

PSYCHOLOGICAL HARDINESS, BIG FIVE  
PERSONALITY, AND DEMOGRAPHIC FACTORS AS  
PREDICTORS OF COLLEGE ENROLLMENT AMONG  
MILITARY VETERANS

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Abstract: Enrolling in college and obtaining a degree may result in higher earnings over a lifetime and greater life and job satisfaction. Research has suggested that military veteran students were at risk for dropping out of college due to factors related to transitioning back into civilian life. However, more recent research indicates that military veterans now graduate at equal rates to non-veteran students. Although more veterans have enrolled in college and ultimately obtained their degrees, there are many military veterans who have chosen to forgo utilizing GI Bill benefits to enroll in college. Prior research has focused on psychological hardiness and Big Five Personality factors in the everyday lives of military veterans. This study examined the effects that psychological hardiness, Big Five Personality factors, and demographics have on predicting the likelihood that military veterans will enroll in college. This study revealed that military veterans with moderate to high levels of the Big Five Personality domains Conscientiousness and Agreeableness were more likely to enroll in college than military veterans with lower levels of those traits. In addition, as age and socioeconomic status increased, the likelihood that veterans would enroll in college also increased. This study did not find that psychological hardiness predicts college enrollment among military veterans.

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## CHAPTER I

### INTRODUCTION

There are many benefits to enrolling in college and obtaining a degree. Some of these benefits are increased wages and earnings over a lifetime (Day & Newburger, 2002), better health care benefits (Baum, Ma, and Payea, 2013), and overall life and job satisfaction (Xiao, Tang, & Shim, 2009). This is particularly important for military veterans due to the many adversities this population may face once discharged from active military service. Challenges that are encountered by military veterans include injury or disability, mental illness, psychological trauma, alcohol and substance abuse problems, relationship problems, and difficulties receiving services (Cozza, Haskins, & Lerner, 2013; Ormerod, 2009). Rudd, Goulding, and Bryan (2011) indicated that many of these challenges may be directly attributed to military service (Ormerod, 2009).

Military veterans experience many challenges when adjusting to civilian life as demands and structure differ significantly from military life (Chiu, 2013; Young, 2012). Many veterans experience difficulty transitioning back into the general population and have symptoms of depression and trauma (Ackerman et al., 2009). Morin (2011) indicated that 72 percent of veterans reported experiencing an easy time adjusting to civilian life while 27 percent of veterans reported a difficult transition. In a study of Operation Enduring Freedom (OEF) and Operation Iraqi Freedom (OIF) combat veterans, researchers found that combat served as a context for exposure to pain,



perceptions of burdensome, increased pain tolerance, failed belongingness, and subsequent coping strategies such as alcohol or substance abuse and suicide (Brenner et. al., 2008). These challenges could potentially influence many veterans' decisions about whether or not to utilize Post 9/11 GI Bill Benefits to enroll in college.

To date, most research regarding college enrollment has focused on the civilian population. More recently, researchers have taken a new interest in examining student veterans and associated factors that may lead to veteran student drop-out and retention (Ackerman, DiRamio, & Mitchell, 2009; Brito, Callahan, & Marks, 2008; Markel, Trujillo, Callahan, & Marks, 2010). However, the existing research does not provide insight into reasons some veterans choose to utilize Post 9/11 GI Bill benefits to enroll in college while other veterans do not. For this reason, it is important to examine demographic factors, the Big Five Personality Factors, and psychological hardiness and the influences they may have on veterans' decisions to enroll in college.

### **Challenges for Military Veterans**

In 2013, there were over 19.6 million veterans in the United States (U.S. Census Bureau News, 2014). Eighteen and 6/10 percent were female veterans, and 11.3 percent of veterans were Black or African American. Six percent were Hispanic; 1.4 percent were Asian; 0.7 percent were American Indian or Alaskan Native; 0.2 percent were native Hawaiian or Other Pacific Islander; 79.3 percent were White or Caucasian; and 1.2 percent identified as some other race (U.S. Census Bureau News, 2014).

Research has indicated that serving in the military may have a positive effect on an individual's life (Hotopf et al. 2006). However, many veterans suffer from significant mental health problems that continue or arise after leaving the military. Some of the most

common mental health problems seen in the military veteran population are problems with substance abuse, depression, and posttraumatic stress disorder (PTSD) (Hoge, Auchterlonie, & Milliken. 2006). Rudd et al. (2011) found that 20 percent of veterans have experienced problems with depression or PTSD and 19 percent experienced some form of traumatic brain injury.

Applewhite (1997) reported that many veterans encountered situational, personal, and administrative barriers to being able to seek medical and psychological services. Although services for veterans have since improved, many veterans still experience problems in receiving services for mental, physical, and emotional problems (Sayer et al., 2010). Because of the limitations in receiving support, veterans tend to use or abuse alcohol to cope with stress, anxiety, or depression (Taft et al., 2007). Other problems that veterans are challenged with are difficulties with their social lives, health, and relationships (Ormerod, 2009). In one study, it was estimated that 25 to 56 percent of combat veterans reported difficulty in productivity, social functioning, community involvement, and self-care domains (Sayer et al., 2010).

Military veterans represent 12 percent of the United States homeless population (U.S. Census Bureau News, 2014). Homelessness may be caused by poverty, extended periods of unemployment, shortages of low-income housing, declines in local and state income assistance programs, and deinstitutionalization (Applewhite, 1997). Individuals who are homeless may experience alcohol and substance abuse problems, severe mental and physical illness, and menial jobs and wages. Applewhite (1997) indicated that homeless veterans reported problems with negative public perceptions and treatment, high incidences of health and mental health problems, dehumanizing policies and

procedures, limited resources, and high levels of stress and frustration with service delivery systems, all of which played significant roles in homelessness.

### **The Benefits of Higher Education**

Workers with different levels of educational attainment have different levels of earnings (Day & Newburger, 2002). Education has paid off historically (Day & Newburger, 2002). From 1997 to 1999, workers with a high school diploma earned an average salary of \$25,000 while workers with a college degree earned an average salary of \$45,000. Workers with professional degrees (M.D., Ph.D., J.D. etc.) earned an average salary of \$99,000 (Day & Newburger, 2002). Baum et al. (2013) indicated that the long-term trend of earnings related to education level is upward and suggested that individuals who obtain college degrees receive more earnings over a lifetime.

Individuals who have obtained a bachelor's degree with no advanced degree earned median salaries of \$56,500 as of 2011, which was \$21,000 more than median earnings of high school graduates (Baum et al., 2013). When compared to high school graduates, four-year college graduates who enroll at age 18 and complete their degrees in four years earn enough by age 36 to compensate for being absent in the work force for four years, as well for borrowing from loan companies the full amount to pay fees and tuition (Baum et al., 2013).

Baum et al. (2013) noted that individuals with higher levels of education are not only more active citizens than others, but also tend to lead healthier lifestyles, which reduces health care costs. In 2012, individuals who volunteered for community organizations consisted of 42 percent four-year college graduates, 29 percent individuals with an associate degree or some college, and 17 percent high school graduates. Among

individuals aged 45 to 64, 80 percent of bachelor's degree recipients voted in 2012 while only 59 percent of high school graduates voted. In addition, Baum et al. (2013) indicated that high school graduates are more likely to smoke cigarettes than college graduates and college educated adults are less likely to be obese (Baum et al., 2013). There is a distinct relationship between education and earnings and other benefits, and this relationship perseveres even when other factors such as personal and geographic characteristics are considered (Julian & Kominski, 2011).

### **Student Veterans**

According to Student Veterans of America (SVA), previous research suggested that student veterans were dropping out of college at higher rates than non-veteran students (Student Veterans of America, 2014). Previous research also indicated that student veterans were taking longer to complete their degrees as opposed to non-veteran students (Student Veterans of America, 2014). SVA suggested that these findings were inaccurate, and examined rate and time of completion among military student veterans (Student Veterans of America, 2014). This research showed that not only are student veterans graduating at similar rates as non-veteran students, they have similar times of completion as well.

However, many veterans choose not to pursue higher education (Steele et al., 2010). Steele et al. (2010) reported that veterans listed a variety of reasons for not utilizing their Post 9/11 GI Bill benefits. These reasons did not include a lack of information or knowledge about using the Post 9/11 GI Bill benefits. Some veterans stated that it was more beneficial to transfer their benefits to their children as this would assist with their children's education. Some veterans stated that they did not see a clear

reason for furthering their education because they already earned an adequate amount of money at their current jobs (Steele et al., 2010).

## **GI Bill**

Past and current GI Bills and the Post 9/11 GI Bill may play a role in decisions that veterans make about whether or not to pursue higher education. The original GI Bill was primarily passed due to veterans returning home from World War II to find themselves in the middle of a recession (Steele et al., 2010). The original GI Bill offered 48 months of educational benefits, including tuition (Steele et al., 2010). Iterations of the original GI Bill led to the Veterans' Readjustment Assistance Act of 1952, the Veterans' Readjustment Act of 1966, and the Post-Vietnam Era Veterans' Educational Assistance Act of 1977 (Steele et al., 2010).

The Veterans' Educational Assistance Act of 1984, also known as the Montgomery GI Bill (MGIB) (Steele et al., 2010), is still in use today. To increase educational benefits for Operation Enduring Freedom (OEF) and Operation Iraqi Freedom (OIF) veterans and to make it easier to pursue higher education, many veteran groups advocated for the Post 9/11 GI Bill (Steele et al., 2010). The Post 9/11 GI Bill offers benefits to veteran students by paying the cost of tuition and other related fees, an annual book stipend, and a monthly living allowance issued directly to the student (Steele et al., 2010). Despite these benefits, Spampneto (1996) reported that only 57% of military veterans who were eligible for the Montgomery GI Bill actually utilized it. Spampneto reported that veterans who chose to utilize the GI Bill had higher earnings and lower unemployment rates than veterans who did not (Spampneto, 1996). More recent research indicated that veterans who participate in the GI Bill program and are

under the age of 35 earn at least 6% more than their non-veteran peers (Department of Veteran Affairs, 2015).

### **Demographic Information**

Perna (2005) indicated that college enrollment and degree attainment rates vary by race, ethnicity, sex, and socioeconomic status (SES). Research shows that Hispanics and African Americans are underrepresented among degree recipients at all levels relative to their representation in the general population (Perna, 2005). Age may also play an important role in enrolling in college. Rowan-Kenyon (2007) explained that there are growing numbers of individuals who do not transition directly from high school to college, but may enroll in college at some later point in their lives. It was reported that 39 percent of students participating in any kind of postsecondary education were over the age of 25 as of 1999 (Rowan-Kenyon, 2007).

In addition to age, gender and SES may play important roles in college enrollment and degree attainment. Buchmann and DiPrete (2006) reported that in the last few decades, college completion has reversed from favoring men to favoring women. Although men receive the majority of professional (54%) and doctoral degrees (55%), women receive the majority of degrees at the associate's (60%) and bachelor's (57%) degree levels (Perna, 2005). Additionally, research has shown that low-income students are less likely than higher income students to attend 4-year universities, even among students with high test scores (Akerhielm, Berger, Hooker, & Wise, 1998). Students who have low SES and are in the top test score group are more likely to enlist in the military (Akerhielm et al., 1998). Although demographics may be important when discussing

college enrollment, other factors such as personality may also influence veterans' decisions to attend college.

### **Personality Factors**

Personality factors may play a role in whether or not veterans choose to pursue higher education. One framework for understanding personality is the "Five Factor Model" of personality (Sheldon, Ryan, Rawsthorne, & Ilardi, 1997). The Five Factor Model focuses on a core set of behavioral traits which include Extraversion, Neuroticism, Agreeableness, Conscientiousness, and Openness to Experience. These traits are known as the Big Five Personality Factors (Sheldon et al., 1997).

Big Five personality theory has been extensively researched and is considered generalizable across all cultures (Judge et al., 1999). Research shows that Big Five personality transcends language and the many unique cultural aspects among different individuals (Gurven, Von Rueden, Massenkoff, Kaplan, & Lero Vie, 2013). Cross-cultural tests across six continents also support the Five Factor Model as a universal construct (McCrae, 2002; McCrae & Terracciano, 2005; Gurven et al., 2013).

Examining the Big Five constructs may aid in understanding reasons many military veterans are making the decision to enroll in college while others are not. There is limited literature on military veterans' personality traits and higher education. Most research on personality and military has focused on active duty personnel (Jackson, Thoemmes, Jonkmann, Lüdtkke, & Trautwein, 2012). One study showed that personality traits predicted the decision of individuals to enlist in the military (Jackson et al., 2012), so it is possible that it also plays a role in the decision to attend college.

