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From Battlegrounds to the Backcountry: The Intersection of Masculinity and Outward Bound Programming on Psychosocial Functioning for Male Military Veterans

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by

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Dedication

I would like to dedicate this dissertation to my family. Mom, Dad, and Melissa I couldn't have done this without you.

I would like to also dedicate this to all the soldiers who have served our Country. May we continue to serve all of you, and offer you the best healthcare possible.

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From Battlegrounds to the Backcountry: The Intersection of Masculinity and Outward Bound Programming on Psychosocial Functioning for Male Military Veterans

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This study investigates the promise of using therapeutic adventure as an alternative therapeutic approach to address a public health issue: Veterans reticence towards seeking mental health assistance, despite their rising rates of mental health issues. To examine how the intersection between conformity to traditional masculine norms and Outward Bound for Veterans (OB4V) programming impacted psychosocial development, a quasi-experimental, longitudinal design was implemented on 159 male Veterans. The primary goals were twofold: 1) to determine whether improvement in six therapeutic outcome variables occurred due to the OB4V intervention; 2) to discover whether male Veterans' level of conformity to traditional masculine norms influenced change in the therapeutic outcome variables. Outcome variables included: 1) mental health status; 2) personal growth initiative; 3) attitudes towards seeking professional psychological help; 4) psychological mindedness; 5) restriction of emotions; 6) subjective wellbeing. Results indicated a significant effect of treatment, suggesting that the OB4V treatment promoted Veterans improvement in all the therapeutic outcome variables, except psychological mindedness. Findings also showed that the significant effect of

treatment was associated with Veterans' improvement in therapeutic outcome variables over all time points irrespective of their level of conformity to traditional masculine norms.

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CHAPTER 1: INTRODUCTION

The mental health consequences for U.S. soldiers serving in war zones have been well documented. Nearly 37% of Veterans returning from the wars of Operation Enduring Freedom (OEF) and Operation Iraqi Freedom (OIF) have been diagnosed with mental health disorders (Seal et al., 2009). Many other concerns go unacknowledged or undiagnosed, and Veterans often experience a delayed onset of symptoms (Milliken, Auchterlonie, & Hoge, 2007; Seal et al., 2008). As a result of living with these mental health issues, Veterans experience a wide range of psychosocial consequences. Examples include: suicide, unemployment and absenteeism, homelessness, decreased wages, lower education obtainment, substance abuse, and increased familial problems and family violence (Karney, Ramchand, Osilla, Caldarone, & Burns, 2008; Tanielian & Jaycox, 2008).

Despite these devastating consequences, it is estimated that only 1/3 of Veterans diagnosed with mental health problems seek help (Hoge, Auchterlonie, & Milliken, 2006; Hoge et al., 2004). Of those Veterans diagnosed with posttraumatic stress disorder (PTSD), it was estimated that less than 10% attended the minimum number of mental health sessions required for adequate treatment of PTSD (Seal et al., 2010). Being under 25 years of age and being male appear to decrease the likelihood that Veterans will seek out mental health services (Seal, 2011). The prevalence of mental health disorders combined with a lack of help seeking among Veterans, often leads to a stressful reintegration process. The Department of Veterans Affairs (2010) attributes a staggering

suicide rate, roughly 6,000 Veterans a year (20% of U.S. suicides), to the often confusing and overwhelming process of transitioning from military to civilian life.

Within the military culture, stigma associated with utilizing mental health services often leads to Veterans' resistance to seek help (Burnam, Meredith, Tanielian, & Jaycox, 2009; Pietrzak, Johnson, Goldstein, Malley, & Southwick, 2009; Seal et al., 2008). Compared to their female counterparts, male Veterans are more reluctant to talk about or admit to any mental health issues (Herrera, Owens, & Mallinckrodt, 2013; Jakupcak, Blais, Grossbard, Garcia, & Okiishi, 2013; Seal et al., 2008) or seek out mental health services (Alfred, Hammer, & Good, 2013; Seal et al., 2010).

Limited research has examined the gender discrepancy among Veterans help-seeking behaviors. This lack of research contrasts sharply with research that has examined gender differences in mental health use among U.S. civilians. Scholars examining U.S. civilian populations, note that men are generally reluctant to seek out and invest themselves in mental health services (Addis & Mahalik, 2003; Lane & Addis, 2005; Mahalik, Good, & Englar-Carlson, 2003; Good & Robertson, 2010; Mansfield, Addis, & Courtenay, 2005; Pederson & Vogel, 2007; Robertson & Fitzgerald, 1990). Theories suggest that this resistance relates to men's socialization or conformity to traditional masculine norms, which perpetuates a fear that they will be perceived as weak or incompetent if they seek help (Addis & Mahalik, 2003; Brooks, 1998, 2010; Fischer & Farina, 1995; Hammer, Vogel, & Heimerdinger-Edwards, 2013). Scholars have consistently identified relationships between men's conformity to traditional masculine norms and greater interpersonal and psychological distress such as depression, anxiety,

risky behaviors, substance use, higher blood pressure, and increased behaviors that were threatening to other people. (Rochlen & Rabinowitz, 2013; O'Neil, 2008, 2010).

To transcend stigma-related barriers to mental health treatment, it is critical to explore alternative avenues through which male Veterans can receive mental health assistance. The Department of Defense (DoD) and the Department of Veterans' Affairs (VA) are calling for innovative approaches to increase access to supportive services for Veterans (Seal, 2011; Tanielian & Jaycox, 2008). Commensurately, non-traditional, out-of-office, therapeutic approaches have received increased attention in men's help-seeking literature (Brooks, 1998, 2010; Kiselica, 2001; Robertson & Fitzgerald, 1990; Rochlen & Rabinowitz, 2013). Considering this increased scholarly attention given to exploring alternative approaches for both Veterans and civilian male populations, there is a unique opportunity to merge these two areas of research.

One out-of-office, innovative, approach that shows much potential, but has received limited attention is the Outward Bound Veterans Program (OB4V). This program combines outdoor group adventure activities (e.g., hiking, canoeing, etc.) with facilitated group process sessions that engage participants cognitively, affectively, and behaviorally. The primary goal of the OB4V is to provide a supportive service to help Veterans "readjust to life at home through powerful wilderness courses that draw on the healing benefit of teamwork and challenge through use of the natural world…to create positive emotional and mental outcomes" (Outward Bound, 2012a). Anecdotal accounts suggest that OEF/OIF Veterans who participated in OB4V courses gained intra- and interpersonal insight, self-confidence, pride, trust, communication skills, and a sense of

camaraderie (Outward Bound). Research shows that Outward Bound also helped Vietnam Veterans address posttraumatic stress disorder symptoms (Hyer, Boyd, Scurfield, Smith, & Burke, 1996; Rheault, 1980), and increased OEF/OIF Veterans' sense of coherence and resilience (Ewert, Van Puymbroeck, Frankel, & Overholt, 2011).

A review of the literature on men and masculinity suggests multiple reasons why men might identify with the OB4V approach. For example, Outward Bound's focus on working as a team aligns with men's affinity toward coming together through shared physical activity (Kiselica & Englar-Carlson, 2010; Kiselica, Englar-Carlson, Horne, & Fisher, 2008; Mortola, Hiton, & Grant, 2008). Men seem drawn to therapeutic experiences where camping and outdoor pursuits are a core aspect of the program (Scheinfeld & Buser, 2013; Scheinfeld, Rochlen, & Buser, 2011). Outward Bound for Veteran's emphasis on making goals, leadership, and decision-making relates well with men's typical values and strengths (Brooks, 1998; Campbell, 1996; Hammer & Good, 2010; Kiselica & Englar-Carlson, 2010).

In particular, OB4V aligns well with Veterans' interests and needs. Outward Bound for Veteran's use of high adventure activities seems well suited to meet Veterans' need for adrenaline-inducing activities as a physical and psychological outlet (Hoge, 2010). Furthermore, Veterans' desire to stay physically fit and be physically challenged (Buis et al., 2011) is supported by the OB4V program. Similar to civilian men (Brooks, 2010; Kiselica & Englar-Carlson, 2010), Veterans enjoy engaging in shared goal-directed activities to accomplish tasks and develop a sense of camaraderie (Brooks 2005; Hoge, 2010).

The combination of group-based interventions and outdoor adventure activities appear particularly beneficial. Research demonstrates the psychosocial benefits of group-based outdoor therapeutic modalities for Veterans (Ewert et al., 2011; Jelinek, 1987; Ragsdale, Cox, Finn, & Eisler, 1996) and group-based therapy for civilian men (Andronico, 1996; Brooks 2010). Scheinfeld et al. (2011) found that outdoor adventure activities joined with group therapy encouraged civilian men to engage in deeper therapeutic processing and increased a sense of camaraderie and trust as compared with their experience in traditional group therapy. For example, they found that participants were able to express and process emotions more readily. This finding is supported by the literature focusing on alternative therapeutic approaches for men (Brooks, 1998; Englar-Carlson, 2006; Rabinowitz, 2002; Rabinowitz & Cochran, 2002; Rabinowitz & Rochlen, 2013; Scheinfeld & Buser, 2013; Wong & Rochlen 2005, 2009).

While scholars have called for greater research in this area, more rigorous, larger-scale research is needed. To this end, the study aims to investigate the therapeutic impact of OB4V on male Veterans. One aspect of that aim is to evaluate how male Veteran's conformity to traditional masculine norms may impact their psychosocial development. With this information, counselors and scholars can be better informed about the therapeutic efficacy of OB4V and related therapeutic adventure programs for male Veterans. Additionally, the OB4V program can use this study to better understand how Veterans' conformity to traditional masculine norms may impact their OB4V program experience and psychosocial outcomes. Brooks (2010) posits that those helping Veterans within mental health paradigms will be much better prepared to provide therapeutic

interventions if they understand the wide-ranging implications of male-Veteran's adherence to traditional masculine qualities.

CHAPTER 2: INTEGRATIVE ANALYSIS OF THE LITERATURE

The following Integrative Analysis of the Literature establishes a theoretical basis for examining the OB4V as an innovative therapeutic approach for male Veterans. It begins by outlining the masculine gender role socialization process and its role in promoting men's conformity to masculine norms. Men's conformity to masculine norms is then shown to be a significant source of their psychological issues and their reluctance to engage in mental health services. The masculine socialization process within the military is outlined, followed by an explanation of how this socialization process impacts Veterans' mental health and desire to seek help. The remainder of the chapter provides support for the development of innovative therapeutic services specifically designed to meet male Veterans' unique needs. This includes both empirical research and theoretical arguments that suggest why male Veterans are likely to benefit from the OB4V program.

GENDER ROLE SOCIALIZATION, MASCULINE NORMS, AND MENTAL HEALTH

Gender Role Socialization

As a background to the current study, it is important to understand how the masculine gender role socialization process relates to masculine norms within the United States. Masculine gender role socialization is commonly viewed from a constructionist perspective, suggesting that boys and men internalize the ideology of what it means to be masculine through society's standards and expectations (Bern, 1981; Levant & Pollack, 1995). This ideology is reinforced by family, schools, peers, and the media (Addis & Cohane, 2005; Levant & Pollack, 1995; Mahalik, Good et al., 2003; Pleck 1981). Such an

approach emphasizes that men are not born with an ideology of masculinity, but rather learn what it means to be masculine through interaction with their social environment. A man's masculine ideology can differ depending on the particular social subgroup with which he associates (for review see, Addis & Cohane, 2005 and Wester & Vogel, 2012).

Scholars' early conceptualizations of masculine ideology and gender roles helped create a foundation for understanding U.S. traditional masculine norms. David and Brannon (1976) first introduced a four dimensional masculine ideology, which included: 1) "No Sissy Stuff" (avoidance of femininity and non-emotional), 2) "the Big Wheel" (the breadwinner, admired, and respected), 3) "the Sturdy Oak" (toughness and stoicism), and 4) "Give'em Hell" (violence and adventure). O'Neil (1981a, 1981b, 1982) followed by suggesting six dimensions of gender role socialization, including: 1) restrictive emotionality, 2) ignoring health-related issues, 3) obsession with achievement and success, 4) restrictive sexual and affectionate behavior, 5) desire for control/power/competition, and 6) homophobia.

Emerging from the gender role socialization literature, seven common components of masculine ideology in the U.S. have been identified by Levant et al., (1992): Men should 1) avoid all things feminine, 2) restrict their emotional life, 3) act tough and aggressive, 4) be self reliant, 5) emphasize achieving status above all else, 6) be non-relational and objectifying in their attitudes toward sexuality, and 7) fear and hate homosexuals. Such ideologies are embodied in the messages that boys and men receive, which in turn influence the way in which a boy or man believes he needs to act, think, and feel to be appropriately masculine (O'Neil, 1981b).

Two proposed theories regarding the consequences of the masculine socialization process and adherence to masculine gender roles are *gender role strain* (GRS; Pleck, 1981, 1995) and *gender role conflict* (GRC; O'Neil 1981b, 1982; O'Neil, Helms, Gable, David, Wrightsman, 1986). Gender role strain theory suggests that men frequently experience psychological distress when they are unable to meet the expectations of male gender role norms and simultaneously address their emotional and interpersonal needs. Pleck posits three aspects of gender role strain. First, *gender role discrepancy* occurs when men experience psychological distress when they are unable to fulfill all the expectations of being a man (e.g. always showing strength and emotional restriction). Second, *gender role trauma* occurs for boys and men when their masculine socialization process becomes traumatic because of physical or emotional aggression and shaming. Third, *gender role dysfunction* occurs when men enact unhealthy and problematic behaviors that negatively impact themselves, family, and friends.

Gender Role Conflict is an extension of Gender Role Strain. O'Neil et al. suggest that men's adherence to male gender roles leads to behaviors and values that often become problematic because they conflict with familial and societal norms. For example, a man may perceive that showing emotional restraint and strength are valued by his male co-workers. However, when these qualities are exhibited at home, he may be viewed as an apathetic and cold husband or father. Through the development of the Gender Role Conflict Scale, O'Neil et al. (1986) posited four prominent components of GRC. First, *success, power, and competition* represent men's striving for achievement and authority over others. Second, *restricted emotionality* stresses the importance of not expressing

emotions. Third, *restricted affectionate behavior between men* relates to men's discomfort in expressing affection towards one another. Fourth, *conflict between work and family* focuses on the negative impact of men's inability to balance work with family expectations.

Conformity to Masculine Norms

Mahalik, Locke et al. (2003) constructed the Conformity to Masculine Norms Inventory (CMNI), which measures levels of conformity to traditional masculine norms. The CMNI differs in four ways from previous scales measuring masculine norms (e.g. Thompson & Pleck's (1986) the Male Role Norms Scale and Levant et al.'s (1992) Male Role Norms Inventory). First, the CMNI found statistical support for the existence of 11 traditional masculine norms, compared to the other scales, which capture five or fewer norms. Second, the CMNI examines conformity and non-conformity to traditional masculine norms, whereas Thompson and Pleck and Levant et al.'s scales tend to only examine conformity. Third, the CMNI is the only scale that examines conformity to traditional masculine norms on behavioral, affective, and cognitive levels. For example, a participant could be high on cognitive expression, but low on behavioral expression of traditional masculine norms. Finally, the CMNI is multidimensional (11 subscales), rather than being confined to one global index.

The 11 traditional masculine norms measured by the CMNI include: 1) Winning (e.g. doing anything to win), 2) Emotional Control (e.g. concealing emotions), 3) Risk-Taking (e.g. taking dangerous risks to prove self-worth), 4) Violence (e.g. viewing

fighting as necessary to being a man), 5) Dominance (e.g. believing it is necessary to be in charge and get his way), 6) Playboy (e.g. sexual promiscuity), 7) Self-Reliance (e.g. never asking for help), 8) Primacy of Work (e.g. prioritizing work over all other areas of life), 9) Power Over Women (e.g. having control over women), 10) Disdain for Homosexuality (e.g. avoiding being perceived as gay or relating to gay culture), and 11) Pursuit of Status (e.g. striving to be viewed as important by colleagues and peers).

When researching the functioning of masculine norms in the therapeutic process, the CMNI is a particularly good measure to examine how conformity to masculine norms may moderate therapeutic process outcomes. The CMNI provides an intrapersonal and interpersonal assessment by measuring the affective, behavioral, and cognitive dimensions of traditional masculine norms. Conformity to masculine norms (as measured by the CMNI) also appears to be a predictor of reluctance towards therapeutic engagement (Good et al., 2006; Levant, Wimer, Williams, Smally, & Noronha, 2009). Because of these advantages, the CMNI will be the primary evaluative and theoretical model used throughout this paper.

Masculine Gender Role Socialization, Masculine Norms, & Mental Health

Masculine gender role socialization can lead to a broad range of negative psychological and interpersonal issues. The socialization process in the United States often pressures men to deny weakness or vulnerability, to try to be totally self-sufficient, to exert emotional and physical control on self and others, and to display aggressive behavior and physical dominance (Courtenay, 2000; Good, Thomson, & Brathwaite,

2005; Mahalik, Good et al., 2003; O'Neil, 2008). Although men's tendencies towards aggressive and controlling interpersonal behavior may be an attempt to cope with their distress, it often creates further psychological distress (Mahalik, Good et al.; Mahalik, Talmadge, Locke, & Scott, 2005). Additionally, because the socialization process promotes resistance to treatment it can leave men with few avenues to work through emotional pain, interpersonal conflict, physical ailments, or any other challenges life presents.

Scholars suggest several psychological symptoms that may result from conformity to masculine norms. Examples of symptoms include: depression and anxiety (Addis, 2008; Blazina, Pisecco, & O'Neil, 2005; Carpenter & Addis, 2001; Cochran & Rabinowitz, 2000), poor self-esteem (Cournoyer & Mahalik, 1995; Sharpe & Heppner, 1991), problems with interpersonal intimacy (Cournoyer & Mahalik; Fischer & Good, 1997; Sharpe & Heppner), irritability and anger (Mahalik, 2000), interpersonal aggression and violence (Franchina, Eisler, & Moore, 2001; Locke & Mahalik, 2005), abuse of substances and tobacco (Blazina & Watkins, 1996; Brooks, & Silverstein, 1995; Cochran, 2005; Mahalik, Lagan, & Morrison, 2006), problems with interpersonal violence, and job dissatisfaction (Dodson & Borders, 2006).

Mahalik et al. (2005) note that men who conform to the Emotional Control, Dominance, Self-Reliance, and Primacy of Work norms are often viewed as emotionally distant and interpersonally dominant. In fact, often men will purposefully detach from anything emotional as a way to assert their strength and stoicism (Good et al., 2005). This is important to note because emotional inexpressiveness, isolation, and conflict between

work and family relations have been found to be associated with men's levels of depression (Cournoyer & Mahalik, 1995; Good, Robertson, Fitzgerald, Stevens, & Bartels, 1996; Good et al., 2005). Additionally, it is important to note that the need for success, power, and competition often leads to increased abuse towards women (Kilmartin, 2010; Mahalik, 2000), immature use of psychological defenses (Mahalik, Cournoyer, DeFranc, Cherry, & Napolitano, 1998), and increased paranoia (Good et al., 1996).

More specifically, there are often serious negative consequences to repressing emotions through emotional control. Brooks (1998) suggests that men who repress emotions often experience a type of psychic pain characterized by anger, embarrassment, bitterness, frustration, guilt, shame, and grief. Furthermore, repression of emotions has been associated with anxiety (Wong, Pituch, & Rochlen, 2006), loneliness (Wong, Horn, Gomory, & Ramos, 2012), depression (Shepard, 2002), interpersonal issues (Sharpe & Heppner, 1991), and aggressive behaviors (Mahalik, 2000).

LIMITATIONS OF TRADITIONAL THERAPY APPROACHES FOR MEN

Men's Reluctance to Seek Help

Explanations for men's resistance to seek help have commonly focused on men's gender role socialization, with qualities of the traditional male role (e.g., independence, strength, self-reliance, competitiveness, and emotional restraint) acting as barriers to men seeking help (Brooks, 1996; Good et al., 2005; Hammer et al., 2013; Levant & Pollack, 1995; Rochlen, 2005; Wester & Vogel, 2012). Mansfield et al. (2005) employed an

exploratory analysis to identify reasons for men's reluctance to seek help. Their study identified five contributing factors: 1) *Need for control and self-reliance* (e.g., autonomy), 2) *Minimizing problems and/or resignation to having problems* (e.g., denial of a problem's severity), 3) *Concrete barriers* (e.g., limited finances or knowledge about services), 4) *Privacy* (e.g., lack of openness towards emotional and physical vulnerability), and 5) *Emotional control* (e.g., control and concealment of emotions).

Several scholars have provided theoretical bases that support Mansfield et al.'s (2005) findings. For example, men who are seeking therapeutic services often fear they will lose a sense of power because they will enter into a dependent, vulnerable, or even submissive relationship with a therapist (Brooks, 1998, 2010). In turn, they may feel threatened by feelings of helplessness and loss of power, which directly contradicts meeting the socialized expectations for men to be independent and invulnerable (Addis & Mahalik, 2003; Brooks, 1998, 2010; Good et al., 2005; Mahalik, Good et al., 2003; Levant & Pollack, 1995). Additionally, men often avoid and stigmatize traditional counseling because they fear they will be perceived as weak or incompetent (Brooks, 1998, 2010; Davies, Shen-Miller, & Isacco, 2010; Pederson & Vogel, 2007). It is also important to note that the degree of resistance towards seeking help may be moderated by men's demographic background. For example, Hammer et al. (2013) found that men from rural backgrounds showed greater resistance to seeking help. Roughly 30% of Veterans reside in rural areas (Department of Veterans Affairs, 2012), making Hammer et al.'s finding important to consider when working with male Veterans from a rural background.

Men and Traditional Therapy

Men who are able to overcome the feeling of stigma attached to seeking help will often still struggle when engaging in traditional forms of the therapeutic process (Brooks 1998, 2010; Campbell, 1996; Good et al., 2005; Mahalik, 1999b; Mahalik, Good et al., 2003; Scher, 1990). For therapy to effectively unfold, it is critical to establish a strong therapeutic alliance characterized by collaboration and trust (Rogers, 1951; Yalom, 2005). Moreover, therapeutic services are most beneficial when the client is able to verbalize troubling thoughts and feelings, realize how past emotions and behaviors impact his current state, and learn new knowledge and skills to cope in healthy ways (Kolden et al., 2000). Thus, to fully engage in therapy means one is willing to ask for help on an ongoing basis, to express vulnerable feelings, to be self-aware, and to give up sole control.

These therapeutic norms are essentially in conflict with the expectations established by the masculine gender role socialization process, which encourages men to be emotionally resistant, shun vulnerability or weakness, and independently solve problems (Addis & Mahalik, 2003; Campbell, 1996; Good et al., 2005; Mahalik et al., 2003; Levant, 1995). Most men have little experience with expressing emotions or engaging in the process of discovering and applying emotional or interpersonal therapeutic insight (Good, 1998). Further, many men perceive psychological treatment as a verbal, affective, vulnerable, sedentary, and ambiguous process, which goes against their desire to be active, strong, stoic, independent, and conceal emotions (Brooks, 1998; Campbell, 1996). Brooks outlines this incongruence by contrasting the following typical

psychotherapy demands with masculinity demands: disclosing private experience vs. hiding private experience, relinquishing control vs. maintaining control, nonsexual intimacy vs. sexualizing intimacy, showing weakness vs. showing strength, experiencing shame vs. expressing pride, acting vulnerable vs. acting invincible, seeking help vs. being self-reliant, expressing feelings vs. being stoic, being introspective vs. taking action, addressing relationship conflict vs. avoiding conflict, confronting pain vs. denying pain, acknowledging failure vs. endlessly persisting, and admitting ignorance vs. feigning omniscience.

Thus, it can be overwhelming and uncomfortable for some men to meet both the requirements of being an active client in individual therapy and the socialized requirements of being masculine (Rochlen & Rabinowitz, 2013). The process of breaking these norms, by engaging in therapeutic services, often leads to men experiencing internal conflict and feeling shameful or inadequate (Krugman, 1995; Osherson & Krugman, 2006). With this in mind, it is critical to employ a gender-aware approach to therapy that takes into consideration the intrapersonal, interpersonal, and cultural struggles men may be experiencing (Brooks, 1998, 2010; Robertson & Williams, 2010).

Three Masculine Norms and the Therapeutic Process

This study proposes that three of the eleven masculine norms included in the CMNI may have a noticeable impact on men's therapeutic experiences. Based on a review of the literature, the *Emotional Control, Self-Reliance, and Dominance* norms are suspected to account for the greatest variance in therapeutic outcomes. Each of the three

masculine norms are presented below and accompanied by rationale for their examination in this study.

The first norm is *Emotional Control*; characterized by stoicism, concealing emotions, and the avoidance of addressing emotional content in interpersonal contexts (Mahalik, Locke, et al., 2003). Exploring emotions through helping the client express and acknowledge emotion is a critical step for clients to make therapeutic progress (Hill, 2004). Additionally, helping men understand the connection between emotions and their actions increases self-awareness (Robertson & Fitzgerald, 1990), increases life satisfaction (Wong et al., 2012), and is integral to helping men identify and work through personal issues (Campbell, 1996; Englar-Carlson, 2006). However, as mentioned above, men are often resistant to the therapy process because they find it difficult to express and process emotions, and perceive they will be viewed as weak or vulnerable if they do so (Good, 1998; Good & Fischer, 1997; Pederson & Vogel, 2007; Rochlen & Rabinowitz, 2013; Wong et al., 2012; Wong & Rochlen, 2005, 2009; Wong, Rochlen, & Pituch, 2006). For some men, it is simply unacceptable to cry or be emotional, while repressing emotions is a sign of strength (Mahalik et al., 2005).

The second norm is *Self-Reliance*, characterized by striving to solve problems independently and not seeking help from others or taking advice (Mahalik, 1999; Mahalik, Locke et al., 2003). Men's internalization of the Self-Reliance norm may create an internal struggle in the therapeutic context, because the act of engaging in therapy inherently suggests a giving up of independence (Addis & Mahalik, 2003; Good et al., 2005; Robertson & Fitzgerald, 1990). Self-reliance often has the meaning of

independently knowing the answer and being able to fix the problem, while engaging in therapy requires the male client to rely on the therapist to help him explore the sources of his presenting concerns (Campbell, 1996; Mahalik et al., 2005). Thus, relying on the therapist for assistance may threaten the client's level of perceived competence.

The third norm is *Dominance*; characterized by striving for control and physical, financial, sexual, interpersonal, and intellectual power over others (Mahalik, 1999a; Mahalik, Locke, et al., 2003). Men's common urge to show competence and their desire for interpersonal dominance may conflict with the need for clients to relinquish some power and control when engaged with the therapist (Brooks, 1998; Campbell, 1996; Good et al., 2005). Men who have internalized the Dominant norm often feel a need to suppress emotional or physical pain in order to not be perceived by others as weak or powerless, making it difficult for the therapist to gauge their level of distress (Courtenay, 2000; Mahalik 1999a, 1999b). The need for dominance also can interfere with developing intimate and trusting relationships (Mahalik, 2000), which is critical for a strong therapeutic alliance and positive therapeutic outcomes for men (Cochran & Rabinowitz, 2000; Englar-Carlson & Stevens 2006; Good & Robertson, 2010; Good et al., 2005; Wade & Good, 2010; Scher, 2001).

VETERANS, MASCULINITY, AND MENTAL HEALTH

Military Culture, Masculinity, and Help-Seeking

The military culture endorses several traditional masculine norms that place particular emphasis on emotional restriction and self-reliance. For one, this culture is largely associated with the primary goal of turning boys into men (Barrett, 1996) as part of the process of developing a "masculine warrior" identity (Dunivin, 1994). New recruits are taught that the only way to survive in the military is to be tough, aggressive, show endurance and loyalty, and show no signs of femininity such as emotions or reliance on others (Hockey, 1986; Hoge, 2010). Those recruits that show weakness are often insulted with phrases such as, "old women," "powder-puffs," "pussies," "wimps," "faggots," or "poufs" (Green, Emslie, O'Neill, Hunt, & Walker, 2010). This banter is constant, forcing soldiers to continually prove their masculinity with fellow soldiers through both verbal and physical means. Brooks (2005) argues that military training may intensify men's hyper-masculine socialization because of its focus on dominance, stoicism, self-reliance, and physical and emotional control. It has been suggested that the hyper-masculine military culture becomes so engrained in soldiers, that they often have a masculine identity crisis when reintegrating into civilian life (Hockey, 1986; Hoge, 2010).

Studies have found that male military personnel tend to have high levels of emotional restriction and fear of emotion (Jakupcak et al., 2013; Jakupcak, Osborne, Michael, Cook, & McFall, 2006). They also tend to outwardly exhibit physical strength, dominance, and rejection of any feminine-like behavior (Herrera et al., 2013; Kurpius &

Lucart, 2000). This "secondary socialization" process may be perceived as necessary to help soldiers become emotionally invulnerable fighters equipped to maintain composure, create a unified front, and complete missions while engaged in live combat (Arkin & Dobrofsky, 1978; Green et al., 2010). When soldiers fail to display emotional control, self-reliance, strength, and stoicism they are often viewed by fellow soldiers as a threat to their units' safety, which further intensifies soldiers' perception of the need to adhere to a hyper-masculine identity (Brooks, 1990, 2005).

In particular, emotional control and self-reliance seem to be intensely endorsed both on and off the battlefield (Burns & Mahalik, 2011; Jakupcak et al., 2013). Thus, during training and while on base, Veterans will rarely admit to any psychological issues or show vulnerabilities for fear that they will be ridiculed, not accepted by their unit, or even demoted (Brooks, 1990, 2005; Rosen, Weber, & Martin, 2000; Quick, Joplin, Nelsen, & Mangelsdorff, 1996). With a strong masculine culture focused on self-reliance and stoicism, it's expected that Veterans should be able to "soldier on" under all circumstances (Barrett, 1996). Soldiers should not show any emotional or physical weakness, and are expected to work through any mental health issues independently (Burns and Mahalik, 2011). In fact, the Army reinforces emotional toughness and staunch self-reliance through medals and awards, as well as punishing or intimidating soldiers when they appear weak or vulnerable (Quick, Joplin, Nelsen, & Mangelsdorff, 1996). The long-term impacts of this hyper-masculine socialization process are posited to be significant, because many of these men develop hyper-masculine identities as a perceived

tool to survive in combat and maintain social connection with their fellow service personnel (Brooks, 1990, 2005; Jakupcak, et al., 2013).

In addition to enhancing traditional masculine norms, the military setting is thought to create a hegemonic masculine culture. Hinojosa (2010) defines military masculine hegemony

as a hierarchical structuring of masculinities, similar to military rank, where male servicemen construct gender identities to pursue and maintain dominance over other male and female service members. It is viewed that this masculine hegemony is embedded in the identity of many male soldiers (Green et al., 2010). For example, Hinojosa (2010) found that military servicemen often create hierarchies by attempting to show dominance over other servicemen in the areas of self-discipline, physical abilities, emotional control, and fighting abilities. The internalization of these hierarchies is thought to be the core progenitor for the development of hegemonic masculinity. The military ethos teaches servicemen to view themselves as agents of American domination obligated to use any force necessary to sustain political or physical dominance (Higate & Hopton 2005). For many servicemen this means employing violent and aggressive tactics against others. Additionally, research suggests that adhering to hegemonic masculine traits is associated with beneficial outcomes within the military; greater likelihood of economic security and increased physical ability and fit bodies (Green et al., 2010; Hinojosa). Unlike high-risk civilian jobs, service members have relatively little escape from the constant pressure to maintain a dominant stance towards both friend and enemy, furthering the hegemonic masculine identity development.

Similar to the civilian male population (see above *Men's Reluctance to Seek Help* section), adherence to hyper-masculine and hegemonic military masculine norms significantly contributes to male Veterans' resistance to seeking help. Male Veterans view seeking help for mental health issues as admitting to or showing symptoms of mental health problems; they do not want to be perceived as weak, in need of help, or show any vulnerability (Brooks, 2005; Lorber & Garcia, 2010). Veterans may also fear counseling services because they are anxious about losing control over their emotions, so they prefer to isolate or use substances to cope (Price, Monson, Callahan, & Rodriguez, 2005). Additionally, Lorber and Garcia (2010) found that numerous active duty servicemen are concerned that admitting to mental health issues and seeking help will negatively impact promotion opportunities. This mentality often sticks with Veterans, making them believe that seeking mental health services could potentially negatively impact their professional track in the civilian world.

Studies indicate that male Veterans use VA mental health counseling services less frequently than their female counterparts (Duggal et al., 2010), and drop out of counseling earlier than their female counterparts (Lorber & Garcia, 2010). Erbes, Currt, and Leskela (2009), found that a sample of 95% male OIF/OEF Veterans were twice as likely to drop out of VA counseling services and attend fewer counseling sessions compared to U.S. Veterans who served in Vietnam. Although not delineated by gender, Hoge et al. (2004) cite that 38% of Veterans who self-identified as having mental health problems did not trust mental health professions and 41% were resistant towards seeking help because they were embarrassed.

Additionally, Ouimette et al. (2011) found that younger OEF/OIF Veterans (≤ 25 years of age) seek out help less frequently and drop out of counseling services at a higher rate than older OEF/OIF and Vietnam Veterans. This age discrepancy was thought to occur for two primary reasons. First, Younger Veterans felt uncomfortable seeking VA services, because they associated the VA with helping older Vietnam Veterans and consequently didn't feel they "fit in" to the VA. Second, younger Veterans tended to embrace greater stigma towards seeking help, fearing that acknowledgment of mental health problems would harm their careers.

Military Culture, Masculinity, and Mental Health

This hegemonic and hyper-masculine military culture coupled with reduced help-seeking appears to exacerbate the physical and mental health wounds of war. Male Veterans' often lack the intrapersonal skills to recognize psychological issues or express psychological distress, regardless of the severity of their symptoms. They also may not have the interpersonal skills to ask for help. This lack of awareness and help-seeking, often leads to increased severity of their symptoms. For many soldiers their emotional restriction and inability to recognize mental health issues is not necessarily conscious, but rather engrained in their military masculine identity (Lorber, 2007). For a review of rates of OIF/OEF Veterans' mental health diagnoses by sex, see Table 1.

