for training and future research are discussed.

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CHAPTER I

INTRODUCTION

Police work is regarded as one of the most stressful occupations (Finn & Tomz, 1997; Liberman et al., 2002). Officers are routinely exposed to violence, human suffering, and tragedy, and they must confront dangerous situations on a regular basis (Bartol & Bartol, 2008; Bonifacio, 1991; Kirschman, Kamena, & Fay, 2013; Miller, 1995; Toch, 2002). Widely recognized organizational stressors involved in police work include unconventional shifts, excessive paperwork, and poor administrative support (Finn & Tomz, 1997; Stratton, 1984; Toch, 2002). Unique task-related stressors include responding to use of force encounters, exercising discretion in ambiguous situations, and role ambiguity (Finn & Tomz, 1997; Kirschman et al., 2013). Furthermore, skewed presentations of the police in the media tend to encourage public hostility and alienate officers from the public (Blum, 2002). Many officers perceive themselves to be under increasingly more pressure due to high levels of violent crime in their jurisdictions, public scrutiny, and technological changes (Blum, 2002; Finn, Talucci, & Wood, 2000; Kirschman et al., 2013).

Police officers generally develop effective coping mechanisms to adapt to the psychological stressors they experience at work. However, sometimes the accumulation of stress can overwhelm even the most resilient officers (Miller, 1995; Shearer, 1993). Police occupational stress may interfere with family functioning, negatively impact officers' physical and psychological well-being, and also reduce the quality of services they provide to the public (Hickman, Fricas, Strom, & Pope, 2011).

Due to the nature of the job, officers may not get to spend much time with their families (Borum & Philpot, 1993; Kirschman, 2007; Kirschman et al., 2013; Maynard & Maynard, 1982). Officers' significant others often report that their partners seem overcommitted to the department, and partners may experience feelings of jealousy or resentment (Miller, 2007). In addition, Roberts and Levenson (2001) found that job stress tends to interfere with the quality of couples' interactions when they do have time to spend together. Work-family conflict has also been found to negatively correlate with measures of psychological health (Mikkelsen & Burke, 2004).

Furthermore, researchers have found relatively high prevalence rates of depression in police samples. For example, Lawson et al. (2012) found that 37% of 631 Australian police officers met criteria for depression, and Darensburg (2006) found that 22% of female and 12% of male officers reported clinically significant levels of depression among a sample of 100 urban police officers. Police officers are especially prone to developing posttraumatic stress disorder (PTSD), because they are exposed to so many instances of violence, many of which threaten their immediate safety (Bonifacio, 1991; Kates, 2008). Kates (2008) reported that one-third of police officers have PTSD symptoms, and in a study of officers from

Buffalo, New York, Darensburg et al. (2006) found that 35% of the sample reported clinically significant symptoms of PTSD.

Police officers have historically used alcohol as a means of self-medicating after exposure to traumatic events, to numb depressive feelings, or to help them relax or sleep (Bonifacio, 1991; Kirschman, 2007; Kirschman et al., 2013). Swatt, Gibson, and Piquero (2007) showed that higher levels of anxiety and depression were associated with higher levels of problematic drinking in a police sample. In addition, Violanti et al. (2011) found that 17% of officers from a mid-sized urban department drank six or more drinks on one occasion on a weekly or daily basis. In another police study, Ballenger et al. (2010) concluded that slightly under eight percent of their sample met criteria for lifetime alcohol abuse or dependence, but approximately 18% of males and 16% of females reported experiencing adverse consequences from alcohol use.

Some researchers also believe that suicide among police officers is a significant problem (Clark, White, & Violanti, 2012). For example, Seligmann, Holt, Chinni, & Roberts (1994) reported that twice as many officers die by suicide each year than are killed in the line of duty. Others have emphasized that the effects of a completed suicide impact the entire police organization (Barron, 2010; Clark et al., 2012).

Job-related stress may also produce physiological effects. For examples, officers may experience gastrointestinal problems as a result of the body's suppression of the digestive process during the fight or flight response. They may also be more susceptible to developing colds, influenza, and other illnesses, due to deficiencies in their immune system from chronic stress (Blum, 2000). Evidence suggests that police officers are also susceptible to sleep problems, because shift work interferes with normal sleep patterns (Vila, 2009). In a study of

4,957 police officers, Rajaratnam et al. (2011) found that over 40% screened positive for at least one sleep disorder. Approximately 26% of respondents reported falling asleep while driving at least one time per month, and officers who tested positive for a sleep disorder also reported increased depression, diabetes, and cardiovascular disease.

Police stressors and their physical and psychological consequences ultimately harm the police organization (More, 1998) through reduced efficiency, greater absenteeism, and excessive aggressiveness among officers (Finn, Talucci, & Wood, 2000). When officers become burned out, they find their job unsatisfying, and they demonstrate little commitment to their work tasks or toward their colleagues (More, 1998). For example, some researchers have found that job stress is negatively correlated with officers' level of performance (Chen, 2009; Shane, 2010).

Given these issues, there may be substantial benefits to engaging in prevention activities and providing early interventions for mental health-related concerns among police officers. Several factors have been identified to explain resistance among police officers toward seeking mental health services. These factors include adherence to cultural tenets, such as ethos of autonomy and emotional control (Blum, 2000; Kappeler et al., 1998; Kirschman et al., 2013; Kureczka, 1996; Stratton, 1984), lack of confidence in mental health providers (Blau, 1994), and practical concerns including cost and accessibility of services (Meyer, 2000; Karaffa & Tochkov, 2013). Perceived stigma associated with seeking services may also discourage officers from seeking help when it is warranted (Blum, 2000; Corrigan, 2004; Fair, 2009).

CHAPTER II

REVIEW OF LITERATURE

The Police Culture

Police officers are distinguished from other groups by their unique role and social

status (Kappeler, Sluder, & Alpert, 1998), and they tend to share a distinct occupational

culture. Historically, the police culture has emphasized characteristics associated with a

traditional male gender role, including physical toughness, aggressiveness, and

competitiveness (Moller-Leimkuhler, 2002; Wester & Lyubelsky, 2005). Officers are

expected to make difficult decisions in ambiguous situations, and they are often insistent

that they can solve problems without assistance in order to demonstrate autonomy

(Kappeler et al., 1998; Kirschman et al., 2013; Kureczka, 1996). Additionally, the police

culture is characterized by an ethos of secrecy, in which officers are reluctant to disclose

information about the police agency to outsiders (Blau, 1994; Kappeler et al., 1998;

Kirschman et al., 2013), including researchers and clinicians (Woody, 2005).

The police culture also emphasizes the importance of emotional control.

Kirschman et al. (2013) summarized that police work is about control—both control of

one's self and control of others. Officers are trained to remain in control of their emotions at all times in order to respond effectively to difficult situations (Blum, 2000).

Stratton (1984) reported that feelings are rarely talked about among police officers, and the ethos of emotional control is instilled in officers as early as their academy training. Officers learn that if they show emotion, they may be viewed with suspicion, and their colleagues may perceive them as weak or unreliable (Bonifacio, 1991; Kirschman et al., 2013). Group members' identification with a group is typically stronger among groups that are distinctive (Ashforth & Mael, 1989), and police colleagues are an important reference group for support and self-identity to many officers. Immersion in the culture often leads them to conform to group norms both on- and off-duty, which may be both adaptive and maladaptive (Bonifacio, 1991).

Willingness to Seek Mental Health Services

The effectiveness of mental health services depends in part on the willingness of the client to engage in the process (Turkum, 2004). However, traditionally, police officers have refrained from asking for help (Violanti, 1995) or pursuing professional mental health interventions (Blau, 1994; Kirschman et al., 2013). Greenstone (2000) noted that officers may not use mental health services, even when they are available. For example, Berg, Hem, Lau, and Ekeberg (2006) found that fewer than 10% of officers who reported symptoms of anxiety or depression had consulted with a psychologist or a psychiatrist within the past 12 months. This finding is generally consistent with the underutilization of mental health services among civilians (e.g., Andrews, Issakidis, & Carter, 2001). Officers may refrain from seeking services because they do not want to be seen as non-

resilient (Toch, 2002), and Blum (2000) concluded that stigma within the police agency may discourage officers from utilizing available services.

Mental Health Stigma

Stigma is one of the reasons that people who might benefit from receiving mental health services do not use them. They may seek to avoid the label of mental illness that sometimes results from seeking services, because of its impact on their sense of identity (Corrigan, 2004; Kushner & Sher, 1989). Corrigan (2004) distinguished between two kinds of stigma: public stigma and self-stigma. Public stigma refers to awareness of how the general public reacts to individuals with mental health concerns (Corrigan & Watson, 2002). In a study of over 12,000 participants from the United States and Canada, Jagdeo et al. (2009) found that almost 50% of respondents indicated that they would be embarrassed if their friends knew about their use of mental health services. Greene-Shortridge, Britt, & Castro (2007) found that military service members experiencing symptoms of PTSD were aware of the public's beliefs about psychological problems, and they tended to anticipate negative responses from peers and supervisors. Furthermore, Komiya, Good, and Sherrod (2000) found that, among college students, perception of public stigma was negatively correlated with attitudes toward seeking psychological help.

Self-stigma refers to an individual's perception that his or her own behaviors or attitudes are not socially acceptable (Corrigan, 2004). Self-stigma requires stereotype agreement, which involves accepting stereotypes that seem to be endorsed by the public. Individuals then have to believe that these public beliefs personally apply to them (Corrigan, Watson, & Barr, 2006). In a meta-analysis of 19 studies predicting attitudes toward seeking professional psychological help, Nam and Choi (2013) found that self-

stigma had the largest effect size of the nine predictors included in the analysis (e.g., anticipated benefit, anticipated risks, depression, distress, self-concealment, self-disclosure, social support, public stigma, and self-stigma). Others have also found that endorsement of self-stigma relates to negative attitudes toward seeking psychological treatment (Conner et al., 2010; Hackler, Vogel, & Wade, 2010), and individuals who endorse greater self-stigma associated with seeking help may be more likely to terminate treatment prematurely (Wade, Post, Cornish, Vogel, & Tucker, 2011).

Evidence suggests that public stigma may be internalized as self-stigma. For example, several researchers have found that self-stigma mediates the relationship between public stigma and attitudes toward seeking services (e.g., Bathje & Pryor, 2011; Vogel, Shechtman, & Wade, 2010; Vogel, Wade, & Hackler, 2007). Using structural equation modeling, Vogel et al. (2007) demonstrated that perceived public stigma was positively associated with self-stigma, and self-stigma was then negatively associated with attitudes toward seeking help. Using a longitudinal design, Vogel, Bitman, Hammer, and Wade (2013) also found that self-stigma developed from public stigma.

Several authors have indicated that peer pressure and stigma keep police officers from discussing things that are distressing to them, because officers do not want to seem as if they cannot handle their jobs or be relied upon for backup (e.g., Blum, 2000; Fair, 2009; Kureczka, 1996; Miller, 1995). Kirschman (2007) noted that officers are warned throughout their training that losing control of their emotions could jeopardize their career. They may be afraid that disclosing issues pertaining to stress or mental health could interfere with promotions (Shearer, 1993) or job assignments (De Lung, 1990).

Many police administrators also believe that officers who need help may eventually cause problems for the department (Blau, 1994).

Researchers have found that officers' attitudes toward seeking mental health services are relatively neutral, rather than negative (Karaffa & Tochkov, 2013; Meyer, 2000). Officers may agree that there is a legitimate need for psychological services, but they are also cognizant of stigma and the potential professional implications of seeking treatment (Toch, 2002). Evidence suggests that social support may play an important role in promoting mental health service utilization (Stephens & Long, 2000). For example, Vogel, Wade, Wester, Larson, and Hackler (2007) found that being encouraged to seek help and knowing someone who had sought help were associated with more positive expectations regarding mental health services and greater intentions of seeking help. However, officers may underestimate their colleagues' support for mental health services, thus demonstrating pluralistic ignorance (Karaffa & Tochkov, 2013).

Pluralistic Ignorance

Pluralistic ignorance describes a phenomenon in which individuals in a group privately reject a belief, feeling, or behavior, yet they believe that other group members privately accept it (Prentice & Miller, 1996). In one of the most cited studies on pluralistic ignorance, Prentice and Miller (1993) found that college students overestimated other students' comfort with heavy drinking on campus. In other words, there was inconsistency between students' subjective perceptions of the drinking norm and the actual norm. Students tended to believe that their peers were more comfortable with heavy drinking than they actually were.

Researchers have found pluralistic ignorance in numerous areas including drinking behaviors (Prentice & Miller, 1993; Segrist, Corcoran, Jordan-Fleming, & Rose, 2007; Suls & Green, 2003), sexual behaviors (Chia & Lee, 2008; Lambert, Kahn, & Apple, 2003; Reiber & Garcia, 2010), body image (Park, Yun, McSweeney, & Gunter, 2007), ethics (Halbesleben, Buckley, & Sauer, 2004), attitudes toward affirmative action (Boven, 2000), support for racial segregation (Breed & Ktsanes, 1961; O'Gorman, 1975; O'Gorman & Garry, 1976), and attitudes toward GLBT individuals (Bowen & Bourgeois, 2001).

Miller and McFarland (1991) explained that pluralistic ignorance may be caused by group members' desire to maintain their in-group identity. If members are experiencing incongruence between their private attitudes and the perceived norms of the group, they are likely to engage in behaviors that are consistent with group norms without necessarily altering their personally held beliefs. Consistently, Prentice and Miller (1996) hypothesized that group identification is the primary cause of pluralistic ignorance in many situations. Group members may act in accordance with group norms so that others accept them. However, they may then interpret others' similarly motivated behaviors as a reflection of their internal beliefs. Essentially, pluralistic ignorance may occur because people have difficulty recognizing how others' norm-congruent behaviors are motivated by their desire to belong to the group.

Individuals' feelings and behaviors are often "determined and sustained by their conceptions of what others think, feel, or do" (O'Gorman & Garry, 1976, p. 449). Therefore, the occurrence of pluralistic ignorance within a group could have several effects. Individuals may feel a sense of inferiority or shame if they mistakenly believe

that their internal attitudes are different than those of the majority (Miller & Morrison, 2009), depending on how important these attitudes are to them (Prentice & Miller, 1996). Pluralistic ignorance increases the likelihood that members will not share their true opinions within the group (Halbesleben, Wheeler, & Buckley, 2007), so it may also preserve the status quo in instances in which group members no longer support certain attitudes or values (Miller & Morrison, 2009). Lastly, the occurrence of pluralistic ignorance may lead to behavior change among group members. Halbesleben et al. (2007) suggested that group members experiencing pluralistic ignorance may change their attitudes or behaviors to be more in line with their perceptions of the group norm.

Pluralistic Ignorance Among Police Officers

Strong identification with other officers is an important element in the police culture (Kirschman et al., 2013; Murray, 2005). Police officers' self-concepts are often intimately connected with their membership in the police organization (Bonifacio, 1991), and they may hold their identity as an officer above all else (Woody, 2005). Motivation to demonstrate behaviors that are consistent with group norms, as well as the discomfort associated with violating norms, tends to be stronger among individuals who value their membership in the group (Prentice & Miller, 1996).

Kirschman et al. (2013) indicated that one of the most common fears among police officers is thinking that they are the only ones experiencing unfavorable internal reactions to stress. Miller and Morrison (2009) suggested that individuals in highly cohesive groups are most susceptible to pluralistic ignorance. Therefore, pluralistic ignorance among officers with regard to seeking mental health services could falsely maintain stigma within the organization and serve as a barrier to service utilization. For

example, officers may incorrectly believe that their positive attitudes toward seeking services are unique, when their colleagues' attitudes are actually quite similar to their own.

In a study of police officers' attitudes toward seeking professional mental health treatment, Karaffa and Tochkov (2013) found that approximately 55% of participants selected agree or strongly agree when they were asked if they would want to get psychological help if they were worried or upset for a long period of time. However, only 24% selected agree or strongly agree when they were asked if other officers would want to get psychological help if they were worried or upset for a long period of time. This suggests that officers tended to underestimate their colleagues' willingness to seek mental health services, thus demonstrating pluralistic ignorance.

