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Military and Government Counseling Association
A Division of the American Counseling Association

Letter from the Editors

The *Journal of Military and Government Counseling* (JMGC) is an official publication of the Military and Government Counseling Association (MGCA), a division of the American Counseling Association. The mission of the journal is to promote reflection and to encourage, develop, facilitate, and promote professional development for administrators, counselors, and educators working with all members of the Armed Services and their families, whether active duty, guard, reserve, retired, or veteran; civilian employees of the Department of Defense; first responders including EMS, law enforcement, fire, and emergency dispatch personnel; and employees of Local, State and Federal governmental agencies.

Welcome to the Journal of Military and Government Counseling

To better serve the needs, issues, environments, and cultures of military and first responder populations, their families, and their communities, we are compiling a special issue of the JMGC that will focus on the needs of First Responders (defined as personnel in all areas of emergency medical, law enforcement, and fire services; including emergency dispatch personnel, community safety officers, trained emergency personnel, and those involved in disaster response).

Therefore, we are inviting manuscript submissions that focus on these populations, their families, and their professional communities. If you have experience with these populations, consider submitting a manuscript to share your expertise on a population that is underrepresented in the literature and clinical practices.

The procedure for submitting articles is available at JMGC Guidelines for Authors (<https://trojan.troy.edu/education/counseling-rehabilitation-interpreter-training/jmgc/index.html>) and the contact email is JMGCeditor@troy.edu.

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Investigating Relations between Traumatic Brain Injury and Relationship Functioning among OIF/OEF Veterans

Jennifer Fillo

University at Buffalo, SUNY

Kenneth E. Leonard

University at Buffalo, SUNY

Kerry T. Donnelly

VA Western New York Healthcare System-Buffalo

Traumatic brain injury (TBI) is one of the most common injuries among veterans of Operation Iraqi Freedom (OIF) and Operation Enduring Freedom (OEF). TBI can negatively affect veterans' close relationships, undermining an important source of support to aid recovery and rehabilitation. Given the complex symptom profile of TBI, the present research aimed to pinpoint key mediators of the link between TBI and marital functioning to help identify targets for intervention. Data from married OIF/OEF veterans (N=188) were drawn from a larger sample. Mediation analyses simultaneously examined the potential roles of depressive, posttraumatic stress disorder (PTSD), and post-concussive symptoms in the association between TBI and Veterans' marital satisfaction. Results revealed associations between TBI and all three types of symptoms; however, only depressive symptoms independently mediated the association between TBI and marital satisfaction. These findings suggest depression as a mechanism by which TBI may interfere with healthy relationship functioning and highlight targets for intervention.

Keywords: traumatic brain injury, marital satisfaction, depressive symptoms, post-concussive symptoms, posttraumatic stress disorder, veterans

Correspondence concerning this article should be addressed to Jennifer Fillo Clinical and Research Institute on Addictions, University at Buffalo, The State University of New York, 1021 Main Street, Buffalo, NY 14203. Email: jfillo@buffalo.edu

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Advances in protective equipment and medical care have increased survival rates among veterans of the recent conflicts in Iraq and Afghanistan. As a result, post-9/11 veterans are living with more than double the rate of service-connected injury than previous generations of veterans (*Profile of Post-9/11 Veterans: 2014, 2016*). Due to the prevalence of improvised explosive devices in these combat theaters (Owens et al., 2008), traumatic brain injury (TBI) is one of the most common injuries among veterans of Operation Iraqi Freedom (OIF) and Operation Enduring Freedom (OEF). TBI occurs when a blow or jolt to the head damages the brain. Whereas Kevlar helmets and body armor can protect against bullets and shrapnel, they cannot completely protect against blast-related, closed brain injuries (Okie, 2005; Warden, 2006). Accordingly, it is estimated that up to 25 percent of OIF/OEF veterans have suffered at least one TBI (Bosco, Murphy, & Clark, 2013; Hoge et al., 2008). Given that more than 2.77 million Service Members have deployed as part of OIF/OEF (Wenger, O'Connell, & Cottrell, 2018), understanding and addressing the various consequences of TBI represent critical tasks for professionals working with this population.

TBI often leads to a range of cognitive (Arciniegas, Held, & Wagner, 2002; Lippert-Gruner, Kuchta, Hellmich, & Klug, 2006), emotional (Fleminger, 2008; Saunders, McDonald, & Richardson, 2006),

and psychosocial (Franulic, Carbonell, Pinto, & Sepulveda, 2004; Morton & Wehman, 1995) problems. Although most TBI that occurs in the military is classified as mild, and most individuals recover within 3 to 12 months (Carroll et al., 2004), for some people, problems related to the injury can persist for longer periods of time, negatively impacting their health and overall functioning (Vanderploeg, Curtiss, Luis, & Salazar, 2007). In particular, psychosocial problems tend to persist longer following TBI, often creating a considerable barrier to rehabilitation (Morton & Wehman, 1995).

The Importance of Relationship Functioning

The interpersonal consequences of TBI have received far less attention in research examining military populations than have neuropsychological sequelae and other aspects of polytrauma. Thus, much of what is known largely comes from the literature on civilian populations. This research shows that TBI can negatively impact various aspects of individuals' social functioning, including close relationships. Indeed, TBI of any severity is associated with poorer relational communication, intimacy, quality, and satisfaction (Burrige, Huw Williams, Yates, Harris, & Ward, 2007; Gill, Sander, Robins, Mazzei, & Struchen, 2011; Gosling & Oddy, 1999), with evidence of greater injury severity predicting increasingly poor relationship satisfaction and adjustment (Peters, Stambrook, Moore, & Esses, 1990). Individuals with TBI, and their romantic partners, also report decreased sexual functioning and sexual satisfaction following the injury (Ponsford, 2003; Sander et al., 2016; Sander et al., 2012). Further, there is evidence that divorce rates may be higher post-injury (Blais & Boisvert, 2005; Wood & Yurdakul, 2009). The consequences of TBI can also take a toll on those closest to the injured individual: prior research has found evidence of psychological distress (i.e., depression, anxiety) among 23-73% of relatives and caregivers of TBI patients (Blais & Boisvert, 2005; Ponsford, Olver, Ponsford, & Nelms, 2003).

It is vital to understand the effects of TBI on relationship functioning in military samples, because anything that may undermine relationship satisfaction may also undermine individuals' chances of

successful recovery and rehabilitation. Spouses and family members are a primary source of support for individuals with TBI – civilian and military – and the quality of these relationships can play a key role in recovery (Dausch & Saliman, 2009; Griffin, Friedemann-Sanchez, Hall, Phelan, & van Ryn, 2009; Kreutzer, Marwitz, & Kepler, 1992). Spouses, in particular, are a critical aspect of veterans' environment. Indeed, prior research has demonstrated the specific importance of spousal support in the prevention and course of service-connected conditions (e.g., posttraumatic stress disorder; Guay, Billette, & Marchand, 2006). However, if injury-related symptoms interfere with healthy relationship functioning (e.g., impair communication, exacerbate conflict), this can erode social support and impair recovery.

Mechanisms Linking TBI and Relationship Functioning

In order to protect this vital aspect of veterans' support system, there is need for a greater understanding of the specific mechanisms linking TBI and relationship functioning. This information is essential for designing effective prevention and intervention. However, given the complex symptom profile of TBI and related polytrauma, it can be difficult to determine which aspects may be most influential for the marital relationship. For example, there is meta-analytic evidence that TBI puts individuals at double the risk of subsequently developing a range of psychiatric illnesses (Perry et al., 2016), which, in turn, may also take a toll on the marital relationship. Disentangling the potential effects of these various factors is a critical next step for research in this domain.

In particular, it may be worthwhile to examine the explanatory roles of depressive, PTSD, and post-concussive symptoms in the associations between TBI and poorer marital functioning. Depression has been repeatedly identified as one of the most common psychiatric diagnoses following TBI (Hibbard, Uysal, Kepler, Bogdany, & Silver, 1998; Koponen et al., 2002; Perry et al., 2016; Whelan-Goodinson, Ponsford, Johnston, & Grant, 2009), and rates of subsequent posttraumatic stress disorder (PTSD) are also high (Hoge et al., 2008; Institute of Medicine, 2009; Schneiderman, Braver, & Kang, 2008; Tanielian & Jaycox, 2008). Indeed, roughly one-third of veterans with TBI also have comorbid depression or PTSD (Hoge

et al., 2008; Tanielian & Jaycox, 2008). Additionally, neuropsychiatric symptoms related to TBI, known as post-concussive symptoms, can also persist following the injury (Cicerone & Kalmar, 1995; Schneiderman et al., 2008; Vanderploeg et al., 2007). Whereas these issues are most likely to occur in the first year following injury (Alway, Gould, Johnston, McKenzie, & Ponsford, 2016; Deb, Lyons, Koutzoukis, Ali, & McCarthy, 1999), there is evidence of vulnerability lasting years and even decades later (Koponen et al., 2002; Whelan-Goodinson et al., 2009).

These problems may, in turn, take a toll on veterans' romantic relationship functioning. Links between both depression and PTSD symptoms and poorer relationship functioning in Service Members and their spouses are well established (Lambert, Engh, Hasbun, & Holzer, 2012; Sayers, Farrow, Ross, & Oslin, 2009; Taft, Watkins, Stafford, Street, & Monson, 2011; Whisman, 2001). Whereas research on post-concussive symptoms and relationship functioning is lacking, there is considerable overlap among post-concussive symptoms, PTSD symptoms, and depressive symptoms (Brenner et al., 2010; Carlson et al., 2010; King et al., 2012). Thus, they may similarly impair relationship functioning. Taken together, this suggests that these symptoms may play an important role in how TBI ultimately affects injured service members' marital relationships. However, in order to pinpoint the most fruitful targets for intervention, research is needed to disentangle their unique effects on relationship functioning. This is the primary focus of the present research.

Present Research

Close relationships are an important source of support that can aid recovery and rehabilitation among veterans; however, history of TBI can also take a toll on these relationships. Given the prevalence of TBI among recent veterans, and the fact that more than half of current Service Members are married (*Profile of Post-9/11 Veterans: 2014*, 2016), it is important to develop a better understanding of the extent to which TBI-related symptoms may impact Service Members' marital relationships, as well as the mechanisms through which this may occur. Such an approach would help identify fruitful targets for intervention to help protect this important source of support for injured veterans.

The present research will address a number of key limitations of prior research. It is clear that the consequences of TBI can strain close relationships. However, much of the extant research has examined these relations in civilian samples and has frequently used blended samples of spouses, parents, and even children (Blais & Boisvert, 2005). Therefore, it is difficult to disentangle potential effects of the TBI on marital vs. parental relationships, as well as the extent to which these findings are generalizable to military and veteran populations. Given that TBI is by definition only one aspect of polytrauma for Service Members and veterans, coping and adjustment may be different for these families compared to civilians (Collins & Kennedy, 2008). The complex and unpredictable nature of combat-related injuries and associated recovery places these families under considerably greater stress (Griffin et al., 2012). Further, research examining the influence of TBI specifically on marital functioning has tended to focus on the marital satisfaction of the non-injured spouse (Blais & Boisvert, 2005), implicitly assuming that TBI-related relationship problems only arise through the burden placed upon them. However, the perspective of the person who sustained the TBI also plays an important role in the functioning of the relationship. For example, the injured veteran's perception of the relationship is likely to influence the extent to which they are willing to turn to their spouse as a source of support during recovery.

The present research aims to fill these critical gaps in the literature. Specifically, using a sample of OIF/OEF veterans, the present research will simultaneously examine three potential mediators of the association between TBI and veteran-reported relationship functioning: post-concussive symptoms, PTSD symptoms, and depressive symptoms. Consistent with the extant literature, we expect that a positive TBI diagnosis will be associated with all three types of symptoms. Further, we hypothesize that these variables will mediate the association between TBI and veteran-reported relationship functioning. However, we make no specific predictions regarding the relative size of the indirect effects associated with each mediator. The present research aims to determine which of these symptoms may have the strongest relation to relationship functioning, and thus be a fruitful target for focusing treatment.

Method

Participants

Data were drawn from a larger longitudinal study enrolling OIF/OEF veterans ($N = 500$). Participants were recruited from five VA medical centers and one VA outpatient clinic in New York State. The sample was drawn from a registry of OEF/OIF veterans across the New York State veterans Integrated Services Network (VA VISN 2) and from clinical referrals to polytrauma or neuropsychology clinics at each site. Veterans were compensated \$75 for participation in each of four assessments in the larger study. The analytic sample for the present research was drawn from a single time point of the parent study and was comprised of 168 married male (89.4%) veterans and 20 married female (10.6%) veterans. Sample characteristics are reported in Table 1. Participants were predominantly Caucasian (90.4%, $n = 170$) with at least some college education or a 4-year degree and ranged in age from 20 to 60 years old ($M = 35.3$, $SD = 9.7$). At the time of participation, on average, veterans had served 12.4 years ($SD = 8.2$) in the military, and 3.5 years ($SD = 2.0$) had passed since their most recent head injury. On par with the national average for post-9/11 deployments (Institute of Medicine, 2013), veterans had been deployed an average of 1.7 times ($SD = 1.5$) at the time of participation.