A military culture has developed that ridicules soldiers for admitting to psychosocial problems. Consequently, male soldiers are often ostracized for being emotional or showing signs of psychological issues. For example, Green et al. (2010)

note that those soldiers who lacked the resilience to work through traumatic experiences did not gain the status of a "true soldier" or "real man" among their fellow soldiers. As a result, they were not socially accepted into their unit and received noticeably less support and camaraderie from their unit.

The lack of unit support or acceptance of mental health issues intermixed with individual soldiers' strong adherence to hyper-masculine identity often leads to worsening mental health issues. For example, Suvak, Vogt, Savarese, King, and King (2002) found that U.S. soldiers serving in Vietnam who coped with combat-related issues through emotional restriction ended up with lower life satisfaction and poorer social integration during their transition process to civilian life. Alfred et al. (2013) found that greater conformity to traditional masculine norms was associated with lower sense of purpose and motivation for personal growth, which mediated reduced psychological well being.

Posttraumatic stress disorder (PTSD), at 22% prevalence rate among male Veterans, is by far the most diagnosed disorder among OIF/OEF Veterans (see Table 1). Veterans who exert high levels of emotional restriction show poorer adjustment to trauma-related issues (Price et al., 2005), increased PTSD symptoms (Jakupcak et al., 2013; Lorber et al., 2007; Morrison, 2012), and depression (Jakupcak et al., 2013). Although male Veterans may attempt to work through trauma by suppressing traumatic memories so as not to become emotional, depressed, or anxious, this resistance towards confronting the trauma exacerbates intrusive memories, flashbacks, nightmares, and general anxiety (Lorber & Garcia, 2010). Many male Veterans believed that, similar to

perseverance in combat, adhering to masculine norms such as emotional control and toughness would eventually alleviate the PTSD symptoms.

In fact, some argue that soldier's intense adherence to masculine norms leads to a complete denial that PTSD exists or is a real diagnosis (Whitworth, 2008). Fox and Pease (2012) suggest that symptoms related to PTSD make it harder to exhibit masculine qualities such as strength, stoicism, and control. The symptoms of PTSD are then considered antithetical to exhibiting traditional masculine traits, furthering the shame associated with symptoms of PTSD. Regardless, male Veterans' reluctance to be emotional, vulnerable, or seek help, means they are rarely equipped with the intrapersonal coping strategies or interpersonal openness to address these mental health symptoms. Thus, the male soldier is left in a bind, where he struggles to make sense of his symptoms while losing his sense of masculinity (Burns & Mahalik, 2011). In this context, it is often not until they encounter an extreme life or death situation (e.g. attempted suicide, near drug overdose, divorce etc.) that they seek help (Tanielian & Jaycox, 2008).

The next most prevalent disorder among male Veterans is substance use disorder. Substance abuse is often used as a means to cope with combat-related mental health issues. For male Veterans, substance abuse aligns with traditional masculine norms because it's perceived to help avoid intrapersonal emotional processing or expressing emotions (Burns & Mahalik, 2011). Although this may provide short-term relief from emotional pain, it is well documented that substance use as a coping mechanism only worsens mental health issues and complicates treatment (Tanielian & Jaycox , 2008).

As a method to deal with their pain, suffering, and depression male Veterans are highly susceptible to committing suicide. The rates of suicide among male Veterans are two-to-one compared to their female counterparts (Department of Veterans Affairs, 2011). McCarthy et al. (2009) found a higher suicide discrepancy rate between male and female Veterans; 43/100,000 male VA patients compared to 10/100,000 female VA patients committed suicide. Additionally, male Veterans have a 66% higher suicide rate than their civilian male counterparts (McCarthy et al.). The gender discrepancy in Veteran suicide rates align with civilian trends, where men are four times more likely to commit suicide than women (Centers for Disease Control, 2010). This is not surprising considering the prevalence of mental health issues and the lack of effective coping strategies among male Veterans. Moreover, the military culture's stigmatization of mental health issues emphasizes self-reliance and denounces emotional vulnerability or physical weakness. In turn, this often leads male Veterans to feel shame or confusion when faced with combat-related psychological issues.

Male Veterans' reduced help-seeking, coupled with overwhelming internalized emotional angst resulting from emotional restriction and lack of intrapersonal coping strategies, is one explanation for this high suicide rate (Braswell & Kushner, 2012). They found that the military's emphasis on strength and control aligns well with traditional masculine norms, but is antithetical to working through many mental health symptoms. As indicated above, male Veterans seeking PTSD treatment feared revealing their emotions because they might lose control. However, male Veterans who are experiencing combat-related mental health symptoms often already feel weak and out of control (Price

et al., 2005). Consequently, this bind may lead male Veterans to feel hopeless and helpless, leading to increased suicide attempts (Goldstein, 2001).

VETERANS' MENTAL HEALTH AND REINTEGRATION

Veterans' Mental Health Problems

During the last ten years, the United States has seen a drastic increase in mental health diagnoses among Veterans due to our continued involvement in overseas wars during this time period. Seal (2011) provides the most recent publicly documented witness testimony updating the U.S. Government on the current challenges Veterans face during the reintegration process to civilian life. Of the 2.1 million military personnel who have served in OEF and OIF, 1.2 million are no longer on active duty and are therefore eligible for VA services. According to Seal, the latest data released from the VA Environmental Epidemiology Service (January 18, 2011) found that 331,514 (51 percent) of the 654,348 VA-enrolled Veterans have received mental health diagnoses and 177,149 (27 percent) have received posttraumatic stress (PTSD) diagnoses. Since 2001, there has been a stark increase in mental health diagnoses among Veterans. Seal notes that between 2002-2008 PTSD diagnoses have increased from .2 percent to 22 percent (62, 929) with 70 percent of those cases being comorbid diagnoses of Depression and PTSD. Of the 11 percent of Veterans with substance abuse diagnoses, 55-75 percent of those Veterans were also diagnosed with PTSD or Depression. This indicates that Veterans often try to self-medicate through substance use. Of note, young Veterans (≤ 25 years of age) who

were on active duty, compared to older counterparts (≥ 40 years of age), were found to have 2 to 5 times higher rates of PTSD, and alcohol and drug use disorder diagnoses.

Maguen et al. (2010) provide the most recent account of mental health diagnosis delineated by sex (see Table 1). Importantly, female Veterans only make up 12 percent of the sample (for reference, 15% of active military are women), potentially leading to a poor generalizable comparison. Yet women had significantly higher rates of depression, anxiety, and eating disorders. Male Veterans, meanwhile, had significantly higher rates of PTSD, substance use, alcohol use disorder, and were more likely to have three or more mental health diagnoses.

Table 1

Mental Health Diagnoses of Iraq and Afghanistan Veterans Seeking VA Health Care, by Gender: April 2002–March 2008

Mental health diagnosis	Women (n = 40 701), No. (%)	Men (n = 288 348), No. (%)
Depression*	9,175 (23)	47,876 (17)
Posttraumatic stress disorder*	6,969 (17)	62,916 (22)
Substance use*	610 (2)	9,043 (3)
Adjustment disorder	4,516 (11)	30,613 (11)
Anxiety*	4,791 (12)	28,249 (10)
Alcohol use disorder*	1,356 (3)	21,763 (8)
Eating disorders*	261 (0.6)	276 (0.1)
Number of mental health diagnoses		
1	5,166 (13)	37,315 (13)
2	4,222 (11)	30,033 (10)
≥ 3*	3,622 (9)	29,492 (10)

Note. VA = Department of Veterans Affairs. Mental health diagnoses were not mutually exclusive.
aMultiple diagnoses were only for conditions listed in the Table.
*P < .001.

Although Veterans have high rates of mental health diagnoses, the majority of Veterans struggle to engage in adequate mental health services. Veterans seem to show initial interest in getting help, but their retention is notably low. According to Seal (2011), of those Veterans diagnosed with PTSD, 80% will attend at least one mental health session. But less than 10% attend the minimum number of sessions (9 sessions) needed to adequately employ standard PTSD psychotherapy treatments. Additionally,

those Veterans with greater severity of comorbid mental health diagnoses tend to receive minimally adequate mental health treatment. For example, it is estimated that 75% of Veterans with severe PTSD and Depression receive inadequate mental health services for their diagnoses (Spoont et al., 2010).

The Challenges of Reintegration

Karney et al. (2008) published a comprehensive RAND Corporation report on the immediate and long-term consequences of mental health problems during Veterans' reintegration process. The report highlights three unique elements of the OIF and OEF conflicts that predispose Veterans to an increased likelihood for the development of mental health disorders and a particularly challenging reintegration process. First, OEF and OIF have been the first all-volunteer force to be deployed at an unprecedented fast pace, leaving many soldiers and their families limited time to prepare for soldiers' departure to war. Second, compared to conflicts in the 1980's and 1990's, a much larger percentage of OEF and OIF soldiers are exposed to life-threatening combat situations. For example, most soldiers are continually threatened by mortars even when working, sleeping, or trying to relax at their respective bases. Third, more soldiers are surviving near-death situations because of advances in medical technology, military technology, and military armor. Because of these advances, many more soldiers are returning with traumatic brain injuries and significant mental or physical health wounds.

Karney et al. outline the most noticeable challenges Veterans face during their reintegration process. First and foremost, Veterans seem to have significant interpersonal

deficits upon return, leading to familial, friendship, and vocational conflicts. Many soldiers report feeling irritable, numb, and isolated in a civilian world that they perceive cannot truly understand what they endured while at war. Veterans' that struggle to regulate emotions and make sense of their place in the civilian world often experience increased anger and frustration, which puts families at greater risk of distressed relationships, intimate partner violence, and divorce. Additionally, mental health disorders and the challenges of fitting back into civilian life make it challenging for Veterans to secure consistent employment, leaving many families and individual Veterans financially deprived. Mental health related symptoms and lack of education are cited as common reasons for Veterans' inability to secure and maintain employment. Veterans report that they are often nervous about working with other people. They are afraid they will become frustrated and angry, which will lead to reactive or aggressive communication patterns and behaviors. There is evidence that these familial disruptions are having significant consequences for Veterans' children.

Furthermore, Karney et al. found that Veterans diagnosed with PTSD, depression, and TBI appear to have significantly more somatic complaints and increased substance use including, alcohol, illegal drugs, and tobacco. With mental health treatment, Veterans drastically decrease their comorbid substance abuse/dependence and other Axis I diagnoses. However, Karney et al. also note that substance abuse/dependence often leads to patients dropping out of therapy before mental health treatment is completed or not seeking therapy in the first place.

Finally, there are higher homelessness rates among returning Veterans, compared to their civilian counterparts. Homeless Veterans seem to get stuck in a downward spiral, where they often use substances to cope with mental and physical health injuries from war. In turn, this leads to lack of employment, resistance to seeking help, and reduced ability to maintain personal relationships with friends and family. Their economic and personal relationship challenges then can worsen their substance use and mental health symptoms (Karney et al.).

ALTERNATIVE APPROACHES FOR MEN

In an effort to address men's ambivalence towards therapy, non-traditional therapeutic approaches have received increased attention in the men's help-seeking literature (Brooks, 1998, 2010; Robertson & Fitzgerald, 1990; Rochlen & Rabinowitz, 2013). Wong and Rochlen (2005) suggest that using assistive activities can help men access and share emotions. Examples include activity-oriented approaches, such as exaggerated vocalizing and breathing exercises, yoga, and punching or aggression releasing exercises (Rabinowitz, 2002; Rabinowitz & Cochran, 2002). Wong and Rochlen (2009) found evidence that expressive writing activities provided men with an additional outlet to express emotions. Lomas, Edginton, Cartwright, and Ridge (2013) found meditation can provide men, especially those more resistant to traditional therapy approaches, an alternative method to increase emotional awareness.

Additionally, authors increasingly recognized the utility of out-of-office therapeutic experiences (Brooks, 2010). Examples include adventure therapy (Scheinfeld

et al., 2011; Scheinfeld & Buser, 2013), gender aware psychoeducation in collegiate classrooms and extracurricular activities (Davies, 2010), life/executive coaching (McKelly & Rochlen, 2007, 2010), men's movement events (Brooks, 2010), online counseling (Rochlen, Land & Wong, 2004), support groups or outreach programs (Blazina & Marks, 2001), mythopoetic and weekend retreats (Andronico, 2001), and psychoeducational workshops (Levant, 1990).

Although more research is needed, many of these approaches tend to be experiential, solution-focused, and cognitive-behavioral with an overt emphasis on problem solving and goal setting. These structured, strength-based approaches are more consistent with men's therapeutic preferences and communication patterns (Brooks, 1998; Campbell, 1996; Gray, 1992; Hammer & Good, 2010).

With increased attention given to alternative approaches for men, several authors (Good et al., 2005; Rochlen, 2005; Wong & Rochlen, 2009) suggest that more research needs to be devoted to studying outcome data on interventions specially designed for men. Moreover, within the literature on men and masculinity there is a call to expand research in two directions: 1) study the negative impacts of conformity to traditional masculine norms on men; 2) find creative ways to meet men's needs and provide effective therapeutic services (Brooks, 2010).

THE OUTWARD BOUND MODEL: THEORY AND PROCESS

Outward Bound for Veterans is one alternative therapeutic approach that shows promise for Veterans. Before providing an explanation of the potential benefits of this

approach, it is important to clearly understand its theoretical underpinnings. Outward Bound has been delivering courses for nearly 50 years (Miner & Boldt, 2002) with the following mission:

> To inspire character development and self-discovery in people of all ages and walks of life through challenge and adventure, and to impel them to achieve more than they ever thought possible, to show compassion for others and to actively engage in creating a better world.

Theoretical Foundation

Walsh and Golins' (1974) wrote a seminal article that provides the theoretical basis for the core of OB's current and past facilitation process models. They define the Outward Bound process as, "characteristic problem-solving tasks set in a prescribed physical and social environment which impel the participant to mastery of these tasks and which in turn serves to reorganize the meaning and direction of his[/her] life experience" (p.2). In this model, the facilitator places the participant into a set of physical and social/group environments where they are faced with problem-solving tasks. The facilitators present and sequence these problem-solving experiences to promote learning and inter- and intrapersonal growth. Six components comprise Walsh and Golins' Outward Bound process model: 1) *Motivated learner or program participant,* 2) *Prescribed physical environment*, 3) *Social environment*, 4) *Adventure-based experience*, 5) *Role of the instructor*, and 6) *Success or mastery*. For the purposes of this dissertation, focus will be given to those components of the Outward Bound process model that particularly relate to therapeutic process, which include *prescribed physical environment, social environment, and success or mastery*.

The *prescribed physical environment* is conceptualized as an unfamiliar physical environment that causes the learner to contrast their old environment (e.g. home) with their new environment (e.g. new natural/wilderness setting). This contrast often leads to new perspectives about their old and new environments. Walsh and Golins suggest outdoor wilderness settings are highly stimulating environments, which provide for enhanced learning. The wilderness is an uncontrolled environment that provides natural consequences. This encourages participants to increase self-awareness and self-responsibility.

Wasserberger (2012) notes that unfamiliar and novel wilderness environments help participants explore their inter- and intra-personal processes in new ways. These inter- and intrapersonal processes can be observed and processed in the moment with fellow group members and the OB instructors. Wasserberger goes on to note three ways in which an unfamiliar natural environment facilitates therapeutic change: 1) Disruption of familiar patterns, 2) Creation of an inherent motivation to acclimate to the new environment, and 3) Provision of real and concrete experiences that can be drawn upon in subsequent social or therapeutic processes. Together, these three processes help set the client up to be internally motivated to make changes in their lives.

The *social environment* as conceptualized by Walsh and Golins typically consists of a ten-person group working together on common objectives. Ten-person groups are viewed as large enough for the establishment of a collective conscious or bond, but small enough for individual participants to experience independent decision-making and self-discovery in a supportive atmosphere. Reciprocity, where strengths and weaknesses can

be balanced, also tends to occur in the ten-person group model. This promotes camaraderie and a sense of interdependence. Additionally, the social microcosm created through the ten-person group model provides a unique opportunity outside of the home environment to experience intimate cooperation and trust building.

Importantly, several authors have identified the importance of creating this cohesive group dynamic in outdoor therapeutic contexts similar to Outward Bound (Bandoroff and Newes, 2004; Ewert & McAvoy, 2000; Nadler & Luckner 1992;). The Outward Bound Social Environment supports Yalom's (2005) concept of universality; group members find that their feelings, thoughts, behaviors, and problems are often similar to those of other group members. This sense of universality not only helps participants build trust and group cohesion more rapidly, but also provides greater opportunity for insight by reflecting upon others' stated experiences.

Success and mastery is the act of experiencing success and increased understanding of how to work through physical, intrapersonal, and interpersonal challenges. This process, coupled with facilitated group process, allows the participant to, "[discover] the significance of it all…reorganize the meaning and direction of a person's experience" (Walsh and Golins, 1974, p.12). The Success and Mastery phase of the OB process model is central to the Outward Bound experience. It is a corrective therapeutic experience that allows for insight and behavioral change. In other words, the new attitudes, values, and affective skills gained through the OB course provide students with a greater skill set with which to work through future problems at home. To do this, OB instructors actively help students understand how their challenges and problem-solving

strategies in the OB context can parallel those in their home environment. They encourage students to transfer this learning back home (e.g. managing stress, interpersonal conflict etc.). Additionally, Walsh and Golins' reference to the reorganization of experience suggests that experiential activities create immediate and real opportunities for feedback. This provides the student with greater insight into the cause and effect of their intra- and interpersonal actions. Thus, the reorganization of experience creates the foundation for development of new perspectives, attitudes, values, and skills to address future issues (Wasserberger, 2012).

The Evolution of the Outward Bound Process Model

Bacon (1987) provides an in depth analysis of how the Outward Bound process model has changed and evolved since its inception in 1962. Most notably, the process has evolved beyond Walsh and Golins' foundational process model to incorporate greater therapeutic facilitation. Although Walsh and Golins' process model is still a large part of every Outward Bound course, a greater emphasis has been placed on discussions, group process, therapeutic techniques, and experiential metaphors to specifically promote greater intra- and interpersonal insight. Bacon provides examples of therapeutic techniques that relate to transactional analysis, experiential therapy practices, choice theory, cognitive therapy, Alcoholics Anonymous techniques, and psychoeducational didactic facilitation. There is often a wide range of therapeutic topics addressed through these techniques. Examples include interpersonal communication, group process, anger management, self-awareness, and self-confidence.

In the current OB process model (used in the current study), the instructor is no longer viewed as purely an outdoor leader. Instead, he or she acts as a discussion leader, counselor, and therapeutic group process facilitator. In this capacity, the instructor encourages students to reflect on their OB experiences and engage in introspection, followed by a facilitated process in which they articulate their insights with the group or individually with an OB leader. Consequently, the OB instructor helps students bring meaning to their OB experiences, and provides a framework for the students to transfer that meaning into their lives at home. Outward Bound's increased work with special populations (e.g. military Veterans, youth-at-risk, cancer survivors, etc.) is considered one of the main reasons for this shift to greater emphasis on therapeutic facilitation.

Bacon (1987) describes how the OB environment provides a fertile context for the use of a therapeutic process. His reasons include: 1) The level of stress on the course breaks down traditional defenses; 2) Activities are concrete, providing the opportunity to experiment and get direct feedback in the OB context about their new ways of behaving and relating to their world; 3) The supportive, small-group atmosphere promotes trust, rapport building, and risk taking; 4) The overall wilderness setting is conducive to a feeling of renewal and revitalization. In sum, the current OB process model creates a strong connection between the students' OB experiences and their life back home by targeting specific behaviors, thoughts, and emotions in an attempt to change these intra- and interpersonal elements directly.

Therapeutic Adventure

As the Outward Bound model has evolved to become more therapeutic, especially for special populations, a new concept has emerged, termed therapeutic adventure (TA). As a point of entry to understand the meaning of TA, it is important to first define adventure therapy (AT) and wilderness therapy (WT) as they share many of the same programmatic components with therapeutic adventure. Scholars have most recently defined AT as the, "prescriptive use of adventure experiences provided by mental health professionals, often conducted in natural settings that kinesthetically engage clients on cognitive, affective, and behavioral levels" (Gass, Gillis, & Russell, 2012, p.1). Wilderness therapy shares the same overarching programmatic definition with AT, but only takes place in wilderness contexts. Ames (2012) cites the following therapeutic elements that set WT apart from traditional therapies: use of nature as a therapeutic healing process, incorporating the productive elements of working through stress, active engagement of client participation and responsibility in the therapeutic process, and use of natural consequences as meaning-making experiences for the client.

Therapeutic adventure can best be conceptualized as an intervention that shares similar therapeutic process components with AT and WT, but without the use of licensed mental health professionals. To illustrate this, Norton (2007) suggests that therapeutic adventure be conceptualized as part of a continuum. On the left end of the continuum resides wilderness-based therapeutic adventure with non-clinical (no mental health licensure) staff. The middle of the spectrum captures therapeutic adventure with clinical and non-clinical staff. On the other end of the spectrum resides outdoor behavioral

healthcare with clinical staff that meets the criteria for healthcare coverage (e.g. wilderness or adventure therapy). Outward Bound for Veterans is considered therapeutic adventure on the left and middle end of the continuum; it uses similar programmatic techniques as WT and AT to provide a therapeutic experience for participants, but does not intentionally staff programs with clinical, licensed professionals. Norton (2007), through citing Kimball and Bacon (1993), posits that the wilderness therapy continuum has four components in common across the spectrum: 1) a group process, 2) challenging activities or team initiatives, 3) therapeutic techniques such as reflection and journaling, one-on-one counseling, and self-disclosure and 4) variable length. As shown above, OB4V programming employs all four of these components. Interestingly, AT and WT's therapeutic process is largely derived from the OB model (Wasserberger, 2012). Moreover, a review of literature shows that wilderness experience programs, such as Outward Bound, generally provide personal growth for participants regardless of the presence of a mental health professional (Friese, Hendee, & Kinziger, 1998). For purposes of this dissertation, the OB4V program will be conceptualized on the above-mentioned continuum.

Therapeutic adventure can affect people on a physical, interpersonal, emotional, and spiritual level. The engagement in the wilderness context often provides opportunities for increasing self-confidence, tranquility, contemplation, and awareness of one's relationship with the physical environment (Davis-Berman & Berman, 2008; Hoyer, 2012; Kaplan & Kaplan, 1989; Kaplan & Talbot, 1983). Kaplan and Kaplan posit that the wilderness provides a restorative function through lowering clients' stress level

by decreasing distractions and increasing time for reflection and rest for the mind. Chalquist's (2009) meta-analysis cites extensive empirical research showing the relation between exposure to nature and reduction in depression, anxiety, and stress, resulting in positive mental health and general health outcomes. Further, Gass (1993) suggests the novel and unknown quality of the wilderness context encourages clients to form fresh intrapersonal and interpersonal perspectives.

To establish the overall therapeutic process in the therapeutic adventure context, a multimodal approach is used. The core elements of the therapeutic process in adventure or wilderness settings involve reciprocal relationships among the adventure activities, facilitated group process, and individual counseling opportunities (Bandoroff & Newes, 2004; Davis-Berman & Berman, 2008; Nadler & Luckner, 1992). The small-group setting coupled with adventure activities creates a social microcosm that allows increased social interaction between clients (Russell, Hendee, & Phillip-Miller, 2000).

The adventure or wilderness context of the OB courses places clients in real, uncontrolled, situations. The challenges inherent in adventure activities are viewed as opportunities for inter- and intrapersonal development (Itin, 2001). When social interaction is coupled with the challenges of the adventure activity, there is an increased likelihood that a client's coping strategies will surface. The instructors and other group members are afforded increased observation time as a student's problematic behaviors, coping mechanisms, and constructive behaviors become manifest (Hoyer, 2004; Kemp & Macaroon, 1998; Scheinfeld & Buser, 2013; Scheinfeld et al., 2011; Wasserberger, 2012). Consequently, the instructors have numerous opportunities for spontaneous

individual or group therapeutic intervention, providing greater opportunity for clients to gain insight. This multidimensional approach is considered critical in facilitating insight and promoting change that can be transferred from the therapeutic adventure context to the home environment (Davis-Berman & Berman, 2008; Wasserberger, 2012). The therapeutic adventure environment also provides a context to apply insight by enacting new patterns and receiving praise or feedback from the group (Davis-Berman & Berman; Gass, 1993; Russell et al., 2000; Wasserberger, 2012).

To maintain emotional and physical safety when participating in an OB course, it is important for the instructor to establish a strong sense of trust and camaraderie among group members. Research suggests that the milieu of working through challenging events as a team in conjunction with emotional sharing will often quickly strengthen trust among group members (Hill, 2007; Gillis, 1995; Scheinfeld & Buser, 2013; Scheinfeld et al., 2011). In turn, clients frequently take responsibility for themselves and the group in a thoughtful and caring manner. This can be especially helpful for depressed individuals or people struggling with anger issues (Davis-Berman & Berman, 2008).

To better illustrate the OB therapeutic process, consider the following example: during and after the challenging experience of climbing a mountain, a client may gain initial insight into the unhealthy or healthy coping mechanisms he uses in high-stress situations. Facilitated individual and group processes are built into the OB process to help the client address what he experienced, reflected upon, and learned from climbing the mountain with the group. While working with the client, whether individually or in a group, the OB instructors can help the client make connections between behaviors and

emotions he exhibited during the adventure-based activity and those he exhibits in his family and community environments. On a less structured level, the client can reflect on his behavior and emotions through informal peer feedback, independent reflection time, and response to therapeutic writing assignments. In sum, instructors and positive peer culture can help students better understand their problematic behaviors and emotions, and provide an emotionally and physically safe environment in which to practice healthy decision-making and behaviors. Follow up after the OB course pertaining to the client's psychosocial development rarely occurs. The challenge remains as to how OB programming can follow up with clients to promote psychosocial development after their course ends.

The Efficacy of Therapeutic Adventure Programming

In an effort to support OB4V's potential therapeutic benefit for male Veterans, it's useful to examine the general benefits of therapeutic adventure for all populations. One of the largest studies to examine the lasting psycho-social impacts of students attending an OB course was a qualitative study initiated by Fletcher (1970). He found that of 2400 OB alumni responses:1) 98.6% found their OB course either "successful" or "highly successful;" 2) 86% reported increased self-confidence; 3) 78% felt that they had increased their maturity; 4) 64% believed that they had increased interpersonal awareness; 5) 64% believed changes resulting from the OB course would last for their lifetimes, 6) 32% thought their changes would last for several years, and 7) only 4% believed that their changes lasted several months.

Several studies have shown the mental health benefits for adolescents and young adults participating in Outward Bound programs. Hattie, Marsh, Neill, and Richards' (1997) meta-analysis found that OB increased self-esteem. They also found that therapeutic adventure programs increased participants' sense of independence, self-confidence, self-efficacy, self-understanding, assertiveness, internal locus of control, and decision-making. Norton (2008, 2009) has shown OB's efficacy as an intervention for adolescents' depression and for enhancing psychosocial development. Martin's (2001) study indicated that OB students improved their self-confidence and interpersonal relationships. Wright (1983) found OB strengthened students' self-esteem, and locus of control. Neill and Dias (2001) found OB increased adult participants' resilience to work through stressful situations during and after the OB course. Goldenberg, McAvoy, and Klenosky (2005) reported OB students gleaning the following values from their Outward Bound course (values are listed from most common to least common): Transference (transfer intra- and interpersonal learning from OB to home life), Achievement of a Personal Goal, Self-Awareness/Improvement/Fulfillment, Self-Confidence/Esteem, Fun and Enjoyment of Life, A Sense of Accomplishment, Self-Reliance, and Warm Relationships with Others.

Researchers have also examined the clinical implications of adolescents participating in therapeutic adventure and wilderness therapy programs. These programs have been shown to work well with counseling-resistant adolescent populations challenged by a variety of disorders, including: ADHD, depression, oppositional defiance disorder, substance abuse/dependence, and anxiety disorders arising from sexual and

physical abuse (Clark, Marmol, Cooley, & Gathercoal, 2004; Davis-Berman & Berman, 2008; Norton, 2011; Russell, 2001, 2003; Russell et al., 2000; Russell, Gillis, & Lewis, 2008). Research indicates increases in self-awareness (Bandoroff & Scherer, 1994; Hattie et al., 1997; Romi & Kohan, 2004), self-esteem (Cason & Gillis, 1994; White & Hendee, 1999), interpersonal skills and communication (McAvoy, Smith, & Rynders, 2006; Russell, 2006), global functioning (Voruganti et al., 2006), and internal locus of control (Cason & Gillis, 1994; Hattie et al., 1997). Owing to the challenge of living in the wilderness, participants also have shown progress in teamwork, communication, physical fitness, and creative problem solving (Gass, 1993; Itin 2001; Phillips-Miller & Russell, 2002). Additionally, initial research suggests that therapeutic adventure can help facilitate weight reduction and decreases in sleep disturbances, hypertension, cholesterol levels, and incidences of diabetes (Breitenstein & Ewert, 1990).

Finally, Scheinfeld et al. (2011) conducted an exploratory study investigating the use of a wilderness therapy retreat as an adjunct to office-based group therapy for middle-aged men. Results indicated the participants found that the retreat promoted deeper therapeutic processing as compared to their experience with office-based group therapy. In general, the retreat provided the men with opportunities to experience reflection and insight, to rapidly develop a strong sense of trust among group members, and to be vulnerable more readily. The process of being vulnerable and emotional in this single gendered group seemed to enhance a sense of camaraderie and mutual empathy among them.

Four notable clinical features of the retreat's format emerged in the results. First, the physical separation from home helped the men to gain clarity and maintain focus on personal issues. Second, the use of adventure activities appealed to the men and seems to have increased their interest in being part of the therapeutic experience. Third, a deep sense of trust among group members developed due to the interdependence and teamwork required to live in the wilderness and engage in adventure activities together. Fourth, the time spent in shared adventure-activities complimented by structured group therapy provided more time and alternative outlets for the men to express themselves emotionally and interpersonally, which, in turn, provided more opportunity to process personal issues.

THE OUTWARD BOUND VETERANS PROGRAM

An Overview of the Outward Bound Veterans Program

The current Outward Bound Veterans Program (OB4V) grew out of the above-mentioned Outward Bound therapeutic and theoretical foundation. Since 2006, the OB4V has raised money to provide OB courses for more than 1,400 Veterans. It is a free program for Veterans, their course and travel expenses are prepaid by private donors. The program continues to grow, aiming to fund another 400-600 Veterans for 2012-2013. The primary purpose of the OB4V program is to: 1) Validate experiences among other Veterans; 2) Push limits and increase sense of self-worth in a non-military setting; 3) Live in the present moment and focus on transition; 4) Translate military values and experience so they continue to serve their communities. In the OB4V Veterans take part

in 5-8 day OB courses across the U.S. that are, "physically, mentally and emotionally challenging in order to build the self-confidence, pride, trust and communication skills necessary to successfully return to their families, employers and communities following wartime service" (Outward Bound, 2012a). These expeditions often mimic wartime experiences (working as a team, physical challenges, outdoor technical skills etc.), while also providing a supportive therapeutic environment that allows for meaningful achievements to support positive affective and behavioral outcomes. Thus, the adventure experience is often used as a metaphor for daily life experiences, helping Veterans transfer their psychosocial learning from the OB context to their home environment. One Veteran stated:

> I learned that I am not alone in my feelings and emotions, and this course helped me realize that I can work through these emotions to become a better person, employee, friend, father and husband. (Outward Bound, 2012b)

Efficacy of Therapeutic Adventure for Veterans and Service Members

Previous programming and research show the promise of the OB4V as a therapeutic intervention for Veterans. Currently, Outward Bound is the primary organization providing outdoor adventure for military Veterans to build resilience and assist in the transition to civilian life (Ewert et al., 2011). An extensive literature review reveals limited adventure-based programming used to currently assist Veterans in their reintegration to civilian life. However, studies have shown the potential therapeutic benefits of adventure programming for Veterans. Five peer-reviewed articles were found

that examined various therapeutic outcomes of active service members and military Veterans attending therapeutic adventure-based programs.

First, Ewert et al. (2011) conducted a large (sample size: 246 Veterans) outcomes study investigating the impact of OB4V courses on three main variables: Sense of Coherence, Resilience, and Personal Constructs. The Orientation to Life Questionnaire (OLQ), which has good psychometrics, was used to measure all three of these variables. The pre/post outcome design was setup such that all 246 participants completed the OLQ on the first day of their OB4V course and on the last day of their course. The researchers employed paired t-tests and 2X2 ANOVA's to determine change in the OLQ from pre- to post-OB4V course and investigated whether demographic variables impacted (moderated) the OLQ outcomes. Results showed significant differences (improvement) for the Sense of Coherence and Resilience variables from pre- to post-OB4V course. They also found significant difference (improvement) from pre- to post-OB4V course for the following personal constructs: leadership, teamwork skills, effective communication, self-efficacy, and social and environmental responsibility. Demographic variables (age, combat experience, etc.) did not impact OLQ outcomes. Results also suggest the small Veteran-only group format of OB4V courses provided Veterans increased social support that helped them make positive cognitive, emotional, and behavioral changes. This suggests OB4V can be an efficacious program to develop Veterans' resilience skills during the reintegration process.

Secondly, Ragsdale et al. (1996) conducted a group comparison study to examine the impact of a 26-day inpatient PTSD program that incorporated adventure-based

counseling and psychodrama techniques. Fifty-six of the Veterans who were part of the inpatient program volunteered to take part in the study. Veterans with substantial medical issues, drug addiction, or who were actively psychotic did not participate in the study. The program was designed to promote inter-and intrapersonal insight, along with increased group cohesion through the integration of experiential outdoor activities, psychodrama therapy, and group therapy led by therapists and staff. Thirty-two Veterans were randomly selected for the treatment group and 24 were randomly selected for the waitlist control group. The researchers used validated instruments that measured hopelessness, internalized shame, loneliness, interpersonal relations, anger, anxiety, and PTSD. Participants completed the instruments immediately before and after the 26-day program. Two-way ANOVA's were used to analyze between group differences. Results indicated that, as predicted, the treatment significantly reduced Veterans' feelings of hopelessness, guilt and shame, loneliness, and emotional restriction.