In a qualitative study of officers who had participated in a police counseling program, Millar (2002) found that some officers chose not to disclose their participation to their colleagues because they were fearful of criticism from others. However, the majority of officers who participated and shared their reasons for counseling with colleagues received support for their decisions. This finding provides further support for the notion that officers may misperceive their peers' attitudes toward seeking mental health services in a way that could restrict mental health service utilization.

Purpose of the Study

Due to the stressors inherent in their jobs, officers may be at increased risk for a variety of personal and mental health-related issues including marriage and family problems (Borum & Philpot, 1993; Kirschman, 2007; Miller, 2007), depression (Blum, 2000; Darensburg et al., 2006; Lawson, Rodwell, & Noblet, 2012; Violanti et al., 2008),

posttraumatic stress disorder (Darensburg et al., 2006; Kates, 2008; Komarovskaya et al., 2011; Menard & Arter, 2013), substance abuse (Ballenger et al., 2010; Davey, Obst, & Sheehan, 2001; Lindsay, 2008; Violanti et al., 2011), suicide (Clark, White, & Violanti, 2012; Kapusta et al., 2010; Seligmann et al., 1994; Violanti et al., 2008), and physical health problems, such as sleep disorders (Rajaratnam et al., 2011; Vila, 2009) or susceptibility to illness (Blum, 2000). Police stressors and their physical and psychological consequences can also negatively impact the police organization (More, 1998) through decreased job performance (Chen, 2009; Shane, 2010), and excessive aggressiveness among officers (Finn, Talucci, & Wood, 2000).

Traditionally, police officers have refrained from asking for help (Violanti, 1995) or pursuing professional mental health services, even when they are available (Blau, 1994; Greenstone, 2000). Some evidence suggests that officers' attitudes toward seeking mental health services may be improving (Karaffa & Tochkov, 2013; Meyer, 2000), but officers are still concerned about stigma regarding seeking help (Blum, 2000; Fair, 2009; Toch, 2002). Considering the relationship between perceived stigma and willingness to seek mental health services (Mojtabai, 2010; Vogel et al., 2007), identifying and addressing sources of stigma within the police organization may improve service utilization (Corrigan, 2004; Dowling, Moynihan, Genet, & Lewis, 2006).

Numerous studies have shown that endorsement of public stigma (e.g., Komiya et al., 2000; Mojtabai, 2010) and self-stigma (e.g., Conner et al., 2010; Hackler et al., 2010; Nam & Choi, 2013) tends to negatively correlate with attitudes toward seeking professional psychological help. Furthermore, evidence suggests that public stigma may be internalized as self-stigma, and self-stigma tends to mediate the relationship between

public stigma and attitudes toward seeking services (e.g., Bathje & Pryor, 2011; Vogel, et al. 2007; Vogel, et al, 2010). However, researchers have not formally investigated the role of public and self-stigma in predicting attitudes toward seeking mental health treatment among police officers. These data are needed in order to develop focused interventions to reduce stigma toward seeking psychological services.

Therefore, the first objective of the study was to identify the role of public stigma and self-stigma in predicting attitudes toward seeking mental health services among police officers. The first three research questions were:

1. Does self-stigma negatively correlate with attitudes toward seeking mental health services among police officers?

2. Does public stigma negatively correlate with attitudes toward seeking mental health services among police officers?

3. Does self-stigma mediate the relationship between public stigma and attitudes toward seeking mental health services among police officers?

Karaffa and Tochkov (2013) found that officers tended to underestimate their colleagues' willingness to seek services, which demonstrates a pluralistic ignorance effect with regard to mental health help-seeking attitudes. Group members are generally motivated to act in accordance with perceived group norms so that others will accept them (Prentice & Miller, 1996). Therefore, pluralistic ignorance tends to preserve the status quo even when members no longer support certain attitudes (Miller & Morrison, 2009). Considering the perceived stigma associated with seeking mental health services in the police community (Blum, 2000), officers may refrain from seeking help even if they hold supportive attitudes.

Researchers have highlighted that dispelling misperceptions within groups could ultimately influence group members' behaviors (Prentice & Miller, 1996), and studies have shown that targeting pluralistic ignorance directly may be an effective method to change group behaviors (Halbesleben et al, 2005; Schroeder & Prentice, 1998). Karaffa and Tochkov (2013) suggested that providing officers with information to show them that attitudes toward seeking mental health treatment are not necessarily negative may ultimately increase their willingness to seek services. As of yet, no other researchers have investigated pluralistic ignorance with regard to attitudes toward seeking mental health services among police officers.

In order to develop, implement, and evaluate educational programs to increase treatment utilization by targeting misperceptions among officers, more specific data are needed. Therefore, the second objective of the study was to develop a more comprehensive understanding of the pluralistic ignorance phenomena as it pertains to help-seeking attitudes among police officers, with regard to several common presenting concerns. The fourth research question addressed in the study was:

4. Do police officers underestimate their colleagues' willingness to seek mental health services for presenting concerns, including (a) family issues, (b) depression, (c) post traumatic stress disorder, (d) substance abuse, and (e) physiological complaints due to stress?

CHAPTER III

METHODOLOGY

Participants

The participants in this study were 248 sworn police officers employed full-time by municipal, county, state, and university police agencies in Texas and Oklahoma. One officer employed part-time and two officers employed on a reserve basis completed the survey, but I removed their responses so that the dataset included officers who were currently employed full-time. I invited several tribal police agencies to participate in the study, although I did not receive any responses from administrative officers regarding the request for participation. Furthermore, I did not recruit participants from federal or military police agencies.

Participation in the study was entirely voluntary and confidential, and participants did not receive any payment or other benefits for participating in the study. The participants' median age was 42.00 years (range, 24-63), and their median time in law enforcement was 17.00 years (range, 2-42). The majority of the respondents were male ($n = 204$, 82.3%) and predominantly White ($n = 222$, 89.5%). Most were married

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(n = 189, 76.2%) and had completed a bachelor's degree (n = 82, 33.1%). Officers of

various ranks were represented in the sample, with most being sergeants (n = 66, 26.6%)

or patrol officers (n = 56, 22.6%). The majority of the participants were employed by

municipal agencies (n = 186, 75.0%). Almost 37% (n = 91) reported that their agency

employed over 1,000 sworn officers, and 24.4% (n = 62) reported that their agency

employed between 100 and 499 officers. Detailed demographic information is reported in

Table 1.

The results indicate that 59.3% (n = 147) of the sample had voluntarily

participated in some form of mental health services the past, including individual (n = 94,

37.9%), family (n = 89, 35.9%), group (n = 19, 7.7%) crisis intervention (n = 20, 8.1%),

or medication (n = 27, 10.9%) services. Officers who had voluntarily sought mental

health services in the past tended to rate the experience positively. Approximately 19% (n

= 28) of the respondents reported that their experience using mental health services was

very positive, 32.2% (n = 48) reported that it was positive, and 26.8% (n = 40) indicated

that it was somewhat positive. Nine percent of officers (n = 14) described their

experience as neutral, while 12.8% described it as either somewhat negative, negative, or

very negative.

Other officers reported that they had been mandated to participate in mental

health services in the past (almost 20%; n = 50), including individual (n =16, 6.5%),

group (n = 21, 8.5%), crisis intervention (n = 15, 6.0%), and medication (n = 1, 0.4%)

services. Twenty-four percent (n = 12) of the respondents who had been mandated to

participate in services reported that their experience was positive, 14.0% (n = 7) reported

that it was somewhat positive, and 18.0% (n = 9) described their experience as neutral.

On the other hand, 22.0% (*n* = 11) described it as somewhat negative, 12.0% (*n* = 6) as negative, and 10.0% (*n* = 5) as very negative.

Instruments

The participants responded to a 62-item online survey (Appendix E). The research survey included items related to participants' attitudes toward seeking mental health services, mental health stigma, willingness to seek services, and perceptions of other officers' willingness to seek services. The survey also included a brief demographic questionnaire. Survey components were presented in randomized order to reduce potential order effects. Definitions adapted from Meyer (2000) were provided to clarify terminology used in the research survey.

Pluralistic Ignorance. Although pluralistic ignorance is a widely recognized phenomenon, there has been relatively little empirical research to measure, evaluate, or clarify the construct (Flezzani & Benshoff, 2003). Pluralistic ignorance has generally been operationalized as a difference score between individuals' ratings of their own attitudes or behaviors and their perceptions of others' attitudes or behaviors (Halbesleben et al., 2004; Lambert et al., 2003; Prentice & Miller, 1993; Schroeder, & Prentice, 1998; Suls & Green, 2003). Validity for the construct is usually established by clearly reporting how it will be measured (Flezzani & Benshoff, 2003).

In the current study, I operationalized pluralistic ignorance as the difference score between officers' self-reported willingness to seek mental health services for five presenting problems (family issues, depression, PTSD, substance abuse, and physiological complaints due to stress) and their perceptions of other officers' willingness to seek services for the same concerns. I created 10 new items for the current

study (Appendix E). Before I administered the survey to participants, I asked four experienced police officers to assess the readability and face validity of the items. The officers' feedback was favorable; therefore, I did not make any revisions. Participants rated their personal willingness to seek mental health services and their perceptions of others' willingness to seek services for each of the five presenting issues on an 11-point scale (0 = *very unwilling*, 5 = *neutral*, 10 = *very willing*).

Several other researchers studying pluralistic ignorance have used similar scaling (Hines, Saris, & Throckmorton-Belzer, 2002; Prentice & Miller, 1993; Lambert et al., 2003; Schroeder, & Prentice, 1998; Suls & Green, 2003). Dawes (2002) concluded that using an 11-point scale may generate data with more variance than a typical 5-point scale, without producing any appreciable differences in terms of scaled means. In this study, I subtracted officers' estimations of others' willingness to seek mental health services for each presenting problem from their personal willingness to seek services for each problem. Evaluating pluralistic ignorance in this manner allows both overestimations and underestimations to be observed (Westerberg, 2004). Therefore, a difference score of 0 indicates that officers' perceptions of others' willingness to seek mental services are accurate, whereas deviations from 0 in either direction indicate inaccurate perceptions. Underestimations of other officers' willingness to seek services were indicated by positive errors for each item.

Although I was primarily interested in examining the difference scores individually for each presenting issue, I conducted a principal components analysis with varimax rotation to determine the component structure among the 10 pluralistic ignorance items ($n = 244$). The Kaiser-Meyer-Olkin statistic of 0.78 verified the sampling adequacy

for the analysis (Kaiser, 1974), and Bartlett's test of sphericity, $\chi^2 (45) = 1358.25$, $p <$ .001, indicated that the correlations between items were sufficiently large for principal components analysis (Field, 2009). Two components had eigenvalues greater than one and collectively explained 65.6% of the variance. As expected, the first component included the five items representing officers' personal willingness to seek help ($M =$ 38.76, $SD = 10.15$, $\alpha = 0.83$), with loadings from 0.76 to 0.86. The second component included the five items representing officers' perceptions of others' willingness to seek help ($M = 28.97$, $SD = 9.27$, $\alpha = 0.88$), with loadings from 0.63 to 0.87.

Attitudes Toward Seeking Professional Psychological Help-Short Form (ATSPPH-SF). The ATSPPH-SF (Fischer & Farina, 1995) is a 10-item self-report instrument developed to assess respondents' attitudes toward and willingness to seek professional mental health treatment. I asked participants to respond according to the degree in which they agree with each statement on a 4-point Likert-type scale. Items on the ATSPPH-SF are scored 0 to 3, where a higher score indicates a more favorable attitude toward seeking professional psychological help (0 = *disagree*, 1 = *partly disagree*, 2 = *partly agree*, 3 = *agree*). Scoring is reversed for several items (3 = *disagree*, 0 = *agree*). Total scores on this scale can range from 0 to 30. I replaced the term psychologist with professional mental health provider in the research survey, since clinicians with various training backgrounds may provide mental health services to police officers.

The ATSPPH-SF was developed using a sample of undergraduate university students ($N = 389$). The mean ATSPPH-SF score of the normative sample was 17.45 with a standard deviation of 5.97. In a previous study, Karaffa and Tochkov (2013) found that

police officers (n = 150) demonstrated a mean ATSPPH-SF score of 15.61 (SD = 3.77).

In the current study (n = 239), the mean ATSPPH-SF score was 17.92 with a standard

deviation of 6.30.

The ATSPPH-SF was developed as a shortened version of the 29-item Fischer

and Turner (1970) Attitudes Toward Seeking Professional Psychological Help (ATSPPH)

scale, which has been found to accurately distinguish those who have sought mental

health treatment from those who have not (Fischer & Turner, 1970). The ATSPPH-SF

correlates highly with the original ATSPPH (r = 0.87), and it has also demonstrated good

psychometric properties (Fischer & Farina 1995). Fischer and Farina (1995) conducted

factor analysis with varimax rotation and concluded that the 10 items represent one

internally consistent construct, with loadings above 0.50. The internal consistency of the

ATSPPH-SF was 0.84, and one-month test-retest reliability was 0.80 for the normative

sample. Using a sample of police officers, Karaffa and Tochkov (2013) found that the

internal consistency of the ATSPPH-SF was fair (α = 0.78). In the current sample, the

scale also showed good internal consistency with an alpha of 0.86.

Military Stigma Scale (MSS). The Military Stigma Scale (Skopp et al., 2012) is a 26-

item self-report instrument developed to measure public stigma and self-stigma related to

seeking mental health services. The MSS was developed using a sample of active duty

Army soldiers. Given the quasi-military nature of police work and the similarities

between police and military culture (Paoline, 2003), the MSS may also be appropriate for

use with police officers. Some items include terminology that is common in the police

culture (e.g., "chain of command"), and they evaluate specific concerns about job

promotions (Shearer, 1993) and perceived reliability (Blum, 2000) that have been reflected in previous police literature.

Skopp et al. (2012) conducted exploratory factor analysis and principal components analysis with oblique rotation and concluded that the MSS consists of two factors that measure the constructs of public stigma and self-stigma. The two-factor solution accounted for 52.1% of the variance in the original scale development sample, and each factor included items loading above 0.40. The 16 public stigma items focus on participants' concerns about their public image if they were to seek mental health services, ramifications on their career, confidentiality concerns, and impact on how colleagues and leaders would perceive them. Skopp et al. (2012) found strong internal consistencies for the public stigma scale for both the scale development sample ($\alpha = 0.94$) and the confirmatory sample ($\alpha = 0.95$). In the current sample, the public stigma scale showed excellent internal consistency with an alpha of 0.93.

The 10 self-stigma items were closely adapted from the previously developed Self-Stigma of Seeking Help scale (SSOSH) and focus on concerns about the loss of self-esteem associated with seeking mental health treatment (Vogel et al., 2006). Skopp et al. (2012) found internal consistencies of $\alpha = 0.89$ in the scale development sample and $\alpha = 0.87$ in the confirmatory sample. In the current sample, the self-stigma scale of the MSS showed strong internal consistency with an alpha of 0.91. Test-retest reliability figures were not generated in the MSS scale development study, but Vogel, Wade and Haake (2006) found that the original SSOSH demonstrated two-month test-retest reliability of 0.72.

I asked participants to respond according to the degree in which they agree with each statement on a 4-point Likert-type scale. Items on the MSS are scored 1 to 4, where a higher score indicates greater perceptions of stigma for seeking mental health services (1 = *definitely disagree*, 2 = *somewhat disagree*, 3 = *somewhat agree*, 4 = *definitely agree*). Scoring is reversed for several items (4 = *definitely disagree*, 1 = *definitely agree*). Total scores on the public stigma scale can range from 16 to 64, and scores on the self-stigma scale can range from 10 to 40. I modified the term military to police in one item.

The mean public stigma score of Skopp et al.'s (2012) scale development sample ($n = 520$) was 32.46 ($SD = 10.94$), and the mean score of the confirmatory sample ($n = 518$) was 30.99 ($SD = 11.38$). In the current study ($n = 231$), the mean public stigma score was 37.81 with a standard deviation of 9.94. The mean self-stigma score of the scale development sample was 19.69 ($SD = 6.43$), and the mean score of the confirmatory sample was 18.54 (SD = 6.05). In the current sample ($n = 233$), the mean self-stigma score was 20.12 with a standard deviation of 6.69. The two subscales correlated $r = 0.67$ in the scale development sample, and they correlated $r = 0.58$ in the confirmatory sample. In the current sample, the public stigma and self-stigma scales correlated $r = 0.63$.