Bartone et al. (2009) noted that one very important dimension of personality, psychological hardiness, is not covered within the Big Five. Psychological hardiness is considered to be an important construct in examining how people deal with stressful situations (Kobasa, 1979) and is important to incorporate with personality factors when considering the traits of student and non-student veterans.

### **Psychological Hardiness**

The hardiness construct (Abdollahi, Talib, Yaacob, Ismail, 2014) is a framework for understanding why many individuals, even under stressful conditions, are able to cope with problems, yet why many individuals in non-stressful conditions are unable to cope with problems. Hardiness may play a role in the understanding of why some veterans pursue higher education and some do not.

Hardiness consists of commitment, challenge, and control, which prepare an individual to handle difficult and problematic events (Kobasa, Maddi, & Kahn, 1982). Hardy persons are perceived as healthy individuals because they possess an increased sense of life and work commitment, are more open to change and challenges in life, and have a greater feeling of control over what happens to them (Bartone, Eid, Johnsen, Laberg, & Snook, 2009). Individuals with higher levels of psychological hardiness tend to interpret challenging and difficult situations as normal features of existence (Bartone et al., 2009).

In military groups, hardiness is associated with fewer physical and mental health symptoms in combat-exposed Gulf War soldiers (Bartone, 1999), casualty assistance workers (Bartone et al., 1989), peacekeeping soldiers (Bartone, 1996), and Israeli soldiers in stressful combat training (Florian et al., 1995). Hardiness has also been associated with



good performance under stress in Israeli officer candidates (Westman, 1990), Norwegian Navy cadets (Bartone et al., 2002), and British police officers (Barton et al., 2004).

There have been a number of studies with various populations attesting to the saliency of hardiness (Bogden, 2014). These populations include bus drivers (Bartone, 1989), lawyers (Kobasa, 1982), the seriously ill (Okun, Zandra & Robinson, 1988), the elderly (Magnani, 1990), athletes (Golby & Sheard, 2004; Maddi & Hess, 1992), and university students (Bartone, Hystad, Eid, Laberg, & Johnsen, 2009). One of the initial studies of this construct in military personnel examined hardiness of U.S. Army casualty assistance workers helping family members of active duty servicemen who were killed in a plane crash (Bartone, Ursano, Wright, & Ingraham, 1989). Hardiness was a key component in preventing the onset of psychological illnesses (Alfred, 2011). Other studies showed that hardiness had an inverse correlation with Posttraumatic Stress Disorder (PTSD) in veterans, meaning that veterans with high levels of PTSD possessed low levels of hardiness (Alfred, 2011; King, King, Fairbank, Keane, & Adams, 1998; Zakin, Solomon, & Neria, 2003). It seems that hardiness is a construct that pertains to military populations, but research is scarce and has not examined the role it may play in decisions about education.

### **Current Study**

Military veterans are faced with different and unique challenges due to their previous active involvement with the armed forces. As a result of their military experience, veterans are more prone to developing symptoms of depression, declines in health, lower earnings over a lifetime, and negative life satisfaction (Ackerman et al., 2009). Veterans could stand to benefit tremendously from higher education. Obtaining a

college degree may enable veterans to become more competitive when seeking employment opportunities. Many veterans experience challenges adjusting to civilian life (Chiu, 2013; Young, 2012) that are exacerbated because of PTSD, depression, or other mood and stress related symptoms due to deployment, combat, or strenuous demands such as spending time away from family and loved ones (Sayers, Farrow, Ross, & Oslin, 2009). Some veterans do not utilize resources intended to help them pursue higher education due to challenges with time, money, and supporting their families (Spampneto, 1996).

At the same time, many veterans are able to overcome such challenges, enroll in college, and ultimately obtain their degrees. Therefore, in this study, I explored how demographic variables, personality factors, and psychological hardiness factored into the decisions veterans made about college enrollment. This research will aid professionals who provide services to veterans in educational or community settings.

### **Research Questions**

1. Will demographic variables (age, race, ethnicity, gender, and socioeconomic status) predict college enrollment among military veterans?
2. Will the Big Five Personality Factors predict college enrollment among military veterans?
3. Will psychological hardiness predict college enrollment among military veterans?

### **Hypotheses**

H<sub>1</sub>: Demographic variables including a) age, b) race, ethnicity, c) gender, and d) socioeconomic status will each predict college enrollment among military veterans.

H<sub>2</sub>: Big Five Personality Factors including a) Conscientiousness, b) Openness to Experience, and c) Extraversion will predict college enrollment among military veterans.

H<sub>3</sub>: Psychological hardiness will predict college enrollment among military veterans.

## CHAPTER II

### METHODOLOGY

#### **Procedures**

The Institutional Review Board (IRB) at a large public university approved this study. The researcher received permission from the Coordinator of Veteran Student Academic Services to recruit military veterans who were currently enrolled. A mass recruitment email was dispersed to the military veteran student body. The researcher also used convenience sampling methods by posting a recruitment flyer to various military Facebook groups and to the listserv Division 19 (Military Psychology) of the American Psychological Association. This method enabled the researcher to collect data not only from military veterans currently enrolled in college, but also from military veterans with a high school education.

Participants followed a link that was provided via email, Facebook, or flyer. This link directed them to a password-protected Qualtrics account. To ensure confidentiality, the IP addresses of the respondents were not collected, and the researcher assigned a numerical code to each case. The link directly guided the veterans to an informed consent agreement. The informed consent statement (Appendix D) described the study and procedures, confidentiality, time involvement, benefits, risks, and the voluntary nature of participation. Veterans provided consent to participate by clicking “yes.”

Subsequently, veterans were guided to the electronic measures. After participants completed the measures, the researcher provided a debriefing statement which thanked participants for their participation in this study. The researcher gathered data on demographics, psychological hardiness, and Big Five Personality.

### **Participants**

Participants were 216 male and female veterans recruited throughout the United States. Participants were 18 years of age or older. Participants were aged 18-24 (7%), 25-34 (39%), 35-44 (21%), 45-54 (17%), 55-64 (10%), 65-74 (5%), and 75-years-of-age or older (1%). Participants were White/Caucasian (63%), Black/African American (23%), Asian American (1%), American Indian/Alaskan Native (7%), Native Hawaiian/Pacific Islander (1%), and Other (4%). Most participants identified as Not of Hispanic, Latino, or Spanish origin (87%); a smaller number identified as Hispanic, Latino, or Spanish origin (7%). Approximately 75 percent of participants were male and 25 percent were female. See tables 1-4 for complete demographic information.

### **Measures**

The measures utilized in this study included a Demographic Questionnaire, the International Personality Item Pool Representation of the NEO PI-R (short version), and the Dispositional Resilience Scale-15 (A Brief Hardiness Scale).

**Demographic Questionnaire.** The demographic questionnaire was used to gather data about the military veteran participants. The questionnaire included gender, age, marital status, race, ethnicity, highest level of completed education (i.e. high school, some college, bachelor's degree, etc.), college year classification if enrolled (i.e.

Freshman, Sophomore, etc.), branch of service, years of active duty experience, and socioeconomic status. (Appendix G)

**International Personality Item Pool Representation of the NEO PI-R (short version).** I used the short version of the International Personality Item Representation of the NEO PI-R (IPIP-NEO; Maples et al., 2014) (Appendix E) to identify Big Five Personality Factors, including Neuroticism, Extraversion, Openness, Agreeableness, and Conscientiousness. The instrument includes 24 items per domain. This instrument was designed to measure the same traits as the original IPIP-NEO (Goldberg, 1999), but more efficiently with fewer items. The short version of the IPIP-NEO inventory consists of 120 items from the original IPIP-NEO inventory. The response format for the short version IPIP-NEO utilizes a 5-point Likert-type scale (Very Inaccurate, Moderately Inaccurate, Neither Accurate nor Inaccurate, Moderately Accurate, Very Accurate).

The original IPIP was created by modifying an existing item pool and administering it to a sample of community adults in an effort to develop 10-item scales for each of the 30 Five Factor Model facets (Hendricks, 1997; Maples et al., 2014). The average coefficient alpha of subscales was .73, which provided preliminary support for the reliability and validity of the IPIP-NEO (Goldberg, 1999). Because the full 300-item IPIP-NEO can be time-consuming, can result in participant fatigue, and can be prohibitive to researchers with budget and/or time constraints, the shorter version of the IPIP-NEO was created.

The short version of the IPIP-NEO has demonstrated strong reliability and convergence with the NEO PI-R (Maples et al., 2014). The short version has demonstrated good internal consistency ( $\alpha = .68$ ). To interpret individual scores, using

SPSS, the researcher calculated the mean and median standard deviation (SD) for the participants in this study, and interpreted scores within one-half standard deviation of the mean. Scores outside of that range can be interpreted as “low” or “high.” The internal consistency from this study was  $\alpha = .69$ .

**Dispositional Resilience Scale-15 (A Brief Hardiness Scale).** I used the Dispositional Resilience Scale-15 (DRS-15; Bartone, 1995) (Appendix F) to identify the level of psychological hardiness for each participant. The DRS-15 is a 15-item brief self-report measure of hardiness (Southwick, Pietrzak, White, 2011). This instrument assesses three dimensions of psychological hardiness: commitment (tendency to engage fully in life activities), perceived control (the perceived ability to exercise control over life circumstances), and challenge (tendency to enjoy challenges) (Southwick et al., 2011). The DRS-15 consists of 15 statements requiring respondents to indicate agreement on a 4-point Likert type scale ranging from 0 (not true at all) to 3 (completely true). (Søndena, Lauvrud, Sandvik, Nonstad, & Whittington, 2013; Steinhardt, & Dolbier, 2008). Bartone (2007) indicated that the DRS-15 has the advantages of brevity, good internal consistency, and validity. The DRS-15 demonstrates good internal consistency ( $\alpha = .82$ ) and good criterion-related validity across many samples (Bartone, 1995, 1999, 2007). For this study, the DRS-15 yielded an alpha level of  $\alpha = .66$ .

The DRS-15 was derived from original scales used to measure hardiness by Kobasa (1979) and Maddi and Kobasa (1984). Item and reliability analyses led to a shortened and more effective 45-item hardiness measure from the original measure of hardiness (Bartone, 1989). This was further condensed to shorter versions that included 30-items and 15-items (Bartone, 1999).

The DRS-15 was normed on large samples of over 7,000 male and female adults (age 20 – 60 years) (Hystad, Eid, Johnsen, Laberg, Bartone, 2010), and male and female college students (N=6,000) (Bartone, 1995, 1999, 2007; Southwick et al., 2011; Steinhardt, & Dolbier, 2008). Total hardiness is interpreted within five scoring bands: 39+ (Very High), 34-38 (High) 28-33 (Average), 22-27 (Low), and 22 and below (Very Low).



## CHAPTER III

### RESULTS

#### **Analytic Plan**

Descriptive statistics and bivariate correlations were computed. Next, a binary logistic regression analysis was executed to jointly examine Hypotheses 1, 2, and 3. Binary logistic regression allowed the researcher to predict categorical outcomes based on several predictor variables. More specifically, binary logistic regression analysis allowed the researcher to understand the unique influence of each predictor, as well as their combined effects, on a single dichotomous outcome variable. The predictor variables included demographic factors (age, race, ethnicity, gender, and socioeconomic status), the Big Five Personality Factors (Extraversion, Neuroticism, Agreeableness, Conscientiousness, and Openness to Experience), and psychological hardiness. In conducting the analyses, race was coded as 0 (White) or 1 (Non-White); ethnicity was coded as 0 (Hispanic, Latino, or Spanish Origin) or 1 (Not of Hispanic, Latino, or Spanish Origin); and gender was coded as 0 (Male), 1 (Female), or 2 (Transgender). The dichotomous outcome variable consisted of college attendance (i.e. did not enroll in college, did enroll in college).

Prior to conducting the analyses, the data were screened for the violation of assumptions. The assumption of linearity was tested by evaluating whether the interaction

term between the predictor and its log transformation was significant. Lastly, the assumption of non-multicollinearity was checked by examining tolerance and VIF statistics.

The binary logistic regression analysis consisted of two parts. The first part assessed the overall model's significance in predicting college enrollment among military veterans. This was achieved by examining the log-likelihood (LL) function and its associated chi-square statistic. The LL function uses the observed and predicted values to assess the fit of the model. For a given case,  $Y$  was either 0 (did not enroll in college) or 1 (did enroll in college), and the predicted value,  $P(Y)$ , was a value between 0 (there is no chance veterans will enroll in college) and 1 (veterans will certainly enroll in college).

