

5-2010

Perceived Organizational Support as a Predictor of Stigma and Treatment Seeking for Psychological Problems

Christie Kelley

Clemson University, clkelle@g.clemson.edu

Follow this and additional works at: https://tigerprints.clemson.edu/all_theses

 Part of the [Psychology Commons](#)

Recommended Citation

Kelley, Christie, "Perceived Organizational Support as a Predictor of Stigma and Treatment Seeking for Psychological Problems" (2010). *All Theses*. 809.

https://tigerprints.clemson.edu/all_theses/809

This Thesis is brought to you for free and open access by the Theses at TigerPrints. It has been accepted for inclusion in All Theses by an authorized administrator of TigerPrints. For more information, please contact kokeefe@clemson.edu.

PERCEIVED ORGANIZATIONAL SUPPORT AS A PREDICTOR OF STIGMA AND
TREATMENT SEEKING FOR PSYCHOLOGICAL PROBLEMS

A Thesis
Presented to
the Graduate School of
Clemson University

In Partial Fulfillment
of the Requirements for the Degree
Master of Science
Applied Psychology

by
Christie L. Kelley
May 2010

Accepted by:
Dr. Thomas W. Britt. Committee Chair
Dr. Patrick Rosopa
Dr. Robert Sinclair

ABSTRACT

Research has shown that the stigma of psychological problems is related to decreased treatment seeking for psychological problems. Utilizing a longitudinal design and a military sample, this study found contrary results, instead supporting the relationship between Post Traumatic Stress Disorder (PTSD) Symptomology and treatment seeking. A relationship between Perceived Organizational Support (POS), or how much organizations value the contributions and well-being of their employees (Eisenberger et al., 1986), and PTSD Symptomology also emerged. POS was negatively related to stigma, and stigma partially mediated the relationship between POS and PTSD Symptomology. Contrary to hypotheses, stigma did not mediate the relationship between POS and treatment seeking. POS is an element which organizations should consider when attempting to decrease stigma and psychological problems within their organization.

ACKNOWLEDGMENTS

Several people have played a vital role in helping to complete this thesis. I am extremely grateful and indebted to each and every one of them. Without their support and guidance I would not have been able to complete this paper.

First, I would like to thank my advisor and mentor Dr. Thomas Britt. Without his support and generosity, my thesis would not be what it is today. His vast knowledge and intelligence are a wonder to me, and I can only hope that in the future my own writing and research is improved by conducting research with a professor of his caliber.

In addition to a wonderful mentor, I also have committee members who I deeply respect. Dr. Robert Sinclair and Dr. Patrick Rosopa have provided me with insight, constructive criticism, and guidance throughout the process of writing this paper.

I also must thank Amy Adler and the Walter Reed Army Institute of Research. Without their support and countless hours work, I would not have a thesis at all. I am eternally grateful for the chance to analyze military data and investigate the variables in the current study in a military setting.

Finally, I want to thank my family and friends for putting up with constant discussion of POS, stigma in the military, and PTSD. Without their support, I would not have endured through this process. My parents, Gary and Joann Kelley, as well as my sisters, shaped me into the hard-working, determined, and tenacious person I am today. For instilling these values in me, I owe them the world. I love you Mom, Dad, Julie, and Katie!

TABLE OF CONTENTS

| | |
|---|-----|
| TITLE | i |
| ABSTRACT..... | ii |
| ACKNOWLEDGMENTS | iii |
| TABLES | vii |
| CHAPTER 1: INTRODUCTION | 1 |
| Perceived Organizational Support..... | 3 |
| Predictors of POS | 6 |
| Outcomes of POS | 7 |
| POS as a Mediator | 9 |
| POS as a Moderator | 10 |
| Post Traumatic Stress Disorder | 12 |
| The History of PTSD | 13 |
| Treatment for PTSD..... | 15 |
| Stigma of Psychological Treatment..... | 17 |
| Stigma of Seeking Treatment for Psychological Problems in the Workplace | 20 |
| Stigma of Treatment Seeking for Psychological Problems in Military Samples .. | 22 |
| Treatment Seeking for Psychological Problems | 25 |
| Stigma of Seeking Treatment for Psychological Problems as a | 27 |
| Predictor of Psychological Problems | 27 |
| Connecting POS and the Stigma of Seeking Treatment for Psychological Problems ... | 27 |
| The Present Study..... | 29 |
| CHAPTER 2: METHOD..... | 30 |
| Participants and Procedure..... | 31 |
| Measures | 31 |
| CHAPTER 3: RESULTS..... | 33 |
| Data Screening..... | 33 |
| Descriptive Statistics of the Measured Variables | 34 |

| | |
|--------------------------------------|----|
| Correlational Analyses | 35 |
| Mediation Analyses | 35 |
| Multiple Regression Analysis | 37 |
| CHAPTER 4: DISCUSSION..... | 38 |
| Summary of the Results | 38 |
| Theoretical Implications | 39 |
| Organizational Implications | 43 |
| Limitations and Future Research..... | 44 |
| Conclusions | 46 |
| REFERENCES..... | 55 |

FIGURES

| | |
|-----------------------|----|
| Figure Captions | 67 |
| Figure 1 | 68 |
| Figure 2 | 69 |
| Figure 3 | 70 |
| Figure 4 | 71 |

TABLES

TABLE 1 72
Means, Standard Deviations and Correlation Analysis of Measured Variables 72

TABLE 2 73
Stigma at Time 1 as a Mediator of the Relationship between POS at Time 1 and
Treatment Seeking at Time 2 for Participants Reporting a Problem..... 73

TABLE 3 74
Stigma at Time 1 as a Mediator of the Relationship between POS at Time 1 and
PTSD Symptomology at Time 2 for All Participants 74

TABLE 4 75
Stigma at Time 1 as a Mediator of the Relationship between POS at Time 1 and
PTSD Symptomology at Time 2 for Participants Reporting a Problem..... 75

TABLE 5 76
Multiple Regression Analysis: Predicting the PTSD Symptomology at Time 2
from POS at Time 1 and Stigma at Time 1 76

TABLE 6 77
Hierarchical Multiple Regression Analysis Predicting PTSD Symptomology at Time
2 showing the interaction term (for those with a problem)..... 77

CHAPTER ONE

INTRODUCTION

Perceived Organizational Support (POS) is the perception of how an employee is treated by the organization, which influences the perception of how the organization feels about the employees' contributions and well-being (Eisenberger, Huntington, Hutchison, & Sowa, 1986). POS has previously been related to work attendance (Eisenberger et al., 1986), job performance (Eisenberger, Fasolo & Davis-LaMastro, 1990), and job satisfaction (Eisenberger, Cummings, Armelo & Lynch, 1997). It has also been positively associated with citizenship behaviors (OCBs) (Shore & Wayne, 1993) or behaviors which positively affect the organization but are not formally acknowledged by the organization (Organ, Podsakoff, & MacKenzie, 2006), and affective commitment (Eisenberger et al., 1990; Shore & Wayne, 1993), or the extent to which an employee wants to help the organization (Eisenberger et al., 2001). However, no research has examined POS as a predictor of whether employees perceive less stigma about receiving treatment for psychological problems within a work setting. Moreover, although POS has been related to well-being, it has not yet been connected to Post Traumatic Stress Disorder (PTSD).

The current study uses military personnel to investigate the relationships between POS, stigma of treatment seeking for psychological problems, and PTSD. Psychological problems such as PTSD are well cited throughout clinical research; however organizational psychology research has essentially ignored the topics of the stigma of seeking treatment for psychological problems, and treatment seeking behavior. Although

the high-stress nature of the military and the organizational climate contributes to the high rates of PTSD in military personnel, organizations almost exclusively look to clinical and counseling psychology to understand the development and treatment of PTSD. Clinical psychology does not pay as much attention to organizational factors. For example, organizational psychology may encourage stigma of treatment seeking for psychological problems in the military as a way to reduce the number of people receiving treatment. Including models from organizational psychology into this line of research could lead to interventions designed to decrease the stigma of seeking treatment for psychological problems and increase the number of military personnel with psychological problems receiving treatment.

The present research integrates the fields of clinical and organizational psychology in order to better understand seeking mental health treatment in work settings. Mental health problems interfere with employees at work, and thus should be a concern for management and organizational research. Specifically, I examine POS as a predictor of stigma and treatment seeking. I also investigate POS as a moderator of the relationship between stigma and PTSD Symptomology. The relationship between perceived stigma and mental health outcomes should be less strong when POS is high, as POS is also expected to buffer individuals from the adverse effects of stigma. Figure 1 provides an overall model for the current research and will be referred to throughout the introduction. The focus of this model suggests that POS is related to decreased stigma and increased treatment seeking when a psychological problem is present. Further,

stigma is hypothesized to mediate the relationship between POS and PTSD Symptomology, and between POS and treatment seeking.

In reviewing research relevant to the model, I first discuss POS, followed by PTSD. I then address the stigma of seeking treatment for psychological problems. Next, I develop, an explanation of the relationships between POS, PTSD, treatment seeking, and stigma, and present specific hypotheses derived from Figure 1.

Perceived Organizational Support

Research by Gouldner (1960) and Levinson (1965) formed the theoretical basis for the development of the POS construct. Gouldner's (1960) "norm of reciprocity holds that people should help those who help them and, therefore, those whom you have helped have an obligation to help you" (p. 173). Gouldner (1960) and Levinson (1965) primarily focus on the positive—kind, caring, or helpful, but does not neglect the negative—an emphasis on retaliation (Gouldner, 1960). The norm of reciprocity holds overtime until an equivalent to the original act is returned to the donor. Gouldner (1960) more specifically explained that the norm of reciprocity dictates society and social norms by the obligation to repay a person who has helped them in the past.

According to Cropanzano and Mitchell (2005), one of the most important models for comprehending workplace behavior is social exchange theory. A social exchange requires multiple interactions which produce an obligation between the people in the exchange. "These interactions are usually seen as interdependent and contingent on the actions of another person" (Cropanzano & Mitchell, 2005, p. 874). The relationships developed through the social exchange tend to become, "trusting, loyal, and mutual

commitments” (Cropanzano & Mitchell, 2005 p. 875). One principle associated with social exchange is reciprocity. POS is essentially a reciprocal social exchange relationship between the employer and employee focusing on the quality of the relationship. For example, when an employer is supportive, employees are more likely to reciprocate by decreasing negative work behaviors (Cropanzano & Mitchell, 2005). There are, however, different types of relationships within the workplace. Social exchange theory outlines the outcomes of mis-matching transactions and relationships. For example, assume a psychological contract is based on an economic exchange. If the employee sees the employer in a social exchange, and the employer does not uphold an economic exchange, there is the risk of damage to the employer-employee relationship (Cropanzano & Mitchell, 2005). Together, the norm of reciprocity and social exchange theory create a basis for the theoretical construct of POS. Levinson (1965) further developed the norm of reciprocity by applying it to organizations. When applied to an organization, the norm of reciprocity is the “process of carrying out of a psychological contract between person and organization” (Levinson, 1965, p. 384). A fulfilled psychological contract is the cornerstone of social exchange theory.

Additionally, Levinson (1965) argued that employees tend to grant organizations humanlike qualities. Specific experiences with different managers form an employee’s opinion of the entire organization. One manager is seen by the employees to act as an agent of the global organization. The way in which a manager acts or behaves reflects on the organization, creating the global belief of how an organization is perceived: caring, supportive, or unkind.

Utilizing the norm of reciprocity and its application to organizations, Eisenberger et al. (1986) provided the initial theoretical background for POS. Eisenberger et al. (1986) defined POS as, “the perception that the organization values [the employees] contributions and cares about their well-being” (p. 501). This explained that POS was distinct from organizational commitment because employees create global beliefs about an organization which describe how willing the organization is as a whole to distribute rewards. The global beliefs formed by employees includes how committed an organization is to the employees and not simply how committed an employee is to an organization as was previously believed (Eisenberger et al., 1986).

Rhoades and Eisenberger (2002) then developed a comprehensive and testable theory of POS entitled Organizational Support Theory (OST) from previous research by Eisenberger et al. (1986) and Shore and Shore (1995). OST uses the theoretical background provided by Eisenberger et al. (1986) to address the context surrounding POS. The context includes the relationship between social exchange theory and POS, as well as the “psychological processes underlying the consequences of POS” (Rhoades & Eisenberger, 2002, p. 699). The psychological processes refer to ways in which POS is related to different outcomes. First, by the standards of the norm of reciprocity, POS creates a felt obligation to be concerned about the organization. Second, high POS contributes to the fulfillment of socioeconomic needs to create an identity within the organization. Finally, POS helps create an effort-reward balance in an organization (Rhoades & Eisenberger, 2002).

The current theory of POS expands upon theories of organizational commitment, the Gouldner approach, and the Levinson approach by incorporating them into a social exchange theory which “emphasizes employees’ belief concerning commitment to them by the organization” (Eisenberger et al., 1986, p. 500). The comprehensive theory of POS, the OST, is related to many different organizational constructs (Rhoades & Eisenberger, 2002). In the sections below, the predictors and outcomes of POS are discussed followed by a review of POS as a mediator and moderator in organizational research.