Demographic Questionnaire. This questionnaire was used to obtain information from participants including their age, sex, marital status, race, ethnicity, level of education, professional rank, years of experience as a police officer, type of agency, the number of officers in their agency, employment status, the approximate number of citizens in their immediate jurisdiction, and prior use of mental health services.

Procedures

I used convenience sampling to identify municipal, county, state, tribal, and university police agencies in Texas and Oklahoma. Agencies were excluded from participating if email addresses were not provided online to contact administrative officers in each agency. I did not recruit participants from federal or military police agencies. I contacted each department via email in order to establish if participants could be recruited within the agency (Appendix C). If consent was offered, I presented materials for the study to the administrative officers and asked them to email the materials to potential participants. The informed consent statement (Appendix D) clearly described that I was not affiliated with the agency in any way, and participation was completely voluntary. I also emphasized that individual responses would not be provided to the agency, and findings would be presented in aggregate form. I took these extra precautions to insure that participants would not perceive the request for research participation as coercive.

The email that I distributed to potential participants included the informed consent statement (Appendix D). The informed consent statement provided a summary of the study as well as information about procedures, time involvement, level of confidentiality, risks and benefits, and the voluntary nature of participation. I did not ask participants to sign their names or provide information about their departmental affiliations. Consent to participate was granted by the officers' participation in filling out the survey.

I provided officers with a link to the survey in the recruitment email. The link directed them to a password-protected Qualtrics™ account. The IP addresses of respondents were not collected, and the Qualtrics™ software assigned a numerical code

to each case to further protect anonymity. Once participants were directed to the survey, they had another opportunity to review the informed consent statement and to select a response to ensure that they understood the conditions of voluntary participation. I also asked participants to select a response to ensure that they were over the age of 18, and then presented an electronic version of the research survey (Appendix E). After participants completed the research survey, I provided a debriefing statement (Appendix F), which thanked officers for their participation and included contact information to reach me if participants had any questions about the study or wanted a copy of the results. The Oklahoma State University Institutional Review Board approval form is provided in Appendix G.

Data Analysis

Prior to running statistical analyses, data were screened to ensure that the underlying assumptions of each analysis were met. An alpha level of .05 was used for the analyses, unless otherwise noted. The first two hypotheses related to whether self-stigma (1) and public stigma (2) would negatively correlate with attitudes toward seeking mental health services among police officers. To evaluate the first two hypotheses, I conducted bivariate correlation analyses to examine these relationships. Scatter plots indicated linear relationships between the variables, and an analysis of the histograms and Q-Q plots of the sampling distribution for each variable suggested that they were normally distributed. Furthermore, there were no significant outliers.

The third hypothesis involved the mediating relationship of self-stigma between public stigma and attitudes toward seeking mental health services among police officers. Mediation exists when a predictor influences a dependent variable indirectly through an

intervening variable (Preacher & Hayes, 2004; 2008). To evaluate the third hypothesis, I used multiple regression analysis and applied the Hayes (2013) PROCESS macro in SPSS, which formally tests the significance of the indirect effect non-parametrically with bootstrapping and generates measures of effect size.

Prior to running the multiple regression analysis, several assumptions were evaluated. A plot of the standardized residuals and a QQ plot suggested that the residuals were normally distributed and the homoscedasticity assumption was met. However, I identified two cases with residuals greater than three standard deviations from the mean ($z = -3.01$ and $z = 3.41$) and removed them as outliers (Warner, 2012). The Durbin-Watson test value of 2.10 suggested that the error terms were uncorrelated (Durbin & Watson, 1951). There were also no issues with multicollinearity, as indicated by a variance inflation factor of 1.62 (Cohen, Cohen, West, & Aiken, 2003). I used listwise deletion to address missing values in the regression model, and there were no significant between-group differences for any of the participant demographic factors with regard to the variables included in the model.

The last set of hypotheses (4a-e) related to whether police officers would underestimate their colleagues' willingness to seek mental health services for several presenting issues, thus demonstrating a pluralistic ignorance effect with regard to help seeking attitudes. I conducted five dependent sample t-tests to determine if there were statistically significant differences between officers' self-reported willingness to seek mental health services and their perceptions of other officers' willingness to seek services for the same presenting issues. Underestimations of other officers' willingness to seek

services were indicated by positive errors. Histograms and Q-Q plots suggested that the

sampling distribution of the differences between scores was approximately normal.

CHAPTER IV

RESULTS

Hypothesis 1: *Self-stigma will negatively correlate with attitudes toward seeking mental health services among police officers.*

Hypothesis 2: *Public stigma will negatively correlate with attitudes toward seeking mental health services among police officers.*

To evaluate the first two hypotheses, I conducted bivariate correlation analyses to examine the relationships between (1) self-stigma and (2) public stigma and attitudes toward seeking professional psychological help. The results indicate that public stigma was negatively correlated with attitudes toward seeking professional psychological help, $r(221) = -0.43$, $p < .001$. In other words, participants who endorsed greater public stigma reported more negative attitudes toward seeking professional psychological help. Self-stigma was also negatively correlated with attitude scores $r(224) = -0.72$, $p < .001$. That is, participants who endorsed greater self-stigma also reported more negative attitudes toward seeking help. Therefore, Hypotheses 1 and 2 were supported.

Hypothesis 3: *Self-stigma will mediate the relationship between public stigma and*

attitudes toward seeking mental health services among police officers.

Next, I conducted multiple regression analyses to assess each component of the

proposed mediation model. Descriptive statistics and a zero-order correlation matrix

including each variable used in the regressions are presented in Table 2. The results of the

path model with standardized coefficients are displayed in Figure 1. Results suggest that

public stigma was negatively associated with attitudes toward seeking professional

psychological help, $B = -0.25$, $\beta = -0.42$, $t(209) = -6.87$, $p < .001$, (c path), and public

stigma was positively associated with self-stigma, $B = 0.39$, $\beta = 0.62$, $t(209) = 11.37$, $p <$

.001, (a path). Results indicate that the mediator (self-stigma) was negatively associated

with attitudes toward seeking help, $B = -0.72$, $\beta = -0.77$, $t(209) = -13.29$, $p < .001$, (b

path). Because both the a path and b path were significant, mediation was tested using the

bootstrapping method with bias-corrected confidence estimates (Preacher & Hayes,

2008). In the present study, the 95% confidence interval of the indirect effect was

obtained with 5000 bootstrap resamples (Preacher & Hayes, 2008).

Results of the mediation analysis confirm the mediating role of self-stigma in the

relationship between public stigma and attitudes toward seeking professional

psychological help, $B = -0.28$, $\beta = -0.48$, $CI = -0.35$ to -0.22, $\kappa^2 = 0.45$ (ab path). Kappa-

squared (κ^2) is the ratio of the indirect effect relative to its maximum possible value,

given the constraints of the data (Preacher & Kelley, 2011). A kappa-squared value of

0.45 ($CI = 0.38$ to 0.53) suggests that the observed indirect effect of $ab = -0.28$ is 45% as

large as its maximum possible value. This may be interpreted as a large effect size

(Preacher & Kelley, 2011). In addition, results indicate that the direct effect of public

stigma on attitudes toward seeking professional psychological help became non-significant, B = 0.03, $t(209) = 0.89$, $p = 0.376$, when controlling for self-stigma (c' path), which suggests full mediation. Furthermore, the overall model explained 56% of the variance in ATSPPH-SF scores, $R^2 = 0.56$, $F(2, 208) = 131.84$, $p < .001$. Therefore, Hypothesis 3 was supported.

Hypotheses 4a-e: *Police officers will underestimate their colleagues' willingness to seek mental health services for presenting concerns, including (a) family issues, (b) depression, (c) post traumatic stress disorder, (d) substance abuse, and (e) physiological complaints.*

To test the last set of hypotheses, I conducted five dependent sample t-tests to determine if there were statistically significant differences between officers' self-reported willingness to seek mental health services and their perceptions of other officers' willingness to seek services for the same presenting issues. I applied an unweighted Bonferroni correction (Shaffer, 1995) to protect the familywise Type I error rate among the set of tests and evaluated each test at an alpha level of .01. As displayed in Table 3, there were differences for each presenting issue, with medium to large effect sizes. Officers perceived themselves as more willing than their colleagues to seek mental health services for family issues, $t(244) = 7.46$, $p < .001$, $d = 0.48$; depression, $t(245) = 9.37$, $p < .001$, $d = 0.60$; posttraumatic stress disorder, $t(244) = 11.64$, $p < .001$, $d = 0.74$; substance abuse, $t(245) = 14.92$, $p < .001$, $d = 0.95$; and physiological complaints, $t(245) = 9.22$, $p < .001$, $d = 0.60$. This demonstrates a pluralistic ignorance effect with regard to help seeking attitudes. Therefore, Hypotheses 4a-e were supported.

Post-hoc Analyses

Considering the unitary component structure and good reliability among each set of pluralistic ignorance items, I combined the five items pertaining to officers' personal willingness to seek help into one scale ($M = 38.76$, $SD = 10.15$, $\alpha = 0.83$) and the five items pertaining to their perceptions of others' willingness to seek help into another ($M = 28.97$, $SD = 9.27$, $\alpha = 0.88$). Then, I compared the difference in total scores using a dependent sample t-test. In line with the individual-level analyses, officers perceived themselves as more willing than their colleagues to seek mental health services when several presenting issues were combined and analyzed simultaneously, $t(243) = 12.72$, $p < .001$, $d = 0.81$.

To determine if officers' attitudes toward seeking mental health services differed from a civilian sample, I conducted a one-sample t-test to compare the current sample's mean attitudes toward seeking professional psychological help score ($M = 17.92$, $SD = 6.30$) to the normative group of college students ($M = 17.45$, $SD = 5.97$) established in the Fischer and Farina (1995) study. Results suggest that officers' attitude scores were not significantly different than participants in the original scale development sample $t(238) = 1.16$, $p = .245$. Next, I compared the current sample's mean attitude score ($M = 17.92$, $SD = 6.30$) to the scores obtained in another police study conducted by Karaffa and Tochkov (2013) and found that officers in the current sample reported more positive attitudes toward seeking professional psychological help than the former sample ($M = 15.61$, $SD = 3.77$), $t(238) = 5.68$, $p < .001$, $d = 0.74$. Furthermore, female officers in the current sample reported slightly more positive attitudes toward seeking help ($M = 19.97$, $SD = 5.46$) than male officers ($M = 17.58$, $SD = 6.37$), $t(234) = 2.17$, $p = .031$, $d = 0.28$.

To investigate the construct validity of the Attitudes Toward Seeking Professional Psychology Help-Short Form (ATSPPH-SF) and the Military Stigma Scale (MSS) among police officers, I compared scores obtained on each measure between officers who had voluntarily sought mental health services in the past and those who had not, including those who had been mandated to complete services or had not sought services at all. Officers who had voluntarily sought services in the past reported significantly higher attitude scores ($M = 19.41$, $SD = 5.88$) than officers who had not ($M = 15.74$, $SD = 6.15$), $t(232) = 4.58$, $p < .001$, $d = 0.60$. Officers who had voluntarily sought services in the past also reported significantly lower self-stigma scores ($M = 18.53$, $SD = 6.30$) compared to officers who had not ($M = 22.38$, $SD = 6.54$), $t(224) = 4.42$, $p < .001$, $d = 0.59$. The difference in public stigma scores between officers who had voluntarily sought services in the past ($M = 39.51$, $SD = 11.06$) and officers who had not ($M = 41.20$, $SD = 9.41$) was non-significant, $t(223) = 1.19$, $p = .237$.

CHAPTER V

DISCUSSION

The main objectives of this study were to identify the role of public stigma and self-stigma in predicting attitudes toward seeking mental health services among police officers and to develop a more comprehensive understanding of the pluralistic ignorance phenomena as it pertains to help-seeking attitudes. To the best of my knowledge, this is the first study to test the mediating role of self-stigma between public stigma and attitudes towards seeking professional psychological help among police officers. This may also be among the first studies (e.g., Karaffa & Tochkov, 2013) to evaluate pluralistic ignorance with regard to help-seeking attitudes among police officers. Ultimately, these data are needed to develop, implement, and evaluate programming to reduce treatment barriers and increase mental health service utilization among officers who may benefit from it.

Mental Health Stigma

As expected, the results of the current study indicate that public stigma was negatively associated with attitudes toward seeking professional psychological help.

In other words, participants who felt that the general public reacts negatively to individuals with mental health concerns reported more negative attitudes toward seeking professional psychological help. This relationship is consistent with previous studies on public stigma and attitudes toward seeking mental health services (e.g., Komiya et al., 2000).

Self-stigma was also negatively associated with attitudes. That is, participants who perceived that their own behaviors or attitudes are not socially acceptable also reported more negative attitudes toward seeking help. Once again, these findings have been supported in previous studies (e.g., Hackler et al., 2010; Conner et al., 2010). Self-stigma has been found to be among the strongest predictors of attitudes toward seeking help (Nam & Choi, 2013). Importantly, officers in the current study who had voluntarily sought services in the past also reported significantly lower self-stigma scores compared to officers who had been mandated to complete services or had not sought services at all. This supports the construct validity of the self-stigma factor within the Military Stigma Scale and suggests that measures of self-stigma may be useful in predicting actual help-seeking behaviors.

Furthermore, results of the mediation analysis confirmed the mediating role of self-stigma in the relationship between public stigma and attitudes toward seeking professional psychological help. In other words, officers' awareness of how the public reacts to individuals with mental health concerns influenced their attitudes toward seeking help indirectly through self-stigma. Their endorsement of self-stigma, or the perception that their behaviors or attitudes regarding mental health concerns are socially

unacceptable, was able to explain the relationship between public stigma and attitudes towards seeking help.

This is consistent with previous research (e.g., Bathje & Pryor, 2011; Vogel et al., 2010; Vogel et al., 2007), and it suggests that awareness of public stigma, in itself, does not seem to relate to attitudes toward seeking professional psychological help when self-stigma is taken into account. Self-stigma requires stereotype agreement, which involves accepting stereotypes and internalizing the idea that public beliefs personally apply to one's self (Corrigan, Watson, & Barr, 2006). This internalization process can reduce people's sense of self-esteem (e.g., Bathje & Pryor, 2011; Corrigan, Watson, & Barr, 2006) and ultimately reduce the likelihood they will seek mental health services (Nam & Choi, 2013). A longitudinal study conducted by Vogel et al. (2013) lent support to the theory that public stigma may be internalized as self-stigma. Vogel et al. (2013) suggested that, although changing the public's views of mental illness and help-seeking is important, targeting the negative effects of stigma through individual interventions may be possible. Specifically, future research should attempt to elucidate the self-stigma internalization process and evaluate effective, cost-efficient interventions to reduce it.

Some researchers have suggested that mental health stigma could be reduced by normalizing symptoms or providing an explanation for them (Blum, 2000; Schreiber & Hartrick, 2002). Officers experiencing PTSD or other job-related stress reactions, for example, may feel less stigma if they are informed that their distressing emotions are logical (or physiological) reactions to the situation (Blum, 2000). This could be incorporated into trainings designed to help officers recognize signs and symptoms of stress and other mental health problems (Finn et al., 2000; Finn & Tomz, 1997) and could

be facilitated by mental health professionals who are familiar with the nature of police work. Furthermore, officers experiencing mental health concerns may be less likely to feel a sense of shame or embarrassment if they are informed that their concerns are treatable (Mann & Himelein, 2004). Therefore, it could also be beneficial for mental health professional to share information about treatment approaches for common presenting problems, including empirical support for their efficacy.