Smaller absolute values of the LL function indicate superior model fit, because they suggest agreement between the probabilities of group membership that are produced in the logistic regression model and the participant's actual group membership. A significant chi-square value would indicate whether the full model produces less prediction error than the null model. The goodness of fit was also described by Nagelkerke's  $R^2$ , which is comparable to the multiple  $R$  value reported in ordinary least squares multiple linear regression. Nagelkerke's  $R^2$  can generate a maximum value of 1.0, and higher values suggest better model fit.

Because the model demonstrated good overall fit, the researcher subsequently evaluated the hypotheses by assessing the unique contribution of each of the predictors in this study using the Wald  $\chi^2$  statistic. The Wald  $\chi^2$  statistic tested whether the  $b$  coefficient for each predictor was significantly different from zero. If the  $b$  coefficient for a predictor was significant, it suggested that the variable (e.g., each demographic factor,

each Big Five Personality Factor, and psychological hardiness) was making a unique contribution toward predicting the outcome variable (enrolled in college, did not enroll in college). Conversely, if the  $b$  coefficient for each predictor was not significant, it indicated that the predictor was not making a significant contribution to the prediction of the outcome variable in the context of the model.

### **Descriptive Statistics and Bivariate Correlations**

Descriptive statistics and bivariate correlations for all of the study variables are listed in table 5.

Bivariate correlations were consistent with expectations. Age was significantly and positively related to Agreeableness,  $r(216) = .24, p < .01$ , and SES,  $r(216) = .25, p < .01$ . Race was significantly and negatively related to SES,  $r(215) = -.29, p < .01$ . Ethnicity was significantly and negatively related to psychological hardiness,  $r(201) = -.15, p < .05$ . The demographic variable gender was significantly and positively related to Agreeableness,  $r(214) = .19, p < .01$  and SES,  $r(214) = .14, p < .05$ . SES was significantly and positively related to psychological hardiness,  $r(213) = .19, p < .01$ , Agreeableness,  $r(216) = .15, p < .05$ , and Conscientiousness,  $r(216) = .17, p < .05$ . Extraversion was significantly and positively related to Psychological hardiness,  $r(213) = .61, p < .01$ , Openness,  $r(216) = .49, p < .01$ , Agreeableness,  $r(216) = .35, p < .01$ , and Conscientiousness,  $r(216) = .47, p < .01$ . Openness was significantly and positively related to psychological hardiness,  $r(213) = .39, p < .01$ , Agreeableness,  $r(216) = .45, p < .01$ , and Conscientiousness,  $r(216) = .27, p < .01$ . Agreeableness was significantly and positively related to psychological hardiness,  $r(213) = .41, p < .01$  and Conscientiousness,

$r(216) = .56, p < .01$ . Conscientiousness was significantly and positively related to psychological hardiness,  $r(213) = .50, p < .01$ .

Bivariate correlations that are not described here were not found to be statistically significant. Results from the bivariate correlations provided evidence that the model was a good fit and possessed good strength.

### **Assumptions**

As previously mentioned, preliminary analysis of the data was performed to check the assumptions of logistic regression. The assumption of linearity was tested by evaluating whether the interaction term between the predictor and its log transformation was significant. In this study, all interactions had significant values greater than .05 suggesting that the assumption of linearity was met.

Next, the assumption of multicollinearity was checked. Results from the analysis demonstrated that the data did not violate the assumption of multicollinearity. The tolerance value of each predictor variable was greater than .35 with the highest value being .89, which exceeded the suggested criteria of below .10 (Adwere-Boamah, 2011). The variance inflation factor (VIF) values of 1.120 to 2.797 fell below the cut-off value of 10, also indicating no multicollinearity.

### **Binary Logistic Regression (Full Model)**

Binary logistic regression was executed to assess the predictive ability of the full model which included the predictor variables of demographic information, the Big Five Personality factors, and psychological hardiness. The first step in testing the hypotheses was assessing the fit of the data to the model. The results of the logistic regression analysis demonstrated that the full model, which included all predictor variables, was

statistically significant. This was determined by examining the chi-square statistic,  $\chi^2 = 99.157$ ,  $df = 11$ ,  $p < .05$  (Table 6). Consistent with the chi-square statistic, these findings are also corroborated by the model fit test results of the LL function (122.990), the Cox & Snell  $R^2$  (.392), and the Nagelkerke  $R^2$  (.584) (Table 7). Moreover, these estimates indicate that a significant amount (39% - 58%) of variation in college enrollment was explained by the predictor variables. This model correctly classified approximately 87 percent of cases.

**Hypothesis 1:** *Demographic variables including a) age, b) race, c) ethnicity, d) gender, and e) socioeconomic status will each predict college enrollment among military veterans.*

To address this hypothesis, the binary logistic regression coefficients, Wald statistics, and odds ratios [Exp (B)] (Table 8) were examined. Wald statistics indicated that age ( $p < .001$ ) and SES ( $p = .034$ ) significantly predicted college enrollment among military veterans. The strongest predictor was SES. The odds ratio for SES was 2.6, which means that the odds of a military veteran who identified as middle class or upper class enrolling in college is increased by 2.6 when compared to those who identified as low class or working class. In addition, Wald statistics revealed that race ( $p = .078$ ), ethnicity ( $p = .321$ ), and gender ( $p = .597$ ), did not significantly predict college enrollment among military veterans. Hypothesis 1 was partially met.

**Hypothesis 2:** *Big Five Personality Factors including a) Conscientiousness, b) Openness to Experience, and c) Extraversion will predict college enrollment among military veterans.*

To address this hypothesis, the binary logistic regression coefficients, Wald statistics, and odds ratios [Exp (B)] (Table 8) were examined. Wald statistics indicated that Agreeableness ( $p = .001$ ) and Conscientiousness ( $p = .004$ ) significantly predicted college enrollment among military veterans. In this case, the strongest predictor was Conscientiousness. The odds ratio for Conscientiousness was 1.1, which means that the odds of a military veteran enrolling in college with higher levels of Conscientiousness is increased by 1.1 when compared to those with lower levels of Conscientiousness. Neuroticism ( $p = .505$ ), Extraversion ( $p = .363$ ), and Openness to Experience ( $p = .726$ ) did not significantly predict college enrollment. Hypothesis 2 was partially met.

**Hypothesis 3:** *Psychological hardiness will predict college enrollment among military veterans.*

To address this hypothesis, the binary logistic regression coefficients, Wald statistics, and odds ratios [Exp (B)] (Table 8) were examined. Wald statistics indicated that psychological hardiness ( $p = .451$ ) did not significantly predict college enrollment among military veterans. Hypothesis 3 was not supported.

## CHAPTER IV

### DISCUSSION

There were three goals in this study. The first goal was to investigate whether demographic variables predicted college enrollment among military veterans. The second aim was to determine whether Big Five Personality factors predicted college enrollment among military veterans. The third aim was to determine whether psychological hardiness predicted military veterans' decisions to enroll in college. This is the first study to explore these factors among military veterans. This investigation is the first to examine these factors together in predicting college enrollment. This study will serve as a beneficial source in helping military veterans make better transitions to civilian life. More specifically, this research can help educators, psychologists, community leaders, and military advocates to further champion for military veterans that they serve. Additionally, this research adds to the literature on demographic variables, personality factors, and psychological hardiness in military veterans.

#### **Demographic Factors**

Results from this study revealed that as age increased, the chances of military veterans enrolling in college also increased. These findings are consistent with previous literature. Rowan-Kenyon (2007) indicated that there have been increasing numbers of

individuals who do not transition to college directly after high school, but may enroll later in their lives. In this study, most of the military veterans chose to enlist directly after high school, which led them to utilize GI Bill benefits to enroll in college at a later age. It is possible that military enlistment helped veterans to develop skills that would enable them to be successful in college.

In addition, this study revealed that SES significantly predicted college enrollment among military veterans. As SES increased, so did the likelihood of college enrollment. This could be due to SES status before and after military enlistment. Akerhielm et al. (1998) indicated that students who identified as low SES, but had high achievement test scores, tended to enlist in the military instead of going directly to college, possibly due to having limited access to resources. Further, many military veterans may be characterized as low SES after separating from the military because of suffering from mental or physical illnesses due to war-related combat or other traumatic experiences. Military veterans whose SES is higher may be more equipped to enroll in college due to having better physical and psychological functioning as well as access to beneficial resources.

### **Personality Factors**

As expected, the results from this study revealed that the Big Five Personality domain of conscientiousness positively and significantly predicted college enrollment among military veterans. More specifically, as levels of conscientiousness increased, the likelihood that veterans would enroll in college also increased. This particular construct has been deemed as being the most consistent dimension in predicting successful job



performance (Judge et al., 1999). Barrick and Mount (1991) indicated that this domain is linked to conformity, dependability, and conscience. The dimension of conscientiousness has been called “Will to Achieve” because of its relation to a variety of educational achievement measures.

Leutner, Ahmetoglu, Akhtar, and Chamorro-Premuzic (2014) indicated that training proficiency was associated with higher levels of conscientiousness. It could be that veterans who possess high levels of conscientiousness may have a better experience accessing resources to enroll in college. Learning and academic success has been found to be associated with conscientiousness (Kokkinos, Kargiotidis, & Markos, 2015). Military veterans who are persistent, possess a hard-working attitude, and are goal oriented (traits that encompasses conscientiousness) may perceive themselves as able to effectively pursue college endeavors. In addition, their use of time-management and self-regulation strategies may assist in navigating the college application process.

Results also indicated that the Big Five Personality domain of agreeableness positively and significantly predicted college enrollment among military veterans. Although not included in the hypotheses, these results support literature from previous studies. Judge et al. (1999) revealed that agreeableness may lead to more successful careers. This domain has also been linked to love, likability, conformity, compliance, cooperation, and trust (Barrick & Mount, 1999; Judge et al. 1999). Veterans who are agreeable may feel that going to college is what is expected of them. Veterans who are not agreeable, possibly due to reasons related to military experience (e.g. combat, trauma, etc.), may choose not to enroll in college.

Enrolling in college can consist of many steps such as submitting transcripts, writing personal statements, submitting test scores, turning in necessary vaccination forms, and registering for classes, to name a few. Military veterans must take additional steps to access GI Bill benefits for the payment of tuition and fees, housing, etc. Veterans who successfully enrolled in college may have demonstrated agreeableness by cooperating and complying with the steps of enrolling while also seeking help from others.

Altruism, Trust, Straightforwardness, Modesty, and Tender-Mindedness are also facets of agreeableness (Costa, McCrae, & Dye, 1991). Military veterans who possess these traits may facilitate a better experience during the enrollment process than those who are not. Altruism and trust can be seen when individuals demonstrate selflessness and attribute benevolent intent towards others (Soto & John, 2009). Agreeable individuals are also able to be assertive or straightforward in their interactions (Costa, McCrae, & Dye, 1991). It could be that veterans who are agreeable are forthright and forthcoming in their daily interactions and when pursuing college education. Military veterans who are agreeable may also be willing to ask for help and prefer to work in groups, which may be more fitting to the enrollment experience and college environment.

### **Psychological Hardiness**

It was hypothesized that psychological hardiness would predict college enrollment among military veterans. However, results revealed that psychological hardiness did not predict college enrollment. This study is the first to relate psychological hardiness to college enrollment among military veterans. There may be a variety of

reasons why this hypothesis was not met. Bartone et al. (2009) specified that individuals with high levels of hardiness perceive challenging or adverse situations as less threatening than others. Military veterans who enrolled in college may have been able to appropriately access resources that allowed them to endure less challenging experiences while going through the process of enrolling. Many post-secondary institutions and military organizations provide resources to assist military veterans with the enrollment process. Many veterans are able to effectively utilize these services while others may experience difficulties accessing these services. Due to problems suffered during military enlistment (i.e. combat exposure, depression, PTSD, family problems, etc.), research indicates that a large number of veterans encounter personal, situational, educational, and administrative barriers and are critical of service providers (Applewhite, 1997; Ormerod, 2009; Sayer et al., 2010; Taft et al., 2007). As a result of experiencing these barriers, many veterans reported finding their own avenues of coping, including alcohol and drug abuse (Ormerod, 2009; Taft et al., 2007). Perhaps military veterans who endured these difficulties (such as combat exposure or PTSD) possess lower levels of psychological hardiness than those who were able to make positive transitions and utilize available resources to enroll in college. On the contrary, those who did utilize the GI Bill to enroll in college may have perceived the enrollment process to be fairly easy or less stressful. Further, military veterans who chose to use their financial resources to enroll in college may have also possessed greater levels of the Big Five Personality factors, Conscientiousness and Agreeableness.