Procedure

Each of the five participating study sites received approval from its institutional review board (IRB) and Research and Development Committee. Participants' responses are protected by a Certificate of Confidentiality granted by the National Institute of Mental Health. The study consisted of four assessment time points, each conducted at 6-month intervals. The first assessment included the TBI diagnostic interview, conducted by one of six licensed psychologists. This was followed by a comprehensive neuropsychological assessment battery, which included the measures assessing depressive symptoms, PTSD, and post-concussive symptoms. Marital satisfaction data were collected at the second assessment time point. Assessment batteries were administered by trained research

assistants. All research assistants were initially trained by the principal investigator (a board-certified clinical neuropsychologist) in study protocols and test administration and scoring, during a meeting of investigators and staff from all five study sites. The project coordinator trained the research assistants in data coding and entry and facilitated weekly telephone conferences to discuss study-related issues and to monitor progress. Each site-specific principal investigator was responsible for ongoing direct and indirect clinical supervision of the local research assistants.

Measures

Traumatic brain injury. Prior TBI was assessed using a 22-item structured diagnostic interview developed by Donnelly et al. (2011) in accordance with Cifu et al. (2009) TBI diagnostic criteria. The interview was designed to assess the probability, nature, and severity of TBI among OIF/OEF veterans. It also contained items assessing the circumstances of the injury. The interview produces ratings of the probability and severity of each TBI event. Injuries assessed to be “very likely” or “almost certainly” were considered positive diagnoses. These ratings were aggregated and used to create a binary variable (1/0) indicating whether the veteran had experienced any prior TBI. This served as the primary predictor variable in the present analyses.

Post-concussive symptoms. Post-concussive symptoms experienced since the time of participants’ TBIs were measured using the 22-item, self-report Neurobehavioral Symptom Inventory (NSI; Cicerone & Kalmar, 1995). The measure includes 11 somatic/sensory items, including: feeling dizzy; vision problems, blurring, trouble seeing, and sensitivity to noise. The measure includes 11 affective items, including: feeling anxious or tense; irritability, easily annoyed; and difficulty making decisions. Degree of severity for each symptom is rated on a 5-point scale ranging from 0 (*none; symptom is rarely ever present/not a problem at all*) to 4 (*very severe; symptom is almost always present/impairs performance at work, school, or home/individual probably cannot function without help*). Total scores on the NSI range from 0 to 88. Higher scores indicate more severe post-concussive symptoms.

PTSD symptoms. PTSD symptoms were measured using the PTSD Checklist-Military Version (PCL-M; Weathers, Litz, Herman, Huska, & Keane, 1993). The PCL-M is a 17-item self-report measure of PTSD symptoms experienced over the past month in response to “stressful military experiences,” based on DSM-IV criteria. Example items include: “repeated, disturbing *memories, thoughts, or images* of a stressful military experience from the past”; “having *physical reactions* (e.g., heart pounding, trouble breathing, or sweating) when *something reminded* you of a stressful military experience from the past”; and “feeling *irritable* or having *angry outbursts*” (emphasis original). Participants rate the frequency of experiencing each symptom over the past month on a 5-point scale ranging from 1 (*not at all*) to 5 (*extremely*). Total scores on the PCL-M range from 17 to 85. Higher scores indicate more severe PTSD symptoms.

Depressive symptoms. Depressive symptoms were measured using the Beck Depression Inventory-II (BDI-II; Beck, Steer, & Brown, 1996). The BDI-II is a 21-item self-report measure of depressive symptoms experienced over the past two weeks. Example symptoms include: sadness, pessimism, guilty feelings, suicidal thoughts or wishes, changes in sleep, and changes in appetite. Participants rate the intensity of each symptom on a 4-point scale ranging from 0 to 3. Total scores on the BDI-II range from 0 to 63. Higher scores indicate more severe depressive symptoms.

Marital satisfaction. Marital satisfaction was measured using the Multidimensional Satisfaction Scale (MDS; Kearns & Leonard, 2004). The MDS assesses satisfaction with 11 functional aspects of romantic relationships: social pleasure, division of labor, problem solving, sexual intimacy, emotional security, companionship, balance of power, feelings of love and acceptance, emotional closeness, personal growth and autonomy, and expressions of affection. Each aspect is then illustrated through examples. Participants rate the extent to which they are satisfied with each aspect of their current relationship on an 8-point scale ranging from 1 (*not at all satisfied*) to 9 (*completely satisfied*). Responses were averaged across items. Higher scores indicate greater marital satisfaction.

Analytic Plan

Mediation analyses using MPlus 8.0 software (Muthén & Muthén, 2017) were used to examine the explanatory role of post-concussive symptoms (M1), PTSD symptoms (M2), and depressive symptoms (M3) in the association between TBI (X) and marital satisfaction (Y; see Figure 1). Analyses controlled for the effects of participant sex and age on the mediators and focal outcome variable. Covariance paths were included to model the associations among the three mediator variables, as there is conceptual overlap in the symptoms assessed in each measure (King et al., 2012). Parameters were estimated using full information maximum likelihood estimation (Schafer & Graham, 2002). Indirect effects were calculated using the product of coefficients approach (MacKinnon, Lockwood, Hoffman, West, & Sheets, 2002). Standard errors and confidence intervals for parameter estimates and indirect effects were estimated using bias corrected bootstrapping with 1000 samples, which addresses the non-normality of the product terms used to estimate indirect effects (Hayes, 2009, 2013). Statistical significance of the parameter estimates and indirect effects is determined by the absence of zero from the confidence interval.

Results

Preliminary Analyses

Descriptive statistics and correlations for focal study variables are presented in Table 2. Approximately 40% of the analytic sample had experienced a prior TBI. Findings from the full parent study sample indicate that the vast majority of such injuries in the sample (96.8%) are classified as mild (Donnelly et al., 2011). The average score on the PCL-M fell below the recommended cut-score (50) for probable diagnosis of PTSD in military populations (Forbes, Creamer, & Biddle, 2001; Weathers et al., 1993), and the average score on the BDI-II fell in the range (14-19) indicative of mild depression (Beck et al., 1996). The average total score on the NSI suggests that participants average rating for each item fell between “mild” and “moderate.” The average score on the MDS is approximately

one standard deviation lower than the mean for non-distressed couples found in prior research (Beach, Fincham, Amir, & Leonard, 2005). As was expected, there were strong correlations among post-concussive symptoms, PTSD symptoms, and depressive symptoms. Further, all three mediator variables were significantly correlated with TBI and marital satisfaction.

Focal Analyses

The aim of the present research was to examine, in parallel, three potential mediators of the association between traumatic brain injury and relationship functioning. Specifically, analyses examined the indirect effect of TBI on veteran-reported marital satisfaction simultaneously via post-concussive symptoms, PTSD symptoms, and depressive symptoms. Results of mediation analyses are presented in Table 3 and Figure 1.

As predicted, TBI was significantly associated with post-concussive symptoms ($a_1 = 11.765$, 95% CI [7.112, 16.993]), PTSD symptoms ($a_2 = 11.031$, 95% CI [6.354, 16.012]), and depressive symptoms ($a_3 = 9.187$, 95% CI [5.189, 13.170]). Individuals with prior TBI reported higher levels of post-concussive symptoms, PTSD symptoms and depressive symptoms. However, only depressive symptoms were significantly associated with veteran-reported marital satisfaction ($b_3 = -0.075$, 95% CI [-0.114, -0.036]). Greater depressive symptoms were related to lower levels of marital satisfaction. Post-concussive symptoms ($b_1 = 0.008$, 95% CI [-0.027, 0.039]) and PTSD symptoms ($b_2 = 0.000$, 95% CI [-0.032, 0.035]) were not significantly related to marital satisfaction.

As predicted, there was a significant total indirect effect of TBI on veteran-reported marital satisfaction through all three mediators ($ab = -0.594$, 95% CI [-0.950, -0.297]). However, only the specific indirect effect of TBI via depressive symptoms was significant ($a_3b_3 = -0.690$, 95% CI [-1.253, -0.316]). With post-concussive symptoms, PTSD symptoms, and depressive symptoms in the model, the direct effect of TBI on veteran-reported marital satisfaction was not significant ($c' = 0.092$, 95% CI [-0.431, 0.594]). As expected, there were significant covariances among the three mediator variables. However, participant sex and age were not significantly associated with post-concussive symptoms, PTSD symptoms,

depressive symptoms, or marital satisfaction, and were therefore removed from Figure 1 for clarity.

Discussion

The present research aimed to advance the literature on the interpersonal consequences of military service by investigating the pathways through which TBI may harm Service Members' close relationships. In a sample of OIF/OEF veterans, this study found that TBI was associated with greater post-concussive symptoms, PTSD symptoms, and depressive symptoms. These symptoms explained relations between TBI and veteran-reported marital satisfaction. Further, results suggested that depressive symptoms may play a particularly important role in linking TBI and poorer romantic relationship functioning. Taken together, these findings add to a growing literature on the negative consequences of common service-connected conditions for veterans and their families.

Results underscore the need for greater consideration of the injured veteran's perception of the relationship. Building upon prior work that has largely focused on the perspective of the non-injured spouse (Blais & Boisvert, 2005), the present findings illustrate that TBI may also harm the injured veteran's satisfaction with the relationship. This finding is important because the veterans' perception of the relationship is likely to influence the extent to which they will seek support from a spouse and the nature of their responses to that support, when offered. Indeed, higher satisfaction is associated with more supportive interactions in romantic relationships (Collins & Feeney, 2000). Further, prior work has found that individuals who report higher relationship satisfaction perceive their partners as being more supportive, even after controlling for the partner's self-reported support provision and the ratings of independent observers (Collins & Feeney, 2000). Thus, veterans' satisfaction with their marital relationships is likely a key factor in their ability to benefit from spousal support.

In order to effectively intervene to preserve or repair veterans' marital relationships, it is necessary to understand the specific mechanisms linking TBI and relationship satisfaction. However, an ongoing issue in this area of research is the fact that many post-concussive symptoms are not

specific to TBI, and thus often overlap with symptoms of other conditions common among veterans, such as PTSD and depression (King et al., 2012). The present research was able to disentangle these factors by examining mediator variables in parallel and modeling the associations among them. As would be expected, all covariance paths among post-concussive symptoms, PTSD symptoms, and depressive symptoms were significant. By accounting for this overlap, findings revealed that only depressive symptoms were significantly associated with veterans' marital satisfaction.

Results suggest that depressive symptoms may be especially relevant to the ways in which TBI may interfere with healthy relationship functioning, particularly for the injured individual. The cognitive distortions associated with depression may also negatively color individuals' thoughts about their marital relationships. This finding is consistent with well-established links between depression and poorer relationship functioning in civilian and non-injured military populations (Sayers et al., 2009; Whisman, 2001). Whereas TBI was also associated with greater post-concussive symptoms and PTSD symptoms in the present sample, these factors were not subsequently related to veteran-reported marital satisfaction. This suggests that the bivariate associations between each of these constructs and marital satisfaction was accounted for by their overlap with depressive symptoms. These findings are consistent with prior research similarly finding more robust associations between depressive symptoms – but not PTSD symptoms – and multiple indicators of family functioning, including marital satisfaction, with National Guard service members (Blow et al., 2013).

The lack of a relationship between PTSD and veteran marital satisfaction in this sample is somewhat surprising, given prior research linking PTSD and relationship problems (Lambert et al., 2012; Taft et al., 2011). Although speculative, it is possible that veterans' depressive symptoms may have a greater impact on coloring their own perception of their relationship, but their PTSD symptoms may have a more pronounced effect on their partners' perceptions of the relationship. Due to the nature and primary focus of the parent study, we were not able to assess the perspective of the non-injured spouse. However, future research examining

the perspectives of both partners is critical to developing a more complete understanding of the influence of TBI on dyadic relationship functioning.

The present findings suggest key targets for clinical intervention. First, they underscore the importance of looking beyond the individual veteran to also assess and address the impact that TBI may have on their marital relationships. Whereas there is often an intrapersonal focus in the treatment of service-connected conditions, it is critical to acknowledge the interpersonal context in which related symptoms occur, and the ways in which aspects of veterans' conditions may differentially impact themselves and their families. Spouses are an important aspect of veterans' environment, and bolstering the marital relationship is likely to aid recovery and rehabilitation.