Social support may also be helpful in reducing mental health stigma. Greene-Shortridge et al. (2007) suggested that if supervisors emphasized the importance of identifying problems and engaging in early interventions, individuals may feel more comfortable seeking mental health services. Consistently, Warner et al. (2008) concluded that being encouraged to seek services by a family member or friend was the preferred approach to reduce barriers to seeking psychological services, and Vogel et al. (2007) found that knowing someone who had sought help promoted positive expectations about the treatment process and increased intentions to seek help. Furthermore, some research has suggested that creating an organizational climate that is supportive of counseling could have benefits other than simply reducing stigma and increasing willingness to use counseling services. For example, Carlan and Nored (2008) found that police officers who worked in climates supportive of counseling reported significantly less stress and less need for counseling services.

 In line with these findings, it could be very beneficial for officers who have used mental health services in the past to share their experiences with other officers, perhaps explaining what the process looked like, potential challenges, and benefits. In the current study, officers who had voluntarily sought mental health services at some point in the

past generally reported positive experiences. Therefore, the testimony of a respected peer or supervisor could go a long way in demystifying the process and reducing stigma (Karaffa & Tochkov, 2013).

Pluralistic Ignorance

In the current study, officers tended to underestimate their peers' willingness to seek mental health services for family issues, depression, posttraumatic stress disorder, substance abuse, and physiological complaints. In other words, there was inconsistency between officers' perceptions of their colleagues' attitudes toward seeking help and their actual attitudes. Officers tended to believe that their peers were less willing to seek mental health services than they actually were. This discrepancy is often referred to as pluralistic ignorance (Prentice & Miller, 1993), and these results replicate Karaffa and Tochkov's (2013) findings with another police sample.

Some researchers have suggested that misperceiving others' attitudes could have several effects within a group, including promoting feelings of shame if members mistakenly believe that their internal attitudes are different than the majority (Miller & Morrison, 2009) or increasing the likelihood that members will not share their true opinions (Halbesleben et al., 2007). Furthermore, misperceiving actual norms may lead group members to change their behaviors to coincide with the false norm (e.g., Halbesleben et al., 2007; Prentice & Miller, 1993). Therefore, pluralistic ignorance among officers with regard to seeking mental services could falsely maintain stigma within the organization and serve as a barrier to service utilization.

Fortunately, evidence suggests that if attitudes and behaviors are encouraged or maintained by inaccurate perceptions of others' attitudes, then correcting misperceptions

could ultimately influence group members' behaviors (Prentice & Miller, 1996).

Researchers (e.g., Halbesleben et al., 2005; Schroeder & Prentice, 1998) have found that

programs designed to reduce pluralistic ignorance with regard to problematic behaviors

are effective if they challenge misperceptions and encourage dialogue about group norms

and beliefs. For example, mental health professionals or training officers in police

agencies could encourage active discussions about perceived norms, stigma, and other

barriers to seeking mental health services, while also presenting information about actual

attitudes and the pluralistic ignorance phenomenon. Future research should evaluate the

efficacy of these interventions as well as the feasibility of incorporating this

programming into training seminars.

Attitudes Toward Seeking Mental Health Services

Literature has shown that positive attitudes toward seeking mental health services

are associated with greater willingness to seek help (e.g., Cramer, 1999; Erkan, Ozbay,

Cihangir-Cankaya, & Terzi, 2012). In fact, the current findings suggest that officers who

had voluntarily sought services in the past reported significantly higher scores on the

Attitudes Toward Seeking Professional Psychological Help-Short Form than officers who

had not, which suggests that scores on attitude measures may correlate with actual help-

seeking behaviors.

Historically, authors have suggested that police officers have refrained from

asking for help (Violanti, 1995) or pursuing professional mental health interventions

(Blau, 1994; Kirschman et al., 2013). However, results of the current study suggest that

officers' attitude scores were not significantly different than participants in the original

scale development sample, which consisted of college students (Fischer and Farina,

1995). These findings could encourage researchers and clinicians to reassess the notion that police officers necessarily have negative attitudes toward psychological services. Although I found that officers in the current sample reported more positive attitudes toward seeking professional psychological help compared to officers in another police study (Karaffa & Tochkov, 2013), on average, police officers exhibited a neutral attitude toward seeking help. Meyer (2000) also found that police officers' attitudes toward seeking professional psychological help were within the neutral range on the original Attitudes Toward Seeking Professional Psychological Help scale (Fischer & Turner, 1970).

Female officers in the current sample reported slightly more positive attitudes toward seeking help than male officers. This is in line with previous studies that have shown that women tend to demonstrate more positive attitudes toward seeking mental health services (Berg et al., 2006; Fischer & Turner, 1970; Leong & Zachar, 1999) and greater levels of psychological openness (Mackenzie, Gekoski, & Knox, 2006). However, these results contradict those of Karaffa and Tochkov (2013), who did not find significant differences between men and women with regard to attitudes toward seeking professional help. In should be noted that the effect size of the difference between men and women in the current sample is relatively small; therefore, it is important to not over-interpret these findings.

Officers' Use of Mental Health Services

The results of the survey indicated that more than half of the sample had voluntarily participated in some form of mental health services in the past, with individual counseling and family counseling being the most frequently endorsed services.

Berg et al. (2006) found that fewer than 10% of officers who reported symptoms of anxiety or depression had consulted with a psychologist or psychiatrist within the past 12 months, although these findings are not directly comparable with the current study, because I did not specify a time frame when I asked officers if they had voluntarily sought mental health services. Furthermore, Berg et al. (2006) collected data using a sample of Norwegian police officers.

Overall, rates of previous voluntary service utilization were higher than I expected. It is possible that these figures reflect a trend toward more positive attitudes about seeking mental health services in the general population (Mojtabai, 2007). However, participants were self-selected on a voluntary basis, and I did not offer any incentive to participate. Therefore, it is possible that the attitude scores and rates of prior mental health service use in this study are inflated. For example, participants may have been more likely to complete the survey because they already held positive attitudes or had prior experience with mental health services. Importantly, officers in the current sample who had voluntarily sought mental health services in the past tended to rate the experience positively. Although it is uncertain as to what factors contributed toward their ratings, these figures could be useful in encouraging other officers to seek services when warranted.

Strengths and Limitations

Overall, this study has several strengths. With regard to data collection procedures, I took precautions to minimize participants' fears of stigmatization or departmental repercussions to encourage candid responses. For example, officers did not sign their names or identify their agency affiliation. I also did not collect the participants'

IP addresses, and I was clear that I conducted the study without being affiliated with any police agency.

In addition, the measures used in this study demonstrated strong internal consistency, and the Military Stigma Scale (Skopp et al., 2012) included items that are more consistent with how officers may experience stigma compared to other scales designed to measure mental health stigma among civilians. The Military Stigma Scale is relatively new and has not been validated extensively with police officers, although the results of the current study are promising. Another strength of this study is it included items related to previous use of mental health services, which helped demonstrate the utility of the Military Stigma Scale (Skopp et al., 2012) and the Attitudes Toward Seeking Professional Psychological Help-Short Form (Fischer & Farina, 1995) in differentiating between officers who had services in the past from those who had not.

Pluralistic ignorance is a widely recognized phenomenon, but there has been relatively little empirical research to measure or evaluate this construct. Flezzani and Benshoff (2003) indicated that validity for the construct is usually established by clearly reporting how it will be measured. I created 10 new items to evaluate pluralistic ignorance in this study and operationalized it similarly to other researchers (Lambert et al., 2003; Prentice & Miller, 1993; Schroeder & Prentice, 1998). Although I created these items for the current study and research regarding their psychometric properties was not available, I asked four experienced police officers to assess the readability and face validity of the items and received favorable feedback before administering the survey. The five items pertaining to officers' personal willingness to seek help and the five items pertaining to their perceptions of others' willingness to seek help each formed a unitary

factor with good internal consistency in the current sample. Therefore, these items may be useful to other police psychology researchers in the future.

Furthermore, the number of participants included this study was sufficiently large to test the hypotheses and generate meaningful conclusions. Woody (2005) indicated that conducting research within police agencies may be particularly challenging. Nonetheless, the sample size was on par or larger than many other recently published studies in the field of police psychology (e.g., Page & Jacobs, 2011; Violanti et al., 2009; Wang et al., 2010; Wester et al., 2010).

Despite these strengths, a few limitations must also be addressed. The non-probability sampling methods used in the study limit the generalizability of the findings. I only included sworn officers who were currently employed full-time by a police agency; therefore, these data may not be applicable to officers employed on a part-time or reserve basis or to retired officers. The dataset included officers from municipal, county, state, and university agencies with various ranks, although it did not include military police, tribal officers, or officers employed by federal law enforcement agencies. Furthermore, these data may not adequately reflect the attitudes and perceptions of officers employed by smaller agencies. Data collection techniques restricted access to smaller departments that may not have websites or access to email.

Participation was entirely voluntary and participants did not receive any financial or professional incentives for completing the survey. It is possible that officers who participated in the study had more positive attitudes or higher rates of previous voluntary service utilization compared to officers who did not participate. This is another potential

threat to the external validity of the study. The correlational design of the study also precludes certain claims regarding causality between variables.

Some diversity was achieved by sampling from departments throughout Texas and Oklahoma; however, a review of the demographic characteristics of the sample suggests that participants may not be representative of the police force as a whole. With regard to sex, about 16% of the current sample were female, which is fairly close to the 12% figure reported in the Bureau of Justice Statistics' (BJS) nationally representative survey of state and local police agencies (Reaves, 2010). Almost 90% of the current sample was White, compared to 75% in the BJS survey. Almost six percent of the current sample was Black or African American compared to 12% in the BJS survey, and less than one percent of the current sample was Asian compared to the two percent figure reported by the BJS. Furthermore, American Indian officers were over-represented in the sample (almost six percent) compared to less than one percent in the BJS survey. Approximately nine percent of the current sample identified as Hispanic or Latino, which is consistent with the BJS figure of 10% (Reaves, 2010).

The Bureau of Justice Statistics (Reaves, 2010) reported that approximately half of the police agencies in the United States employed less than 10 officers, but officers employed by these departments only accounted for five percent of the total number of officers. The BJS report noted that 61% of full-time police officers were employed by agencies with at least 100 officers, compared to less than 30% in the current sample. This indicates that officers from smaller departments were underrepresented in the sample. However, the report stated that approximately one-third of officers were employed by

agencies with 1,000 or more officers, which is similar to the figure obtained in the current study (37%).

Future Directions and Conclusions

Until now, researchers had not formally investigated the role of public stigma and self-stigma in predicting attitudes toward seeking mental health treatment among police officers, nor had they studied pluralistic ignorance with regard to officers' attitudes toward seeking services in sufficient depth to make sound program or policy recommendations. The current study contributes new knowledge to the police psychology literature and poses several important theoretical and clinical considerations for researchers, practitioners providing mental health services to police officers and their families, and police administrators. These findings may be particularly useful to police agencies, because untreated physical, interpersonal, and psychological consequences of police stress can impact the entire police organization (Chen, 2009; Finn, et al., 2000; More, 1998; Shane, 2010).

Nonetheless, the generalizability of the findings may be limited due to the sampling strategy and an under-representation of racially diverse officers, officers from smaller departments, or police officers employed in federal positions or other unique areas of law enforcement. In the future, these hypotheses should be tested using a representative sample and a more comprehensive sampling strategy. Researchers should also continue to focus on clinical applications of the results by developing and evaluating programming to target mental health stigma and improve psychological services for officers.

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APPENDICES

Appendix A: Tables and Figures

Table 1:

Demographic Characteristics of Participants (N = 248)

Variable			Variable		
	n	*%*		*n*	*%*
Sex:			Marital Status:		
Male	204	82.3	Single	16	6.5
Female	39	15.7	Married	189	76.2
Missing	5	2.0	Divorced	36	14.5
Race:			Separated	3	1.2
White	222	89.5	Missing	4	1.6
Black/African American	14	5.6	Education:		
American Indian	14	5.6	High School	10	4.0
Asian	1	0.4	Some College	64	25.8
Missing	4	1.6	Associate's Degree	41	16.5
Ethnicity:			Bachelor's Degree	82	33.1
Not Hispanic/Latino	207	83.5	Some Graduate School	18	7.3
Hispanic/Latino	23	9.3	Graduate Degree	28	11.3
Missing	4	1.6	Missing	5	2.0
Age:			Professional Rank:		
(Median = 42.00, Range = 24-63)			Patrol Officer	56	22.6
20-29	14	5.6	Detective	33	13.3
30-39	66	26.4	Sergeant	66	26.6
40-49	91	36.5	Lieutenant	33	13.3
50-59	61	24.4	Captain	15	6.0
60-69	7	2.8	Chief	15	6.0
Missing	9	3.6	Deputy	14	5.6
			Other	11	4.4

Table 1

Demographic Characteristics of Participants (Continued)

Variable			Variable		
	n	%		*n*	%
Years of Experience					
(Median =17.00, Range = 2-42)					
0-9	47	18.8	Type of Agency:		
10-19	96	38.5	City	186	75.0
20-29	65	26.0	County	43	17.3
30-39	30	12	State	8	3.2
40-49	3	1.2	University	7	2.8
Missing	7	2.8	Missing	4	1.6
Number of Officers in Agency:			Population of Jurisdiction:		
(Median = 350, Range = 3-4,500)			(Median = 350,000, Range = 25-8,000,000)		
1-49	34	13.6	0-49,999	58	23.2
50-99	37	14.8	50,000-99,999	18	7.2
100-499	61	24.4	100,000-499,999	39	15.6
500-999	13	5.2	500,000-999,999	62	24.9
1,000+	91	36.6	1,000,000+	46	18.5
Missing	12	4.8	Missing	25	10.1

Table 2

Zero-Order Correlation Matrix for Regression Variables (n = 214)

Variable	*M*	SD	1.	2.	3.
1. ATSPPH-SF	18.00	6.26	-		
2. Public Stigma	39.96	10.69	-0.43***	-	
3. Self-Stigma	20.08	6.77	-0.75***	0.62***	-

Note. ATSPPH-SF = Attitudes Toward Seeking Professional Psychological Help-Short Form; Public Stigma = Military Stigma Scale (Public Stigma); Self-Stigma = Military Stigma Scale (Self-Stigma).
*** $p < .001$.

Table 3

Descriptive Statistics and t-Test Results for Each Presenting Issue

Presenting Issue	n	Self		Others		Paired Differences		t	df	p	d
		M	SD	M	SD	M	SD				
Family	245	6.80	2.81	5.38	2.12	1.42	2.98	7.46	244	< .001	0.48
Depression	246	7.39	2.48	5.73	2.14	1.67	2.79	9.37	245	< .001	0.60
PTSD	245	8.48	2.46	6.42	2.28	2.06	2.77	11.64	244	< .001	0.74
Substance abuse	246	8.86	2.55	5.91	2.48	2.95	3.10	14.92	245	< .001	0.95
Physical	246	7.20	2.68	5.50	2.16	1.70	2.84	9.22	245	< .001	0.60
Combined	244	38.77	10.17	28.97	9.27	9.80	12.03	12.72	243	< .001	0.81

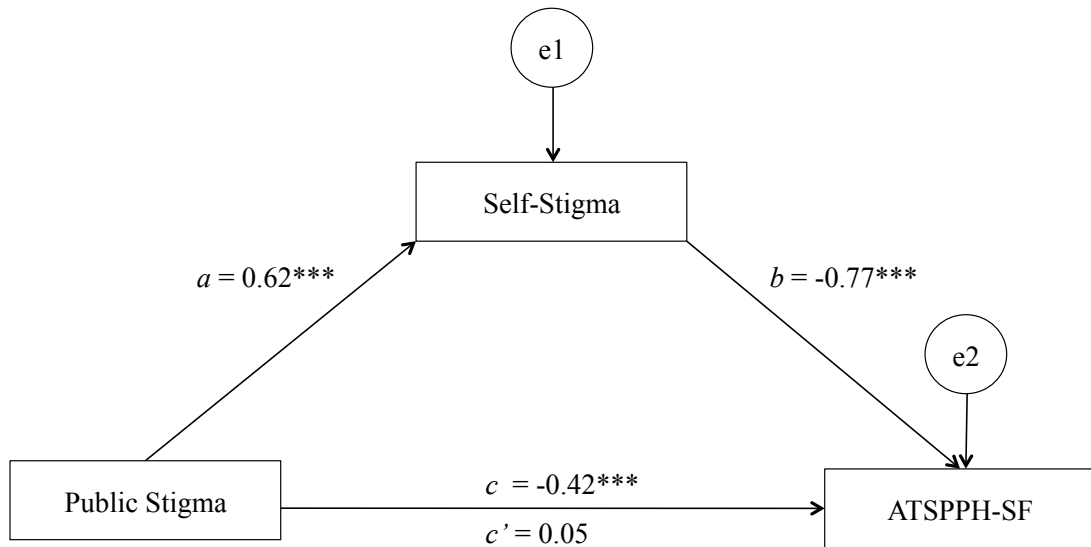*Figure 1*. Indirect effect of public stigma on ATSPPH-SF through self-stigma. Standardized coefficients are shown. ATSPPH-SF = Attitudes Toward Seeking Professional Psychological Help-Short Form; Public Stigma = Military Stigma Scale (Public Stigma); Self-Stigma = Military Stigma Scale (Self-Stigma). Model 1: $F(1, 209) = 129.20$, $p < .001$, $R^2 = 0.38$. Model 2: $F(2, 208) = 131.84$, $p < .001$, $R^2 = 0.56$.
*** $p < .001$.