Another reason psychological hardiness was not a significant predictor might be because military veterans possess different interests and endeavors. Veterans may prefer

to apply this character trait to vocational endeavors instead of pursuing post-secondary education. For instance, Steele et al. (2010) indicated that some veterans choose not to enroll in college because they already earned an adequate salary at their current place of employment. For this reason, veterans did not see a clear reason to utilize GI Bill benefits or they transferred their benefits to dependents. Further, because psychological hardiness incorporates the three domains challenge, control, and commitment, it is possible that veterans may have high levels of one or two of the domains and low levels of another. For an example, Veterans may score high on the challenge domain but have low scores on the control and commitment domain, which would generate a low overall hardiness score.

In military groups, hardiness was found to be a salient factor in individuals who persisted in carrying out their tasks effectively during stressful situations. (Bartone, 1989, 1996, 1999; Florian et al., 1995). However, in this study, hardiness did not predict college enrolment among military veterans. The hardiness construct may perhaps serve as a more beneficial personality trait during military enlistment. Military veterans who pursue higher education may perceive the experience as less threatening or less challenging as opposed to their military experiences. Because this sample consists of military veterans, it is possible that participants responded to the hardiness questionnaire based on their current life experiences as a civilian. Current active military personnel may potentially endorse greater levels of challenge, control, and commitment domains to generate an overall higher hardiness score.

## **Limitations**

There are several limitations in this study. First and foremost, the use of convenience sampling limits the generalizability of the research results to a larger population of veterans. For example, veterans had to have access to the internet or social media to participate in this study. Although efforts were made to recruit participants from various avenues, participant demographics were homogenous, with a majority of the participants being Caucasian, male, and heterosexual. These problems could be due to the nature and culture of the veteran population that is being explored. The Department of Defense (2014) provided details regarding the gaps in demographics among military service members. As of 2014, the distribution of military service members by gender were 200,692 (15.1%) women and 1,125,581 (84.9%) men. Military personnel who identified as White made up the highest percentage of military services members (914,203; 69%) while those who identified as a racial/ethnic minority made up only 412,070 (31%) of service members (Department of Defense, 2014). Gates (2010) stated that of people serving in the military or in the standby and retired reserve forces, 2.2% (48, 500) identified as Lesbian, Gay, or Bisexual. This information may explain the homogenous nature of the participants in this study being primarily Caucasian, male, and heterosexual.

Further, the sample of veterans who participated in this study and the concluding results may not be generalizable to military veterans overall given that this was a more highly educated group. 77 percent of veterans who participated in this study enrolled in college while only 24 percent of veterans who participated in this study did not enroll. For future studies, it may be beneficial for researchers to recruit a more balanced sample

of veterans who enrolled and did not enroll in college to produce more generalizable results.

Another limitation is the use of self-report data that may have impacted research results due to potential bias such as participants' mood while responding to questions, forgetting past events, or reporting in a socially desirable way. For an example, participants may have responded to questions on the IPIP-NEO inventory in a way they believed was socially desirable, making it difficult to provide an accurate representation of their personality traits.

The use of a binary logistic regression analysis may have created subtle limitations in interpreting the results. This particular type of design does not allow for causal conclusions to be made in regards to the relationship between demographics, personality factors, and psychological hardiness on college enrollment. Further, a binary logistic regression only examines the relationship between variables in one direction, preventing the ability to understand whether the predictor variables (demographics, personality factors, hardiness) impact decisions to enroll in college, vice versa, or if there is a potential circular relationship that exists. Finally, there are a number of variables that this study did not account for, such as life or job satisfaction.

### **Conclusions, Implications, & Future Directions**

To this point, researchers had not formally investigated the role that demographic variables, personality, and psychological hardiness may have on military veterans and their decisions to enroll in college. This study revealed that age and SES significantly predicted college enrollment among military veterans. Conscientiousness and

Agreeableness also predicted college enrollment. Psychological hardiness did not significantly predict college enrollment.

Although psychological hardiness did not positively predict college enrollment, there were some relationships with other variables. For example, psychological hardiness was significantly and positively related to Agreeableness and Conscientiousness. This suggests that the higher veterans scored on the Agreeableness or Conscientiousness domains, the higher their psychological hardiness score was, which was related to the likelihood of college enrollment. This indicates that psychological hardiness is still something to consider in military veterans.

This study contributes to military psychology literature and offers several clinical and theoretical implications. Not only will this research be beneficial for university officials in providing services to military veterans, it will also be helpful to mental health professionals in therapeutic settings. Based on the results of this study, it may be beneficial for counseling psychologists, university staff, and other mental health professionals to consider examining additional character traits and personal strengths of military veterans who may lack Agreeableness or Conscientiousness. This approach could possibly increase a veteran's belief in his/her personal abilities due to the development of more confidence. Furthermore, this may help veterans to view the process of accessing financial resources (such as the Post 9/11 GI Bill) and enrolling in college to be more understandable.

This study may also improve our general understanding of how veterans approach life decisions. Military veterans are faced with unique barriers (physical, social, psychological) that may lead to readjustment issues once separated from the military.

However, many veterans are able to facilitate a better adjustment to civilian life. Applying this research to these problems may aid researchers and clinicians in better understanding the underlying factors associated with positive and negative readjustment to civilian life as well as their decisions to enroll in college.

There are also several implications for the development of training programs, clinics, and psychoeducational groups targeted at the military veteran population. As socioeconomic status increased, the possibility that a veteran would enroll in college also increased. It may be useful to develop a program to meet the needs of those who have limited resources because of their SES status. Such programs could provide education and instruction on how to access a variety resources that would create a smoother journey to enroll in college.

Several VA medical centers and university student veteran centers across the United States have developed programs to help recruit and aid military veterans in accessing useful resources and enrolling in college. Perhaps this study will provide insight for these organizations to help enhance the services they provide to veterans. For an example, results of this study indicated that military veterans who enrolled in college had higher levels of Conscientiousness and Agreeableness as opposed to those who did not. There are a variety of reasons these two domains may have been associated with college enrollment. Veterans who possessed more conscientiousness may be more organized and efficient when approaching different tasks. They may also demonstrate an increased desire to perform a task well. Further, veterans who had increased levels of the agreeableness trait may be more cooperative and create better and comfortable interactions with those involved in the college enrollment process. They may also present



with more selflessness and compliance, making the reception of services and instruction clearer.

It is important for college officials, psychologists, and other mental health professionals who serve the veteran community to recognize and work with military veterans who may not be agreeable or conscientious. With this information, organizations that serve military veterans can implement training and therapeutic programs for veterans who may lack self-discipline and demonstrate more impulsivity and resistance in an effort to aid them in utilizing financial resources to enroll in college. This research can potentially help support university officials in recruiting military veterans to embark upon a college career, especially those who possess lower levels of agreeableness or conscientiousness and lack appropriate resources due to SES. Furthermore, college campuses, with the assistance of counseling psychologists and other mental health professionals, can hold workshops for the military veteran community to provide psychoeducation about personality and character traits while also educating veterans about the college experience. This could possibly lead to more veterans feeling comfortable with enrolling in college due to having a greater understanding of what college entails.

It is important to discuss the implications related to race. Although race did not significantly predict college enrollment among military veterans, this study offers valuable information regarding military experience and college endeavors. Individuals who enroll in college following high school graduation are typically White or Caucasian. As of 2015, 64 percent of individuals who identified as Non-Hispanic White enrolled in college while only 52 percent of African Americans and 30 percent of Hispanics (of any

race) enrolled in college (Ryan & Bauman, 2016). Though these statistics have increased in recent decades, Caucasian individuals continue to enroll in college at greater rates as opposed to all other races. Interestingly, this study revealed that race was not a factor in the decisions of military veterans to enroll in college. It is possible that the military may serve as a “leveling” experience for military veterans. What this means is that veterans may have acquired certain skills and attributes (perhaps agreeableness and conscientiousness) that fostered their ability to engage in the enrollment process. In this regard, military experience may serve as a positive or necessary resource for People of Color who may not be ready to pursue college directly after high school.

Another implication of this study is related to how for-profit schools recruit military veterans to obtain GI Bill funds while leaving veterans with unhelpful degrees or no degree at all. The Post 9/11 GI Bill essentially pays the full cost of college education for military veterans, but in recent years, funds from the GI Bill have mostly been dispersed to for-profit schools by veterans (Patton, 2012). The federal government has investigated marketing and lending practices of some for-profit schools in previous years (Woodruff & Glantz, 2014). More than 10 billion dollars was spent on the GI Bill in 2013 (Woodruff & Glantz, 2014). Many believe that veterans are being deceptively and aggressively recruited by for-profit school officials; and thus, many veterans obtain few job prospects after graduation from such schools (Patton, 2012). Researchers also found that for-profit students end up with higher unemployment (Deming, Goldin, & Katz, 2012). The Center for Investigative Reporting found almost three hundred schools that were banned from receiving state financial aid in California; however, these schools obtained GI Bill money (Woodruff & Glantz, 2014). Schools that had no academic

accreditation were also able to receive money from the GI Bill. Perhaps, military veterans who possessed lower levels of agreeableness and conscientiousness traits were more interested in for-profit schools who advertised a more “veteran friendly” enrollment process as opposed to traditional four year colleges and universities. This research may aid professional advocates in providing insight and education to military veterans of the benefits of non-profit or traditional colleges such as obtaining more meaningful degrees.

There are a number of directions for future studies. First, it may be beneficial to examine other influential personality traits or utilize other measures such as the Myers–Briggs Type Indicator (Myers, McCaulley, & Most, 1985). Future studies should further explore socioeconomic status and age among military veterans in greater detail. For example, the current benefits offered by the GI bill may not be sufficient financial support for those with lower SES. Studies could explore what other benefits, assistance, or incentives would be particularly relevant for veterans with lower SES. Although the variables in this study were used to predict college enrollment, it may be useful to apply these variables to veterans’ job performance or readjustment to civilian life. Though greater success is often associated with someone who has a college degree, exploring demographics, personality factors, and psychological hardiness in other contexts of military veterans’ lives may generate more understanding in how they approach their everyday tasks which could lead to greater well-being.

Lastly, it will be beneficial for future studies to examine the influence of race, ethnicity, and gender within the military population. The U.S. military consists of individuals from a variety of backgrounds, however most participants in this sample were

Caucasian/White and male. It will be beneficial for future studies to recruit a more diverse sample with broader gender and racial/ethnic representation.

Overall, future studies should emphasize preventative, intervention, and vocational work with military veterans. There is a great need for preventative work among the military veteran population to address readjustment, life skills, and problem solving, which can ultimately lead to college enrollment or healthier living. Military veterans have endured experiences that are not common to the civilian population, and these experiences can have lasting and negative effects. By utilizing this research and working with these individuals, university officials, military organizations, advocates, and psychologists can use their understanding of personality factors, mental and medical healthcare services, and educational services to help veterans become more successful.

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## APPENDICES

### Appendix A

#### Extended Review of the Literature

There are many benefits to enrolling in college and obtaining a degree. Some of these benefits are increased wages and earnings over a lifetime (Day & Newburger, 2002), better health care benefits (Baum, Ma, and Payea, 2013), and overall life and job satisfaction (Xiao, Tang, & Shim, 2009). This is particularly important for military veterans due to the many adversities this population may face once discharged from active military service. Challenges that are encountered by military veterans include injury or disability, mental illness, psychological trauma, alcohol and substance abuse problems, relationship problems, and difficulties receiving services (Cozza, Haskins, & Lerner, 2013; Ormerod, 2009).

Veterans may also experience challenges due to past deployments and combat exposure. Brown and Dir (2010) indicated that 55 percent of military personnel deployed for combat one or more times since 9/11/01. Of the 55 percent of veterans that deployed, 25 percent deployed only one time, 16 percent deployed two times, and 14 percent deployed three or more times. Because of deployments and exposure to combat, many military veterans reported high work stress, high family stress, heavy alcohol abuse, and high stress due to their return home (Brown and Dir, 2010) Rudd, Goulding, and Bryan (2011) indicated that many of these challenges may be due to prior military service.



Military veterans also experience challenges when adjusting to civilian life as demands and structure differ significantly from military life (Chiu, 2013; Young, 2012). Many veterans experience difficulty transitioning back into the general population and possess symptoms from war such depression and trauma (Ackerman et al., 2009). Morin (2011) indicated that 72 percent of veterans reported experiencing an easy time adjusting to civilian life while 27 percent of veterans reported a difficult transition. In a study among a group of Operation Enduring Freedom (OEF) and Operation Iraqi Freedom (OIF) combat veterans, it was reported that combat served as a context for exposure to pain, perceptions of burdensome, increased pain tolerance, failed belongingness, and subsequent coping strategies such as alcohol or substance abuse and suicide (Brenner et. al., 2008).