Predictors of POS

Investigators have examined the following predictors of POS: fairness and organizational procedures, positive mood, and the chance to be recognized or promoted. Moorman, Blakely, and Niehoff (1998) found a positive relationship between fairness of organizational procedures and POS. Eisenberger, Armeli, Rexwinkel, Lynch, and Rhoades (2001) found a positive relationship between POS and positive mood in a study concerning POS and job outcomes. Similarly, Eisenberger et al. (1986) suggested that praise by management would be positively related to POS; however, no empirical study has linked praise by management to POS. In a meta-analysis, Rhoades and Eisenberger (2002) found a positive relationship between the chance to be recognized or promoted and POS.

Outcomes of POS

POS has been related to a host of organizational outcomes. For the purposes of this review, I separate them into health and well-being, job attitudes and motivation, performance, and turnover intentions.

The first domain is health and well-being. O'Driscoll et al. (2003) found a negative relationship between POS and work-family conflict. Work-family conflict is a stressor in which work demands interfere with family obligations. Jain and Sinha (2005) found that POS was a positive predictor of general health, which was measured using the General Health Questionnaire. The General Health Questionnaire consisted of two factors: sense of accomplishment and contribution, and botheration-free existence (a lack of stress or strain). Further, Rhoades and Eisenberger's (2002) meta-analysis found a significant negative relationship between POS and strain, or "aversive psychological and psychosomatic reactions" (p. 702). Given the established relationship between health and POS, Figure 1 suggests a direct link between POS and the development of the PTSD Symptomology.

POS has also been related to job attitudes and motivation. For example, Eisenberger et al. (2001) found a positive relationship between POS and felt obligation, or how much an employee feels that he or she should care about the goals of an organization. Eisenberger et al. (2001) believed that through POS employees would become concerned about the organization. POS was also related to organizational spontaneity or extra-role behaviors (Eisenberger et al., 2001), and organizational commitment through felt obligation. Similarly, Kinnunen, Feldt and Mäkikangas (2008)

found that POS was positively associated with work engagement, or a mental state in which an employee is dedicated and absorbed to the work in which he or she is doing. In Rhoades and Eisenberger's (2002) meta-analysis, POS had the strongest relationship with affective commitment, showing that when employees found an organization supportive, they were also emotionally attached to the organization. Rhoades and Eisenberger (2002) also found a significant relationship between POS and job satisfaction.

POS has also been examined as a predictor of job performance. Eisenberger et al. (2001) found that through felt obligation, there was a positive relationship between POS and in-role performance. Likewise, Eisenberger et al. (1990) found a relationship between POS and performance in a study utilizing six different occupations. Rhoades and Eisenberger's (2002) meta-analysis also found a small relationship between POS and performance and a moderate relationship between POS and extra-role behaviors.

Hui et al. (2007) examined turnover intentions and POS using a Chinese sample and found that POS was negatively related to thoughts of leaving the organization and looking for a new job. POS was also positively related to staying with the organization. Van Knippenberg, van Dick, and Tavares (2007) also explored the relationship between POS and turnover intentions. Van Knippenberg et al. (2007) found that POS was negatively related to thoughts about quitting a job. Similarly, Kinnunen et al. (2008) found that POS was negatively related to likelihood of leaving an organization and the frequency of thoughts about leaving the organization. This result was consistent with the Rhoades and Eisenberger's (2002) meta-analysis, which found a significant relationship between POS and turnover intentions.

POS has also been investigated as a predictor of withdrawal behaviors (Eisenberger et al., 1986), turnover intentions (Hui, Wong, & Tjosvold, 2007), and voluntary turnover (Allen, Weeks, & Moffit, 2005). Eisenberger et al. (1986) conducted two studies investigating the relationship between POS and absenteeism through social exchange theory. Eisenberger et al. (1986) found that a strong exchange ideology strengthened the negative relationship between POS and absenteeism, a withdrawal behavior. Exchange ideology is operationalized as an “employee’s belief that work effort should depend on treatment by the organization” (p. 503). Rhoades and Eisenberger (2002) also found a significant negative relationship between POS and a general measure of withdrawal behaviors which includes tardiness, absenteeism and voluntary turnover.

POS has a negative relationship with numerous negative outcomes. The previously examined study supports a link between POS and decreased PTSD Symptomology and stigma of seeking treatment for psychological problems as an outcome of high POS environments. If PTSD Symptomology and stigma are negative consequences of an employees’ position in an organization, it is likely that POS will quell the negative effects by supporting employees in a critical time of need.

POS as a Mediator

In addition to POS as a predictor and outcome, researchers have also investigated POS as a mediator of particular relationships. Moorman, Blakely, and Niehoff (1998) conducted a study in which POS fully mediated the relationship between perceived fairness and OCBs. Specifically, when POS was included, the relationship between perceived fairness and OCBs was reduced to non-significance. Harris, Harris and Harvey

(2007) focused on perceptions of organizational politics (POPs), POS, and job outcomes (pay satisfaction, job strain, role conflict, job satisfaction and turnover intentions).

According to Harris et al. (2007), POPs occur when employees disregard organizational and coworker well-being in order for an employee to further his or her career. Thus Harris et al. (2007) proposed that POS would mediate the relationship between POPs and job outcomes. Consistent with this prediction, Harris et al. (2007) found a negative correlation between POS and POPs and POS was also found to be significantly correlated with all of the outcome variables. Regression analyses indicated that POS fully mediated the relationship between POPs and turnover intentions, as well as the other outcome measures. Once again, POS is suppressing the effects of negative work outcomes by providing a supportive atmosphere in which the employees' perceive themselves to be valued as an important member of the organization. POS been fully discussed as a predictor, outcome and mediator, but it is also often studied as a moderator.

POS as a Moderator

POS has been found to be a moderator of many relationships previously found in organizational research. Kinnunen et al. (2008) explored POS and turnover intentions within the effort-reward imbalance model. The effort-reward imbalance model explains the relationship between effort put into work and the rewards received from the effort. Specifically, POS was found to moderate the relationship between lack of rewards and turnover intentions such that low POS magnified the relationship between lack of rewards and turnover intentions. Kinnunen et al. (2008) found that not having POS as a resource actually exacerbated the relationship between lack of rewards and turnover intentions.

Thus, POS is an important variable to because the feeling supported is likely to decrease the magnitude of the relationship between a lack of rewards and turnover intentions.

POS has also been used as a moderator in research focusing specifically on chronic pain. According to Decker and Meyer (1999), nearly 100 million people are affected by chronic pain in the United States. Chronic pain is related to psychological distress (Bair, Robinson, Katon, & Kroenke, 2003; Schatzberg, 2004), increased absenteeism, and reduced performance while at work which adds to a loss of productivity (Jensen, Romano, Turner, Good, & Wald, 1999; Stewart, Ricci, Chee, Morganstein, & Lipton, 2003). Programs which include physical and psychosocial interventions are the most productive in ameliorating chronic pain (Byrne & Hochwarter, 2006). Physical factors include therapy, medicine and invasive treatments and are beyond the realm of the organization (Byrne & Hochwarter, 2006). Psychosocial variables, however, include psychotherapy and social support (Byrne & Hochwarter, 2006). Byrne and Hochwarter (2006) cite POS as a psychosocial factor in which the organization can help to decrease chronic pain.

Due to the negative consequences of chronic pain, Byrne and Hochwarter (2006) investigated POS as a possible buffer against the negative effects of chronic pain. Byrne and Hochwarter (2006) measured performance (perceived effectiveness, perceived work intensity, OCBs, and task performance) of insurance agents. High POS for people with high chronic pain was associated with increased performance. Low POS along with elevated levels of chronic pain was related to decreased task performance. This research

provides evidence that negative effects of chronic pain on performance can potentially be reduced by POS.

Finally, Hochwarter, White, Treadway and Ferris (2006) examined the moderating effect of POS on the relationship between supervisor-rated job performance and social skill. Social skill is defined as integrating social or interpersonal cues so that the response is one that will meet organizational objectives. The hypothesis that in low POS settings there will be a stronger relationship between performance and social skill was supported, because in high POS settings, employees do not need to rely on social skill as a means to excel in the organization.

POS has been heavily researched throughout industrial-organizational psychology. POS as a moderator has been shown to positively affect chronic pain, and performance. In situations of high PTSD Symptomology, POS is likely to act in a similar manner. POS is a predictor, an outcome, a mediator, and a moderator of many relationships (Rhoades & Eisenberger, 2002), however little research has investigated POS and PTSD Symptomology. One interesting possibility is that POS might be related to PTSD Symptomology and the stigma of seeking treatment (see Figure 1). I now discuss the history of PTSD as well as its relevance to the current study.

Post Traumatic Stress Disorder

PTSD is characterized by an exposure to a traumatic event which creates negative chronic symptoms defined by the DSM-IV (American Psychiatric Association, 2000). Approximately 8% of the general population and between 12% and 20% of combat soldiers returning from Iraq suffer from PTSD (Grieger, Kolkow, Spira, & Morse, 2007;

Koenen, Goodwin, Struening, Hellman, & Guardino, 2003). PTSD has a negative impact on an individual's everyday functioning and has been related to decreased well-being, quality of life, and psychosocial adjustment (American Psychiatric Association, 2000; Schonfeld, Verboncoeur, Fifer, Lipschutz, Lubeck, & Beusching et al., 1997).

Buckley, Mozley, Bedard, Dewulf and Grief (2004) investigated veterans and the negative health consequences of PTSD. They focused on preventative health behaviors for veterans with PTSD and found that when compared to the general male population, veterans with PTSD had elevated rates of physical health conditions, including asthma, arthritis, tuberculosis, diabetes (I and II), stroke, cancer, nonfatal myocardial infarction, and cirrhosis of the liver. Almost half of the sample were chronic smokers and many were significantly overweight. This research and other research support PTSD as a risk factor for cardiovascular disease in particular. In order to better understand the scope of PTSD, a brief history and explanation of the different types of treatment are discussed.

The History of PTSD

In the first edition of the DSM in 1952, stress response syndrome was included as a subcategory of gross stress reactions. In 1968, the name was changed to a trauma-related disorder and listed as a type of situational disorder. In 1980, with the completion of the DSM-III, PTSD was finally categorized as a type of anxiety disorder. DSM-IV, which was published in 1994, placed PTSD in a subcategory of anxiety disorders called stress response. Until the publication of the DSM-III, these disorders did not attract attention or long-term treatment from physicians and the general attitude from both the

medical and military communities was for the soldier to move on from his post-combat anxieties (Parrish, 2008).

According to the DSM-IV, the most recent diagnostic manual for psychiatric conditions, the diagnostic criteria of PTSD includes a “history of exposure to a traumatic events meeting two criteria and symptoms clusters: intrusive recollections, avoidant/numbing symptoms, and hyper-arousal symptoms” (American Psychiatric Association, 2000). Two other categories are the duration of symptoms (greater than one month) and functional significance (clinically impairs daily functioning) (American Psychiatric Association, 2000). This section details the classification of PTSD as well as research which connects PTSD to the military.

The DSM-IV-TR classifies an event as traumatic if the person has “experienced, witnessed, or been confronted with an event or events that involve actual or threatened death or serious injury, or a threat to the physical integrity of oneself or others” (American Psychiatric Association, 2000). Further, the person must respond to the trauma with intense fear, helplessness, or horror (American Psychiatric Association, 2000).

PTSD is a complex diagnosis and includes a variety of symptoms which are presented by the DSM-IV in clusters involving: intrusive recollection, avoidant/numbing, and hyper-arousal. Intrusive recollection is defined as the relentless re-experiencing of the trauma by one of the following: continued and intrusive negative recollections of the trauma; recurrent distressing dreams about the traumatic event; reliving, hallucinating, or having flashbacks of the event; intense psychological distress when exposed to symbols

or reminders of the event; and physiological reactivity when exposed to symbols or reminders of the event (American Psychiatric Association, 2000).

Avoidant/numbing is the “persistent avoidance of stimuli associated with the trauma and numbing of general responsiveness (not present before the trauma)” as characterized by three of the following actions: avoiding thoughts, feelings or conversations about the trauma; avoiding activities, places, or people related to the trauma; forgetting parts of the trauma; disinterest in important activities; detachment from others; lack of future planning; and decreased feelings of love and other positive feelings towards people (American Psychiatric Association, 2000).

Hyper-arousal, on the other hand, is characterized by a “difficulty falling or staying asleep; irritability or outbursts of anger; difficulty concentrating; hyper-vigilance; and exaggerated startle response” (American Psychiatric Association, 2000). The length of PTSD can also vary, as PTSD can be diagnosed as acute (symptoms persist less than three months) or chronic (symptoms persist more than three months), and with or without delay (with delay if occur greater than six months after the trauma).