Appendix B: Extended Review of Literature

Police work is regarded as one of the most stressful occupations (Finn & Tomz, 1997; Liberman et al., 2002). Officers are routinely exposed to violence, human suffering, and tragedy, and they must confront dangerous situations on a regular basis (Bartol & Bartol, 2008; Bonifacio, 1991; Kirschman et al., 2013; Miller, 1995; Toch, 2002). Many stressors experienced by police officers are unique to the profession, and some officers perceive themselves to be under increasingly more pressure due to high levels of violent crime in their jurisdictions and increasing public scrutiny (Finn, Talucci, & Wood, 2000). Police officers also struggle with adapting to fighting crime in a digital age, in which social media and other technologies are changing the face of criminal activity and posing new investigative challenges (Kirschman et al., 2013).

Due to the stressors inherent in police work, officers may be at increased risk for a variety of personal and vocational issues including marriage and family problems (Kirschman, 2007; Miller, 2007), depression (Blum, 2000; Darensburg et al., 2006; Lawson et al., 2012; Violanti et al., 2008), posttraumatic stress disorder (Darensburg et al., 2006; Komarovskaya et al., 2011; Menard & Arter, 2013), substance abuse (Ballenger et al., 2010; Davey et al., 2001; Lindsay, 2008; Violanti et al., 2011), suicide (Clark et al., 2012; Kapusta et al., 2010; Seligman et al., 1994; Violanti et al., 2008), and physical health problems, including sleep disorders (Rajaratnam et al., 2011; Vila, 2009) or susceptibility to illness (Blum, 2000).

Despite these tendencies, several factors have been identified to explain hesitance among police officers toward seeking mental health services. These factors include adherence to cultural tenets, such as ethos of autonomy and emotional control (Blum,

2000; Kappeler et al., 1998; Kirschman et al., 2013; Kureczka, 1996; Stratton, 1984), lack of confidence in mental health providers (Blau, 1994), practical factors, including cost and accessibility of services (Karaffa & Tochkov, 2013; Meyer, 2000), and perceived stigma associated with seeking services (Blum, 2000; Corrigan, 2004; Fair, 2009).

The Police Culture

Police officers are distinguished from other occupational groups by their unique role and social status (Kappeler et al., 1998). Oldham (2006) stated, "The military and the police service are not simply jobs. They are cultures and should be both treated and respected as such" (p. 18). Group members' identification with the group is typically stronger among groups that are distinctive (Ashforth & Mael, 1989), and police colleagues are an important reference group for support and self-identity to many officers. Shift work makes it difficult for many police officers to socialize with average people. Therefore, officers tend to socialize with other officers off-duty, which reinforces the distinctiveness of the police culture (Davey et al., 2001; Dempsey & Forst, 2005). Immersion in the culture often leads officers to conform to group norms both on- and off-duty, which may be both adaptive and maladaptive (Bonifacio, 1991).

Historically, the police culture has emphasized characteristics associated with a traditional male gender role, including physical toughness, aggressiveness, and competitiveness (Moller-Leimkuhler, 2002; Wester & Lyubelsky, 2005). Bravery is an important component in the culture, and officers' acceptance into the police community often relies on their ability to prove themselves in dangerous situations (Kappeler et al., 1998). Officers are expected to make difficult decisions in ambiguous situations, and they

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are often insistent that they can solve problems without assistance in order to demonstrate autonomy (Kappeler et al., 1998; Kirschman et al., 2013; Kureczka, 1996).

The police culture is also characterized by an ethos of secrecy, in which officers are reluctant to disclose information about the police agency to outsiders (Blau, 1994; Kappeler et al., 1998; Kirschman et al., 2013), including researchers (Woody, 2005). The police culture tends to dichotomize the world in terms of 'us versus them,' and it emphasizes that officers' colleagues are the only reliable sources of support. This belief serves to promote in-group solidarity (Henry, 2004), but it also encourages cynicism. In some ways, cynicism is an effective coping mechanism for managing the nihilism that officers encounter on the job, but it also tends to alienate them from others (Bonifacio, 1991; Kirschman et al., 2013).

The police culture emphasizes the importance of emotional control. Kirschman et al. (2013) summarized that police work is about control—both control of ones' self and control of others. Officers are trained to remain in control of their emotions at all times in order to respond to difficult situations effectively (Blum, 2000). Stratton (1984) reported that feelings are rarely talked about among police officers, and the ethos of emotional control is instilled in officers as early as their academy training. Officers learn that if they show emotion, they may be viewed with suspicion and their colleagues may perceive them as weak or unreliable (Bonifacio, 1991; Kirschman et al., 2013).

There is a growing consensus that the police culture is undergoing a transition (Loftus, 2010), and traditional conceptions of police cultural values may not accurately reflect those of contemporary officers. Among a sample of sheriffs' deputies, Cochran and Bromley (2003) did not find widespread adherence to the cultural norms generally

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reflected in the literature, but the authors did note these attitudes among a minority of officers in the sample. Similarly, Paoline (2004) examined occupational attitudes among officers and found that traditional assumptions regarding a monolithic police culture may not be valid. For example, Paoline identified seven distinct groups, and only one group (nine percent of officers in the sample) endorsed traditional aspects of the police culture. However, in an ethnographic study conducted in an English police agency, Loftus (2010) concluded that officers in the sample demonstrated a worldview that was in line with older cultural patterns, because the basic stressors of the police role are still prominent. This finding supported the notion that a distinct police culture may still exist.

Police Stress

  Organizational Stressors. Police organizations are characterized as classic bureaucratic institutions (Kappeler et al., 1998; Niederhoffer, 1967) and tend to produce noteworthy organizational stressors. Organizational stress refers to stress generated due to policies and practices of the police agency (Finn & Tomz, 1997). For example, widely recognized organizational stressors include shift work, excessive paperwork, insufficient training to complete job tasks, limited promotional opportunities, and poor administrative support (Finn & Tomz, 1997, Stratton, 1984; Toch, 2002).

  Specific organizational stressors related to supervision and administrative support include being second-guessed by superiors when performing job tasks, lack of positive reinforcement for performing well, punishment for small infractions, and low organizational morale (Amaranto, Steinberg, Castellano, & Mitchell, 2003). Many authors have agreed that organizational stressors are often more troubling to officers than stressors experienced in the line of duty (Blum, 2002; Kirschman, 2007, Kirschman et al.,

2013; Toch, 2002). For example, Liberman et al. (2002) found that, overall, routine occupational stressors were more stressful to officers than exposure to critical incidents.

External Stressors. External stressors include stressors associated with interacting with the criminal system or the public. Finn and Tomz (1997) indicated that officers often experience frustrations with the prosecutor's office, the inefficiency of the criminal justice process, and unjust court decisions. Officers are also impacted by local politics, which often have impact on financial and personnel resources (Stratton, 1984; Stucky, 2005).

In addition, Bonifacio (1991) explained that ambivalence from the public is a unique external stressor experienced by police officers. On one hand, officers are perceived as caring and "all-powerful" to a law-abiding citizen in need, but they are also perceived as "unloving persecutors" when citizens commit law violations (p. 30). Negative or distorted media accounts of incidents involving officers may also weigh heavily on officers and their families (More, 1998; Stratton, 1984), and skewed presentations of the police in the media tend to encourage public hostility and alienate officers from the public (Blum, 2002). Furthermore, increased emphasis on transparency in regard to government and community operations has produced greater levels of scrutiny toward police officers and public safety personnel (Kirschman et al., 2013).

Task-Related Stressors. Task-related stressors refer to stressors generated by the on-the-job aspects of policing. Unique task-related stressors include exposure to death and suffering, responding to use of force encounters, exercising discretion in ambiguous situations, and role ambiguity (Finn & Tomz, 1997; Kirschman et al., 2013). Police officers are routinely exposed to death when responding to homicides, suicides, and

motor vehicle accidents (Benner, 2000; Henry, 2004). Exposure to death is emotionally and psychologically traumatic for many officers (Henry, 2004), and it has been found to be associated with PTSD symptoms in samples of law enforcement officers (Violanti, 2004).

In addition to routine exposures to death in the course of duty, some of the most significant critical incidents experienced by officers are use of force encounters (Blum, 2000; Kirschman et al., 2013). Officers are charged with exercising discretion and making decisions in ambiguous situations (Blum, 2000; Kirschman et al., 2013; Stratton, 1984), and they may question the appropriateness of their prior actions (Toch, 2002), particularly when deadly force is required. Blum (2002) stated, "Not only must the officer worry about an immediate threat, but there are always questions about the consequences of lethal force" (p. 137).

For example, police officers may be disciplined or investigated within their departments if they use force against someone to protect themselves or others. Furthermore, if they are involved in multiple use of force encounters, they may be perceived as problems for the department (Blum, 2002). Importantly, Blum (2000) suggested that officers' psychological reactions to use of force encounters may depend, to some degree, on the way officers are treated by the department, significant others, and the media.

Consequences of Stress

Family and Relationship Issues. Family and relationship issues are some of the most common presenting issues among officers' and their spouses (Blau, 1994; Miller, 2007). McCoy and Aamodt (2010) concluded that there is little empirical support for the

notion that divorce rates are higher among police officers compared to other occupations, but Bonifacio (1991) highlighted that "there is nearly unanimous agreement that the job imposes considerable stress on the family unit" (p. 174). In a study of over 400 spouses of Scottish police officers, Alexander and Walker (1996) found that approximately 50% of the spouses in the sample reported that their relationships had been slightly impaired by the work-induced stressors of their partners, and nine percent reported that their relationships were extremely impaired. The researchers found that spouses reported the greatest impairment to their social life, particularly due to shiftwork and long hours. Likewise, Maynard and Maynard (1982) found that shift rotations and changing schedules were considered some of the most stressful aspects of the job among police families.

Due to the nature of the job, and officers may not get to spend much time with their family (Borum & Philpot, 1993; Kirschman, 2007; Kirschman et al., 2013; Maynard & Maynard, 1982). Officers' significant others often report that their partners seem overcommitted to the department and they may experience feelings of jealousy or resentment (Miller, 2007). In addition, Roberts and Levenson (2001) found that job stress tends to interfere with the quality of couples' interactions when they do have time to spend together. Specifically, the authors found that when officers reported experiencing more job stress, they also reported having fewer moments in which they experienced positive affect and reciprocated each other's positive affect.

Work-family conflict describes a type of role conflict in which role pressures from work are incompatible with family demands (Allen, Herst, Bruck, & Sutton, 2000). Burke and Mikkelsen (2006) found that police officers indicating higher levels of

exhaustion reported more work-family conflict, and Mikkelsen and Burke (2004) found that officers reporting greater demands for hiding emotions reported also reported greater work-family conflict. Youngcourt and Huffman (2005) found that having a supportive partner mitigated work-family conflict among police officers. Work-family conflict has also been found to negatively correlate with measures of psychological health (Mikkelsen & Burke, 2004).

Oftentimes, elements of the police role or officers' working personality intrude upon family relationships (Henry, 2004; Miller, 2007). This is problematic, because work habits that make officers effective in performing their jobs may not be conducive to being a responsive partner or parent (Kirschman, 2007; Kirschman et al., 2013). Officers may present as commanding and decisive while on duty in order to gain respect and instill confidence, but it may create conflict in the family when it is over-practiced (Kirschman et al., 2013). Officers' partners often complain about them making authoritative demands or demonstrating over-protectiveness or cynicism (Borum & Philpot, 1993). Blumenstein, Fridell, and Jones (2012) found that officers who adhere to elements of the traditional police culture, such as authoritarianism, are also at increased risk for engaging in psychological abuse.

Officers are reinforced for keeping their emotions under control while on the job, but restricting emotions can produce conflict at home (Borum & Philpot, 1993; Miller, 2007). Officers may also refrain from talking about their experiences, because they assume that their partners do not fully understand the conditions that they face at work. Miller (2006) suggested that officers may also restrict their emotions at home in order to avoid making themselves and their family vulnerable to the stressors they experience on

shift. That is, they may not want to subject their partners to vicarious stress (Toch, 2002). In line with this consideration, some findings have indicated that officers' significant others may be susceptible to experiencing vicarious trauma. For example, Davidson, Berah, and Moss (2006) found that spouses of officers suffering from PTSD symptoms tended to experience greater levels of psychological distress themselves.

Depression. Officers may also be susceptible to experiencing symptoms of depression, including feelings of helplessness, anhedonia, and insomnia in the aftermath of critical incidents, or as a result of exposure to chronic day-to-day stressors (Toch, 2002; Blum, 2000). Researchers have found relatively high prevalence rates of depression in police samples. For example, Lawson et al. (2012) found that 37% of 631 Australian police officers met criteria for depression, and Darensburg et al. (2006) found that 22% of female and 12% of male officers reported clinically significant levels of depression among a sample of 100 urban police officers. In addition, Wang et al. (2010) found that police recruits who reported lower self-worth during training and greater perceived work stress in the first year of police service showed greater depression symptoms at 12 months. Komarovskaya et al. (2011) found that killing or seriously injuring someone in the line of duty was also marginally associated with depressive symptoms.

Substance Abuse. Police officers have historically used alcohol as a means of self-medicating after exposure to traumatic events, to numb depressive feelings, or to help them relax or sleep (Bonifacio, 1991; Kirschman, 2007; Kirschman et al., 2013). Alexander and Walker (1994) also found that officers tended to use alcohol as a way of relieving stress. Researchers do not agree on the extent of alcohol abuse among police

officers (Blau, 1994; Lindsay, 2008). For example, Kates (2008) reported that more than 25% of police officers abuse alcohol, compared to 10% of the general population; whereas Lindsay (2008) did not find differences between officers and the general public with regard to drinking behaviors. Nonetheless, Lindsay found that over 19% of the sample reported binge drinking when they drank. Similarly, Violanti et al. (2011) found that 17% of officers from a mid-sized urban department drank six or more drinks on one occasion on a weekly or daily basis. In another study, Ballenger et al. (2010) concluded that only slightly under eight percent of their sample met criteria for lifetime alcohol abuse or dependence, but approximately 18% of males and 16% of females reported experiencing adverse consequences from alcohol use.

In the United States, many groups consider drinking alcohol to be one of the most acceptable ways of socializing. In the police culture, drinking alcohol is consistent with officers' need maintain a masculine image, yet it allows them opportunities to express concerns at the same time (Stratton, 1984). Several researchers have found evidence to support the notion that officers' drinking behaviors are socially motivated. Davey et al. (2001) found that many officers reported drinking in order to be part of the group. Similarly, Kates (2008) reported an incident in which an officer stated, "If you didn't drink with the guys, you weren't one of the guys. That's what real men, real cops did. And the drunker and crazier you got, the more accepted you were" (p. 103). In line with these findings, Lindsay and Kyna (2009) found that officers most at risk for drinking problems also admitted that fitting in was highest on their list of reasons why they drank alcohol.

Several factors have been associated with problematic drinking among police officers. For example, Violanti et al. (2011) found that stressful life events, including divorce or separation, were associated with an increased likelihood of hazardous drinking behaviors, and Swatt et al. (2007) showed that higher levels of anxiety and depression were associated with higher levels of problematic drinking. Some researchers have also found that exposure to critical incident stress is associated with greater alcohol use (Menard & Arter, 2013; Violanti, 2004), but others (e.g., Ballenger et al., 2010) have shown that critical incident exposure and PTSD symptoms are not associated with the level of officers' alcohol use.

