Mental Health Stigma and Military Spouses: The Influence of Marital Conflict and Career Consequences on Help-seeking Encouragement

by

Lori Hermosillo

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Graduate Supervisory Committee:

Nicole Roberts, Chair
Mary Burleson
Barbara Tinsley

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ABSTRACT

Approximately one-third of Iraq and Afghanistan veterans develop mental health problems, yet only 35-40% of those with mental disorders are seeking mental healthcare (Hoge, et al., 2004; Vogt, 2011). Military spouses may be an important resource for facilitating treatment seeking (Warner, et al., 2008), especially if service member mental health issues are impacting the marriage. Military spouses might be hesitant to encourage service member help-seeking, however, due to perceived threat of adverse military career consequences. For this study, 62 military wives completed an online survey. As part of the survey, participants were randomly assigned to one of four vignettes containing a description of a hypothetical military husband with mental health symptoms. Each vignette presented different combinations of marital conflict (high versus low) and service member concerns about adverse career consequences (high versus low). Wives rated on a five-point scale how likely they were to encourage the hypothetical military husband to seek help. It was hypothesized that spouses would be more willing to encourage help-seeking when concerns about adverse military career consequences were low and marital distress was high. No main effects or interaction effect were found for marriage and career. Perceived stigma about seeking mental health treatment in the military, psychological identification as a military spouse, and experience and familiarity with military mental healthcare policies failed to moderate the relationship between marital conflict, career concerns, and encouragement of help-seeking. Correlational analyses revealed that (1) greater experience with military mental healthcare (first- or secondhand), and (2) greater perceptions of stigma regarding seeking mental healthcare in the military each were associated with decreased perceptions of military

supportiveness of mental healthcare. Therefore, although the experimental manipulation in this study did not lead to differences in military spouses' encouragement of a hypothetical military service member to seek mental health services, other findings based on participants' actual experiences suggest that experiences with military mental healthcare may generate or reinforce negative perceptions of military mental healthcare. Altering actual experiences with military mental healthcare, in addition to perceptions of stigma, may be a useful area of intervention for military service members and spouses.

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Mental Health Stigma and Military Spouses: The Influence of Marital Conflict and Career Consequences on Help-seeking Encouragement

The mass killing of Afghan civilians committed by a U.S. soldier in 2012 and the continued high suicide rate among U.S. active and reserve troops have called into question why, despite programs designed to decrease stigma towards mental health use, men and women in uniform often do not seek help even, and perhaps especially, when it is needed (Abramson, 2012; Chapell, 2013). This is increasingly becoming a critical topic to address, as one-third of troops returning from Operation Iraqi Freedom (OIF) and Operation Enduring Freedom (OEF) develop major psychopathology or have interpersonal difficulties (Vogt, 2011). Despite increased provision of mental healthcare, only 35-40% of troops showing signs of mental health problems have utilized these services (Hoge, et al., 2004; Vogt, 2011). The low percentage of service use in the population for which it is being provided has led to interest in how perceived stigma and barriers to care impact help-seeking behavior in the military.

Public, Self, and Structural Stigma

One major focus of previous research has been on how perception of stigma influences a service member's decision to seek mental healthcare. Three types of mental health stigma that have been examined in the context of the military are public stigma (the stereotypes and beliefs pervasive in the general population), self-stigma (the internalization of the public's stereotypes and beliefs), and structural stigma (formal organizational policies that impact career opportunities due to mental health issues; Corrigan, Watson, and Ottati, 2003). The public stigma of mental illness involves

commonly held beliefs about mentally ill individuals, which include that they are dangerous, irresponsible, and naive. Self-stigma occurs when an individual incorporates these stereotypes into his or her own belief system. It has been hypothesized that this internalization leads to lower self-esteem, which in turn will cause lower help-seeking behaviors (Corrigan, et al., 2003). In line with this hypothesis, Held and Owens (2012) found that self-stigma fully mediated the relationship between perceived public stigma and attitudes towards help-seeking behaviors in service members, suggesting that service members may internalize public stigma, apply negative stereotypes to themselves related to mental health issues, and develop negative attitudes towards help-seeking. Structural stigma also plays a role in the military, as commanding officers who have access to an individual's mental health treatment records may declare that person unfit for duty and discharge them, or may limit his or her security clearances so that only certain military occupational specialties (MOS) are available to him or her (Lunasco, Goodwin, Ozanian, & Loflin, 2010). Several studies have found that service members report negative unit leadership perception (Britt, Klocko, Riviere, & Adler, 2011; Brown, Creel, Engel, Herrell, & Hoge, 2011; Greene-Shortridge, Britt, & Castro, 2007; Hoerster, et al., 2012; Kim, Momen, Strychacz, & Viirre, 2012; Warner, Appenzeller, Mullen, Warner, & Grieger, 2008;) and adverse career consequences (Britt, et al., 2008; Gould, et al., 2010; Stecker, Fortney, Hamilton, & Ajzen, 2007; Strom, et al., 2012; Visco, 2009; Warner, et al., 2008) as major barriers to seeking mental healthcare.

Military Culture: The Role of Leaders and Peers

With respect to aspects of military culture that perpetuate or mitigate against mental health stigma, two key influences are from leadership and peers.

Leadership perceptions. The relationship between service member perception of their leaders, in particular non-commissioned officers (NCOs) who directly supervise the vast majority of service members, and stigma towards mental health treatment has been examined. Service member reports of negative NCO behaviors (such as embarrassing subordinates or showing favoritism) were associated with higher levels of perceived barriers to care and stigma, whereas reports of positive NCO behavior were associated with lower levels of perceived barriers to care and stigma. The reported behavior of commissioned officers, who typically have less day to day contact with lower ranking troops, had less impact on perceived levels of stigma and barriers to care, suggesting that having regular contact with a supportive leader may be an important factor in helping service members overcome stigma and barriers to seeking mental healthcare (Britt, Wright, & Moore, 2012).

Similarly, during deployment, good leadership, such as providing positive feedback and remaining calm in stressful situations, is associated with better service member mental health, as well as lower perceptions of stigma and barriers to care. This relationship between leadership and perceptions of stigma and barriers during deployment was still present even when controlling for the presence of a mental health disorder, which has been shown to be related to higher levels of perceived stigma and barriers in both military and civilian populations (Wright, et al., 2009). The creation of a supportive environment by leadership may be an important factor for decreasing concerns

about negative leadership perception of help-seeking behavior. Service member perception of leadership supportiveness for mental health treatment may be especially important in help-seeking decisions, since leadership recommendations, including restricting duties or making a service member non-deployable, are often influential in determining how mental healthcare cases are handled.

An issue that can potentially interfere with leaders providing their subordinates support for help-seeking is leaders' beliefs about how their subordinates would view them if they themselves sought mental healthcare. In one study, officers reported fears about their leadership abilities being called into question and that such doubts could result in greater casualties among their subordinates in combat situations (Stecker, et al., 2007). Higher-ranking NCOs and officers also report being less interested in receiving mental healthcare than lower-ranking enlisted service members (Brown, et al., 2011). Leadership fears about negative perceptions and career impact, along with their own resistance to receiving mental healthcare, may make it less likely that leaders will be able to provide a supportive environment regarding mental healthcare for their subordinates. If leadership does not seek help when needed, it may reinforce negative beliefs about service members who seek help, as well as perceived risk of career consequences if one seeks mental healthcare.

Peer perceptions. Attitudes of unit members toward mental healthcare also influence how service members perceive help-seeking. The structure of military life creates both workplace and personal social bonds between unit members, making unit members important sources of social support and social influence. Unit member perception of mental health issues and treatment appears to be an important factor in

mental health stigma in the military. In a study of peace-keeping troops deployed to Bosnia, service members were asked to fill out a mental and physical health inventory. Some of the service members had deployed with their unit, while others had deployed alone. If a service member scored above the cutoff in one of the categories (i.e., physical health problems or mental health problems), the service member was asked to either stand in line to see a medical doctor or a psychologist. The service members filled out their inventories as a group, so when a service member was asked to stand in either line, the other service members present were aware of which professional they were waiting to see. Concerns about stigmatization resulting from taking the psychological inventory and standing in line to see the psychologist were highest in those whose units were present. Those who scored above the cutoff for the medical inventory expressed stigmatization concerns, but level of concern between the service members who were with their unit and those who were not was not significantly different. Similarly, those whose units were present felt less comfortable talking about their psychological inventories than those who were alone. No differences in comfort level were found for discussing the medical inventory (Britt, 2000). These results reveal the importance service members place on peer perceptions regarding help-seeking in general, as well as increased service member concern that help-seeking will be perceived more negatively by unit members if it is for mental health issues rather than medical issues. Several studies have found that perceived unit support is inversely related to level of perceived stigma toward mental healthcare (Pietrzak, Johnson, Goldstein, Malley, & Southwick, 2009; Warner, et al., 2008; Wright, et al., 2009). As with unit leadership, peer support for mental healthcare appears to be an important factor in shaping service member beliefs.