Treatment for PTSD

Typically, PTSD is diagnosed by clinical structured interviews or self-report questionnaires. The present research utilizes the PTSD checklist (PCL), a frequently used self-report questionnaire. Treatment of PTSD generally consists of cognitive-behavioral therapy, exposure therapy, eye movement desensitization and reprocessing, anti-anxiety, or depression medication (American Psychological Association, 2004;

United States Department of Veterans Affairs). Cognitive-behavioral therapy, exposure therapy and eye movement desensitization and reprocessing are all widely accepted as effective treatment for PTSD (Hamblen, Gibson, Mueser, & Norris, 2006). Cognitive-behavioral therapy encourages people to change problematic thinking and thus reduce distress (Hamblen et al., 2006). This therapy is used to help people modify their viewpoints in order to reduce the negative symptoms of PTSD. Exposure therapy posits that the more a person attempts to repress a reaction, the stronger a reaction. The goal of this therapy is that once patients learn that the experience will not have the dreaded effect, the person becomes desensitized to the reaction, causing the distress to diminish (Hamblen et al., 2006). Eye movement desensitization and reprocessing consists of eight stages which focus on critical incidents of the trauma, current triggers of the post traumatic stress, and future impairments for everyday functioning (Silver, Rogers, & Russell, 2008). According to the United States Department of Veteran Affairs, other treatments utilized include: group therapy, family therapy, and brief psychodynamic psychotherapy (or learned ways to deal with trauma).

Throughout the literature on mental health treatment seeking, there is clear stigma for soldiers seeking treatment for PTSD that consequently may reduce the amount people in need who seek help (Grieger et al., 2007). According to Fikretoglu (2006), one third of military personnel in a nationally representative sample of the Canadian military never received treatment for PTSD. Finally, Mojtabai and Olfson (2006) found that because people in the US are significantly less likely to receive treatment than Canadians, the rate of seeking treatment should be lower in US military personnel.

The present research examines a novel integration of clinical, counseling and organizational psychology by assessing how an organizational variable, POS, is related to an increased likelihood of treatment seeking, as well as PTSD. High POS is also hypothesized to be related to less severe symptoms of PTSD, and lower stigma for soldiers returning from being deployed. Stigma, PTSD and treatment seeking are variables which are traditionally examined in clinical and counseling research. A relationship between POS, and both stigma and the severity of symptoms of PTSD, would likely encourage a multi-disciplinary approach to PTSD, thus promoting cross-field research to decrease the negative outcomes of extreme stressors in organizations. I now address the prior research on stigma to seeking treatment for psychological problems.

Stigma of Psychological Treatment

An environment in which the organization cares about the well-being of the employees should support treatment for psychological problems. It is also probable that the atmosphere of the organization will decrease the stigma of psychological problems. Employees who perceive strong organizational support should be less worried about the presumed negative consequences of seeking treatment, being secure that they will ultimately be supported by the organization through their treatment. Figure 1 illustrates these relationships. In this section, I review relevant research on the stigma of psychological treatment. I first define and review the conceptualization of stigma. Next, I discuss research on stigma specifically in the workplace. Finally, I review research on stigma in the military.

Stigma is defined as a “social mark that leads to discrediting of members of a group, such as people with mental illness” (Boysen & Vogel, 2008, p. 447). According to Couture and Penn (2003), the Surgeon General of the United States referred to stigma as an “impediment to the treatment of mental disorders” (p. 291). People with psychological problems are often seen as dangerous and irresponsible (Mayville & Penn, 1998). According to Mayville and Penn (1998), the general public criticizes people with psychological problems more than those with physical health problems. For people experiencing psychological problems, many negative consequences result from stigma. These are discouragement, hurt, anger, decreased perceived competence, increased perceived avoidance by others, and lowered self-esteem (Wahl, 1999). People affected by psychological problems who perceive stigma are also less likely to receive treatment (Holmes & River, 1998). Other outcomes of the stigma of psychological problems are a decreased likelihood of being leased an apartment, getting a job, or receiving healthcare. In addition, a lower quality of life was also a consequence of stigma (Lawrie, 1999; Link & Phelan, 2001).

There are two major categorizations of stigma; public stigma and self stigma. Public stigma refers to the general public’s negative attitude toward people with psychological problems (Britt et al., 2008). Self-stigma refers to the “internalization of how the general public portrays people with mental illness, and the belief in that portrayal” (Britt et al., 2008, p. 318). The present research focuses on self-stigma about both having a psychological problem as well as seeking treatment for psychological problems.

Couture and Penn (2003) note three types of stigmatized perceptions that characterize an individual's view of people with psychological problems: authoritarianism, fear and exclusion, and benevolence. Authoritarianism refers to the belief that others must control people with psychological problems because they are unable to make responsible decisions for themselves (Couture & Penn, 2003). Fear and exclusion (or social restrictiveness) is the belief that people with psychological problems should be feared and separated from the general population (Couture & Penn, 2003). Benevolence is the belief that people with psychological problems are "innocent and naïve; therefore, others must care for them" (Couture & Penn, 2003, p. 292). Couture and Penn (2003) explain that reducing these stigmatizing perceptions within the general public will encourage people to seek treatment, and create better lives for those suffering severe psychological problems.

In order to reduce these stigmatizing perceptions, Couture and Penn (2003) highlight three methods for reducing stigma: protest, education, and promoting contact. Protest is instructing the general public to not "think about or consider using negative stereotypes" in reference to people with psychological problems (Couture & Penn, 2003, p. 293). Education involves teaching the general public about psychological problems. Promoting contact is directly putting people in touch with patients with psychological problems in order to dismiss inaccurate negative stereotypes. Promoting contact is the most efficient way to dispel stigma because it includes other factors such as education (Couture & Penn, 2003).

Boysen and Vogel (2008) investigated education and stigma and found that college students associated less blame to people with psychological problems which were perceived to be out of the individual's control. Teaching the causes of psychological problems and explaining the science behind the disorders increased the effectiveness of the education. Education has been supported in literature as having positive results in decreasing stigma (see Mayville & Penn, 1998).

Similarly, Spagnolo, Murphy and Librera (2008) examined the attitudes of high school students toward people with psychological problems. In a public education program, viewing presentations both created and presented by people with psychological problems decreased stigma toward people with these problems. Similar to Couture and Penn (2003), Spagnolo et al. (2008) found that the public education program, which is both a combination of education and contact, significantly decreased stigma in youth.

Stigma of Seeking Treatment for Psychological Problems in the Workplace

While consequences of the stigma of seeking treatment for psychological problems and ways in which to reduce stigma have been frequently examined with students, the workplace also provides a setting to study the stigma of psychological problems. People spend a lot of each week working at organizations. Organizations play a large role in the dynamics of a person's lifestyle, thus creating an important setting in which to study how stigma of psychological problems affects employees. Within the workplace, disclosure of a psychological problem and consequences of disclosing have been examined in the context on stigma.

Ellison, Russinova, MacDonald-Wilson, and Lyass (2003) examined patterns and correlates of disclosure of psychological problems within the workplace. People working in mental health settings were most likely to disclose a psychological problem. One-third of the participants disclosed a psychological problem when submitting a job application. Those who disclosed when submitting a job application were significantly more likely to have lower incomes (Ellison et al., 2003). Half of the participants disclosed a psychological problem due to an unfavorable circumstance (e.g., needing to explain symptoms or being hospitalized). Other factors associated with disclosing a psychological problem included comfort in secure employment, a lack of negative consequences, feeling appreciated by a boss, and being respected by colleagues (Ellison et al., 2003). A small number of people stated that they disclosed a psychological problem due to a supportive work environment. The relationship between a supportive work environment, specifically POS, and disclosing a psychological problem however, has not been empirically assessed. Lastly, nondisclosure of psychological problems in the workplace has been shown to be the result of a concern for the negative consequences of disclosing (Ellison et al., 2003).

According to Link and Phelan (2001), negative consequences of stigma result from discrimination by the employer. Specifically, people suffering from psychological problems are less likely to be hired for a job (Link & Phelan, 2001). In a study examining discrimination complaints in reference to the American Disabilities Act (ADA), discrimination due to disclosure also occurred post-hire and when attempting to receive reasonable accommodations (Moss & Johnsen, 1997). Further, according to Moss and

Johnsen (1997), “psychiatric disabilities are the second most frequent disability cited by ADA complainants, comprising 12% of the 49,974 employment discrimination charges filed under the ADA with the EEOC as of June 30, 1995.” Ellison et al. (2003) further explained that in order for employees with psychological problems to seek treatment, the ADA only requires disclosure of the problem to necessary parties.

When focusing on disclosure of psychological problems in the workplace, Dalgin and Gilbride (2003) found that employees who were able to identify their psychological problem as a disability were more likely to disclose in order to receive accommodations through the ADA. Employees who did not need accommodations while at work were less prone to identify the problem as a disability (Dalgin & Gilbride, 2003). Furthermore, employees who felt their psychological problem did not affect their workplace performance were less likely to disclose because they did not feel they needed special accommodations (Dalgin & Gilbride, 2003). Similar to Ellison et al., (2003), nondisclosure of psychological problems in the workplace was in part due to a fear of being stigmatized by employers and coworkers (Dalgin & Gilbride, 2003). Specifically, disclosure was feared to result in more supervision, isolation from coworkers, termination, not being hired, lack of opportunity for promotions, and the need to work harder to prove their worth as an employee (Dalgin & Gilbride, 2003).

Stigma of Treatment Seeking for Psychological Problems in Military Samples

The study of stigma is especially important in military samples, where service members often develop psychological problems as a result of combat exposure. Milliken, Auchterlonie and Hoge (2007) examined mental health problems of Iraq combat veterans,

and found that 20% of active soldiers and 42% of reserve soldiers were found in need of treatment for psychological problems. Psychological problems developed while in the military lead to a number of negative consequences. Jacobson et al. (2008) found that after returning home from being deployed, Reserve and National Guard personnel were significantly more likely to have problems with alcohol (binge drinking, weekly drinking, and other alcohol-related problems). According to Renshaw, Rodrigues and Jones (2009), PTSD as a result of combat deployments has also been linked to decreased marital satisfaction. Psychological problems thus interfere with both the work and personal lives of soldiers.

It is imperative for psychological problems to be identified and treated in order for soldiers to effectively continue a career in the military and other occupations. Early detection of psychological problems is necessary to prevent the development of severe psychological problems that interfere with veterans' lives. Mental health screening has been a positive way to detect early symptoms of PTSD and other psychological problems (Seal, et al., 2008).

Unfortunately, the stigma of seeking treatment for psychological problems affects the number of soldiers who receive treatment despite mental health screening. In returning peacekeeping troops from Bosnia, Britt (2000) clearly showed the presence of the stigma of seeking treatment for psychological problems in the military. Britt (2000) found that service members believed disclosing a psychological problem was significantly more stigmatizing than disclosing medical problems. Soldiers felt if they disclosed a psychological problem it would negatively affect their career and were also

less likely to indicate they would follow through with a referral for psychological problems.

Similarly, Hoge et al. (2004) found that the majority of US soldiers returning from Iraq and Afghanistan identified as having a psychological problem did not want to receive help because they believed they would be seen as weak and treated differently by unit leadership. Soldiers also worried that members of their unit would lose confidence in them and that leadership would blame them for the psychological problem. The same stigma occurs in the Canadian military. Gould, Greenberg, and Hetherington (2007) noted that in Marin's (2002) study examining the Canadian military, soldiers were concerned about being ostracized after treatment for psychological problems. Gould, Greenberg, and Hetherington (2002) also found that trauma risk management, a program which uses psychoeducation in a group setting to decrease the stigma of psychological problems in military personnel, significantly increased positive attitudes about treatment seeking, but did not increase the number of people willing to seek treatment. The treatment program, however, was aimed at decreasing the stigma associated with PTSD and not increasing treatment seeking for psychological problems. Gould et al. (2007) attributed a lack of knowledge about treatment as the reason why personnel were not always willing to seek help. This was an important step toward decreasing the stigma of psychological problems in the military.

Despite the connection between stigma of seeking treatment for psychological problems and actual treatment seeking, relatively little research has examined how organizations might contribute to reducing stigma-related concerns. Greene-Shortridge,

Britt, and Castro (2007) reviewed research on organizational variables associated with the stigma of seeking treatment in the military. Britt et al. (2006) found that quality of leadership and the existence of a family-friendly unit climate were negatively related to the stigma of seeking treatment for psychological problems. Greene-Shortridge et al. (2007) recommended that in addition to promoting contact, leader/supervisor support is another way to decrease stigma. POS, however, has never been empirically related to the stigma of seeking treatment for psychological problems and to whether employees seek needed treatment for psychological problems. Therefore, the following hypotheses are proposed:

Hypothesis 1: Stigma at Time 1 will be negatively related to POS at Time 1 and Time 2 (see Figure 1).

Treatment Seeking for Psychological Problems

Mental health treatment seeking by definition refers to whether or not a person attempts to receive treatment for a psychological problem. There are general models for treatment seeking that exist outside of the military. These models mainly include demographic and resource (such as family or community presence) variables. One such model, the Behavioral Model of Health Services Use, proposes that predisposing characteristics (demographics, social structure, and health beliefs) lead to enabling resources (personal/family, and community), and these enabling resources can either lead to treatment or hinder the perceived need to seek treatment, which leads to making (or not making) the decision to seek treatment (Andersen, 1995). Koenen et al. (2003) found that predisposing factors of older age, being separated or divorced, and minority race

were negatively associated with treatment seeking for PTSD (Koenen et al., 2003). Although stigma is the most common impediment to individuals receiving necessary treatment (Mojtabai, 2007; Youssef & Deane, 2006), it has not been directly included into models such as the Behavioral Model of Health Services Use.