Additionally, results shed light on fruitful starting points for intervention with veterans' and their spouses. Given that TBI has a complex symptom profile, and it often presents as part of polytrauma in veterans, it can be difficult to know which factors may have the greatest impact on the marital relationship. The present findings suggest that depressive symptoms may be a key factor in the way TBI ultimately interferes with healthy relationship functioning. Thus, counselors working with TBI-affected veterans should consider utilizing conjoint therapeutic approaches, particularly those that can simultaneously address depression and marital issues, such as behavioral marital therapy for depression (BMT-D). BMT-D has proven effective at bolstering marital functioning and relieving depressive symptoms (Mead, 2002). It also may be beneficial to incorporate psychoeducation to help the veteran and spouse better understand TBI and related symptoms (Sayers, 2011).

Findings contribute to a greater understanding of the interpersonal consequences of TBI, specifically among military couples. Much of the extant literature on TBI and close relationships has been conducted using civilians; however, these effects may be particularly pronounced in military samples. Indeed, prior research has found that TBI with more violent causes is associated with greater subsequent relationship instability (Arango-Lasprilla et al., 2008), which is likely to be particularly true of TBI sustained during the course of military service. Further, given the fact that TBI is often only one aspect of polytrauma in veterans, recovery from TBI

in military samples is likely more complicated than among civilian samples, (Brenner, Vanderploeg, & Terrio, 2009; Gironde et al., 2009). It is also important to note that a portion of the sample were treatment-seeking veterans recruited from VA facilities, who may have more severe symptoms or impairment than those who do not seek treatment. Given that less than half of all eligible veterans are enrolled for VA care (Bagalman, 2014), this may limit the generalizability of the findings.

By simultaneously examining the potential moderating roles of post-concussive symptoms, PTSD symptoms, and depressive symptoms, the present research begins to tease apart the unique effects of these factors. Given the cross-sectional nature of the data, we cannot infer causal relations among TBI, depressive symptoms, and marital satisfaction. However, poorer interpersonal functioning post-injury is well documented in both the civilian and military TBI literatures. Further, it is unlikely that relationship quality would put people at higher risk for sustaining TBI. Yet, there may be reciprocal relations among the examined mediators and relationship functioning, and these relations may operate differently for injured and non-injured spouses. Thus, future prospective longitudinal research would help reveal how these processes unfold over time post-injury for veterans and their spouses.

Conclusion

The present research examines poorer marital satisfaction as an important interpersonal consequence of TBI, which is one of the most common service-connected conditions among OIF/OEF veterans. The results demonstrate that depressive symptoms can play an important mediating role in the association between TBI and marital relationship functioning in this population. Conjoint counseling approaches targeting veterans' depressive symptoms may help alleviate depressive symptoms and protect healthy marital relationship functioning, thereby bolstering an important source of support to aid veteran recovery and rehabilitation.

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Table 1

Demographic characteristics of analytic sample (N = 188)

Variable	<i>M (SD) or % (n)</i>
Sex	
Male	89.4% (168)
Female	10.6% (20)
Age	35.3 (9.7)
Education	
Some HS - HS Diploma	21.3% (40)
Some College - 4-Year Degree	70.7% (133)
Some Graduate School - Graduate Degree	8.0% (15)
Race/Ethnicity	
African American	2.7% (5)
Asian American	1.1% (2)
Caucasian	90.4% (170)
Hispanic	2.7% (5)
Native American	0.5% (1)
Other	2.7% (5)
Military History	
Years in Military	12.4 (8.2)
Number of Deployments to War Zone	1.7 (1.5)
Months since Most Recent Head Injury	41.4 (23.7)

Table 2
Descriptive Statistics and Correlations among Focal Variables

Variable	1	2	3	4	M (SD) / % (N)	Range
1. TBI	-				40.4% (76)	0 / 1
2. Postconcussive symptoms	0.396***	-			29.33 (16.40)	0 - 88
3. PTSD symptoms	0.339***	0.839***	-		42.01 (17.28)	17 - 85
4. Depressive symptoms	0.363***	0.786***	0.837***	-	18.00 (13.31)	0 - 63
5. Marital satisfaction	-0.123	-0.319***	-0.360***	-0.451***	5.75 (1.86)	1 - 9

Note. *** $p < .001$.

Table 3
Total, Direct, and Indirect Effects of TBI on Marital Satisfaction, via Postconcussive Symptoms, PTSD Symptoms, and Depressive Symptoms

	<i>estimate</i>	<i>SE</i>	<i>Z</i>	95% CI	
				Lower	Upper
Total effect on marital satisfaction					
<i>c</i> Postconcussive symptoms	-0.502	0.288	-1.741 [†]	-1.046	0.073
Direct effects on marital satisfaction					
<i>c'</i> TBI	0.092	0.264	0.348	-0.431	0.594
<i>b₁</i> Postconcussive symptoms	0.008	0.016	0.501	-0.027	0.039
<i>b₂</i> PTSD symptoms	0.000	0.017	0.012	-0.032	0.035
<i>b₃</i> Depressive symptoms	-0.075	0.020	-3.734***	-0.114	-0.036
Indirect effects on marital satisfaction					
	<i>estimate</i>	<i>SE</i>	<i>Z</i>	Lower	Upper
<i>ab</i> Total indirect effect	-0.594	0.172	-3.458***	-0.950	-0.297
<i>ab₁</i> TBI → Postconcussive symptoms → Marital satisfaction	0.094	0.197	0.476	-0.257	0.516
<i>ab₂</i> TBI → PTSD symptoms → Marital satisfaction	0.002	0.191	0.011	-0.398	0.414
<i>ab₃</i> TBI → Depressive symptoms → Marital satisfaction	-0.690	0.234	-2.942**	-1.253	-0.316

Note: [†]*p* < .10. ***p* < .01. ****p* < .001. Letters denote corresponding paths in Figure 1.

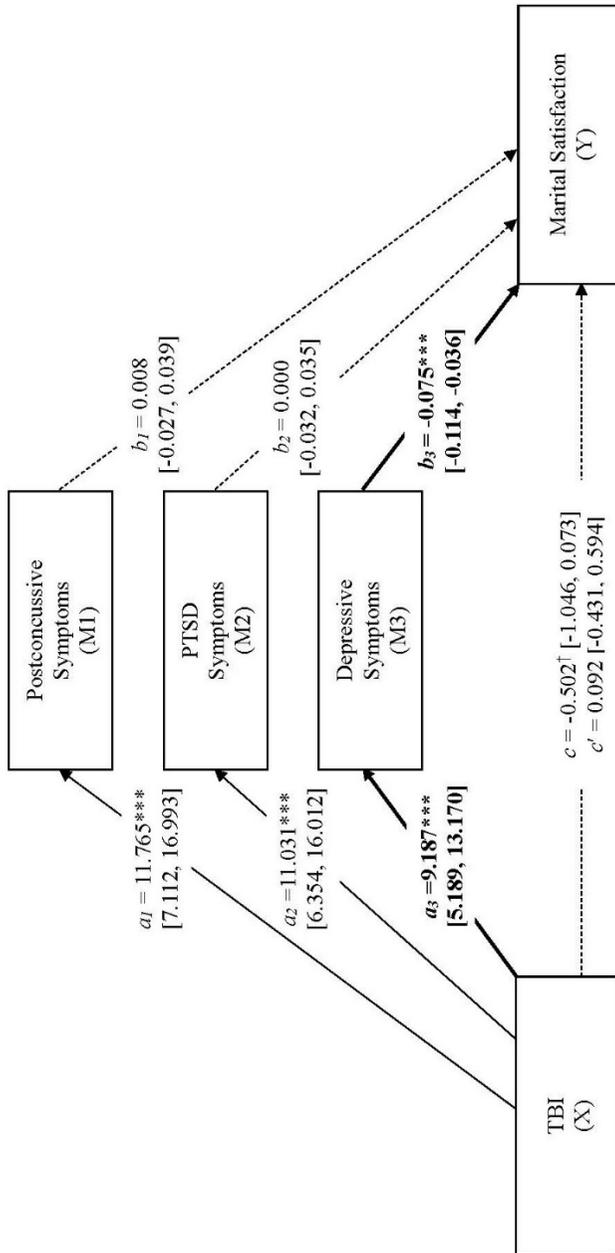


Figure 1. Model of total, direct, and indirect effects of TBI on marital satisfaction.

Note. $^\dagger p < .10$. $*p < .05$. $**p < .01$. $***p < .001$. Significant pathways are depicted as solid lines. Non-significant pathways are depicted as dashed lines. There was a significant total indirect effect of TBI on marital satisfaction through all three mediators ($ab = -0.594$, 95% CI [-0.950, -0.297]). Paths corresponding to the specific indirect effect of TBI on marital satisfaction via depressive symptoms are bolded ($ab_3 = -0.690$, 95% CI [-1.253, -0.316]). Model also controlled for the effects of participant sex and age on postconcussive symptoms, PTSD symptoms, depressive symptoms, and marital satisfaction. None of these paths were significant, so they were removed from the figure for clarity.

Counseling Barriers and Mental Health Concerns of Military College Students

Whitney George

Jacksonville University

Sachin Jain

University of South Dakota

Anne Pinto

Jacksonville University

The researchers in this study sought to determine perceived barriers to counseling and the experience of PTSD, depression, anxiety, anger and alcohol use in the military and veteran student population on a small liberal arts college campus. Although findings indicated the existence of barriers to counseling that military and veteran college students may experience, there were no findings that concluded that PTSD, depression, anxiety, anger, or alcohol use were problematic within the population sampled.

Keywords: military, college, barriers

Correspondence concerning this article should be addressed to Whitney George, 2800 University Blvd. N., Jacksonville, FL 32211. Email: wgeorge@ju.edu

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The GI Bill has provided funds to military veterans for college education since the Servicemen's Readjustment Act of 1944, which in turn has increased the population of military personnel on college campuses (United States Government Accountability Office, 2014). The G.I. Bill of Rights extended the breadth of its benefits with the Veterans' Education Act of 2008, an act that served to support military personnel after three years of active duty after September 11, 2001. Since then, over 1 million

veterans have used the educational benefits to attend universities in America and other countries (Jordan, 2013; United States Government Accountability Office, 2014). Additionally, after World War II, the Veteran's Administration arranged with over 400 hundred colleges and universities in the United States to provide on campus counseling to their student veterans (McCarthy, 2014). Mental health providers were eager to bring counseling centers to American colleges that offered services like educational-vocational counseling and personal adjustment counseling (McCarthy, 2014).

However, military personnel may find that the transition from military to student life imposes a distinct challenge to veterans who come from backgrounds and experiences that differ from the typical college student (Freedman, Marshall, Le, Aronson, Perkins, & Hayes, 2018). Considering the increased number of veterans on college campuses, there are a growing number of student veterans who suffer from psychiatric issues (Barry, Whiteman, Wadsworth, & Hitt, 2012; Currier, Holland, Drescher, & Foy, 2015; Grossbard et al., 2014; Rudd, Goulding, & Bryan, 2011; Widome et al., 2011). Due to increasing numbers of military and veteran students enrolling in 2- and 4-year colleges and universities, it is important to assess the needs of this population to determine if college counseling centers are aware of the specific challenges that this population may face.

Mental Health Needs within the Military Population

Military personnel from the Operation Iraqi Freedom/Enduring Freedom have a higher risk for developing psychological traumas (Barry et al. 2012; Currier et al., 2015; Romero, Riggs, & Ruggero, 2015) as well as high rates of Posttraumatic Stress Disorder (PTSD) and depression that are characterized by constant, extreme, and overwhelming worry and anxiety (Milanak, Gros, Magruder, Brawman-Mintzer, & Frueh, 2013). Rudd, Goulding, and Bryan (2011) also found these individuals to be 24% more likely to be depressed, 35% more likely to suffer from anxiety, and 46% more likely to have PTSD symptoms than their non-veteran counterparts.

The university environment can also provide some unaccommodating aspects when considered from a military veteran point of

view. Such aspects include often different political views of war, disconnection from other students due to divergent values and maturity levels, and school policies and infrastructure dissimilar to what they experienced within military culture (Elliot, Gonzalez, & Larson, 2011; Johnson, Graceffo, Hayes, & Locke, 2014; Livingston, Havice, Cawthorne, & Fleming, 2011; Persky & Oliver, 2010). The difference in age also plays an integral part in the assimilation to the culture on a college campus. Military and veteran students are usually older than their non-military and veteran peers which makes relating to them more difficult. Johnson et al, (2014) reported that military and veteran students experienced an inability to connect with peers as a result of differing levels of maturity. More studies are finding that it is imperative that colleges accommodate for student veterans by providing tailored mental health services (Currier, McDermott, & McCormick, 2017).