Military Cultural Values and Beliefs

The prevalence of negative attitudes and beliefs about seeking mental healthcare in the military may be connected to issues unique to the culture of the military. For instance, one belief commonly found among service members is that seeking help for psychological issues is a sign of weakness (Gould, et al., 2010; Pietrzak, et al., 2009; Sayer, et al., 2009; Strom, et al., 2007; Visco, 2009). Because military culture values mental toughness, adaptability, and self-sufficiency, this belief is not particularly surprising (Lorber & Garcia, 2010). Such characteristics are also in line with societal ideals of masculine behavior. The culture of masculinity is a large part of military culture, and the treatment of mental illness in the military has been influenced by cultural ideals of masculinity (Bryan & Morrow, 2011, Hinjosa, 2010). Historically, men were expected to always have control of themselves, particularly their emotions (Mosse, 2000). Being out of control of one's emotions was seen as a feminine trait, and men who lacked emotional control were considered unfit for military service. Soldiers presenting with mental health problems were often treated poorly or even abusively, and many times the military labeled their symptoms as a cowardly attempt to escape military service (Mosse, 2000). The concerns of modern day service members reflect these same issues, with service members expressing fears about being labeled as crazy and becoming non-deployable if they seek help (Stecker, et al., 2007). Service members also are more likely to report physical symptoms such as sleeping problems rather than psychological symptoms on post-deployment health assessments (Bliese, Wright, Adler, Thomas, & Hoge, 2007).

Similarly, an emphasis in the military is on developing and maintaining "upstanding character" (Dickstein, Vogt, Handa, & Litz, 2010). A widely held stereotype in larger society, however, is that any mental illness that does not appear to have a biological basis emanates from a character flaw, such as the person choosing to not control unacceptable behaviors (Dickstein, et al., 2010). Consequently, military ideals and societal notions of mental illness are at odds. Further, expectations that service members will be strong and self-reliant can increase service member isolation when experiencing mental health problems. The values and beliefs often promoted in the military also run counter to the idea of seeking treatment, such as traditional psychotherapy, which could be perceived as implying sickness and dependence (Bryan & Morrow, 2011; Lunasco, et al., 2010). This mismatch in values between military and mental health culture may lead service members to resist seeking help. In turn, silence around issues of mental health can contribute to individual service members' perceptions that experiencing a mental health problem in the military is abnormal, and that they are the only one struggling to cope with difficult or traumatic experiences (Lorber & Garcia, 2010). Creating a sense that one is not alone in coping with mental health issues is an important factor in decreasing negative attitudes towards help-seeking, reflected in findings that contact with other veterans and service members who have sought mental healthcare, and normalizing combat stress reactions, appear to be effective means for decreasing service member perceptions of stigma long-term (Dickstein, et al., 2010). The fact that service members, even those who have sought help, are expressing a feeling of isolation in dealing with mental health issues may be an indicator that helping service

members reconcile help-seeking behaviors with other military values such as self-reliance and emotional control is a need that has not been fully addressed.

Military Anti-Stigma Programs

In an effort to combat stigma among service members, programs have been created by the military to help service members cope with emotional responses to deployment experiences, recognize psychological issues, and decrease stigma toward seeking treatment. Anti-stigma and education programs, such as "Battlemind," reframe post-deployment difficulties as normal responses to combat experiences, and reframe treatment seeking as showing strength (Adler, Bliese, McGurk, Hoge, & Castro, 2011). Such programs appear to be a helpful in changing attitudes toward mental health treatment and are particularly effective for service members with high combat exposure (Adler et al., 2011). The impact on attitudes may or may not be long lasting, however, with some studies finding changes in attitudes persisting four months after return from deployment and others finding changes had disappeared six months later (Adler, et al., 2011; Castro, Adler, McGurk, & Bliese, 2012). The military also uses health assessments immediately upon return (Post Deployment Health Assessment or PDHA) and three to six months after return from deployment (Post Deployment Health Reassessment or PDHRA) to track service member health, including mental health issues. Several studies have identified problems with the screening system, such as lack of anonymity (Warner, et al., 2011) and potential service member minimization or omission about mental health issues, especially related to desire to cause harm to self or others (Hourani, 2012). Further, concerns that PDHA results indicating mental health issues will delay one's return home may lead to an increased likelihood of dishonest responses on mental health

items (Bliese, et al., 2007). In addition to problems with the screening tools themselves, a large percentage of reported military suicides are occurring among service members who have never deployed, reflecting a need among individuals who currently are not receiving any routine mental health assessments (Chapell, 2013; McIlvaine, 2011). Therefore, deployment-related mental health assessments do not appear to provide adequate mental healthcare resources for service members, and minimal mental health screening and assessment is available outside of the deployment cycle.

In sum, programs targeting negative attitudes towards mental health treatment and attempting to improve assessment methods have been met with limited success. This raises the question of which factors continue to act as barriers for service members needing mental healthcare, and which potentially could facilitate treatment-seeking. Concerns about adverse career consequences have been found consistently among service members, despite studies that show career consequences such as losing security clearance, being discharged, having restricted duties during deployment, or communication with commanding officers about mental health issues occur at fairly low rates when service members self-refer to mental healthcare and seek help earlier after symptom development (Christensen & Yaffe, 2012; Rowan & Campise, 2006). While it has been hypothesized that service members may need more education about how the risk of adverse career consequences are often limited when service members choose to seek mental healthcare on a self-referral basis soon after a mental health issue develops (rather than waiting until leadership recommends or requires treatment; Rowan & Campise, 2006), it may also be the case that service members still have concern that they will be among the small percentage who faces career consequences, and thus do not seek

treatment to avoid the possibility altogether. Service members may also be aware that there are circumstances under which military mental health providers are obligated to contact commanding officers even in cases of self-referral, such as substance abuse treatment, a mental health condition determined to interfere with the service member's ability to execute his or her duties, inpatient care, and if a mental health provider determines the mental health issue poses a risk to the military mission (Department of Defense, 2011). Service members in the militaries of other Western nations (Australia, the U.K., New Zealand, and Canada) have similar levels of concern about career harm resulting from seeking mental healthcare as U.S. service members (Gould, et al., 2010), further underscoring career impact as an important consideration for military service members when making treatment decisions, including choosing when and from whom to seek help.

Military Spouses and Mental Healthcare Stigma

Even service members who are motivated to seek help may be in a bind as to where to turn. Because of concerns about career consequences, service members experiencing psychological difficulties may not feel that they can turn to the military for support. At the same time, they oftentimes are not comfortable seeking help from civilian sources (even if they have the resources to do so), as they perceive civilian providers as unable to understand military-specific experiences, such as deployment and combat (Bryan & Morrow, 2011; Lunasco, et al., 2010). These factors can contribute to service member reluctance to seek help, as they feel they have no resources that understand both their military and psychological experiences.

Military spouses, who have both knowledge about the military and personal interest in promoting service members' well-being, are in a unique position to provide support for service members dealing with psychological difficulties. Additionally, spouses may be integral to helping service members overcome stigma and barriers to treatment, as service members report spousal encouragement as a major influence on their mental health treatment decisions (Hoge, et al., 2004; Warner, et al., 2008). Understanding the potential for spouses to be more involved in getting service members into treatment is a worthwhile focus of study, as other intervention efforts appear to have reduced perceptions of stigma, at least temporarily, and yet treatment rates remain low and service member mental health issues remain at record levels.

Unfortunately, military spouses report similar concerns about stigma toward mental healthcare. This may apply to encouraging service member help-seeking, as well as to spouses' concerns that if they were to seek mental healthcare for themselves it could have a damaging impact on the service member's career (Warner, Appenzeller, Warner, & Grieger, 2009). The importance spouses place on not harming service members' careers may be due to the fact that spouses similarly make sacrifices for the military lifestyle, such as frequent relocation and long periods of separation from the service member during deployment, and therefore they also have an investment in the success of the service member's career (Warner, et al., 2009). Spouses may also be invested in the success of service members' careers because of the financial benefits of military service, such as housing, education, and loans. These concerns seem to be more acute for spouses who have experienced more deployments and are older, likely reflecting the development of a greater sense of investment over time (Warner, et al., 2009).