Thirdly, Hyer et al. (1996) investigated the use of Outward Bound for male war Veterans as an adjunct to specialized inpatient PTSD treatment. Two hundred and nineteen Veterans from two VA PTSD inpatient facilities on the East Coast volunteered to take part in the study. Five themes were established. Although the quantitative results did not yield a significant difference in outcomes between the OB treatment and the inpatient treatment, qualitative findings indicated the benefits of OB for the Veterans. First, the Veterans reported positive feelings and perceptions related to self-esteem, self-confidence, and physical agility. Second, they reported that taking part in the OB experience helped them overcome negative emotions and feel more in control. Third, the

Veterans reported that the OB experience helped them find a renewed sense of joy and appreciation for their lives. Fourth, they commented on the positive experience of bonding and building camaraderie as Veterans. Finally, the Veterans rediscovered the pleasures of being in the wilderness.

Fourth, Bob Rheault (1980) published observational accounts of the first Outward Bound course for Vietnam Veterans in 1975. The Outward Bound Program for Vietnam Veterans acted as a therapeutic adjunct for Veterans who were diagnosed with PTSD and currently admitted into the VA's PTSD inpatient unit in Northampton, CT. The six-day program consisted of four days of backpacking, with the first and last day at the VA inpatient unit. Observations suggested that Veterans experienced courage, brotherhood, determination, responsibility, and a real sense of power and competence similar to when they were in combat. Several Veterans reported a strong feeling of closeness and mutual support, a renewed sense of self-confidence, a greater feeling of camaraderie and trust, and a new liveliness and reawakening for the capacity to genuinely struggle. Dick Sette, the director of the inpatient unit stated, "this bonding helps shorten [the time spent on] clinical trust issues between men and staff, enhancing the therapeutic process on the unit" (p.237).

Finally, Chisholm and Gass (2011) researched the Operation Reintegration (OR) program, which provides outdoor adventure for intact military units. The OR program has three primary objectives: 1) develop skills to adjust to civilian life, 2) increase a sense of connection and trust with the civilian community, and 3) provide a positive outlet for stress management. The primary purpose of these objectives are to decrease negative

behaviors, mitigate PTSD, increase unit support, and include mental health professionals in a positive manner.

Chisholm and Gass used a mixed-methods approach to measure the impact of OR on Veterans' psychosocial outcomes pertaining to reintegration. To do this, they first developed the Reintegration Stress Scale. Through factor analysis and psychometric testing, they found the psychometrics of the scale to be sufficient. They surveyed 37 participants before, one-month after, and six-months after the OR experience. Using one-way ANOVA's, Chisholm and Gass found statistically significant (improved) outcomes from pre- to post-OR experience for the four subscales of the Reintegration Stress Scale: 1) views of how unit support assists in reintegration, 2) views of how civilian community support assists with reintegration, 3) healthy self-structures and stress management to assist with reintegration, 4) views of how the Army assists with reintegration. Results from the Reintegration Stress Scale showed a significant increase (improvement) from pre- to post-OR program intervention.

Chisholm and Gass discovered five primary themes from the qualitative analysis. First, the theme of *Transition to Civilian Life* indicated that participants found it notably difficult to form psychosocial perspectives to transition from military deployment to civilian life. Second, the theme of *Reintegration Issues* suggested that Veterans think there needs to be better reintegration training through the military. Third, the theme of *Importance of Group in Therapeutic Process* indicated that Veterans were able to better navigate the challenges of reintegration when they had opportunities to talk with Veterans who shared similar reintegration issues. Fourth, the theme of *Changing Routine*

highlighted the psychosocial benefits Veterans found in getting out of their normal routines and exploring new ways to live their lives during the reintegration process. Finally, the theme of *Developing Constructive Use of Time* indicated that Veterans found great value in intentionally creating time to recreate or take care of themselves through exercise.

The Benefits of Therapeutic Group Process for Male Veterans

The group format in the therapeutic adventure context has been identified as a critical component in helping provide a safe and reflective therapeutic environment for all types of participants (Kimball & Bacon, 1993; McPhee & Gass, 1987; Scheinfeld & Buser, 2013; Scheinfeld et al., 2011; Wasserberger, 2012). Ewert and McAvoy (2000) point out that the group model in outdoor adventure is beneficial to developing team morale, cohesiveness, and functioning. It is important to note that if an adventure trip is too long, too stressful, or too demanding, clients may not be able to maintain therapeutic engagement. Rather they become focused on survival and physical safety (Ewert and McAvoy; Scheinfeld & Buser, 2013; Scheinfeld et al., 2011).

For Veterans in particular, the therapeutic group model seems to establish an important sense of camaraderie and interpersonal trust critical for therapeutic change (Jelinek, 1987). Ewert (2011) found that OB's small group model provided a needed social support network to facilitate a sense of trust and cohesion necessary for the vets to make attitudinal and behavioral changes. In a recent qualitative study by Scheinfeld,

Rochlen, Reilly, and Sellers (2013), a Veteran attending an Outward Bound Sailing course stated:

> Being able to talk to other vets about my stuff was huge, because, you know, they been through it, they understand. But, if this was a bunch of civilians or something, I wouldn't have felt comfortable talking about that stuff…I feel real close to these guys now, I feel comfortable talking about stuff, it's just like when we were in the field [(on military deployment)].

As exemplified by this quote, research suggests that social connection, sense of camaraderie and belongingness, and Veteran peer support are important for maintaining and perpetuating positive emotional and behavioral advances (Pietrzak et al. 2010).

Additionally, the therapeutic group format seems to be particularly beneficial for men in general. Although much of the literature is focused on male-only groups, OB4V courses are not men-only courses (see Introduction). With that said, there are still some core elements of therapeutic groups that seem to particularly benefit men who may be more resistant to traditional forms of individual therapy. Men often think in hierarchical terms, and will anxiously compete to maintain a "one up" status with other men (Brooks, 1998). However, men's groups help mitigate men's concerns by allowing them to see that their issues are not unique to them. This process is consistent with Yalom's (2005) theory of universality. Group therapy creates a therapeutic space where men can find a sense of commonality and camaraderie on an emotional level, where their trust for one another deepens and the need to compete and perform male displays may be reduced (Brooks, 1996; McPhee, 1996).

Therapeutic groups also provide a supportive social microcosm to identify and address many issues that have interpersonal consequences for men. Issues that are commonly addressed in the group process include restrictive emotionality, maintaining control and independence, fears of acting feminine in the presence of other men, and physical contact among men (Rabinowitz, 1991, 2005, 2007; Rabinowitz & Cochran, 2002; Wilcox, & Forrest, 1992). In turn, the experience of working side-by-side and building emotion-based rapport helps men overcome shame that may be associated with seeking help (Brooks, 2010).

The Promise of OB4V for Male Veterans

Based on the above review of the literature, there is evidence to support the proposition that OB4V can be an appealing and effective alternative therapeutic approach for male Veterans. In addition to the DoD and VA's call for the development of innovative approaches for Veterans (see Introduction), several authors support the need for non-traditional, male friendly therapeutic approaches; specifically, interventions that are more aligned with men's needs and interests that develop through the masculine socialization process (Addis & Mahalik, 2003; Brooks, 2010; Kiselica, 2001; Robertson & Fitzgerald, 1990; Wade & Good, 2010). Consistent with men's preferences, OB4V provides a structured process that focuses on supporting a team atmosphere, problem solving around personal and group issues, and establishing goals. This process allows OB4V participants to be goal driven, employ decision-making skills, and take direct action (Davis-Berman, 2008; Gass, 1993; Wasserberger, 2012), which corresponds to

men's typical strengths and values (Brooks, 1998; Campbell, 1996; Kiselica & Englar-Carlson, 2010).

Furthermore, the OB4V model encourages the use of positive self-reliance where Veterans build confidence to take the initiative to care of themselves through healthy decision-making within the interpersonal context of the group. Kiselica and Englar-Carlson found this type of self-reliance to be a beneficial masculine trait. They also note that courage and risk-taking within the context of healthy decision-making can be beneficial for men. The OB4V program provides structured activities and decision-making models that help Veterans move outside their comfort zones to experience greater intrapersonal, interpersonal, and physical challenges with high perceived risk and low actual risk. In turn, the OB4V participants are provided with greater opportunity for personal growth when outside their comfort zones (Bacon, 1987).

As illustrated above, the group model appears therapeutically beneficial for male Veterans. The use of facilitated therapeutic group process sessions and the development of a supportive group culture is central to therapeutic adventure programming (Gillis, 1998; Hoyer, 2004; Russell, 2000) and specifically OB (Bacon, 1987, Ewert et al., 2011). Historically, men have formed camaraderie in groups (Benenson, Aostoleris, & Parnass, 1997; Berstein, 1987) and enjoy opportunities where they can work together on a common goal (Kiselica & Englar-Carlson, 2010). However, when men form groups, these groups are frequently characterized by competitive interactions (Brooks, 1998; Farr 1986; Meth & Pasick, 1990). In particular, it's found that male servicemen have a tendency towards dominating one another through violence, verbal and physical

aggression, and physical ability (Hinojosa, 2010). Thus, it is possible that Veterans will be more apt to express this hegemonic masculinity when back in a group setting among ex-servicemen. In an effort to address these hegemonic interpersonal issues, Outward Bound facilitation actively employs trust building activities and group process sessions to foster camaraderie and compassion among group members (Bacon, 1987). While at the same time, the OB4V provides a structured and safe environment where Veterans endure physical challenges and assume leadership roles. Thus, OB4V could be used as a helpful bridge for military personnel to better understand how to work as a team and be physical, while also maintaining composure and applying positive intra- and interpersonal skills when faced with challenge.

To this end, therapeutic adventure discourages competition and provides space for collaborative activities, while creating a supportive environment for the clients to become vulnerable and address personal issues (Hill, 2007; Scheinfeld & Buser, 2013; Scheinfeld et al., 2011). In turn, the group camaraderie allows trust to develop rapidly in the therapeutic adventure context (Hill; Gillis, 1995; Scheinfeld & Buser, Scheinfeld et al.). Brooks (2010) suggests that developing a foundation of trust is critical when attempting to help men become emotional and vulnerable. Although men often cope with their problems through physical or emotional avoidance, emotional suppression, and aggressive behaviors (Brooks; Mahalik, 2000), Scheinfeld et al. (2011) noted that the group formed a sense of cohesion around the commonality of their shared issues. This cohesion helped to create a unique opportunity for the Veterans to develop further camaraderie by becoming more emotional and vulnerable.

Brooks (2010) notes that therapeutic adventure can, "attract significant male participation because of its physicality and somewhat controlled tests of endurance" (p.57). This point is supported by the fact that men usually find comfort in coming together through shared physical activity (Kiselica et al. 2008; Mortola et al., 2008). Servicemen are accustomed to high-adrenaline inducing, action-oriented situations while on active duty (Hoge, 2010). During the reintegration process, Veterans often seek opportunities to be physical for the adrenaline rush. Thus, Outward Bound's use of high-adventure, adrenaline-inducing activities creates a safe and therapeutic physical outlet for Veterans. Mahoney (2010) notes that high adventure activities (e.g. rock climbing) provided an important outlet for Veterans to relieve stress through engaging in highly physical, adrenaline-inducing activities. Additionally, Veterans show a strong desire to engage in physical activity to stay healthy (Buis et al., 2011), and research suggests outdoor adventure can help improve physical health and motivate participants to maintain positive health outcomes (Breitenstein & Ewert, 1990). Finally, Scheinfeld et al. (2011) found that male participants were motivated to participate in AT primarily because of the hiking and camping components. Moreover authors (Brooks, 1998, 2010; Campbell, 1996) stress the importance that men place on taking action, which therapeutic adventure provides in addition to introspection.

Therapeutic adventure also provides varying outlets and assistive activities for emotional expression and processing (Scheinfeld & Buser, 2013; Scheinfeld et al., 2011), which has been shown to be beneficial for men in therapy (Brooks, 1998, 2010; Englar-Carlson, 2006; Rabinowitz, 2002; Rabinowitz & Cochran, 2002; Wong & Rochlen 2005,

2010). For example, Brooks (1998) suggests that men find it helpful to use experiential exercises to access deeply buried emotions of shame and grief. Scheinfeld et al. (2011) noted that adventure activities combined with the four-day duration of the therapeutic adventure experience seemed to create alternative avenues for participants to engage in therapeutic processing. This finding is corroborated by evidence that suggests therapeutic adventure experiences create opportunities to discover and apply insight within the group setting (Ewert, 1982; Gass, 1993). Finally, Jolliff & Horne (1996) found that experiential trust-building activities encouraged men to trust, support, and nurture one another.

CHAPTER 3: METHODOLOGY

STATEMENT OF PURPOSE

The current study responds to researchers' suggestions for empirical research that addresses the relation between conformity to traditional masculine norms, the therapeutic process, and therapeutic outcomes. Several authors (Davies, 2010; Rabinowitz & Cochran, 2002; Rochlen, 2005) have identified a need to develop more approaches to work with the unique challenges that men tend to present in the context of the therapeutic process. In a recent book on alternative therapeutic approaches to connect with men, Rochlen and Rabinowitz (2013) highlight the greater need for empirical-based data to inform how counselors can best select and implement therapeutic approaches to work with a wider range of men. Wong and Rochlen (2009) point out that most of the studies examining the therapeutic process with men focus on men's attitudes toward various types of interventions, but fail to empirically evaluate the interventions and their outcomes. Good et al. (2005) indicate the need for a greater number of intervention-based studies that explore the role of emotional inexpressiveness and self-reliance in the therapeutic process.

Furthermore, scholars have long suggested that a greater emphasis be placed on studying *within-group differences* among men (Addis & Mahalik, 2003; Wong & Rochlen, 2005). Although literature indicates the efficacy of group-based therapeutic approaches for men, limited research has explored the impact of therapeutic adventure on men. Scheinfeld et al. (2011) suggest future research on therapeutic adventure programming with men should focus on quantitative and longitudinal data collection that

uses a larger and more diverse sample size, and controls for participants' previous therapy experience.

The proposed study addresses many of these calls for research, by examining the therapeutic impact on Veterans participating in the OB4V as well as how therapeutic outcomes vary based on level of conformity to traditional masculine norms. Ultimately, these findings may inform therapists about how to utilize therapeutic adventure more effectively when working with men conforming to differing levels of masculine norms.

THERAPEUTIC OUTCOME VARIABLES

Seven therapeutic outcome variables are addressed in this study (see Table 2). Six of them are measured over time: Pre-intervention (Time 1), Post-intervention (Time 2), and One-month follow-up (Time 3). The seventh therapeutic outcome variable, Therapeutic Realizations (TRS-R), is only measured at post-intervention (Time 2). For a detailed explanation of the choice of these particular measures in the current study see Appendix A.

Table 2

Therapeutic Outcome Variables delineated by type of measure, data collection time point, and purpose

Therapeutic Outcome Variable (Subject to Change)	Measure	Data Collection Time Point(s)	Purpose
Mental Health Status	Outcomes Questionnaire-45 (OQ-45)	Time 1,2, & 3	Measure change in symptom distress, interpersonal relations, and social role performance.
Personal Growth Initiative	Personal Growth Initiative Scale-II (PGIS-II)	Time 1,2, & 3	Measure change in one's initiative to plan for and enact personal growth (i.e. inclination to intentionally improve one's self across life domains) in their life.
Attitude Towards Seeking Psychological Help	Attitudes Towards Seeking Professional Psychological Help Scale (ATSPPHS)	Time 1,2, & 3	Measure the change in openness to seek out and engage in psychological supportive services.
Psychological Mindedness	Balanced Index of Psychological Mindedness (BIPM)	Time 1,2, & 3	Measure the change in interest and ability to relate to one's inner thoughts and feelings.
Emotional Suppression	Emotion Regulation Questionnaire-Suppression Subscale (ERQ)	Time 1, 2, & 3	Measures level of emotional suppression.
Subjective Wellbeing	Satisfaction with Life Scale (LSQ)	Time 1,2, & 3	Measures subjective wellbeing.
Therapeutic Outcome Variable (Not Subject to Change)	Measure	Data Collection Time Point(s)	Purpose
Therapeutic Realizations	Therapeutic Realizations Scale-Revised (TRS-R)	Time 2 only	Measure clients' assessments of their therapeutic accomplishments that they experienced while, or as a result of participating in their Outward Bound experience.

RESEARCH QUESTIONS

This study was guided by two general research questions relating to the six above therapeutic outcome variables. Each research question is accompanied by specific sub inquiries and their respective hypotheses:

Research Question 1: Does the OB4V provide therapeutic value for male Veterans?

Sub Inquiry

- 1.1: Does the change in the therapeutic outcome variables from Time 1 to Time 2 in the treatment group significantly differ from the waitlist control group?

Research Question 2: Do male Veterans' levels of conformity to traditional masculine norms impact their therapeutic outcome variables?

Sub Inquiries

- 2.1: Do participants' CMNI scores predict their Time 1 (Pre-intervention) therapeutic outcome variables?
- 2.2: Do participants' CMNI scores predict the change from Time 1 to Time 2 in therapeutic outcome variables that are associated with the effect of the OB4V treatment?
- 2.3: Do participants' CMNI scores predict the change in their therapeutic outcome variables from Time 1 to Time 2 (post-treatment) and from Time 2 to Time 3 (one-month follow-up)?
- 2.4: Do participants' CMNI scores predict session-level therapeutic realizations/insight (TRS-R) scores?

PARTICIPANTS

This study sampled 177 male U.S. military Veterans who enrolled in an Outward Bound for Veterans (OB4V) course between spring 2012 and spring 2013. Treatment group participants (N = 159, see Appendix B) and waitlist-control participants (N = 18, see Appendix C) were primarily Caucasian and employed. Age of participants ranged

from 22 to 66 with a mean age of 34 (SD = 9.70). The majority of the sample was deployed and experienced combat overseas (engaged with the enemy or received enemy fire). Under half of the sample reported having a mental health diagnosis, with the majority of diagnoses being Post-Traumatic Stress Disorder and Depression. Group demographics were similar between the treatment and waitlist control groups. Further, this sample of Veterans represents a demographic cross section similar to the national average of returning Veterans (see Seal, 2011), with the exception of race and ethnicity. Non-Caucasian military personnel make up 30% of the military (Department of Defense, 2012), while 15% of the OB4V research participants were non-Caucasian. Veterans with severe mental illness (i.e. psychotic symptoms or actively suicidal) or health issues are referred to programs other than OB4V.

Overall, the sample size was sufficient for the proposed statistical analyses and participants were recruited from a range of geographic locations. A power analysis indicated that this sample size was sufficient to establish a medium effect size of .15, and a power level of .80 ($p>.05$) to employ multilevel and multiple regression analyses (Hox, 2002). Furthermore, participants were recruited from thirty-one different OB4V groups ranging in location throughout the U.S. and type of outdoor activity (see outwardboundforveterans.com). Only male Veterans who enrolled in an OB4V course were eligible for the study. To reduce selection bias, participants were not recruited for the study if they had previously attended an Outward Bound course of any kind.

MEASURES

Demographic Survey (Appendix D):

The demographic survey was developed to collect basic demographic information at pre-intervention about participants' age, race/ethnicity, level of education, marital status, and socioeconomic status. Information was collected about previous military involvement including length of active duty, whether they were or were not deployed, whether they experienced combat, the number of tours they went on, and their military occupational specialty. Additionally, information was collected about whether they had previously received counseling services and the number of sessions they had attended since being in the military.

Post-Course Components Questionnaire (Appendix E):

The Post-Course Components Questionnaire was developed to collect basic information about the course components such as, the start and end date of their course, type of adventure activities they engaged in, and the amount and type of facilitated therapeutic group process sessions participants attended.

CMNI: Conformity to Masculine Norms Inventory (Mahalik, et al., 2003):

The CMNI measures the degree to which an individual conforms to each of 11 masculinity norms found in the dominant (traditional) culture of the U.S. These norms are identified as Winning, Emotional Control, Risk-Taking, Violence, Dominance, Playboy, Self-Reliance, Primacy of Work, Power Over Women, Disdain for

Homosexuality, and Pursuit of Status. Each of these norms are represented by a subscale in the CMNI. The National Director of Outward Bound for Veterans requested all items from the Playboy, Power Over Women, and Disdain for Homosexuality subscales (31 items) be removed, leaving 63 items in the scale. The total of these 63 items will be referred to as the "CMNI Adjusted Total." The Director thought the wording of these subscale item questions were inappropriate, and did not want them to be associated with the OB4V program.

The remaining scale items were answered on a 4-point Likert scale (0 = *Strongly Disagree* to 3 = *Strongly Agree*). Sample items include, "It is best to keep your emotions hidden" (Emotional Control), "I should be in charge" (Dominance), and "I hate asking for help" (Self-Reliance). Appropriate items are reverse scored, and raw scores are converted to transformed scores (T-scores) using a mean of 50 and standard deviation of 10. According to Mahalik et al. (2005), T-scores of 39.99 and below reflect extreme nonconformity, scores from 40 to 49.99 reflect moderate nonconformity, scores from 50.01 to 60 are interpreted as reflecting moderate conformity, and scores of 60.01 and above reflect extreme conformity.

The CMNI has been shown to have good psychometric properties. The internal consistency reliability estimates range from .75 to .91 for the 11 Masculinity Norms and a coefficient alpha of .94 for the CMNI Total scale. Test–retest over 2–3 weeks ranged from .76 to .95 for the 11 Masculinity Norms with a test–retest coefficient of .96 for the CMNI Total scale. In regards to validity, factor analysis supported the 11-factor structure. The CMNI relates significantly to three other masculinity measures: The Brannon

Masculinity Scale (Brannon & Juni, 1984), the Gender Role Conflict Scale (O'Neil et al., 1986), and the Masculine Gender Role Stress Scale (Eisler & Skidmore, 1987).

OQ-45: The Outcomes Questionnaire-45 (Wells, Burlingame, Lambert, Hoag, & Hope, 1996):

The OQ-45 measures patients' mental health status and progress in therapy. It was designed for three uses: 1) To measure clients' current levels of distress; 2) As an outcome measure to be administered prior to and following treatment interventions; and 3) To monitor ongoing treatment response. The measure contains three subscales: 1) Symptom Distress (SD) subscale, measuring subjective discomfort (intrapsychic functioning); 2) Interpersonal Relations (IR) subscale, measuring how a person is getting along in friendships, family life, and marriage; and 3) Social Role Performance (SR) subscale, measuring the level of dissatisfaction, conflict, or distress in employment, family roles, and leisure life. The questionnaire consists of 45 items answered on a 5-point Likert scale (0= *Almost Always* to *4= Never).* Sample questions include, "I feel no interest in things" (Symptom Distress), "I feel lonely" (Interpersonal Relations), and "I feel stressed at work/school" (Social Role Performance). Appropriate items are reversed scored, and raw scores are added for the subscale and total scores.

Higher scores indicate greater symptom distress. An OQ-45 total score of 64 or above demarcates individuals who are within the *dysfunctional group,* indicating higher symptom distress. An OQ-45 total score of 63 or below is considered lower symptom distress and demarcates individuals who are in the *functional group*. Change of 14 points

or greater in OQ-45 total scores represents reliable improvement or decline in mental health.

The OQ-45 has been shown to have good psychometric properties. Based on a normative sample (N = 1000+) collected from sites in seven different states, internal consistency and test-retest reliability estimates range from .70 to .93 and .78 to .84, respectively. Criterion validity studies reveal strong correlations between all scales of the OQ-45 and existing measures of anxiety, depression, interpersonal functioning, and social adjustment. Construct validity studies measuring sensitivity to change in patients undergoing outpatient psychotherapy from a university training clinic, Employee Assistance Programs, and managed care settings all produced highly significant pretest/posttest differences on all scales of the OQ-45 (Wells et al., 1996). Further, the OQ-45 shows sensitivity to patient change, which is an important consideration when used in repeated measure designs.

PGIS-II: The Personal Growth Initiative Scale-II (Robitschek et al., 2012):

The PGIS-II is a multidimensional scale that measures intentional engagement to promote personal growth. The scale examines one's active and intentional involvement in changing and developing as a person. It includes four subscales: Readiness for Change, Planfulness, Using Resources, and Intentional Behavior. The scale consists of 16 items answered on a 6-point Likert scale (0 = *Strongly Disagree* to 5 = *Strongly Agree*), with higher scores indicating greater desire for personal growth. Sample items include "I can tell when I am ready to make specific changes in myself" (Readiness for Change), "I set

realistic goals for what I want to change about myself" (Planfulness), "I ask for help when I try to change myself" (Using Resources), and "When I get a chance to improve myself I take it" (Intentional Behavior). The PGIS was originally developed from an outcome evaluation protocol for Outward Bound adult programming (Robitschek, 1997) making this a particularly good fit for this study.

The PGIS-II has been shown to have good psychometric properties. Robitschek established concurrent validity by showing moderate to high correlations of PGIS-II with related measures (i.e. original PGIS (Robitschek, 1998), Rathus Assertiveness Schedule (RAS; Rathus, 1973), Personal Attributes Questionnaire (Spence & Helmreich, 1980), Locus of Control (Levenson, 1974), and Social Desirability Scale (Crowne & Marlowe, 1960)). Discriminant validity was also established by showing a low correlation with the Marlowe-Crowne Social Desirability Scale – Short Form (Ballard, 1992; Reynolds, 1982). Test-retest reliability showed temporal stability for the total scores of the PGIS-II, correlations are as follows: 1-week, $r = .82$; 2-week, $r = .67$; 4-week, $r = .70$; and 6-week, $r = .62$.

ATSPPHS: The Attitudes Toward Seeking Professional Psychological Help Scale (Fischer & Farina, 1995):

The ATSPPHS is a unidimensional scale that measures one's openness to seeking psychological help when their personal-emotional state warrants it. The scale consists of 10 items answered on a 4-point Likert scale (0 = *Strongly Disagree* to 3 = *Strongly Agree*) with higher scores indicating more positive attitudes towards seeking help. The

ten items were taken from a larger multidimensional scale measuring attitudes towards seeking psychological help (Fischer & Turner, 1970). The items with the highest item-total scale correlations made up the final ten items of the scale. Sample items include, "I might want to have psychological counseling in the future" and "Personal and emotional troubles, like many things, tend to work out by themselves."

The ATSPPHS has been shown to have good psychometric properties. Fischer and Farina reported test-retest reliability as r = .8 after a one month interval. The correlation between scores of the ATSPPHS and the original multidimensional scale were .87, showing good overlap between the two measures. Convergent and divergent validity were established on the original measure (Fischer & Turner, 1970).

BIPM: The Balanced Index of Psychological Mindedness (Nyklíček & Denollet, 2009):

The BIPM is a multidimensional instrument that measures one's interest and ability to relate to and reflect upon his or her psychological states and processes. It includes two subscales: Insight subscale and Interest subscale. The scale consists of 16 items answered on a 5-point Likert scale (0 = *Not True* to 4 = *Very True*), with higher scores indicating greater interest, more insight, and higher psychological mindedness. Sample items include, "I love exploring my 'inner' self" (Interest) and "I am out of touch with my innermost feelings" (Insight).

The BIPM has shown to have good psychometric properties. The internal consistency reliability estimate are adequate (Cronbach α = .85 for interest and .76 for insight), with a test-retest reliability of r = .63 (Interest subscale), r = .71 (Insight scale)

and r=.75 (Total). Convergent validity was established by showing substantial correlations between the PGIS-II and measures of self-consciousness, emotional intelligence, and alexithymia (negative). Discriminant validity was established by showing substantially low correlations with measures of basic personality traits of neuroticism and extraversion.

ERQ: Emotion Regulation Questionnaire (Gross & John, 2003):

The Emotion Regulation Questionnaire is a multidimensional instrument that measures emotional regulation through two subscales: emotional suppression and emotional reappraisal. Only items from the Emotional Suppression subscale were used for this dissertation. This subscale was chosen to examine how emotional restriction changes over time after attending an OB4V course. The Emotion Suppression subscale consists of four items on a 7-point Likert scale (0 = Strongly Disagree to 7 = Strongly Agree), with higher scores indicating higher emotional suppression. “I control my emotions by not expressing them” is an example of the statements used in this assessment. Gross and John indicate the ERQ discriminates well between genders, making this scale particularly helpful for gender-related research. They also indicate strong, negative correlations between wellbeing and the Emotional Suppression subscale. This further supports the importance of examining this construct and its overall relation to mental health.

The ERQ Suppression Subscale has shown to have good psychometric properties. The internal consistency reliability estimate are adequate (Cronbach $\alpha = .73$), with a test-

retest reliability of r = .69. Convergent validity was established by showing strong correlations between the ERQ Suppression Subscale and measures of negative mood regulation, absence of emotional venting, and inauthenticity. Discriminant validity was established by showing substantially low correlations with measures of cognitive ability and personality.

LSQ: Satisfaction with Life Questionnaire (Diener, Emmons, Larsen, and Griffin, 1985):

The Satisfaction with Life Questionnaire is a unidimensional instrument that measures satisfaction of life as a whole through asking participants about their subjective wellbeing. The scale consists of five items on a 7-point Likert scale (0 = *Strongly Disagree* to 7 = *Strongly Agree*), with higher scores indicating higher life satisfaction. "In most ways my life is close to my ideal" is an example of the assessment text used in this scale. Diener et al. recommend using the LSQ as an adjunct to instruments that measure mental health because it provides complementary information about participants' judgment of their own wellbeing.

The Satisfaction with Life Scale has shown to have good psychometric properties. The internal consistency reliability estimate are adequate (Cronbach $\alpha = .87$), with a test-retest reliability of r = .82. Convergent validity was established by showing strong correlations between the LSQ and measures of wellbeing.

TRS-R: The Therapeutic Realizations Scale-Revised (Kolden et al., 2000):

The TRS-R measures clients' assessments of the therapeutic accomplishments that they experienced while, or as a result of participating in therapy sessions. It is a modification and refinement of the Therapeutic Realizations Scale (Kolden, 1991). Examples of therapeutic realizations measured by the TRS-R include unburdening, attainment of insight, problem clarification, encouragement, enhanced morale, and an increased sense of capacity to cope. The measure contains 4 subscales: 1) Remoralization subscale, which measures a renewed sense of optimism and positive affectivity as exemplified by the therapeutic impacts of confidence, hope, enhanced self-control, reassurance, and encouragement; 2) Unburdening subscale, which measures the emotional-cognitive process of reflective self-expression, and the experience of relief realized in interpersonal opportunities to verbalize troubling thoughts and feelings with a trusted listener; 3) Past-Focused Insight subscale, which measures learning that occurs in psychotherapy characterized by the realization of connections between temporally remote experiences and present feelings, thoughts, actions, and ways of relating with the self and others; 4) Present-Focused Understanding subscale, which measures the acquisition of new knowledge, skills, attitudes, and ways of coping. The scale consists of 17 items answered on a 5-point Likert scale (0 = *Not at All* to *4 = A Great Deal).* Examples include, "More understanding of reasons behind my behavior and feelings" (Remoralization), "Help in talking about what was really troubling me" (Unburdening), "Increased awareness that reactions and behaviors toward someone now are similar to reactions and behaviors towards others in the past" (Past-Focused Insight), and "Ideas for

better ways of dealing with people and problems" (Present-Focused Insight). Higher scores indicated greater Remoralization, Unburdening, Past-Focused Insight, and Present-Focused Understanding.

The TRS-R has been shown to have good psychometric properties. The internal consistency reliability estimate for the TRS-R Total scale is .93. Reliabilities were calculated for each of the subscales using coefficient alpha: Remoralization, α=.89; Unburdening, α=.86; Past-Focused Insight, α=.89; and Present-Focused Understanding, α=.74. In regards to validity, factor analysis supported the four-factor structure. Criterion validity studies showed the TRS-R was highly correlated to measures of psychotherapy process from the perspective of both patients and therapists.

PROCEDURES

The University of Texas Internal Review Board approved this research proposal on April 11, 2012. Data collection occurred over a 12-month period. See Appendix F for a copy of the Consent Form. Treatment and waitlist control participants were recruited through the OB4V enrollment process. Each month, the PI randomly selected four enrollees to be recruited for the waitlist control group while the remainder of enrollees received emails recruiting them for the treatment group portion of the study.

The PI emailed treatment group participants survey links at three time points using a Qualtrics online survey program. The sequence of these data completion points were as follows: 1) Time 1—Participants were emailed measures two weeks before their course began and asked to complete them before they left for their course; 2) Time 2—

Participants were emailed the battery of measures three days after the course ended and were asked to complete the measures within 4 days of receiving them; 3) Time 3—Participants were emailed measures one-month after their course ended and asked to complete them within seven days. On average, participants took 30-45 minutes to complete the measures at each time point. Prospective participants at Time 1 or enrolled participants (Time 2 and Time 3) who did not respond to the survey email, were emailed 3 reminder emails within each time point's data collection timeline. Participants who did not respond to the last reminder, were then removed from the study. The same occurred for the below waitlist group at Time 1 and Time 2.

The waitlist control participants received The Time 1 and Time 2 battery of measures before they attended the course. The Time 1 battery was given two to three weeks prior to their course, with a six-day gap between the administration of the Time 2 battery to mimic the OB4V course length.

As incentive for participation, a $20.00 Amazon gift card was emailed to each participant (including members of the control group) after they completed measures at each data collection point. In total, $15,000 dollars was spent on these incentives with funds provided by a number of grants including: The Aetna Foundation, The University of Texas Excellence in Graduate Research Award, The Graduate School Continuing Education Fellowship, the June Marie Gallessich Dissertation Award, and the American Psychological Association Dissertation Research Award.

All participants took part in Outward Bound Courses that were consistent with the OB4V model described in the above-mentioned section, *"The Outward Bound Veterans Program."* For a detailed description of the OB4V program model see Appendix G.