Posttraumatic Stress Disorder. Police officers are especially prone to developing PTSD because they are exposed to so many instances of violence and human suffering, many of which threaten their immediate safety (Bonifacio, 1991; Kates, 2008). Officers may experience intrusive recollections of incidents in which they have experienced feelings of helplessness (Blum, 2000), including responding to major disasters (Dowling et al., 2006), or officer-involved shootings (Kates, 2008). It has been estimated that 12% to 35% of police officers in the United States suffer from PTSD, with various levels of impairment (Mann & Neece, 1990). Kates (2008) reported that one-third of all police officers have PTSD symptoms, and in a study of officers from Buffalo, New York, Darensburg et al. (2006) found that 35% of the sample reported clinically significant symptoms of PTSD.

Komarovskaya et al. (2011) found that nearly 10% of 400 police officers in their study reported having to kill or seriously injure someone in the line of duty during the first three years on the force. The authors also found that killing or seriously injuring

someone was significantly associated with PTSD symptoms. Consistently, Menard and

Arter (2013) found that exposure to critical incidents was associated with PTSD

symptoms. Stephens and Long (1999) concluded that traumatic experiences were

positively related to PTSD symptoms, but the relationship was weakened if officers

reported greater social support from peers. In addition, Violanti (2004) found that

comorbid risk of PTSD symptoms and alcohol use increased the odds of suicide ideation

approximately ten times over those officers who had lower levels of trauma.

Suicide. Some researchers believe that suicide among police officers is also a

significant problem (Clark et al., 2012). Seligmann et al. (1994) reported that twice as

many officers die by suicide each year as are killed in the line of duty, and the effects of a

completed suicide may impact the entire police organization (Barron, 2010; Clark et al.,

2012). However, the literature on suicide among police officers is relatively sparse

(Bonifacio, 1991), and statistics regarding prevalence rates are inconclusive due to

methodological challenges (Kirschman, 2007).

Descriptive statistics on police suicide can be misleading, depending on which

statistics are being reported. Police suicide studies that report suicides are more likely to

get published than studies that do not report suicides during the examined time period.

Therefore, suicide rates reported in the literature may tend to be inflated (Loo, 2003). In a

study of suicide among 20,000 members of the Royal Canadian Mounted Police between

1960 and 1983, Loo (1986) showed that the average rate of suicide was about half that of

the general population. In contrast, Kapusta et al. (2010) found that the suicide rates

among police officers seemed comparable to those of the general population. However,

given the healthy-worker effect, which assumes that police officers are generally

psychologically healthier than the general public, the authors concluded that officers are at increased risk for suicide.

Several variables have been shown to predict suicidal ideation or attempts among officers. For example, Violanti et al. (2009) found that depression was associated with suicidal ideation. Likewise, Barron (2010) found that approximately 70% of police officers in the sample who completed suicide demonstrated mental health issues, including depression in the three months prior to their death. Barron also found that almost 55% of officers who completed suicide had been referred for some form of intervention, but few officers used these sources of support. Some studies have found correlations between alcohol abuse and suicide (Barron, 2010; Violanti, 1995), and Violanti (2004) found that PTSD symptomology was associated with increased suicidal ideation. Berg et al. (2003) also found that serious suicidal ideation was mainly attributed to personal and family problems.

Physiological Reactions. Repeated exposure to stressful events can also produce chronic hypervigilance and other physiological symptoms. In a sense, officers' brains become accustomed to responding to crises, and they will tend to respond according to these emergency patterns, even in situations in which there is not a legitimate threat (Blum, 2002). Stratton (1984) noted that the overworking of the adrenal glands, due repeated exposure to dangerous situations, may produce fatigue and impair officers' ability to sustain attention and concentration. Officers may experience gastrointestinal problems as a result of the body's suppression of the digestive process during the fight or flight response and may be more susceptible to developing colds, influenza, and other illnesses, due to deficiencies in their immune system from chronic stress (Blum, 2000).

Police officers are susceptible to sleep problems, because shift work interferes with normal sleep patterns (Vila, 2009). In a study of 4,957 police officers, Rajaratnam et al. (2011) found that over 40% screened positive for at least one sleep disorder. Approximately 26% of respondents reported falling asleep while driving at least one time for month, and officers who tested positive for a sleep disorder also reported increased depression, diabetes, and cardiovascular disease. In addition, Neylan et al. (2002) found that occupational stress among police officers was associated with poor sleep quality.

Organizational Effects. Police stressors and their physical and psychological consequences can also negatively impact the police organization (More, 1998) through reduced efficiency, greater absenteeism, and excessive aggressiveness among officers (Finn et al., 2000). When officers become burned out, they find their job unsatisfying, and they demonstrate little commitment to their work tasks or toward their colleagues (More, 1998). Among a sample of 461 police officers from two large urban departments, Shane (2010) found that officers who reported greater organizational stressors demonstrated lower performance. Consistently, Chen (2009) also found a negative correlation between job stress and performance among officers. In their large-scale sleep disorder study, Rajaratnam et al. (2011) conducted follow-up surveys for up to two years and found that officers who tested positive for a sleep disorder were more likely to report that they had made a serious administrative error or a safety violation that could be attributed to fatigue. Officers who met criteria for a sleep disorder were also more likely than officers who did not to report uncontrolled anger toward suspects or absenteeism.

Attitudes Toward Seeking Mental Health Services

The effectiveness of mental health services depends in part on the willingness of the client to engage in the process (Turkum, 2004). Evidence suggests that only about one-third of individuals who experience mental health symptoms seek mental health services within a year of the onset of symptoms (e.g. Andrews et al., 2001). One of the most significant predicators of willingness to seeking psychological help is having positive attitudes toward seeking mental health services (Cramer, 1999; Erkan et al., 2012).

Factors Associated With Attitudes Toward Seeking Mental Health Treatment. Several factors have been shown to predict attitudes toward seeking professional help for mental health concerns. One of the most consistent predictors is gender and masculine ideology. For example, studies have found that women tend to demonstrate more positive attitudes toward seeking mental health services (Berg et al., 2006; Fischer & Turner, 1970; Leong & Zachar, 1999) and greater levels of psychological openness (Mackenzie, Gekoski, & Knox, 2006). On the contrary, men tend to underutilize sources of help that are available (Addis & Mahalik, 2003), and are generally less open to seeking psychological help (Leong & Zachar, 1999).

Similarly, male gender role conflict has also been negatively associated with help-seeking attitudes. Male gender role conflict refers to the strain that exists when men's internal feelings are not consistent with traditional socialized views of masculinity (O'Neil, 1981). Pederson and Vogel (2007) found that men experiencing greater gender role conflict were less likely to self-disclose, which led to less willingness to seek counseling, and Berger et al. (2005) found that men who scored higher on measures of

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gender role conflict and endorsed aspects of traditional masculine ideology tended to have more negative attitudes toward psychological help-seeking. In addition, McKelley and Rochlen (2010) found that men with higher conformity to masculine norms indicated greater stigma toward seeking help.

Attitudes Toward Seeking Mental Health Treatment Among Police Officers.
Police officers develop coping mechanisms to adapt to the psychological stressors they experience at work, but sometimes the accumulation of stress can overwhelm even the most resilient officers (Miller, 1995; Shearer, 1993). Defense mechanisms including repression, displacement, and isolation from feelings may be adaptive in some ways, but these characteristics may also create barriers for seeking help (Blum, 2002; Miller, 1995). Traditionally, police officers have refrained from asking for help (Violanti, 1995) or pursuing professional mental health interventions (Blau, 1994; Kirschman et al., 2013).

Greenstone (2000) noted that officers may not use mental health services, even when they are available, and their reasons for doing so tend to reflect those of the general population. For example, Berg et al. (2006) found that fewer than 10% of officers who reported symptoms of anxiety or depression had consulted with a psychologist or psychiatrist within the past 12 months. This finding is generally consistent with the underutilization of services among civilians. Officers may refrain from seeking services because they do not want to be seen as non-resilient (Toch, 2002), and Blum (2000) concluded that stigma within the police agency may discourage officers from utilizing available services.

Mental Health Stigma

Stigma is one of the reasons that people who might benefit from receiving mental health services do not use them. They may seek to avoid the label of mental illness that sometimes results from seeking services, because of its impact on their sense of identity (Corrigan, 2004; Kushner & Sher, 1989). Corrigan (2004) distinguished between two kinds of stigma: public stigma and self-stigma.

Public Stigma. Public stigma refers to awareness of how the general public reacts to individuals with mental illness (Corrigan & Watson, 2002). In a study of over 12,000 participants from the United States and Canada, Jagdeo et al. (2009) found that almost 50% of respondents indicated that they would be embarrassed if their friends knew about their use of mental health services. Greene-Shortridge et al. (2007) found that military service members experiencing symptoms of PTSD were aware of the public's beliefs about psychological problems and tended to anticipate negative responses from peers and supervisors. Furthermore, Mojtabai (2010) found that respondents who lived in communities which seemed to blame individuals for their mental illness reported less willingness to seek mental health services, and Komiya et al. (2000) found that, among college students, perception of public stigma was negatively associated with attitudes toward seeking psychological help.

Self-Stigma. Self-stigma refers to an individual's perception that his or her behaviors or attitudes are not socially acceptable (Corrigan, 2004). Self-stigma requires stereotype agreement, which involves accepting stereotypes that seem to be endorsed by the public. Individuals then have to believe that these public beliefs personally apply to them (Corrigan et al., 2006). Link (1987) concluded that when people seek mental health

services and they are labeled, these beliefs may become internalized and lead to self-devaluation or fear of rejection by others. In line with this conclusion, numerous researchers (e.g., Bathje & Pryor, 2011; Corrigan et al., 2006; Greene-Shortridge et al., 2007; Link, Struening, Neese-Todd, Asmussen, & Phelan, 2001) have concluded that self-stigma negatively impacts the self-esteem of many people with psychological troubles.

In a meta-analysis of 19 studies predicting attitudes toward seeking professional psychological help, Nam and Choi (2013) found that self-stigma had the largest effect size ($r = -0.63$) of the nine predictors included in the analyses (e.g., anticipated benefit, anticipated risks, depression, distress, self-concealment, self-disclosure, social support, public-stigma, and self-stigma). Others have also found that endorsement of self-stigma related to negative attitudes toward seeking psychological treatment (Hackler et al., 2010; Conner et al., 2010), and individuals who endorse greater self-stigma associated with seeking help may be more likely to terminate treatment prematurely (Wade et al., 2011).

Evidence suggests that public stigma may be internalized as self-stigma. For example, several researchers have found that self-stigma mediates the relationship between public stigma and attitudes toward seeking services (e.g., Bathje & Pryor, 2011; Vogel et al., 2010; Vogel et al., 2007). Using structural equation modeling, Vogel et al., (2007) demonstrated that perceived public stigma was positively associated with self-stigma, and self-stigma was then negatively associated with attitudes toward seeking help. Using a longitudinal design, Vogel et al. (2013) also found that self-stigma develops from public stigma.

Factors Associated With Mental Health Stigma. Research has shown that

women tend to stigmatize mental illness less than men (Mann & Himelein, 2004). Men

may be particularly resistant to seeking help when they perceive that others in their social

network are discouraging of the process (Addis & Mahalik, 2003). Furthermore, studies

have shown that men experiencing gender role conflict are more likely to endorse

stigmatizing attitudes toward counseling (O'Neil, 2008; Wester et al., 2010), and

Hammer, Vogel, and Heimerdinger-Edwards (2013) found that masculine norms were

linked to self-stigma.

Vogel et al. (2010) concluded that self-stigma had a stronger relationship with

men's attitudes toward counseling than women's. Additionally, Vogel et al. (2007) found

that the relationship between perceived public stigma and self-stigma was stronger for

men than for women, which suggests that men may internalize public stigma more

strongly than women. Levels of stigmatization may differ according to the nature of the

presenting issue. For example, Mann and Himelein (2004) found that stigmatization of

schizophrenia was significantly greater than stigmatization of depression.

Mental Health Stigma Among Police Officers. Members of military and

paramilitary organizations who seek mental health services are often concerned about

stigma. In a large sample of soldiers with combat duty in Iraq or Afghanistan, Hoge et al.

(2004) found that participants who met criteria for a mental health disorder were twice as

likely to report concern about stigmatization compared to those who did not meet criteria

for a disorder. Similarly, among a sample of soldiers with combat experience, Warner et

al. (2008) found that the three most endorsed barriers to seeking mental health services

were negative perceptions by colleagues, negative perceptions by leaders, and being seen as weak.

Several authors have also indicated that peer pressure and stigma keeps police officers from discussing things that are distressing to them, because officers do not want to seem as if they are cannot handle their jobs or be relied upon for backup (e.g., Blum, 2000; Fair, 2009; Kureczka, 1996; Miller, 1995). Kirschman (2007) noted that officers are warned throughout their training that losing control of their emotions could jeopardize their careers. They may be afraid that disclosing issues pertaining to stress or mental health concerns could interfere with promotions (Shearer, 1993) or job assignments (De Lung, 1990), and many police administrators believe that officers who need help may eventually cause problems for the department (Blau, 1994).

Bennett (1992) indicated that it is becoming more acceptable for officers to seek professional help for problems associated with occupational stress, and police administrators are generally more aware of the psychological effects of occupational stress and trauma exposure on officers (Levensen & Dwyer, 2000; More, 1998). With regard to attitudes toward seeking psychological services, Meyer (2000) found that although police officers endorsed more negative attitudes than a normative group of college students, their scores on the Attitudes Toward Seeking Professional Psychological Help scale (Fischer & Turner, 1970) were relatively neutral. Similarly, Karaffa and Tochkov (2013) found that the mean Attitudes Toward Seeking Professional Psychological Help-Short Form (Fischer & Farina, 1995) score obtained by female officers was significantly lower than the score obtained by females in the normative sample of college students. However, the mean score reported by male officers was not

significantly different than scores reported by males in the normative sample. Furthermore, officers' scores on the measure indicated that they held relatively neutral attitudes toward seeking mental health treatment.

Officers may agree that there is a legitimate need for psychological services, but they are also cognizant of potential professional implications of seeking treatment (Toch, 2002). Given the association between stigma and willingness to seek mental health services (Mojtabai, 2010; Vogel et al., 2007), addressing sources of stigma within the police organization may improve service utilization (Corrigan, 2004; Dowling et al., 2006). Several factors have been shown to reduce stigma toward seeking psychological services.

First of all, evidence suggests that people may feel less self-stigma if their symptoms are normalized and if they are given an explanation for them (Schreiber & Hartrick, 2002). Therefore, officers experiencing PTSD or other job-related stress reactions may feel less stigma if they are informed that they are not weak; rather, their distressing emotions are logical reactions to the situation (Blum, 2000). Researchers have found that providing accurate information about mental health concerns may reduce also stigma. Hammer and Vogel (2010) examined the efficacy of a male-sensitive brochure developed to improve attitudes toward counseling seeking and reduce the self-stigma of seeking counseling among 1,397 depressed men. They found that the male-sensitive brochure, which incorporated information about the psychology of men and masculinity, improved participants' attitudes and reduced their self-stigma toward counseling. Similarly, training officers to recognize signs and symptoms of stress and mental health concerns may reduce stigma (Finn et al., 2000; Finn & Tomz, 1997).

Evidence suggests that social support may play an important role in promoting mental health service utilization (Stephens & Long, 2000). In regard to the military community, Greene-Shortridge et al. (2007) suggested that implementing supportive policies at the organizational level could reduce stigma associated with seeking services for mental health concerns. For example, if supervisors emphasized the importance of identifying problems and engaging in early interventions, service members may feel more comfortable seeking mental health services.

Vogel et al. (2007) found that being encouraged to seek help and knowing someone who had sought help was associated with more positive expectations regarding mental health services and greater intentions of seeking help. Warner et al. (2008) found that soldiers with combat experience endorsed encouragement from family members and friends as the preferred approach to reducing barriers to seeking psychological services. Furthermore, Carlan and Nored (2008) found that police officers who worked in supportive counseling climates reported significantly less stress, less need for counseling, and greater willingness to use counseling services.