In addition, Early (2011) indicated that from 2002-2009 over one million soldiers' left active duty service in Afghanistan and Iraq and became eligible for VA care. 46 percent of those veterans pursued VA services and 48 percent of those veterans were diagnosed with a mental health problem of those veterans who used VA care. Further, it was reported that of the OEF/OIF combat troops, 10-18 percent of them had probable PTSD after deployment (Early, 2011). These may be challenges that could potentially influence many veterans to not utilize Post 9/11 GI Bill Benefits to enroll in college.

To date, most research regarding college enrollment has focused on the civilian population. More recently, many researchers have taken a new interest in examining student veterans and associated factors that may lead to veteran student drop-out and retention (Ackerman, DiRamio, & Mitchell, 2009; Brito, Callahan, & Marks, 2008;

Markel, Trujillo, Callahan, & Marks, 2010). However, the existing research does not provide insight into reasons some veterans choose to utilize Post 9/11 GI Bill benefits to enroll in college while other veterans do not. Factors that can potentially increase or decrease the likelihood of veterans enrolling in college are demographic factors (Perna, 2005), the Big Five Personality Factors (Costa & McCrae, 1988), and Psychological Hardiness (Kobasa, 1979).

Demographic factors may potentially influence veterans' decision to either enroll in college or not. Research has shown that college enrollment and degree attainment rates differ by demographics such as gender, race, ethnicity, and socioeconomic status (Perna, 2005; Rowan-Kenyon, 2007). Further, in discussing college enrollment among military veterans, it may be useful to explore the association of the Big Five Personality factors on student and non-student veterans. This will be useful because the Big Five provides specific and comprehensible detail regarding personality traits and characteristics. Lastly, Psychological Hardiness is an important concept that may prove to be pertinent in examining factors that influence veterans to utilize educational benefits to enroll in college or not. Hardiness provides understanding regarding how people approach their problems and set goals (Abdollahi et al., 2014). For this reason, it is pertinent to examine demographic factors, the Big Five Personality Factors, and Psychological Hardiness and the influences they have on veterans' decisions to enroll in college.

### **Challenges of Military Veterans**

In 2013, there were over 19.6 million veterans in the United States (U.S. Census Bureau News, 2014). There were 1.6 million female veterans, and 11.3 percent of veterans who were black or African American. Six percent were Hispanic; 1.4 percent

were Asian; 0.7 percent were American Indian or Alaskan Native; 0.2 percent were native Hawaiian or Other Pacific Islander; 79.3 percent were white or Caucasian; and 1.2 percent identified as other race (U.S. Census Bureau News, 2014).

Many individuals who enlist in the armed forces do well. Research has indicated that serving in the military may have a positive effect on an individual's life (Hotopf et al. 2006). However, many veterans suffer from significant mental health problems that continue or arise after de-enlisting from the military. Military Veterans present with many complex difficulties which create many challenges for them (Ormerod, 2009). Due to prior military experiences consisting of exposure to combat, time spent from family, death, etc., military veterans tend to experience a range of co-morbidities (Ormerod, 2009). Some of the most common mental health problems seen in the military veteran population are problems with substance abuse, depression, and posttraumatic stress disorder (PTSD) (Hoge, Auchterlonie, & Milliken. 2006). Rudd et al. (2011) found that 20 percent of veterans have experienced problems with depression or PTSD and 19 percent experienced some form of traumatic brain injury.

Ormerod (2009) stated that alcohol and substance abuse problems are common among the military population, and can potentially lead to aggression and potential contact with the legal system when combined with hyper-arousal. Due to these potential problems, veterans can benefit from receiving support such as health-care and mental health services. However, Applewhite (1997) reported that many veterans encountered situational, personal, and administrative barriers and were very critical of their service providers. Although services for veterans have since improved, many veterans still experience problems in receiving services for mental, physical, and emotional problems

(Sayer et al., 2010). Ormerod (2009) reported that due to barriers in receiving support, many veterans often find their own ways of coping. In addition, because of the limitations in receiving support, veterans tend to use, or abuse alcohol to cope with stress, anxiety, or depression (Taft et al., 2007). PTSD is comorbid with alcohol related problems and evidence supports the notion that PTSD symptoms usually precede problems due to alcohol (Stewart, 1996). The self-medication hypothesis (Khantzian, 1985) can be used to explain this phenomenon. More specifically, a person positive for PTSD may use alcohol to alleviate distress and heightened anxiety that is usually present with PTSD (Taft et al., 2007). In particular, Taft et al., (2007) stated that symptoms of hyper-arousal may lead to self-medication attempts.

Other problems that veterans are challenged with are difficulties with their social lives, health, and relationships (Ormerod, 2009). In one study, it was estimated that 25 to 56 percent of combat veterans reported “some” to “extreme” difficulty in productivity, social functioning, community involvement and self-care domains (Sayer et al., 2010). One-third of combat veterans reported dangerous driving, divorce, increased substance use and problems with anger management (Sayer et al., 2010). Many veterans report experiencing stress and anxiety when readjusting to civilian life. Sayer et al. (2010) indicated that almost 96 percent of combat veterans expressed interest in receiving services to help readjust to civilian life.

For many military veterans, high school is the highest level of formal education. This is because many individuals can join the military at the age of 18 and forgo attending college (U.S. Census Bureau News, 2014). When veterans de-enlist from the military, they are usually much older than college students which can make integration

difficult (Church, 2009). As of 2014, 92 percent of veterans age 25 or older have a high school diploma, while only 26 percent of veterans in the same age range have a bachelor's degree (U.S. Census Bureau News, 2014). According to the Congressional Digest (2012), unemployment rates among men and women since September 2001 are unacceptably high. Unemployment rates for non-veteran individuals are 8.7 percent while unemployment rates for post-9/11 veterans are 12.1 percent. In addition, younger workers experience higher unemployment rates than older workers, however, unemployment rates for young veterans (age 18-25) is 30.2 percent which is almost double the unemployment for non-veterans in the same age range (Congressional Digest, 2012). Due to most employers hiring workers with more education (associate's and bachelor's degrees), veterans are faced with being unemployed due to limited educational experiences.

Military veterans represent 12 percent of the United States homeless population (U.S. Census Bureau News, 2014). Applewhite (1997) stated that extreme poverty is the underlying cause of most homelessness in the U.S. Other reasons may include, extended periods of unemployment, shortages of low-income housing, declines in local and state income assistance programs, and deinstitutionalization (Applewhite, 1997). Individuals who are homeless may experience alcohol and substance abuse problems, severe mental and physical illness, and menial jobs and wages. Applewhite (1997) indicated that homeless veterans reported problems with negative public perceptions and treatment, high incidences of health and mental health problems, dehumanizing policies and procedures, limited resources, and high levels of stress and frustration with service delivery systems, all of which played significant roles in homelessness.

## **The Benefits of Higher Education**

Over the past decades, workers with different levels of educational attainment have had different levels of increased earnings (Day & Newburger, 2002). Day and Newburger (2002) reported that education has paid off historically. In 1975, year-round, full-time workers who had obtained a bachelor's degree had 1.5 times the annual earnings of workers with only a high school diploma and this ratio rose to 1.8 by 1999 (Day & Newburger, 2002). Individuals with advanced degrees, who earned up to 1.8 times the earnings of high school graduates in 1975, averaged 2.6 times the earnings of individuals with high school diplomas in 1999. Relative earnings of the least educated individuals decreased during this same time period (Day & Newburger, 2002). Between the years of 2008 and 2011, the gap between the median earnings of college graduates ages 25-34 and high school graduates within the same age range declined from 74% to 69% for men and from 79% to 70% for women. Baum, Ma, and Payea (2013) indicated that the long-term trend of earnings related to education level is upward and suggested that individuals who obtain college degrees receive more earnings over a lifetime.

Individuals who embark on a college career and ultimately earn their degrees are more likely to be employed as opposed to individuals who have not obtained a degree (Baum et al., 2013). Individuals who have obtained a bachelor's degree with no advanced degree earned median salaries of \$56,500 as of 2011, which were \$21,000 more than median earnings of high school graduates. Further, when compared to a high school graduate, four-year college graduates who enroll at age 18 and complete their degrees in four years earn enough by age 36 to compensate for being absent in the work force for four years, as well for borrowing from loan companies the full amount to pay fees and

tuition (Baum et al., 2013). Julian and Kominski (2011) noted that higher levels of education enable people the accessibility to obtain specialized jobs that are often associated with increased levels of pay.

College-educated adults are more likely than individuals with high school diplomas to receive health insurance and pension benefits from their employers. In 2011, employers provided pension plans to 65% of individuals with bachelor's degrees and 73% to those with advanced degrees. Employers only provided pension plans to 52% of full-time workers with high school diplomas (Baum et al., 2013). Also in 2011, health insurance was provided to 69% of individuals with bachelor's degrees and to 73% of those with advanced degrees, while only 55% of full-time workers with high school diplomas were provided insurance by their employers (Baum et al., 2013).

Baum et al. (2013) noted that individuals with higher levels of education are not only more active citizens than others, but also tend to lead healthier lifestyles, which reduce health care costs. In 2012, individuals who volunteered for community organizations consisted of 42% four year college graduates, 29% individuals with an associate degree or some college, and 17% high school graduates. Among individuals between the ages of 45 and 64, 80% of bachelor's degree recipients voted in 2012 while only 59% of high school graduates voted. In addition, Baum et al. (2013) indicated that high school graduates are more likely to smoke cigarettes than college graduates. College educated adults are also less likely to be obese. (Baum et al., 2013).

Pascarella and Terenzini (2005) indicated that individuals who obtained a bachelor's degree are provided with a 95% net occupational status benefit over individuals with a high school diploma. Individuals who obtain an associate degree are

provided with a 24% - 44% net occupational status benefit over individuals that obtained a high school diploma, and individuals who receive some college education such as a licensure-certificate or a vocational degree are provided with a 12% - 22% net occupational status benefit over individuals who received a high school diploma. (Pascarella & Terenzini, 2005). Other benefits of higher education include increased chances that adults will move up the socioeconomic ladder (Baum et al., 2013). These indicators demonstrate a distinct relationship between education and earnings and other benefits, and this relationship perseveres even when other factors such as personal and geographic characteristics are considered (Julian & Kominski, 2011).

### **Student Veterans**

According to Student Veterans of America (SVA), previous research suggested that student veterans were dropping out of college at higher rates than non-veteran students (Student Veterans of America, 2014). Previous research also indicated that student veterans were taking longer to complete their degrees as opposed to non-veteran students (Student Veterans of America, 2014). SVA suggested that this data was inaccurate, and therefore, initiated a research project to examine rate and time of completion among military student veterans (Student Veterans of America, 2014). This research indicated that not only are student veterans graduating at similar rates as non-veteran students, they have similar times of completion as well. Perhaps previous research efforts raised awareness and provided necessary insight that allowed university officials to more effectively support student veterans to ensure academic success.

Although the SVA indicated that many veterans are enrolling in college and are graduating at similar rates as non-veteran students, many veterans are choosing not to



pursue higher education (Steele et al., 2010). Steele et al. (2010) reported that veterans listed a variety of reasons for not utilizing their Post 9/11 GI Bill benefits. However, these reasons did not include a lack of information or knowledge about the new law and processes of using the Post 9/11 GI Bill benefits. The Post 9/11 GI Bill allows veterans to transfer benefits to dependents. As a result, some veterans stated that it was more beneficial to transfer their benefits to their children as this would assist with their education. Some veterans stated that they did not see a clear reason for furthering their education and capitalizing on the Post 9/11 GI Bill due to earning an adequate amount of money at their current jobs. Veterans also mentioned that they were not inclined to further their education and did not want to waste the funds of the Post 9/11 GI Bill (Steele et al., 2010).

Veterans choosing not to utilize Post 9/11 GI Bill benefits to pursue higher education may potentially experience decreased life and job satisfaction. Liu, Thomas, and Zhang (2010) indicated that graduating from college tends to lead to greater job satisfaction. In addition, veterans who choose not to utilize Post 9/11 GI Bill Benefits to pursue higher education may negatively impact their own earnings and wages.