CHAPTER 4: RESULTS

This chapter begins with a preliminary quantitative analysis section, outlining the steps taken to discover relevant demographics and check assumptions for the primary analyses. The second portion of the chapter is the primary quantitative analysis, where the results are presented after each research question and its associated hypothesis.

PRELIMINARY QUANTITATIVE DATA ANALYSIS

Discovery of Relevant Demographics:

Participants' demographic variables were included in the model to control for their potential confounding influence on the dependent variables being examined. The following variables were included in all analyses: age, race (white or not white), and previous counseling experience (number of counseling sessions attended before the OB4V course). One-way ANOVA's were employed before running each analysis to investigate whether any significant mean differences existed within the Time 1 dependent variables based on the remainder of the participants' demographic variables. Those demographic variables included: Marital Status (married or not married), Employment (full-time employed or not full-time employed), Psychological Symptoms (number of reported psychological symptoms), Psychological Diagnoses (number of reported diagnoses), Health Symptoms (number of reported health symptoms), Combat Experience (received or engaged with enemy fighting), and Tours Served (number of tours served).

Demographic variables with significant mean differences ($p < .05$) were added into the multilevel and multiple regression analyses as subject-level covariates to control for their potential influence within the overall model. Hosmer, Lemeshow, and Sturdivant (2013) suggest that any mean differences of demographic variables where $p < .25$ should be included in the model. However, the power analysis indicated no more than 11 independent variables were allowed in this model. Thus, only mean differences of demographics where $p < .05$ were included in each analysis to keep the number of independent variables at or below 11.

Checking Assumptions for Multiple Regression:

Several analyses were employed to check whether the assumptions were met for multiple regression and multilevel analyses. Residuals for all dependent variables were examined and met the following assumptions of multiple regression analyses: normality of residuals, lack of outliers, and homogeneity of variance. Outliers were noted and removed. Only subjects with complete data were analyzed (see *Attrition* section below for dropout information). The dependent variable (therapeutic outcome variable) scores across all time points did not differ significantly by group (see Appendix M), increasing the likelihood for the independence of observations assumption to be met. The STATA cluster function was employed during multiple regression analysis to help control for any within group effects, further increasing the likelihood for the independence of observations assumption to be met. Alpha levels were set at .01 for all analyses to reduce the likelihood of Type 1 errors occurring due to the re-testing of the same participants.

Finally, the absence of multicollinearity between the predictor variables was checked for all multiple regressions (see Appendix H). In summary, these analyses indicate that assumptions were met for multiple regression analyses.

Checking Assumptions for Multilevel Analyses:

Next, several tests were employed to evaluate whether assumptions were met to appropriately employ the multilevel analyses. Residuals were examined at each relevant level (level 1 and level 2), and the following assumptions of multilevel analysis were met: normality of residuals, lack of outliers, and homogeneity of variance. Outliers were noted and removed. Only subjects with complete data for Time 1, Time 2, and Time 3 were analyzed. Alpha levels were set at .01 for all analyses to reduce the likelihood of Type 1 errors occurring due to the re-testing of the same participants.

Attrition:

In total, 27% of participants of the study dropped out after Time 1 or after Time 2. From Time 1 (N=219) to Time 2 (N=181), 38 male participants dropped out. From Time 2 to Time 3 (N=159), 22 male participants dropped out. Diagnostics were run using odds ratio, logistic regressions to determine if participants with particular demographic background had greater odds of dropping out. Results indicate that participants' odds of dropout from Time 1 to Time 2 increase by 45% for each one unit increase on their CMNI Dominance subscale, by 110% for each one unit increase on their ATSPPHS scale, and by 63% if the participant is fully employed. By contrast, from time 2 to time 3,

results indicate that participants' demographic background does not influence their likelihood of dropping out of the study.

PRIMARY QUANTITATIVE DATA ANALYSIS

This section begins with descriptive statistics for the dependent and independent variables of interest. This data is summarized in Tables 3, 4, 5, and 6. The latter portion of this section provides the results for each research question and accompanied hypotheses.

To address RQ's 1.1, 2.1, 2.2, and 2.4, multiple regressions were employed. This selection of analysis was used based on the interest in evaluation of the relationship between an independent variable of interest, multiple dependent variables, and the need to control for demographic variables. To address RQ 2.3, multilevel analysis was used for to account for the nested nature of the participants' data across all three time points.

Research Question 1.1 and 2.2 use change scores that were calculated by subtracting each dependent variable's Time 1 score from its Time 2 score. In RQ 1.1, regression analysis was then used to determine whether change scores differed significantly between treatment and control groups. This variable (noted as "Treat") represents the effect of treatment (i.e. participation in OB4V vs. no participation in OB4V) on psychological health, and is thus the key outcome variable of interest in the study. An interaction term was implemented for RQ 2.2 to determine whether the difference in participants' change scores in the treatment group versus the waitlist control groups was influenced (moderated) by participants' conformity to masculine norms. An

interaction term was also used for RQ 2.3 to determine whether change in the dependent variables over all three time points was influenced (moderated) by participants' conformity to masculine norms. See Appendix I for a detailed rationale of the data analyses employed.

Descriptive Statistics:

The following tables provide information about participants OQ-45 change scores (Table 3), help-seeking behaviors (Table 4), distribution of CMNI (Table 5), and the change in mean values of therapeutic outcome variables over time (Table 6). See Appendix O for normative data comparing this study's sample with male, adult community population sample's scores across all measures.

Table 3
Information About Participants' OQ-45 Change Scores as a Percentage

OQ-45 Information	Percentage
Score of 64 or higher at Time 1	38
14 point or greater score reduction from Time 1 to Time 2	34
Maintained a 14 point or greater score reduction at Time 3	31
Initial Time 1 score of 64 or greater, and maintained a 14 point or greater score reduction at Time 3	21

Table 4
Participants' different help-seeking behaviors as a percentage

Help Seeking Behavior	Percentage
Sought counseling before OB course	40
Sought medication and counseling before OB course	14
Sought only medication before OB course	4
Have a diagnosis and sought counseling or counseling and medication before OB course	78
Sought counseling for first time after OB course	4

Table 5
Descriptive statistics for the Conformity to Traditional Masculine Norms Inventory

CMNI Variable	Mean (n = 159)	SD (n = 159)	Range (n = 159)
CMNI Adjusted Total	1.53	.27	.85-2.49
Emotional Control	1.58	.54	0-3
Self-Reliance	1.29	.56	0-3
Dominance	1.47	.47	0-3
Risk-Taking	1.78	.44	.6-3
Winning	1.45	.47	.1-2.9
Violence	1.68	.47	0-2.75
Pursuit of Status	1.79	.43	.17-3
Primacy of Work	1.18	.45	0-3

Note: The CMNI scale assigns a value of 0 to an item response of Strongly Disagree, a 1 to an item response of Disagree, a 2 to an item response of Agree, and a 3 to an item response of Strongly Agree.

Table 6
Change in Therapeutic Outcome Variables over time presented as mean values

Variable	Time 1 Mean Value (n = 159)	Time 2 Mean Value (n = 159)	Time 3 Mean Value (n = 159)
OQ_45	58.68	47.91	43.17
PGIS-II	3.44	3.78	3.82
ATSPPHS	1.56	1.73	1.88
BIPM	32.95	36.49	37.84
ERQ	23.36	16.1	14.61
LSQ	18.1	25.43	25.78

Research Question 1: Does the OB4V provide therapeutic value for male Veterans?

Sub Question:

- 1.1: Do the therapeutic outcome variables change from Time 1 to Time 2 in the treatment group significantly differ from the waitlist control group?

Hypothesis 1.1:

The treatment group would show a significant negative change (improvement) in OQ-45 and ERQ scores from Time 1 to Time 2, and significant positive change (improvement) in PGIS, ATSPPHS, BIPM, and LSQ from Time 1 to Time 2. The waitlist control group would not show significant differences from Time 1 to Time 2, indicating that the OB4V intervention was largely responsible for the change in therapeutic outcomes.

Results 1.1:

Overview, RQ 1.1. Results from a multiple regression analysis indicated that hypothesis 1.1 was partially supported. All the change scores for the therapeutic outcome variables in the treatment group, with the exception of the BIPM variable, significantly differed from the control group. This significant effect of treatment suggests that the OB4V treatment helped promote change that was associated with participants' improvement in all the therapeutic outcome variables, except the BIPM variable (psychological mindedness). See Appendix J for the RQ 1.1 results tables.

OQ-45 Results, RQ 1.1, Mental Health Wellbeing. While controlling for demographics, the overall model examining whether participants' OQ-45 change scores differed from one another for the treatment group compared to the waitlist control group was significant ($F [12, 34] = 19.50$, $p < .00$, $R^2 = .26$). On average, the treatment group's OQ-45 score dropped by 8.42 points from Time 1 to Time 2 ($p < .00$) as compared to the control group.

PGIS Results, RQ 1.1, Personal Growth Initiative. While controlling for demographics, the overall model examining whether participants' PGIS change scores differed from one another for the treatment group compared to the waitlist control group was significant ($F [11, 34] = 8.04$, $p < .00$, $R^2 = .30$). On average, the treatment group's PGIS score increased by .33 points from Time 1 to Time 2 ($p < .00$) as compared to the control group.

ATSPPHS Results, RQ 1.1, Attitudes Towards Seeking Psychological Help. While controlling for demographics, the overall model examining whether participants'

ATSPPHS change scores differed from one another for the treatment group compared to the waitlist control group was found to be significant ($F [9, 34] = 2.84$, $p < .01$, $R^2 = .10$). On average, the treatment group's ATSPPHS score increased by .13 points from Time 1 to Time 2 ($p < .01$) as compared to the control group.

BIPM Results, RQ 1.1, Psychological Mindedness. While controlling for demographics, the overall model examining whether participants' BIPM change scores differed from one another for the treatment group compared to the waitlist control group was found not to be significant ($F [12, 34] = 1.61$, $p < .14$, $R^2 = .07$). The treatment group's BIPM score did not significantly differ from Time 1 to Time 2 ($p < .08$) as compared to the control group.

ERQ Results, RQ 1.1, Emotional Restriction. While controlling for demographics, the overall model examining whether participants' ERQ change scores differed from one another for the treatment group compared to the waitlist control group was found to be significant ($F [11, 34] = 3.22$, $p < .01$, $R^2 = 11$). On average, the treatment group's ERQ score dropped by 2.14 points from Time 1 to Time 2 ($p < .00$) as compared to the control group.

LSQ Results, RQ 1.1, Subjective Wellbeing. While controlling for demographics, the overall model examining whether participants' LSQ change scores differed from one another for the treatment group compared to the waitlist control group was found to be significant ($F [12, 34] = 7.01$, $p < .00$, $R^2 = .14$). On average, the treatment group's LSQ score increased by 2.06 points from Time 1 to Time 2 ($p < .00$) as compared to the control group.

Research Question 2: Do male Veterans' levels of conformity to traditional masculine norms impact their therapeutic outcome variables?

Sub Inquiries:

- 2.1: Do participants CMNI scores predict their Time 1 (Pre-intervention) therapeutic outcome variables?

Hypothesis 2.1:

Participants' level of conformity to masculine norms would be negatively associated with their therapeutic outcome variables at Time 1.

Specifically, it was expected that a positive and significant linear relationship would be found at Time 1 for the OQ-45 and ERQ; male Veterans with lower CMNI scores would show lower mental health symptoms (OQ-45) and emotional restriction (ERQ). As male Veterans increase in their CMNI scores their mental health symptoms and levels of emotional restriction would also increase. For the PGIS-II, ATSPPHS, BIPM, and LSQ a negative and significant linear relationship would be found at Time 1: male Veterans with lower CMNI scores would show higher personal growth initiative (PGIS-II), attitude toward seeking help (ATSPPHS), psychological mindedness (BIPM), and subjective wellbeing (LSQ). Then, as male Veterans increase in their CMNI scores their PGIS-II, ATSPPHS, BIPM, and LSQ total scores would decrease.

Results 2.1:

Overview, RQ 2.1. Results from a multiple regression analysis indicated that hypothesis 2.1 was partially supported. The CMNI Emotional Control subscale scores significantly predicted the OQ-45, BIPM, LSQ, and ERQ scale scores within their hypothesized directions. This indicates that as participants report greater emotional

control, they tend to show higher mental health issues and emotional suppression, and lower levels of psychological mindedness, subjective wellbeing, and initiative for personal growth.

The CMNI Adjusted Total scores significantly predicted the ATSPPHS scores within the hypothesized direction, indicating higher CMNI Adjusted Total scores are associated with greater resistance to seek out professional psychological help. Finally, the CMNI Self-Reliance scores significantly predicted the PGIS scores within the hypothesized direction, indicating higher CMNI Self-Reliance scores are associated with lower initiative for personal growth. See Appendix K for the RQ 2.1 results tables.

OQ-45 Results, RQ 2.1, Mental Health Wellbeing. Using multiple regression analyses, the overall model examining the relationship between CMNI scores and Time 1 OQ-45 scores was significant ($F [10, 32] = 40.29$, $p < .00$, $R^2 = .45$). Specifically, one unit increase in the CMNI Emotional Control subscale score is associated with a 1.29 increase in OQ-45 score ($p < .00$).

This indicates that participants' greater mental health issues are associated with their endorsement of greater emotional control. The other CMNI scores did not significantly predict the Time 1 OQ-45 score (p-values ranged from .03 to .94).

PGIS Results, RQ 2.1, Personal Growth Initiative. Using multiple regression analyses, the overall model examining the relationship between CMNI scores and Time 1 PGIS scores was significant ($F [9, 33] = 11.05$, $p < .00$, $R^2 = .25$). Specifically, one unit increase in the CMNI Emotional Control is associated with a .03 decrease in the PGIS score ($p < .01$) and a one unit increase in the Self-Reliance subscale is associated with a

.05 decrease in the PGIS score ($p < .00$).

This indicates that participants' decreased sense of personal growth initiative is associated with their endorsement of greater emotional control. Additionally, participants who report greater self-reliance show decreased personal growth initiative. The other CMNI scores did not significantly predict the Time 1 PGIS score (p-values ranged from .03 to .99).

ATSPPHS Results, RQ 2.1, Attitudes Towards Seeking Psychological Help. Using multiple regression analyses, the overall model examining the relationship between CMNI scores and Time 1 ATSPPHS scores was significant ($F [8, 33] = 16.28$, $p < .00$, $R^2 = .42$). Specifically, one unit increase in the CMNI Adjusted Total score is associated with a .02 decrease in the ATSPPHS score ($p < .00$), and one unit increase in the CMNI Self-Reliance subscale is associated with a .04 decrease in the ATSPPHS score ($p < .01$).

This indicates that participants' decreased attitudes towards seeking psychological help is associated with their endorsement of greater overall conformity to traditional masculine norms. Additionally, participants who report greater self-reliance show decreased attitudes towards seeking psychological help. The other CMNI scores did not significantly predict the Time 1 ATSPPHS score (p-values ranged from .02 to .2).

BIPM Results, RQ 2.1, Psychological Mindedness. Using multiple regression analyses, the overall model examining the relationship between CMNI scores and Time 1 BIPM scores was significant ($F [11, 32] = 30.66$, $p < .00$, $R^2 = .60$). Specifically, one unit increase in the CMNI Emotional Control subscale score is associated with a 1.13 decrease in the BIPM score ($p < .00$).

This indicates that participants' decreased psychological mindedness is associated with their endorsement of greater emotional control. The other CMNI scores did not significantly predict the Time 1 BIPM score (p-values ranged from .3 to .9).

ERQ Results, RQ 2.1, Emotional Restriction. The overall model examining the relationship between CMNI scores and Time 1 ERQ scores was found to be significant ($F[10, 33] = 24.38$, $p < .00$, $R^2 = .52$). Specifically, one unit increase in the CMNI Emotional Control subscale score is associated with a .62 increase in the ERQ score ($p < .00$).

This indicates that participants' increased emotional restriction is associated with their endorsement of greater emotional control. The other CMNI scores did not significantly predict the Time 1 ERQ score (p-values ranged from .02 to .40).

LSQ Results, RQ 2.1, Subjective Wellbeing. The overall model examining the relationship between CMNI scores and Time 1 LSQ scores was found to be significant ($F[11, 33] = 16.86$, $p < .00$, $R^2 = .28$). Specifically, one unit increase in the CMNI Emotional Control subscale score is associated with a .37 decrease in the LSQ score ($p < .01$).

This indicates that participants' decreased sense of subjective wellbeing is associated with their endorsement of greater emotional control. The other CMNI scores did not significantly predict the Time 1 LSQ score (p-values ranged from .1 to .5).

- 2.2: Do participants' CMNI scores predict the change from Time 1 to Time 2 in their therapeutic outcome variables that is due to the OB4V treatment?

Hypothesis 2.2:

Participants' CMNI scores would influence (moderate) their therapeutic outcome variable change scores when comparing the treatment group to the control group. In other words, participants with higher CMNI scores would show less improvement in therapeutic outcome variables than participants with lower CMNI scores when comparing the treatment group to the waitlist control group.

Specifically, it was expected that men with lower CMNI scores would show greater negative OQ-45 and ERQ change scores (negative values indicate decrease in mental health issues and emotional restriction). Furthermore, it was anticipated that as men increased their CMNI subscale scores their OQ-45 and ERQ change scores would show smaller, or even positive, change score values. For the PGIS-II, ATSPPHS, BIPM, and LSQ scores a positive and significant linear relationship was expected : male Veterans with lower CMNI scores were anticipated to show higher PGIS-II, ATSPPHS, BIPM, and LSQ total change scores. As male Veterans increased in their CMNI scores, it was expected that their PGIS-II, ATSPPHS, BIPM, and LSQ total change scores would decrease. However, it was expected that all subjects will show some improvement in their therapeutic outcome variables.

Results 2.2:

Overview, RQ 2.2. Results from a multiple regression analysis indicated that hypothesis 2.2 was not supported. Change scores in the therapeutic outcome variables for the treatment group compared to the waitlist control group was not influenced

(moderated) by participants' level of conformity to masculine norms. Considering that the results from RQ 1.1 show that the treatment group's change in therapeutic outcome variables significantly differed from the waitlist control group, the results from RQ 2.2 suggest that participants who attend Outward Bound show change in therapeutic outcome variables in the hypothesized direction *regardless of their level of conformity to masculine norms.* This suggests that OB4V can be an effective program for participants who are low, moderate, or high conformers to traditional masculine norms. See Appendix L for the RQ 2.2 results tables.

OQ-45 Results, RQ 2.2, Mental Health Wellbeing. The overall model examining whether CMNI scores moderated the relationship between treatment and change in OQ-45 scores from Time 1 to Time 2 was significant ($F [17, 159] = 3.10$, $p < .00$, $R^2 = .26$). However, no CMNI scores moderated the relationship between treatment and OQ-45 change scores as shown by non-significant interactions (p-values range from .06 to .92). This suggests that participants' change in overall mental health status from Time 1 to Time 2 occurred regardless of their level of conformity to traditional masculine norms.

PGIS Results, RQ 2.2, Personal Growth Initiative. The overall model examining whether CMNI scores moderated the relationship between treatment and change in PGIS scores from Time 1 to Time 2 was significant ($F [12, 34] = 8.03$, $p < .00$, $R^2 = .28$). However, no CMNI scores moderated the relationship between treatment and PGIS change scores as shown by non-significant interactions (p-values range from .70 to

.90). This suggests that participants' change in personal growth initiative from Time 1 to Time 2 occurred regardless of their level of conformity to traditional masculine norms.

ATSPPHS Results, RQ 2.2, Attitudes Towards Seeking Psychological Help. The overall model examining whether CMNI scores moderated the relationship between treatment and change in ATSPPHS scores from Time 1 to Time 2 was not significant ($F [10, 34] = 2.65$, $p < .02$, $R^2 = .10$). No CMNI scores moderated the relationship between treatment and ATSPPHS change scores as shown by non-significant interactions (p-values range from .15 to .96). This suggests that participants' change in attitude toward seeking psychological help from Time 1 to Time 2 occurred regardless of their level of conformity to traditional masculine norms.

BIPM Results, RQ 2.2, Psychological Mindedness. The overall model examining whether CMNI scores moderated the relationship between treatment and change in BIPM scores from Time 1 to Time 2 was not significant ($F [13, 34] = 1.69$, $p < .10$, $R^2 = .10$). No CMNI scores moderated the relationship between treatment and BIPM change score as shown by non-significant interactions (p-values range from .10 to .84). This suggests that participants' change in psychological mindedness from Time 1 to Time 2 occurred regardless of their level of conformity to traditional masculine norms.

ERQ Results, RQ 2.2, Emotional Restriction. The overall model examining whether CMNI scores moderated the relationship between treatment and change in ERQ scores from Time 1 to Time 2 was significant ($F [12, 34] = 3.34$, $p < .00$, $R^2 = .11$). However, no CMNI scores moderated the relationship between treatment and ERQ change score as shown by non-significant interactions (p-values range from .34 to .81).

This suggests that participants' change in emotional restriction from Time 1 to Time 2 occurred regardless of their level of conformity to traditional masculine norms.

LSQ Results, RQ 2.2, Subjective Wellbeing. The overall model examining whether CMNI scores moderated the relationship between treatment and change in LSQ scores from Time 1 to Time 2 was significant ($F [13, 34] = 8.78$, $p < .00$, $R^2 = .15$). However, no CMNI scores moderated the relationship between treatment and LSQ change score as shown by non-significant interactions (p-values range from .06 to .80). This suggests that participants' change in subjective wellbeing from Time 1 to Time 2 occurred regardless of their level of conformity to traditional masculine norms.

- 2.3: Do participants' CMNI scores predict the change in their therapeutic outcome variables from Time 1 to Time 2 (post-treatment) and from Time 2 to Time 3 (one-month follow-up)?

Hypothesis 2.3:

It was anticipated that participants would show improvement in their therapeutic outcome variables from Time 1 to Time 2, and would show little change from Time 2 to Time 3. This would indicate maintenance of improvement. However, participants who conform to higher levels of traditional masculine norms would show less improvement over time compared to participants with lower levels of conformity to masculine norms.

Specifically, a negative and significant linear relationship was expected from Time 1 to Time 2 for the OQ-45 and ERQ; men with lower CMNI Adjusted Total scores, would show greater decreases in OQ-45 and ERQ scores from Time 1 to Time 2. This change over time would be influenced (moderated) by participants' level of conformity to

masculine norms; as men increased in their CMNI Adjusted Total scores there would be less reduction in their OQ-45 and ERQ scores. However, participants with higher CMNI scores would still show some decrease in OQ-45 and ERQ scores. For the PGIS-II, ATSPPHS, BIPM, and LSQ a positive and significant linear relationship was anticipated from Time 1 to Time 2: male Veterans with lower CMNI scores would show higher change in PGIS-II, ATSPPHS, BIPM, and LSQ total scores from Time 1 to Time 2. As male Veterans increased in their CMNI scores, their change in PGIS-II, ATSPPHS, BIPM, and LSQ scores would decrease in magnitude.

A non-significant linear relationship was expected from Time 2 to Time 3. Male Veterans across all CMNI scores would show minimal change in therapeutic outcome variables from Time 2 to Time 3, suggesting maintenance of their change in therapeutic outcome variables.

Results 2.3:

Overview, RQ 2.3. Results from a multilevel analysis indicated that hypothesis 2.3 was not supported. Participant's conformity to traditional masculine norms did not significantly predict (moderate) change in the therapeutic outcome variables across time. However, time did significantly predict change in a positive direction, indicating improvement, for the mean values of the ATSPPHS, BIPM, LSQ, and PGIS across all time points. Time also significantly predicted change in a negative direction, indicating improvement, for the mean values of the OQ-45 and ERQ scores across all time points. This finding counters the hypothesis, because it was thought participants' therapeutic outcome variables would remain relatively stable from Time 2 to Time 3. Furthermore,

the lack of a moderation effect by CMNI indicated that from Time 1 through Time 3, participants, on average, showed improvement across all the therapeutic outcome variables regardless of their level of conformity to traditional masculine norms. It is important to note that because the waitlist control group for Time 2 to Time 3 was absent, these results do not indicate change in therapeutic outcome variables due to treatment, but only across time. See Appendix M for the RQ 2.3 results tables.

OQ-45 Results, RQ 2.3, Mental Health Wellbeing. None of the participants' CMNI scores significantly predicted change in OQ-45 scores from Time 1 to Time 2 and from Time 2 to Time 3 (p-values ranged from .02 to .81**)**. However, time significantly predicted an average decrease of 8.44 ($p<.00$) points in OQ-45 scores from Time 1 to Time 2, an average decrease of 5.01 ($p<.00$) points in OQ-45 scores from Time 2 to Time 3, and an average decrease of 13.45 ($p<.00$) points in OQ-45 scores from Time 1 to Time 3. When examining the overall effect of time, time predicts a significant decrease of 2.22 ($p < .00$) in OQ-45 scores across all three time points. In sum, these results imply that the change in OQ-45 scores due to time is occurring regardless of individual CMNI scores.

PGIS Results, RQ 2.3, Personal Growth Initiative. None of the participants' CMNI scores significantly predicted change in PGIS scores from Time 1 to Time 2, and from Time 2 to Time 3 (p-values ranged from .2 to .8**)**. However, time significantly predicted an average increase of .29 ($p<.00$) points in PGIS scores from Time 1 to Time 2. Time did not predict change in PGIS scores from Time 2 to Time 3 as indicated by non-significant increase of .06 ($p<.96$) points in PGIS scores from Time 2 to Time 3, and an average increase of .35 ($p<.00$) points in PGIS scores from Time 1 to Time 3. When

examining the overall effect of time, time predicts a significant increase of .05 (p<.00) in PGIS scores across all three time points. In sum, these results imply that change in PGIS scores due to time is occurring regardless of individual CMNI scores.

ATSPPHS Results, RQ 2.3, Attitudes Towards Seeking Psychological Help. None of the participants' CMNI scores significantly predicted change in ATSPPHS scores from Time 1 to Time 2 and from Time 2 to Time 3 (p-values ranged from .13 to .97**)**. However, time significantly predicted an average increase of .17 (p<.00) points in ATSPPHS scores from Time 1 to Time 2, an average increase of .13 (p<.00) points in ATSPPHS scores from Time 2 to Time 3, and an average increase of .31 (p<.00) points in ATSPPHS scores from Time 1 to Time 3. When examining the overall effect of time, time predicts a significant increase of .05 (p<.00) in ATSPPHS scores across all three time points. In sum, these results imply that change in ATSPPHS scores due to time is occurring regardless of individual CMNI scores.

BIPM Results, RQ 2.3, Psychological Mindedness. None of the participants' CMNI scores significantly predicted change in BIPM scores from Time 1 to Time 2 and from Time 2 to Time 3 (p-values ranged from .05 to .97**)**. However, time significantly predicted an average increase of 3.00 (p<.00) points in BIPM scores from Time 1 to Time 2, an average increase of 1.14 (p<.00) points in BIPM scores from Time 2 to Time 3, and an average increase of 4.15 (p<.00) points in BIPM scores from Time 1 to Time 3. When examining the overall effect of time, time predicts a significant increase of .66 in BIPM scores across all three time points. In sum, these results imply that change in BIPM scores due to time is occurring regardless of individual CMNI scores.

ERQ Results, RQ 2.3, Emotional Restriction. None of the participants' CMNI scores significantly predicted change in ERQ scores from Time 1 to Time 2 and from Time 2 to Time 3 (p-values ranged from .06 to .86**)**. However, time significantly predicted an average decrease of 1.72 (p<.00) points in ERQ scores from Time 1 to Time 2, an average decrease of 1.26 points in ERQ scores from Time 2 to Time 3, and an average decrease of 3.00 points in ERQ scores from Time 1 to Time 3. When examining the overall effect of time, time predicts a significant decrease of .51 (p < .00) in ERQ scores across all three time points. In sum, these results imply that change in ERQ scores due to time is occurring regardless of individual CMNI scores.

LSQ Results, RQ 2.3, Subjective Wellbeing. None of the participants' CMNI scores significantly predicted change in LSQ scores from Time 1 to Time 2 and from Time 2 to Time 3 (p-values ranged from .12 to .93**)**. However, time significantly predicted an average increase of 1.6 (p < .00) points in LSQ scores from Time 1 to Time 2. Time did not predict change in LSQ scores from Time 2 to Time 3 as indicated by non-significant increase of .02 (p < .99) points in LSQ scores from Time 2 to Time 3, and an average change of 1.58 (p < .00) points in LSQ scores from Time 1 to Time 3. When examining the overall effect of time, time predicts a significant increase of .21 (p < .00) in LSQ scores across all three time points. In sum, these results imply that change in LSQ scores due to time is occurring regardless of individual CMNI score.

- 2.4: Do participants' CMNI scores predict session-level therapeutic realizations/insight (TRS-R) scores?

Hypothesis 2.4:

Most participants would indicate they found therapeutic value, as measured by the TRS-R, from their OB4V experiences. Participants with higher levels of conformity to masculine norms would find less therapeutic value from their OB4V experience as compared to participants with lower levels of conformity to traditional masculine norms.

Specifically, a negative and significant linear relationship was expected between all CMNI scores and the TRS_R scores at Time 2. Participants with lower CMNI scores would show higher TRS-R Total scores (greater Remoralization, Unburdening, Past-Focused Insight, and Present-Focused Understanding). As men increased in their CMNI subscale scores, their TRS-R Total scores would decrease. However, it was anticipated that all men would show at least some therapeutic insight and process as measured by their TRS-R outcomes scores.

Results 2.4:

Overview, RQ 2.4. Results from a multiple regression analysis indicated that hypothesis 2.4 was not supported. The majority of participants found either "quite a bit" or "a great deal" of therapeutic value from their experience. However, participants' CMNI scores did not significantly predict their therapeutic realizations scores. These results indicated that Veterans can find therapeutic value from their Outward Bound experience whether they are low, moderate, or high conformers to the CMNI Adjusted Total or subscale norms. See Appendix N for the RQ 2.4 results tables.

TRS-R Results, RQ 2.4, Therapeutic Realization. The majority of participants found either "quite a bit" or "a great deal" of therapeutic value from their OB4V experience: 5% found no therapeutic value (marked as "Not at All"), 33% of participants found some therapeutic value (marked as "Some"), 50% found quite a bit of therapeutic value (marked as "Quite a Bit"), and 12% found a great deal of therapeutic value (marked as "A Great Deal") from their OB4V experience. However, the overall model examining whether CMNI scores predicted therapeutic realizations scores was found not to be significant ($F [8, 34] = 16.48$, $R^2 = .26$). None of the CMNI scores significantly predicted TRS_R scores (p-values ranged from .03 to .86).

CHAPTER 5: DISCUSSION

This study addresses scholars' concerns about the dearth of outcomes-based research and program development within the field of alternative therapeutic interventions for men (Davies, 2010; Good et al., 2005; Rabinowitz & Cochran, 2002; Rochlen, 2005; Scheinfeld et al., 2011; Wong & Rochlen, 2009) and Veterans (Seal, 2011; Tanielian & Jaycox, 2008). The primary goals were twofold: 1) to determine whether improvement in Veterans' therapeutic outcome variables are associated with the effect of the OB4V intervention; 2) to discover whether male Veterans' level of conformity to traditional masculine norms influences the amount of change in their therapeutic outcome variables (see Table 2). Overall, the results support the use of OB4V programming to meet male Veterans' unique therapeutic needs and interests. These findings address the Department of Defense and the Department of Veteran's Affairs call for greater innovative, community-based interventions to help mitigate returning Veterans' reintegration challenges (Tanielian & Jaycox, 2008).

This chapter provides an overview and discussion of the findings from this study within the context of the literature. First, the treatment effectiveness of the OB4V program will be reviewed, including the Veterans' perceived therapeutic value of the OB4V program. Second, the relationship between participants' conformity to traditional masculine norms and their Time 1 therapeutic outcome variables will be discussed. Third, the study's findings concerning the impact of conformity to traditional masculine norms on the change in the outcome variables will be addressed. Fourth, implications of these

findings will be discussed. Finally, limitations of the study design and directions for future research will be discussed.

TREATMENT EFFICACY OF OUTWARD BOUND FOR VETERANS

Veterans who attended an OB4V course (treatment group) showed improvement in all therapeutic outcome variables, except psychological mindedness (BIPM). A significant effect of treatment was found, suggesting that the OB4V treatment helped to promote this improvement; using multiple regressions, participants' change scores in the treatment group significantly differed from the waitlist control group (see Appendix J for amount and direction of change). These results show that the Outward Bound for Veterans treatment model helps to increase overall mental health, subjective wellbeing, openness to emotions, motivation for personal growth, and openness to seek psychological help. Furthermore, results indicate that OB4V appears to be an appealing and effective alternative therapeutic intervention for male Veterans. Although the results do not indicate the specific OB4V course components that may align with male Veterans' therapeutic needs and preferences, the findings suggest that the program is effective for men who conform to all levels of traditional masculine norms.

Considering the significance of these findings, it is important to explore why OB4V may appeal to male Veterans and promote psychosocial development. This is a critical point of exploration. Scholars note the need for continued development of alternative, gender-aware therapeutic approaches that take into account preferences and needs unique to men (Addis & Mahalik, 2003; Brooks, 2010; Kiselica, 2001; Rabinowitz

& Rochlen, 2013; Robertson & Fitzgerald, 1990; Wade & Good, 2010) and Veterans (Seal, 2011; Tanielian & Jaycox, 2008). With this in mind, explanations for the therapeutic success of OB4V with male military populations will be explored.

The literature supports OB4V's focus on a team model that aligns with men's needs and preferences. Men's typical strengths and values correspond to team-based atmospheres, problem solving around personal and group issues, and establishing goals (Brooks, 1998; Campbell, 1996; Kiselica & Englar-Carlson, 2010). The camaraderie that stems from overcoming challenges as a group can instill positive feelings of efficacy and togetherness for men. Both masculine and military culture promote positive associations with brotherhood and team-based activity. The OB4V model is unique in that it aligns with men's drive for group-based, physical activities and simultaneously promotes an emotionally supportive environment that encourages vulnerability. In other words, therapeutic adventure's use of the supportive group model intermixed with team challenges to promote camaraderie provides men greater opportunity to be vulnerable and address personal issues (Scheinfeld & Buser, 2013; Scheinfeld et al., 2011). This intrapersonal and interpersonal growth is a central component to promote therapeutic change.