Spouses also report that they face practical barriers to seeking care for themselves, such as getting time off of work or having childcare issues, which may be exacerbated during deployments when emotional and mental health issues often arise for military spouses (Mansfield, et al., 2010; Warner, et al., 2009). A study by Warner and colleagues (2009) found that spouses of deployed service members had increased levels of stress and symptoms of depression. Half of the spouses in the study met clinical criteria for depression, while an additional 25% endorsed some depressive symptoms. Overall, 10% of spouses endorsed symptoms that indicated severe depression. Despite the fact that most of the respondents reported symptoms of depression, only one-third reported seeking mental healthcare. Concerns about having time away from work and family, and adverse consequences for the service member, were among the top barriers to seeking help for these spouses (Warner, et al., 2009). In this sense, different aspects of military careers may create attitudinal and practical barriers to help-seeking in military spouses, with perhaps greater effect in times when spouses need help the most. This is troubling considering that marital or relationship problems often increase during the separation and stress of deployment, and relationship distress has been found to precede approximately half of service member suicides (Gottman, Gottman, & Atkins, 2011; McIlvaine, 2011). Ensuring that spouses are receiving the help that they need to deal with emotional difficulties may be a key way to help preserve spouse mental health and improve coping, especially in times of greater stress, such as during deployments. This in turn could help spouses support service members throughout deployments, the transition home post-deployment, and eventually back into civilian society when their

military career ends, potentially improving service member mental health outcomes and minimizing marital distress.

While several studies have examined the impact of stigma on help-seeking for service members (Britt, et al., 2008; Brown, et al., 2011; Gould, et al., 2010; Greene-Shortridge, et al., 2007; Hoerster, et al., 2012; Kim, et al. 2011; Momen, et al., 2012; Stecker, et al., 2007; Strom, et al., 2012; Visco, 2009; Warner, et al., 2008) and military spouses (Mansfield, et al., 2010; Warner, et al., 2009), no known studies have examined how military spouses view the stigma for seeking mental healthcare faced by service members, to what extent military spouses encourage service members to seek help if they have symptoms of a mental health problem, and what factors motivate or deter encouragement of service member help-seeking. Although spouses are more likely to utilize mental health services than service members (Eaton, et al., 2008), given that spouses report concerns about stigma from the military for seeking care for themselves, spouses may be even less likely to encourage service members to seek help for mental health issues, because they perceive service members will face the risk of at least as much if not more stigma and potential adverse career consequences for seeking mental healthcare. Understanding the relationship between spouses' perceptions of stigma towards mental healthcare for service members, especially concerns about detrimental consequences for military careers, and the encouragement of help-seeking behaviors may reveal crucial information for developing new approaches to overcoming resistance to mental healthcare treatment in service members.

OVERVIEW OF CURRENT STUDY

The current research examines military spouses' encouragement of service members showing signs of mental health problems (based on a vignette) to seek mental health care, given different combinations of marital conflict (high versus low) and service member concern about career consequences (high versus low). Spouses will be presented with one of four vignettes as part of a larger online survey. By comparing spouses' responses under different experimental conditions, it will be possible to ascertain whether career concerns decrease the likelihood that spouses will encourage service members to seek mental health care, even when the service member's behavior is causing disruption within the marriage. In addition, this study examines how perceptions of military-specific stigma about mental healthcare treatment, spouses' level of identification with being a military spouse, and spouses' experience with military mental healthcare impact the likelihood that career consequences will interfere with spousal encouragement of help-seeking behavior. Developing such an understanding is important for designing and targeting intervention strategies with military spouses.

HYPOTHESES

Based on previous research (Warner, et al., 2009; Eaton et al., 2008), it is hypothesized that:

H1: Increased service member concern about career consequences for seeking mental healthcare will result in decreased likelihood of spouses encouraging service members to seek help, especially when marital conflict is low.

H2: Spouses who perceive greater stigma towards help-seeking in the military, and perceive that their partners believe greater stigma exists, will be less likely to encourage service members to seek help, especially when service member concerns about career consequences are high.

H3: Higher levels of identification with being a military spouse will be related to decreased spousal encouragement for service members to seek help, especially when service member concerns about career consequences are high.

H4: Greater familiarity and experience with military mental healthcare policies will be related to increased spousal encouragement for service members to seek help, especially when service member concerns about career consequences are high.

In addition, relationships will be explored between marital and mental health variables and encouragement of service members (in a hypothetical vignette) to seek help. These exploratory variables include marital satisfaction, acceptability of violence in relationships, spouses' own mental health, service members' prior treatment seeking (as reported by spouses), and spouses' perceptions of service members' need for mental healthcare.

METHOD

Participants

Participants in the current study consisted of 62 female military spouses whose partner was anticipating deployment within six months (n = 7), was currently deployed (n = 17), or had returned home from deployment within the last five years (n = 38). 30 participants were excluded from data analysis because of ineligibility (N = 5), not responding to relevant questions (N = 19), or they were male (N = 6). All participants

were 18 years or older. Specific ages were only available for 29 participants. For these participants, mean age was 28.9 years (*SD* = 6.31). The majority of participants were Caucasian (79.0%). Participants included spouses of service members in the Army (61.3%), Marines (17.7%), Navy (9.7%), and Air Force (11.3%). Most participants (72.6%) had children. Mean length of marriage in years was 5.89 (*SD* = 4.72). Additional demographic information can be found in Table 1.

Participants were recruited through postings on websites for military spouses, social networking sites, flyers, and word of mouth. Participants completed the survey online by using a link provided in the flyers and online postings. Participation in the survey was voluntary and responses were anonymous. Compensation was either a $5 or $10 gift card to Starbucks (incentive was increased after the study began to increase enrollment). This study was approved by the Institutional Review Board (IRB) at Arizona State University.

Procedure

Participants were directed to a link that contained a cover letter with a description of and instructions for an online survey administered via surveymonkey.com, a secure website. At the end of the cover letter, to begin taking the survey participants were asked to click on links that corresponded to their spouse's current deployment status (i.e., anticipating deployment, currently deployed, or post-deployment). Participants were informed that the survey would take approximately 45 minutes to complete and that completion of the survey was considered their consent to participate. Because they would not be able to re-enter and complete the survey if they exited, participants were encouraged to allow adequate time to complete the survey. A contact phone number was

provided at the top of each survey page in case participants had questions or needed to stop and re-start for any reason. Participants were prompted to create a reproducible ID code by following a formula composed of letters and numbers based on personal information (e.g., first two letters of mother's name, two digit day of month of birthday). The reproducible IDs were created in case participants needed to have their survey reset or to link their data if they participated in follow up studies. Participants' reproducible IDs were not linked to their contact information in any way to preserve response anonymity.

Upon filling out the survey, participants were directed to a separate link to provide contact information in order to receive a Starbucks gift card, receive a copy of the findings, and/or to be contacted about follow-up studies. Participants were informed that their contact information would only be used for the purposes they selected and would not be linked to their survey responses in any way.

Measures

Survey instruments assessing the constructs of interest are described below and included in Appendix B. Measures not relevant to the present study also were collected.

Experimental Manipulation: Marital Conflict and Career Consequences

An experimental manipulation was designed to assess spouses' decisions to encourage service members to seek mental healthcare. Two potential influences were assessed: perceived career consequences and level of marital conflict. In addition to other survey instruments, participants were presented with a short vignette describing mental illness symptoms displayed by a hypothetical military service member after deployment (vignettes are included in Appendix B). Participants were randomly assigned to one of

four vignette conditions. Each vignette included low or high level of service member concern about career consequences for seeking treatment (slightly versus very concerned) and low or high level of marital conflict (increased verbal arguments versus physical violence.) Following the vignette, participants were asked to indicate how likely they would be to encourage the service member to seek treatment, using a 5 point scale (*not at all likely* to *very likely*).

Moderators

Perceptions of mental health stigma in the military. Hoge and colleagues (2004) developed a scale to measure perceptions of stigma and barriers for seeking mental healthcare commonly reported by military service members. This measure has been used in many studies of service members and mental healthcare stigma (Britt, et al., 2008; Britt, et al., 2012; Brown, et al., 2011; Kim, et al., 2011; Kim, Thomas, Wilk, Castro, & Hoge, 2010; Wright, et al., 2009). A revised version of the scale was created by Warner and colleagues (2008). The revised version had acceptable internal reliability (Cronbach's $\alpha = .942$; Warner et al., 2008). Although these scale items have been used extensively in military stigma research, additional psychometric properties of the scale have not been established.