### **GI Bill**

It is important to understand the history of past and current GI Bills and distinctive features regarding the Post 9/11 GI Bill. The original GI Bill was known as the Servicemen's Readjustment Act of 1944 (Steele et al., 2010). This bill was primarily passed due to veterans returning home from World War II to find themselves in the middle of a recession. To foster a better reintegration of returning veterans from World War II, the original GI Bill offered 48 months of educational benefits, including tuition

(Steele et al., 2010). It is estimated that the original GI Bill increased college completion of veterans by 43 percent. Iterations of the original GI Bill led to the Veterans' Readjustment Assistance Act of 1952 which is also known as the Korean War GI Bill (Steele et al., 2010). Subsequent GI Bills followed and included the Veterans' Readjustment Act of 1966, which was known as the Vietnam GI Bill; and the Post-Vietnam Era Veterans' Educational Assistance Act of 1977, also known as VEAP (Steele et al., 2010). These later iterations provided veterans with monthly education payments directly and did not include tuition payments to institutions (Steele et al., 2010).

The earliest version of the GI Bill that is still offered today is the Veterans' Educational Assistance Act of 1984, also known as the Montgomery GI Bill (MGIB) (Steele et al., 2010). The MGIB offers veteran students a flat monthly rate directly which can be applied to tuition, books, room, and board. It is important to note that in 2005, congress passed an additional GI Bill called the Reserve Educational Assistance Program (REAP) (Steele et al., 2010). REAP allows reservists who were called to active duty after September 11, 2001 to receive MGIB benefits that are similar to other active duty service members.

Although the MGIB assisted many veterans with educational expenses, its benefits did not cover full-time tuition and the cost of living at many public universities across the United States. To increase educational benefits for Operation Enduring Freedom (OEF) and Operation Iraqi Freedom (OIF) veterans and to make it easier to pursue higher education, many veteran advocacy groups joined together to advocate for educational benefits similar to those of World War II. This eventually led to the development of the Post 9/11 GI Bill (Steele et al., 2010).

The Post 9/11 Bill offers benefits to veteran students by paying the cost of tuition and other related fees, an annual book stipend, and a monthly living allowance which is issued directly to the student (Steele et al., 2010). As mentioned previously, the Post 9/11 GI Bill allows members to transfer unused education benefits to a spouse or a child (Falkey, 2014; Steele et al., 2010; Young, 2012). However, members are only allowed to transfer benefits if they have served at least six years in the military and agree to enlist for an additional four years. Active service members who qualify for retirement are not required to enlist for additional service (Steele et al., 2010).

The Post 9/11 GI Bill has been a beneficial resource for veterans choosing to pursue higher education. However, as mentioned previously, veterans are choosing not to utilize the Post 9/11 GI Bill benefits for various reasons (Steele et al., 2010). Although university officials have made great efforts in implementing programs and personnel that will enhance the experiences of military student veterans (DiRamio et al., 2008), many veterans are choosing to discontinue their education for reasons such as unsuccessful adjustment to a new culture and memory and concentration problems from trauma related injuries (Markel, Trujillo, Callahan, & Marks, 2010).

Spampneto (1996) reported that only 57% of military veterans who were eligible for the Montgomery GI Bill actually utilized it. It was found that veterans who chose to utilize the GI Bill have higher earnings than veterans who do not utilize their educational benefits and have lower unemployment rates (Spampneto, 1996). Common reasons veterans choose to forgo higher education include time and money (spending time with families, balancing jobs, etc.) (Spampneto, 1996). In addition to life circumstances, demographics may potentially factor into veterans' decisions to enroll in college.

## **Demographic Information**

In discussing college enrollment among military veterans, demographics may factor into their decisions to pursue college. Perna (2005) indicated that college enrollment and degree attainment rates vary by race, ethnicity, gender, and socioeconomic status (SES). Research shows that Hispanics and African Americans are underrepresented among degree recipients at all levels relative to their representation in the general population (Perna, 2005). From 1999-2000, Hispanics received 11 percent of all public high school diplomas. However, they only received 6 percent of all bachelor's degrees (Perna, 2005). Similarly, from 1999-2000, African Americans represented 13 percent of all graduates from a public high school, but just 11 percent of recipients with an associate's degree, and 9 percent of recipient's with bachelor's degrees (Perna, 2005).

Age may also play an important role in enrolling in college. Rowan-Kenyon (2007) explained that there are growing numbers of individuals who do not transition directly from high school to college, but may enroll in college at some later point in their lives. It was reported that 39 percent of students participating in any kind of postsecondary education were over the age of 25 as of 1999 (Rowan-Kenyon, 2007).

In addition to age, gender and SES may play important roles in college enrollment and degree attainment as well. Buchmann and DiPrete (2006) reported that in the last few decades', college completion has reversed from favoring men to favoring women. Although men receive the majority of professional (54%) and doctoral degrees (55%), women receive the majority of degrees at the associate's (60%) and bachelor's (57%) degree levels (Perna, 2005). Additionally, research has shown that low-income students are less likely than higher income students to attend 4-year universities, even among

students with high test scores (Akerhielm, Berger, Hooker, & Wise, 1998). Students who have low SES and are in the top test score group tend to enlist in the military (Akerhielm et al., 1998). Research shows that demographic factors are important regarding college enrollment and degree attainment (Akerhielm et al., 1998; Buchmann and DiPrete, 2006; Cabrera & La Nasa, 2001; Perna, 2000, 2005), however, personality factors may also influence veterans' decisions to attend college.

### **Personality Factors**

Personality factors may play a role in whether or not veterans choose to pursue higher education. Bartone et al. (2009) indicated that in recent years, a unifying framework for understanding the complete domain of normal personality is the "Five Factor Model" of personality. In the discipline of personality psychology, the Big-Five model offers an integrative framework that assists researchers and other professionals in understanding personality more fully (Sheldon, Ryan, Rawsthorne, & Ilardi, 1997). The Five Factor Model focuses on a core set of behavioral traits which include Extraversion, Neuroticism, Agreeableness, Conscientiousness, and Openness to Experience. These traits are known as the Big Five Personality Factors (Sheldon et al., 1997). The Five Factor Model has been utilized by researchers to understand their contribution to an array of outcomes, including relationship quality, occupational choices, health, and clinical disorders (Maples, Guan, Carter, & Miller, 2014).

Evidence suggests that most personality measures can be categorized or reduced under the umbrella of the five factor model of personality also known as the Big Five (Judge, Higgins, Thoresen, & Barrick, 1999). The proponents of the Big Five personality traits argue that individuals can be better understood by discerning how much they

demonstrate each of the traits in their lives (Sheldon et al., 1997). It is important to note that the dimensionality of the Big Five has been extensively researched and was found to be generalizable across all cultures (Judge et al., 1999). Other research has explored the influence of these five general personality dimensions on job performance and leadership (Digman, 1990; McCrae, 1992).

Of the five dimensions included within the Big Five, three of the dimensions are more closely associated to career success. These dimensions consist of neuroticism, extraversion, and conscientiousness (Judge et al. 1999). The neuroticism dimension has also been called the Emotional Stability, Emotionality, or Stability domain (Barrick & Mount, 1991). Traits commonly associated with this factor include being embarrassed, emotional, worried, insecure, depressed, angry, and anxious (Barrick & Mount, 1991). According to Costa and McCrae (1988), neuroticism is the most persistent trait across personality measures (Judge et al. 1999). In the measure of the Big Five traits, Costa and McCrae (1992) break neuroticism down into six facets. They include hostility, anxiety, depression, self-consciousness, impulsiveness, and vulnerability. People who score high on neuroticism are likely to experience problems that include physical symptoms and negative moods, and in turn, may be affected by difficult life events (Judge et al. 1999).

Extraversion is also a prevalent factor in personality psychology (Judge et al. 1999). This dimension has been referred to as Surgency and its traits are generally associated with being sociable, assertive, gregarious, talkative, and active (Barrick & Mount, 1991). It is also noted that this dimension consists of the two components Sociability and Ambition (Barrick & Mount, 1991). Extraversion is related to the

experience of emotions that are positive, and further, people who are extraverts tend to pursue leadership roles and have greater numbers of close friends (Judge et al. 1999).

The construct that has emerged as the most consistent dimension related to performance across jobs is conscientiousness, and it is broken down into three related facets. These facets include dependability (careful and responsible), achievement orientation (persistent and hardworking), and orderliness (organized and planful) (Judge et al. 1999). This dimension has been referred to as Conformity, Dependability, and Conscience (Barrick & Mount, 1991). Barrick and Mount (1991) also indicated that the Conscientiousness dimension has been called “Will to Achieve” or “Will” due to its association to volition and a variety of educational achievement measures. There has been empirical evidence that bolsters the pertinence of conscientiousness at work linking it to retention and attendance (Judge et al. 1999). Further, Judge et al. (1999) indicated that individuals who have higher conscientiousness tend to live longer.

Another facet of the Big Five is Openness to Experience which can be characterized by intelligence as well as unconventionality (Judge et al. 1999). Traits commonly associated with the openness to experience dimension include being curious, cultured, imaginative, intelligent, broad-minded, artistically sensitive, and original (Barrick & Mount, 1991). Judge et al. (1999) postulated that openness to experience may possibly be related to career success. The final dimension of the Big Five consists of Agreeableness and it may lead to more successful careers, especially in the areas where customer service and teamwork is important (Judge et al. 1999). This dimension has also been termed as Likability, Social Conformity, Love, and Compliance versus Non-Compliance (Barrick & Mount, 1991). Barrick and Mount (1999) suggested that this

dimension includes being trusting, courteous, flexible, forgiving, good-natured, cooperative, tolerant, and soft-hearted.

Because the Big Five provides specific and comprehensible detail regarding personality traits and characteristics, it may be useful to link the Five Factor Model with student and non-student veterans to explore potential personality differences. There is limited literature regarding personality factors among military veterans and higher education. Most research has focused on active duty military personnel and personality traits. In a study examining military training and personality development, it was indicated that personality traits predicted the decision of individuals to enlist in the military (Jackson, Thoemmes, Jonkmann, Lüdtke, & Trautwein, 2012). People in high school who were more likely to enter the military after graduation were lower in agreeableness, neuroticism, and openness to experience. However, Jackson et al. (2012) found that changes in personality were due to military training. Military recruits possessed even lower levels of agreeableness and these levels continued five years after training, even after participants entered the labor market or college. In addition, these results suggested that serving in the military may have lasting influences on individual characteristics which may provide insight in examining personality factors as they relate to veterans (Jackson et al., 2012). More specifically, utilizing the Big Five construct may offer insight into the reasons some veterans choose not to enroll in college. Dimensions of the Big Five are closely associated with career success which may also relate to academic success regarding student and non-student veterans.

There have also been many critiques regarding whether the Five Factor Model is fully adequate for describing all personality (Bartone, Eid, Johnsen, Laberg, & Snook,



2009). Bartone et al. (2009) noted that two very important dimensions of personality are not covered within the Big Five, which are psychological hardiness and social judgment. Psychological hardiness is considered to be an important construct in examining how people deal with stressful situations (Kobasa, 1979) and for this reason, it is important to incorporate it with personality factors when considering the traits of student and non-student veterans.

### **Psychological Hardiness**

In discussing psychological hardiness, Kobasa, Maddi, and Kahn (1982) found that hardiness has formulated into a theoretical context better known as the hardiness construct (Abdollahi, Talib, Yaacob, Ismail, 2014). The hardiness construct is a framework that examines the reasons why many individuals, even under stressful conditions, are able to cope with problems, and why many individuals in nonstressful conditions are unable to cope with problems (Abdollahi et al., 2014). Hardiness may play a role in the understanding of why some veterans pursue higher education and some do not.

Bartone, Eid, Johnsen, Laberg, and Snook (2009) reported that, “Hardiness was first described by Kobasa (1979) as a personality style or pattern associated with continued good health and performance under stress” (p. 500). Hardy persons can be perceived as being healthy individuals because they possess an increased sense of life and work commitment, are more open to change and challenges in life, and they also have a greater feeling of control over what happens to them (Bartone et al., 2009). Individuals with higher levels of psychological hardiness tend to interpret challenging and difficult situations as normal features of an existence (Bartone et al., 2009). It has been found that

hardiness functions as a significant moderator or buffer in the relationship between stress and health for a variety of occupational groups (Bartone et al., 2009; Kobasa, 1982).

Bartone et al. (2009) reported that in military groups, hardiness is associated with fewer physical and mental health symptoms in combat-exposed Gulf War soldiers (Bartone, 1999), casualty assistance workers (Bartone et al., 1989), peacekeeping soldiers (Bartone, 1996), and Israeli soldiers in stressful combat training (Florian et al., 1995). Hardiness has also been associated with continued good performance under stress, including, for example, Israeli officer candidates (Westman, 1990), Norwegian Navy cadets (Bartone et al., 2002), and British police officers (Barton et al., 2004).