Common Differences Between Military and Non-Military College Students

There are several inconsistencies between military and veteran students and non-veteran and military students. One of these differences includes avoidant coping styles. Active military and veterans are more likely to engage in avoidant coping than students who are not associated with military service (Bonar & Domenici, 2011; Whiteman, & Barry, 2011). Avoidant coping can be seen through behaviors such as turning away from negative experiences and emotions, denying or minimizing the results or effects of a specific problem, and choosing not to deal with the problems when they present (Boden, Bonn-Miller, Vujanovic, & Drescher, 2012). According to the National Veterans Foundation (National Veterans Foundation, 2016), 20% of the veterans who served in Iraq or Afghanistan suffer from either Major Depressive Disorder or PTSD. This number does not account for other mental health concerns. Of those, only 22% sought mental health treatment outside of the VA (National Veterans Foundation, 2016).

Those with avoidant coping styles are often reluctant to seek help because of negative beliefs about mental health treatment and what it might mean for them to seek services (Currier et al., 2017; National Veterans

Foundation, 2016). In order to reframe health-seeking behaviors as a more positive strategy to mental illness, universities must confront the stigma that military and veteran students face when they seek help. Such stigmas include the belief of ineffective treatment approaches and untrustworthy providers (Currier et al., 2017). Veterans with PTSD and depression are more likely to endorse such negative beliefs about mental health treatment due to the above stigmatized experiences (National Veterans Foundation, 2016; Vogt, Fox, & Di Leone, 2014).

Another aspect of military and veteran student life that is inconsistent with non-military and veteran students are traumatic experience in combat and training which could lead to serious mental illness. In fact, PTSD is linked with higher risks of suicidal tendencies, physical disabilities, employment and relationship difficulties, and a lower quality of life (Hundt et al., 2014). Serious mental illnesses could also lead to substance abuse (Whiteman et al., 2013). Patients with PTSD who happen to be resistant to psychotherapy often seek out alternative treatments like medication, which could further lead to opioid abuse (Hundt et al., 2014). Male veterans also reported drinking more frequently (Whiteman et al., 2013).

A final factor distinguishing the experience for a military and veteran student compared to the experience of a non-military and non-Veteran student is the lack of peer support Service Members receive on a college campus. Hundt et al. (2014) studied the factors associated with little to high use of therapy in service members with PTSD. In this study they note that the under-utilization of therapy could be linked to a lack of social support and difficulties in social relationships (Hundt et al., 2014). Student veterans often feel disconnected from non-veteran students on campuses, and they desire the closeness and support of other veterans (Strickley, 2009). The American Council of Education (ACE) quoted an undergraduate veteran student at the University of Michigan saying, “I don’t know other veterans on campus, and I wasn’t able to relate to the younger students not in the military,” (ACE, 2008, p. 8). In fact, the inability to connect with peers on campus has shown to cause academic regression and significantly more problems with adjustment for student veterans on campus (Freedman et al., 2018).

An Attempt at Addressing the Issue

Due to such an overwhelming need, the Veteran's Administration (VA) created contracts with more than 400 college campuses to provide veterans with VA University Counseling Centers (McCarthy, 2014). Such centers would develop veterans into "happier, more productive, and civically engaged graduates for the American society," (McCarthy, 2014, p. 2). Providing such results would reduce the amount of waste, inefficiency, and student maladjustment for veteran students on a college campus (McCarthy, 2014). It was also assumed that serious mental illnesses could be prevented if they were able to receive the right help with more common life issues (McCarthy, 2014).

Need for the Study

A primary goal of many universities is to not only educate, but also meet the overall needs of the active military and veteran students at both the undergraduate and graduate levels. Veteran and active military individuals comprised roughly 4% of the overall national college and university undergraduate enrollment in 2015 (ACE, 2015), and often come to campus with a different approach to learning than the traditional student might (Elliot, Gonzalez, & Larson, 2011; Freedman et al, 2018; Livingston et al., 2011; Persky & Oliver, 2010). In addition to the unique learning approach, military students may come to college with distinct needs that require additional campus resources and support. Although it was previously noted that the VA created contracts to provide mental health support to military and veteran college students (McCarthy, 2014), not all college campuses have this uniquely directed form of care. In fact, many college campuses have one point of access for all students, regardless of military affiliation.

The literature also suggests that military and veteran students are reluctant to seek out counseling services, regardless of where the service is provided (Currier et al., 2017). Identifying barriers to treatment and recognizing mental health concerns that exist within this population can help college counseling centers to promote services appropriately, while dispelling myths that may exist among military and veteran students about what counseling may be like.

Purpose of the Study

It has been noted that military students do not seek counseling services on many college campuses nationwide (Currier et al., 2017). It has also been noted that this population would be positively impacted by counseling and exposure to counseling techniques (Currier et al., 2017). The goal of this research project is to better understand the needs of veteran and active military students, by obtaining data on mental health symptoms that they have with regards to several mental health factors including anxiety, depression, anger, alcohol use, and PTSD. It is also important to better understand factors that would prevent a military or veteran student from seeking counseling services. The hope is that the researchers will gather information to assist in supporting students in transition to and from active duty/civilian life and transitioning to/from the role of a college student, by providing data that college counseling centers can use to support these students.

Data Collection

Prior to recruiting participants, an Internal Review Board application describing the nature of the study and the type of participants desired for recruitment was filed and was approved. Participants were recruited from a small private liberal arts university during the Fall semester, which corresponded to four months of data collection. Potential study participants included anyone who was currently enrolled in the university, identified as a military or veteran student, and who agreed to and signed the informed consent document. The participants were recruited through an email that described the purpose, nature, and requirements of participation in the study.

Three instruments and an 8-item demographic form were used in this study and were distributed through an online survey tool. The instruments were the 17-item PTSD Checklist (PCL-5) (Weathers et al., 2013), the PROMIS-Anxiety (6-items), Depression (6-items), Anger (5-items), and Alcohol Use (7-items) Short Forms (Pilkonis et al., 2011), and the 27-item Perceived Barriers to Psychological Treatment (PBPT) (Mohr et al., 2006).

The PBPT (Mohr et al, 2006), is a 27-item survey that identifies potential barriers to receiving weekly psychological counseling or other behavioral treatment. The items ask participants to rate the degree to which a variety of problems would interfere with the participants' ability to see a counselor or therapist weekly. Weekly therapy sessions are defined as a session lasting approximately 50 minutes. Response choices include: 5 (impossible), 4 (extremely difficult), 3 (moderately difficult), 2 (slightly difficult), and 1 (not difficult at all) (Mohr et al., 2006). Mohr et al. (2010), evaluated the psychometric properties of the PBPT and concluded that the scale had good to very good internal reliability, internal consistency, and criterion validity.

Method

The study used a cross-sectional descriptive survey research design. A non-probability convenience sampling method was used in order to collect data on military and veteran students. Participants were recruited from a small liberal arts college in the state of Florida, whose total student body population is approximately 4,200 individuals, and of those, 268 individuals are military or veteran students. Of the 268 military and veteran students on the campus, 37 individuals (14% of the enrolled military and veteran students) participated in this study.

This study focused on four research questions: (a) are there differences in perceived barriers to psychological treatment when participants are compared by age, gender, ethnicity, marital status, education, branch of service, years of military service, and current military status?; (b) are there differences in PTSD, depression, anxiety, anger, or alcohol use when participants are compared by age, gender, ethnicity, marital status, education, branch of service, years of military service, and current military status?; (c) do age, gender, ethnicity, marital status, education, branch of service, years of military service, or current military status predict barriers to psychological treatment for study participants?; (d) do age, gender, ethnicity, marital status, education, branch of service, years of military service, or current military status predict the presence of PTSD, depression, anxiety, anger, or alcohol use in study participants?

Participants

Participants ranged in age from 23 to 61 years of age; the mean age was 35.62 years old ($SD = 8.95$). The sample included 67.6% men ($n = 25$) and 32.4% women ($n = 12$). Participants had the option of selecting one of seven designations that best described their ethnic identification, including Asian/Pacific Islander, White/Caucasian, Hispanic/Latino(a), Puerto Rican, Black/African American, Multiracial, and Other. The majority of the participants 43.3% ($n = 16$) self-identified as White/Caucasian, 27% ($n = 10$) as Black/African American, 10.8% ($n = 4$) as Multiracial, 10.8% ($n = 4$) as Hispanic/Latino/a, 2.7% ($n = 1$) as Puerto Rican, 2.7% ($n = 1$) as Asian/Pacific Islander, and 2.7% ($n = 1$) as Other.

Participants were also asked about their educational levels and marital status. The majority of the participants, 67.6% ($n = 25$) reported currently being enrolled at the undergraduate level. Of those, 10.8% ($n = 4$) reported currently being enrolled as a freshman, 13.5% ($n = 5$) reported currently being enrolled as a sophomore, 32.5% ($n = 12$) reported currently being enrolled as a junior, and 10.8% ($n = 4$) reported currently being enrolled as a senior. The other 32.4% ($n = 12$) reported current enrollment as a graduate student. Regarding participants' marital status, 43.3% ($n = 16$) reported being married, 35.1% ($n = 13$) reported having been divorced, 16.2% ($n = 6$) reported being single/never married, 2.7% ($n = 1$) reported being widowed, and 2.7% ($n = 1$) reported being in a life partnership/civil union.

Other demographic variables participants reported on were years of military service, branch of service, and current military status. With regards to years of military service, 29.7% ($n = 11$) reported serving 0-5 years, 40.5% ($n = 15$) reported serving 6-10 years, 5.4% ($n = 2$) reported serving 11-15 years, 10.8% ($n = 4$) reported serving 16-20 years, and 13.5% ($n = 5$) reported serving 20 or more years. The majority of military service was provided in the Navy (51.4%; $n = 19$), followed by the Army (32.4%; $n = 12$), the Marines (8.1%; $n = 3$), and the Air Force (8.1%; $n = 3$). No participants reported having served in the Coast Guard. Finally, current military status was reported for all participants. The majority of respondents reported being veteran Non-Retired status (62%; $n = 23$), followed by those

reporting veteran Retired Status (30%; $n = 11$), and Active Duty (8%; $n = 3$). None of the participants identified as being in the National Guard or Reserves as their current status.

Data Analysis and Results

The current study focused on four research questions. The first and second questions were analyzed using a multivariate analysis of variance design (MANOVA), which allowed for the analysis of the independent variables individually, as well as several dependent variables. The dependent variables in the first question were individual items on the PBPT instrument (Mohr et al., 2010), and the five mental health dependent variables in the second question included: PTSD, depression, anxiety, anger, and alcohol use, each as measured by score on the correlated instrument. The independent variables for both questions were age, gender, ethnicity, marital status, education, branch of service, years of military service, and current military status.

The third and fourth questions were analyzed using a multiple (linear) regression statistical design, allowing for the prediction of a dependent variable from multiple independent variables. The dependent variable in the third question included perceived barriers to psychological treatment for study participants. There were eight independent variables in the third question: age, gender, ethnicity, marital status, education, branch of service, years of military service, and current military status. For the fourth question, the same eight independent variables were used and five mental health dependent variables used were: PTSD, depression, anxiety, anger, and alcohol use, each as measured by score on the correlated instrument. A discussion of the findings with regards to perceived barriers to psychological treatment, as well as the five mental health dependent variables is reported below.

Perceived Barriers to Psychological Treatment

Research questions one and three addressed the dependent variable of perceived barriers to psychological treatment. For question one,

perceived barriers to psychological treatment was explored using eight independent variables: age, gender, ethnicity, marital status, education, branch of service, years of military service, and current military status. Data were assessed prior to analysis to ensure the assumptions of MANOVA were met. The Levene test for perceived barriers ($p = .181$) also indicated that assumptions were met. Power analysis for a MANOVA was conducted in G*Power using an alpha of 0.05, a power of 0.80, and a large effect size ($f = 0.40$) (Faul, Erdfelder, Buchner, & Lang, 2013), indicating a desired sample size of 38.

The MANOVA analysis revealed that current military status influenced barriers to treatment. The multivariate main effect for military status, Wilks $\lambda = .021$, $F(2, 27) = 10.165$, $p = .004$, observed power = 0.99 indicated there was a significant finding on the dependent variable of barriers to treatment at 0.05 significance level. No individual significance was found on the PBPT items with regards to military status.

The MANOVA results also revealed significant findings on the variables branch of service and ethnicity. The multivariate analysis main effect of branch of service, Wilks $\lambda = .021$, $F(3, 36) = 1.76$, $p = .048$, observed power = 0.91, and ethnicity, Wilks $\lambda = .001$, $F(6, 36) = 8.99$, $p = .001$, observed power = 0.99 indicated a significant effect on barriers to treatment. Specifically, individual significance was found on the following PBPT items with regards to ethnicity (a) responsibility of caring for loved ones, $F(6, 36) = 2.643$, $p = 0.02$, observed power = 0.96 and (b) difficulty motivating oneself to go to therapy, $F(6, 36) = 2.272$, $p = 0.041$, observed power = 0.92. However, there were no significant findings with regards to the independent variables of age, Wilks $\lambda = .002$, $F(22, 36) = 0.943$, $p = .630$; gender, Wilks $\lambda = .167$, $F(1, 36) = 1.659$, $p = .216$; marital status, Wilks $\lambda = .002$, $F(4, 36) = 0.881$, $p = 0.684$; education, Wilks $\lambda = .000$, $F(5, 36) = 1.189$, $p = 0.298$; or years of military service, Wilks $\lambda = .001$, $F(4, 36) = 1.138$, $p = 0.363$.