The present study adapted Warner and colleagues' Perceived Barriers to Seeking Mental Health Services scale to assess (1) spouses' own perceptions of stigma about mental healthcare treatment-seeking in the military, and (2) spouses' ratings of service members' (i.e., their partner's) stigma perceptions (see Appendix B).

Four items from Warner and colleagues' (2008) scale that were related to career concerns were also used to assess spouse perceptions of the stigma and barriers that

service members face when seeking mental healthcare. Participants were asked to rate their level of agreement on a 5-point scale ranging from *strongly disagree* to *strongly agree*.

Because spouses were asked about their perceptions of the service member beliefs rather than the service member being asked directly, the wording of the prompts was adapted to reflect this. Two additional items (I might view my spouse differently and I would not approve of him seeking mental healthcare) were also added to the scale. Participants were asked to rate how much believed their partner agreed with statements about stigma (e.g., My spouse would be perceived as weak) and barriers to care (e.g., It would be difficult for my spouse to get time off work for appointments) on a 5-point scale ranging from *strongly disagree* to *strongly agree*.

A reliability analysis was conducted for the items for the spouse perceived stigma and barriers scale and the service member perceived stigma and barriers scale. Scale items from the spouse stigma scale (Cronbach's $\alpha \geq .927$) and the service member scale (Cronbach's $\alpha \geq .876$) showed adequate reliability and were averaged into composite scores.

Psychological identification as a military spouse. Since no known established measure for identification with being a military spouse exists, a revised version of the social affiliation subscale of the Scale of Ethnic Experience (SEE; Malcarne, Chavira, Fernandez, & Liu, 2006) was used to measure participant level of identification as a military spouse. References to ethnicity were replaced with references to military spouses (see Appendix B). The social affiliation scale of the SEE was designed to assess preferences and comfort level associated with socializing with individuals of the same the

ethnicity versus individuals of different ethnicities. This subscale has been validated with several ethnic groups and 6 week test-retest reliability coefficients ranged from .59 to .82 (Malcarne et al., 2006).

Sample items from the scale adapted for military spouses include "I find it easiest to trust people who are military spouses" and "I prefer my close friends to be military spouses." Participants rated their level of agreement with five statements on a 5-point scale from *strongly agree* to *strongly disagree*. In the present sample, the scale items showed adequate reliability (Cronbach's α = .902) and were averaged into one composite score.

Familiarity and experience with military mental health policies. Due to a lack of established measures, familiarity and experience with military mental health policies were assessed using questions created for this study. Participant knowledge of military policy was assessed by asking participants how familiar they are with military mental health policies in general (*not at all familiar* to *extremely familiar*). Participants were also asked to indicate whether they had any experience dealing with military mental healthcare and what kind of experience (*directly/first-hand; indirectly/second-hand*, *(e.g., hearing about family/friends' experiences)*; *no specific examples come to mind, but I do have some general impressions*, and *no knowledge, experience, or impressions*.) These measures are included in Appendix B.

Additional Variables of Interest

The below measures are also included in Appendix B

Relationship violence. Part of the experimental manipulation (described above) involved a scenario in which a service member was becoming violent toward his spouse. Since couples experiencing relationship violence often do not view the violence as problematic (Ehrensaft & Vivian, 1996), participant perceptions of acceptability of violence in relationships was measured using the question, "In general, how acceptable would you say hitting, throwing, pushing, shoving, biting, kicking, or similar behaviors are in a relationship?" This question was created for this study and included behaviors that have been defined as violence in past research (Straus, Hamby, Boney-McCoy, & Sugarman, 1996). Participants rated the level of acceptability on a 5-point scale (*not at all acceptable* to *extremely acceptable*.)

Perceptions of military supportiveness for mental healthcare. Two questions were created to assess participants' perceptions of military supportiveness for mental healthcare treatment. Participants were asked to rate how supportive they believe the military is towards service members utilizing mental healthcare (1) in theory (written policy) and (2) in practice (how the military actually handles the situation). Participants rated their level of agreement on a 5-point scale from *not at all supportive* to *extremely supportive*.

Spouse mental health. The Mental Health Inventory-5 (MHI-5) was used to assess participants' mental health. The MHI-5 was designed to be a brief assessment that would accurately gauge general mental health (Berwick, et al., 1991). Previous studies have found that the MHI-5 performs as well as other commonly used mental health

assessments, such as the GHQ-30 and SSI-28, in identifying mood and anxiety disorders (Berwick, et al., 1991) and the scale has adequate reliability (Cronbach's α = .74; Rumpf, Meyer, Hapke, & John, 2001). Participants were asked to rate how much time they had spent feeling certain ways (e.g., nervous, peaceful and calm) in the last month on a 6-point scale (1 = *none of the time* to 6 = *all of the time*). A reliability analysis conducted on scale items in the present sample showed adequate reliability (Cronbach's α = .79).

Service member mental health. Participants were asked three questions created for this survey to assess spouse perceptions of service member mental health. Wives were asked to indicate whether their husband had been diagnosed with a mental problem, if they believed their husband had a mental health issue but had not been diagnosed, or if their husband did not have a mental health issue as far as they knew. Wives were also asked whether their husband was in mental health treatment currently, in the past, or never. Finally, wives were asked to rate the extent they believed that their husband needed mental health treatment on a 5-point scale (*not at all* to *extremely*).

Marital satisfaction. The Locke-Wallace Marital Adjustment Scale was used to measure marital satisfaction (Locke & Wallace, 1959). Wives were asked to rate their level of marital happiness on a 7-point scale (*very unhappy* to *perfectly happy*) and the extent that they and their husbands agreed on various topics, such as finances and recreation, on a 6-point scale (*always disagree* to *always agree*). Participants were also asked questions about how they interact with their spouses and their perception about their marriage.

Demographics. Demographic information about participants was also collected, including years married, children, age, race/ethnicity, education, income, and gender. In

addition, participants were asked to provide information about their husbands (service members), including military branch, years in the military, rank, age, gender, race/ethnicity, and number of previous deployments.

Data Analysis

Due to the small sample size, the three deployment groups (anticipating deployment, currently deployed, and post-deployment) were collapsed into one group.

Hypothesis 1. The first hypothesis predicted that spouses would be less likely to encourage a service member in a vignette to seek help when his career concerns were high and the couple's marital conflict was relatively low. Multiple regression was used to test this hypothesis, with spouse encouragement of service member help-seeking as the outcome measure and level of marital conflict and career concerns as the predictors. An interaction term of marriage and career concerns was also entered into the regression analyses. Variables were centered prior to creating the interaction term, and all predictors were entered simultaneously.

Hypotheses 2-4. The second, third, and fourth hypotheses predicted that the effects of career concern on encouragement of help-seeking would be moderated, respectively, by perceptions of stigma for seeking mental health care in the military (assessed based on spouses' own ratings of perceived stigma, and spouses' ratings of service members' perceived stigma; H2), psychological identification as a military spouse; H3), and familiarity and experience with military mental healthcare policies (with familiarity and experience assessed separately; H4). A separate linear regression analysis was conducted for each respective moderator. The moderator was included as an additional predictor and the two-way and three-way interaction terms also were entered to

test for moderation. All variables were centered prior to creating interaction terms, and all terms were entered simultaneously. Of note, even though Hypotheses 2-4 focused on each moderator with respect to career concerns, the full model was tested so that the interaction of marital conflict and the moderator, and the three-way interaction of marital conflict, career concerns, and each moderator, could be explored.

Results

Descriptive Results and Correlations among Study Variables

Means and standard deviations for military spouses' encouragement of service member treatment-seeking based on a hypothetical vignette are listed by manipulation condition in Table 2. Table 3 presents means and standard deviations for other study variables of interest, which include (1) variables treated as moderators in the primary analyses: spouses' perceptions of stigma for seeking mental healthcare in the military; spouses' ratings of service member perceptions of stigma for seeking mental healthcare in the military; psychological identification as a military spouse; familiarity with military mental health policies; and experience with military mental healthcare; and (2) variables of interest that were not included in the primary analyses: perceptions of military supportiveness of mental healthcare; service member mental health (as rated by the spouse); service member treatment seeking; and spouse perceptions of service member need for mental healthcare.