These general models have also been used in military research, but once again they only include demographic type variables and lack the inclusion of stigma and attitudinal variables such as POS. For example, Fikretoglu et al. (2006) applied the Behavioral Model of Health Services Use to psychological problems in the military to examine predictors of treatment seeking for trauma-related PTSD in a Canadian military sample. The “enabling factors” related to treatment seeking were marital status and household income. Single participants and those who had an income of over \$80,000 were less likely to seek treatment than other participants. Being in a relationship where the other person is also affected by the symptoms of PTSD may contribute to increased treatment seeking (Fikretoglu et al., 2006). Household income association with treatment seeking is attributed to the difference of free healthcare in Canada (Fikretoglu et al., 2006). The “need factor” of the behavioral model showed that those with PTSD symptoms which interfered with daily activities were more likely to seek treatment than those with only a few symptoms of PTSD (Fikretoglu et al., 2006). Lastly, people with five or more types of trauma were also more likely to receive treatment than people who experiences three or fewer types of trauma (Fikretoglu et al., 2006). Therefore, the following hypothesis is proposed:

Hypothesis 2: Stigma at Time 1 will mediate the relationship between POS at Time 1 and treatment seeking at Time 2 (see Figure 2).

Stigma of Seeking Treatment for Psychological Problems as a
Predictor of Psychological Problems

Figure 1 shows POS as a moderator of the relationship between stigma and PTSD Symptomology. In this section I discuss the link between the severity of psychological difficulties and stigma. Hoge et al. (2004) found that soldiers who met the criteria for a psychological problem were two times as likely to report stigma of seeking treatment for psychological problems. Similarly, Britt et al. (2008) found that the stigma of seeking treatment for psychological problems is related to PTSD Symptomology. In two samples, military personnel and college students, perceived stigma was significantly related to depression. Depression and perceived stigma were especially related in high stress situations. The presumed mechanism for this relationship is that the stigma which exists in the military is likely to decrease the treatment sought for psychological problems which in turn increases PTSD Symptomology (Greene-Shortridge et al., 2007). Figure 1 shows a relationship between stigma and PTSD Symptomology. Therefore, the following hypotheses are proposed:

Hypothesis 3: At Time 1, stigma will be positively related to PTSD Symptomology (see Figure 1).

Hypothesis 4: Stigma at Time 1 will be positively related to PTSD Symptomology at Time 2 (see Figure 1).

Connecting POS and the Stigma of Seeking Treatment for Psychological Problems

In this section, I provide an argument for why POS should be connected to stigma of seeking treatment for psychological problems. As seen in Figure 1, a supportive work environment should make employees feel as though they can make mistakes and will not be abandoned by the organization. Therefore, POS should help create a climate of reduced stigma which is more psychologically beneficial for soldiers suffering from psychological problems. Further, POS should be necessary in the military and other high stress occupations in order to reduce the stigma of seeking treatment for psychological problems and improve overall mental health. Essentially, low POS will exacerbate PTSD Symptomology and an atmosphere of high POS is predicted to be related to a decrease in PTSD Symptomology.

Similar findings have been obtained in organizational settings. Ellison et al. (2003) found that when choosing to disclose a psychological problem in the workplace, a small number of people specifically stated that they disclosed due to a supportive work environment. As discussed above, POS is a predictor of well-being and health outcomes. Maguen, Vogt, King, and Litz (2006) suggested that in order to overcome trauma, a support system is necessary. In an environment where employees are often deployed for long periods of time, such as in the military, it is necessary for an organization to be included in the support system because other forms of support are unavailable. Once treatment has been sought, the relationship between fear of seeking treatment and actual treatment seeking is weaker (Kushner & Sher, 1989). Leaders within the military and organizations who are receiving treatment and expressing support for treatment will encourage servicemen, servicewomen, and civilian employees to seek treatment and

potentially reduce the stigma of seeking treatment for psychological problems (Greene-Shortridge et al., 2007). Therefore, the following hypotheses are proposed:

Hypothesis 5: At Time 1 and 2, POS will be negatively related to PTSD Symptomology (see Figure 1).

Hypothesis 6: Stigma at Time 1 will mediate the relationship between POS at Time 1 and PTSD Symptomology at Time 2 (see Figure 3).

Figure 1 shows POS to be directly related to stigma. Figure 1 also shows a moderating effect of POS such that when POS is high, feeling stigma will be less related to greater symptoms. In contrast, when employees feel low POS, they are more likely to report higher stigma which will result in greater PTSD Symptomology. I hypothesize that in situations of high POS, employees experiencing stigma will realize they are taken care of and supported by the organization which will reduce the fear of seeking treatment and thus weaken the relationship between stigma and PTSD Symptomology. Conversely, in situations of low POS, employees will focus on the stigma of psychological problems and feel as if the organization will not support their need for treatment and will report more PTSD Symptomology. Therefore, the following hypothesis is proposed:

Hypothesis 7: POS at Time 1 will moderate the relationship between the stigma of psychological problems at Time 1 and PTSD Symptomology at Time 2, such that when POS is high the positive relationship between the stigma of psychological problems and PTSD Symptomology will be weaker (see Figure 4).

The Present Study

POS has never been examined as a predictor of treatment seeking, either in civilian or military organizations. In the present research, I test whether the perception of POS is negatively related to the stigma of seeking treatment for psychological problems and therefore an increased likelihood that soldiers struggling with psychological problems will seek treatment. In addition, I examine the mediating relationship of stigma between POS and PTSD Symptomology, as well as POS as a moderator of the stigma-PTSD Symptomology relationship. The longitudinal nature of the current study will help to better elucidate the relationships between POS, stigma, and treatment seeking.

Referring to Figure 1, I expect the paths for each variable to be significant at Time 1 and at Time 2. A direct relationship between POS and PTSD Symptomology at both Time 1 and Time 2 is proposed. Stigma at Time 1 is also proposed to be negatively related to POS at both Time 1 and Time 2. Similarly, at Time 1, a direct relationship is also hypothesized between the stigma of seeking treatment and PTSD Symptomology. Stigma at Time 1 is also hypothesized to be positively related PTSD Symptomology at Time 2. Further, POS at Time 1 is hypothesized to moderate the relationship between stigma at Time 1 and PTSD Symptomology at Time 2. Finally, two mediated relationships are proposed. First, stigma at Time 1 is hypothesized to mediate the relationship between POS at Time 1, and treatment seeking at Time 2 (see Figure 2). Second, stigma at Time 1 is hypothesized to mediate the relationship between POS at Time 1 and PTSD Symptomology at Time 2 (see Figure 3).

CHAPTER 2

METHOD

Participants and Procedure

I used an archival longitudinal data set from the Walter Reed Army Institute of Research. The participants were active-duty US soldiers ($N = 636$) in a Brigade Combat Team. The soldiers recently returned from a 15-month combat deployment in Iraq. For Time 1, the data were collected 4 months post deployment. For Time 2, the data were collected 8 months after Time 1. Participants included completed both the Time 1 and Time 2 survey. Although 1,658 soldiers completed the first survey, only 636 soldiers completed both surveys. Participation was voluntary and Time 1 surveys were administered in a classroom, while Time 2 surveys were administered in a movie theater. Both surveys were administered on US Army bases in Germany. Demographic information collected included age, gender, race/ethnicity, level of education, unit information, deployment information, years in the military, and number of months with current unit (see Appendix A). The measures were obtained from a larger study focused on expressive writing and post-deployment transitions.

Measures

Perceived organizational support. POS was assessed at Time 1 and Time 2 using a modified version of the Eisenberger et al. (1986) eight-item survey of Perceived Organizational Support (SPOS). The modified items replaced the word “employer” with “unit.” Respondents expressed their agreement with each item on a seven-point Likert-like scale with 1 = strongly disagree, and 7 = strongly agree. Questions such as, “My unit really cares about my well-being” and “My unit strongly considers my goals and values” were used to assess POS. (see Appendix A). Eisenberger et al. (1997) found a Cronbach’s

Alpha of .90 for the eight-item SPOS scale. Shore and Tetrick (1991) conducted a study of content validity for the SPOS and concluded that it is a well-validated, distinct, unidimensional construct (see Appendix B). The Cronbach's Alpha for the scale in this study was .90 at Time 1, and .91 at Time 2.

Treatment seeking for psychological problems. Treatment seeking for psychological problems was assessed with a scale which reflects writing or talking to a mental health professional. Treatment seeking was assessed at Time 1 and Time 2 by one question: "How much have you talked with or written to a Mental Health/Medical Professional about your deployment experiences?" Respondents expressed their agreement on a 5-point scale with 1 = Not at all, 2 = A little bit, 3 = A moderate amount, 4 = Quite a bit, and 5 = A lot. This variable was recoded into two categories: yes or no. "Yes" responses were coded as a one, and "no" responses were coded as a zero.

Psychological problems. The presence of a psychological problem was assessed at Time 1 and Time 2 using the question, "Are you currently experiencing a stress, emotional, alcohol, or family problem related to deployment?" Respondents expressed their agreement with this item on a 4-point Likert-like scale with 1 = No, 2 = Yes, Mild, 3 = Yes, Moderate, and 4 = Yes, severe. This variable was recoded into two categories: yes or no.

PTSD symptomology. PTSD Symptomology were assessed using the PCL, a 17-item PTSD scale (Blanchard, Jones-Alexander, Buckley, & Forneris, 1996; Weathers, Litz, Herman, Huska, & Keane, 1993). The items are consistent with the DSM-IV-TR's criteria for PTSD (Diagnostic and Statistical Manual of Mental Disorders [DSM-IV-TR];

American Psychiatric Association, 2000). Respondents expressed their agreement with each item on a five-point Likert-like scale with 1 = not at all, and 5 = extremely.

Questions referring to reactions experienced by soldiers such as, “Repeated, disturbing memories, thoughts, or images of the stressful experience” and “Feeling emotionally numb or being unable to have loving feelings for those close to you” were used to assess PTSD Symptomology. McKibben et al. (in press) found this scale to have a Cronbach’s Alpha of .94 (see Appendix C). The Cronbach’s Alpha for the scale in this study was .94 at Time 1, and .95 at Time 2.

Stigma of psychological problems. Stigma of psychological problems was assessed using five items from Hoge et al. (2004) labeled Perceived Barriers to Seeking Mental Health Services. Britt et al. (2008) labeled a modified version of these items perceived stigma. Britt et al. (2008) reported the modified scale’s Cronbach’s Alpha as .82. The sixth item which is included in the current study, “I would think less of a team member who was receiving mental health counseling” is not reflected in prior research. Respondents expressed their agreement with each item on a five-point Likert-like scale with 1 = strongly disagree, and 5 = strongly agree. Questions such as, “I would be seen as weak” and “My unit leadership might treat me differently” were used to assess stigma related to seeking treatment for psychological problems (see Appendix D). The Cronbach’s Alpha for the scale in this study at Time 1 was .89.

CHAPTER 3

RESULTS

Data Screening

All statistical analyses were conducted using SPSS 17.0. Before beginning the analyses, the data were standardized and examined for outliers with z-scores of above or below three. No extreme outliers were found. When examining the multivariate outliers for Hypothesis 2, dfBetas revealed two outliers. Cases 784 and 811 considerably reduced the relationship between POS and treatment seeking and thus these values were removed from the treatment seeking data for this analysis. Due to missing data, pairwise deletion was used in all subsequent analyses.

Descriptive Statistics of the Measured Variables

Means and standard deviations for each scale across both time periods are presented in Table 1. At Time 1, 13.29% of the participants met the criteria for PTSD according to the PLC as compared to 14.06% at Time 2. At Time 1, 41.04% reported a psychological problem, and of those who reported a problem, 26.74% reported seeking treatment for the problem. At Time 2, 49.60% reported a psychological problem, but only 18.06% reported seeking treatment. When comparing the differences between the participants reporting a psychological problem who sought treatment and the participants who did not seek treatment, there were no significant differences between PTSD Symptomology at Time 1 ($M = 1.83$) and Time 2 ($M = 1.86$). There was a significant difference for POS at Time 1 ($M = 4.11$) and Time 2 ($M = 3.84$), $t(638) = 5.58, p < .001$, such that POS was higher at Time 1 than at Time 2 for the participants in this sample.

Finally, when examining the differences between treatment seeking for Time 1 and Time 2, at Time 2 ($M = 1.05$) participants sought significantly less treatment than at Time 1 ($M = 1.24$), $t(638) = 8.82, p < .001$. When analyses were conducted to examine

differences in demographic variables, there were significant differences between men and woman for PTSD at Time 1 and Time 2. At Time 1, men ($M = 1.85$) were found to exhibit more symptoms of PTSD than women ($M = 1.49$), $t(644) = -2.17, p < .05$. At Time 2, Men ($M = 1.88$) were still found to exhibit more symptoms of PTSD than females ($M = 1.51$), $t(644) = -2.03, p < .05$. No differences were found for POS, PTSD Symptomology, and stigma when examining race. The Cronbach's alphas were all in an acceptable range, with the lowest alpha at .89 (see Table 1).