Bartone, Roland, Picano, and Williams (2008) further confirmed that psychological hardiness appears to be an important individual characteristic associated with stress tolerance and successful performance in highly demanding occupations. As previously mentioned, hardiness was first introduced by Kobasa (1979) after Kobasa studied mid-level managers at a large public utility company which experienced increased disturbances over many years (Alfred, 2011). Kobasa's finding indicated that higher levels of stress often created opportunities for potential resources and personal growth. As a result, Kobasa suggested that people who tended to avoid situations of increased stress may lose opportunities to better their lives (Alfred, 2011). This notion is particularly important when discussing psychological hardiness among veterans and non-student veterans.

Kobasa (1979) introduced the term hardiness as a way of understanding others, problems, and goals (Abdollahi et al., 2014). Hardiness initiated from existential psychology. Existential psychology asserts that life is perceived as a stressful spectacle

due to the continuous alterations created by the unavoidable developmental process. Therefore, hardiness is described as existential courage which is essential in perceiving difficult changes to be encouraged to cope and deal with life stressors effectively (Abdollahi et al., 2014). More specifically, hardiness is defined as the ability to incorporate the three constructs commitment, control, and challenge, which in turn, will prepare an individual to handle difficult and problematic events (Kobasa, Maddi, & Kahn, 1982). The component of commitment (versus alienation) describes individuals who are able to remain engaged in life's activities. Individuals who have higher rates within this construct tend to have increased levels of purpose and life and self-worth. The component of control (versus powerlessness) is explained as the belief that individuals have the ability to influence their environment as well as their life satisfaction. A strong internal locus of control is associated with higher control. The final component includes challenge (versus threat) which is described as the anticipation of change as an opportunity for growth. Higher rates within the challenge construct specify a decreased fear in making mistakes as well as lowered needs for security (Alfred, 2011; Alfred, Hammer, & Good, 2014).

There have been a wide range of studies regarding various populations attesting to the saliency of hardiness (Bogden, 2014). These populations include bus drivers (Bartone, 1989), lawyers (Kobasa, 1982), the seriously ill (Okun, Zandra & Robinson, 1988), the elderly (Magnani, 1990), athletes (Golby & Sheard, 2004; Maddi & Hess, 1992), and university students (Bartone, Hystad, Eid, Laberg, & Johnsen, 2009) according to Alfred (2011). In association with the military personnel, one of the initial studies regarding hardiness was conducted by Bartone, Ursano, Wright, and Igraham

(1989). Bartone et al. (1989) researched U.S. Army casualty assistance workers helping family members of active duty servicemen who were killed in a plane crash and the effects of secondary trauma. It was determined that hardiness was a key component in preventing the onset of psychological illnesses (Alfred, 2011).

Psychological hardiness incorporates attitudes that provide the motivation and courage to turn stressful and difficult situations into growth opportunities and the ability to remain healthy despite increased levels of distress (Alfred et al., 2014). Alfred (2011) stated that examining the military population (active duty personnel and veterans) is important primarily because the military encompasses individuals who are healthy, young, and in many cases, free of pathology. Serving in the military helps men and women develop mental, physical, and character strengths they are able to utilize even after military service (Bartone et al., 2008). In one study, greater hardiness was related to lower levels of anxiety and depression and overall better mental health one and five months after returning from deployment (Adler & Dolan, 2006; Alfred, 2011; Bartone, 1999).

Although there have been several studies conducted exploring hardiness pertaining to military populations (Bartone, 1999; Bartone et al., 2008; Bogden, 2014; Dolan & Adler, 2006; Maddi, 2007), research is scarce regarding hardiness and its relation to the reasons veterans enroll in college and persist while many veterans do not pursue an academic career. Some studies indicate that hardiness was found to have an inverse correlation with Posttraumatic Stress Disorder (PTSD) among the military veteran population meaning that veterans with high levels of PTSD possessed low levels of hardiness (Alfred, 2011; King, King, Fairbank, Keane, & Adams, 1998; Zakin,

Solomon, & Neria, 2003) which may be a potential reason many veterans choose not to utilize educational benefits to enroll in college.

### **Life & Job Satisfaction**

There is limited research on how personality factors and psychological hardiness in the veteran population might relate to life and job satisfaction. However, it is possible that veterans who have low neuroticism, and high extraversion, conscientiousness and psychological hardiness may experience greater life and job satisfaction (Bartone et al., 2009; Judge et al., 1999). In a study investigating the relationship of traits from the five factor model of personality with career success, findings demonstrated that conscientiousness positively predicted intrinsic and extrinsic career success (Judge et al., 2009). Extrinsic success was negatively predicted by neuroticism while extrinsic career success was positively predicted by general mental ability (Judge et al., 2009).

Life and job satisfaction is important regarding the veteran population because having positive life and job experiences may potentially increase overall well-being. Many individuals choose to serve the United States, but do not seek educational opportunities after discharge from the military, and as a result, may earn less over a lifetime or experience health problems that may decrease life and job satisfaction. During their military enlistment, veterans endured unique experiences that are indigenous to the civilian population. In a study examining the stressful challenges that men and women experienced while serving in Iraq and Afghanistan, it was indicated that out of 894 army service members, 89% were attacked or ambushed, 95% observed dead bodies or human remains, 93% were shot or shot at, 48% were responsible for the death of an adversary, and 65% observed dead or injured Americans (Hoge et al., 2004). MacLean and Elder

(2007) concluded that combat veterans suffered worse outcomes regarding life course than noncombat veterans and the civilian population. In addition, while enlisted in the military, individuals experienced significant time being separated from their families because of mandatory training, deployments, etc.

Some studies have found that active military service led veterans to experience worse consequences, such as mental illness or injuries resulting in disability, than they would have experienced otherwise (MacLean & Elder, 2007). Attending college may possibly increase not only life satisfaction, but job satisfaction as well. Pascarella and Terenzini (2005) revealed that obtaining a college degree tends to have a positive indirect effect on job satisfaction through its impact on factors such as earnings, job prestige, job autonomy, and nonroutine work. As a result of increased postsecondary education, workforce participation increases while the likelihood of being unemployed decreases (Pascarella & Terenzini, 2005).

Life satisfaction is one of the most used measures of quality of life or subjective well-being (Xiao et al., 2009). Research has demonstrated that quality of life or subjective well-being is positively related to job performance, mental and physical health, interpersonal relationships, and married status (Sirgy et al. 2006). Research also suggests that domain-specific behaviors factor into domain-specific satisfactions, which contributes to an individual's overall satisfaction with life. Xiao et al., (2009) suggested that positive financial behaviors contribute to financial satisfaction which contributes to life satisfaction. Further, Xiao et al. (2009) found that positive financial behaviors contribute to life satisfaction through two mediating variables, academic satisfaction and academic performance, which could potentially lead to long term life satisfaction. This is

particularly important for veterans because attending college and obtaining a college degree may possibly enhance their quality of life or subjective well-being.

Peterson, Park, and Seligman (2005) explored orientations to happiness and life satisfaction through pleasure, engagement, and meaning. Life satisfaction was predicted by these three orientations. Individuals who scored low on each of these orientations reported low life satisfaction. It was reported that these people were likely depressed, anxious, or distressed (Peterson, Park, & Seligman, 2005). Although this study did not explore differences between life satisfaction among individuals who attended college and those that did not attend college, this becomes a pertinent discussion regarding veterans and their overall well-being and the importance that obtaining a college degree can have on life and job satisfaction. This is because veterans who have obtained a college degree may potentially report higher life and job satisfaction as opposed to veterans who did not obtain a college degree.

Veterans can be identified as a special group due to numerous experiences that are unrecognized by the civilian population (Ackerman et al., 2009). Veterans may be more susceptible to develop symptoms of depression, experience declines in health, earn less over a lifetime, and have negative life satisfaction. This population could stand to benefit tremendously from higher education.

### **Current Study**

Military veterans are faced with different and unique challenges due to their previous active involvement with the armed forces. Many veterans experience challenges adjusting to civilian life (Chiu, 2013; Young, 2012), and in many cases, problems are exacerbated because of developing PTSD, depression, or other mood and stress related

symptoms due to deployment, combat, or strenuous demands such as spending time away from family and loved ones (Sayers, Farrow, Ross, & Oslin, 2009). Spampneto (1996) has suggested that some veterans do not utilize resources intended to help them pursue higher education due to challenges with time, money, and supporting their families. At the same time, many veterans are able to overcome such challenges, enroll in college, and ultimately obtain their degrees.

It is possible that personality traits such as the Five Factor Model and Psychological Hardiness (Kobasa, 1979) may play a role in veterans' decisions to pursue higher education. Exploring these factors will generate greater insight into the reasons many student veterans are persisting successfully in college as well as why non-student veterans are not utilizing the Post 9/11 GI Bill benefits to enroll in college. Graduating from college can potentially increase wages and earnings over a lifetime as well as job and life satisfaction. It is particularly important to investigate student veterans and non-student veterans due to the many challenges this population is faced with after discharge from active duty service. Due to prior experiences, military veterans are at higher risks of developing alcohol and substance abuse problems and symptoms related to depression and PTSD (Ormerod, 2009). They also experience a range of health, social, educational/vocational, and relationship difficulties that may decrease overall well-being. Therefore, this study is innovative in exploring the roles that demographic factors, personality factors, and psychological hardiness may potentially have on decisions veterans make about college enrollment.

The current research is an important step in the direction towards understanding why some military veterans enroll in college while others do not. Examining



demographics, personality factors, and levels of psychological hardiness may improve our understanding of veterans and how they approach life decisions. Further, this research will aid professionals who provide services to veterans in educational or community settings. Such research will be useful within the overall field of mental health by providing greater knowledge, understanding, and sensitivity which could potentially enhance services provided to veterans leading to more successful outcomes.

## Appendix B

### Tables

Table 1

*Descriptive Statistics for Current Age of Participants*

Age	Percent	Number
18-24	7%	15
25-34	39%	85
35-44	21%	45
45-54	17%	37
55-64	10%	21
65-74	5%	11
75-older	1%	2
Total		216

Table 2

*Descriptive Statistics for Race*

Race	Percent	Frequency
White/Caucasian	62.5%	135
Non-White	37%	80
Total		215

Table 3

*Descriptive Statistics for Ethnicity*

Ethnicity	Percent	frequency
Hispanic, Latino, or Spanish Origin	7%	16
Not of Hispanic, Latino, or Spanish Origin	87%	187
Total		213

Table 4

*Descriptive Statistics for Gender*

Gender	Percent	frequency
Male	75%	161
Female	25%	53
Total		214

Table 5

*Descriptive Statistics for Enrollment Status*

Enrollment Status	Percent	frequency
Did not Enroll	23.6%	51
Did Enroll	76.4%	165
Total		216

Table 6

*Bivariate correlations and Descriptive Statistics*

	1	2	3	4	5	6	7	8	9	10
1. Hardiness		.613**	.387**	.406**	.500	-.028	-.090	-.152*	.065	.192**
2. Extraversion			.490**	.353**	.466**	-.072	-.048	-.046	.097	.065
3. Openness				.447**	.273**	-.038	.042	-.129	.133	-.014
4. Agreeableness					.557**	.243**	-.127	-.071	.186**	.145*
5. Conscientiousness						.124	-.088	-.052	.093	.165*
6. Age							.027	.064	-.062	.249**
7. Race								-.046	-.008	-.285**
8. Ethnicity									-.003	.078
9. Sex/Gender										.138*
10. Socioeconomic Status										
<i>N</i>	213	216	216	216	216	216	215	203	214	216
<i>M</i>	28.16	77.23	77.15	85.21	92.52	3.02	1.73	1.92	1.25	2.41
<i>SD</i>	6.71	14.85	13.56	13.64	14.55	1.35	1.27	.27	.43	.63

Note: \*\* $p < .01$ , \* $p < .05$ .