Correlations among these variables, as well as with the primary dependent measure (extent of encouragement to seek mental health care for a military service member in a hypothetical scenario), are shown in Table 4.

Differences in Encouragement of Treatment-Seeking by Marital Conflict and Career Concerns (Hypothesis 1)

As noted above, means for encouragement of treatment-seeking are listed by manipulation condition in Table 2. No significant main effects of level of marital conflict or career concerns were found on encouragement of help-seeking. The interaction of marital conflict and career concerns also was not significant. Hypothesis 1 was therefore not supported, as different levels of marital conflict and career concerns did not lead to significantly different likelihood of military spouse encouragement of help-seeking (see Table 5).

Beliefs about Stigma as a Potential Moderator of Differences in Encouragement of Treatment-Seeking (Hypothesis 2)

Means and standard deviations of perceived stigma about seeking mental healthcare services in the military are reported in Table 6. Spouses' own stigma beliefs, and spouses' perceptions of their partner's stigma beliefs, are reported.

No significant main effects or interactions of marital conflict, career concerns, and perceptions of stigma about seeking mental healthcare in the military—either based on spouses' own stigma beliefs, or spouses' ratings of their partner's stigma beliefs—were found. These results indicate spouse perceptions of stigma do not moderate the relationship between (1) marital conflict and (2) career concerns with respect to encouraging help-seeking. Likelihood of encouraging help-seeking also did not differ significantly between the four conditions as a function of levels of stigma beliefs. Therefore, the prediction that increases in spouse and service member perception of

stigma would be associated with decreases in encouragement of help-seeking was not supported (see Table 6).

Psychological Identification as a Military Spouse as a Potential Moderator of Differences in Encouragement of Treatment-Seeking (Hypothesis 3)

No significant main effects or interactions of marital conflict, career concerns, and level of identification as a military spouse were found. The results indicate that identification as a military spouse does not moderate the relationship between (1) marital conflict or (2) career concerns and likelihood of encouraging help-seeking. The prediction that higher levels of identification as military spouse would be associated with lower likelihood of encouraging help-seeking also was not supported, as encouragement of help-seeking did not differ significantly between the four conditions as a function of level of identification as a military spouse (see Table 7).

Influence of Familiarity and Experience with Military Mental Healthcare Policies (Hypothesis 4)

No significant main effects or interactions of marriage concerns, career concerns, and familiarity or experience with military mental health policy were found. The hypothesis that greater familiarity and experience with military mental healthcare policies would be associated with greater encouragement of help-seeking also was not supported (see Table 8).

Additional Analyses

None of the marital or mental health variables explored were significantly related to the dependent measure of encouragement of treatment-seeking for the service member in a vignette (see Table 4). Notably, all but one of the participants rated violence in relationships as not at all acceptable, and the remaining participant rated violence in relationships as "slightly acceptable."

Discussion

This study examined whether different levels of marital conflict and career concerns influenced military spouses' likelihood of encouraging a hypothetical military service member to seek help for mental health problems, and whether this relationship was moderated by (1) perceptions of stigma of seeking mental health services in the military, (2) identification as a military spouse, and (3) familiarity and experience with military mental health policies. The primary hypothesis, which predicted that spouses would be more willing to encourage help-seeking when concerns about adverse military career consequences were low and marital distress was high, was not supported. Military spouses did not differ in their likelihood of encouraging help-seeking, regardless of the levels of marital conflict and career concerns presented in a vignette. The proposed moderation relationships also were not supported.

Why Career and Marriage Concerns Did Not Influence Encouragement to Seek Mental Healthcare

In addition to the study limitations discussed below, several possible explanations for the lack of support for the primary hypotheses are presented here.

Nature and strength of experimental manipulation. The present study focused on results of an experimental manipulation designed to test whether spouses (all wives) differed in their reported willingness to encourage a military spouse (husbands) to pursue mental health services, given a hypothetical scenario varying concerns about career impact and marital distress. Although this approach was advantageous in terms of experimental control, it is possible that the manipulation by itself was inadequate for fully assessing the impact of career and marriage concerns on military spouses' decisions about encouraging mental health treatment-seeking. Vignettes in the four experimental conditions were purposefully similar, with the exception of subtle variations in wording (e.g., "slightly concerned" versus "very concerned"). Consequently, they may have been inadequate to differentiate how a range of career and marital consequences might impact encouragement to seek treatment. It also is possible that the manipulation created too great of a demand characteristic, whereby participants were likely to encourage the spouse to seek help in all experimental conditions (evidenced by means of 4.3 or above on a 5-point scale). This may have been the case in particular for the "high marital conflict" scenario, in which there was violence between partners.

Further, it was expected that a hypothetical scenario would be advantageous because it perhaps would be less threatening than asking directly about one's partner, potentially leading to more honest responses. Of course, assessing encouragement of treatment-seeking in response to a hypothetical scenario about one's spouse likely differs from an assessment of how spouses anticipate behaving or actually behave with respect to encouraging their own spouse to seek treatment.

Follow up questions may have been needed to examine wives' expectations about the outcome of encouraging husbands to seek help (i.e., husbands in the hypothetical scenario, and/or their own husbands), and how those outcomes may have impacted spouses' decisions to encourage or not to encourage help-seeking. For example, wives could have been asked to rate the likelihood that their husband would respond to the encouragement by actually seeking help. Wives also could have been asked how likely they would be to continue to encourage their husbands to seek treatment if their husbands refused to go initially, or if they would continue such encouragement even if their husbands had in fact experienced an adverse career consequence as a result of seeking mental health treatment. Similarly, wives could have been asked how likely they would be to continue to encourage help if their husband refused treatment and marital issues deteriorated, improved, or stayed the same. Wives could have been asked whether they have actual experience with any of these situations and how they responded to those situations. These types of complex relationships may be important factors in determining how marriage and career concerns have an impact on military spouses over time, rather than asking about a one-time hypothetical event as was presented in the manipulation.

Service member well-being perhaps more important than career or marital concerns. With respect to the decision to encourage treatment-seeking, it is possible that wives actually are not influenced by level of marriage concerns or the possibility of adverse career consequences for service members. Rather, the primary concern for wives in this sample, who, again, provided high ratings of encouragement to seek treatment, may have been their husbands' well-being, and not the marriage or career itself. Increased marital concerns, whether minor or major, may be viewed by wives as an issue

that would benefit from service member treatment, thus making their primary focus enrolling their husbands in treatment, irrespective of the level of marital issues occurring. Wives may have concerns about career consequences resulting from the service member seeking help, but they may see the potential benefit of treatment as greater than the potential cost. Similarly, with respect to wives' own help-seeking, they report concerns that seeking mental health services might negatively impact their husbands' careers (Warner, et al., 2009), yet they still pursue mental health services (Eaton, et al., 2008). Military wives may also view it as their responsibility to encourage their husbands to seek treatment, precisely because they know their husbands are resistant due to career concerns. As discussed below, this may be particularly true for this sample of military wives, who were motivated to fill out a survey of military couples and health.

Potential lack of psychological identification as a military spouse. Level of identification with being a military spouse among participants was generally low (a mean of 2.6 on a 1 to 5 scale). Because these wives on average did not identify strongly with their role as a military spouse, they may have been less likely to put their husbands' military career before their own well-being, their safety, and the well-being of their husbands. They may also have been less likely to endorse the values and beliefs in military culture that can serve to perpetuate stigma and resistance to treatment seeking. Spouses with higher levels of identification with their role as a military spouse may tend to be more focused on service members' careers, even to the point of risking their marriage, mental health, and safety rather than encouraging activities that could potentially harm the service member's career, such as seeking mental healthcare.

Potential selection bias regarding mental health stigma concerns and experience with military mental health policies. There may have been an overrepresentation in this sample of military spouses who were relatively less concerned about mental health stigma (evidenced by their willingness to participate). Military wives with greater concerns about stigma and career consequences related to mental health issues and treatment perhaps elected not to participate in the survey. This potentially could have resulted in less variability in the sample and less influence of the manipulation or moderating effects of stigma beliefs. Although the mean scores for perceptions of stigma for military service members seeking mental healthcare were higher in this study (a mean of 2.8 on an 1-5 scale) than what was found in service members by Warner and colleagues (2008; a mean of 2.7), it could be expected that spouses (assessed here) would have lower stigma ratings than the service members themselves (assessed in Warner and colleagues' study). In addition, 84.8% of the service members in Warner's study reported receiving "Battlemind" training, which may have led to decreases in endorsement of stigma and barriers in this group. Participants in the present study were not asked whether they or their husbands had received anti-stigma training. It is possible that spouses in the present sample received similar training and yet still had greater perceptions of stigma.