Correlational Analyses

To examine hypotheses 1 and 3-5, correlations were examined. Table 1 presents both the reliabilities of the scales and the correlations among the variables. Hypotheses 1, 3, 4, and 5 all received support. In support of hypothesis 1, stigma at Time 1 was negatively related to POS at Time 1, $r = -.31, p < .001$, and stigma at Time 1 was negatively related to POS at Time 2, $r = -.21, (p < .001)$. For Hypothesis 3, at Time 1 stigma was positively related to PTSD Symptomology, $r = .24, p < .001$. Supporting Hypothesis 4, stigma at Time 1 was positively related to PTSD Symptomology at Time 2, $r = .24, p < .001$. Finally, in support of Hypothesis 5, at Time 1, POS was significantly related to PTSD Symptomology, $r = -.31, p < .001$. At Time 2, POS was also negatively related to PTSD Symptomology, $r = -.28 p < .001$.

Mediation Analyses

The results of the mediation analyses are provided in Table 2. To examine Hypothesis 2, logistic regression was utilized due to the dichotomous nature of treatment seeking. Hypothesis 2 was not supported. When analyzing the data considering only

those who reported a problem, the relationship between stigma and treatment seeking was not significant. Significant relationships were found for POS and treatment seeking, $Wald = 4.94, p < .05$, and POS with stigma, $t(309) = -4.96, p < .001$, but no relationship emerged between stigma and treatment seeking. This relationship was in the opposite direction as hypothesized. Participants who perceived higher POS sought treatment less often, and as hypothesized perceived less stigma. However, when the PTSD at Time 1 was controlled for, $Wald = 8.341, p < .01$, the relationship between POS and treatment seeking was no longer significant. The relationship was also examined for speaking with clergy members, however no mediating effects were found for this relationship.

Hypothesis 6 was supported, such that stigma at Time 1 partially mediated the relationship between POS at Time 1 and PTSD Symptomology at Time 2. The results are provided in Tables 3 (all participants) and 4 (participants reporting a problem). POS was negatively related to both PTSD Symptomology, $t(637) = -7.29, p < .001$, and stigma, $t(637) = -8.11, p < .001$, such that participants perceiving more POS had lower self-ratings of PTSD and also perceived less stigma. Stigma was also positively related to PTSD Symptomology, $t(637) = 4.28, p < .001$, such that those who perceived high stigma also had high self-ratings of stigma. To test the indirect effect of stigma on PTSD Symptomology, the Sobel test was used. The results of the Sobel test resulted in a significant indirect effect which accounted for 17% of the total effect of POS on PTSD Symptomology, $t = -3.01, p < .001$ (MacKinnon, Warsi, & Dwyer, 1995).

POS and stigma may be especially important predictors for people reporting a psychological problem. When analyzing the data considering only those who reported a

problem, POS was negatively related to PTSD Symptomology, $t(309) = -4.40, p < .05$, and stigma, $t(308) = -4.96, p < .05$. Stigma was also positively related to PTSD Symptomology, $t(309) = 2.44, p < .05$. The Sobel test was significant, and the indirect effect of stigma accounted for 20% of the total effect of POS on PTSD Symptomology, $t = -2.20, p < .05$ (MacKinnon, Warsi, & Dwyer, 1995).

Multiple Regression Analysis

The results of the multiple regression analysis for Hypothesis 7 are presented in Tables 5 (all participants) and 6 (participants reporting a problem). Prior to conducting the multiple regressions, the variables of POS and stigma were mean centered to ensure multicollinearity was not an issue. No support was found for Hypothesis 7 as POS at Time 1 did not significantly moderate the relationship between the stigma of psychological problems at Time 1 and PTSD Symptomology at Time 2. Main effects were significant for both POS, $t(636) = -5.74, p < .001$, and stigma, $t(636) = 5.28, p < .001$, on PTSD Symptomology. Participants who had high perceptions of POS also had low self-ratings of PTSD Symptomology. Participants with high perceptions of stigma also had high self-ratings of PTSD Symptomology. The interaction between POS and stigma was not significant, thus stigma does not moderate the relationship between POS and PTSD Symptomology. When analyzing the data considering only those who reported a problem, the main effects were significant for both POS, $t(307) = -3.61, p < .001$, and stigma $t(307) = 2.44, p < .001$ when the interaction term was not added into the model. When the interaction between POS and stigma was included in the model, the interaction was not significant.

CHAPTER 4

DISCUSSION

The current study is the first to examine POS as a predictor of the stigma of seeking treatment for psychological problems, PTSD Symptomology, and treatment seeking. The remainder of this section will first discuss the results, then identify the implications for theory, next explore organizational implications, and finally discuss limitations and future research.

Summary of the Results

In summarizing the results, I first begin with the bivariate relationships. In support of the hypotheses, the relationships between POS, PTSD Symptomology, and stigma at Time 1 were all significant. Perceptions of POS were negatively related to the perceived stigma of seeking treatment for psychological problems, as well as PTSD Symptomology. Higher levels of POS were associated with lower levels of perceived stigma of treatment for psychological problems and PTSD Symptomology.

Next, the relationships between POS and stigma at Time 1, and PTSD Symptomology at Time 2 were examined. Stigma and POS were both associated with PTSD Symptomology at Time 2, although these relationships were weaker than the analyses which included only Time 1 measures. The relationships between stigma, POS, and PTSD Symptomology established the conditions for testing the hypothesis that stigma would mediate the relationship between POS and PTSD Symptomology.

Stigma was examined as a mediator for two relationships. The mediational analyses indicated that a portion of the relationship between POS and PTSD

Symptomology was a function of perceived stigma. POS, and stigma were also investigated as predictors of treatment seeking behavior. POS was not a predictor of treatment seeking when controlling for PTSD Symptomology at Time 1. When PTSD Symptomology was not controlled for, POS was related to treatment seeking in the opposite direction than expected. Stigma was not related to treatment seeking. Because stigma was not related to treatment seeking, it could not be examined as a mediator of the relationship between POS and treatment seeking. Although the expectation was that stigma would predict treatment seeking, some prior studies have also failed to support this hypothesis and thus this was not completely unexpected (Gould et al., 2002). Finally, when POS was examined as a moderator of the relationship between POS and PTSD Symptomology, the interaction was not significant. Next, I discuss the theoretical implications of the novel relationships between POS, stigma, and PTSD Symptomology.

Theoretical Implications

In order to discuss the theoretical implications of the findings in the current study, the expected relationship between POS and PTSD Symptomology is first investigated. Previous research supports that POS is positively related to mental health outcomes such as well-being (Eisenberger et al., 1986), and support was found that stigma mediates the relationship between POS and PTSD Symptomology. Stigma, however, only accounted for between 17 % of all participants and 20% of participants reporting a psychological problem of the relationship between POS and PTSD Symptomology. The mediating effect of stigma was comparable for the entire sample and for those reporting

psychological problem. Further, stigma does not mediate as much of the relationship between POS and PTSD Symptomology as hypothesized.

Therefore, other factors are largely responsible for the relationship between POS and PTSD Symptomology. Given the properties of POS, it is likely that POS itself may be responsible. The fact that employees are feeling valued and appreciated by their employers may in itself be enough to affect symptoms of PTSD. POS is positively related to well-being, so it is not surprising that it would also be negatively related to PTSD Symptomology (Eisenberger et al., 1986). Further, POS has also been negatively related to work-family conflict and strain (O'Driscoll et al., 2003; Rhoades & Eisenberger, 2002). If in high POS situations soldiers are less likely to experience strain as a result of everyday work hassles, symptoms of PTSD may be lower. Furthermore, POS is related to a host of positive outcomes, so perhaps the positive benefits of factors such as decreased strain, are contributing to the negative relationship between POS and PTSD Symptomology. POS has also been related to positive work outcomes such as work attendance, job performance, and affective commitment. The combination of the positive relationships between POS and health and work outcomes may also add to the negative relationship between POS and PTSD Symptomology (Eisenberger et al., 1986; Eisenberger et al., 1990; Eisenberger et al., 1997; Shore & Wayne, 1993).

It is possible that one mediator of the relationship between POS and PTSD Symptomology is the conservation of resources theory. This theory posits that individuals try to create circumstances that are best for themselves, and that the individual attempts to protect him or herself in social relationships (Hobfoll & Schumm,

2002). Hobfoll and Schumm (2002) further explain that “the focus of this theory is on reactions toward the environmental events that affect resources” (p. 133). Thus, POS is thought of as a prized resource, and as such, the presence of it aids in decreasing PTSD Symptomology. Soldiers suffering from symptoms of PTSD may feel as though they have support as an extra resource in which to help deal with the negative effects of PTSD. The perceived loss of this resource can be particularly overwhelming as individuals tend to rely on resources as an avenue with which to decrease psychological distress and ultimately symptoms of PTSD (Hobfoll & Schumm, 2002).

One other mechanism which may link POS and PTSD Symptomology is that POS is theoretically derived from the norm of reciprocity, which posits that people should help those who help them (Gouldner, 1960). Thus, if the organization is supportive, helpful, and values the employees, the employees are more likely to want to give back to the organization. POS has been previously related to outcomes such as positive mood, perception of organizational fairness, and the chance to be recognized or promoted (Eisenberger et al. 1986; Eisenberger et al., 2001; Moorman, Blakeley, & Niehoff, 1998). Because POS is also positively related to the aforementioned variables, they may all work together to decrease PTSD Symptomology. For example, if employees feel supported by their organization, which is also accompanied by a positive mood, they may take advantage of mental health resources provided by their organization because they perceive a fairness of organizational procedures and intrinsically want to be mentally healthy in order to do their best for the organization.

Additionally, POS was not found to predict treatment seeking in the hypothesized direction. POS was negatively related to treatment seeking, and when controlling for PTSD Symptomology, POS was not related to treatment seeking at all. Furthermore, the positive relationship between PTSD Symptomology and treatment seeking is replicated in the current study (Fikretoglu et al., 2006). This suggests that the negative relationship between POS and treatment seeking may be a function of the negative relationship between POS and PTSD. It is possible that when soldiers first feel symptoms of PTSD, POS acts as a substitute for seeking treatment. As the symptoms worsen, POS no longer can assume this role, and thus is not related to treatment seeking when taking into account the severity of psychological symptoms.

In the present study, the relationship between stigma and treatment seeking was not supported. Although researchers have argued for the importance of stigma in treatment seeking (Couture & Penn, 2003; Holmes & River, 1998), research has not consistently supported this relationship (Gould et al., 2002; Gould et al., 2007). Thus, the lack of a relationship between stigma and treatment seeking in the current study is not entirely unexpected. One reason stigma may not be related to treatment seeking is because soldiers blame themselves for developing PTSD. Prior research with civilians has posited that self-blame for a problem may reduce treatment seeking (Cooper et al., 2003). The phenomenon of self-blame may also be occurring in this sample. It is also possible that soldiers who receive support from their organization are less likely to blame themselves for the problem because they are supported through the critical times of need,

and therefore are less likely to perceive stigma of seeking treatment for psychological problems.

Organizational Implications

The results from this study have many organizational implications. Although this study was conducted with military personnel, these results are likely to generalize to other high stress occupations. For positions such as police officers or firefighters, it may be important for organizations to create a supportive environment to facilitate a decrease of PTSD Symptomology in employees.

The current study successfully connected the fields of counseling, clinical and organizational psychology by integrating POS into PTSD Symptomology literature. Further, stigma was also negatively related to PTSD Symptomology. It is important to note that PTSD can follow any traumatic event which meets the DSM-IV criteria (American Psychiatric Association, 2000). This would include drivers who are in a car accident, or firefighters witnessing an especially traumatic fire (American Psychiatric Association, 2000). In such situations, POS may play a role in decreasing the stigma of seeking treatment for psychological problems, and decreasing symptoms of PTSD.

Although stigma was not related to treatment seeking, it was negatively related to PTSD Symptomology. One way in which to possibly integrate these findings is for organizations to openly discuss psychological concerns. Leadership is instrumental in this pursuit. Organizations which openly support employees discussing their psychological problem may find employees with lower symptoms of PTSD. Greene-Shorridge et al. (2007) explain that one possible way to increase treatment seeking is

through leaders discussing their own problems and openly seeking treatment. Although no relationship was found between POS and treatment seeking, it is possible that soldiers who openly accept their psychological problem through the support of leadership may find a decrease in symptoms of PTSD. Perhaps the act of hiding PTSD worsens the symptoms, whereas openly accepting PTSD as a psychological problem in itself decreases the symptoms. Furthermore, the organization needs to demonstrate in a way in which the soldiers are aware that the military values and cares about their well-being—psychological problems being no exception.