Pluralistic Ignorance

Definitions and Examples. Pluralistic ignorance describes a phenomenon in which individuals in a group privately reject a belief, feeling, or behavior, yet they believe that other group members privately accept it (Prentice & Miller, 1996). In one of the most cited studies on pluralistic ignorance, Prentice and Miller (1993) found that college students overestimated other students' comfort with heavy drinking on campus. In other words, there was inconsistency between students' subjective perceptions of the drinking norm and the actual norm. Students tended to believe that their peers were more

comfortable with heavy drinking than they actually were. This effect occurred when participants were asked to rate the comfort levels of their friends as well as the average student on campus. Pluralistic ignorance has also been demonstrated with regard to public opinion. In another classic study, O'Gorman and Garry (1976) found that most White American adults tended to underestimate White support for racial desegregation. That is, White public opinion was perceived to be more conservative than it actually was.

Among a sample of correctional officers, Kaufman (1981) found that participants perceived their coworkers to be less sympathetic toward inmates than themselves. They perceived agreement among their coworkers when opinions toward inmates were not actually negative, overall. Furthermore, officers who reported having sympathetic attitudes toward inmates tended to feel more isolated from the group. Grekul (1999) also found that correctional officers perceived other officers to be more negative toward inmates than they actually were.

Researchers have found pluralistic ignorance in numerous areas including drinking behaviors (Hines et al., 2002; Prentice & Miller; 1993; Segrist et al., 2007; Suls & Green, 2003), attitudes toward drug use (Hines et al., 2002), sexual behaviors (Chia & Lee, 2008; Cohen & Shotland, 1996; Hines et al., 2002; Lambert et al., 2003; Reiber & Garcia, 2010), sexual harassment and aggression (Flezzani & Benshoff, 2003; Halbesleben, 2009), internet abuse (Lee, Yoon, & Kim, 2008), body image (Park, Yun, McSweeney, & Gunter, 2007), ethics (Halbesleben et al., 2004), attitudes toward divorce (Stalder, 2011), sexism in the military (Do, Samuels, Adkins, Clinard, & Koveleskie, 2013), attitudes toward affirmative action (Boven, 2000), support for racial segregation (Breed & Ktsanes, 1961; O'Gorman, 1975; O'Gorman & Garry, 1976), and attitudes

toward GLBT individuals (Bowen & Bourgeois, 2001).

Causes of Pluralistic Ignorance. Miller and McFarland (1991) explained that pluralistic ignorance may be caused by individuals' desire to maintain their in-group identity. If individuals are experiencing incongruence between their private attitudes and the perceived norms of the group, they are likely to engage in behaviors that are consistent with group norms without necessarily altering their personally held beliefs. Consistently, Prentice and Miller (1996) hypothesized that group identification is the primary cause of pluralistic ignorance in many situations. For example, individuals may act in accordance with group norms so that they may be accepted by others. However, they may then interpret others' similarly motivated behaviors as a reflection of their internal beliefs. Essentially, pluralistic ignorance may occur because people have difficulty recognizing how others' norm-congruent behaviors are motivated by their desire to belong to the group (Prentice & Miller, 1996).

Consequences of Pluralistic Ignorance. Individual's feelings and behaviors are often "determined and sustained by their conceptions of what others think, feel, or do." (O'Gorman & Garry, 1976, p. 449); therefore, the occurrence of pluralistic ignorance within a group could have several effects. Individuals may feel a sense of inferiority or shame if they mistakenly believe that their internal attitudes are different than the majority (Miller & Morrison, 2009), depending on how important these attitudes are to them (Prentice & Miller, 1996). For example, in their study on college drinking behaviors, Prentice and Miller (1993) found that students who perceived their attitudes to be different than the norm tended to score higher on measures of campus alienation.

Pluralistic ignorance increases the likelihood that members will not share their

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true opinions within the organization (Halbesleben et al., 2007), so it may also preserve the status quo in instances in which group members no longer support certain attitudes or values (Miller & Morrison, 2009). Lastly, the occurrence of pluralistic ignorance may also lead to behavior change among group members. Halbesleben et al (2007) suggested that individuals experiencing pluralistic ignorance may change their attitudes or behavior to be more in line with their perceptions of the group norm. Accordingly, Prentice and Miller (1993) found that students who underestimated their peers comfort with drinking responded to the incongruence by shifting their attitudes toward the incorrectly perceived norm.

Pluralistic Ignorance and Attitudes Toward Mental Health Treatment Among Police Officers. Strong identification with other officers is an important element in the police culture (Kirschman et al., 2013; Murray, 2005). Police officers' self-concepts are often intimately connected with their membership in the police organization (Bonifacio, 1991), and they may hold their identity as an officer above all else (Woody, 2005). Motivation to demonstrate behaviors that are consistent with group norms, as well as the discomfort associated with violating norms, tends to be stronger among individuals who value their membership in the group (Prentice & Miller, 1996).

Kirschman et al. (2013) indicated that one of the most common fears among police officers is thinking that they are the only ones experiencing unfavorable internal reactions due to stress. Miller and Morrison (2009) suggested that individuals in highly cohesive groups are most susceptible to pluralistic ignorance. Furthermore, pluralistic ignorance among officers with regard to seeking mental services could falsely maintain stigma within the organization and serve as a barrier to service utilization.

In a study of police officers' attitudes toward seeking professional mental health treatment, Karaffa and Tochkov (2013) found that approximately 55% of participants selected agree or strongly agree when they were asked if they would want to get psychological help if they were worried or upset for a long period of time. However, only 24% selected agree or strongly agree when they were asked if other officers would want to get psychological help if they were worried or upset for a long period of time. This suggests that officers tended to underestimate their colleagues willingness to seeking mental health services, thus demonstrating pluralistic ignorance. The authors also found that officers' perception of other officers' willingness to seek services was positively correlated with scores on the Attitudes Toward Seeking Professional Psychological Help-Short Form scale (Fischer & Farina, 1995).

In a qualitative study of officers who had participated in a police counseling program, Millar (2002) found that some officers chose not to disclose their participation to their colleagues because they were fearful of criticism from others. However, the majority of officers who participated and shared their reasons for counseling with colleagues received support for their decisions. This finding provides further support for the notion that officers may misperceive their peers' attitudes toward seeking mental health services in a way that could restrict mental health service utilization.

Pluralistic Ignorance Interventions. Fortunately, pluralistic ignorance among group members seems to offer a clear route to behavior change. If attitudes and behaviors are encouraged or maintained by inaccurate perceptions of others' attitudes, then correcting misperceptions could ultimately influence group members' behaviors (Prentice & Miller, 1996). When considering pluralistic ignorance among college students with

regard to drinking behaviors, Prentice and Miller (1996) considered that most students already endorse the kind of moderate attitudes that informational presentations seek to produce. The researchers concluded that it may be more effective to focus on challenging inaccurate assumptions so that group members realize that their attitudes are shared by others (Prentice & Miller, 1996).

In line with this consideration, several researchers have found support that challenging misperceptions among group members effectively alters attitudes and behaviors. For example, Schroeder and Prentice (1998) examined interventions to reduce pluralistic ignorance regarding college drinking behaviors. One group of randomly assigned students participated in a peer-oriented discussion of drinking that focused on addressing pluralistic ignorance. In this condition, participants were presented with information about widespread misperceptions of drinking attitudes among college students. They were also encouraged to discuss the social dynamics of college drinking.

In the control group, participants were simply presented with information about how to make responsible drinking decisions. Four to six months later, the researchers found that students in the treatment condition reported drinking less than participants in the control condition, and they were also less affected by the prescriptive strength of the drinking norm. Among participants in the control group, the relationship between their perceptions of their peers' comfort with drinking and their own drinking behavior depended on how sensitive they were to social pressure. However, sensitivity to social pressure did not moderate the relationship between perceptions of others and their own drinking behavior among participants in the treatment group.

In addition, Halbesleben et al. (2005) developed a business ethics education program, modeled after Schroeder and Prentice (1998). In the pluralistic ignorance-reducing condition, participants were presented with information about pluralistic ignorance and encouraged to discuss how pluralistic ignorance might apply to perceptions of ethics. The authors found that students in this condition reported higher ethical standards over the semester, compared to a group of students who did not have similar training.

Appendix C: Request For Agency Participation

Your agency is being invited to participate in a research study about attitudes toward seeking psychological services among police officers in Oklahoma. This study is being conducted by Kerry Karaffa, M.S., under the direction of Julie Koch, Ph.D., from the School of Applied Health and Educational Psychology at Oklahoma State University. Mr. Karaffa is currently a graduate student in the Counseling Psychology Ph.D. program at Oklahoma State University, and data gathered in this study will be used in his doctoral dissertation. The study will provide information that may ultimately be used to promote service utilization and improve psychological services for police officers. Findings may also pose considerations for training.

A 62-item survey will be administered online via the researcher's password-protected Qualtrics account. The research survey will include items related to officers' attitudes and perceptions about mental health services. The survey will also include a brief demographic questionnaire. The survey will take approximately 15 minutes to complete.

With consent of the department, information about the study will be forwarded to officers by department personnel. The email will explain the purposes and goals of the study and clearly state that participation is entirely voluntary, and the researcher is not affiliated with the department in any way. The researcher will also specify that the survey should be conducted off-duty, using personal resources. If officers choose to participate, they may select a link that will forward them to the researcher's Qualtrics account. The survey will be submitted electronically. An informed consent statement will be presented, again stating that participation is entirely voluntary and that officers may discontinue participation at any time without any negative consequences. Informed consent is indicated by participants selecting that they are over 18 years old, and that they acknowledge that they have been fully informed about the procedures of the study, they are aware of what they will be asked to do, and they understand the benefits and risks of participation.

Officers will not be rewarded directly for participating; however, they will be informed that this research could potentially be used to improve psychological services for police officers. Although absolute anonymity cannot be ensured, procedures will be taken to protect confidentiality. During the study, no one, including the researcher, will know the name of the respondent. The IP address of the respondent's computer will not be collected, and any demographic information will be published in summary form. The data will be password-protected, and only the researcher and individuals responsible for research oversight will have access to the records. Data collected in the study will be destroyed after 5 years.

There are no risks involved in participating in excess of those an officer would experience in everyday life. However, some items could produce feelings of ambiguity or remind officers of negative experiences. Officers will be provided with the researcher's information if they have any questions about the study.

Upon completion of the study, the department and any research participant may be provided with a summary of the findings. However, individual responses will only be accessible to the researcher and individuals responsible for research oversight. This study could make a valuable contribution to the field of police psychology and provide information that could benefit the law enforcement community. If your department is interested in participating in this study, please forward the included informed consent statement to officers in the agency. Afterwards, please inform the researcher that the study materials have been distributed and provide an estimate of the number of officers in the department. If you have any questions or concerns pertaining to the study please feel free to contact the researcher or advisor.

Researcher: Kerry Karaffa, M.S.
School of Applied Health and Educational Psychology
Oklahoma State University
434 Willard Hall
Stillwater, OK 74078
Email: Kerry.Karaffa@okstate.edu

Advisor: Julie Koch, Ph.D.
School of Applied Health and Educational Psychology
Oklahoma State University
434 Willard Hall
Stillwater, OK 74078
Email: Julie.Koch@okstate.edu

If you have questions about participants' rights in the study, please contact:

IRB Chair: Shelia Kennison, Ph.D.
219 Cordell North
Oklahoma State University
Stillwater, OK 74078,
Phone: (405) 744-3377
Email: irb@okstate.edu

Appendix D: Informed Consent Agreement

You are being invited to participate in a research study about attitudes toward seeking psychological services among police officers in Oklahoma. This study is being conducted by Kerry Karaffa, M.S., under the direction of Julie Koch, Ph.D., from the School of Applied Health and Educational Psychology at Oklahoma State University. Mr. Karaffa is currently a graduate student in the Counseling Psychology Ph.D. program at Oklahoma State University, and data gathered in this study will be used in his doctoral dissertation. The study will provide information that may ultimately be used to promote service utilization and improve psychological services and training for police officers.

Participation involves completing a 62-item electronic survey about your personal attitudes and perceptions about mental health services and demographic information. The survey will take approximately 15 minutes to complete. Participation is voluntary and there are no direct incentives for participating in the study. You may choose not to participate or discontinue participation at any time without consequence.

Although absolute anonymity cannot be ensured, procedures will be taken to protect confidentiality. Due to the personal nature of some of the questions and to encourage honest responses, you will not be asked to provide your name or departmental affiliation. Computer IP addresses will not be collected, and any demographic information (such as your age, ethnicity, or level of education) will be presented in summary form when findings are reported. Please note that Qualtrics has specific privacy policies of its own. You should be aware that this web service may be able to link your responses to your ID in ways that are not bound by this consent form and the data confidentiality procedures used in this study, and if you have concerns you should consult these services directly. Qualtrics' privacy statement is provided at: http://qualtrics.com/privacy-statement.

Your individual responses will not be provided to your agency. Please note that the researcher is not affiliated with your agency in any way, and surveys should be completed off-duty using personal resources. The data will be password-protected, and only the researcher and individuals responsible for research oversight will have access to the records. Data collected in the study will be destroyed after 5 years.

Completing the survey could produce feelings of ambiguity or remind you of traumatic past experiences. Otherwise, there are no risks involved in participating in the study in excess of those you would experience in everyday life.

Your consent to participate is granted by selecting that you are over 18 years old, and by acknowledging that you have been fully informed about the procedures listed here, and you are aware of what you will be asked to do and the benefits and risks of participation. If you have any questions or concerns about this study or feel that you may be in need of mental health services, you may contact the researcher. If you would like a copy of the results of this study, please contact the researcher and arrangements will be made.

Researcher: Kerry Karaffa, M.S.
School of Applied Health and Educational Psychology
Oklahoma State University
434 Willard Hall
Stillwater, OK 74078
Email: Kerry.Karaffa@okstate.edu

Advisor: Julie Koch, Ph.D.
School of Applied Health and Educational Psychology
Oklahoma State University
434 Willard Hall
Stillwater, OK 74078
Email: Julie.Koch@okstate.edu

If you have questions about your rights as a research volunteer, you may contact the
Oklahoma State University Institutional Review Board (IRB) Chair.

IRB Chair: Shelia Kennison, Ph.D.
219 Cordell North
Oklahoma State University
Stillwater, OK 74078,
Phone: (405) 744-3377
Email: irb@okstate.edu

Thank you for your time and participation. If you would like to participate in this study,
please select the link provided below:

Appendix E: Research Survey

For the purposes of this survey, the following definitions are applicable:

Professional Mental Health Provider: Any person who is trained to provide treatment for personal problems of a psychological nature such as a psychologist, psychiatrist, counselor, therapist, or social worker.

Psychological Help: Any treatment designed to help alleviate personal problems of a psychological nature, including individual counseling, family therapy, group therapy, crisis intervention, or medication.

Psychotherapy: The process of addressing personal problems with the help of a mental health professional. Psychotherapy may also be referred to as therapy or counseling.

Directions: Please choose the response that best matches how much you agree or disagree with each statement. There are no right or wrong answers. Although some of the items may look alike, it is important to us that you answer all of them.