OB4V likely appeals to Veterans because it aligns well with Veterans' attraction to adventure sports, such as backpacking, rock climbing, and canoeing. These activities often heighten Veterans' adrenaline and sense of accomplishment, because they involve a mixture of challenge, safe risk-taking, and physicality. Hoge (2010) posits that Veterans identify with experiences that induce adrenaline and are action-oriented. Additionally,

OB4V's focus on physical activity supports Veterans' affinity to be healthy through activity and exercise (Buis et al., 2011). Mahoney (2010) notes that high-adrenaline adventure activities can provide Veterans stress relief. Although levels of stress and adrenaline were not measured in this study, these are possible explanations for Veterans affinity towards the OB4V experience as an alternative to traditional therapy.

Some male Veterans may prefer therapeutic adventure experiences because they hold positive associations with recreational activities, wilderness-based exploration and hunting. Scheinfeld and Buser (2013) note that the men's preference for therapeutic adventure over traditional therapy stems, in part, from their affinity towards recreation and adventure. These elements of adventure activities (i.e. safe risk-taking, physical challenge), which align with masculine norms and military culture, are experienced within the OB4V context. Simultaneously, the OB4V experience promotes camaraderie, therapeutic insight, and vulnerability. To this end, the OB4V program is poised to create a balanced, gender-aware, approach that engages male military Veterans' affinity towards adventure, while simultaneously promoting intrapersonal and interpersonal insight and growth.

The integration of adventure with informal emotional sharing is a core component of the OB4V program model that helps reduce emotional restriction and increases several psychosocial markers. Scheinfeld et al. (2011) note that men often become emotionally vulnerable with one another during the adventure experience (e.g., on the trail) or while resting (e.g., sitting around the campfire), because there is less pressure to share at an intimate level compared with formal therapy approaches. Other scholars have discovered

the importance of finding non-directive ways for emotional expression and processing, which have been shown to be beneficial for men in therapy (Brooks, 1998, 2010; Englar-Carlson, 2006; Rabinowitz, 2002; Rabinowitz & Cochran, 2002; Scheinfeld & Buser, 2013; Wong & Rochlen 2005, 2010). In other words, gender aware approaches that can be helpful for men often remove direct therapeutic facilitation and use experiential activity as the precipitator for engaging in exploration of intrapersonal emotions or cognitions. This suggests that OB4V may best align with male Veterans' interests if they continue to not use licensed mental health clinicians and do not explicitly integrate structured therapy approaches with the adventure activities.

The positive findings from this study show that OB4V is a promising approach that supports the needs and preferences of male Veterans. The alignment between the OB4V treatment model and male Veterans' preferences likely helped promote therapeutic value and positive psychosocial outcomes for Veterans. However, additional research focused on participants' therapeutic and gender-based preferences is needed to measure how well the OB4V course components align with the full range of male Veterans' needs and preferences.

Finally, it is important to discuss the non-significant finding regarding the psychological mindedness outcome variable. Nyklíček and Denollet (2009) found that psychological mindedness, as a personal construct, is a fairly stable trait that rarely changes unless a person experiences significant external influences such as notable life events or psychotherapy. The lack of significance for the psychological mindedness construct may suggest that Outward Bound is not comparable to psychotherapy in regards

to influencing participants' interest in or understanding of their cognitions and emotions. However, it is important to note that 62% of participants found "quite a bit" to "a great deal" of therapeutic value from the OB4V experience.

CONFORMTIY TO TRADITIONAL MASCULINE NORMS AND THERAPEUTIC OUTCOME VARIABLES AT TIME 1

Emotional control:

Emotional control appears to have substantial negative impact on Veterans' overall psychological wellbeing and motivation to care for their mental health. Results at Time 1 (RQ2.1) indicated that Veterans' level of conformity to the CMNI Emotional Control subscale significantly predicted greater mental health issues (OQ-45), decreased sense of overall wellbeing (LSQ), reduced psychological mindedness (BIPM), greater emotional suppression (ERQ), and reduced motivation for personal growth (PGI). These results were expected considering that emotional control is characterized by stoicism, concealing emotions, and the avoidance of addressing emotional content in interpersonal contexts.

The impact of these underlying qualities of emotional control may deter Veterans from reflecting upon or addressing intrapersonal or interpersonal issues in a constructive manner. Consequently, Veterans who are engaged in emotional distancing may assume that difficult intrapersonal or interpersonal issues will get resolved through quick, impulsive, often unhealthy, coping strategies or will fade away over time if ignored. Ultimately, these unhealthy coping tendencies associated with emotional control can lead

to greater mental health issues, decreased sense of wellbeing, reduced interest or ability to relate to inner thoughts and feelings, and less motivation for intentional personal growth.

To this end, findings from RQ 2.1 show that Veterans' higher levels of conformity to the Emotional Control norm are associated with greater mental health issues (OQ-45) and with their perception of lower levels of wellbeing (LSQ). This is supported by related literature, which suggests that emotional restriction is associated with men's increased levels of depression (Cournoyer & Mahalik, 1995; Good, Robertson, Fitzgerald, Stevens, & Bartels, 1996; Good et al., 2005; Jakupcak et al., 2013; Shepard, 2002), loneliness (Wong et al., 2012), lower overall psychological wellbeing (Alfred et al., 2013), greater anxiety (Wong, Pituch, & Rochlen, 2006), aggressive behaviors (Mahalik, 2000), and worsening PTSD symptoms (Jakupcak et al., 2013; Lorber et al., 2007; Morrison, 2012). Moreover, Price et al (2005) found that soldiers exhibiting greater emotional suppression reported lower life satisfaction and reduced social connection.

The literature also supports the finding that increased emotional control is associated with decreased personal growth initiative (PGI). Alfred et al. (2013) showed that decreased motivation for personal growth in male veterans is associated with higher conformity to traditional masculine norms, which in turn mediates reduced psychological wellbeing. In examining the PGI construct, Robitschek (1998) suggests that intentional change begins with a person deciding what they would like to change through closely relating to their cognitions and emotions associated with that desired change. Thus, it is

reasonable to posit that PGI can be stunted, because people's conformity to traditional masculine norms may interfere with their ability to openly relate to their emotions. Depression, anxiety, or general emotional distress has also been found to decrease PGI (Robitschek & Kashubeck, 1999). These mental health symptoms often interfere with a person's emotional state. This provides further evidence to suggest that a reduced capacity to relate to emotions can cause a decrease in PGI.

The negative impact of increased emotional control on psychological mindedness (BIPM) is also supported by research (Bagby, Parker, & Taylor, 1994). Nyklíček & Denollet (2009) posit that a core element to attaining psychological mindedness is the ability for someone to have interest in and relate to their cognitions and emotions. Attainment of psychological mindedness is an important component of effective therapeutic intervention. Helping clients acknowledge and verbalize cognitions and emotions is a central component for development of a therapeutic process (Kolden et al., 2000). Moreover, therapeutic services are most beneficial when the client is able to verbalize troubling thoughts and feelings, realize how past emotions and behaviors impact their current state, and understand new knowledge and skills to cope in healthy ways (Kolden et al.). Masculinity scholars identify emotional restriction as one of the core hurdles for men engaging in a therapeutic process (Brooks, 2010; Campbell, 1996; Englar-Carlson, 2006; Robertson & Fitzgerald, 1992). This study's findings, complemented by the current literature, suggest that emotional restrictions remain a significant challenge for male Veterans' healthy reintegration.

A large proportion of Male Veterans appear to place a high value on emotional control. This is problematic considering its negative psychosocial impact on Veterans returning from war. Scholars have argued that emotional control is a common masculine norm that is exaggerated by conforming to military culture. Over 50% of this study's participants "agree[d]" or "strongly agree[d]" that they exhibit qualities of the Emotional Control norm (see Table 5**)**. This relatively high percentage supports the premise that the military's hyper-masculine culture often promotes emotional restriction to avoid showing weakness (Brooks, 2005; Burns & Mahalik, 2011; Jakupcak et al., 2013; Jakupcak et al., 2006). It may also indicate that men who enlist in the military tend to have higher levels of emotional control. Further research would be needed to investigate this nuance. Scholars note that the transition from military to civilian life can create a masculine identity crisis, because the hyper-masculine norms that are promoted in the military often misalign with civilian norms (Hockey, 1986; Hoge, 2010). Lorber (2007) posits that the military masculine identity is so engrained in soldiers' subconscious that it can be difficult for them to recognize their emotional restriction. Thus, it is important to consider the mental health and therapeutic implications of Veterans' conformity to the Emotional Control norm considering its prevalence and often covert influence on psychosocial functioning.

CMNI Adjusted Total and Self-Reliance:

Veterans' conformity to a wide range of traditional masculine norms, represented in this study by the CMNI Adjusted Total score, predicted reduced interest in seeking

help (ATSPPHS). The CMNI Adjusted Total score in this study is comprised of the following subscales: Emotional Control, Self-Reliance, Dominance, Winning, Risk-Taking, Violence, Primacy of Work, and Pursuit of Status. Combined, these subscales represent a traditional masculine construct characterized by stoicism, not showing weakness, emotional restriction, and wanting to be in control. This study's findings concerning the impact of Total CMNI score on attitudes towards seeking professional psychological help (ATSPPHS) support the literature, which suggest that male Veterans who conform to greater degrees of traditional masculine norms are less open to seeking out or engaging in mental health services (Duggal et al., 2010; Lorber & Garcia, 2010; Ouimette et al., 2011; Seal, 2011). Scholars note that those Veterans who conform to a range of traditional masculine norms are particularly prone to resist seeking help, because they do not want to be perceived as weak or in need of assistance (Brooks, 2005; Burnam, Meredith, Tanielian, & Jaycox, 2009; Lorber & Garcia, 2010; Pietrzak, Johnson, Goldstein, Malley, & Southwick, 2009).

Addressing Veterans' attitudes towards seeking professional psychological help (ATSPPHS) is particularly important for several reasons. First, Veterans show a high dropout rate from therapy. According to Erbes, Currt, and Leskela (2009), 95% of male OIF/OEF Veterans in their sample dropped out of VA counseling services, and attended less therapy sessions at a rate twice that of Vietnam Veterans. Hoge et al. (2004) noted that 38% of Veterans with mental health issues mistrusted mental health professionals, and 41% were embarrassed to seek mental health assistance. Veterans' reduced openness to seeking help should be of great concern, considering the alarmingly high rates of

Veteran suicides and mental health issues. Moreover, substantial evidence suggests that male Veterans' resistance to seek psychological help stems from their conformity to traditional masculine norms. Moving forward, the development of gender-aware interventions will be critical considering the impact that conforming to traditional masculine norms has on help-seeking behaviors.

Additionally, findings from this study show that Veterans' increased level of conformity to the Self-Reliance norm is associated with decreased personal growth initiative (PGI). Self-reliance is characterized by striving to solve problems independently and not seek help from others or take advice (Mahalik, 1999; Mahalik, Locke et al., 2003). Although previous research does not support a clear link between increased self-reliance and decreased personal growth initiative, the literature provides tentative explanations that may have relevance for the findings in this study. For example, various authors suggest that men who conform to the self-reliance norm fear losing a sense of independence, which leads to reduced interest in psychological change or seeking help (Addis & Mahalik, 2003; Good et al., 2005; Robertson & Fitzgerald, 1990). Men who conform to the self-reliance norm may associate a need for psychological change with being inadequate or weak. Consequently, they may resist psychological change in an effort to remain feeling independent and strong. Robitschek et al. (2012) suggest that personal growth initiative stems from an ability to enact change through an intentional acknowledgment of cognitions, behaviors, and emotions that one would like to develop. Thus, in accordance with the findings from this study, the following line of logical conjecture is posited: 1) men who conform to higher levels of

the self-reliance norm strive for a sense of independence and strength, 2) those men are then less likely to acknowledge psychosocial issues that would require change, because it may threaten their sense of an independent and strong identity.

IMPACT OF VETERANS' CONFORMITY TO MASCULINE NORMS ON CHANGE IN THERAPEUTIC OUTCOME VARIABLES

One of the more important findings from this study indicates that the significant effect of treatment (OB4V treatment) associated with Veterans' change in the therapeutic outcome variables was not influenced (moderated) by participants' level of conformity to masculine norms (RQ2.2). Furthermore, Veteran's level of conformity to masculine norms did not significantly predict their perception of the therapeutic value (TRS-R) of their OB4V course (RQ2.4). The implications of these findings are substantial because it suggests that OB4V can provide therapeutic value for Veterans irrespective of their level of conformity to traditional masculine norms. In other words, even male Veterans who highly conform to traditional masculine norms can experience therapeutic benefit from OB4V. Scholars support this finding by showing the therapeutic utility of using adventure-based approaches that incorporate men's unique cultural needs and interests into the therapeutic intervention (Brooks, 2010; Scheinfeld & Buser, 2013; Scheinfeld et al., 2011).

Findings from RQ 2.3 support the premise that improvement in the therapeutic outcome variables over time (Time 1 through Time 3) can occur whether individuals are low, moderate, or high conformers to traditional masculine norms. This finding shows

that male Veterans who conform to traditional masculine norms still have the potential to improve their overall mental health, personal growth initiative, attitudes towards seeking help, openness in relating to emotions, and subjective wellbeing. This, along with the other findings, substantiates the premise that alternative interventions, such as Outward Bound for Veterans, can help male Veterans improve their psychosocial wellbeing even if they restrict their emotions or are resistant towards seeking help. Bettmann, Russell, and Parry (2013) noted a similar finding. Although their study examined an adolescent population, they found that regardless of clients' degree of openness to change through therapeutic intervention, they showed improvement in their mental health after attending an adventure therapy intervention. This is an important finding considering it's often assumed that most psychological improvement through therapeutic intervention centers around emotional expression (Kolden et al., 2000). Unfortunately, because there was no waitlist control data collection at Time 3, it is not possible to state that change in outcome variables from Time 2 to Time 3 was associated with the effect of the Outward Bound intervention. However, considering that change in therapeutic outcome variables from Time 1 to Time 2 was associated with the significant effect of treatment (RQ 1.1), it is plausible that change in therapeutic outcome variables from Time 2 to Time 3 was influenced by the OB4V program. If this held true, it would provide further evidence for Outward Bound's potential to provide longer-term (at least one-month) psychosocial benefits through therapeutic adventure.

Outward Bound for Veterans programming appears to promote greater openness to seeking professional psychological help for Veterans conforming to a range of

traditional masculine norms. Scheinfeld et al. (2013) suggest that OB4V may be most helpful in that it acts as a psychological "door opener" where Veterans begin to think about their lives in a new way, become more motivated to address issues, and take better care of themselves upon returning home. For example, one Veteran stated in response to an open-ended question from this study, "[Outward Bound] helped me see what I need to work on in my life." Another Veteran stated, "[Outward Bound] gave me perspective, I realized I needed more help…I have been taking better care of myself and doing a better job of being there for my family." Further 6-month and one-year data collection is planned for 2013 and 2014 using this study's sample to better delineate Veterans' rates of seeking help after their OB4V experience.

Overall, this study's results support the use of alternative therapeutic methods for male Veterans. Brooks (2010) makes the sound argument that gender-aware therapeutic interventions use alternative techniques to accommodate men's conformity to traditional masculine norms that may inhibit therapeutic progress in traditional therapy settings. To address therapeutic engagement barriers due to emotional control, Wong and Rochlen (2009) suggest expressive writing and Rabinowitz (2002) found physical group-based activities to be helpful. Moreover, Scheinfeld et al. (2011) found that group-based adventure activities over an extended period (four-days or longer) help men feel more comfortable sharing thoughts and emotions. Thus, male Veteran's conformity to masculine norms, including emotional control, does not preclude potential for therapeutic gain, but it does need to be addressed through gender-aware interventions.

Considering the positive therapeutic impact of OB4V, it is important to note this study directly addresses authors' (Good et al., 2005; Rochlen, 2005; Wong & Rochlen, 2009) call for increased experimental, longitudinal research on interventions designed for men. It also addresses the Department of Defense and the Department of Veteran's Affairs call for innovative, community-based interventions to meet the unique needs and interests of the returning Veterans (Tanielian & Jaycox, 2008). In turn, this study sets the premise for increased funding and research to establish OB4V as an official innovative approach to work with Veterans.

IMPLICATIONS

This study provides an empirical basis for two overarching implications. First, the results suggest that the OB4V program helps to improve Veterans' mental health, general wellbeing, and motivation for personal growth. Secondly, regardless of Veteran's level of conformity to traditional masculine norms, OB4V provides Veterans with an alternative culture-centered intervention (Sue & Sue, 2012) that takes into account their masculine and military cultural needs and interests. OB4V is an innovative approach that begins to address what many are referring to as a growing public health issue (Seal, 2011; Tanielian & Jaycox, 2008), characterized by increasing mental health issues and suicide completions among returning Veterans coupled with low rates of help seeking and inadequate therapeutic programming to meet their needs. It is hoped that the results of this study will strengthen support for the OB4V program and stimulate related program initiatives that improve Veterans' mental health.

Karney et al. (2008) note that Veterans who experienced combat, and more specifically those with PTSD or a TBI, seem to have greater psychosocial challenges in the reintegration process. As seen in the demographics table (Appendix B**),** the majority of Veterans who attend OB4V have experienced combat with just under half of them reporting psychological symptoms or mental health diagnoses. The majority (67%) of those diagnoses were PTSD. Moreover, as seen in Table 3**,** 38% of the participants' OQ-45 scores were above 63 points (i.e., in the high range of mental health issues), which indicates that the mental health status of these Veterans resembles that of a clinical population more so than a community population. Thus, OB4V is providing services to Veterans who would benefit from mental health and other supportive services, but may not seek them out. To this end, OB4V is poised to provide needed psychosocial services for both Veterans who are amenable towards and resistant to traditional mental health services.

Findings also suggest it will be important for Veterans and organizations to address the negative psychosocial impact of conforming to the emotional control norm. Research indicates that those Veterans with greater emotional control, showed poorer social integration and lower life satisfaction during reintegration (Suvak et al., 2002). Emotional restriction is associated with poorer coping after traumatic experiences (Price et al., 2005) and increased PTSD symptoms (Lorber et al., 2007). This study's results corroborate these scholars' findings. Often Veterans believe emotional numbing or avoidance is a way to alleviate PTSD symptoms (Lorber et al.). Thus, during reintegration it is critical to establish relationships and programming that creatively

address Veterans' thoughts and feelings associated with their military, reintegration, and general life experiences.

LIMITATIONS AND FUTURE RESEARCH DIRECTION

This study had several limitations that can be addressed in future research. Limitations will be discussed first, followed by suggestions for future research.

Limitations:

All measures were based on self-report, leading to increased likelihood of reporting bias. Podsakoff, MacKenzie, Lee, and Podsakoff (2003) note that reporting bias is a common and significant measurement challenge within the behavioral sciences. Although the instrument's directions asked participants to answer questions honestly, the current study did not implement measurement strategies to address reporting bias. Future research could implement greater objective health measures (e.g. measure weight, fitness level, blood pressure, saliva samples for amount of serotonin, etc.), and use measurement methods to detect reporting bias. Additionally, it was not possible to control for the environment in which measures were completed, because participants were asked to complete measures on their home computers. To better manage reporting bias and overall methods bias see Podsakoff et al.

Although the overall sample size for the treatment group was adequate, the waitlist control group was too small for this study. Ideally, the waitlist control group would be a similar sample size as the treatment group to more appropriately compare the

two groups. Additionally, similar to the treatment group, it would be ideal for the sample size of the waitlist control group to also meet the power analysis requirements to establish a medium effect size of .15, and a power level of .80 ($p>.05$) when running statistical analyses. This would better allow for the results from the multilevel and multiple regression analyses of the treatment and waitlist control groups to be fully comparable. The waitlist control group was small, because monetary constraints restricted the number of participants that could be recruited for the waitlist control group. Furthermore, the Time 3 data should have been collected for the waitlist control group. This would have provided results indicating whether the change in the outcome variables from Time 2 to Time 3 was due to treatment, not just due to time. Ideally, future research could use a matching technique applied to an equal number of participants in the treatment and control groups.

Specific course components (e.g. weather, amount of therapeutic facilitation, background of the instructors, group size, etc.) were not measured. McKenzie (2000) provides an extensive review of the literature that exemplifies the dearth of rigorous research that examines which specific outdoor adventure course components are associated with participant outcomes. Future research should collect detailed information about course components to better understand how course elements impact participant outcomes.

This study only collected data one week and one-month after the course ended, which leaves in question the longer-term impact of OB4V on Veterans. The decision to collect data one-month after the course ended was not founded on previous research or

theory. After examining the literature on Outward Bound and therapeutic adventure, the Principal Investigator could not find a standard length of time that researchers let lapse between treatment and post-treatment data collection. Considering the short duration of the OB4V course and to reduce likelihood of life events impacting participants' responses, it was thought that outcomes would be most identifiable one week and one-month after the course ended. Future research could provide a stronger theoretical basis for the amount of time lapse before and after the OB4V treatment data collection.

Finally, demographic data and results from the ATSPPH scale may indicate that Veterans entering the OB4V program were more open to therapeutic services than the general Veteran population. For example, Hoge et al. (2006) posit that only 1/3 of Veterans seek help for mental health needs and Seale et al. (2010) suggest 10% of Veterans with PTSD attended the minimum number of mental health sessions required for adequate treatment of PTSD. Demographic information from this study indicate that 40% of the participants were seeing a mental health counselor before they attended the OB4V course. Further, 78% of Veterans who disclosed they had a mental health diagnosis had sought counseling or counseling and medication before the OB4V course. OB4V Veterans' potential bias towards openness to engaging in mental health treatment may not accurately reflect the general Veteran population. Thus, it is important to consider this potential bias when generalizing these findings to the overall U.S. Veteran population.

Future Directions:

Considering the limitations of this study, additional suggestions for future research are as follows: Researchers could place greater emphasis on the predictive relationship between demographic (background) variables and the therapeutic outcome variables to understand whether therapeutic adventure programming is more beneficial or less beneficial for Veterans with particular demographic backgrounds. For example, future research could examine the relationship between race and OB4V outcomes, between employment status and OB4V outcomes, and between rural vs. urban background and OB4V outcomes. Moreover, research suggests that Veterans under the age of 25 are at particular risk for not seeking out help (Ouimette et al., 2011). This group is also at high risk for suicide completion (Braswell & Kushner, 2012; Brenner et al., 2008). Thus, the relationship between Veterans under 25 years of age and OB4V outcomes could be investigated. Outcome differences by Gender will also be important to measure. According to this study's demographic data, roughly 17% of Outward Bound participants are women, making gender an important demographic to research in future studies.

Of particular importance, is the need for researchers to examine whether OB4V is better used as a stand-alone program or used as an adjunct to community or government mental health programming. Results from this study indicate that OB4V, although only five-days in duration, provides psychosocial growth for Veterans. However, it is unclear how OB4V can best help Veterans maintain and develop their psychosocial growth as they move forward in their reintegration process. To address this issue, it will be

important for OB4V to explore partnering opportunities where their program could be used as an adjunct within the larger context of reintegration programs within Veteran-centered organizations such as the VA or the Wounded Warrior Project. Additionally, maintenance and development of psychosocial growth could be facilitated through online or in-person group meetings facilitated by their Outward Bound instructors. Overall, more methods could be identified to harness Veterans' gains from their OB4V experience to improve their psychosocial functioning within the civilian context.

In sum, OB4V is poised to provide substantial psychosocial benefits to Veterans in their reintegration process. Although limitations to this study exist, this was the first quasi-experimental, longitudinal study to research Veterans' psychosocial outcomes after attending an Outward Bound course. Moreover, findings support the use of OB4V as a viable, alternative form of therapeutic intervention that takes into account the unique needs and interests associated with U.S. masculine and military culture.

Appendix A

The seven therapeutic outcome variables were selected for two reasons. First, the OB4V therapeutic process shows promise to positively change the therapeutic outcome variables across time points and provide a context for the attainment of therapeutic realizations. This could be achieved through the OB4V's focus on creating an experiential and therapeutic process to help Veterans gain insight about their intrapersonal and interpersonal challenges and attributes. Moreover, the OB4V program provides a context for skill development to apply this insight on course and back home. The emphasis on teamwork and camaraderie creates a supportive atmosphere where Veterans can learn to trust and experience a sense of belonging. These experiences and skills development are expected to help Veterans with their reintegration process.

Considering OB4V's above mentioned therapeutic foci, it is expected that Veterans' mental health status will improve (measured by the Outcomes Questionnaire-45) through a supportive therapeutic outlet that enables the Veteran to begin working through their mental and physical health problems. Personal growth initiative (measured by the Personal Growth Initiative Scale-II) is anticipated to increase due to the OB4V program's emphasis on supporting Veterans to lead an intrapersonally, interpersonally, and physically healthier lifestyle. Their openness to psychological help (measured by the Attitudes Toward Seeking Professional Psychological Help) is hypothesized to increase, because the OB4V program can provide a safe context to be more vulnerable with an emphasis on taking action to create a healthier lifestyle back home. The Program's focus on self-reflection and facilitated group process is hypothesized to increase Veteran's

ability to be psychologically minded (as measured by the Balanced Index of Psychological Mindedness) and less emotionally restricted (as measured by the Emotional Suppression subscale). With improvement across mental health, psychological mindedness, and reduced emotional restriction it is hypothesized that overall subjective wellbeing will also increase (as measured by the Life Satisfaction Measure). Finally, therapeutic process facilitated by OB4V leaders is hypothesized to provide Veterans with greater insight and understanding (measured by the Therapeutic Realizations Scale-Revised) about their past, present, and future lives.

Second, male Veterans' conformity to traditional masculine norms is posited to directly impact (moderate) the amount of change in therapeutic outcome variables. It is hypothesized that higher levels of adherence to traditional masculine norms will be associated with a reduced mental health status at Time 1 and less improvement in mental health status across time points. Furthermore, adherence to traditional masculine norms may interfere with men's ability to engage in the therapeutic process, be vulnerable, and attain intrapersonal and interpersonal insight. Consequently, it is hypothesized that those men with higher conformity to traditional masculine norms will be associated with lower levels of psychological mindedness, personal growth initiative, openness to seek psychological help, and therapeutic realizations. Higher conformity to traditional masculine norms is also hypothesized to lower the amount of change in psychological mindedness, personal growth initiative, and openness to seek psychological help across time points.

Appendix B

Participants from the treatment group have a mean age of 36, a median age of 34, and the age ranges from 22-66 years of age.

Demographic Variables as a Percentage for Treatment Group

Characteristic	Male Veteran Participants (n=159)
Race	
White	85
Non-White	15
Marital	
Married	47
Not-Married	53
Employment/Student	
Full employment	56
No full employment	21
Student	23

Military History as a Percentage for Treatment Group

Characteristic	Male Veteran Participants (n=159)
Combat	
Experienced Combat	69
No Combat	31
Tours	
Not deployed	9
One tour	33
Two tours	32
Three or more tours	26
Military Rank	
E-3 through E-9	79
O-1 through O-6	21
Military branch	
Army	42
Marine Corps	18
Navy	15
Air Force	8

U.S. Coast Guard	1
National Guard	16
Military Status	
Active Duty	25
Veteran	75
Active duty post 9/11/01	
Active duty since 9/11/01	92
Left military before 9/11/01	8

Psychological and Health History as a Percentage for Treatment Group

Characteristic	Male Veteran Participants (n=159)
Number of health symptoms from TBI, combat Stress, deployment injury	
No health symptoms	57
One health symptom	29
Two health symptoms	9
Three or more health symptoms	5
Health symptom from TBI	
Reported symptom	11
No symptom	89
Health symptom from combat stress	
Reported symptom	20
No symptom	80
Health symptom from combat or deployment injury	
Reported symptom	33
No symptom	67
Number of psychological symptoms	
No psychological symptoms	59
One symptom	22
Two symptoms	12
Three or more symptoms	7

Psychological symptom from TBI	
Reported symptom	14
No symptom	86
Psychological symptom from combat stress	
Reported symptom	35
No symptom	65
Psychological symptom from physical issue	
Reported symptom	14
No symptom	86
Psychological symptoms from family/reintegration stress	
Reported symptom	3
No symptom	97
Psychological symptoms from emotional grief	
Reported symptom	3
No symptom	97
Total psychological diagnoses	
No diagnoses	59
One diagnosis	21
Two diagnoses	7
Three or more diagnoses	13
PTSD diagnosis	
Reported diagnosis	28
No diagnosis	72
Depression diagnosis	
Reported diagnosis	22
No diagnosis	78
Substance abuse disorder	

Reported diagnosis	11
No diagnosis	89
Narcotic abuse disorder	
Reported diagnosis	2
No diagnosis	98
Generalized anxiety	
Reported diagnosis	16
No diagnosis	84
Adjustment disorder	
Reported diagnosis	2
No diagnosis	98
Visits to counselors	
Reported visiting counselor	40
No visit to counselor	60

Appendix C

Participants from the waitlist control group had a mean age of 32, median age of 31, and the age ranged from 24-46 years of age.

Demographic Variables as a Percentage for Waitlist Control

Characteristic	Male Veteran Participants (n=18)
Race	
White	78
Non-White	22
Marital	
Married	44
Not-Married	56
Employment/Student	
Full employment	66
No full employment	17
Student	17

Military History as a Percentage for Waitlist Control Group

Characteristic	Male Veteran Participants (n=18)
Combat	
Experienced Combat	67
No Combat	33
Tours	
Not deployed	11
One tour	50
Two tours	28
Three or more tours	11
Military Rank	
E-3 through E-9	79
O-1 through O-6	21
Military branch	
Army	44.4
Marine Corps	22.2
Navy	5.6
Air Force	11.1

National Guard	16.7
Military Status	
Active Duty	11
Veteran	89
Active duty post 9/11/01	
Active duty since 9/11/01	100
Left military before 9/11/01	0

Psychological and Health History as a Percentage for Waitlist Control Group

Characteristic	Male Veteran Participants (n=18)
Number of health symptoms from TBI, combat Stress, deployment injury	
No health symptoms	78
One health symptom	17
Two health symptoms	0
Three or more health symptoms	5
Health symptom from TBI	
Reported symptom	11
No symptom	89
Health symptom from combat stress	
Reported symptom	11
No symptom	89
Health symptom from combat or deployment injury	
Reported symptom	11
No symptom	89
Number of psychological symptoms	
No psychological symptoms	83
One symptom	11
Two symptoms	0
Three or more symptoms	6

Psychological symptom from TBI	
Reported symptom	11
No symptom	89
Psychological symptom from combat stress	
Reported symptom	11
No symptom	89
Psychological symptom from physical issue	
Reported symptom	6
No symptom	94
Psychological symptoms from family/reintegration stress	
Reported symptom	0
No symptom	100
Psychological symptoms from emotional grief	
Reported symptom	0
No symptom	100
Total psychological diagnoses	
No diagnoses	72
One diagnosis	17
Two diagnoses	0
Three or more diagnoses	11
PTSD diagnosis	
Reported diagnosis	22
No diagnosis	78
Depression diagnosis	
Reported diagnosis	11
No diagnosis	89
Substance abuse disorder	

Reported diagnosis	6
No diagnosis	94
Narcotic abuse disorder	
Reported diagnosis	6
No diagnosis	94
Generalized anxiety	
Reported diagnosis	0
No diagnosis	100
Adjustment disorder	
Reported diagnosis	0
No diagnosis	100
Visits to counselors	
Reported visiting counselor	44
No visit to counselor	66

Appendix D

Demographic Survey

PLEASE CIRCLE ALL THAT APPLY

1) Age:_____

2) Race:
   a. White/European American
   b. Hispanic/Latino
   c. Asian/Asian-American/pacific Islander
   d. Black /African-American
   e. Native American
   f. Other (please specify) _____

3) Marital Status:
   a. Single
   b. Married
   c. Widowed
   d. Divorced
   e. Separated

4) Employment Status:
   a. Fulltime
   b. Part time
   c. Retired
   d. Unemployed
   e. Student (undergraduate)
   f. Student (Graduate)
5) Type of Employment:_____

6) Between which dates were you active in the military? Start:_____(year) to _____(year)
   If you are still active in the military, when did you enroll in the military? _____(year)
7) Were you deployed? _____ If so, how many tours did you serve?_____
8) What was/is your military occupational specialty?_____
9) Were you involved in combat? Yes or No
10) During or after active duty, did you receive any counseling services?_____ If yes, how many counseling sessions have you attended during active duty or after active duty? _____

Appendix E

Post-Course Components Questionnaire

1. What was the start and end date of you Outward Bound course?

Start: _____(month)_____(day)_____(year) End :

_____(month)_____(day)_____(year)

2. How many fellow Veterans attended the course?_____

3. Please check the box next to the primary outdoor activity or activities you engaged in. The activity is considered primary if you engaged in the activity for two days or more.

- Canoeing
- Kayaking
- Sailing
- White water rafting
- Backpacking
- Mountaineering
- Rock climbing
- Canyoneering
- Caving
- Dog sledding
- Skiing
- Snow shoeing/backpacking

4. Please check the box next to the secondary outdoor activity or activities you engaged in. The activity is secondary if you engaged in the activity for one day or part of a day.

- Canoeing
- Kayaking
- Sailing
- White water rafting
- Backpacking
- Mountaineering
- Rock climbing
- Canyoneering
- Caving
- Dog sledding

- Skiing
- Snow shoeing/backpacking

Appendix F

Consent Form

Title: The Outward Bound Veterans Dissertation Study

Conducted by:

- David Scheinfeld (Primary Investigator); Graduate Student, Educational Psychology; OBVetsStudy@gmail.com, (253) 208-7018
- Aaron Rochlen, PhD; Associate Professor, Educational Psychology; aaron.rochlen@mail.utexas.edu , (512) 471-0361

You are being asked to participate in a research study. This form provides you with information about the study. Please read the information below and ask any questions (email or call David Scheinfeld, info above) you might have before deciding whether or not to take part. Your participation is entirely voluntary. You can refuse to participate without penalty or loss of benefits to which you are otherwise entitled. You can stop your participation at any time and your refusal will not impact current or future relationships with Outward Bound or participating sites. To do so simply email David Scheinfeld at OBVetsStudy@gmail.com if you wish to stop participation.