In summary, POS is related to stigma and PTSD Symptomology. Organizations may want to consider POS when attempting to decrease PTSD Symptomology and stigma of seeking treatment for psychological problems. The presence of stigma is related to several negative consequences, such as decreased perceived competence, increased perceived avoidance by others, lowered self-esteem, lowered quality of life, and decreased likelihood of being leased an apartment, getting a job, or receiving healthcare (Lawrie, 1999; Link & Phelan, 2001; Wahl, 1999). Promoting a healthy work environment through POS may help decrease stigma and PTSD Symptomology. Previous research has not connected POS to stigma or PTSD Symptomology; however these relationships provide support for incorporating organizational attitudes into programs of which the overall goal is increasing mental health in the workplace.

Limitations and Future Research

The current study has a few limitations. First, the measures were all self-report. When dealing with issues such as stigma, it is possible that soldiers are not reporting as

much stigma as they actually feel because of the feared consequences. It is also possible that more soldiers are suffering from PTSD than admit to it on paper. Further research could utilize a more concrete measure of treatment seeking which would provide more information on the length of treatment or diagnosis. Instead of simply utilizing self-report data, it would be interesting to include actual data of whether or not treatment was sought from a mental health professional, what the diagnosis was for the individual, how long the treatment continued, and if medication was prescribed. This may uncover a different relationship between POS and treatment seeking than what was found in the current study. Following treatment it would be interesting to again have the participants complete a survey including questions on stigma and POS.

A second limitation is that although the current study was longitudinal in design, all measures were not assessed at both time periods. The absence of the stigma scale at Time 2 also decreased the ability to draw causal inferences. Although POS at Time 1 is related to stigma at Time 1, it would not be accurate to state that POS leads to reduced stigma (Stone-Romero & Rosopa, 2008). Further research should focus on comparisons between the longitudinal relationships to begin to discern directionality between relationships such as POS and stigma, stigma and treatment seeking, as well as stigma and PTSD Symptomology.

The final and perhaps most important limitation is that of generalizability. As discussed earlier, it is expected that the results found in a sample of soldiers recently returned from deployment will parallel other high stress organizations. In order to address this issue however, future research should replicate these findings in different

organizations. It would be interesting to duplicate these findings not only in traditional high stress positions but also in other positions such as nurses, nursing home staff, and teachers who have large amounts of responsibility and stress on a daily basis.

Future research may also expand the scope of psychological problems. PTSD Symptomology was an important variable in this study as there is a lack of research connecting organizational attitudes such as POS to PTSD for a population in which approximately 12-20% of military personnel are affected by PTSD (Grieger, Kolkow, Spira, & Morse, 2007; Koenen, Goodwin, Struening, Hellman, & Guardino, 2003). One way to expand these findings, however would be to sample other professions and include other psychological problems such as depression or anxiety disorders which may be more relevant to different professions. Focusing on job relevant psychological disorders may increase generalizability of the relationship between POS, stigma and psychological problems found in this study.

Conclusions

In conclusion, some novel relationships were established in this study. POS was negatively related to stigma, and PTSD Symptomology. Further, stigma partially mediated the relationship between POS and PTSD Symptomology. POS and stigma, however, did not work interdependently as the model hypothesized to increase treatment seeking and decrease PTSD Symptomology. POS is an important element which organizations should consider taking strides to increase when attempting to decrease stigma and psychological problems within their organization. Although this study was conducted on a high-risk and stress occupation, the generalizability of the results is likely

as other high stress positions may be related to PTSD or other similar mental health disorders.

APPENDICES

APPENDIX A

Demographics

Instructions: This section asks for your basic demographic information.

1. Social security number: (fill in circles and write numbers)

2. Age: (fill in circles)

0 0

1 1

2 2

3 3

4 4

5 5

6 6

7 7

8 8

9 9

3. Gender: (fill in circles)

Male

Female

4. Race/Ethnicity: (fill in circles)

Caucasian/White

African American

Hispanic

Asian/Pacific Islander

Other

5. Highest Level of Civilian Education? (fill in circles)

Some High School

GED

High School Diploma

Some College

Associate Degree

Bachelors Degree

Masters Degree

Doctorate Degree

6. Unit Information:

Platoon_____

Company_____

Battalion_____

Brigade_____

7. Did you Deploy to Iraq with 2nd BCT/2ID? (fill in circles)

Yes

No

8. How many years have you been in the military? If less than 1 year, please mark "00". (fill in circles)

00

11

22

33

4

5

6

7

8

9

9. How many months have you been with your current unit? (fill in circles)

0 0

1 1

2 2

3 3

4 4

5 5

6 6

7 7

8 8

9 9

APPENDIX B

The Survey of Perceived Organizational Support

Instructions: How much do you AGREE OR DISAGREE with the statements below?

| | | | | | |
|-------------------|----------|-------------------|---------|----------------|-------|
| 1 | 2 | 3 | 4 | 5 | 6 |
| 7 | | | | | |
| Strongly Disagree | Disagree | Slightly Disagree | Neutral | Slightly Agree | Agree |
| Strongly Agree | | | | | |

1. My unit strongly considers my goals and values.
2. My unit really cares about my wellbeing.
3. My unit shows little concern for me.
4. My unit would forgive an honest mistake on my part.
5. My unit cares about my opinion.
6. If given the opportunity, my unit would take advantage of me.
7. Help is available from my unit when I have a problem.
8. My unit is willing to help me when I need a special favor.

APPENDIX C

PTSD Symptomology: PTSD Scale

Instructions: Below is a list of reactions that Soldiers sometimes experience following deployment or in response to other stressful life experiences. Please mark how much you have been bothered by each problem IN THE PAST MONTH.

| 1 | 2 | 3 | 4 |
|------------|---|---------|---|
| 5 | | | |
| Not at all | | Neutral | |
| Extremely | | | |

1. Repeated, disturbing memories, thoughts or images of the stressful experience?
2. Repeated, disturbing dreams of the stressful experience?
3. Suddenly acting or feeling as if the stressful experience were happening again (as if you were reliving it)?
4. Feeling very upset when something reminded you of the stressful experience?
5. Having physical reactions (e.g., heart pounding, trouble breathing, sweating) when something reminded you of the stressful experience
6. Avoiding thinking or talking about the stressful experience or avoiding having feelings about it?
7. Avoiding activities or situations because they reminded you of the stressful experience?
8. Trouble remembering important parts of the stressful experience?
9. Loss of interest in activities that you used to enjoy?
10. Feeling distant or cut off from other people?

11. Feeling emotionally numb or being unable to have loving feelings for those close to you?
12. Feeling as if your future somehow will be cut short?
13. Trouble falling or staying asleep?
14. Feeling irritable or having angry outbursts?
15. Having difficulty concentrating?
16. Being “super alert”, watchful, or on guard?
17. Feeling jumpy or easily startled?

APPENDIX D

Stigma of Psychological problems

Instructions: Rate each of the following factors that might affect your decision to receive mental health counseling or services if you ever had a problem:

| | | | |
|-------------------|----------|---------|-------|
| 1 | 2 | 3 | 4 |
| 5 | | | |
| Strongly disagree | Disagree | Neutral | Agree |
| Strongly agree | | | |

1. It would harm my career.
2. Members of my unit might have less confidence in me.
3. My unit leadership might treat me differently.
4. My leaders would blame me for the problem.
5. I would be seen as weak.

REFERENCES

- (2004, January 16). The effects of trauma do not have to last a lifetime. *American Psychological Association*, Retrieved from <http://www.psychologymatters.org/ptsd.html>
- (2009, October, 8). National Center for PTSD. *United States Department of Veterans Affairs*, Retrieved from <http://www.ptsd.va.gov/public/pages/treatment-ptsd.asp>
- Aiken, L.S., & West, S.G. (1991). *Multiple regressions: Testing and interpreting interactions*. Thousand Oaks, CA: Sage.
- Allen, D.G., Shore, L.M., & Griffeth, R.W. (2003). The role of perceived organizational support and supportive human resource practices in the turnover process. *Journal of Management*, 29, 9-118.
- Allen, D.G., Weeks, K.P., & Moffitt, K.R. (2005). Turnover intentions and voluntary turnover: The moderating roles of self-monitoring, locus of control, proactive personality, and risk aversion. *Journal of Applied Psychology*, 90, 980-990.
- American Psychiatric Association (1994). *Diagnostic and statistical manual of mental disorders* (4th ed.). Washington, DC: American Psychiatric Association 1994.
- American Psychiatric Association. (2000). *Diagnostic and statistical manual of mental disorders DSM-IV-TR (Fourth ed.)*. Washington D.C.: American Psychiatric Association.
- Andersen, R.M. (1995). Revisiting the behavioral model and access to medical care: Does it matter? *Journal of Health and Social Behavior*, 26, 1-10.

- Bair, J., Robinson, R., Katon, W., & Kroenke, K. (2003). Depression and pain comorbidity: A literature review. *Archives of Internal Medicine, 163*, 2433–2445.
- Blanchard, E. B., Jones-Alexander, J., Buckley, T. C., & Forneris, C. A. (1996). Psychometric properties of the PTSD Checklist (PCL). *Behavioral Research and Therapy, 8*, 669-673.
- Blau, P. M. (1964). *Exchange and power in social life*. New York: Wiley.
- Boysen, G.A., & Vogel, D.L. (2008). Education and mental health stigma: The effects of attribution, biased assimilation, and attitude polarization. *Journal of Social and Clinical Psychology, 25(5)*, 447-470.
- Britt, T.W. (2000). The stigma of psychological problems in a work environment: Evidence from the screening of service members returning from Bosnia. *Journal of Applied Social Psychology, 30*, 1599-1618.
- Britt, T.W., Greene, T.M., Castro, C.A., & Hoge, C.W. (2006). The stigma of psychological problems in the military. *Paper presented at the APA/NIOSH Work, Stress, and Health Conference, Miami, FL*.
- Britt, T.W., Green-Shortbridge, T.M., Brink, S., Nguyen, Q.B., & Rath, J. (2008). Perceived stigma and barriers to care for psychological treatment: Implications for reactions to stressors in different contexts. *Journal of Social and Clinical Psychology, 27(4)*, 317-335.

- Buckley, T.C., Mozley, S.L., Bedard, M.A., Dewulf, A., & Greif, J. (2004). Preventive health behaviors, health-risk behaviors, physical morbidity, and health-related role functioning impairment in veterans with post-traumatic stress disorder. *Military Medicine, 169*, 536-540.
- Byrne, Z.S., & Hochwarter, W.A. (2006). I get by with a little help from my friends: The interaction of chronic pain and organizational support on performance. *Journal of Occupational Health Psychology, 11*, 215-227.
- Cooper A.E., Corrigan P.W., & Watson A.C. (2003). Mental illness stigma and care seeking. *Journal of Nervous Mental Disorders, 191*, 339-41.
- Couture, S.M., & Penn, D.L. (2003). Interpersonal contact and the stigma of mental illness: A review of the literature. *Journal of Mental Health, 12*(3), 291-305.
- Dalgin, R.S., & Gilbride, D. (2003). Perspectives of people with psychiatric disabilities on employment disclosure. *Psychiatric Rehabilitation Journal, 26*(3), 306-310.
- Decker, M., & Meyer, M. (1999). Therapeutic potential of neuronal nicotinic acetylcholine receptor agonists as novel analgesics. *Biochemical Pharmacology, 58*, 917-923.
- Eisenberger, R., Armeli, S., Rexwinkel, B., Lynch, P.D., & Rhoades, L. (2001). Reciprocation of perceived organizational support. *Journal of Applied Psychology, 86*, 42-51.
- Eisenberger, R., Cummings, J., Armelo, S., & Lynch, P. (1997). Perceived organizational support, discretionary treatment, and job satisfaction. *Journal of Applied Psychology, 82*, 812-820.

- Eisenberger, R., Fasolo, P., & Davis-LaMastro, V. (1990). Perceived organizational support and employee diligence, commitment, and innovation. *Journal of Applied Psychology, 75*, 51-59.
- Eisenberger, R., Huntington, R., Hutchison, S., & Sowa, D. (1986). Perceived organizational support. *Journal of Applied Psychology, 71*, 500-507.
- Ellison, M.L., Russinova, Z., MacDonald-Wilson, K.L., & Lyass, A. (2003). Patterns and correlates of workplace disclosure among professionals and managers with psychiatric conditions. *Journal of Vocational Rehabilitation, 18*, 3-13.
- Ferrada-Noli, M., Asberg, M., Ormstad, K., Lundin, T., & Sundbom, E. (1998). Suicidal behavior after severe trauma. Part 1: PTSD diagnoses, psychiatric comorbidity, and assessments of suicidal behavior. *Journal of Traumatic Stress, 11*, 103–112.
- Fikretoglu, D., Brunet, A., Guay, S., & Pedlar, D. (2007). Mental health treatment seeking by military members with posttraumatic stress disorder: Findings on rates, characteristics, and predictors from a nationally representative Canadian military sample. *The Canadian Journal of Psychiatry, 52*(2), 103-110
- Fikretoglu, D., Brunet, A., Schmitz, N., Guay, S., & Pedlar, D. (2006). Posttraumatic stress disorder and treatment seeking in a nationally representative Canadian military sample. *Journal of Traumatic Stress, 19*, 847-858.
- Fikretoglu, D., Brunet, A., Schmitz, N., Guay, S., & Pedlar, D. (2006). Posttraumatic stress disorder and treatment seeking in a nationally representative Canadian military sample. *Journal of Traumatic Stress, 19*(6), 847-858.