Military spouses in the present sample also had a relatively low level of familiarity and experience with military policies regarding mental health. Of the present sample, 45.2% reported having no knowledge, experience, or general impressions of military mental healthcare policy, and 27.4% reported having general impressions but no specific examples. This means that nearly three-fourths of participants' perceptions of mental healthcare in the military were based on something other than first- or secondhand

experiences. Experience with military policies was not a significant moderator in the present study (although trend-level effects were present). Nevertheless, experience with military mental healthcare may be particularly relevant with respect to implications of this work, because higher levels of experience with military mental healthcare were associated with lower ratings of perceived military supportiveness for help-seeking. In other words, the more experience military spouses reported having with military mental healthcare, the less support they perceived. Perceptions of less support in turn were associated with higher endorsement of perceived stigma and barriers to care. Although causality cannot be inferred, this may suggest that experience leads to greater knowledge about how the military handles mental health issues with service members and in turn leads to increased perception of stigma and barriers to seeking mental healthcare in the military. It also may be the case that those who pursue military mental healthcare services are more ill than those who do not, which itself may contribute to greater real and/or perceived stigma and barriers. Given that 70% of wives with higher levels of experience with military mental healthcare reported having only second-hand experience through friends or family, simply hearing about negative experiences with military mental healthcare may be sufficient for increasing perceptions of stigma and decreasing perceptions of military supportiveness.

Limitations

In addition to the explanations described above, this study had several methodological limitations that may have influenced the results. The sample size (N = 62) was small, which likely resulted in insufficient power to detect effects that may be present in the military spouse population. Clearly a much larger sample size would be

required to draw more definitive conclusions about the relationships among the variables of interest, particularly given the number of variables being tested.

As discussed earlier, self-selection bias may have affected the results, as spouses who are more concerned about mental healthcare stigma may have been less likely to participate in the study. The deployment status eligibility requirements (which originally were implemented to allow for comparisons in mental health attitudes pre- and post-deployment) also may have disqualified many participants who would have otherwise participated in the study. Many Navy and Air Force service members do not deploy as often as Army and Marines service members, and this was reflected in the smaller number of Navy and Air Force wives who participated in the study.

Because the study of military spouses and the influence of mental health stigma is a relatively new area, several of the measures used in this study were created to assess various constructs hypothesized to be related to military spouse perceptions of stigma. Some of these instruments may not have accurately assessed the constructs of interest. For example, level of identification as a military spouse may not be related to how invested a spouse is in the service member's career or whether they agree with the values and beliefs present in military culture. Developing a better understanding of the constructs involved in this area of study is needed in order to create more precise measures.

This sample only collected measures from military wives, and therefore service member attitudes were measured by asking the wives what they believed their husbands' perceptions about mental health stigma were. Such perceptions may or may not be accurate. Responses of service members to stigma related questions may have yielded

important information for understanding how mental healthcare stigma impacts military couples, such as whether service members believe that their spouse would not approve of or would see them differently if they sought mental health treatment. Finally, in addition to studying wives of male service members, studying attitudes among civilian husbands or dual-military couples would be important future areas of study.

Implications

Many studies have focused on how concerns about adverse career consequences act as a barrier to service member and military spouse help-seeking. No known studies, however, have examined how concerns about adverse career consequences influence whether military spouses will encourage service member help-seeking. It was hypothesized that career concerns would decrease spouse encouragement of help-seeking, but that perhaps severe marriage concerns may overcome the influence of career concerns and lead to increased encouragement of help-seeking. Paradoxically, however, it may be the case that minor marriage concerns (which were not presented in the scenarios for the present study) lead to more encouragement of help-seeking compared to more severe marriage concerns, because such concerns are less threatening when it comes to seeing a mental health counselor. Of note, exceptions to the confidentiality of military records can be made for many reasons, including if a commanding officer requests them (Department of Defense, 2011). In addition, in the vignette, the service member's mental health issue developed shortly after returning from deployment, a time when military couples often experience difficulties readjusting to one another and minor conflicts are expected to arise. Because this is viewed as a relatively "normal" experience for military couples, help-seeking for minor marriage concerns after a deployment may not be as

stigmatized as seeking mental health treatment for other issues, such as escalating arguments and/or violence, and consequently wives may perceive the risk of adverse career consequences in the case of minor conflicts to be low. Conversely, domestic violence alone can result in adverse career and social consequences for service members. Help-seeking in these situations is in fact high risk for one's military career, regardless of stigma beliefs and career concerns in general. Examination of moderate levels of marriage concerns, which may be more readily categorized as normal issues or as less stigmatizing issues, may add additional insight into the nature of the interaction between perceptions of career concerns and marriage concerns, as well as how other factors such as perception of stigma or identification with being a military spouse may influence whether spouses decide to encourage service member help-seeking.

Both from a theoretical perspective and in terms of the potential for intervention, experiences with military mental healthcare may be a key construct to consider. Because more experience with mental healthcare in the military is associated with decreased perceptions of military support, which is in turn associated with greater perceptions of stigma and barriers, having more experience may result in more negative outcomes long term for military couples. Furthermore, decreased perceptions of military support were associated with worse spouse mental health and lower marital satisfaction. It could be argued, however, that having increased knowledge about how mental health cases are handled in the military may give military couples the opportunity to discuss mutually acceptable ways to deal with service member mental health issues that take into account concerns about stigma and adverse career consequences. For instance, military wives could begin discussions with their husbands prior to deployment about how they should

proceed if the husband developed a mental health issue after returning home. Options might include seeking help from sources outside of the military, or not re-enlisting once the husband's current term is complete. Wives could also encourage pre-emptive care for dealing with the stresses of military life, so that service members will already have an established relationship with a mental healthcare provider should a mental health issue arise. In response to a prompt for additional comments at the end of the study, one of the participants stated that she and her husband regularly attended marriage counseling before and after deployments as a mutually agreed upon way to deal with psychological and relationship issues. Marriage counseling may be one way for wives to ensure that their husbands receive psychological support while simultaneously minimizing its stigmatization.

Without knowledge about military mental health policies, military wives may not perceive any need to discuss these issues with their husbands, because they believe that the military will provide and support the mental health treatment of service members. If the service member develops a mental health issue, the couple may experience added stress when they do not receive the support they need, if the service member suffers adverse consequences for seeking help, or if the service member refuses to seek help because of perceived stigma.

Because spouses are influential in service member treatment decisions (Warner, et al., 2008), military spouses need to be informed about issues that may impact service member help-seeking in order to have a sensitive and realistic discussion about dealing with mental health issues. Discussing the impact of stigma and making plans for mental illness that take stigma and adverse career consequences into consideration may help

facilitate earlier treatment seeking in service members and minimize distress experienced by military couples as a result of mental health issues.

Future Research

Further research is needed to examine how military spouses' attitudes about mental healthcare in the military and their motivation to encourage service members to seek help may change over time and what types of experience or information cause these changes. Understanding how the threat of different types of career consequences for seeking mental healthcare (e.g., restricted duties versus being discharged) may influence whether spouses will persist in encouraging help-seeking or look for alternative means to deal with the situation, such as discouraging re-enlistment and coping with the situation in the meantime. Examining the choices spouses and military couples make with respect to mental health, and when and how they make such choices, may reveal a more complex nature of the relationship between career concerns and help-seeking encouragement. Finally, examining service member reported attitudes and beliefs about help-seeking along with their reactions to spouse encouragement of help-seeking may reveal characteristics that make some service members more responsive to encouragement from their spouses.

Conclusion

Low rates of mental health service utilization by military service members has been linked to negative outcomes for service members, including relationship distress and suicide. Understanding how stigma for seeking treatment in the military impacts service member help-seeking behaviors is crucial for improving outcomes for military families. Previous studies have found that military spouses have influence over service members'

decisions about seeking mental healthcare. Understanding how military spouses' attitudes towards mental healthcare and their decisions to encourage service members to seek help are shaped by stigma and barriers to care may be crucial for developing interventions that increase service member utilization of mental healthcare services.

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TABLES

Table 1.