The purpose of this study:

- To better understand your experiences during your Outward Bound trip, and how Outward Bound experiences affect veterans.

If you agree to be in this study, we will ask you to do the following things:

- Complete electronic questionnaires at three time points; before, one to two days after, and one month after you complete your Outward Bound course.

Total estimated time to participate:

- Time 1 questionnaires (before OB course): approximately 25-40 minutes
- Time 2 questionnaires (one to two days after OB course): approximately 30-40 minutes
- Time 3 questionnaires (one month after OB course): approximately 20-30 minutes
- Total time for the study approximately 65-110 minutes

Risks of being in the study:

- It is possible that some of the questions asked during the group interview may be difficult or uncomfortable for you to answer. For example, some of the questions may remind you of a difficult, challenging, or uncomfortable experience(s) in your life. However, you can always opt to not answer a question or discontinue participation in the study at any time.
- If you wish to discuss the information above or have any concerns, you may call or email the Primary Investigator listed on the front page of this form.
- If for any reason you need to access supportive services after or during

completing these surveys please contact your local Veterans Affairs office for assistance. Or, you can contact the national veterans support hotline at 1-800-273-TALK (8255) for immediate assistance.

Benefits of being in the study:

- Participants may gain further understanding about their Outward Bound experiences.

Compensation:

- $20.00 in Amazon gift card will be emailed to the participant within five business days after they complete each of the three data collection time points, with a total of $60.00 in Amazon gift cards for completing Time 1, Time 2, and Time 3 data collection points. The participant will only receive compensation after completing the survey at each time point. The participant will not be compensated if they withdraw from the study and will only be compensated for each survey completed.

Confidentiality and Privacy Protections:

- The data resulting from your participation may be made available to other researchers in the future for research purposes not detailed within this consent form. In these cases, the data will contain no identifying information that could associate you with it, or with your participation in any study.

- The data from this study will be stored securely and kept confidential. Authorized persons from The University of Texas at Austin and members of the Institutional Review Board have the legal right to review your research records and will protect the confidentiality of those records to the extent permitted by law. All publications will exclude any information that will make it possible to identify you as a subject. Throughout the study, the researchers will notify you of new information that may become available and that might affect your decision to remain in the study.

Contacts and Questions: The participant may contact David Scheinfeld, the primary investigator at OBVetsStudy@gmail.com or (253)208-7018. Additionally the participant may contact the U. of Texas Institutional Review Board anonymously at orsc@uts.cc.utexas.edu or (512) 471-8871.

If you have any questions about the study please feel free to email or call David Scheinfeld. If you have questions later, want additional information, or wish to withdraw your participation call or email the researchers conducting the study. Their names, phone numbers, and e-mail addresses are at the top of this page. If you have questions about your rights as a research participant, complaints, concerns, or questions about the research please contact The University of Texas at Austin Institutional Review Board for the Protection of Human Subjects at (512) 471-8871 or email: orsc@uts.cc.utexas.edu.

If you would like this consent for your records, please click the below print tab to print this page before moving to the next page.

PRINT TAB

Consent Agreement:
If you agree to participate please press the "I agree" tab to continue, otherwise use the X at the upper right corner to close this window and disconnect.
I AGREE TAB

Appendix G

The Outward Bound Program Model

The Outward Bound for Veterans program (OB4V) uses a manual-based curriculum. The Outward Bound for Veterans program instructors receive similar training, making the program intervention as consistent as possible across all participants. During this training, instructors develop therapeutic facilitation skills, technical adventure skills, safety management skills and strengthen their theoretical foundations of the general OB and OB4V philosophy. Typically, there are two instructors in charge of ten OB4V students over six days in the wilderness. Outward Bound Veteran Program courses take place across the entire U.S. and implement all adventure activities Outward Bound offers: hiking, rock climbing, mountaineering, canyoneering, canoeing, whitewater canoeing, whitewater rafting, sailing, sea kayaking, skiing, winter camping/snow shoeing, and dog sledding.

While on course instructors create a curriculum that provides for a milieu of challenging group adventure activities (e.g. hiking, climbing, canoeing etc.) intermixed with therapeutic group facilitation. Instructors' goals focus on helping Veterans foster greater understanding about intrapersonal and interpersonal insight. Instructors work closely together as a team to guide the daily facilitation process of the group. Students are encouraged to initiate group meetings at any given time to process insight(s) or challenge(s) that may have arisen for them. Additionally, instructors implement structured therapeutic theme groups. Some examples themes include making meaning from challenging experiences, effective interpersonal communication, working through

the challenges of the transition process to civilian life, remembrance ceremony (remembering the fallen), making sense of anger, and understanding how intrapersonal and interpersonal insight gained through the OB experience can be applied in the civilian world.

The Outward Bound Veterans Program is open enrollment; any U.S. Veteran can enroll in an Outward Bound course if they meet the medical requirements. Outward Bound medical staff screen Veterans, and will often restrict Veterans who have severe mental illness or physical challenges that would prevent them from engaging in the adventure activities. Veterans are also asked if they have thoughts of killing themselves to screen for suicidal ideation. If a Veteran has thoughts about killing themselves or has severe mental illness, the OB4V screener will ask to speak with the Veteran's psychologist, psychiatrist, or medical doctor. The OB4V screener takes into account all information and makes a decision on a case-by-case basis whether the Veteran will be safe to attend the OB4V course. The screening process remained the same for those Veterans enrolled in this dissertation study. They do their best to accommodate Veterans' physical challenges. In the case they cannot work with a Veteran, they refer them to the appropriate resources. The OB4V curriculum follows a three phase model: training, main, and final. These phases allow the OB group to become progressively independent from the instructors so they can learn adventure skills as a group and independently operate in the wilderness. This sense of learning skills and operating autonomously from the instructors often provides groups members with a fulfilling sense of accomplishment and self-confidence.

Appendix H

Collinearity Diagnostic

	Variance Inflation Factor
Variable	VIF
CMNI (Total)	3.20
CMNI (Emotional-Control)	1.93
CMNI (Self-Reliance)	1.86
CMNI (Dominance)	1.61
Age	1.48
Race	1.07
Psychological Symptoms	4.02
Health Symptoms	2.88
Psychological Diagnoses	2.83
Employment	1.47
Marital Status	1.32
Combat Experience	1.26
Tours Served	1.20

Note: N = 159.
Variables included CMNI Adjusted Total score, CMNI Emotional Control score, CMNI Self-Reliance score, CMNI Dominance score, Age, Race (White or Non-White), Psychological Symptoms (number of reported psychological symptoms), Health Symptoms (number of reported health symptoms), Psychological Diagnoses (number of reported diagnoses), Employment (full-time employed or not full-time employed), Marital Status (married or not married), Combat Experience (encountered combat or no combat experience), Tour Served (number of tours served overseas).
VIF > 5* VIF > 10**

Appendix I

Rationale for Data Analyses Used

Multiple regression analyses were used for RQ's 1.1, 2.1, 2.2, and 2.4, because these research questions focused on the relationship between an independent variable of interest, multiple dependent variables, and needed to control for demographic variables. However, the independence of observations assumption for RQ's 1.1 and 2.2 could not be met due to the nested nature of the data. In an effort to account for the nesting effect, the clustering option was engaged on all regressions. Additionally, greater significance among variable relationships was found when the clustering option was engaged compared to not engaged. In turn, this suggests that that the clustering option helps account for the nesting effect to some degree. Multilevel analysis was not used for RQ's 1.1, 2.1, 2.2, and 2.4, because it was suggested that three time points provide more reliable results for multilevel analysis.

Multilevel analysis was used for RQ 2.3 to account for the nested nature of the participants' data across all three time points. Specifically, due to the repeated measures design, participants' time point data are nested within participants. Additionally, participants are nested within OB groups. Because OB participants are in single groups, they can impact one another's course experience within each group. Consequently, the independence of observations assumption cannot be met, making the use of multiple regression analysis risky because Type I error is increased when the independence assumption is violated. For the multilevel analysis design, Level 1 included Time data; i.e. change in dependent variables from Time 1 to Time 2, and from Time 2 to Time 3.

Level 2 included the individual subject data that does not vary over time; i.e. all subject demographic data. Finally, level 3 included group data that does not change over time.

Appendix J

Tables illustrating results from RQ 1.1

Predictors of change in mental health status score (OQ-45) from Time 1 to Time 2 score due to treatment

	OQ-45 Change Score	
Variable	β	95% CI
Treat	-8.42**	[-10.94, -5.90]
CMNI (Total)	.17**	[.10, .27]
CMNI (Emotional-Control)	.08	[-.16, .33]
CMNI (Self-Reliance)	-.28	[-.85, .28]
CMNI (Dominance)	-.69*	[-1.20, -.18]
Age	.03	[-.12, .18]
Race	-1.32	[-5.1, 2.45]
Counseling Sessions	1.47	[-1.63, 4.57]
Marital Status	1.51	[-2.12, 5.14]
Employment	1.56	[-1.33, 4.45]
Psychological Symptoms	.70	[-1.98, 3.38]
Psychological Diagnoses	-3.34*	[-5.75, -.94]
R^2	.26	
F	19.50**	

Note: N (Treatment Group) = 145. N (Waitlist Control Group) = 18. CI = Confidence Interval. Interaction variable included Treat indicating difference in change score of control versus treatment group. Control variables included CMNI Adjusted Total score, CMNI Emotional Control score, CMNI Self-Reliance score, CMNI Dominance score, Age, Race (White or Non-White), Counseling Sessions (number of counseling sessions attended before OB4V), Marital Status (married or not married), Employment (full-time employed or not full-time employed), Psychological Symptoms (number of reported psychological symptoms), and Psychological Diagnoses (number of reported diagnoses).
*p < .00. **p < .01.

Predictors of change in personal growth initiative score (PGIS-II) from Time 1 to Time 2 due to treatment

	PGIS-II Change Score	
Variable	β	95% CI
Treat	.35**	[.22, .47]
CMNI (Total)	.00	[.00, .01]
CMNI (Emotional-Control)	-.01	[-.02, .00]
CMNI (Self-Reliance)	.01	[.00, .03]
CMNI (Dominance)	.02	[-.02,.05]
Age	.00	[-.01, .00]
Race	.16	[.03, .29]
Counseling Sessions	-.10	[-.19, -.01]
Marital Status	-.02	[-.05, .01]
Employment	.26*	[.06, .46]
Psychological Symptoms	-.02	[-.09, .04]
R^2	.25	
F	7**	

Note: N (Treatment Group) = 135. N (Waitlist Control Group) = 18. CI = Confidence Interval.
Interaction variable included Treat indicating difference in change score of control versus treatment group. Control variables included CMNI Adjusted Total score, CMNI Emotional Control score, CMNI Self-Reliance score, CMNI Dominance score, Age, Race (White or Non-White), Counseling Sessions (number of counseling sessions attended before OB4V), Marital Status (married or not married), Employment (full-time employed or not full-time employed), Psychological Symptoms (number of reported psychological symptoms).
*p < .00. **p < .01.

Predictors of change in attitudes towards seeking psychological help score (ATSPPHS) from Time 1 to Time 2 due to treatment

	ATSPPH Change Score	
Variable	β	95% CI
Treat	.17**	[.07, .27]
CMNI (Total)	.00	[.00, .01]
CMNI (Emotional-Control)	.00	[-.01, .01]
CMNI (Self-Reliance)	.00	[-.02, .03]
CMNI (Dominance)	-.02	[-.05, .02]
Age	.00	[.00, .01]
Race	-.03	[-.14, .09]
Counseling Sessions	.04	[-.03, .12]
Employment	.14	[-.07, .34]
R^2	.07	
F	4.09**	

Note: N (Treatment Group) = 145. N (Waitlist Control Group) = 18. CI = Confidence Interval. Interaction variable included Treat indicating difference in change score of control versus treatment group. Control variables included CMNI Adjusted Total score, CMNI Emotional Control score, CMNI Self-Reliance score, CMNI Dominance score, Age, Race (White or Non-White), Counseling Sessions (number of counseling sessions attended before OB4V), Employment (full-time employed or not full-time employed).
*p < .00. **p < .01.

Predictors of change in psychological mindedness score (BIPM) from Time 1 to Time 2 due to treatment

	BIPM Change Score	
Variable	β	95% CI
Treat	1.68	[.024, 3.34]
CMNI (Total)	.02	[-.07, .10]
CMNI (Emotional-Control)	.00	[-.15, .16]
CMNI (Self-Reliance)	.08	[-.16, .32]
CMNI (Dominance)	-.16	[-.73, .41]
Age	.01	[-.04, .07]
Race	-.41	[-1.96, 1.13]
Counseling Sessions	-.27	[-1.60, 1.06]
R^2	.04	
F	1.47	

Note: N (Treatment Group) = 145. N (Waitlist Control Group) = 18. CI = Confidence Interval.
Interaction variable included Treat indicating difference in change score of control versus treatment group. Control variables included CMNI Adjusted Total score, CMNI Emotional Control score, CMNI Self-Reliance score, CMNI Dominance score, Age, Race (White or Non-White), Counseling Sessions (number of counseling sessions attended before OB4V).
*p < .00. **p < .01.

Predictors of change in emotional restriction score (ERQ) from Time 1 to Time 2 due to treatment

	ERQ Change Score	
Variable	β	95% CI
Treat	-2.40**	[-3.48, -1.31]
CMNI (Total)	.05	[-.02,.12]
CMNI (Emotional-Control)	-.04	[-.15, .07]
CMNI (Self-Reliance)	-.12	[-.35, .11]
CMNI (Dominance)	-.23	[-.56, .11]
Age	.03	[-.02,.09]
Race	.57	[-1.03, 2.18]
Counseling Sessions	-.24	[-.94, .47]
R^2	.10	
F	3.4*	

Note: N (Treatment Group) = 145. N (Waitlist Control Group) = 18. CI = Confidence Interval.
Interaction variable included Treat indicating difference in change score of control versus treatment group. Control variables included CMNI Adjusted Total score, CMNI Emotional Control score, CMNI Self-Reliance score, CMNI Dominance score, Age, Race (White or Non-White), Counseling Sessions (number of counseling sessions attended before OB4V).
*p < .00. **p < .01.

Predictors of change in subjective wellbeing score (LSQ) from Time 1 to Time 2 due to treatment

	LSQ Change Score	
Variable	β	95% CI
Treat	.37**	[.19, .55]
CMNI (Total)	.00	[-.01, .01]
CMNI (Emotional-Control)	-.01	[-.03, .01]
CMNI (Self-Reliance)	.00	[-.03, .03]
CMNI (Dominance)	.03	[-.03, .08]
Age	.00	[-.01, .01]
Race	.18	[.01, .35]
Counseling Sessions	-.06	[-.19, .08]
R^2	.10	
F	7.15**	

Note: N (Treatment Group) = 137. N (Waitlist Control Group) = 18. CI = Confidence Interval.
Interaction variable included Treat indicating difference in change score of control versus treatment group.
Control variables included CMNI Adjusted Total score, CMNI Emotional Control score, CMNI Self-Reliance score, CMNI Dominance score, Age, Race (White or Non-White), Counseling Sessions (number of counseling sessions attended before OB4V).
*p < .00. **p < .01.

Appendix K

Tables illustrating results from RQ 2.1

Predictors of mental health status (OQ-45) at Time 1

	OQ-45 Time 1 Score	
Variable	β	95% CI
CMNI (Total)	-.01	[-.26, .24]
CMNI (Emotional-Control)	1.29**	[.53, 2.10]
CMNI (Self-Reliance)	1.11	[.11, 2.11]
CMNI (Dominance)	-1.56	[-3.68, .56]
Age	.33	[.00, .66]
Race	9.12	[-1.11, 19.36]
Counseling Sessions	4.80	[-1.20, 10.80]
Employment	-10.43*	[-17.63, -3.24]
Psychological Symptoms	-2.42	[-7.00, 2.15]
Psychological Diagnoses	6.74*	[2.10, 11.43]
R^2	.45	
F	40.29**	

Note: N = 148. CI = Confidence Interval.
Control variables included Age, Race (White or Non-White), Counseling Sessions (number of counseling sessions attended before OB4V), Employment (full-time employed or not full-time employed), Psychological Symptoms (number of reported psychological symptoms), and Psychological Diagnoses (number of reported diagnoses).
*p < .00. **p < .01.

Predictors of personal growth initiative score (PGIS-II) at Time 1

	PGIS-II Time 1 Score	
Variable	β	95% CI
CMNI (Total)	.00	[-.01, .01]
CMNI (Emotional-Control)	-.03*	[-.05, .00]
CMNI (Self-Reliance)	-.05*	[-.09, -.02]
CMNI (Dominance)	.00	[-.09, .09]
Age	-.01	[-.02, .01]
Race	-.31	[-.60, -.04]
Counseling Sessions	-.02	[-.21, .16]
Employment	-.34	[-.75, .08]
Psychological Symptoms	.00	[-.16, .16]
Health Symptoms	-.09	[-.31, .13]
R^2	.26	
F	11.55**	

Note: N = 147. CI = Confidence Interval.
Control variables included CMNI Adjusted Total score, CMNI Emotional Control score, CMNI Self-Reliance score, CMNI Dominance score, Age, Race (White or Non-White), Counseling Sessions (number of counseling sessions attended before OB4V), Employment (full-time employed or not full-time employed), Psychological Symptoms (number of reported psychological symptoms), Health Symptoms (number of reported health symptoms).
*p < .00. **p < .01.

Predictors of attitudes towards seeking psychological help score (ATSPPHS) at Time 1

	ATSPPH Time 1 Score	
Variable	β	95% CI
CMNI (Total)	-.017*	[-.03, -.01]
CMNI (Emotional-Control)	-.014	[-.04, .01]
CMNI (Self-Reliance)	-.04*	[-.07, -.01]
CMNI (Dominance)	.06	[.01, .11]
Age	.00	[-.01, .01]
Race	-.08	[-.28, .11]
Counseling Sessions	.28**	[.17, .40]
Health Symptoms	.02	[-.10, .14]
R^2	.42	
F	16.28**	

Note: N = 150. CI = Confidence Interval.
Control variables included Age, Race (White or Non-White), Counseling Sessions (number of counseling sessions attended before OB4V), Health Symptoms (number of reported health symptoms).
*p < .00. **p < .01.

Predictors of change psychological mindedness score (BIPM) at Time 1

	BIPM Time 1 Score	
Variable	β	95% CI
CMNI (Total)	.05	[-.06, .16]
CMNI (Emotional-Control)	-1.13**	[-1.38, -.88]
CMNI (Self-Reliance)	-.11	[-.46, .25]
CMNI (Dominance)	.04	[-.58, .66]
Age	-.02	[-.12, .08]
Race	2.21	[-.71, 5.14]
Counseling Sessions	-.56	[-2.43, 1.31]
Combat Experience	.20	[-1.92, 2.32]
Health Symptoms	-2.32	[-4.32, -.33]
Psychological Symptoms	1.23	[-.81, 3.26]
Psychological Diagnoses	-.50	[-1.81, .81]
R^2	.60	
F	30.66**	

Note: N = 144. CI = Confidence Interval.
Control variables included CMNI Adjusted Total score, CMNI Emotional Control score, CMNI Self-Reliance score, CMNI Dominance score, Age, Race (White or Non-White), Counseling Sessions (number of counseling sessions attended before OB4V), Combat Experience (received or engaged with enemy fighting), Health Symptoms (number of reported health symptoms), Psychological Symptoms (number of reported psychological symptoms), Psychological Diagnoses (number of reported psychological diagnoses).
*p < .00. **p < .01.

Predictors of emotional restriction score (ERQ) at Time 1

	ERQ Time 1 Score	
Variable	β	95% CI
CMNI (Total)	-.08	[-.15, -.02]
CMNI (Emotional-Control)	.62**	[.50, .74]
CMNI (Self-Reliance)	.13	[-.11, .36]
CMNI (Dominance)	.10	[-.41, .60]
Age	-.07	[-.15, .02]
Race	-.44	[-2.72, 1.84]
Counseling Sessions	.31	[-.67, 1.30]
Combat Experience	1.60	[.17, 3.01]
Employment	2.45	[.45, 4.45]
Psychological Symptoms	.60	[-.31, 1.50]
R^2	.52	
F	24.38**	

Note: N = 145. CI = Confidence Interval.
Control variables included CMNI Adjusted Total score, CMNI Emotional Control score, CMNI Self-Reliance score, CMNI Dominance score, Age, Race (White or Non-White), Counseling Sessions (number of counseling sessions attended before OB4V), Combat Experience (received or engaged with enemy fighting), Employment (employed or unemployed), Psychological Symptoms (number of reported psychological symptoms).
.*p < .00. **p < .01.

Predictors of subjective wellbeing score (LSQ) at Time 1

	LSQ Time 1 Score	
Variable	β	95% CI
CMNI (Total)	.06	[-.02, .14]
CMNI (Emotional-Control)	-.37**	[-.65, -.10]
CMNI (Self-Reliance)	-.14	[-.47, .19]
CMNI (Dominance)	.22	[-.39, .83]
Age	-.05	[-.15, .04]
Race	-2.63	[-5.16, -.10]
Counseling Sessions	-.64	[-2.71, 1.42]
Employed	-5.78**	[-9.72, -1.84]
Psychological Symptoms	.40	[-1.35, 2.13]
Psychological Diagnoses	-1.10	[-2.59, .37]
R^2	.28	
F	16.86**	

Note: N = 159. CI = Confidence Interval.
Control variables included CMNI Adjusted Total score, CMNI Emotional Control score, CMNI Self-Reliance score, CMNI Dominance score, Age, Race (White or Non-White), Counseling Sessions (number of counseling sessions attended before OB4V), Employed (employed or not employed), Psychological Symptoms (number of reported psychological symptoms), and Psychological Diagnoses (number of reported psychological diagnoses).
.*p < .00. **p < .01.

Appendix L

Tables illustrating results from RQ 2.2

Tables for moderation by CMNI scales of the relationship between treatment and OQ-45

Moderation by CMNI Adjusted Total of the relationship between treatment and mental health status change score (OQ-45)

	OQ-45 Change Score	
Variable	β	95% CI
Interaction	.17	[-.01, .35]
CMNI (Emotional-Control)	.10	[-.15, .35]
CMNI (Self-Reliance)	-.32	[-.88, .25]
CMNI (Dominance)	-.70*	[-1.20, -.19]
Age	.03	[-.11, .18]
Race	-1.35	[-5.07, 2.37]
Counseling Sessions	1.40	[-1.77,4.57]
Marital Status	1.50	[-2.16, 5.16]
Employment	1.54	[-1.32, 4.40]
Psychological Symptoms	.64	[-2.05, 3.33]
Psychological Diagnoses	-3.29**	[-5.70, -.90]
R^2	.26	
F	21.42**	

Note: N (Treatment Group) = 145. N (Waitlist Control Group) = 18. CI = Confidence Interval.
Interaction variable examined whether CMNI Adjusted Total moderated the relationship between treatment and the OQ-45 change score from Time 1 to Time 2.
Control variables included CMNI Emotional Control score, CMNI Self-Reliance score, CMNI Dominance score, Age, Race (White or Non-White), Counseling Sessions (number of counseling sessions attended before OB4V), Marital Status (married or not

married), Employment (full-time employed or not full-time employed), Psychological Symptoms (number of reported psychological symptoms), and Psychological Diagnoses (number of reported diagnoses).
*p < .00. **p < .01.

Moderation by CMNI Emotional-Control of the relationship between treatment and mental health status change score (OQ-45)

	OQ-45 Change Score	
Variable	β	95% CI
Interaction	.12	[-.22, .45]
CMNI (Total)	.16**	[.06, .27]
CMNI (Self-Reliance)	-.28	[-.85, .29]
CMNI (Dominance)	-.70*	[-1.20, -.18]
Age	.03	[-.12, .18]
Race	-1.35	[-5.10, 2.40]
Counseling Sessions	1.41	[-1.76, 4.59]
Marital Status	1.53	[-2.11, 5.20]
Employment	1.54	[-1.40, 4.44]
Psychological Symptoms	.66	[-2.10, 3.38]
Psychological Diagnoses	-3.31**	[-5.73, -.88]
R^2	.26	
F	18.63**	

Note: N (Treatment Group) = 145. N (Waitlist Control Group) = 18. CI = Confidence Interval.
Interaction variable examined whether CMNI Emotional Control moderated the relationship between treatment and the OQ-45 change score from Time 1 to Time 2. Control variables included CMNI Adjusted Total score, CMNI Self-Reliance score, CMNI Dominance score, Age, Race (White or Non-White), Counseling Sessions (number of counseling sessions attended before OB4V), Marital Status (married or not married), Employment (full-time employed or not full-time employed), Psychological Symptoms (number of reported psychological symptoms), and Psychological Diagnoses (number of reported diagnoses).
*p < .00. **p < .01.

Moderation by CMNI Self-Reliance of the relationship between treatment and mental health status change score (OQ-45)

	OQ-45 Change Score	
Variable	β	95% CI
Interaction	-.06	[-1.38, 1.26]
CMNI (Total)	.17**	[.07, .27]
CMNI (Emotional Control)	.08	[-.16, .33]
CMNI (Dominance)	-.69*	[-1.21, -.17]
Age	.03	[-.12, .18]
Race	-1.33	[-5.23, 2.56]
Counseling Sessions	1.47	[-1.63, 4.58]
Marital Status	1.49	[-2.29, 5.27]
Employment	1.57	[-1.31, 4.46]
Psychological Symptoms	.71	[-2.01, 3.44]
Psychological Diagnoses	-3.35*	[-5.76, -.93]
R^2	.26	
F	18.29**	

Note: N (Treatment Group) = 145. N (Waitlist Control Group) = 18. CI = Confidence Interval.
Interaction variable examined whether CMNI Self-Reliance moderated the relationship between treatment and the OQ-45 change score from Time 1 to Time 2.
Control variables included CMNI Adjusted Total score, CMNI Emotional Control score, CMNI Dominance score, Age, Race (White or Non-White), Counseling Sessions (number of counseling sessions attended before OB4V), Marital Status (married or not married), Employment (full-time employed or not full-time employed), Psychological Symptoms (number of reported psychological symptoms), and Psychological Diagnoses (number of reported diagnoses).
*p < .00. **p < .01.

Moderation by CMNI Dominance of the relationship between treatment and mental health status change score (OQ-45)

	OQ-45 Change Score	
Variable	β	95% CI
Interaction	-.73	[-2.11, .65]
CMNI (Total)	.17**	[.06, .27]
CMNI (Emotional Control)	.09	[-.16, .33]
CMNI (Self-Reliance)	-.26	[-.86, .35]
Age	.03	[-.12, .18]
Race	-1.29	[-5.10, 2.51]
Counseling Sessions	1.49	[-1.61, 4.60]
Marital Status	1.50	[-2.10, 5.09]
Employment	1.47	[-1.50, 4.43]
Psychological Symptoms	.66	[-2.05, 3.38]
Psychological Diagnoses	-3.37**	[-5.80, -.96]
R^2	.26	
F	19.54**	

Note: N (Treatment Group) = 145. N (Waitlist Control Group) = 18. CI = Confidence Interval.
Interaction variable examined whether CMNI Dominance moderated the relationship between treatment and the OQ-45 change score from Time 1 to Time 2.
Control variables included CMNI Adjusted Total score, CMNI Emotional Control score, CMNI Self-Reliance score, Age, Race (White or Non-White), Counseling Sessions (number of counseling sessions attended before OB4V), Marital Status (married or not married), Employment (full-time employed or not full-time employed), Psychological Symptoms (number of reported psychological symptoms), and Psychological Diagnoses (number of reported diagnoses).
*p < .00. **p < .01.

Tables for moderation by CMNI scales of the relationship between treatment and PGIS

Moderation by CMNI Adjusted Total of the relationship between treatment and personal growth initiative change score (PGIS-II)

	PGIS-II Change Score	
Variable	β	95% CI
Interaction	.00	[-.01, .01]
CMNI (Emotional-Control)	-.01	[-.02, .00]
CMNI (Self-Reliance)	.02	[-.00, .04]
CMNI (Dominance)	.02	[-.02, .05]
Age	.00	[-.01, .00]
Race	.16*	[.04, .28]
Counseling Sessions	-.10**	[-.16, -.04]
Employment	.23	[.03, .44]
Psychological Symptoms	.10	[-.02, .20]
Health Symptoms	-.02	[-.14, .10]
R^2	.28	
F	8.03**	

Note: N (Treatment Group) = 145. N (Waitlist Control Group) = 18. CI = Confidence Interval.
Interaction variable examined whether CMNI Adjusted Total moderated the relationship between treatment and the PGIS-II change score from Time 1 to Time 2.
Control variables included CMNI Emotional Control score, CMNI Self-Reliance score, CMNI Dominance score, Age, Race (White or Non-White), Counseling Sessions (number of counseling sessions attended before OB4V), Employment (full-time employed or not full-time employed), Psychological Symptoms (number of reported psychological symptoms), and Health Symptoms (number of reported health symptoms).
*p < .00. **p < .01.

Moderation by CMNI Emotional Control of the relationship between treatment and personal growth initiative change score (PGIS-II)

	PGIS-II Change Score	
Variable	β	95% CI
Interaction	.00	[-.02, .02]
CMNI (Total)	.00	[-.00, .01]
CMNI (Self-Reliance)	.02	[-.00, .04]
CMNI (Dominance)	.02	[-.01, .05]
Age	-.00	[-.01, .00]
Race	.16*	[.04, .27]
Counseling Sessions	-.10**	[-.16, -.04]
Employment	.24	[.03, .45]
Psychological Symptoms	.09	[-.02, .20]
Health Symptoms	-.02	[-.14, .10]
R^2	.28	
F	8.08**	

Note: N (Treatment Group) = 145. N (Waitlist Control Group) = 18. CI = Confidence Interval.
Interaction variable examined whether CMNI Emotional Control moderated the relationship between treatment and the PGIS-II change score from Time 1 to Time 2. Control variables included CMNI Adjusted Total score, CMNI Self-Reliance score, CMNI Dominance score, Age, Race (White or Non-White), Counseling Sessions (number of counseling sessions attended before OB4V), Employment (full-time employed or not full-time employed), Psychological Symptoms (number of reported psychological symptoms), and Health Symptoms (number of reported health symptoms).
*p < .00. **p < .01.

Moderation by CMNI Self-Reliance of the relationship between treatment and personal growth initiative change score (PGIS-II)

	PGIS-II Change Score	
Variable	β	95% CI
Interaction	.01	[-.03, .04]
CMNI (Total)	.00	[-.00, .01]
CMNI (Emotional Control)	-.01	[-.02, .00]
CMNI (Dominance)	.02	[-.01, .05]
Age	-.00	[-.01, .00]
Race	.16*	[.04, .29]
Counseling Sessions	-.10**	[-.16, -.05]
Employment	.10	[-.02, .20]
Psychological Symptoms	.10	[-.02, .20]
Health Symptoms	-.02	[-.15, .10]
R^2	.27	
F	7.03**	

Note: N (Treatment Group) = 145. N (Waitlist Control Group) = 18. CI = Confidence Interval.
Interaction variable examined whether CMNI Self-Reliance moderated the relationship between treatment and the PGIS-II change score from Time 1 to Time 2.
Control variables included CMNI Adjusted Total score, CMNI Emotional Control score, CMNI Dominance score, Age, Race (White or Non-White), Counseling Sessions (number of counseling sessions attended before OB4V), Employment (full-time employed or not full-time employed), Psychological Symptoms (number of reported psychological symptoms), and Health Symptoms (number of reported health symptoms).
*p < .00. **p < .01.

Moderation by CMNI Dominance of the relationship between treatment and personal growth initiative change score (PGIS-II)

	PGIS-II Change Score	
Variable	β	95% CI
Interaction	.01	[-.05, .06]
CMNI (Total)	.00	[-.00, .01]
CMNI (Emotional Control)	-.01	[-.02, .00]
CMNI (Self-Reliance)	.02	[.00, .04]
Age	.00	[-.01, .00]
Race	.16*	[.04, .29]
Counseling Sessions	-.10**	[-.16, -.05]
Employment	.23	[.03, .44]
Psychological Symptoms	.10	[-.02, .20]
Health Symptoms	-.02	[-.14, .10]
R^2	.27	
F	7.04**	

Note: N (Treatment Group) = 145. N (Waitlist Control Group) = 18. CI = Confidence Interval.
Interaction variable examined whether CMNI Dominance moderated the relationship between treatment and the PGIS-II change score from Time 1 to Time 2.
Control variables included CMNI Adjusted Total score, CMNI Emotional Control score, CMNI Self-Reliance score, Age, Race (White or Non-White), Counseling Sessions (number of counseling sessions attended before OB4V), Employment (full-time employed or not full-time employed), Psychological Symptoms (number of reported psychological symptoms), and Health Symptoms (number of reported health symptoms).
*p < .00. **p < .01.

Tables for moderation by CMNI scales of the relationship between treatment and ATSPPHS

Moderation by CMNI Adjusted Total of the relationship between treatment and attitude towards seeking psychological help change score (ATSPPHS)

	ATSPPH Change Score	
Variable	β	95% CI
Interaction	.00	[-.01, .01]
CMNI (Emotional-Control)	.00	[-.01, .01]
CMNI (Self-Reliance)	.00	[-.02, .01]
CMNI (Dominance)	-.03	[-.05, .00]
Age	.00	[-.00, .01]
Race	-.01	[-.10, .08]
Counseling Sessions	.01	[-.04, .06]
Health Symptoms	.02	[-.04, .07]
R^2	.10	
F	2.65	

Note: N (Treatment Group) = 147. N (Waitlist Control Group) = 18. CI = Confidence Interval.
Interaction variable examined whether CMNI Adjusted Total moderated the relationship between treatment and the ATSPPHS change score from Time 1 to Time 2.
Control variables included CMNI Emotional Control score, CMNI Self-Reliance score, CMNI Dominance score, Age, Race (White or Non-White), Counseling Sessions (number of counseling sessions attended before OB4V), and Health Symptoms (number of reported health symptoms).
*p < .00. **p < .01.