- Gould, M., Greenberg, N., & Hetherington, J. (2007). Stigma and the military: Evaluation of a PTSD psychoeducational program. *Journal of Traumatic Stress, 20*, 505-515.
- Gouldner (1960). The norm of reciprocity: A preliminary statement. *American Sociological Review, 25*, 161-178.
- Green-Shortridge, T.M., Britt, T.W., & Castro, C.A. (2007). The stigma of mental health problems in the military. *Military Medicine, 172*(2), 157-161.
- Kolkow, T.T., Spira, J.L., Morse, J.S & Grieger, T.A.,. (2007). Post-traumatic stress disorder and depression in health care providers returning from deployment to Iraq and Afghanistan. *Military Medicine, 172*(5), 451-455.
- Hamblen, J.L., Gibson, L.E., Mueser, K.T., & Norris, F.H. (2006). Cognitive behavioral therapy for prolonged postdisaster distress. *Journal of Clinical Psychology: In Session, 62*(8), 1043-1052.
- Harris, R.B., Harris, K.J., & Harvey, P. (2007). A test of competing models of relationships among perceptions of organizational politics, perceived organizational support, and individual outcomes. *The Journal of Social Psychology, 147*, 631-655.
- Hobfoll, S. E. & Schumm, J.A. (2002). Conservation of resources: Application to public health promotion. In R.J. DiClemente, R.A., Crosby, & C.M. Kegler (Eds.), *Emerging Theories in Health Promotion Practice and Research*, Jossey-Boss (1st edn). New York: New York.

- Hochwarter, W.A., Whitt, L.A., Treadway, D.C., & Ferris, G.R. (2006). The interaction of social skill and organizational support on job performance. *Journal of Applied Psychology, 91*, 482-489.
- Hoge, C.W., Castro, C.A., Messer, S.C., McGurk, D., Cotting, D.I., & Koffman, R.L. (2004). Combat duty in Iraq and Afghanistan, mental health problems, and barriers to care. *The New England Journal of Medicine, 351(1)*, 13-22.
- Holmbeck, G., (1997). Toward terminological, conceptual, and statistical clarity in the study of mediators and moderators: Examples from the child-clinical and pediatric psychology literatures. *Journal of Consulting and Clinical Psychology, 65*, 599-610.
- Holmes, P.E. & River, L.P. (1998). Individual strategies for coping with the stigma of severe mental illness. *Cognitive and Behavioral Practice, 5(2)*, 231 – 239.
- Hui, C., Wong, A., & Tjosvold, D. (2007). Turnover intention and performance in China: The role of positive affectivity, Chinese values, perceived organizational support and constructive controversy. *Journal of Occupational and Organizational Psychology, 80*, 735-751.
- Jacobson, I.G., Ryan, M.A.K., Hooper, T.I., Smith, T.C., Amoroso, P.J., Boyko, E.J., Gackstetter, G.D., Wells, T.S., & Bell, N.S. (2008). Alcohol use and alcohol-related problems before and after military combat deployment. *Journal of American Medical Association, 300(6)*, 663-675.

- Jain, A.K., & Sinha, A.K. (2005). General health in organizations: Relative relevance of emotional intelligence, trust, and organizational support. *International Journal of Stress Management, 12*, 257-273.
- Jensen, M. P., Romano, J. M., Turner, J. A., Good, A. B., & Wald, L. H. (1999). Patient beliefs predict patient functioning: Further support for a cognitive— behavioral model of chronic pain. *Pain, 81*, 94–104.
- Kinnunen, U., Feldt, T., & Mäkikangas, A. (2008). Testing the effort-reward imbalance model among Finnish managers: The role of perceived organizational support. *Journal of Occupational Health Psychology, 13*, 114-127.
- Koenen, K.C., Goodwin, R., Struening, E., Hellman, F., & Guardino, M. (2003). Posttraumatic stress disorder and treatment seeking in a national screening sample. *Journal of Traumatic Stress, 16 (1)*, 5-16.
- Kulka, R. A., Schlenger, W. E., Fairbank, J. A., Hough, R. L., Jordan, B. K., Marmar, C. R., et al. (1990). *Trauma and the Vietnam war generation: Report of the findings from the National Vietnam Veterans Readjustment Study*. New York: Brunner/Mazel.
- Kushner, M.G., & Sher, K.J. (1989). Fear of psychological treatment and its relation to mental health services avoidance. *Professional Psychology: Research and Practice, 20 (4)*, 251-257.
- Lawrie, S.M. (1999). Stigmatisation of psychiatric disorder. *Psychiatric Bulletin, 23(3)*, 129 – 131.

- Levinson, H. (1965). Reciprocation: The relationship between man and organization. *Administrative Science Quarterly*, 9, 370-390.
- Link, B.G. & Phelan, J.C. (2001). Conceptualizing stigma. *Annual Review of Sociology*, 27, 363-385.
- MacKinnon, D.P., Warsi, G., & Dwyer, J.H. (1995). A simulation study of mediated effect measures. *Multivariate Behavioral Research*, 30, 41-62.
- Maguen, S., Vogt, D.S., King, L.A., King, D.W., & Litz, B.T. (2006). Posttraumatic growth among gulf war I verterans: The predictive rold of deployment-related experiences and background characteristics. *Journal of Loss and Trauma*, 11, 373-388.
- Marin, A. (2002). Systemic treatment of CF members with PTSD. Ombudsman report. Retrieved November 17, 2004, from <http://www.ombudsman.forces.gc.ca/reports/special/PTSD>
- Mayville, E., & Penn, D.L. (1998). Changing societal attitudes toward persons with severe mental illness. *Cognitive and Behavioral Practice*, 5, 241-253.
- McFarlane, A. C., Atchinson, M., Rafalowicz, E., & Papay, P. (1994). Physical symptoms in post-traumatic stress disorder. *Journal of Psychosomatic Research*, 38, 715-726.
- McKibben, E.S., Britt, T.W., Castro, C.A., & Hoge, C. W. (in press). Receipt and rated adequacy of stress management training are related to PTSD and other outcomes among Operation Iraqi Freedom veterans. *Military Psychology*.

- Milliken, C.S., Auchterlonie, J.L., & Hoge, C.W. (2007). Longitudinal assessment of mental health problems among active and reserve component soldiers returning from the Iraq war. *Journal of the American Medical Association*, *298*(18), 2141-2148.
- Mojtabai, R. (2007). Americans' attitudes toward mental health treatment seeking: 1990-2003. *Psychiatric Services*, *58*, 642-651.
- Moorman, R. H., Blakely, G.L., & Niehoff, B.P. (1998). Does perceived organizational support mediate the relationship between procedural justice and organizational citizenship behavior? *Academy of Management Journal*, *41*, 351-357.
- Moss, K., & Johnsen, M.C. (1997). Employment discrimination and the ADA: A study of the administrative complaint process, *Psychiatric Rehabilitation Journal* *21*(2), 111-121.
- O'Driscoll, M.P., Poelmans, S., Spector, P.E., Kalliath, T., Allen, T.D., & Cooper, C.L. (2003). Family-responsive interventions, perceived organizational and supervisor support, work-family conflict, and psychological strain. *International Journal of Stress Management*, *10*, 326-344.
- Organ, D.W., Podsakoff, P.M., & MacKenzie, S.B. (2006). *Organizational citizenship behavior: Its nature, antecedents, and consequences*. Thousand Oaks: Sage.
- Parrish, B. (2008). *Military veterans PTSD reference manual*. Bryn Mawr, PA: Infinity Publishing.

- Renshaw, K.D., Rodrigues, C.S., & Jones, D.H. (2009). Combat exposure, psychological symptoms, and marital satisfaction in National guard soldiers who served in Operation Iraqi Freedom from 2005 to 2006. *Anxiety, Stress & Coping*, 22(1), 101-115.
- Rhoades, L., & Eisenberger, R. (2002). Perceived Organizational Support: A review of the literature. *Journal of Applied Psychology*, 87, 698-714.
- Schatzberg, A. (2004). *New horizons in the clinical treatment of depression*. Littleton, CO: Postgraduate Institute for Medicine.
- Schonfeld, W. H., Verboncoeur, C. J., Fifer, S. K., Lipschutz, R. C., Lubeck, D. P., & Buesching, D. P. (1997). The functioning and wellbeing of patients with unrecognized anxiety disorders and major depressive disorder. *Journal of Affective Disorders*, 43, 105-119.
- Seal, K.H., Bertenthal, D., Maguen, S., Gima, K., Chu, A., & Marmar, C.R. (2008). Getting beyond “don’t ask; don’t tell”: An evaluation of US veterans administration postdeployment mental health screening of veterans returning from Iraq and Afghanistan. *American Journal of Public Health*, 98(4), 714-720.
- Shore, L.M., & Shore, T.H. (1995). Perceived organizational support and organizational justice. In R. Cropanzano & K. Kacmar (Eds.), *Organizational politics, justice, and support*, pp. 148-164. Westport, CT: Quorum.
- Shore, L.M., & Tetrick, L.E. (1991). A construct validity study of the survey of perceived organizational support. *Journal of Applied Psychology*, 76, 637-643.

- Shore, L.M., & Wayne, S.J. (1993). Commitment and employee behavior: Comparison of affective commitment and continuance commitment with perceived organizational support. *Journal of Applied Psychology, 78*, 774-780.
- Silver, S.M., Rogers, S., & Russell, M. (2008). Eye movement desensitization and reprocessing (EMDR) in the treatment of war veterans. *Journal of Clinical Psychology: In Session, 64(8)*, 947-957.
- Sobel, M.E. (1990). Effect analysis and causation in linear structural equation modeling. *Psychometrika, 55*, 495-515.
- Spagnolo, A.B., Murphy, A.A., & Librera, L.A. (2008). Reducing stigma by meeting and learning from people with mental illness. *Psychiatric Rehabilitation Journal, 31(3)*, 186-193.
- Stewart, W. F., Ricci, J. A., Chee, E., Morganstein, D., & Lipton, R. (2003). Lost productivity time and cost due to common pain conditions in the US workforce. *Journal of the American Medical Association, 290*, 2443–2454.
- Stone-Romero, E. F., & Rosopa, P. J. (2008). The relative validity of inferences about mediation as a function of research design characteristics. *Organizational Research Methods, 11*, 326-352.
- U.S. Department of Health and Human Services. (1999). Mental Health: A report of the Surgeon General. Rockville, MD: U.S. Department of Health and Human Services, Substance Abuse and Mental Health Services Administration, Center for Mental Health Services, National Institutes of Health, National Institute for Mental Health.

- Van Knippenberg, D., van Dick, R., & Tavares, S. (2007). Social identity and social exchange: Identification, support, withdrawal from the job. *Journal of Applied Psychology, 37*, 457-477.
- Wahl, O.F. (1999). Mental health consumers' experience of stigma. *Schizophrenia Bulletin, 25*(3), 467 – 478.
- Weathers, F. W., Litz, B. T., Herman, D. S., Huska, J. A., & Keane, T. M. (1993). *The PTSD Checklist (PC:L): Reliability, validity, and diagnostic utility*. Paper presented at the annual meeting of the International Society for Traumatic Stress Studies, San Antonio.
- Youssef, J., & Deane, F.P. (2006). Factors influencing mental-health help-seeking in Arabic-speaking communities in Sydney, Australia. *Mental Health, Religion & Culture, 9*(1), 43-66.
- Zatzick, D. F., Marmar, C. R., Weiss, D. S., Metzler, T. J., Golding, J. M., Steward, A., et al. (1999). Posttraumatic stress disorder and functioning and quality of life outcomes in a nationally representative sample of male veterans. *American Journal of Psychiatry, 154*, 1690–1695.

FIGURES

Figure Captions

Figure 1. The general model showing the predicted relationships which will be examined both longitudinally and cross-sectionally.

Figure 2. Stigma (at Time 1) as a mediator of the relationship between POS (at Time 1) and treatment seeking (at Time 2)

Figure 3. Stigma (at Time 1) as a mediator of the relationship between POS (at Time 1) and PTSD (at Time 2)

Figure 4. Prediction of POS as a moderator of the relationship between symptoms of psychological problems and stigma.