1. I would want to seek psychological help if I were experiencing problems in my family relationships. (PI)

   ☐　☐　☐　☐　☐　☐　☐　☐　☐　☐　☐
   **Strongly　　　　　　　　　Neutral　　　　　　　　　Strongly
   Disagree　　　　　　　　　　　　　　　　　　　　　Agree**

2. I would want to seek psychological help if I were experiencing depression. (PI)

   ☐　☐　☐　☐　☐　☐　☐　☐　☐　☐　☐
   **Strongly　　　　　　　　　Neutral　　　　　　　　　Strongly
   Disagree　　　　　　　　　　　　　　　　　　　　　Agree**

3. I would want to seek psychological help if I were experiencing posttraumatic stress disorder (PTSD). (PI)

   ☐　☐　☐　☐　☐　☐　☐　☐　☐　☐　☐
   **Strongly　　　　　　　　　Neutral　　　　　　　　　Strongly
   Disagree　　　　　　　　　　　　　　　　　　　　　Agree**

4. I would want to seek psychological help if I were experiencing problems with substance abuse. (PI)

   ☐　☐　☐　☐　☐　☐　☐　☐　☐　☐　☐
   **Strongly　　　　　　　　　Neutral　　　　　　　　　Strongly
   Disagree　　　　　　　　　　　　　　　　　　　　　Agree**

5. I would want to seek psychological help if I were experiencing physical symptoms due to stress. (PI)

☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐
Strongly   **Neutral**   **Strongly**
Disagree   **Agree**

6. Other officers would want to seek psychological help if they were experiencing problems in their family relationships. (PI)

☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐
Strongly   **Neutral**   **Strongly**
Disagree   **Agree**

7. Other officers would want to seek psychological help if they were experiencing depression. (PI)

☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐
Strongly   **Neutral**   **Strongly**
Disagree   **Agree**

8. Other officers would want to seek psychological help if they were experiencing post traumatic stress disorder (PTSD). (PI)

☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐
Strongly   **Neutral**   **Strongly**
Disagree   **Agree**

9. Other officers would want to seek psychological help if they were experiencing problems with substance abuse. (PI)

☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐
Strongly   **Neutral**   **Strongly**
Disagree   **Agree**

10. Other officers would want to seek psychological help if they were experiencing physical symptoms due to stress. (PI)

☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐
Strongly   **Neutral**   **Strongly**
Disagree   **Agree**

11. If I believed I was having a mental breakdown, my first inclination would be to get professional attention. (A)

☐ **Disagree**   ☐ **Partly Disagree**   ☐ **Partly Agree**   ☐ **Agree**

12. The idea of talking about problems with a professional mental health provider strikes me as a poor way to get rid of emotional conflicts.* (A)

☐ **Disagree**   ☐ **Partly Disagree**   ☐ **Partly Agree**   ☐ **Agree**

13. If I were experiencing a serious emotional crisis at this point in my life, I would be confident that I could find relief in psychotherapy. (A)

☐ **Disagree**   ☐ **Partly Disagree**   ☐ **Partly Agree**   ☐ **Agree**

14. There is something admirable in the attitude of a person who is willing to cope with his or her conflicts and fears *without* resorting to professional help.* (A)

☐ **Disagree**   ☐ **Partly Disagree**   ☐ **Partly Agree**   ☐ **Agree**

15. I would want to get psychological help if I were worried or upset for a long period of time. (A)

☐ **Disagree**   ☐ **Partly Disagree**   ☐ **Partly Agree**   ☐ **Agree**

16. I might want to have psychological counseling in the future. (A)

☐ **Disagree**   ☐ **Partly Disagree**   ☐ **Partly Agree**   ☐ **Agree**

17. A person with an emotional problem is not likely to solve it alone; he or she *is* likely to solve it with professional help. (A)

☐ **Disagree**   ☐ **Partly Disagree**   ☐ **Partly Agree**   ☐ **Agree**

18. Considering the time and expense involved in psychotherapy, it would have doubtful value for a person like me.* (A)

☐ **Disagree**   ☐ **Partly Disagree**   ☐ **Partly Agree**   ☐ **Agree**

19. A person should work out his or her own problems; getting psychological counseling would be a last resort.* (A)

☐ **Disagree**   ☐ **Partly Disagree**   ☐ **Partly Agree**   ☐ **Agree**

20. Personal and emotional troubles, like many things, tend to work out by themselves.* (A)

☐ **Disagree**   ☐ **Partly Disagree**   ☐ **Partly Agree**   ☐ **Agree**

21. My self-confidence would be harmed if I got help from a mental health provider. (SS)

  ☐ **Definitely Disagree**   ☐ **Somewhat Disagree**   ☐ **Somewhat Agree**   ☐ **Definitely Agree**

22. I would be given less responsibility, if chain of command knew I was seeing a mental health provider. (PS)

  ☐ **Definitely Disagree**   ☐ **Somewhat Disagree**   ☐ **Somewhat Agree**   ☐ **Definitely Agree**

23. If my chain of command discovered I was seeing a mental health provider, I would NOT lose their respect.* (PS)

  ☐ **Definitely Disagree**   ☐ **Somewhat Disagree**   ☐ **Somewhat Agree**   ☐ **Definitely Agree**

24. People would judge me poorly if they knew that I received mental health services. (PS)

  ☐ **Definitely Disagree**   ☐ **Somewhat Disagree**   ☐ **Somewhat Agree**   ☐ **Definitely Agree**

25. I would worry about my personal problems being part of my police records. (PS)

  ☐ **Definitely Disagree**   ☐ **Somewhat Disagree**   ☐ **Somewhat Agree**   ☐ **Definitely Agree**

26. People I respect would think less of me if they knew I had mental health problems. (PS)

  ☐ **Definitely Disagree**   ☐ **Somewhat Disagree**   ☐ **Somewhat Agree**   ☐ **Definitely Agree**

27. My view of myself would change if I made the choice to see a therapist. (SS)

  ☐ **Definitely Disagree**   ☐ **Somewhat Disagree**   ☐ **Somewhat Agree**   ☐ **Definitely Agree**

28. My chances of promotion would be harmed if I sought mental health services. (PS)

  ☐ **Definitely Disagree**   ☐ **Somewhat Disagree**   ☐ **Somewhat Agree**   ☐ **Definitely Agree**

29. I would feel okay about myself if I made the choice to seek professional help.* (SS)

  ☐ **Definitely Disagree**   ☐ **Somewhat Disagree**   ☐ **Somewhat Agree**   ☐ **Definitely Agree**

30. I am open to seeking services, but I worry about how it could hurt my career. (PS)

  ☐ **Definitely Disagree**   ☐ **Somewhat Disagree**   ☐ **Somewhat Agree**   ☐ **Definitely Agree**

31. My reputation in my community would be harmed if people knew that I had seen a mental health provider. (PS)

☐ **Definitely Disagree**   ☐ **Somewhat Disagree**   ☐ **Somewhat Agree**   ☐ **Definitely Agree**

32. I would be afraid that my peers would find out what I tell my mental health provider. (PS)

☐ **Definitely Disagree**   ☐ **Somewhat Disagree**   ☐ **Somewhat Agree**   ☐ **Definitely Agree**

33. I would feel worse about myself if I could not solve my own problems. (SS)

☐ **Definitely Disagree**   ☐ **Somewhat Disagree**   ☐ **Somewhat Agree**   ☐ **Definitely Agree**

34. It would make my problems worse if my peers knew I was seeing a mental health provider. (PS)

☐ **Definitely Disagree**   ☐ **Somewhat Disagree**   ☐ **Somewhat Agree**   ☐ **Definitely Agree**

35. I would feel inadequate if I went to a therapist for psychological help. (SS)

☐ **Definitely Disagree**   ☐ **Somewhat Disagree**   ☐ **Somewhat Agree**   ☐ **Definitely Agree**

36. Seeking psychological help would make me feel less intelligent. (SS)

☐ **Definitely Disagree**   ☐ **Somewhat Disagree**   ☐ **Somewhat Agree**   ☐ **Definitely Agree**

37. My peers would think less of me if they knew I was getting help from a mental health provider. (PS)

☐ **Definitely Disagree**   ☐ **Somewhat Disagree**   ☐ **Somewhat Agree**   ☐ **Definitely Agree**

38. If I went to a therapist, I would be less satisfied with myself. (SS)

☐ **Definitely Disagree**   ☐ **Somewhat Disagree**   ☐ **Somewhat Agree**   ☐ **Definitely Agree**

39. I'd lose the respect of my subordinates if they found out I was receiving mental help. (PS)

☐ **Definitely Disagree**   ☐ **Somewhat Disagree**   ☐ **Somewhat Agree**   ☐ **Definitely Agree**

40. There are things I am afraid to talk about because of what others will think. (PS)

☐ **Definitely Disagree**   ☐ **Somewhat Disagree**   ☐ **Somewhat Agree**   ☐ **Definitely Agree**

41. A person seeking mental health treatment is seen as weak. (PS)

☐ **Definitely Disagree**   ☐ **Somewhat Disagree**   ☐ **Somewhat Agree**   ☐ **Definitely Agree**

42. It would make me feel inferior to ask a therapist for help. (SS)

☐ **Definitely Disagree**   ☐ **Somewhat Disagree**   ☐ **Somewhat Agree**   ☐ **Definitely Agree**

43. I am afraid that my chain of command would find out what I told a mental health provider. (PS)

☐ **Definitely Disagree**   ☐ **Somewhat Disagree**   ☐ **Somewhat Agree**   ☐ **Definitely Agree**

44. My peers would think I was unreliable if they knew I was receiving mental health treatment. (PS)

☐ **Definitely Disagree**   ☐ **Somewhat Disagree**   ☐ **Somewhat Agree**   ☐ **Definitely Agree**

45. My self-confidence would NOT be threatened if I sought professional help.* (SS)

☐ **Definitely Disagree**   ☐ **Somewhat Disagree**   ☐ **Somewhat Agree**   ☐ **Definitely Agree**

46. My self-esteem would increase if I talked to a therapist.* (SS)

☐ **Definitely Disagree**   ☐ **Somewhat Disagree**   ☐ **Somewhat Agree**   ☐ **Definitely Agree**

Note: * denotes reverse scored items, (A) = Attitudes Toward Seeking Professional Psychological Help-Short Form item, (SS) = Military Stigma Scale self-stigma item, (PS) = Military Stigma Scale public stigma item, (PI) = Pluralistic ignorance items

Directions: Please provide the following information:

47. Age: _____

48. Sex:
☐ Male
☐ Female

49. Marital status:
☐ Single
☐ Married
☐ Divorced
☐ Separated
☐ Widowed

50. Race (Please check all that apply):
- ☐ White
- ☐ Black or African American
- ☐ American Indian / Alaska Native
- ☐ Asian
- ☐ Native Hawaiian / Other Pacific Islander
- ☐ Some Other Race: _____

51. Ethnicity:
- ☐ Hispanic, Latino, or Spanish origin
- ☐ Not of Hispanic, Latino, or Spanish origin

52. Highest Level of Education:
- ☐ High School
- ☐ Some College
- ☐ Associate's Degree
- ☐ Bachelor's Degree
- ☐ Some Graduate School
- ☐ Graduate Degree

53. Professional Rank:
- ☐ Recruit
- ☐ Patrol Officer
- ☐ Detective
- ☐ Sergeant
- ☐ Lieutenant
- ☐ Captain
- ☐ Chief
- ☐ Deputy
- ☐ Sheriff
- ☐ Other: _____

54. Type of agency:
- ☐ City
- ☐ County
- ☐ State
- ☐ University
- ☐ Tribal
- ☐ Other

55. Approximate number of sworn police officers in your agency: _____

56. Approximate population of your jurisdiction: _____

57. Employment status
- ☐ Full-time
- ☐ Part-time
- ☐ Reserve

58. Number of years you have been a police officer: _____

59. <u>Have you voluntarily participated in or received any of the following mental health services? (Please check all that apply).</u>
☐ Individual Counseling
☐ Family therapy
☐ Group therapy
☐ Crisis Intervention
☐ Medication
☐ Not applicable

60. If so, how would you rate your experience(s)?

☐	☐	☐	☐	☐	☐	☐
Very Negative	**Negative**	**Somewhat Negative**	**Neutral**	**Somewhat Positive**	**Positive**	**Very Positive**

61. <u>Have you been mandated to participate in or receive any of the following mental health services? (Please check all that apply):</u>
☐ Individual Counseling
☐ Family Counseling
☐ Group Counseling
☐ Crisis Intervention
☐ Medication
☐ Not applicable

62. If so, how would you rate your experience(s)?

☐	☐	☐	☐	☐	☐	☐
Very Negative	**Negative**	**Somewhat Negative**	**Neutral**	**Somewhat Positive**	**Positive**	**Very Positive**

Appendix F: Debriefing Statement

Thank you for participating in this research. In the study, the researcher studied police officers' attitudes toward seeking psychological services. If you would like a copy of the results of the study, please contact the researcher and arrangements will be made.

Researcher: Kerry Karaffa, M.S.
School of Applied Health and Educational Psychology
Oklahoma State University
434 Willard Hall
Stillwater, OK 74078
Email: Kerry.Karaffa@okstate.edu

Advisor: Julie Koch, Ph.D.
School of Applied Health and Educational Psychology
Oklahoma State University
434 Willard Hall
Stillwater, OK 74078
Email: Julie.Koch@okstate.edu

If you have questions about your rights as a research volunteer, you may contact the Oklahoma State University Institutional Review Board (IRB) Chair.

IRB Chair: Shelia Kennison, Ph.D.
219 Cordell North
Oklahoma State University
Stillwater, OK 74078,
Phone: (405) 744-3377
Email: irb@okstate.edu

Thank you for participating.

Appendix G: Oklahoma State University IRB Approval

Oklahoma State University Institutional Review Board

Date: Friday, March 21, 2014

IRB Application No ED1433

Proposal Title: Stigma, Pluralistic Ignorance, and Attitudes Toward Seeking Mental Health
Services Among Police Officers

Reviewed and   Exempt
Processed as:

Status Recommended by Reviewer(s): Approved Protocol Expires: 3/20/2017

Principal
Investigator(s):

Kerry Karaffa   Julie Koch
1200 N Perkins Rd Apt 1E   418 Willard
Stillwater, OK 74075   Stillwater, OK 74078

The IRB application referenced above has been approved. It is the judgment of the reviewers that the
rights and welfare of individuals who may be asked to participate in this study will be respected, and that
the research will be conducted in a manner consistent with the IRB requirements as outlined in section 45
CFR 46.

☒ The final versions of any printed recruitment, consent and assent documents bearing the IRB approval
stamp are attached to this letter. These are the versions that must be used during the study.

As Principal Investigator, it is your responsibility to do the following:

1. Conduct this study exactly as it has been approved. Any modifications to the research protocol must be
submitted with the appropriate signatures for IRB approval. Protocol modifications requiring approval may
include changes to the title, PI advisor, funding status or sponsor, subject population composition or size,
recruitment, inclusion/exclusion criteria, research site, research procedures and consent/assent process or forms
2. Submit a request for continuation if the study extends beyond the approval period. This continuation must
receive IRB review and approval before the research can continue.
3. Report any adverse events to the IRB Chair promptly. Adverse events are those which are unanticipated and
impact the subjects during the course of the research; and
4. Notify the IRB office in writing when your research project is complete.

Please note that approved protocols are subject to monitoring by the IRB and that the IRB office has the
authority to inspect research records associated with this protocol at any time. If you have questions about the
IRB procedures or need any assistance from the Board, please contact Dawnett Watkins 219 Cordell North
(phone: 405-744-5700, dawnett.watkins@okstate.edu).

Sincerely,

Shelia Kennison, Chair
Institutional Review Board

VITA

Kerry Michael Karaffa

Candidate for the Degree of

Doctor of Philosophy

Thesis: STIGMA, PLURALISTIC IGNORANCE, AND ATTITUDES TOWARD SEEKING MENTAL HEALTH SERVICES AMONG POLICE OFFICERS

Major Field: Educational Psychology

Biographical:

Education:

Completed the requirements for the Doctor of Philosophy in Educational Psychology (option: Counseling Psychology) at Oklahoma State University, Stillwater, Oklahoma in July, 2016.

Completed the requirements for the Master of Science in Psychology at Texas A&M University-Commerce, Commerce, Texas in 2012.

Completed the requirements for the Bachelor of Science in Criminal Justice at A&M University-Commerce, Commerce, Texas in 2009.

Experience:

Psychological Intern: University of Missouri Student Counseling Center. August, 2015 – July, 2016.

Assessment Practicum Counselor: Oklahoma State University Counseling and Counseling Psychology Clinic. August, 2014 – August, 2015.

Practicum Counselor: Oklahoma State University Student Counseling Center. August, 2013 – May, 2014.

Practicum Counselor: Wings of Hope Family Crisis Services. August, 2012 – August, 2013.

Assessment Practicum Counselor: Texas A&M-Commerce Community Counseling and Psychology Clinic. January, 2011 – December, 2011.