Moderation by CMNI Emotional Control *of the relationship between treatment and attitude towards seeking psychological help change score (ATSPPHS)*

	ATSPPH Change Score	
Variable	β	95% CI
Interaction	.00	[-.01, .01]
CMNI (Total)	.00	[-.01, .01]
CMNI (Self-Reliance)	.00	[-.02, .01]
CMNI (Dominance)	-.03	[-.05, .00]
Age	.00	[-.00, .01]
Race	-.01	[-.10, .08]
Counseling Sessions	.01	[-.04, .06]
Health Symptoms	.02	[-.04, .07]
R^2	.11	
F	3.09**	

Note: N (Treatment Group) = 147. N (Waitlist Control Group) = 18. CI = Confidence Interval.
Interaction variable examined whether CMNI Emotional Control moderated the relationship between treatment and the ATSPPHS change score from Time 1 to Time 2. Control variables included CMNI Adjusted Total score, CMNI Self-Reliance score, CMNI Dominance score, Age, Race (White or Non-White), Counseling Sessions (number of counseling sessions attended before OB4V), and Health Symptoms (number of reported health symptoms).
*p < .00. **p < .01.

Moderation by CMNI Self-Reliance *of the relationship between treatment and attitude towards seeking psychological help change score (ATSPPHS)*

	ATSPPH Change Score	
Variable	β	95% CI
Interaction	.00	[-.03, .03]
CMNI (Total)	.00	[.00, .01]
CMNI (Emotional-Control)	.00	[-.01, .01]
CMNI (Dominance)	-.03	[-.05, .00]
Age	.00	[-.00, .01]
Race	-.01	[-.10, .08]
Counseling Sessions	.01	[-.05, .06]
Health Symptoms	.02	[-.03, .08]
R^2	.10	
F	2.89**	

Note: N (Treatment Group) = 147. N (Waitlist Control Group) = 18. CI = Confidence Interval.
Interaction variable examined whether CMNI Self-Reliance moderated the relationship between treatment and the ATSPPHS change score from Time 1 to Time 2.
Control variables included CMNI Adjusted Total score, CMNI Emotional Control score, CMNI Dominance score, Age, Race (White or Non-White), Counseling Sessions (number of counseling sessions attended before OB4V), and Health Symptoms (number of reported health symptoms).
*p < .00. **p < .01.

Moderation by CMNI Dominance *of the relationship between treatment and attitude towards seeking psychological help change score (ATSPPHS)*

	ATSPPH Change Score	
Variable	β	95% CI
Interaction	-.04	[-.08, .01]
CMNI (Total)	.00	[-.00, .01]
CMNI (Emotional-Control)	.00	[-.01, .01]
CMNI (Self-Reliance)	.00	[-.02, .02]
Age	.00	[.00, .01]
Race	.00	[-.10, .09]
Counseling Sessions	.00	[-.05, .06]
Health Symptoms	.02	[-.04, .07]
R^2	.10	
F	3.92**	

Note: N (Treatment Group) = 147. N (Waitlist Control Group) = 18. CI = Confidence Interval.
Interaction variable examined whether CMNI Dominance moderated the relationship between treatment and the ATSPPHS change score from Time 1 to Time 2.
Control variables included CMNI Adjusted Total score, CMNI Emotional Control score, CMNI Self-Reliance score, Age, Race (White or Non-White), Counseling Sessions (number of counseling sessions attended before OB4V), and Health Symptoms (number of reported health symptoms).
*p < .00. **p < .01.

Tables for moderation by CMNI scales of the relationship between treatment and BIPM

Moderation by CMNI Adjusted Total of the relationship between treatment and psychological mindedness change score (BIPM)

	BIPM Change Score	
Variable	β	95% CI
Interaction	-.12	[-.26, .02]
CMNI (Emotional-Control)	.00	[-.13, .13]
CMNI (Self-Reliance)	.08	[-.14, .31]
CMNI (Dominance)	-.31	[-.71, .08]
Age	.03	[-.02, .10]
Race	.08	[-1.17, 1.33]
Counseling Sessions	-.63	[-1.43, .17]
Combat Experience	.27	[-1.20, 1.74]
Health Symptoms	-.04	[-1.13, 1.05]
Psychological Symptoms	-.53	[-1.67, .62]
Psychological Diagnoses	.59	[-.14, 1.32]
R^2	.10	
F	1.69	

Note: N (Treatment Group) = 148. N (Waitlist Control Group) = 18. CI = Confidence Interval.
Interaction variable examined whether CMNI Adjusted Total moderated the relationship between treatment and the BIPM change score from Time 1 to Time 2.
Control variables included CMNI Emotional Control score, CMNI Self-Reliance score, CMNI Dominance score, Age, Race (White or Non-White), Counseling Sessions (number of counseling sessions attended before OB4V), Combat Experience (received or engaged with enemy fighting), Health Symptoms (number of reported health symptoms), Psychological Symptoms (number of reported psychological symptoms), and Psychological Diagnoses (number of reported diagnoses).*p < .00. **p < .01.

Moderation by CMNI Emotional Control *of the relationship between treatment and psychological mindedness change score (BIPM)*

	BIPM Change Score	
Variable	β	95% CI
Interaction	-.02	[-.20, .16]
CMNI (Total)	.02	[-.05, .08]
CMNI (Self-Reliance)	.07	[-.14, .28]
CMNI (Dominance)	-.23	[-.68, .22]
Age	.03	[-.02, .10]
Race	.02	[-1.25, 1.30]
Counseling Sessions	-.64	[-1.50, .21]
Combat Experience	.31	[-1.22, 1.83]
Health Symptoms	-.06	[-1.14, 1.02]
Psychological Symptoms	-.53	[-1.70, .63]
Psychological Diagnoses	.63	[-.15, 1.40]
R^2	.07	
F	1.88	

Note: N (Treatment Group) = 149. N (Waitlist Control Group) = 18. CI = Confidence Interval.
Interaction variable examined whether CMNI Emotional Control moderated the relationship between treatment and the BIPM change score from Time 1 to Time 2. Control variables included CMNI Emotional Control score, CMNI Self-Reliance score, CMNI Dominance score, Age, Race (White or Non-White), Counseling Sessions (number of counseling sessions attended before OB4V), Combat Experience (received or engaged with enemy fighting), Health Symptoms (number of reported health symptoms), Psychological Symptoms (number of reported psychological symptoms), and Psychological Diagnoses (number of reported diagnoses).
*p < .00. **p < .01.

Moderation by CMNI Self-Reliance of the relationship between treatment and psychological mindedness change score (BIPM)

	BIPM Change Score	
Variable	β	95% CI
Interaction	.29	[-.13, .70]
CMNI (Total)	.00	[-.07, .07]
CMNI (Emotional Control)	.03	[-.11, .17]
CMNI (Dominance)	-.21	[-.65, .23]
Age	.03	[-.03, .10]
Race	.15	[-1.10, 1.40]
Counseling Sessions	-.73	[-1.57, .10]
Combat Experience	.27	[-1.21, 1.75]
Health Symptoms	-.06	[-1.14, 1.03]
Psychological Symptoms	-.55	[-1.73, .63]
Psychological Diagnoses	.68	[-.09, 1.45]
R^2	.07	
F	1.51	

Note: N (Treatment Group) = 149. N (Waitlist Control Group) = 18. CI = Confidence Interval.
Interaction variable examined whether CMNI Emotional Control moderated the relationship between treatment and the BIPM change score from Time 1 to Time 2. Control variables included CMNI Emotional Control score, CMNI Adjusted Total score, CMNI Dominance score, Age, Race (White or Non-White), Counseling Sessions (number of counseling sessions attended before OB4V), Combat Experience (received or engaged with enemy fighting), Health Symptoms (number of reported health symptoms), Psychological Symptoms (number of reported psychological symptoms), and Psychological Diagnoses (number of reported diagnoses).
*p < .00. **p < .01.

Moderation by CMNI Dominance of the relationship between treatment and psychological mindedness change score (BIPM)

	BIPM Change Score	
Variable	β	95% CI
Interaction	-.13	[-.71, .44]
CMNI (Total)	.02	[-.04, .08]
CMNI (Emotional Control)	.01	[-.12, .14]
CMNI (Self-Reliance)	.07	[-.16, .30]
Age	.04	[-.02, .10]
Race	.06	[-1.18, 1.30]
Counseling Sessions	-.68	[-1.50, .14]
Combat Experience	.36	[-1.14, 1.84]
Health Symptoms	-.07	[-1.15, 1.01]
Psychological Symptoms	-.53	[-1.70, .63]
Psychological Diagnoses	.61	[-.13, 1.36]
R^2	.08	
F	1.75	

Note: N (Treatment Group) = 148. N (Waitlist Control Group) = 18. CI = Confidence Interval.
Interaction variable examined whether CMNI Dominance moderated the relationship between treatment and the BIPM change score from Time 1 to Time 2.
Control variables included CMNI Emotional Control score, CMNI Self-Reliance score, CMNI Adjusted Total score, Age, Race (White or Non-White), Counseling Sessions (number of counseling sessions attended before OB4V), Combat Experience (received or engaged with enemy fighting), Health Symptoms (number of reported health symptoms), Psychological Symptoms (number of reported psychological symptoms), and Psychological Diagnoses (number of reported diagnoses).
*p < .00. **p < .01.

Tables for moderation by CMNI scales of the relationship between treatment and ERQ

Moderation by CMNI Adjusted Total of the relationship between treatment and emotional restriction change score (ERQ)

	ERQ Change Score	
Variable	β	95% CI
Interaction	-.03	[-.10, .05]
CMNI (Emotional-Control)	-.02	[-.12, .07]
CMNI (Self-Reliance)	-.04	[-.20, .12]
CMNI (Dominance)	-.14	[-.33, .06]
Age	.03	[-.01, .07]
Race	.08	[-.57, .74]
Counseling Sessions	-.18	[-.74, .39]
Employment	1.15	[.05, 2.26]
Combat Experience	-.46	[-1.48, .56]
Psychological Symptoms	.11	[-.43, .66]
R^2	.10	
F	3.34*	

Note: N (Treatment Group) = 154. N (Waitlist Control Group) = 18. CI = Confidence Interval.
Interaction variable examined whether CMNI Adjusted Total moderated the relationship between treatment and the ERQ change score from Time 1 to Time 2.
Control variables included CMNI Emotional Control score, CMNI Self-Reliance score, CMNI Dominance score, Age, Race (White or Non-White), Counseling Sessions (number of counseling sessions attended before OB4V), Employment (full-time employed or not full-time employed), Combat Experience (received or engaged with enemy fighting), Psychological Symptoms (number of reported psychological symptoms).*p < .00. **p < .01.

Moderation by CMNI Emotional Control of the relationship between treatment and emotional restriction change score (ERQ)

	ERQ Change Score	
Variable	β	95% CI
Interaction	.04	[-.13, .21]
CMNI (Total)	.04	[.00, .08]
CMNI (Self-Reliance)	-.07	[-.23, .09]
CMNI (Dominance)	-.16	[-.35, .04]
Age	.04	[-.01, .08]
Race	.14	[-.52, .80]
Counseling Sessions	-.20	[-.77, .39]
Employment	1.18	[.08, 2.28]
Combat Experience	-.519	[-1.52, .48]
Psychological Symptoms	.13	[-.42, .68]
R^2	.12	
F	6.47**	

Note: N (Treatment Group) = 152. N (Waitlist Control Group) = 18. CI = Confidence Interval.
Interaction variable examined whether CMNI Emotional Control moderated the relationship between treatment and the ERQ change score from Time 1 to Time 2. Control variables included CMNI Adjusted Total score, CMNI Self-Reliance score, CMNI Dominance score, Age, Race (White or Non-White), Counseling Sessions (number of counseling sessions attended before OB4V), Employment (full-time employed or not full-time employed), Combat Experience (received or engaged with enemy fighting), Psychological Symptoms (number of reported psychological symptoms).
*p < .00. **p < .01.

Moderation by CMNI Self-Reliance of the relationship between treatment and emotional restriction change score (ERQ)

	ERQ Change Score	
Variable	β	95% CI
Interaction	.04	[-.30, .37]
CMNI (Total)	.04	[.00, .08]
CMNI (Emotional Control)	-.04	[-.13, .05]
CMNI (Dominance)	-.16	[-.35, .04]
Age	.04	[-.01, .08]
Race	.15	[-.50, .80]
Counseling Sessions	-.18	[-.74, .38]
Employment	1.20	[.10, .28]
Combat Experience	-.53	[-1.54, .48]
Psychological Symptoms	.13	[-.42, .67]
R^2	.12	
F	7.77**	

Note: N (Treatment Group) = 152. N (Waitlist Control Group) = 18. CI = Confidence Interval.
Interaction variable examined whether CMNI Self-Reliance moderated the relationship between treatment and the ERQ change score from Time 1 to Time 2.
Control variables included CMNI Adjusted Total score, CMNI Emotional Control score, CMNI Dominance score, Age, Race (White or Non-White), Counseling Sessions (number of counseling sessions attended before OB4V), Employment (full-time employed or not full-time employed), Combat Experience (received or engaged with enemy fighting), Psychological Symptoms (number of reported psychological symptoms).
*p < .00. **p < .01.

Moderation by CMNI Dominance of the relationship between treatment and emotional restriction change score (ERQ)

	ERQ Change Score	
Variable	β	95% CI
Interaction	-.24	[-.75, .27]
CMNI (Total)	.04	[.00, .08]
CMNI (Emotional Control)	-.03	[-.12, .06]
CMNI (Self-Reliance)	-.05	[-.20, .10]
Age	.03	[-.01, .07]
Race	.20	[-.47, .88]
Counseling Sessions	-.20	[-.77, .37]
Employment	1.16	[.07, 2.25]
Combat Experience	-.53	[-1.52, .47]
Psychological Symptoms	.10	[-.45, .65]
R^2	.13	
F	6.75**	

Note: N (Treatment Group) = 153. N (Waitlist Control Group) = 18. CI = Confidence Interval.
Interaction variable examined whether CMNI Dominance moderated the relationship between treatment and the ERQ change score from Time 1 to Time 2.
Control variables included CMNI Adjusted Total score, CMNI Emotional Control score, CMNI Self-Reliance score, Age, Race (White or Non-White), Counseling Sessions (number of counseling sessions attended before OB4V), Employment (full-time employed or not full-time employed), Combat Experience (received or engaged with enemy fighting), Psychological Symptoms (number of reported psychological symptoms).
*p < .00. **p < .01.

Tables for moderation by CMNI scales of the relationship between treatment and LSQ

Moderation by CMNI Adjusted Total of the relationship between treatment and subjective wellbeing change score (LSQ)

	LSQ Change Score	
Variable	β	95% CI
Interaction	-.06	[-.12, .00]
CMNI (Emotional-Control)	-.04	[-.14, .06]
CMNI (Self-Reliance)	.06	[-.10, .22]
CMNI (Dominance)	.16	[-.08, .40]
Age	.00	[-.05, .05]
Race	1.01	[.26, 1.76]
Counseling Sessions	-.50	[-1.21, .21]
Employment	-.54	[-1.31, .24]
Psychological Symptoms	-.40	[-1.08, .29]
Psychological Diagnoses	.50	[.00, .97]
R^2	.15	
F	8.78**	

Note: N (Treatment Group) = 146. N (Waitlist Control Group) = 18. CI = Confidence Interval.
Interaction variable examined whether CMNI Adjusted Total moderated the relationship between treatment and the LSQ change score from Time 1 to Time 2.
Control variables included CMNI Emotional Control score, CMNI Self-Reliance score, CMNI Dominance, Age, Race (White or Non-White), Counseling Sessions (number of counseling sessions attended before OB4V), Employment (full-time employed or not full-time employed), Psychological Symptoms (number of reported psychological symptoms), and Psychological Diagnoses (number of reported psychological diagnoses).
*p < .00. **p < .01.

Moderation by CMNI Emotional Control of the relationship between treatment and subjective wellbeing change score (LSQ)

	LSQ Change Score	
Variable	β	95% CI
Interaction	.02	[-.11, .15]
CMNI (Total)	.05	[-.11, .21]
CMNI (Self-Reliance)	.05	[-.11, .21]
CMNI (Dominance)	.14	[-.10, .37]
Age	.00	[-.05, .05]
Race	1.04	[.31, 1.77]
Counseling Sessions	-.52	[-1.27, .23]
Employment	-.54	[-1.33, .25]
Psychological Symptoms	-.41	[-1.10, .28]
Psychological Diagnoses	.48	[-.02, 1.00]
R^2	.14	
F	6.44**	

Note: N (Treatment Group) = 146. N (Waitlist Control Group) = 18. CI = Confidence Interval.
Interaction variable examined whether CMNI Emotional Control moderated the relationship between treatment and the LSQ change score from Time 1 to Time 2. Control variables included CMNI Adjusted Total score, CMNI Self-Reliance score, CMNI Dominance, Age, Race (White or Non-White), Counseling Sessions (number of counseling sessions attended before OB4V), Employment (full-time employed or not full-time employed), Psychological Symptoms (number of reported psychological symptoms), and Psychological Diagnoses (number of reported psychological diagnoses).
*p < .00. **p < .01.

Moderation by CMNI Self-Reliance of the relationship between treatment and subjective wellbeing change score (LSQ)

	LSQ Change Score	
Variable	β	95% CI
Interaction	.12	[-.25, .50]
CMNI (Total)	-.02	[-.06, .03]
CMNI (Emotional Control)	-.02	[-.12, .08]
CMNI (Dominance)	.13	[-.11, .37]
Age	.00	[-.05, .05]
Race	1.10*	[.36, 1.82]
Counseling Sessions	-.60	[-1.34, .13]
Employment	-.60	[-1.35, .15]
Psychological Symptoms	-.47	[-1.15, .21]
Psychological Diagnoses	.50	[-.02, 1.00]
R^2	.14	
F	6.94**	

Note: N (Treatment Group) = 147. N (Waitlist Control Group) = 18. CI = Confidence Interval.
Interaction variable examined whether CMNI Self-Reliance moderated the relationship between treatment and the LSQ change score from Time 1 to Time 2.
Control variables included CMNI Adjusted Total score, CMNI Emotional Control score, CMNI Dominance, Age, Race (White or Non-White), Counseling Sessions (number of counseling sessions attended before OB4V), Employment (full-time employed or not full-time employed), Psychological Symptoms (number of reported psychological symptoms), and Psychological Diagnoses (number of reported psychological diagnoses).
*p < .00. **p < .01.

Moderation by CMNI Dominance of the relationship between treatment and subjective wellbeing change score (LSQ)

	LSQ Change Score	
Variable	β	95% CI
Interaction	-.45	[-1.00, .08]
CMNI (Total)	-.02	[-.06, .03]
CMNI (Emotional Control)	-.01	[-.12, .10]
CMNI (Self-Reliance)	.07	[-.10, .24]
Age	.00	[-.05, .05]
Race	1.03*	[.28, 1.80]
Counseling Sessions	-.62	[-1.34, .11]
Employment	-.70	[-1.49, .10]
Psychological Symptoms	-.47	[-1.14, .21]
Psychological Diagnoses	.50	[-.03, 1.03]
R^2	.14	
F	5.95**	

Note: N (Treatment Group) = 146. N (Waitlist Control Group) = 18. CI = Confidence Interval.
Interaction variable examined whether CMNI Dominance moderated the relationship between treatment and the LSQ change score from Time 1 to Time 2.
Control variables included CMNI Adjusted Total score, CMNI Emotional Control score, CMNI Self-Reliance, Age, Race (White or Non-White), Counseling Sessions (number of counseling sessions attended before OB4V), Employment (full-time employed or not full-time employed), Psychological Symptoms (number of reported psychological symptoms), and Psychological Diagnoses (number of reported psychological diagnoses).
*p < .00. **p < .01.

Appendix M

Multilevel analysis examining change in therapeutic outcome variables over time.

Fixed Effects Estimates (Top) and Variance-Covariance Estimates (Bottom) for mental health wellbeing scores (OQ-45)

Parameter	OQ-45 Score
	Fixed effects
Intercept	34.00(6.31) **
Level 1	
Overall Time	-2.22 (.19)**
Time 1 - Time 2	-8.44 (.96) **
Time 2 - Time 3	-5.02 (.93) **
Time 1 - Time 3	-13.46 (.96) **
CMNI (Total)	-.13 (.15)
CMNI (Emotional Control)	1.46 (.31)**
CMNI (Self-Reliance)	1.04 (.56)
CMNI (Dominance)	-.77 (.96)
Age	.38 (.16)
Race	9.97 (3.84)*
Counseling Sessions	6.12 (2.51)
Married	-2.78 (3.03)
Employment	-9.77 (3.14)**
Psychological Symptoms	.35 (2.20)
Psychological Diagnoses	4.30 (1.93)

	Random parameters
Level 2	
Participant ID	257.42 (32.45)
Group Number	.00 (.00)

Note: N (Treatment Group at Time 1, Time 2, Time 3) = 448.
Standard errors are in parentheses.
Overall Time accounts change in OQ-45 for the overall effect of time from Time 1 through Time 3.
Time 1 – Time 2 accounts for only change in OQ-45 from Time 1 to Time 2.
Time 3 – Time 3 accounts for only change in OQ-45 from Time 2 to Time 3
Time 1 – Time 3 accounts for only change in OQ-45 from Time 1 to Time 3
Control variables included CMNI Emotional Control score, CMNI Self-Reliance score, CMNI Dominance Score, Age, Race (White or Non-White), Counseling Sessions (number of counseling sessions attended before OB4V), Marital Status (married or not married), Employment (full-time employed or not full-time employed), Psychological Symptoms (number of reported psychological symptoms), and Psychological Diagnoses (number of reported psychological diagnoses).
*p < .00. **p < .01.

Fixed Effects Estimates (Top) and Variance-Covariance Estimates (Bottom) for personal growth initiative (PGIS-II)

Parameter	PGIS Score
	Fixed effects
Intercept	4.04 (.21)**
Level 1	
Overall Time	.05 (.01)**
Time 1 - Time 2	.30 (.04)**
Time 2 - Time 3	.06 (.04) **
Time 1 - Time 3	.35 (.04)**
CMNI (Total)	.00 (.00)
CMNI (Emotional Control)	-.03 (.01)**
CMNI (Self-Reliance)	-.04 (.02)
CMNI (Dominance)	.04 (.03)
Age	-.01 (.00)
Race	-.15 (.13)
Counseling Sessions	-.08 (.07)
Employment	-.10 (.20)
Psychological Symptoms	.05 (.08)
Health Symptoms	-.06 (.09)
	Random parameters
Level 2	
Participant ID	.01 (.02)

Group Number	.00 (.00)

Note: N (Treatment Group at Time 1, Time 2, Time 3) = 448.
Standard errors are in parentheses.
Overall Time accounts change in PGIS for the overall effect of time from Time 1 through Time 3.
Time 1 – Time 2 accounts for only change in OQ-45 from Time 1 to Time 2.
Time 3 – Time 3 accounts for only change in OQ-45 from Time 2 to Time 3
Time 1 – Time 3 accounts for only change in OQ-45 from Time 1 to Time 3
Control variables included CMNI Adjusted Total, CMNI Emotional Control score, CMNI Self-Reliance score, CMNI Dominance Score, Age, Race (White or Non-White), Counseling Sessions (number of counseling sessions attended before OB4V), Marital Status (married or not married), Employment (full-time employed or not full-time employed), Psychological Symptoms (number of reported psychological symptoms), and Health Symptoms (number of reported health symptoms).
*p < .00. **p < .01.

Fixed Effects Estimates (Top) and Variance-Covariance Estimates (Bottom) for attitudes towards seeking psychological help (ATSPPHS)

Parameter	ATSPPHS Score
	Fixed effects
Intercept	1.51 (.17)**
Level 1	
Overall Time	.05 (.00)**
Time 1 - Time 2	.17 (.02)**
Time 2 - Time 3	.13 (.02)**
Time 1 - Time 3	.31 (.02)**
CMNI (Total)	-.02 (.00)**
CMNI (Emotional Control)	-.01 (.01)
CMNI (Self-Reliance)	-.04 (.02)*
CMNI (Dominance)	.04 (.02)
Age	.00 (.00)
Race	-.05 (.10)
Counseling Sessions	.25 (.05)
Health Symptoms	.03 (.05)
	Random parameters
Level 2	
Participant ID	.18 (.02)
Group Number	.01 (.01)

Note: N (Treatment Group at Time 1, Time 2, Time 3) = 448.
Standard errors are in parentheses.

Overall Time accounts change in ATSPPHS for the overall effect of time from Time 1 through Time 3.
Time 1 – Time 2 accounts for only change in OQ-45 from Time 1 to Time 2.
Time 3 – Time 3 accounts for only change in OQ-45 from Time 2 to Time 3
Time 1 – Time 3 accounts for only change in OQ-45 from Time 1 to Time 3
Control variables included CMNI Adjusted Total, CMNI Emotional Control score, CMNI Self-Reliance score, CMNI Dominance Score, Age, Race (White or Non-White), Counseling Sessions (number of counseling sessions attended before OB4V), Psychological Symptoms (number of reported psychological symptoms), and Health Symptoms (number of reported health symptoms).
*p < .00. **p < .01.

Fixed Effects Estimates (Top) and Variance-Covariance Estimates (Bottom) for psychological mindedness (BIPM)

Parameter	BIPM Score
	Fixed effects
Intercept	34.56 (2.10)**
Level 1	
Overall Time	.66 (.07)**
Time 1 - Time 2	3.00 (.35)**
Time 2 - Time 3	1.14 (.34)**
Time 1 - Time 3	4.15 (.35)**
CMNI (Total)	.06 (.05)
CMNI (Emotional Control)	-1.03 (.10)**
CMNI (Self-Reliance)	-.16 (.18)
CMNI (Dominance)	-.08 (.31)
Age	-.04 (.05)
Race	2.10 (1.28)
Counseling Sessions	-1.45 (.82)
Combat Exposure	.77 (1.03)
Health Symptoms	-1.75 (.86)
Psychological Symptoms	1.00 (.88)
Psychological Diagnoses	-.47 (.64)
	Random parameters
Level 2	

Participant ID	.10 (.10)
Group Number	.00 (.00)

Note: N (Treatment Group at Time 1, Time 2, Time 3) = 448.
Standard errors are in parentheses.
Overall Time accounts change in BIPM for the overall effect of time from Time 1 through Time 3.
Time 1 – Time 2 accounts for only change in OQ-45 from Time 1 to Time 2.
Time 3 – Time 3 accounts for only change in OQ-45 from Time 2 to Time 3
Time 1 – Time 3 accounts for only change in OQ-45 from Time 1 to Time 3
Control variables included CMNI Emotional Control score, CMNI Self-Reliance score, CMNI Dominance Score, Age, Race (White or Non-White), Counseling Sessions (number of counseling sessions attended before OB4V), Combat Exposure (engaged or did not engage with enemy fire), Health Symptoms (number of reported health symptoms), Psychological Symptoms (number of reported psychological symptoms), and Psychological Diagnoses (number of reported psychological diagnoses).
*p < .00. **p < .01.

Fixed Effects Estimates (Top) and Variance-Covariance Estimates (Bottom) for emotional restriction (ERQ)

Parameter	ERQ Score
	Fixed effects
Intercept	16.20 (1.32)**
Level 1	
Overall Time	-.51 (.05)**
Time 1 - Time 2	-1.71 (.23)**
Time 2 - Time 3	-1.26 (.23)**
Time 1 - Time 3	-3.00 (.23)**
CMNI (Total)	-.02 (.03)
CMNI (Emotional Control)	.55 (.06)**
CMNI (Self-Reliance)	-.01 (.11)
CMNI (Dominance)	-.06 (.20)
Age	-.02 (.03)
Race	.80 (.82)
Counseling Sessions	-.27 (.45)
Employment	4.35 (1.30)**
Combat Exposure	1.40 .64)
Psychological Symptoms	.83 (.35)
	Random parameters
Level 2	
Participant ID	9.95 (1.41)

Group Number	.58 (.76)

Note: N (Treatment Group at Time 1, Time 2, Time 3) = 448.
Standard errors are in parentheses.
Overall Time accounts change in ERQ for the overall effect of time from Time 1 through Time 3.
Time 1 – Time 2 accounts for only change in OQ-45 from Time 1 to Time 2.
Time 3 – Time 3 accounts for only change in OQ-45 from Time 2 to Time 3
Time 1 – Time 3 accounts for only change in OQ-45 from Time 1 to Time 3
Control variables included CMNI Adjusted Total, CMNI Emotional Control score, CMNI Self-Reliance score, CMNI Dominance Score, Age, Race (White or Non-White), Counseling Sessions (number of counseling sessions attended before OB4V), Employment (employed or not employed), Combat Exposure (engaged or did not engage with enemy fire), Psychological Symptoms (number of reported psychological symptoms).
*p < .00. **p < .01.

Fixed Effects Estimates (Top) and Variance-Covariance Estimates (Bottom) for subjective wellbeing (LSQ)

Parameter	LSQ Score
	Fixed effects
Intercept	16.20 (1.32)**
Level 1	
Overall Time	-.51 (.05)**
Time 1 - Time 2	-1.72 (.23)**
Time 2 - Time 3	-1.26 (.23)**
Time 1 - Time 3	-3.00 (.23)**
CMNI (Total)	-.02 (.03)
CMNI (Emotional Control)	.55 (.06)**
CMNI (Self-Reliance)	-.01 (.11)
CMNI (Dominance)	-.06 (.20)
Age	-.02 (.03)
Race	.80 (.82)
Employment	4.35 (1.30)**
Psychological Symptoms	1.40 (.64)
Psychological Diagnoses	.84 (.35)
	Random parameters
Level 2	
Participant ID	9.95 (1.41)
Group Number	.58 (.76)

Note: N (Treatment Group at Time 1, Time 2, Time 3) = 448.
Standard errors are in parentheses.
Overall Time accounts change in LSQ for the overall effect of time from Time 1 through Time 3.
Time 1 – Time 2 accounts for only change in OQ-45 from Time 1 to Time 2.
Time 3 – Time 3 accounts for only change in OQ-45 from Time 2 to Time 3
Time 1 – Time 3 accounts for only change in OQ-45 from Time 1 to Time 3
Control variables included CMNI Adjusted Total, CMNI Emotional Control score, CMNI Self-Reliance score, CMNI Dominance Score, Age, Race (White or Non-White), Counseling Sessions (number of counseling sessions attended before OB4V), Employment (employed or not employed), Psychological Symptoms (number of reported psychological symptoms), Psychological Diagnoses (number of reported psychological diagnoses).
*p < .00. **p < .01.

Multilevel analysis examining whether CMNI scores moderate OQ-45 scores change over time.

Fixed Effects Estimates (Top) and Variance-Covariance Estimates (Bottom) for Moderation by CMNI Adjusted Total of the relationship between time and mental health wellbeing scores (OQ-45)

Parameter	OQ-45 Score
	Fixed effects
Intercept	34.34 (6.34)**
Level 1	
Interaction	.10 (.06)
CMNI (Emotional Control)	1.40 (.31)**
CMNI (Self-Reliance)	1.04 (.56)
CMNI (Dominance)	-.722 (.97)
Age	.38 (.16)
Race	10.23 (3.86)*
Counseling Sessions	6.16 (2.52)
Marital Status	-2.80 (3.05)
Employment	-9.78 (3.16)**
Psychological Symptoms	.41 (2.20)
Psychological Diagnoses	4.25 (1.94)
	Random parameters
Level 2	
Participant ID Intercept	266.33 (32.43)

Group Number Intercept		.00 (.00)

Note: N (Treatment Group at Time 1, Time 2, Time 3) = 448.
Standard errors are in parentheses.
Interaction variable examined whether CMNI Adjusted Total moderated the relationship between time and the OQ-45 score.
Control variables included CMNI Emotional Control score, CMNI Self-Reliance score, CMNI Dominance Score, Age, Race (White or Non-White), Counseling Sessions (number of counseling sessions attended before OB4V), Marital Status (married or not married), Employment (full-time employed or not full-time employed), Psychological Symptoms (number of reported psychological symptoms), and Psychological Diagnoses (number of reported psychological diagnoses).
*p < .00. **p < .01.

Fixed Effects Estimates (Top) and Variance-Covariance Estimates (Bottom) for Moderation by CMNI Emotional Control of the relationship between time and mental health wellbeing scores (OQ-45)

Parameter	OQ-45 Score
	Fixed effects
Intercept	34.47 (6.34)**
Level 1	
Interaction	.37 (.17)
CMNI (Total)	-.13 (.15)
CMNI (Self-Reliance)	1.02 (.56)
CMNI (Dominance)	-.73 (.97)
Age	.38 (.16)
Race	10.21 (3.87)*
Counseling Sessions	6.21 (2.52)*
Marital Status	-2.78 (3.05)
Employment	-9.79 (3.16)*
Psychological Symptoms	.36 (2.20)
Psychological Diagnoses	4.23 (1.94)
	Random parameters
Level 2	
Participant ID Intercept	266.64 (32.50)
Group Number Intercept	.00 (.00)

Note: N (Treatment Group at Time 1, Time 2, Time 3) = 448.
Standard errors are in parentheses.
Interaction variable examined whether CMNI Emotional Control moderated the relationship between time and the OQ-45 score.

Control variables included CMNI Emotional Control score, CMNI Self-Reliance score, CMNI Dominance Score, Age, Race (White or Non-White), Counseling Sessions (number of counseling sessions attended before OB4V), Marital Status (married or not married), Employment (full-time employed or not full-time employed), Psychological Symptoms (number of reported psychological symptoms), and Psychological Diagnoses (number of reported psychological diagnoses).
*p < .00. **p < .01.