Sample Demographics

Spouse Ethnicity	***N***	**%**
Caucasian	49	79.0
Hispanic/Latino	10	16.1
Asian American/Pacific Islander	2	3.2
Native American/Alaska Native	1	1.6
Spouse Education Level	***N***	**%**
High school or GED	11	17.7
Associates degree or some college	29	46.8
Bachelor's degree	13	21.0
Master's degree	8	12.9
Doctorate/Professional degree	1	1.6
Annual Income	***N***	**%**
< $10,000	1	1.6
$10,000-$29,999	15	24.2
$30,000-$49,999	18	29.0
$50,000-$79,999	17	27.4
$80,000-$149,999	10	16.1
$150,000 or more	1	1.6
Service Member Rank[a]	***N***	**%**
E1-E3	5	8.1
E4-E6	36	58.1
E7-E9	4	6.5
O1-O2	3	4.8
O3-O6	12	19.4
W1 and over	2	3.2
	M	***SD***
Length of marriage (years)	5.89	4.72
Marital satisfaction	115.0	32.60
Spouse mental health (per Mental Health Inventory)	22.13	5.08
Service member age	30.0	6.49
Years in the military	8.77	5.83
Number of previous deployments	1.94	2.36
Service Member Ethnicity		
Caucasian	51	82.3
Hispanic/Latino	6	9.7
Native American/Alaska Native	3	4.8
Asian American/Pacific Islander	2	3.2

[a]E1-E9 are junior enlisted members and non-commissioned officers; O1-W1 are commissioned officers and warrant officers. E1 is lowest rank, W1 and above is highest rank.

Table 2.

Means (SD) for Reported Encouragement of Help-Seeking by Manipulation Condition (N=62)

	Marital Conflict	
Career Concerns	Low ("frequent arguments")	High ("violence")
Low ("slightly concerned")	4.32 (0.82)	4.59 (0.51)
High ("very concerned")	4.58 (0.67)	4.47 (1.09)

Table 3.

Means and Standard Deviations for Moderator Variables and Variables of Interest

	Mean	*SD*
Spouse perceptions of service member beliefs (1-5 scale)	2.78	.80
Spouse beliefs (1-5 scale)	3.15	.98
Psychological Identification as a Military Spouse (1-5 scale)	2.59	1.01
Familiarity with Military Mental Health Policy (1-5 scale)	2.90	1.22
Experience with Military Mental Healthcare (1-4 scale)	1.90	.987
Perceived Military Supportiveness for Mental Healthcare (1-5 scale)	2.81	1.02
Spouse ratings of service member mental health (based on spouse perceptions) (0-4 scale)$_a$	3.45	1.15
Spouse reported prior/current service member treatment seeking (0-3 scale)$_b$	1.10	.473
Spouse perception of service member need for treatment (1-5 scale)	1.65	1.23

Note. *Ns* range from 59-62.
$_a$Higher scores are associated with better mental health.
$_b$Higher scores are associated with more treatment seeking.

Table 4. *Pearson Correlations among Study Variables*

	Spouse stigma beliefs	Spouse ratings of service member stigma beliefs	Psychological identification as a military spouse	Familiarity with military mental health policies	Experience with military mental health policies	Perceived military supportiveness for mental healthcare	Spouse mental health (based on Mental Health Inventory)	Spouse ratings of service member mental health (based on spouse perceptions)	Spouse report of service member's prior/current treatment seeking	Spouse perceptions of service member need for mental healthcare	Marital satisfaction
Spouse ratings of service member stigma beliefs	-.720***	-									
Psychological identification as a military spouse	.102	.059	-								
Familiarity with military mental health policies	-.069	-.011	-.134	-							
Experience with military mental health policies	.134	.159	-.080	.386**	-						
Perceived military supportiveness for mental healthcare	-.502***	-.366**	.077	.129	-.377**	-					
Spouse mental health (based on Mental Health Inventory)	-.127	-.162	-.016	.031	-.115	.302*	-				
Spouse ratings of service member mental health (based on spouse perceptions)	.094	-.013	.044	-.119	-.162	.145	.216	-			
Spouse report of service member's prior/current treatment seeking	-.008	-.007	-.094	.228	.125	-.022	-.352**	-.297*	-		
Spouse perceptions of service member need for mental healthcare	-.100	.095	-.189	.025	.342**	-.192	-.381**	-.540***	.465***	-	
Marital satisfaction	-.229	-.318*	.000	.215	-.173	.444**	.549***	.233	-.411**	-.564***	-
Encouragement of mental health help-seeking	-.196	-.118	.056	-.020	-.068	.197	.018	.071	.011	.025	.147

Note. *N*s range from 54 to 62.
*$p < .05$. **$p < .01$. ***$p < .001$.
"Stigma beliefs" refer to beliefs that seeking mental healthcare is stigmatized in the military. "Encouragement" refers to spouses' encouragement of mental help-seeking in response to a hypothetical vignette.

Table 5.

Results of Regression Predicting Encouragement of Help-Seeking (N = 62)

Predictor	*B*	*SE B*	*β*	*t*	Sig. (*p*)
Marriage concerns	.272	.265	.175	1.03	.308
Career concerns	.268	.293	.170	.91	.365
Marital conflict x career concerns	-.427	.410	-.230	-1.04	.301

Note. $R^2 = .023$

Table 6.

Results of Regression Predicting Encouragement of Help-Seeking Moderated by Stigma Perceptions

Predictor	*B*	*SE B*	*β*	*t*	Sig. (*p*)
Spouse Stigma Beliefs about Seeking Mental Healthcare in the Military					
Marital conflict	.349	.274	.224	1.275	.208
Career concerns	.280	.295	.178	.949	.347
Spouse perceived stigma	-.169	.190	.211	-.887	.379
Marital conflict x Career concerns	-.564	.420	.304	-1.344	.185
Marital conflict x Spouse perceived stigma x	-.052	.278	.049	-.188	.852
Career concerns x Spouse perceived stigma	.147	.344	.118	.429	.670
Marital conflict x Career concerns x Spouse perceived stigma	-.161	.448	.106	-.360	.720
Spouse Ratings of Service Member Stigma Beliefs about Seeking Mental Healthcare in the Military					
Marital conflict	.300	.283	.191	1.061	.294
Career concerns	.265	.327	.165	.809	.422
Spouse ratings of service member perceived stigma	-.310	.230	.314	-1.347	.184
Marital conflict x Career concerns	-.446	.463	.235	-.964	.339
Marital conflict x Spouse ratings of service member perceived stigma	.267	.334	.189	.799	.428
Career concerns x Spouse ratings of service member perceived stigma	.346	.370	.228	.935	.354
Marital conflict x Career concerns x Spouse ratings of service member perceived stigma	-.419	.360	.267	-1.164	.250

Note. Spouse perceptions $R^2 = .079$, $N = 61$; Spouse perceptions of service member beliefs $R^2 = .071$, $N = 58$

Table 7.

Results of Regression Predicting Encouragement of Help-Seeking Moderated by Psychological Identification as a Military Spouse ($N = 60$)

Predictor	*B*	*SE B*	*β*	*t*	Sig. (*p*)
Marital conflict	.309	.271	.198	1.139	.260
Career concerns	.305	.299	.192	1.020	.312
Identification as military spouse	.292	.192	.374	1.521	.134
Marital conflict x Career concerns	.425	.423	.223	-1.006	.319
Marital conflict x Military spouse identification	.364	.296	.341	-1.229	.224
Career concerns x Military spouse identification	.436	.317	.392	-1.377	.174
Marital conflict x Career concerns x Military spouse identification	.531	.429	.388	1.236	.222

Note. $R^2 = .071$

Table 8.

Results of Regression Predicting Encouragement of Help-Seeking Moderated by Experience and Familiarity with Military Mental Healthcare ($N = 61$)

Predictor	*B*	*SE B*	*β*	*t*	Sig. (*p*)
Experience with Military Mental Healthcare					
Marital conflict	.238	.271	.153	.878	.384
Career concerns	.291	.296	.185	.982	.331
Experience with military mental healthcare	.077	.154	.097	.501	.618
Marital conflict x Career concerns	-.360	.417	-.194	-.863	.392
Marital conflict x Experience with military mental healthcare	-.480	.306	-.336	-1.568	.123
Career concerns x Experience with military mental healthcare	-.264	.270	-.204	-.980	.331
Marital conflict x Career concerns x Experience with military mental healthcare	.861	.463	.427	1.860	.068

Predictor	*B*	*SE B*	*β*	*t*	Sig. (*p*)
Familiarity with Military Mental Health Policy					
Marital conflict	.267	.159	.926	.359	.267
Career concerns	.297	.137	.724	.472	.297
Familiarity with Military mental health policy	.166	.355	1.372	.176	.166
Marital conflict x Career concerns	.416	-.176	-.786	.435	.416
Marital conflict x Familiarity with military mental health policy	.232	-.247	-.979	.332	.232
Career concerns x Familiarity with military mental health policy	.235	-.373	1.465	.149	.235
Familiarity with military mental health policy x Marital conflict x Career concerns	.338	.110	.442	.660	.338

Note. Experience $R^2 = .088$, Familiarity $R^2 = .084$.