To address question three, a multiple linear regression model was used that included eight predictor variables: age, gender, ethnicity, marital status, education, branch of service, years of military service, and current military status. A probability level of $p = .05$ or less was utilized for testing significance. All of the variables were entered into the model and no

statistical significance was found ($R = .597$, $R^2 = .356$, $R^2_{adj} = .172$, $F(8, 36) = 1.937$, $p = .094$).

PTSD, Depression, Anxiety, Anger, and Alcohol Use

Research questions two and four addressed the dependent variables of PTSD, depression, anxiety, anger, and alcohol use, as measured by scores on the corresponding instruments. For question two, the dependent variables were explored using eight independent variables: age, gender, ethnicity, marital status, education, branch of service, years of military service, and current military status. Separate one-way MANOVA's revealed no significant findings for any of the independent variables: age, Wilks $\lambda = .004$, $F(22, 36) = 1.003$, $p = .506$; gender, Wilks $\lambda = .167$, $F(1, 36) = .839$, $p = .336$; ethnicity, Wilks $\lambda = .448$, $F(6, 36) = .697$, $p = .890$; marital status, Wilks $\lambda = .561$, $F(4, 36) = .735$, $p = .811$; education, Wilks $\lambda = .596$, $F(5, 36) = .654$, $p = .889$; branch of service, Wilks $\lambda = .561$, $F(3, 36) = .736$, $p = .809$; years of military service, Wilks $\lambda = .505$, $F(4, 36) = .883$, $p = .627$; and current military status, Wilks $\lambda = .809$, $F(2, 36) = .715$, $p = .707$.

To address question four, five separate multiple linear regression models that included eight predictor variables were used: age, gender, ethnicity, marital status, education, branch of service, years of military service, and current military status. A probability level of $p = .05$ or less was utilized for testing significance. All of the variables were entered into the model and no statistical significance was found for any of the dependent variables: PTSD, ($R = .511$, $R^2 = .261$, $R^2_{adj} = .014$, $F(8, 36) = 1.05$, $p = .423$); depression, ($R = .451$, $R^2 = .203$, $R^2_{adj} = -.062$, $F(8, 36) = .766$, $p = .648$); anxiety, ($R = .498$, $R^2 = .248$, $R^2_{adj} = -.003$, $F(8, 36) = .988$, $p = .472$); anger, ($R = .546$, $R^2 = .298$, $R^2_{adj} = .064$, $F(8, 36) = 1.272$, $p = .296$); or alcohol use, ($R = .456$, $R^2 = .208$, $R^2_{adj} = -.057$, $F(8, 36) = .786$, $p = .631$).

Discussion

Much of the literature reviewed supports the claim that military and veteran students are reluctant to seek counseling services (Currier et al., 2017). Stigma about receiving counseling services, belief of ineffective

treatment approaches, and untrustworthy providers, have been common factors cited as barriers to treatment for military and veteran college students (Currier et al., 2017). Consistent with previous findings, the researchers found data to support that military status (active duty, veteran non-retired, or veteran retired), branch of service (Navy, Army, Marines, or Air Force), and ethnicity, each individually influenced barriers to treatment. Specifically, the researchers found that factors such as responsibility of caring for loved ones and difficulty motivating oneself to go to counseling were significant barriers to counseling, which was particularly influenced by ethnicity. There were no significant predictors found that would influence barriers to treatment, therefore the current findings contradict the results of previous studies (Hundt et al., 2014). Similarly, the finding that none of the demographic variables influenced or predicted PTSD, depression, anxiety, anger or alcohol use are also inconsistent with the results of earlier works (Barry et al., 2012; Currier et al., 2015; Romero et al., 2015).

Implications for Practice

When approached with the distinguishing factors of how different military and veteran students are from non-military, while still remaining military veteran students, universities are better able to see where they can improve their support for the military and veteran students they have on campus. First, universities can coordinate services for veterans in a setting where they are most likely to seek help (Currier et al., 2017). Another way that universities can support their military and veteran students is to be aware of some of the barriers these students face with regards to counseling services. The findings of this study are consistent with previous work that indicate that military and veteran students are reluctant to seek counseling due to such factors as caregiving responsibilities or motivation to seek services. Addressing these barriers could easily be addressed through targeted marketing or educational campaigns on college campuses that let students know where the counseling center is located and that services are often free for students. Many college counseling centers have flexible hours and letting students know about evening or weekend hours could assist in overcoming barriers such as a student being too busy or unable to find time

to attend counseling. Hiring mental health staff who share an understanding of the military and veteran culture is a critical component to gaining trust with students (Sudano, Collins, & Miles, 2017). Having counseling center staff attend new student orientations, engage as classroom guest speakers, or attend on campus student group events could assist in overcoming any challenges that students have with distrust or discomfort with those providing counseling services.

In terms of the findings related to the experience of PTSD, depression, anxiety, anger, and alcohol use in the military and veteran student participants in this study, it may be important to acknowledge that the military and veteran population may be over-pathologized with regards to mental health problems. Holowka et al., (2014), looked at the validity of PTSD diagnoses in veterans who served in Iraq and Afghanistan and found that of those participants, 25% had been false-positively identified as having a diagnosis of PTSD. It could be beneficial for college counseling centers to recognize that this group of students may not differ greatly from non-military and veteran students in their experience of mental health disorders.

Limitations and Implications for Future Studies

Although the effort was made to increase the sample size, the study is most limited by the small number of participants included in the study. The hope is that at least 100 military and veteran students would participate in this study, however only 37 individuals responded to the recruitment efforts. Recruiting students on a small college campus to participate in studies where mental health questions are asked continues to be a main hurdle in understanding the mental health challenges within this population. Of even greater challenge, is recruiting military and veteran students to talk about these sensitive issues, given the known stigma that exists around the topic of mental health within the military population. Future studies would benefit from collaborative recruiting efforts with military support services on the college campus, if those services exist, to assist with increasing the number of participants through utilization of a familiar campus entity.

Additionally, only five mental health variables were assessed in the surveys which could have greatly influenced why no significance was

found with regards to any of the mental health variables in this study. By not including the assessment of attention deficit/hyperactivity disorder, eating disorders, phobias, and other common psychiatric issues, the results in the area of all mental health disorders is limited. Future studies should consider broadening the scope of mental health variables assessed to increase the types of challenges that may exist with more student responders. Finally, given the small sample size, limitations exist around the statistical analysis and findings of this study. Because some variables (i.e. marital status and ethnicity) had only one individual represented in some of the subcategories, post-hoc tests were unable to be conducted. Despite these limitations, our study still provides insight in to some of the barriers to seeking counseling services that military and veteran college students might face.

Conclusion

The researchers in this study sought to determine perceived barriers to counseling services and the experience of PTSD, depression, anxiety, anger and alcohol use in the military and veteran student population on a small liberal arts college campus. Previous studies found the existence of stigma associated with counseling, lack of trust of counselors, and challenging the efficacy of counseling to be common barriers to seeking counseling services (Currier et al., 2017). Existing literature also identified depression, PTSD, drinking behaviors, and anxiety to be common mental health problems experienced by military and veteran college students (Barry et al., 2012; Currier et al., 2015; Romero et al., 2015). Although this study found similar results in terms of the barriers military and veteran college students may experience in terms of seeking counseling services, there were no findings that concluded that PTSD, depression, anxiety, anger, or alcohol are problematic within the population sampled. Considering these findings, college counseling centers can increase their efforts to overcome barriers that exist for military and veteran students seeking counseling services, while continuing to monitor the presence of mental health issues in accordance with the assessment procedures used for all students.

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Exploring Associations Between Adverse Childhood Events and Resilience Level of Army Veterans

Stephanie R. Rausch

Walden University

Tami J. Frye

Walden University

This study examined the association between childhood factors of socioeconomic status, parental discipline, and being a military child, and adult resiliency level using the theoretical framework of Dienstbier's theory of mental toughness. Army veterans were recruited through social media and veterans' organizations to complete a survey of 25 questions that consisted of demographic questions on childhood socioeconomic factors, questions from the Harsh Discipline Scale (HDS), and questions from a 9-item Resiliency Scale (RS). No associations were found between the independent and dependent variables. However, statistically significant associations were shown between spanking and high resilience with reported answers of "almost always" having higher level of resilience (Odds Ratio = 12.001, $p = .032$). Examining resilience questions individually showed that low and middle socio-economic status had statistically significant higher resilience in responding to extreme pressure in a positive way.

Keywords: Army veterans, childhood adversity

Correspondence concerning this article should be addressed to Stephanie Rausch, Walden University, Email: stephanie.r.rausch.civ@mail.mil

Veteran mental health issues and suicide have become a concern in recent years with increased incidence attributed to ongoing wars on terror causing an increase in depression, Post-Traumatic Stress Disorder (PTSD), and other stresses to mental health such as finances and family hardships (Steenkamp, Nash, & Litz, 2013). Resiliency is believed to be a main component in whether a person can bounce back from adversities and have positive mental health outcomes. Hourani et al. (2012) defined resilience as a multidimensional characteristic that varies from person to person based on many different facets of life that include age, gender, and culture, and can change throughout time.

There is some disagreement in research on what causes resilience – whether it is inherited through genetics, developed over time through exposures, or a mixture of both. Dienstbier’s theory of mental toughness posits that resilience can be developed over time and that exposure to adverse childhood events (ACEs) with a reasonable support network, and recovery time between events can lead a person to be more resilient as an adult (Dienstbier, 2015). This theory inherently says that a child must be exposed to some adversity in order to develop resiliency and positive coping skills that can be utilized as an adult to assist them with staying mentally healthy. If there is no exposure to adversity, or too much adversity, then negative mental outcomes would likely be present in adulthood. This research explores three specific ACEs of socioeconomic status (SES): parental discipline style, military child status, and how these relate to developing resilience as an adult military veteran.

Literature Review

There exists a variety of research on how early childhood factors are related to resilience, such as abuse, poverty, and education level of parents (Liu, Reed, & Girard, 2017; Shiner, Allen, & Masten, 2017). However, current research on the relationship between ACEs and adult mental health is inconsistent in many aspects. Shiner et al. (2017) found that exposure to high numbers of ACEs can cause permanent negative changes to the big five personality traits, potentially leading to an inability to learn resiliency or other positive coping behaviors. Liu et al. (2017) found adults with exposure to minimal ACEs had higher levels of

resilience, indicating that some children can adapt well to early life stressors and build resilience against future adversities and potential mental health issues. In military members who are deployed, exposure to ACEs was predictive of PTSD symptoms (Choi et al., 2013); however, in the same population, other researchers have found that resilience acted as a moderator between ACEs and PTSD symptoms (Poole, Dobson, & Pusch, 2017). Much of the literature found on the topic of ACEs and resilience focused on ACEs such as physical or sexual abuse, extreme poverty, and growing up as a ward of social services (Nurius, Green, Logan-Greene, & Borja, 2015). In these reviews, there was almost always a negative association between the ACE and adult resilience. In these instances, ACEs were grouped together, measured as a whole, and compared with the resilience. There were few literature sources that focused specifically on SES or discipline as an individual ACE. There was even less literature found on how adult resiliency is related to growing up as a military child. Literature reviewed that specifically explored SES or discipline had mixed results depending on how they classified the variables, such as using family education or household size in an SES variable, or if spanking was included as a physical abuse or separate from physical abuse (Afifi et al., 2017; Lê-Scherban, Brenner & Schoeni, 2016).

Discipline and Resilience

Parental discipline style has been shown to have an effect on adult mental health outcomes and how a child develops resiliency (Merrick et al., 2017). Many researchers have concluded that spanking is an ACE and should be classified as physical abuse. Other researchers have concluded that spanking – open handed, only on a child’s buttock – should not be classified as physical abuse, and does have positive outcomes with discipline and mental health (Gershoff & Grogan-Kaylor, 2016). Analyzing discipline using Dienstbier’s Theory would conclude that basic discipline in the form of a time out, being placed in a corner, or spanking as previously described could be considered a minor ACE that would help a child develop resilience. Gershoff and Grogan-Kaylor (2016) and Tallieu and Brownridge (2013) are just a few researchers who found that spanking had negative associations with resilience and mental health. However, consistent with

other literature on this topic, spanking was grouped in the variable with other physical abuse, and not analyzed as a separate construct. Merrick et al. (2017) and Afifi et al. (2017) had similar results, but once they adjusted spanking as an individual variable, removing other ACEs from their statistical equations, they found there were no statistically significant associations between spanking and adult depression. The mixed results in literature that explored how discipline is related to resilience show that a gap remains in understanding the line between discipline and physical abuse and how each affect future mental health.