Fixed Effects Estimates (Top) and Variance-Covariance Estimates (Bottom) for Moderation by CMNI Self-Reliance of the relationship between time and mental health wellbeing scores (OQ-45)

Parameter	OQ-45 Score
	Fixed effects
Intercept	34.34 (6.34)**
Level 1	
Interaction	.32 (.32)
CMNI (Total)	-.13 (.15)
CMNI (Emotional Control)	1.45 (.31)**
CMNI (Dominance)	-.72 (.97)
Age	.38 (.16)
Race	10.20 (3.86)*
Counseling Sessions	5.84 (2.51)
Marital Status	-2.78 (3.05)
Employment	-9.76 (3.16)*
Psychological Symptoms	.39 (2.20)
Psychological Diagnoses	4.25 (1.93)
	Random parameters
Level 2	
Participant ID Intercept	265.94 (33.32)
Group Number Intercept	.00 (.00)

Note: N (Treatment Group at Time 1, Time 2, Time 3) = 448.
Standard errors are in parentheses.
Interaction variable examined whether CMNI Self-Reliance moderated the relationship between time and the OQ-45 score.

Control variables included CMNI Emotional Control score, CMNI Self-Reliance score, CMNI Dominance Score, Age, Race (White or Non-White), Counseling Sessions (number of counseling sessions attended before OB4V), Marital Status (married or not married), Employment (full-time employed or not full-time employed), Psychological Symptoms (number of reported psychological symptoms), and Psychological Diagnoses (number of reported psychological diagnoses).
*p < .00. **p < .01.

Fixed Effects Estimates (Top) and Variance-Covariance Estimates (Bottom) for Moderation by CMNI Dominance of the relationship between time and mental health wellbeing scores (OQ-45)

Parameter	OQ-45 Score
	Fixed effects
Intercept	34.38 (6.33)**
Level 1	
Interaction	-.12 (.56)
CMNI (Total)	-.13 (.15)
CMNI (Emotional Control)	1.45 (.31)
CMNI (Self-Reliance)	1.03 (.56)
Age	.38 (.16)
Race	10.19 (3.86)*
Counseling Sessions	6.18 (2.5)
Marital Status	-2.78 (3.04)
Employment	-9.75 (3.16)*
Psychological Symptoms	.40 (2.20)
Psychological Diagnoses	4.26 (1.93)
	Random parameters
Level 2	
Participant ID Intercept	265.11 (32.32)
Group Number Intercept	.00 (.00)

Note: N (Treatment Group at Time 1, Time 2, Time 3) = 448.
Standard errors are in parentheses.
Interaction variable examined whether CMNI Dominance moderated the relationship between time and the OQ-45 score.

Control variables included CMNI Emotional Control score, CMNI Self-Reliance score, CMNI Dominance Score, Age, Race (White or Non-White), Counseling Sessions (number of counseling sessions attended before OB4V), Marital Status (married or not married), Employment (full-time employed or not full-time employed), Psychological Symptoms (number of reported psychological symptoms), and Psychological Diagnoses (number of reported psychological diagnoses).*$p < .00$. **$p < .01$.

Multilevel analysis examining whether CMNI scores moderate PGIS scores change over time.

Fixed Effects Estimates (Top) and Variance-Covariance Estimates (Bottom) for Moderation by CMNI Adjusted Total of the relationship between time and personal growth initiative scores (PGIS-II)

Parameter	PGIS Score
	Fixed effects
Intercept	3.96 (.21)**
Level 1	
Interaction	.00 (.00)
CMNI (Emotional Control)	-.03 (.01)*
CMNI (Self-Reliance)	-.04 (.02)
CMNI (Dominance)	.04 (.03)
Age	-.01 (.01)
Race	-.15 (.13)
Counseling Sessions	-.085 (.07)
Employment	-.12 (.1)
Psychological Symptoms	.06 (.08)
Health Symptoms	-.07 (.09)
	Random parameters
Level 2	
Participant ID Intercept	.30 (.04)
Group Number Intercept	.00 (.02)

Note: N (Treatment Group at Time 1, Time 2, Time 3) = 453.

Standard errors are in parentheses.
Interaction variable examined whether CMNI Adjusted Total moderated the relationship between time and the PGIS-II score.
Control variables included CMNI Emotional Control score, CMNI Self-Reliance score, CMNI Dominance Score, Age, Race (White or Non-White), Counseling Sessions (number of counseling sessions attended before OB4V), Employment (full-time employed or not full-time employed), Psychological Symptoms (number of reported psychological symptoms), and Health Symptoms (number of reported health symptoms).
*p < .00. **p < .01.

Fixed Effects Estimates (Top) and Variance-Covariance Estimates (Bottom) for Moderation by CMNI Emotional Control of the relationship between time and personal growth initiative scores (PGIS-II)

Parameter	PGIS Score
	Fixed effects
Intercept	3.97 (.21)**
Level 1	
Interaction	.00 (.01)
CMNI (Total)	.00 (.01)
CMNI (Self-Reliance)	-.037 (.02)
CMNI (Dominance)	.04 (.03)
Age	-.01 (.01)
Race	-.15 (.13)
Counseling Sessions	-.09 (.07)
Employment	-.13 (.19)
Psychological Symptoms	.06 (.08)
Health Symptoms	-.06 (.09)
	Random parameters
Level 2	
Participant ID Intercept	.30 (.04)
Group Number Intercept	.00 (.02)

Note: N (Treatment Group at Time 1, Time 2, Time 3) = 453.
Standard errors are in parentheses.
Interaction variable examined whether CMNI Emotional moderated the relationship between time and the PGIS-II score.
Control variables included CMNI Emotional Control score, CMNI Self-Reliance score, CMNI Dominance Score, Age, Race (White or Non-White), Counseling Sessions (number of counseling sessions attended

before OB4V), Employment (full-time employed or not full-time employed), Psychological Symptoms (number of reported psychological symptoms), and Health Symptoms (number of reported health symptoms).
*p < .00. **p < .01.

Fixed Effects Estimates (Top) and Variance-Covariance Estimates (Bottom) for Moderation by CMNI Self-Reliance of the relationship between time and personal growth initiative scores (PGIS-II)

Parameter	PGIS Score
	Fixed effects
Intercept	3.96 (.21)**
Level 1	
Interaction	.01 (.01)
CMNI (Total)	-.00 (.01)
CMNI (Emotional Control)	-.03 (.01)*
CMNI (Dominance)	.04 (.03)
Age	-.01 (.01)
Race	-.15 (.13)
Counseling Sessions	-.09 (.074)
Employment	-.12 (.19)
Psychological Symptoms	.06 (.08)
Health Symptoms	-.06 (.09)
	Random parameters
Level 2	
Participant ID Intercept	.30 (.04)
Group Number Intercept	.00 (.02)

Note: N (Treatment Group at Time 1, Time 2, Time 3) = 453.
Standard errors are in parentheses.
Interaction variable examined whether CMNI Self-Reliance moderated the relationship between time and the PGIS-II score.
Control variables included CMNI Emotional Control score, CMNI Self-Reliance score, CMNI Dominance Score, Age, Race (White or Non-White), Counseling Sessions (number of counseling sessions attended

before OB4V), Employment (full-time employed or not full-time employed), Psychological Symptoms (number of reported psychological symptoms), and Health Symptoms (number of reported health symptoms).
*p < .00. **p < .01.

Fixed Effects Estimates (Top) and Variance-Covariance Estimates (Bottom) for Moderation by CMNI Dominance of the relationship between time and personal growth initiative scores (PGIS-II)

Parameter	PGIS Score
	Fixed effects
Intercept	3.96 (.21)**
Level 1	
Interaction	.03 (.02)
CMNI (Total)	.00 (.01)
CMNI (Emotional Control)	-.03 (.01)*
CMNI (Self-Reliance)	-.04 (.02)
Age	-.01 (.01)
Race	-.15 (.13)
Counseling Sessions	-.08 (.07)
Employment	-.12 (.19)
Psychological Symptoms	.06 (.08)
Health Symptoms	-.064 (.09)
	Random parameters
Level 2	
Participant ID Intercept	.30 (.04)
Group Number Intercept	.00 (.02)

Note: N (Treatment Group at Time 1, Time 2, Time 3) = 453.
Standard errors are in parentheses.
Interaction variable examined whether CMNI Dominance moderated the relationship between time and the PGIS-II score.
Control variables included CMNI Emotional Control score, CMNI Self-Reliance score, CMNI Dominance Score, Age, Race (White or Non-White), Counseling Sessions (number of counseling sessions attended

before OB4V), Employment (full-time employed or not full-time employed), Psychological Symptoms (number of reported psychological symptoms), and Health Symptoms (number of reported health symptoms).
*p < .00. **p < .01.

Multilevel analysis examining whether CMNI scores moderate ATSPPHS scores change over time.

Fixed Effects Estimates (Top) and Variance-Covariance Estimates (Bottom) for Moderation by CMNI Adjusted Total of the relationship between time and attitudes towards seeking psychological help (ATSPPHS)

Parameter	OQ-45 Score
	Fixed effects
Intercept	1.5 (.17)**
Level 1	
Interaction	.00 (.00)
CMNI (Emotional Control)	-.01 (.01)
CMNI (Self-Reliance)	-.04 (.02)
CMNI (Dominance)	.04 (.02)
Age	.00 (.00)
Race	-.045 (.10)
Counseling Sessions	.26 (.05)
Health Symptoms	.03 (.05)
	Random parameters
Level 2	
Participant ID Intercept	.18 (.02)
Group Number Intercept	.01 (.01)

Note: N (Treatment Group at Time 1, Time 2, Time 3) = 453.
Standard errors are in parentheses.
Interaction variable examined whether CMNI Adjusted Total moderated the relationship between time and the ATSPPHS score.
Control variables included CMNI Emotional Control score, CMNI Self-Reliance score, CMNI Dominance Score, Age, Race (White or Non-White), Counseling Sessions (number of counseling sessions attended before OB4V), and Health Symptoms (number of reported health symptoms). *p < .00. **p < .01.

Fixed Effects Estimates (Top) and Variance-Covariance Estimates (Bottom) for Moderation by CMNI Emotional Control of the relationship between time and attitudes towards seeking psychological help (ATSPPHS)

Parameter	OQ-45 Score
	Fixed effects
Intercept	1.5 (.17)**
Level 1	
Interaction	.00 (.00)
CMNI (Total)	-.02 (.00)*
CMNI (Self-Reliance)	-.04 (.02)*
CMNI (Dominance)	.04 (.02)
Age	-.00 (.00)
Race	-.04 (.10)
Counseling Sessions	.26 (.05)
Health Symptoms	.03 (.05)
	Random parameters
Level 2	
Participant ID Intercept	.18 (.02)
Group Number Intercept	.01 (.01)

Note: N (Treatment Group at Time 1, Time 2, Time 3) = 453.
Standard errors are in parentheses.
Interaction variable examined whether CMNI Emotional Control moderated the relationship between time and the ATSPPHS score.
Control variables included CMNI Emotional Control score, CMNI Self-Reliance score, CMNI Dominance Score, Age, Race (White or Non-White), Counseling Sessions (number of counseling sessions attended before OB4V), and Health Symptoms (number of reported health symptoms).
*p < .00. **p < .01.

Fixed Effects Estimates (Top) and Variance-Covariance Estimates (Bottom) for Moderation by CMNI Self-Reliance of the relationship between time and attitudes towards seeking psychological help (ATSPPHS)

Parameter	OQ-45 Score
	Fixed effects
Intercept	1.51 (.17)**
Level 1	
Interaction	.00 (.01)
CMNI (Total)	-.02 (.00)**
CMNI (Emotional Control)	-.01 (.01)
CMNI (Dominance)	.03 (.02)
Age	.00 (.00)
Race	-.05 (.10)
Counseling Sessions	.26 (.05)
Health Symptoms	.03 (.05)
	Random parameters
Level 2	
Participant ID Intercept	.18 (.02)
Group Number Intercept	.01 (.01)

Note: N (Treatment Group at Time 1, Time 2, Time 3) = 453.
Standard errors are in parentheses.
Interaction variable examined whether CMNI Self-Reliance moderated the relationship between time and the ATSPPHS score.
Control variables included CMNI Emotional Control score, CMNI Self-Reliance score, CMNI Dominance Score, Age, Race (White or Non-White), Counseling Sessions (number of counseling sessions attended before OB4V), and Health Symptoms (number of reported health symptoms).
*p < .00. **p < .01.

Fixed Effects Estimates (Top) and Variance-Covariance Estimates (Bottom) for Moderation by CMNI Dominance of the relationship between time and attitudes towards seeking psychological help (ATSPPHS)

Parameter	OQ-45 Score
	Fixed effects
Intercept	3.96 (.21)**
Level 1	
Interaction	-.03 (.01)
CMNI (Total)	-.02 (.00)**
CMNI (Emotional Control)	-.01 (.01)
CMNI (Self-Reliance)	-.04 (.02)*
Age	.00 (.00)
Race	-.04 (.10)
Counseling Sessions	.26 (.05)
Health Symptoms	.03 (.05)
	Random parameters
Level 2	
Participant ID Intercept	.30 (.04)
Group Number Intercept	.00 (.02)

Note: N (Treatment Group at Time 1, Time 2, Time 3) = 453.
Standard errors are in parentheses.
Interaction variable examined whether CMNI Dominance moderated the relationship between time and the ATSPPHS score.
Control variables included CMNI Emotional Control score, CMNI Self-Reliance score, CMNI Dominance Score, Age, Race (White or Non-White), Counseling Sessions (number of counseling sessions attended before OB4V), and Health Symptoms (number of reported health symptoms).
*p < .00. **p < .01.

Multilevel analysis examining whether CMNI scores moderate BIPM scores change over time.

Fixed Effects Estimates (Top) and Variance-Covariance Estimates (Bottom) for Moderation by CMNI Adjusted Total of the relationship between time and psychological mindedness (BIPM)

Parameter	BIPM Score
	Fixed effects
Intercept	34.45 (2.09)**
Level 1	
Interaction	.01 (.02)
CMNI (Emotional Control)	-1.03 (.10)**
CMNI (Self-Reliance)	-.15 (.18)
CMNI (Dominance)	-.09 (.31)
Age	-.05 (.05)
Race	2.01 (1.28)
Counseling Sessions	-1.54 (.82)
Combat Exposure	.79 (1.03)
Health Symptoms	-1.80 (.85)
Psychological Symptoms	1.02 (.87)
Psychological Diagnoses	-.44 (.64)
	Random parameters
Level 2	
Participant ID Intercept	26.98 (3.43)
Group Number Intercept	.00 (.00)

Note: N (Treatment Group at Time 1, Time 2, Time 3) = 448.
Standard errors are in parentheses.
Interaction variable examined whether CMNI Adjusted Total moderated the relationship between time and the OQ-45 score.
Control variables included CMNI Emotional Control score, CMNI Self-Reliance score, CMNI Dominance Score, Age, Race (White or Non-White), Counseling Sessions (number of counseling sessions attended before OB4V), Combat Exposure (engaged or did not engage with enemy fire), Health Symptoms (number of reported health symptoms), Psychological Symptoms (number of reported psychological symptoms), and Psychological Diagnoses (number of reported psychological diagnoses).
*p < .00. **p < .01.

Fixed Effects Estimates (Top) and Variance-Covariance Estimates (Bottom) for Moderation by CMNI Emotional Control of the relationship between time and psychological mindedness (BIPM)

Parameter	BIPM Score
	Fixed effects
Intercept	34.43 (2.09)**
Level 1	
Interaction	.022 (.06)
CMNI (Total)	.06 (.05)
CMNI (Self-Reliance)	-.15 (.18)
CMNI (Dominance)	-.08 (.31)
Age	-.05 (.05)
Race	2.00 (1.28)
Counseling Sessions	-1.54 (.82)
Combat Exposure	.80 (1.03)
Health Symptoms	-1.79 (.85)
Psychological Symptoms	1.01 (.87)
Psychological Diagnoses	-.44 (.64)
	Random parameters
Level 2	
Participant ID Intercept	27.00 (4.11)
Group Number Intercept	.00 (.00)

Note: N (Treatment Group at Time 1, Time 2, Time 3) = 448.
Standard errors are in parentheses.
Interaction variable examined whether CMNI Emotional Control moderated the relationship between time and the OQ-45 score.

Control variables included CMNI Emotional Control score, CMNI Self-Reliance score, CMNI Dominance Score, Age, Race (White or Non-White), Counseling Sessions (number of counseling sessions attended before OB4V), Combat Exposure (engaged or did not engage with enemy fire), Health Symptoms (number of reported health symptoms), Psychological Symptoms (number of reported psychological symptoms), and Psychological Diagnoses (number of reported psychological diagnoses).
*p < .00. **p < .01.

Fixed Effects Estimates (Top) and Variance-Covariance Estimates (Bottom) for Moderation by CMNI Self-Reliance of the relationship between time and psychological mindedness (BIPM)

Parameter	BIPM Score
	Fixed effects
Intercept	34.45 (2.09)**
Level 1	
Interaction	.01 (.11)
CMNI (Total)	.06 (.05)
CMNI (Emotional Control)	-1.03 (.10)**
CMNI (Dominance)	-.09 (.31)
Age	-.05 (.05)
Race	2.00 (1.28)
Counseling Sessions	-1.54 (.82)
Combat Exposure	.79 (1.03)
Health Symptoms	-1.80 (.85)
Psychological Symptoms	1.02 (.87)
Psychological Diagnoses	-.44 (.64)
	Random parameters
Level 2	
Participant ID Intercept	26.99 (3.37)
Group Number Intercept	.00 (.00)

Note: N (Treatment Group at Time 1, Time 2, Time 3) = 448.
Standard errors are in parentheses.
Interaction variable examined whether CMNI Self-Reliance moderated the relationship between time and the OQ-45 score.

Control variables included CMNI Emotional Control score, CMNI Self-Reliance score, CMNI Dominance Score, Age, Race (White or Non-White), Counseling Sessions (number of counseling sessions attended before OB4V), Combat Exposure (engaged or did not engage with enemy fire), Health Symptoms (number of reported health symptoms), Psychological Symptoms (number of reported psychological symptoms), and Psychological Diagnoses (number of reported psychological diagnoses).*$p < .00$. **$p < .01$.

Fixed Effects Estimates (Top) and Variance-Covariance Estimates (Bottom) for Moderation by CMNI Dominance of the relationship between time and psychological mindedness (BIPM)

Parameter	BIPM Score
	Fixed effects
Intercept	34.45 (2.09)**
Level 1	
Interaction	-.10 (.19)
CMNI (Total)	.06 (.05)
CMNI (Emotional Control)	-1.03 (.10)**
CMNI (Self-Reliance)	-.16 (.18)
Age	-.048 (.05)
Race	2.00 (1.28)
Counseling Sessions	-1.54 (.82)
Combat Exposure	.80 (1.03)
Health Symptoms	-1.79 (.85)
Psychological Symptoms	1.01 (.87)
Psychological Diagnoses	-.44 (.64)
	Random parameters
Level 2	
Participant ID Intercept	27.04 (3.37)
Group Number Intercept	.00 (.00)

Note: N (Treatment Group at Time 1, Time 2, Time 3) = 448.
Standard errors are in parentheses.
Interaction variable examined whether CMNI Dominance moderated the relationship between time and the OQ-45 score.

Control variables included CMNI Emotional Control score, CMNI Self-Reliance score, CMNI Dominance Score, Age, Race (White or Non-White), Counseling Sessions (number of counseling sessions attended before OB4V), Combat Exposure (engaged or did not engage with enemy fire), Health Symptoms (number of reported health symptoms), Psychological Symptoms (number of reported psychological symptoms), and Psychological Diagnoses (number of reported psychological diagnoses).
*p < .00. **p < .01.

Multilevel analysis examining whether CMNI scores moderate ERQ scores change over time.

Fixed Effects Estimates (Top) and Variance-Covariance Estimates (Bottom) for Moderation by CMNI Adjusted Total of the relationship between time and emotional restriction (ERQ)

Parameter	ERQ Score
	Fixed effects
Intercept	16.29 (1.32)**
Level 1	
Interaction	.00 (.02)
CMNI (Emotional Control)	.55 (.06)**
CMNI (Self-Reliance)	-.00 (.11)
CMNI (Dominance)	-.05 (.19)
Age	-.02 (.03)
Race	.74 (.82)
Counseling Sessions	-.29 (.45)
Employment	4.43 (1.29)
Combat Exposure	1.40 (.64)
Psychological Symptoms	.82 (.35)
	Random parameters
Level 2	
Participant ID Intercept	9.96 (1.41)
Group Number Intercept	.58 (.76)

Note: N (Treatment Group at Time 1, Time 2, Time 3) = 448.
Standard errors are in parentheses.

Interaction variable examined whether CMNI Adjusted Total moderated the relationship between time and the OQ-45 score.
Control variables included CMNI Emotional Control score, CMNI Self-Reliance score, CMNI Dominance Score, Age, Race (White or Non-White), Counseling Sessions (number of counseling sessions attended before OB4V), Employment (employed or unemployed), Combat Exposure (engaged or did not engage with enemy fire), Psychological Symptoms (number of reported psychological symptoms).
*p < .00. **p < .01.

Fixed Effects Estimates (Top) and Variance-Covariance Estimates (Bottom) for Moderation by CMNI Emotional Control of the relationship between time and emotional restriction (ERQ)

Parameter	ERQ Score
	Fixed effects
Intercept	16.29 (1.32)**
Level 1	
Interaction	.01 (.04)
CMNI (Total)	-.023 (.03)
CMNI (Self-Reliance)	.00 (.11)
CMNI (Dominance)	-.05 (.19)
Age	-.02 (.03)
Race	.73 (.82)
Counseling Sessions	-.29 (.45)
Employment	4.42 (1.29)
Combat Exposure	1.41 (.64)
Psychological Symptoms	.82 (.35)
	Random parameters
Level 2	
Participant ID Intercept	9.96 (1.41)
Group Number Intercept	.58 (.76)

Note: N (Treatment Group at Time 1, Time 2, Time 3) = 448.
Standard errors are in parentheses.
Interaction variable examined whether CMNI Emotional Control moderated the relationship between time and the OQ-45 score.
Control variables included CMNI Emotional Control score, CMNI Self-Reliance score, CMNI Dominance Score, Age, Race (White or Non-White), Counseling Sessions (number of counseling sessions attended

before OB4V), Employment (employed or unemployed), Combat Exposure (engaged or did not engage with enemy fire), Psychological Symptoms (number of reported psychological symptoms).
*p < .00. **p < .01.

Fixed Effects Estimates (Top) and Variance-Covariance Estimates (Bottom) for Moderation by CMNI Self-Reliance of the relationship between time and emotional restriction (ERQ)

Parameter	ERQ Score
	Fixed effects
Intercept	16.29 (1.32)**
Level 1	
Interaction	-.032 (.08)
CMNI (Total)	-.02 (.03)
CMNI (Emotional Control)	.55 (.06)**
CMNI (Dominance)	-.06 (.19)
Age	-.02 (.03)
Race	.72 (.82)
Counseling Sessions	-.29 (.45)
Employment	4.43 (1.29)
Combat Exposure	1.41 (.64)
Psychological Symptoms	.82 (.35)
	Random parameters
Level 2	
Participant ID Intercept	9.96 (1.41)
Group Number Intercept	.58 (.76)

Note: N (Treatment Group at Time 1, Time 2, Time 3) = 448.
Standard errors are in parentheses.
Interaction variable examined whether CMNI Self-Reliance moderated the relationship between time and the OQ-45 score.
Control variables included CMNI Emotional Control score, CMNI Self-Reliance score, CMNI Dominance Score, Age, Race (White or Non-White), Counseling Sessions (number of counseling sessions attended

before OB4V), Employment (employed or unemployed), Combat Exposure (engaged or did not engage with enemy fire), Psychological Symptoms (number of reported psychological symptoms).
*p < .00. **p < .01.

Fixed Effects Estimates (Top) and Variance-Covariance Estimates (Bottom) for Moderation by CMNI Dominance of the relationship between time and emotional restriction (ERQ)

Parameter	ERQ Score
	Fixed effects
Intercept	16.29 (1.32)**
Level 1	
Interaction	-.04 (.13)
CMNI (Total)	-.02 (.03)
CMNI (Emotional Control)	.55 (.06)**
CMNI (Self-Reliance)	.00 (.11)
Age	-.02 (.03)
Race	.72 (.82)
Counseling Sessions	-.29 (.45)
Employment	4.42 (1.29)
Combat Exposure	1.40 (.64)
Psychological Symptoms	.82 (.35)
	Random parameters
Level 2	
Participant ID Intercept	9.96 (1.41)
Group Number Intercept	.58 (.76)

Note: N (Treatment Group at Time 1, Time 2, Time 3) = 448.
Standard errors are in parentheses.
Interaction variable examined whether CMNI Dominance moderated the relationship between time and the OQ-45 score.
Control variables included CMNI Emotional Control score, CMNI Self-Reliance score, CMNI Dominance Score, Age, Race (White or Non-White), Counseling Sessions (number of counseling sessions attended

before OB4V), Employment (employed or unemployed), Combat Exposure (engaged or did not engage with enemy fire), Psychological Symptoms (number of reported psychological symptoms).
*p < .00. **p < .01.

Multilevel analysis examining whether CMNI scores moderate LSQ scores change over time.

Fixed Effects Estimates (Top) and Variance-Covariance Estimates (Bottom) for Moderation by CMNI Adjusted Total of the relationship between time and subjective wellbeing (LSQ)

Parameter	LSQ Score
	Fixed effects
Intercept	28.33 (1.89)**
Level 1	
Interaction	-.01 (.02)
CMNI (Emotional Control)	-.35 (.10)**
CMNI (Self-Reliance)	-.02 (.17)
CMNI (Dominance)	.47 (.29)
Age	-.04 (.05)
Race	-2.43 (1.16)
Counseling Sessions	-.44 (.78)
Employment	1.23 (.98)
Psychological Symptoms	-.05 (.65)
Psychological Diagnoses	-1.13 (.58)
	Random parameters
Level 2	
Participant ID Intercept	24.03 (3.13)
Group Number Intercept	.21 (1.28)

Note: N (Treatment Group at Time 1, Time 2, Time 3) = 448.
Standard errors are in parentheses.

Interaction variable examined whether CMNI Adjusted Total moderated the relationship between time and the OQ-45 score.
Control variables included CMNI Emotional Control score, CMNI Self-Reliance score, CMNI Dominance Score, Age, Race (White or Non-White), Counseling Sessions (number of counseling sessions attended before OB4V), Employment (employed or unemployed), Psychological Symptoms (number of reported psychological symptoms), Psychological Diagnoses (number of reported psychological diagnoses).
*p < .00. **p < .01.

Fixed Effects Estimates (Top) and Variance-Covariance Estimates (Bottom) for Moderation by CMNI Emotional Control of the relationship between time and subjective wellbeing (LSQ)

Parameter	LSQ Score
	Fixed effects
Intercept	28.33 (1.89)**
Level 1	
Interaction	.02 (.05)
CMNI (Total)	.01 (.05)
CMNI (Self-Reliance)	-.02 (.17)
CMNI (Dominance)	.47 (.29)
Age	-.04 (.05)
Race	-2.42 (1.16)
Counseling Sessions	-.44 (.78)
Employment	1.23 (.98)
Psychological Symptoms	-.05 (.65)
Psychological Diagnoses	-1.13 (.58)
	Random parameters
Level 2	
Participant ID Intercept	24.02 (3.13)
Group Number Intercept	.21 (1.28)

Note: N (Treatment Group at Time 1, Time 2, Time 3) = 448.
Standard errors are in parentheses.
Interaction variable examined whether CMNI Emotional Control moderated the relationship between time and the OQ-45 score.
Control variables included CMNI Emotional Control score, CMNI Self-Reliance score, CMNI Dominance Score, Age, Race (White or Non-White), Counseling Sessions (number of counseling sessions attended

before OB4V), Employment (employed or unemployed), Psychological Symptoms (number of reported psychological symptoms), Psychological Diagnoses (number of reported psychological diagnoses).
*p < .00. **p < .01.

Fixed Effects Estimates (Top) and Variance-Covariance Estimates (Bottom) for Moderation by CMNI Self-Reliance of the relationship between time and subjective wellbeing (LSQ)

Parameter	LSQ Score
	Fixed effects
Intercept	28.33 (1.89)**
Level 1	
Interaction	.11 (.09)
CMNI (Total)	.01 (.05)
CMNI (Emotional Control)	-.35 (.10)**
CMNI (Dominance)	.47 (.29)
Age	-.04 (.05)
Race	-2.38 (1.16)
Counseling Sessions	-.44 (.78)
Employment	1.24 (.98)
Psychological Symptoms	-.047 (.65)
Psychological Diagnoses	-1.14 (.58)
	Random parameters
Level 2	
Participant ID Intercept	24.03 (3.13)
Group Number Intercept	.16 (1.28)

Note: N (Treatment Group at Time 1, Time 2, Time 3) = 448.
Standard errors are in parentheses.
Interaction variable examined whether CMNI Self-Reliance moderated the relationship between time and the OQ-45 score.
Control variables included CMNI Emotional Control score, CMNI Self-Reliance score, CMNI Dominance Score, Age, Race (White or Non-White), Counseling Sessions (number of counseling sessions attended

before OB4V), Employment (employed or unemployed), Psychological Symptoms (number of reported psychological symptoms), Psychological Diagnoses (number of reported psychological diagnoses).
*p < .00. **p < .01.

Fixed Effects Estimates (Top) and Variance-Covariance Estimates (Bottom) for Moderation by CMNI Dominance of the relationship between time and subjective wellbeing (LSQ)

Parameter	LSQ Score
	Fixed effects
Intercept	28.33 (1.89)**
Level 1	
Interaction	-.04 (.15)
CMNI (Total)	.01 (.05)
CMNI (Emotional Control)	-.35 (.10)**
CMNI (Self-Reliance)	-.03 (.17)
Age	-.04 (.05)
Race	-2.42 (1.16)
Counseling Sessions	-.44 (.78)
Employment	1.23 (.98)
Psychological Symptoms	-.04 (.65)
Psychological Diagnoses	-1.13 (.58)
	Random parameters
Level 2	
Participant ID Intercept	24.03 (3.13)
Group Number Intercept	.21 (1.28)

Note: N (Treatment Group at Time 1, Time 2, Time 3) = 448.
Standard errors are in parentheses.
Interaction variable examined whether CMNI Dominance moderated the relationship between time and the OQ-45 score.
Control variables included CMNI Emotional Control score, CMNI Self-Reliance score, CMNI Dominance Score, Age, Race (White or Non-White), Counseling Sessions (number of counseling sessions attended

before OB4V), Employment (employed or unemployed), Psychological Symptoms (number of reported psychological symptoms), Psychological Diagnoses (number of reported psychological diagnoses).
*p < .00. **p < .01.

Appendix N

Table illustrating results for RQ 2.4

Predictors of therapeutic realizations (TRS-R) at Time 2

	TRS-R Time 2 Score	
Variable	β	95% CI
CMNI (Total)	-.01	[-.2, .01]
CMNI (Emotional-Control)	.00	[-.02, .02]
CMNI (Self-Reliance)	.04	[.00, .08]
CMNI (Dominance)	.02	[-.05, .08]
Age	-.03**	[-.04, -.02]
Race	-.17	[-.47, .12]
Counseling Sessions	-.13	[-.27, .01]
Marital Status	-.01	[-.23, .20]
R^2	.23	
F	16.58**	

Note: N = 147. CI = Confidence Interval.
Control variables included Age, Race (White or Non-White), Counseling Sessions (number of counseling sessions attended before OB4V), Marital Status (married or not married).
*p < .00. **p < .01.

Appendix O

Means and standard deviations of the outcome variables for this study's sample compared to other male community population samples

Variable	Current Sample Time 1 Mean Value	Current Sample Time 1 Standard Deviation	Population Comparison Sample Mean	Population Comparison Sample Standard Deviation	Range
OQ_45_Total	58.68	27.48	49.2	17.59	0 -180
LSQ	23.35	.28	23	6.8	5 - 35
PGIS-II	3.44	.78	3.69	0.72	0 - 5
ERQ	4.51	1.40	3.64	1.11	4 - 28
BIPM	32.95	8.78	18	3.95	0 - 56
ATSPPH	1.56	.66	1.85	.65	0 - 3

Note: Means and standard deviations of the male community population samples taken from the following sources; 1) OQ-45 Total; Lambert et al. (2004), 2) LSQ Total: Pavot and Diener (2008), 3) PGIS-II; Robitschek et al. (2012), 4) ERQ Total: Gross and John (2003), 5) BIPM: Nyklíček & Denollet (2009), 6) ATSPPH Total: Berger et al. (2005).

The means and standard deviations of pre-treatment data for this study's sample were compared with other men in community population samples for each measure used in this study. The principal investigator of this study was unable to find normative data illustrating Veterans' responses to the measures used in this study. Thus, male community population samples were used as normative data. It is important to note that male community population samples may not be directly comparable to this Veteran population sample, because of differences in background demographics. This comparison can still provide basic information about whether this study's sample performed in a

similar manner on the outcome variables at pre-treatment to men in the general community population.

Findings show that this study's sample performed similar on the outcome variables at pre-treatment to the general male community population sample on all outcome variables, except OQ-45 Total and BIPM Total scores. This study's sample had a mean score 9.48 points higher on the OQ-45 Total score and a larger standard deviation of 9.89 points. This suggests that this study's sample shows greater mental health issues than the general male community population. This is expected as Veterans tend to have greater mental health issues compared to the general civilian population due to their military experiences (Tanielian & Jaycox, 2008). Secondly, this study's sample had a mean score of 14.95 points higher on the BIPM Total score and a larger standard deviation of 8.78 points. This suggests that this study's sample shows greater interest and ability to relate to their thoughts and feelings than the male community population. As stated in the limitations section, this study's sample appear to be more open to therapeutic services than the general Veteran population. This level of greater openness to therapeutic services may also suggest greater openness to their thoughts and feelings as intrapersonal insight is a central component to engaging in the therapeutic process. The higher BIPM score may also account for the non-significant effect of the OB4V treatment with regard to the change in BIPM pre- to post-treatment; due to a higher BIPM score at pre-treatment there is less opportunity for an increased BIPM score at post-treatment.

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