APPENDIX A

INSTITUTIONAL REVIEW BOARD (IRB) APPROVAL

ASU Knowledge Enterprise Development

Office of Research Integrity and Assurance

To:	Nicole Roberts FAB
From:	Mark Roosa, Chair Soc Beh IRB
Date:	07/17/2012
Committee Action:	**Exemption Granted**
IRB Action Date:	07/17/2012
IRB Protocol #:	1206007952
Study Title:	Military Spouses Study

The above-referenced protocol is considered exempt after review by the Institutional Review Board pursuant to Federal regulations, 45 CFR Part 46.101(b)(2) .

This part of the federal regulations requires that the information be recorded by investigators in such a manner that subjects cannot be identified, directly or through identifiers linked to the subjects. It is necessary that the information obtained not be such that if disclosed outside the research, it could reasonably place the subjects at risk of criminal or civil liability, or be damaging to the subjects' financial standing, employability, or reputation.

You should retain a copy of this letter for your records.

APPENDIX B

STUDY MEASURES

Vignettes for Experimental Manipulation

INSTRUCTIONS: Below is a HYPOTHETICAL SCENARIO about you and your spouse. Please read the scenario and indicate on the rating scale provided how you believe you would respond if you and your spouse were i the situation described.

Your spouse has recently returned from deployment. He is having nightmares about traumatic experiences from the deployment and avoids anything that reminds him of these experiences. He angers easily and verbal arguments are occurring more frequently between you and your spouse. Your spouse does not want to seek help because he is slightly concerned that getting treatment for a mental health issue might negatively impact his military career.

Based on this information, how likely would you be to encourage your spouse to seek mental healthcare?

Respondents: 25%

Your spouse has recently returned from deployment. He is having nightmares about traumatic experiences from the deployment and avoids anything that reminds him of these experiences. He angers easily and often acts out violently towards you. Your spouse does not want to seek help because he is slightly concerned that getting treatment for a mental health issue might negatively impact his military career.

Based on this information, how likely would you be to encourage your spouse to seek mental healthcare?

Respondents: 25%

Your spouse has recently returned from deployment. He is having nightmares about traumatic experiences from the deployment and avoids anything that reminds him of these experiences. He angers easily and verbal arguments are occurring more frequently between you and your spouse. Your spouse does not want to seek help because he is very concerned that getting treatment for a mental health issue will negatively impact his military career.

Based on this information, how likely would you be to encourage your spouse to seek mental healthcare?

Respondents: 25%

Your spouse has recently returned from deployment. He is having nightmares about traumatic experiences from the deployment and avoids anything that reminds him of these experiences. He angers easily and often acts out violently towards you. Your spouse does not want to seek help because he is very concerned that getting treatment for a mental health issue will negatively impact his military career.

Based on this information, how likely would you be to encourage your spouse to seek mental healthcare?

Respondents: 25%

	Not at all likely	Slightly likely	Moderately likely	Very likely	Extremely likely
Please rate:	◯	◯	◯	◯	◯

Adapted Perceived Barriers to Seeking Mental Health Services Scale

Spouse Perceptions of Stigma for Service Members

Please indicate to what extent YOU agree with the following statements.

If your spouse were to seek mental healthcare:

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
It would harm my spouse's career.	◯	◯	◯	◯	◯
Members of my spouse's unit might view him/her differently.	◯	◯	◯	◯	◯
My spouse's unit leadership might have less confidence in him/her.	◯	◯	◯	◯	◯
Evidence of mental healthcare in my spouse's medical records could harm his/her career.	◯	◯	◯	◯	◯

Spouse Perceptions of Service Member Stigma Beliefs

Please indicate to what extent you agree that the following are barriers to YOUR SPOUSE seeking mental healthcare.

	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
My spouse's unit leadership might have less confidence in him/her.	◯	◯	◯	◯	◯
Members of my spouse's unit might view him/her differently.	◯	◯	◯	◯	◯
I might view my spouse differently.	◯	◯	◯	◯	◯
It is difficult for my spouse to get time off from work to attend appointments.	◯	◯	◯	◯	◯
It would harm my spouse's career.	◯	◯	◯	◯	◯
It would be too embarrassing for my spouse.	◯	◯	◯	◯	◯
My spouse would be seen as weak.	◯	◯	◯	◯	◯
Evidence of mental healthcare in my spouse's medical records could harm his/her career.	◯	◯	◯	◯	◯
My spouse would not agree to take any medications for mental health problems.	◯	◯	◯	◯	◯
I would not approve of him/her seeking mental healthcare.	◯	◯	◯	◯	◯

Psychological Identification as a Military Spouse

Please rate your level of agreement with the following statements.

	Strongly disagree	Somewhat disagree	Not sure/ undecided	Somewhat agree	Strongly agree
At a social gathering, I would feel most comfortable if the majority of the people there were military spouses.	◯	◯	◯	◯	◯
I feel most comfortable talking about personal things with other military spouses.	◯	◯	◯	◯	◯
I think that friendships work best when both people are military spouses.	◯	◯	◯	◯	◯
I find it easiest to trust people who are military spouses.	◯	◯	◯	◯	◯
I prefer my close friends to be military spouses.	◯	◯	◯	◯	◯

Familiarity with Military Mental Healthcare Policies

How familiar are you with military policies on mental healthcare?

- ◯ Extremely
- ◯ Very
- ◯ Moderately
- ◯ Slightly
- ◯ Not at all

Experience with Military Mental Healthcare

Do you have past experience dealing with military policies regarding mental healthcare for service members:

- ☐ Directly/first-hand
- ☐ Indirectly/second-hand (e.g., hearing about family/friends' experiences)
- ☐ No specific examples come to mind, but I do have some general impressions
- ☐ No knowledge, experience, or impressions

Other (please specify)

Relationship Violence Acceptability

In general, how acceptable would you say hitting, throwing, pushing, shoving, biting, kicking, or similar behaviors are in a relationship?

	Not at all acceptable	Slightly acceptable	Moderately acceptable	Very acceptable	Extremely acceptable
Please rate:	◯	◯	◯	◯	◯

Perceptions of Military Supportiveness of Mental Healthcare

How supportive do you believe the military is IN THEORY (e.g., written policy) towards service members utilizing mental healthcare services?

	Not at all supportive	Slightly supportive	Moderately supportive	Very supportive	Extremely supportive
Please rate:	◯	◯	◯	◯	◯

How supportive do you believe the military is IN PRACTICE (e.g., how the military actually handles the situation) towards service members utilizing mental healthcare services?

	Not at all supportive	Slightly supportive	Moderately supportive	Very supportive	Extremely supportive
Please rate:	◯	◯	◯	◯	◯

MHI-5: Spouse Mental Health

How much of the time, during the last month, have you:

	None of the time 1	2	3	4	5	All of the time 6
Been a very nervous person?	◯	◯	◯	◯	◯	◯
Felt calm and peaceful?	◯	◯	◯	◯	◯	◯
Felt downhearted and blue?	◯	◯	◯	◯	◯	◯
Been a happy person?	◯	◯	◯	◯	◯	◯
Felt so down in the dumps nothing could cheer you up?	◯	◯	◯	◯	◯	◯

Service Member Mental Health

Please indicate which of the following is true about your spouse (check all that apply):

- ☐ Since being deployed, he has been diagnosed by a healthcare professional as having a mental health issue.
- ☐ At some point in the past (prior to deployment) he was diagnosed as having a mental health issue.
- ☐ I believe he has a mental health issue, although he has not been diagnosed.
- ☐ He does not have a mental health issue as far as I can tell.
- ☐ Unsure

Other (please specify)

Is your spouse currently in treatment for a mental health issue?

- ◯ Yes
- ◯ No, but he has been in the past
- ◯ No, he has never been in treatment for a mental health issue
- ◯ Unsure

Other (please specify)

To what extent do you believe your spouse currently needs treatment for a mental health issue?

	Not at all	A little	Moderately	Very much	Extremely
Please rate:	◯	◯	◯	◯	◯