Figure 1

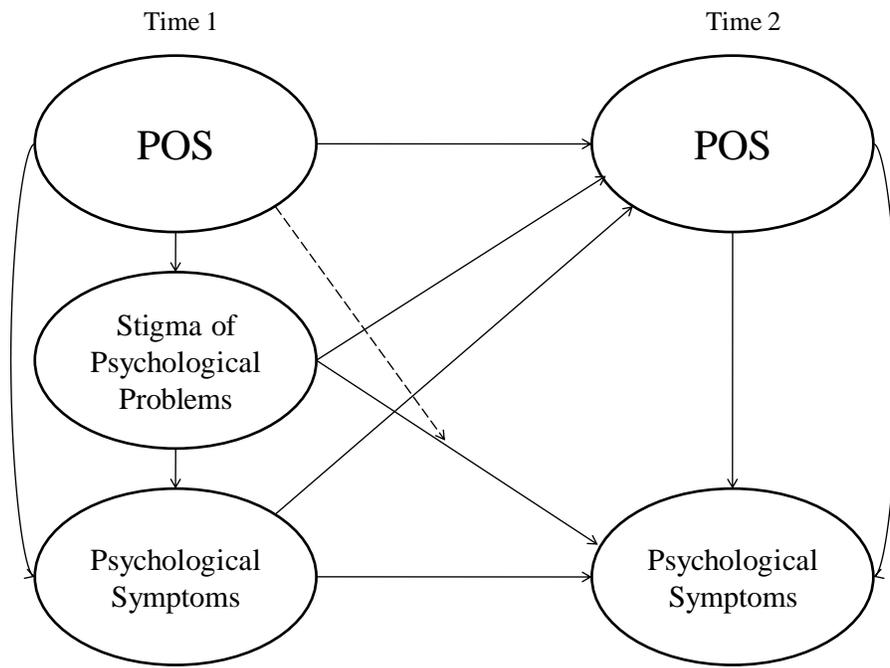


Figure 2

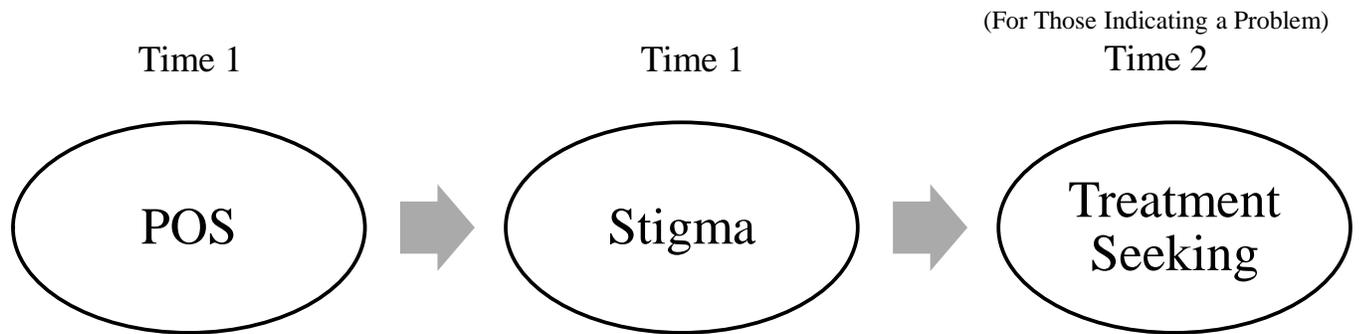


Figure 3

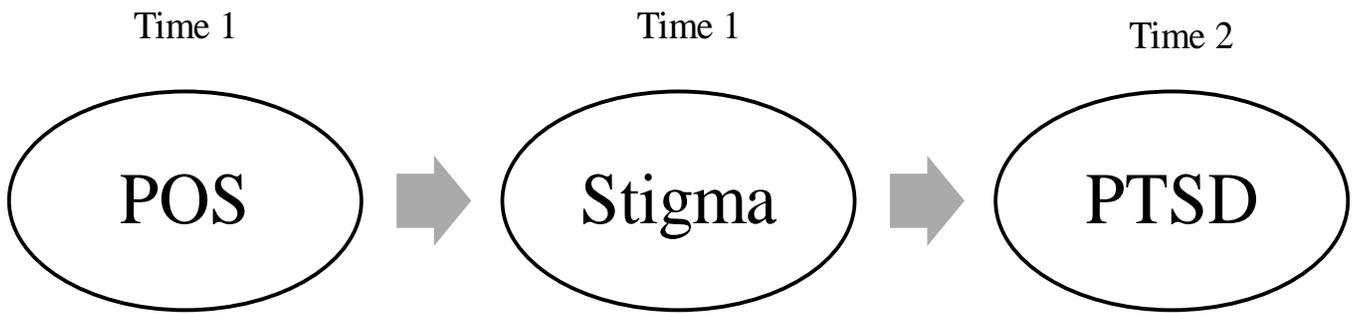


Figure 4

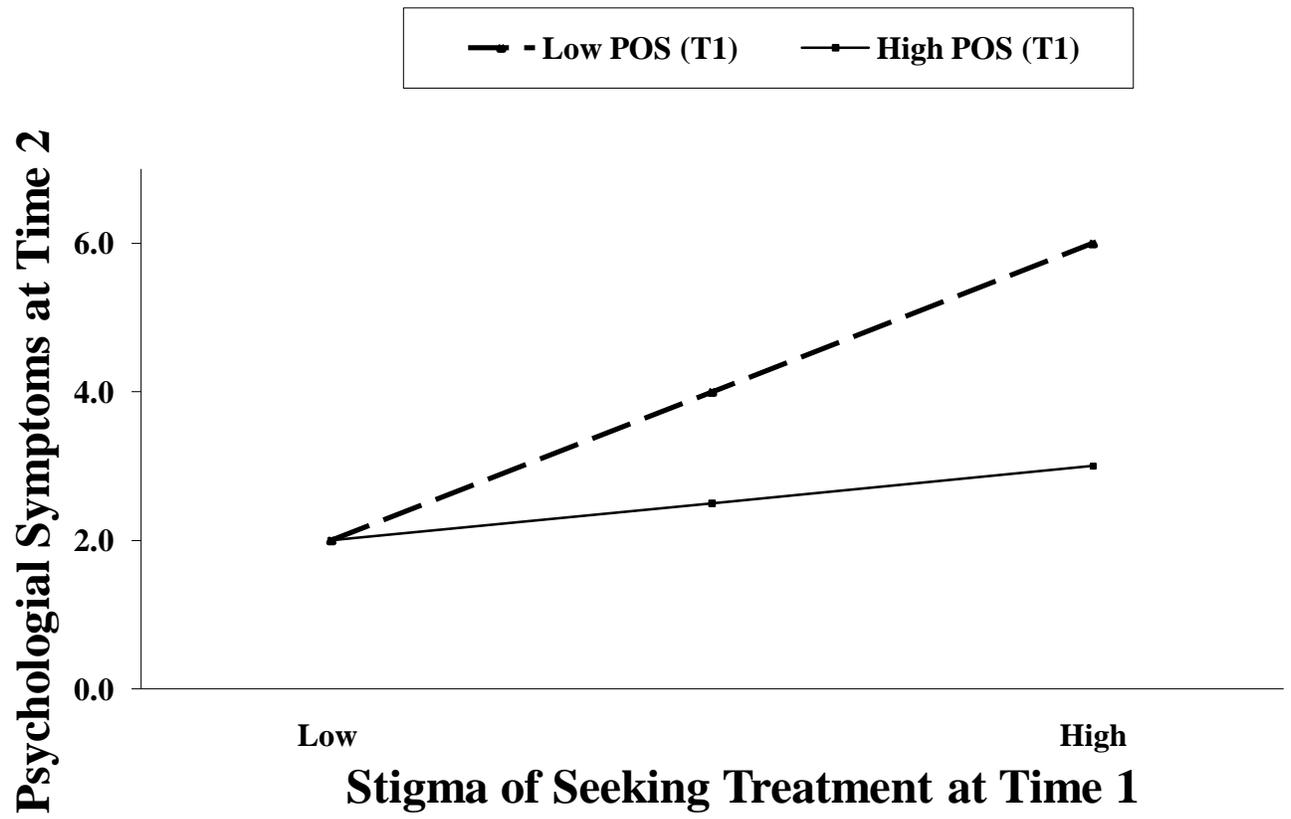


TABLE 1

Means, Standard Deviation and Correlations of Measured Variables

| Variable | M | SD | 1 | 2 | 3 | 4 | 5 |
|-------------|------|------|---------|---------|--------|--------|-------|
| 1 POS T1 | 4.11 | 1.23 | (.90) | | | | |
| 2 POS T2 | 3.84 | 1.32 | .57*** | (.91) | | | |
| 3 PTSD T1 | 1.83 | .79 | -.31*** | -.19*** | (.94) | | |
| 4 PTSD T2 | 1.87 | .87 | -.28*** | -.28*** | .69*** | (.95) | |
| 5 Stigma T1 | 2.93 | .92 | -.31*** | -.21*** | .24*** | .24*** | (.89) |

POS = perceived organizational support; PTSD = post traumatic stress disorder;

T1 = Time 1; T2 = Time 2.

Note. Internal consistency reliability estimates are plotted on the diagonal.

*** = $p < .001$ (two-tailed)

TABLE 2

Stigma at Time 1 as a Mediator of the Relationship between POS at Time 1 and
Treatment Seeking at Time 2 for Participants Reporting a Problem

| Model | Unstand. B | SE | DF | t-value | Wald | Exp (B) |
|------------|------------|-----|-----|----------|--------|---------|
| Model 1: | | | | | | |
| POS—Stigma | -.19 | .04 | 309 | -4.96*** | | |
| Model 2: | | | | | | |
| POS—TS | -.27 | .12 | 1 | | 4.94* | .76 |
| Model 3: | | | | | | |
| POS—TS | -.27 | .13 | 1 | | 4.60* | .76 |
| Stigma—TS | .01 | .18 | 1 | | .00 | 1.009 |
| Model 4: | | | | | | |
| PTSD—TS | .55 | .19 | 1 | | 8.34** | 1.73 |
| POS—TS | -.29 | .15 | 1 | | 3.65 | .75 |

* = $P < .05$; ** = $P < .01$, *** = $P < .001$

Model 1: $R^2 = .07$; Adjusted $R^2 = .07$

TABLE 3

Stigma at Time 1 as a Mediator of the Relationship between POS at Time 1 and PTSD
Symptomology at Time 2 for All Participants

| Model | Unstand. B | SE | DF | t-value | R ² | Adjusted R ² |
|-------------|------------|-----|-----|----------|----------------|-------------------------|
| Model 1: | | | | | .09 | .09 |
| POS—Stigma | .23 | .03 | 637 | -8.11*** | | |
| Model 2: | | | | | .08 | .08 |
| POS—PTSD | -.20 | .03 | 639 | -7.25*** | | |
| Model 3: | | | | | .10 | .10 |
| POS—PTSD | -.16 | .03 | 636 | -5.74*** | | |
| Stigma—PTSD | .16 | .04 | 636 | 4.28*** | | |

* = $P < .05$; ** = $P < .01$, *** = $P < .001$

TABLE 4

Stigma at Time 1 as a Mediator of the Relationship between POS at Time 1 and PTSD
Symptomology at Time 2 for Participants Reporting a Problem

| Model | Unstand. B | SE | DF | t-value | R ² | Adjusted R ² |
|-------------|------------|-----|-----|----------|----------------|-------------------------|
| Model 1: | | | | | .07 | .07 |
| POS—Stigma | -.19 | .04 | 309 | -4.96 | | |
| Model 2: | | | | | .06 | .06 |
| POS—PTSD | -.17 | .04 | 309 | -4.40*** | | |
| Model 3: | | | | | .08 | .07 |
| POS—PTSD | -.15 | .04 | 308 | -3.61*** | | |
| Stigma—PTSD | .14 | .06 | 308 | 2.44** | | |

* = $P < .05$; ** = $P < .01$, *** = $P < .001$

TABLE 5

Multiple Regression Analysis: Predicting the PTSD Symptomology at Time 2
from POS at Time 1 and Stigma at Time 1 (for all participants)

| Variable | Unstand. B | SE | DF | t-value | R ² | Adjusted R ² |
|--------------|------------|------|-----|----------|----------------|-------------------------|
| Model 1: | | | | | .10 | .10 |
| POS | -.16 | .03 | 636 | -5.74*** | | |
| Stigma | .16 | .04 | 636 | 5.28*** | | |
| Model 2: | | | | | .10 | .10 |
| POS | -.120 | .079 | 635 | -1.51 | | |
| Stigma | .215 | .111 | 635 | 1.94* | | |
| POS x Stigma | -.014 | .025 | 635 | -.54 | | |

* = $p < .05$; ** = $p < .01$; *** = $p < .001$

TABLE 6

Hierarchical Multiple Regression Analysis Predicting PTSD Symptomology at Time 2
 showing the interaction term (for those reporting a problem)

| Variable | Unstand. B | SE | DF | t-value | R ² | Adjusted R ² |
|--------------|------------|-----|-----|----------|----------------|-------------------------|
| Model 1: | | | | | .08 | .07 |
| POS T1 | -.15 | .04 | 308 | -3.61*** | | |
| Stigma T1 | .14 | .06 | 308 | 2.44*** | | |
| Model 2: | | | | | .08 | .07 |
| POS T1 | -.04 | .12 | 307 | -.36 | | |
| Stigma T1 | .27 | .16 | 307 | 1.72 | | |
| POS x Stigma | -.03 | .04 | 307 | -.89 | | |

* = $p < .05$; ** = $p < .01$; *** = $p < .001$