Socioeconomic Status and Resilience

SES is a well-known factor in resilience development and mental health. Those who grow up in poverty or homelessness have consistently shown poor mental health outcomes (Lê-Scherban et al., 2016). There is much research on how poverty affects the development of resilience. However, research on the relationships between middle class households and mental health was scarce and inconclusive. Using Dienstbier's Theory to analyze how SES is related to resilience should show that adults who grew up in a middle-class environment will be more resilient than those who grew up in upper class or poverty (Dienstbier, 2015). Those children who grow up in poverty would be considered to lack the support networks or recovery time between adversities to effectively develop resilience, while those who grow up in upper class households would not experience adversities and therefore would not develop resilience at all (Lê-Scherban et al., 2016). Björkenstam, Pebley, Burström, & Kosidou (2017) and Lê-Scherban, Brenner, & Schoeni (2016) found that adults who were financially disadvantaged as children had poorer mental health outcomes than those who grew up with wealth. All the research found on this topic was specific to poverty or upper-class households. There were no peer reviewed studies found on the relationship between resilience and middle-class upbringing.

Military Child and Resilience

It is well known that military children face a variety of adversities such as parental deployments, multiple moves, changing schools, losing friends, and financial stress between parents. Literature has shown that military families face adversities such as instability, domestic violence, and child neglect or abuse, at a higher rate than their civilian counterparts (Oshri, Lucier-Greer, O'Neal, Arnold, Mancini, & Ford, 2015). Much of the research reviewed showed a negative association between being a military child and mental health. However, Oshri et al. (2015) found that children from military families that had a rigid lifestyle with consistency in discipline and rules were more resilient with positive mental health outcomes. Looking at this variable using Dienstbier's lens should show that military children would be more resilient adults because they face adversities but have access to many resources and programs that help them adjust and bounce back from these adversities. Of all the literature reviewed that explores how resilience is related to being military, no studies were found that explored this construct in adult veterans. The most current data available shows that 83% of new military recruits report having a family member serve in the military (Rostker, Klerman, & Zander-Cotugno, 2014). These statistics show that research is needed to determine how resiliency in the veteran population is related to growing up with the military and understanding how the ACE of being a military child affects adult mental health.

Exploring how these three variables affect the resilience level of veterans could lead to a better understanding of what causes PTSD and other mental health issues in veterans. Understanding how these variables affect veterans can also have an impact on future resilience training for new recruits and current service members.

Methods

This study was a quantitative survey research study that utilized a 25-question survey built on the platform SurveyMonkey using demographic questions, the Harsh Discipline Scale (HDS), and the 9-item Resiliency Scale (RS). The independent variables are parental discipline, childhood

SES, and military child status. The dependent variable is resilience level. The associations between these variables were addressed using the following three research questions:

Research Question 1: Is there an association between parental discipline style on a child and their resilience level as an adult veteran?

Research Question 2: Is there an association between childhood SES status and resilience level as an adult veteran?

Research Question 3: Is there an association between being a child of a military veteran and level of resilience as an adult veteran?

Participants and Procedures

The participants for this study were recruited through social media and veterans' organizations in the Midwest. For the sake of manageability, the only inclusion criterion was that they be Army veterans. The sample size was calculated with G*Power software to be 67 using a .05 alpha and 80% power. This number was rounded up and doubled to account for potential incomplete data, biases, and other potential limitations that arise when using volunteers for survey research. Veterans who agreed to participate would click on the link provided in the social media post or go to the web address provided on the flyers. The first page of the survey was the consent form. They had to agree at the bottom of the form to continue into the survey. The survey link was active for 30 days and recorded a total of 205 respondents. There were 21 incomplete surveys that were not used, leaving a total of 184 completed surveys for analysis. The IRB from Walden University approved this study on 26 July 2018, approval number 07-26-18-0148735, with an expiration date of 25 July 2019.

Measures

The demographic questions consisted of questions that asked current age, gender, length of service, rank at discharge/retirement, number of deployments, PTSD/TBI diagnosis, family income as a child, childhood household size, mother's education, father's education, and if either/both parents served in the military. The variables of age, gender, length of service, rank at discharge, and PTSD or TBI diagnosis were collected to use

as potential moderators or covariates during data analysis. The variables for income, family size, and parent's education were used to produce the SES variable. These questions were set up in Likert format so that all the data could be ordinal and therefore compared statistically. Family size was measured using 1 for "3 or less members," 2 for "3-4 members," 3 for "5-6 members, and 4 for "more than 6 members." Parents' education was coded as 1 for "less than high school graduate," 2 for "high school graduate," 3 for "undergraduate degree," 4 for "master's degree or higher." The annual level of income that qualifies as poverty, low, middle, or upper class has changed in the last 20 years and was measured based on the median household income chart for 1990 to 2016 provided by the U.S. Census Bureau and the Prior HHS Poverty Guidelines from 1982 - 2016 chart from the U.S. Department of Health and Human Services (U.S. Census Bureau, 2019; U.S. Department of Health and Human Services, n.d.). Using these two charts, income was separated into poverty, which was coded as 1 for "less than \$15,000 per year," low class coded as 2 for "\$15,000 – \$45,000 per year," middle class coded as 3 for "\$45,000 – \$65,000 per year," and upper class coded as 4 for "over \$65,000 per year." The four SES questions were added and averaged to produce the independent variable of SES. Each individual SES category was also compared independently with resilience to see if there were any differences between the variables.

The military child question had four answer choices: none, father, mother or both. All non- answers were coded as 0, and father, mother or both answers were coded as 1 to produce the independent variable of military child.

The Harsh Discipline Scale (HDS) is a four-question scale developed in 1991 by Simons, Whitbeck, Conger, and Wu that measures discipline style of parents. This scale was used because it asks specific questions about spanking, and keeps it separate from other physical abuse questions. The questions are rated on a 5-point scale with 1 equal to never, 3 equal to about half the time, and 5 equal to always. The answers to the questions were added and then averaged. The higher the score, the harsher the parenting style, with a low score meaning less harsh parenting. The average score for each participant was used at the discipline variable, however, each question was also independently compared with the

resilience variable to ascertain if there were any differences between different discipline styles and resilience.

The dependent variable of resilience was measured using the 9-item Resiliency Scale developed by Siu, et al. 2009. This instrument was initially developed by Siu et al. (2009) as a 10-item resiliency scale with seven items taken from the Resiliency Self-Test created by the Army in their Hooah4Health Program in 2001. The Hooah4Health program was used to assess soldiers' resiliency and stress levels and teach better coping mechanisms (Pufal, 2001). Two other items on this scale were adapted from earlier research from the same authors, and the tenth item was newly formed for this specific scale (Siu et al., 2009). The newly added tenth item of the scale was removed after statistical analysis from their research showed that removing this one item lead to a correlation between the resiliency scale and other scales they used, of .40 and above with the remaining nine scale items. This instrument was used in this study because it was constructed using seven questions from the Resiliency Self-Test created by the Army in the Hooah-4-Health Program (Pufal, 2001). The fact that this instrument was previously used on military members with high external and internal validity made it ideal for use in this study. The scale ranges from 1 to 6, with 1 equal to very inaccurate, and 6 equal to very accurate. The 9 items are added together, and the average is calculated to determine level of resiliency. A higher score is equal to a high resilience level, with a low score meaning a low resilience level. The average score was used as the resiliency variable, and similar to the independent variables, each individual question was also compared with the independent variables.

Limitations

This study had several limitations. First, the results may not be generalizable to the general population because the participants were Army veterans only. A second limitation was the use of surveys that have questions about the veterans' past childhood events. This may have introduced recall bias. A third limitation is the use of self-administered surveys. Not all participants can be expected to remain honest on these surveys. These limitations were addressed by explaining to all participants

that their answers to the surveys would remain anonymous. A final limitation was selection bias, because all participants would be volunteer only and had to meet the requirement of being a prior Army soldier.

Threats to Validity

External validity threats can threaten generalizability of the results and include selection bias, confounding, experimental variables, and interference (Frankfort-Nachmias, Nachmias, & DeWaard, 2015). This study requires the use of a very specific population creating a selection bias and threatening the generalizability of the results. Using the population of only retired or discharged Army soldiers will make the results less likely to apply to a civilian population. Due to the nature of the job of Army soldiers, preventing this bias is not possible. The general population does not have exposures to combat like an Army soldier does and thus will make these results specific to military members. However, depending on what is discovered as the relationship between the tested variables, this research could be reproduced with a civilian population to determine generalizability. It is reasonable to assume that if ACEs influence the resiliency of soldiers, they will also have an effect on the resiliency of the civilian population because both populations were children and had no military experience at the time of the ACE occurrence.

Internal validity threats affect the reliability of the results and can include threats such as instrumentation bias, statistical errors, and differential selection (Frankfort-Nachmias et al., 2015). The internal threat of this study is introduced by the use of a specific target population and the inability to randomize the sample. An experimental study is the only way to control for internal validity threats (Creswell, 2009).

Construct validity is the ability for the test to measure what it was meant to measure (Frankfort-Nachmias et al., 2015). This validity threat is minimized by using pre-tested questionnaires that have been shown in previous research to be valid and reliable. Statistical procedures will also be used to ensure the measurement tools did measure the intended variables.

Results

The data were cleaned, coded, and analyzed using IBM SPSS Version 23 software. Tests for normality and distribution were done using chi-squared goodness of fit, and Mann Whitney U/Wilcoxon Rank Sum, and Kruskal-Wallis. The Chi-squared Goodness of Fit test was used to ensure that the data fits the model and to identify any potential outliers (Forthofer, Lee, & Hernandez, 2007). The distribution of the data was tested with the Chi-Squared Test for Homogeneity. Correlations between the variables was tested using several nonparametric test procedures and ordinal logistic regression. Each independent variable was compared with the dependent variable using the Mann Whitney Test and Wilcoxon's Rank Sum Test to explore differences between groups (Field, 2009). The Kruskal-Wallis test was used to compare all of the variables together to determine differences between groups (Gerstman, 2008). Hypothesis testing was conducted using ordinal logistic regression.

Demographics

There were 117 males and 67 females in this study. Rank at discharge covered all available ranks in the army except O7 through O10, which encompasses the four levels of general officers. The rank of E4 had the highest frequency of 43 responses or 23.4%. Rank was further analyzed into categories as described previously with senior enlisted ranks being the most reported at a total of 83 or 45.1%. The average age category with 57 responses and 31% was 45-54. The question about prior PTSD diagnosis was answered with 72 (38.1%) reporting "yes - they had been diagnosed with PTSD," and 112 (60.9%) answered no. The TBI diagnoses questions were answered with 36 (19.6%) reporting yes, and 148 (80.4) reporting no. The years of service reported ranged between 1 and 37 with a mean of 13.23. Number of deployments ranged from 0 to 16, with the mean of 1.74. There were 112 (60.8%) participants who answered that they had a father or mother serve in the military, 11(5.9%) participants indicated that both parents served, and 61 (33.2) participants answered that neither parent served.

The HDS was averaged and 3 (1.6%) participants had average answers of never, 74 (40.2%) participants had an average answer of almost never, 71 (38.6%) participants had an average of about half of the time, 36 (19.6%) participants had an average of almost always, and 0 (0%) had an average of always. Question One for the HDS asked about “how often parents lost their temper.” The most common answer with 61 (33.2%) participant responses was “never”. Question Two asked about “how often parents spanked or slapped the participant.” The most common answer with 70 (38%) participant responses was “never”. Question Three asked about “being hit with a belt or other object.” The most common answer with 47 (25.5%) participant responses was “never”. Question Four asked “how often a participant was kicked out of the house.” The most common answer with 130 (70.7%) participant responses was “almost always”.

The SES variable was averaged into 1) low SES, 2) median SES and 3) high SES, based on answers to family size, parent’s education, and household income. There were 84 participants who had an average of low SES, 75 participants had an average of middle SES, and 25 participants had an average of high SES. For the family size question, the category of 5-6 family members had the highest frequency at 69 (37.5%) responses. For the fathers’ education, “less than a high school diploma” had the highest frequency with 101 (54.9%) responses. For the mothers’ education, “less than a high school diploma” had the highest frequency, with 111 (60.3%) responses. For the income question, the highest frequency was 88 (47.8%) responses in the category of “less than 15 thousand dollars per year” category.

The dependent variable of resiliency was an averaged score from the nine questions on the resiliency scale. There were 4 (2.2%) participants that had average answers of “strongly disagree”, 45 (24.5%) participants had an average answer of “disagree”, 79 (42.9%) participants had an average of “somewhat disagree”, 42 (22.8%) participants had an average of “somewhat agree”, 14 (7.6%) participants had an average of “agree”, and 0 (0%) had an average of “strongly agree”. Question One asked about being capable of overcoming future problems. The choice of “agree” had the highest frequency of 109 (59.2%) responses. Question Two was a statement about having high capacity for facing adversity. The choice of “agree” had

the highest frequency of 101 (54.9%) responses. Question Three was about remaining calm under pressure. The choice of “strongly disagree” had the highest frequency of 78 (42.4%) responses. Question Four was about experiencing anxiety under stressful circumstances. The choice of “disagree” had the highest frequency with 49 (26.6%) responses. Question Five was about continuing to like oneself after making a mistake. The choice of “strongly disagree” had the highest frequency of 67 (36.4%) responses. Question Six is about standing up for oneself. The choice of “agree” had the highest frequency of 70 (38%) responses. Question Seven was about responding to difficult situations in a positive way. The choice of “strongly disagree” had the highest frequency of 72 (39.1%) responses. Question Eight was about experiencing peacefulness during stressful times. The choice of “somewhat disagree” had the highest frequency of 43 (23.3%) responses. The last question was about remaining calm in frightening situations. The choice of “strongly disagree” and “somewhat disagree” both were equal with the highest frequency of 54 (29.3%) responses each.

Distribution and Normality Analysis

The distribution and normality of the variables was tested using the Mann-Whitney U/Wilcoxon Rank Sum test, Kruskal-Wallis test, and Chi-squared tests. The Mann-Whitney U and Wilcoxon Rank Sum test was performed on all variables to examine if there was a difference between medians in each group.

Chi-Squared Goodness of Fit. A chi-squared goodness of fit test was done on all variables to determine if the distribution of data matched the population. The test was run with the assumption that all observed frequencies would be of equal proportions.

The resiliency variable has five groups, strongly disagree (N = 4), disagree (N = 45), somewhat disagree (N = 79), somewhat agree (N = 42), and agree (N = 14). The minimum expected frequency was 36.8. There was a statically significant difference between the five resiliency groups and what is expected in the population with almost half of participants

averaging a resilience score of “somewhat disagree”, $X^2(4) = 94.315, p = .000$.

The SES variable has three groups, low SES (N = 84), median SES (N = 75), and high SES (N = 25). The minimum expected frequency was 61.3. There was a statistically significant difference between the three groups of SES and what is expected in the population with almost half of the participants averaging in the low SES score, $X^2(2) = 32.946, p = .000$.

The discipline variable has four groups, never (N = 3), almost never (N = 74), about half time (N = 71), and almost always (N = 36). The minimum expected frequency was 46. There was a statistically significant difference between the groups of discipline and what is expected in the population with over half of the participants averaging in the “almost never” and “about half time” categories, $X^2(3) = 73, p = .000$.

The military child variable has two groups, none (N = 61), father, mother, both (N = 123). The minimum expected frequency was 92.0. There was a statistically significant difference between the two groups of military children and what is expected in the population with over half of the participants indicating they were a military child, $X^2(1) = 20.891, p = .000$.

Mann Whitney U/Wilcoxon Rank Sum. The Mann Whitney U/Wilcoxon Rank Sum test was used to determine if there was a difference in medians between groups. Since the SES variable had more than two groups, the test was run separately for SES groups 1 (low SES) and 2 (median SES), groups 1 (low SES) and 3 (high SES), and groups 2 (median SES) and 3 (high SES). Graphing of resilience with each group of SES showed the scores between groups were similar. Median score differences were not statistically significant, $p > .05$, between resilience and all groups of SES with SES (1, 2) $U 2779.5, W 6349.5, z -1.352, p .176$, SES (1, 3) $U 1036.5, W 1361.5, z -.104, p .917$, and SES (2, 3) $U 819, W 1144, z -.987, p .324$.

The discipline variable also has more than two groups and was run with groups 1 (never) and 2 (almost never), and groups 3 (about half time) and 4 (almost always). Group 5 (always) of discipline had 0 frequencies and could not be compared with any other group for this analysis. Graphing of resilience with each discipline group showed scores between groups

were similar. Median score differences were not statistically significant, $p > .05$, between resilience and all discipline groups with discipline (1, 2) $U 93.5, W 2869.5, z -.501, p .663$, and discipline (3, 4) $U 1246.5, W 3802.5, z -.218, p .827$.

The military child variable has two groups and was compared as groups 0 (none) and 1 (father, mother, both). Graphing of resilience with each military child variable group showed scores similar between groups. Median score differences were not statistically significant, $p > .05$ between resilience and military child with $U 3408, W 11034, z -.1068, p .285$.

Kruskal-Wallis. The Kruskal-Wallis H test to determine if there were differences between resilience and the independent variables of SES, discipline, and military child. In comparing resilience with the three groups of SES, low SES, median SES, and high SES. There was no statistically significant difference between resilience and the groups of SES, $X^2(2) 2.13, p .345$. In comparing resilience with the four groups of discipline, *never*, *almost never*, *about half time*, and *almost always* (“always” had a frequency of 0 and was not included in the test), the difference between groups was not statistically significant, $X^2(3) .726, p .867$. In comparing resilience to the two groups of the military child variable, the differences between groups was not statistically significant, $X^2(1) 1.141, p .285$.

Hypothesis Testing

Ordinal logistic regression and odds ratio analysis was used to determine if there were any associations between the dependent and independent variables. There were no statistically significant associations between the variables. When the covariates/moderating variables were added to the model, there was no change in statistical significance in associations. When the HDS questions were analyzed independently with the resilience variable, there was a statistical association found between question 2 “when you did something wrong how often did your mom/dad spank or slap you?” and question 3 “when punishing you did your mom/dad ever hit you with a belt, paddle, or something else?” (Figure 1). In question 2, the odds of people who answered “almost always” scoring high on resilience was twelve times higher than those who answered “always” and

was statistically significant (OR 12.001, p .032). In question number 3, the odds of people who answered “about half time” scoring high on resilience were less than half those who answered “always” and was statistically significant (OR .273, p .012). When the individual RS questions were compared with the independent variables, question 3 “When there is a great deal pressure being placed on me, I remain calm,” showed statistical significance with the SES variables (Figure 2). The odds of SES 1 (low SES) scoring higher on the resiliency scale was three and half times that of SES 3 (high SES) and was statistically significant (OR 3.796, p .007). The odds of SES 2 (median SES) scoring higher on the resiliency scale was five and half times that of SES 3 (high SES) and was statistically significant (OR 5.544, p .001). There were no other variables that showed a statistical significance.

Discussion

The purpose of this study was to measure the associations between specific ACEs of SES, parental discipline style, growing up a military child, and resilience level of Army veterans using Dienstbier’s theory (2015) of mental toughness as a framework in this study conducted in 2019. There were no associations between the independent and dependent variables. There were, however, associations between specific questions of the HDS and resilience, and SES and the specific RS question.

Analyzing the results of this study in 2019 indicates that the individual HDS questions using Dienstbier’s theory (2015) fits with the hypothesis that a mild form of corporal punishment could contribute to increased resiliency, while harsh forms, such as using an object to hit a child, contributes to less resiliency in adulthood (Dienstbier, 2015). The results of these two questions could show there is a fine line between spanking and what is considered abuse. As with the literature review, when spanking is separated into its own category and not grouped with physical abuse, it appears to have a positive association with adult resiliency, while consistent with the literature, physical abuse as seen in question 3, showed a negative association with resilience.

Examining the individual Resiliency Scale (RS) (Siu et al., 2009) questions against the independent variables using Dienstbier’s theory

(2015) showed only significant results in question 3, which was about remaining calm under pressure. Those participants who reported in the low or median SES category showed a positive association with resilience as adults compared with those who reported being in the high SES category. This result is in line with the theory in that children who are from low and median SES face more adversities and should develop better coping skills (Dienstbier, 2015).

Limitations

There were many limitations to this study. The first limitation is that the results cannot be widely generalized because the participants were Army veterans and did not include other military branches. Though they may be applied to other Army members and perhaps to other members of the military in general, they cannot safely be applied to the general population as a whole. The second limitation is the fact that the chi-squared analysis indicated that the data did not fit the population, and this could skew the results. The third limitation is in the distribution of the data, as demographic analysis showed that the participant population had a lower than average resilience score to start with. The fourth limitation is recall bias from asking questions that required participants to remember things and events from childhood. A fifth limitation is the use of convenience sampling and using social media to recruit potential study participants. This could have caused a bias in that veterans who do not use social media were unaware of the study and unable to participate. A final limitation was the use of Likert scales and ordinal data. Ordinal data is categorical and interpretive meaning that the results can only show correlation, and not causation (Frankfort-Nachmias et al., 2015).

Future Research

Future research on this topic should address the limitations listed and increase the population to all veterans regardless of service branch or length of service. More research using Dienstbier's theory (2015) as framework could also benefit studies that seek to understand resilience. A longitudinal study that starts with young military children and follows them

into adulthood, measuring their ACEs and resilience as they age, could greatly improve our understanding of resilience in military children. Future studies on adults who were military children could also inform researchers on the development of resilience.

Conclusion

The findings from this study indicate there are no associations between the specific ACEs of parental discipline, SES, and military child status, and resilience level of Army veterans. There were, however, associations between spanking and resilience, and physical abuse and resilience, as well as low and median SES and the specific resilience aspect of performing under pressure. Participants were more likely to indicate that they could remain calm and respond positively to extreme pressure if they grew up in a median to low SES homes. Participants who were spanked or slapped regularly were more resilient than those who were not and were more resilient than those who were hit with objects such as a belt or paddle. This result could potentially show that there is a fine line in the area of discipline where an open hand spanking could help a child develop resilience, while using an object to hit the child could hamper the development of resilience. Overall, the results from this study could be used to inform future research on how specific ACEs are related to the development of resiliency in adults. This is a seminal study considering the effects ACEs such as SES, discipline and military child status may have on whether resiliency develops in adulthood. It considers what factors contribute to developing that resiliency and whether or not those factors are statistically significant.

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Mission Reintegration: The Professional School Counselor's Role in Helping Military Families Successfully Reunite after Deployment

Rebekah F. Cole

Arkansas State University

Rebecca Cowan

Walden University

Military families face many challenges when an active duty service member returns home from deployment and reunites with the family. These challenges include rediscovering new roles within the family; dealing with possible mental illness and injury; developing a new routine; and building positive working relationships. Because of their skill set and key position in the school, professional school counselors play a crucial role in helping military families overcome the challenges they face after deployment. By building partnerships with military family members, school counselors can work towards positive outcomes during this difficult time as they offer individual and group counseling, parent education, and provide easily accessible resources to the family.

Keywords: military families, school counseling, deployment

Address correspondence to Rebekah Cole at Rebekah.cole3@gmail.com

There are 1.4 million active duty service members in the Army, Navy, Air Force, and Marine Corps today (The School Superintendent Association [AASA], 2019). Approximately half of these service members are married (Department of Defense, 2017) and 44.1% of these service members have children (America's Promise Alliance, 2019). As a part of

their jobs, military service members regularly face deployments, when they are separated from their families for extended periods of time in order to accomplish a particular mission (Research and Development Corporation [RAND], 2019). Deployments vary in time frame and can either be sudden or planned over a period of time (Committee on the Assessment of the Readjustment Needs of Military Personnel, Veterans, and Their Families, 2013)

Returning home after the deployment brings its own unique set of challenges (Doyle & Peterson, 2005; Sayer, Carlson, & Frazier, 2014). During reintegration, service members must make an active effort to transition back into civilian life. The main component of this reintegration involves re-defining their position within their families. Families, in turn, must accept the service member's return to the household (Glynn, 2013). Many changes have taken place in the home since the service member deployed. Therefore, after the initial excitement of homecoming, the entire family must learn how to adjust to having the service member home again (Knobloch, Knobloch-Fedders, Yorgason, Jebata, & McGlaughlin, 2017). Military children are at the highest risk for abuse, neglect, attachment problems, and trouble coping right after a service member leaves for deployment and immediately after her/his return (Johnson & Ling, 2013).

Role of Professional School Counselor According to ASCA National Model

Professional school counselors are tasked with helping all students be successful in school (American School Counselor Association [ASCA], 2019). According to the ASCA National Model, school counselors assist students socially, emotionally, and academically (ASCA, 2003). These three domains are affected during the period of reintegration and should be addressed by professional school counselors as a part of their comprehensive school counseling program. Since school counselors work with military students throughout public schools in the United States (Cole, 2012), it is important to recognize the challenges that these families face during reintegration from a deployment due to the social and emotional challenges present during this time. Without a clear understanding of the

challenges that these families face, school counselors will not be able to help them effectively (Cozza & Lerner, 2013).

When equipped with this awareness regarding the challenges of reintegration and its high risk to military children (Johnson & Ling, 2013), professional school counselors are in a prime position to offer counseling and support services both to the student as well as the student's family members. Ultimately, with the developmental knowledge and culturally competent counseling skills to help students be successful in school and beyond (Walsh, Barrett, & DePaul, 2007), school counselors can show leadership in actively assisting military families before (pre-integration), during (integration), and after (post-integration) the service member's homecoming (Cole, 2012).

Pre-Integration

In the pre-integration stage, a professional school counselor recognizes that in the weeks before a service member returns home from deployment there may be uncertainties and possibly anxiety amongst each of the family members regarding the role changes that have occurred during the deployment (Walsh et al., 2014). During the deployment the at-home spouse took on more responsibility of caring for the household and was the sole disciplinarian (The Research and Outreach Laboratory [REACH], 2015). She/he may be uncertain about how the roles will shift once the co-parent arrives back home. In addition, the service member may have suffered physical injuries or may be dealing with mental health issues as a result of facing intense combat (Walsh et al., 2014). Each family member may wonder how these physical and mental challenges will affect the service member's return. Finally, while the service member is away, there is an attachment disruption between the parent and child (Johnson & Ling, 2013; Louie & Cromer, 2014) that may result in a disconnected relationship (Huebner, Mancini, Wilcox, Grass, & Grass, 2007). The child may not feel close to, or, depending on her/his age, even remember the service member. The student may worry about what it will be like having another parent at home and how she/he will get along with the returning service member. Overall, these feelings of worry and uncertainty may be confusing to family members who think they should only be experiencing excitement and joyful

anticipation at the thought of their loved one returning home (Johnson & Ling, 2013).

With an understanding of these pre-integration challenges, the school counselor should help the military family put prevention measures into place in order to work to avoid some of these potential challenges (Louie & Cromer, 2014; RAND, 2016; Wilcox et al., 2015). For example, the school counselor might engage the military children in group counseling sessions that focus on coping strategies for anxiety and stressful situations (Cole, 2012; Rush & Akos, 2007). The group can provide a safe and supportive environment to learn and discuss what reintegration will be like and to develop concrete strategies to reconnect with the deployed parent. Having other children in the group with shared experiences can prove therapeutic for the student group members (Cole, 2012; Gladding, 2016; Rush & Akos, 2007).

In addition, the school counselor should meet with the student for individual counseling sessions in order to prepare for integration. She/he might utilize solution-focused brief therapy (SFBT) to help the student set goals for the reintegration period and to highlight the student's strengths in preparation to face any challenges that may arise (Hess, Magnuson, & Beeler, 2012; McCormac, 2016). SFBT techniques have been found to be beneficial when working with military families (Hall, 2016) and include strategies such as emphasizing client resilience and using the miracle question (Toros, 2019), which is particularly useful for goal-setting. For instance, the school counselor might find it beneficial to ask the student the miracle question so that the school counselor can gain an understanding of what is most important to the student during the reintegration period, which can help to prioritize goals.

Another individual counseling approach that may be helpful with military students during this time may be using cognitive-behavioral therapy (CBT), which examines the way in which the student understands the experience of the returning parent and the way in which this understanding affects her/his thoughts, feelings, and overall well-being (Hess, Magnuson, & Beeler, 2012). By utilizing CBT, the professional school counselor can help the student to understand how to monitor her/his thinking and replace maladaptive thinking with more positive thoughts,

which in turn lead to behavior changes (Kress & Paylo, 2019). CBT tools, such as thought records, have been shown to be effective when utilized with the military population (Wenzel, Brown, & Karlin, 2011) and can assist the student with challenging any negative thinking they may have regarding reintegration. Using a thought record can help the student recognize any maladaptive thoughts that might arise as a result of reintegration. As a way to challenge these negative thoughts, the student will be asked to identify any evidence that supports the thought as well as evidence that does not provide support. Finally, alternative, more balanced thoughts will be constructed. For instance, perhaps the student is overgeneralizing (Rnic, Dozois, & Martin, 2016) by making assumptions about the reintegration period based on their previous experiences. Maybe the returning parent exhibited signs of PTSD during past integration periods and the student believes this is likely to happen again. By using a thought record, the school counselor can help the student challenge this thought and develop more balanced thinking such as “my mom had difficulty when returning from her last deployment, but she has important supports, such as a therapist, in place this time to help her work through this.” Additionally, the school counselor can teach other CBT techniques, such as progressive muscle relaxation and breathing exercises, to the student to help reduce any anxiety they might be experiencing (Wenzel et al., 2011).

School counselors should also offer parent education to the at-home spouse who may be worried about the challenges of reintegration (Cole, 2012; Walker, Shenker, & Hoover-Dempsey, 2010). These parent education sessions might focus on setting realistic expectations, stress management, positive parenting strategies, and ways to recognize possible symptoms of mental health issues in children and adults (Cole, 2012; Walker et al., 2010). During these parent education sessions, school counselors should provide the spouse with easily accessible resources regarding mental health counseling that may be useful when challenging times arise (Doyle & Peterson, 2005). For example, a handout with the name, contact information, and description of a marriage and family therapist or mental health counselor in the local area who accepts TRICARE (2019), the military insurance provider, may be helpful for the family to have if the need for family counseling should arise. Another valuable resource would

be a handout with the phone number of Military One's Source's 24/7 support line, where they can call and request confidential non-medical counseling services (Military One Source, 2019).

Above all, when working with students and parents in preparation for reintegration, the school counselor should normalize the possible stressors (such as redefining and reestablishing parenting roles) so that the family can understand that they are not the cause of the problems they may face or unique in their challenging circumstances (Doyle & Peterson, 2005; Drummet, Coleman, & Cable, 2003; Johnson & Ling, 2013). For example, when talking with the at-home spouse and students, school counselors can describe different case studies where military families have overcome the challenges of reintegration. Overall, these case studies can be used to offer hope as well as to highlight the resiliencies inherent in military families. In addition, professional school counselors might utilize bibliotherapy, which involves reading a story and discussing real life implications with the student (Moulton, Heath, Prater, & Dyches, 2011), with military students. Through this technique military students will recognize the commonality of the struggles they face and their feelings will be normalized (Tubbs, Young, Heath, & Dyches, 2019). Books about deployment and reintegration such as *Coming Home* by Greg Ruth (2014) and *All Hands on Deck! Dad's Coming Home!* by Julia A. Maki (2012) can be helpful tools in teaching students about reintegration and helping them to think through the thoughts and feelings that they have about their parent returning home and rejoining the family.

Finally, school counselors should collaborate with teachers in the pre-integration stage to alert them to the upcoming changes in the student's life and to educate them regarding possible warning signs that the student could display as a result of possible challenges in the home life (Clark & Amatea, 2004; Walker et al., 2010). In coordination with the school counselor, teachers should be encouraged to reach out and offer additional support to the at-home spouse, who may be undergoing additional stress at this time. Teachers, in consultation with the school counselor, should likewise provide an extra layer of academic support for the student, who may be distracted from her/his school work while focusing on the upcoming changes and challenges at home (Richardson et al., 2011).

School counselors can then follow up with the student in order to reinforce any interventions deemed necessary by the teacher.

Integration

Integration occurs when the service member arrives home from deployment and reunites with the family. Challenges that the family may face during this time is the shift in parenting responsibilities. In addition, as a result of the time spent in combat, the service member may display mental health symptoms such as anxiety, aggression, Post Traumatic Stress Disorder (PTSD), and substance abuse (Hoge, Auchterlonie & Milliken, 2006; Wilcox et al. 2015). It is important to note that past studies have shown that there is a correlation between the military parent's mental health symptoms and the appearance of symptoms in the spouse and children (Creech, Hadley, & Borsari, 2014; Lester et al., 2010; REACH, 2015). In the midst of these struggles the service member must work to re-connect with the children who have grown and changed (Pisano, 2010) and who may or may not remember their interactions with the service member before the deployment.

Since the initial homecoming is often a time of celebration and even known as a "honeymoon period" (Boice, 2019), the school counselor should join the family in celebrating the end of the deployment and return of their loved one. If invited by the family, the school counselor might physically attend the service member's return (i.e. greet the Navy ship at the homecoming port on the naval base). The school counselor could also host a homecoming celebration at the school or in the child's classroom, fostering a sense of pride and support in the family's accomplishment.

After this initial "honeymoon period" (Boice, 2019), the school counselor should check in regularly (i.e. every few days) with the military student to assess her/his well-being (Todd, Campbell, Meyer, & Horner, 2008). In addition, the school counselor should call the spouse to see how things at home are going and/or invite the family in for a family meeting to discuss any challenges that the family is facing during this reintegration period. The school counselor should also encourage the student's teacher, who spends the most time with the student in the classroom, to monitor the student's academic, social, and emotional well-being and to alert the school

counselor if any social, emotional, or academic warning signs surface (Clark & Amatea, 2004).

School counselors should be aware that active duty members often regret missing important developmental milestones and as a result desire to become better parents for their children (Walsh et al., 2014). Therefore, when the service member returns home, school counselors should offer parent education training that focuses on positive parenting and strengthening the parent-child relationship as a protective factor (Kress & Paylo, 2019). This training should be held at flexible hours to fit into the service member's intensive work schedule. During these trainings professional school counselors may offer ideas for re-bonding with children and creating and new routine and memories for the family to thrive under. For example, the family might plan a Saturday morning breakfast together each week or a camping trip for the service member and the children.

Post-Integration

The professional school counselor is called to actively support the military family post-integration as it has been found that family reintegration challenges increase in the 3-6 months after homecoming (REACH, 2015). While many military families seem to adapt after a year of being reunited (REACH 2015), long-term challenges include the continued redefinition of roles as the family works to learn more about each other and the ways in which each family member contributes to the family unit as a whole (Gewirtz, McMorris, Hanson, S, & Davis, 2014). In addition, the family must continue to work through stressors caused by the service member's possible mental health issues (REACH, 2015). In the midst of these challenges, because service members usually relocate every 2-3 years (DeSimone, 2018), the service member will most likely be given a new job within the military and the family will thus need to relocate to a new duty station in the immediate or near future.

In the midst of these post-integration challenges, the professional school counselor can encourage the family to utilize the coping mechanisms they have learned as they carry out their new routine and become comfortable in their new norms (Pisano, 2010). Helping the family articulate their new roles in the family and recognize their "new normal" is

key to marking and maintaining this progress (Gewirtz, McMorris, Hanson, & Davis, 2014). The school counselor's role in teaching and encouraging healthy communication can assist the family with continuing to move forward with positive working relationships throughout the constant challenges they may face throughout their military career (Greene, Buckman, Dandeker, & Greenberg, 2010).

The professional school counselor should also work to prepare the family for possible upcoming transitions and relocation (Bradshaw, Sudhinaraset, Mmari, & Blum, 2010; Cole, 2016; Ruff & Keim, 2014). Discussions with the student regarding a move to a new area or attending a new school should take place. With the family's permission, the school counselor should communicate with the student's new school counselor in order to provide background information regarding the family's past challenges and their strengths and resiliencies in overcoming these challenges (Cole, 2016). The professional school counselor should also inform the military family about the Interstate Compact on Educational Opportunity for Military Children, which makes provides military families with leeway and support regarding enrollment policies, special education processes, extracurricular activities, school placement, graduation, and more in order to help military families transition to their new school system (DoDEA, 2019). Finally, the school counselor should research TRICARE compatible mental health resources in the area and provide their contact information to the family so that the family can immediately access these services (Cole, 2016; Ruff & Keim, 2014; TRICARE, 2019).

Conclusion

Because of their unique skill set and training in prevention and intervention, school counselors are in a prime position to help military families overcome the challenges they face during reintegration. Working with the families during each phase of integration, school counselors can be key players and leaders in the school and community in serving this population. Since military families are a part of a unique culture with their own individual set of needs, school counselors should develop close and consistent partnerships with each family in a proactive manner. Through these partnerships, professional school counselors can enhance their

awareness of military families' needs as well as increase their understanding of the family's strengths and resiliencies to capitalize on when facing the everyday challenges of military life.

Future Research

Future quantitative and qualitative research should focus on new, innovative avenues for helping military families work through deployments and reintegration. Qualitative studies, for example, might explore the lived experiences of spouses and active duty service members as they prepare for and actually experience reintegration and the implications for practice in the counseling field. In addition, quantitative studies might measure the perceived stress and/or anxiety of children who are engaging with a professional school counselor throughout the pre-integration, integration and post-integration phases versus children who are not. Future studies could also further investigate the association between deployment length and distress in children. Additionally, future research could examine the strategies school counselors use when working with children throughout the reintegration process. Further research could explore whether these strategies prove to be beneficial. The results of these studies may be useful for advocating for more time for school counselors to engage in direct services for military students as well as to show the benefit of the profession in aiding military children throughout the deployment process.

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