Table 7

*Omnibus Tests of Model Coefficients*

	Chi-square	df	Sig.
<i>Step</i>	99.157	11	.000
<i>Block</i>	99.157	11	.000
<i>Model</i>	99.157	11	.000

Table 8

*Model Summary*

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	122.990	.392	.584

Table 9

*Binary Logistic Regression Examining Psychological Hardiness, Big Five Personality, and Demographics as Predictors of College Enrollment*

	B	S. E.	Wald	df	Sig.	Exp(B)
Hardiness	.045	.060	.568	1	.451	1.046
Extraversion	-.025	.028	.826	1	.363	.975
Openness	-.008	.024	.123	1	.726	1.008
Agreeableness	.086	.024	12.384	1	.000	1.090
Conscientiousness	.076	.027	8.123	1	.004	1.079
Age	-.854	.230	13.741	1	.000	.426
Race	.835	.474	3.098	1	.078	2.304
Ethnicity	1.231	1.240	.986	1	.321	3.425
Gender	.314	.594	.280	1	.597	1.369
SES	.952	.448	4.512	1	.034	2592

## **Appendix C**

### **Request for Agency Participation**

Your agency is being invited to participate in a research study about the roles the Big Five Personality Factors and Psychological Hardiness play on college enrollment among military veterans. This study is being conducted by Rogers W. Loche III, M.S., under the direction of Julie Koch, Ph.D., from the School of Applied Health and Educational Psychology at Oklahoma State University. Mr. Loche is currently a graduate student in the Counseling Psychology Ph.D. program at Oklahoma State University, and data gathered in this study will be used in his doctoral dissertation. The study will provide information that may ultimately be used to gain an understanding of personality factors and hardiness regarding military veterans that may potentially enhance services provided to veterans which could lead to more successful outcomes.

Two measures will be administered online via the researcher's password-protected Qualtrics account. The research survey will include items related to the Big Five Personality Factors and Psychological Hardiness. The survey will also include a brief demographic questionnaire. The survey will take approximately 40 minutes to complete.

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

Veterans will not be rewarded directly for participating; however, they will be informed that this research could potentially be used to gain an understanding of procedures that can assist veterans pursue academic endeavors and ultimately obtain a degree. Although absolute anonymity cannot be ensured, procedures will be taken to protect confidentiality. During the study, no one, including the researcher, will know the name of the respondent. The IP address of the respondent's computer will not be collected, and any demographic information will be published in summary form. The data will be



password-protected, and only the researcher and individuals responsible for research oversight will have access to the records. Data collected in the study will be destroyed after 5 years.

There are no risks involved in participating in excess of those a veteran would experience in everyday life. Officers will be provided with the researcher's information if they have any questions about the study.

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

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Advisor: Julie Koch, Ph.D.  
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434 Willard Hall  
Stillwater, OK 74078  
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**If you have questions about participants' rights in the study, please contact:**

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

## **Appendix D**

### **Informed Consent Agreement**

You are being invited to participate in a research study about the roles the Big Five Personality Factors and Psychological Hardiness play on college enrollment among military veterans. This study is being conducted by Rogers W. Loche III, M.S., under the direction of Julie Koch, Ph.D., from the School of Applied Health and Educational Psychology at Oklahoma State University. Mr. Loche is currently a graduate student in the Counseling Psychology Ph.D. program at Oklahoma State University, and data gathered in this study will be used in his doctoral dissertation. The study will provide information that may ultimately be used to gain an understanding of personality factors and hardiness regarding military veterans that may potentially enhance services provided to veterans which could lead to more successful outcomes.

Participation involves completing two measures regarding personality traits, psychological hardiness, and demographic information. The survey will take approximately 40 minutes to complete. Participation is voluntary and there are no direct incentives for participating in the study. You may choose not to participate or discontinue participation at any time without consequence.

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

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

There are no risks involved in participating in the study in excess of those you would experience in everyday life.

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

Researcher: Rogers W. Loche III, M.S.  
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Advisor: Julie Koch, Ph.D.  
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If you have questions about your rights as a research volunteer, you may contact the Oklahoma State University Institutional Review Board (IRB) Chair.

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

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

## Appendix E

### International Personality Item Pool Representation of the NEO PI-R (Short Version)

The following pages contain phrases describing people's behaviors. Please use the rating scale next to each phrase to describe how accurately each statement describes you. Describe yourself as you generally are now, not as you wish to be in the future. Describe yourself as you honestly see yourself, in relation to other people you know of the same sex as you are, and roughly your same age. So that you can describe yourself in an honest manner, your responses will be kept in absolute confidence. Please read each statement carefully, and then click the box that corresponds to the accuracy of the statement.

Answer every item. Failing to answer items will return an invalid narrative report. Note that the answer circles appear below each question. Please make sure that the box you are choosing corresponds to the question you are considering. If you make a mistake or change your mind, simply click the box you wish to choose.

All responses to this inventory from all respondents are completely confidential and will **not** be associated with you as an individual. Responses are, however, automatically entered into a database in order for the researcher to interpret results

1. Worry about things.

Very Inaccurate  Moderately Inaccurate  Neither Accurate Nor Inaccurate  Very Accurate

2. Make friends easily.

Very Inaccurate  Moderately Inaccurate  Neither Accurate Nor Inaccurate  Very Accurate

3. Have a vivid imagination.

Very Inaccurate  Moderately Inaccurate  Neither Accurate Nor Inaccurate  Very Accurate

4. Trust others.

Very Inaccurate  Moderately Inaccurate  Neither Accurate Nor Inaccurate  Very Accurate

5. Complete tasks successfully.

Very Inaccurate  Moderately Inaccurate  Neither Accurate Nor Inaccurate  Very Accurate

6. Get angry easily.

Very Inaccurate  Moderately Inaccurate  Neither Accurate Nor Inaccurate  Very Accurate

7. Love large parties.

Very Inaccurate  Moderately Inaccurate  Neither Accurate Nor Inaccurate  Very Accurate

8. Believe in the importance of art.

Very Inaccurate  Moderately Inaccurate  Neither Accurate Nor Inaccurate  Very Accurate

9. Use others for my own ends

Very Inaccurate  Moderately Inaccurate  Neither Accurate Nor Inaccurate  Very Accurate

10. Like to tidy up.

Very Inaccurate  Moderately Inaccurate  Neither Accurate Nor Inaccurate  Very Accurate

11. Often feel blue.

Very Inaccurate  Moderately Inaccurate  Neither Accurate Nor Inaccurate  Very Accurate

12. Take charge

Very Inaccurate  Moderately Inaccurate  Neither Accurate Nor Inaccurate  Very Accurate

13. Experience my own emotions

Very Inaccurate  Moderately Inaccurate  Neither Accurate Nor Inaccurate  Very Accurate

14. Love to help others.

Very Inaccurate  Moderately Inaccurate  Neither Accurate Nor Inaccurate  Very Accurate

15. Keep my promises

Very Inaccurate  Moderately Inaccurate  Neither Accurate Nor Inaccurate  Very Accurate

16. Find it difficult to approach others.

Very Inaccurate  Moderately Inaccurate  Neither Accurate Nor Inaccurate  Very Accurate

17. Am always busy.

Very Inaccurate  Moderately Inaccurate  Neither Accurate Nor Inaccurate  Very Accurate

18. Prefer variety to routine.

Very Inaccurate  Moderately Inaccurate  Neither Accurate Nor Inaccurate  Very Accurate

19. Love a good fight.

Very Inaccurate  Moderately Inaccurate  Neither Accurate Nor Inaccurate  Very Accurate

20. Work hard.

Very Inaccurate  Moderately Inaccurate  Neither Accurate Nor Inaccurate  Very Accurate

21. Go on binges

Very Inaccurate  Moderately Inaccurate  Neither Accurate Nor Inaccurate  Very Accurate

22. Love excitement

Very Inaccurate  Moderately Inaccurate  Neither Accurate Nor Inaccurate  Very Accurate

23. Love to read challenging material

Very Inaccurate  Moderately Inaccurate  Neither Accurate Nor Inaccurate  Very Accurate

24. Believe that I am better than others

Very Inaccurate  Moderately Inaccurate  Neither Accurate Nor Inaccurate  Very Accurate

25. Am always prepared.

Very Inaccurate  Moderately Inaccurate  Neither Accurate Nor Inaccurate  Very Accurate

26. Panic easily.

Very Inaccurate  Moderately Inaccurate  Neither Accurate Nor Inaccurate  Very Accurate

27. Radiate joy.

Very Inaccurate  Moderately Inaccurate  Neither Accurate Nor Inaccurate  Very Accurate

28. Tend to vote for liberal political candidates.

Very Inaccurate  Moderately Inaccurate  Neither Accurate Nor Inaccurate  Very Accurate

29. Sympathize with the homeless.

Very Inaccurate  Moderately Inaccurate  Neither Accurate Nor Inaccurate  Very Accurate

30. Jump into things without thinking.

Very Inaccurate  Moderately Inaccurate  Neither Accurate Nor Inaccurate  Very Accurate

31. Fear for the worst.

Very Inaccurate  Moderately Inaccurate  Neither Accurate Nor Inaccurate  Very Accurate

32. Feel comfortable around people.

Very Inaccurate  Moderately Inaccurate  Neither Accurate Nor Inaccurate  Very Accurate

33. Enjoy wild flights of fantasy.

Very Inaccurate  Moderately Inaccurate  Neither Accurate Nor Inaccurate  Very Accurate

34. Believe that others have good intentions.

Very Inaccurate  Moderately Inaccurate  Neither Accurate Nor Inaccurate  Very Accurate

35. Excel in what I do.

Very Inaccurate  Moderately Inaccurate  Neither Accurate Nor Inaccurate  Very Accurate

36. Get irritated easily.

Very Inaccurate  Moderately Inaccurate  Neither Accurate Nor Inaccurate  Very Accurate

37. Talk to a lot of different people at parties.

Very Inaccurate  Moderately Inaccurate  Neither Accurate Nor Inaccurate  Very Accurate

38. See beauty in things that others might not notice.

Very Inaccurate  Moderately Inaccurate  Neither Accurate Nor Inaccurate  Very Accurate

39. Cheat to get ahead.



Very Inaccurate  Moderately Inaccurate  Neither Accurate Nor Inaccurate  Very Accurate

40. Often forget to put things back in their proper places.

Very Inaccurate  Moderately Inaccurate  Neither Accurate Nor Inaccurate  Very Accurate

41. Dislike myself.

Very Inaccurate  Moderately Inaccurate  Neither Accurate Nor Inaccurate  Very Accurate

42. Try to lead others.

Very Inaccurate  Moderately Inaccurate  Neither Accurate Nor Inaccurate  Very Accurate

43. Feel others' emotions.

Very Inaccurate  Moderately Inaccurate  Neither Accurate Nor Inaccurate  Very Accurate

44. Am concerned about others.

Very Inaccurate  Moderately Inaccurate  Neither Accurate Nor Inaccurate  Very Accurate

45. Tell the truth.

Very Inaccurate  Moderately Inaccurate  Neither Accurate Nor Inaccurate  Very Accurate

46. Am afraid to draw attention to myself.

Very Inaccurate  Moderately Inaccurate  Neither Accurate Nor Inaccurate  Very Accurate

47. Am always on the go.

Very Inaccurate  Moderately Inaccurate  Neither Accurate Nor Inaccurate  Very Accurate

48. Prefer to stick with things that I know.

Very Inaccurate  Moderately Inaccurate  Neither Accurate Nor Inaccurate  Very Accurate

49. Yell at people.

Very Inaccurate  Moderately Inaccurate  Neither Accurate Nor Inaccurate  Very Accurate

50. Do more than what's expected of me.

Very Inaccurate  Moderately Inaccurate  Neither Accurate Nor Inaccurate  Very Accurate

51. Rarely overindulge.

Very Inaccurate  Moderately Inaccurate  Neither Accurate Nor Inaccurate  Very Accurate

52. Seek adventure.

Very Inaccurate  Moderately Inaccurate  Neither Accurate Nor Inaccurate  Very Accurate

53. Avoid philosophical discussions.

Very Inaccurate  Moderately Inaccurate  Neither Accurate Nor Inaccurate  Very Accurate

54. Think highly of myself.

Very Inaccurate  Moderately Inaccurate  Neither Accurate Nor Inaccurate  Very Accurate

55. Carry out my plans.

Very Inaccurate  Moderately Inaccurate  Neither Accurate Nor Inaccurate  Very Accurate

56. Become overwhelmed by events.

Very Inaccurate  Moderately Inaccurate  Neither Accurate Nor Inaccurate  Very Accurate

57. Have a lot of fun.

Very Inaccurate  Moderately Inaccurate  Neither Accurate Nor Inaccurate  Very Accurate

58. Believe that there is no absolute wrong.

Very Inaccurate  Moderately Inaccurate  Neither Accurate Nor Inaccurate  Very Accurate

59. Feel sympathy for those who are worse off than myself.

Very Inaccurate  Moderately Inaccurate  Neither Accurate Nor Inaccurate  Very Accurate

60. Make rash decisions.

Very Inaccurate  Moderately Inaccurate  Neither Accurate Nor Inaccurate  Very Accurate

61. Am afraid of things.

Very Inaccurate  Moderately Inaccurate  Neither Accurate Nor Inaccurate  Very Accurate

62. Avoid contacts with others.

Very Inaccurate  Moderately Inaccurate  Neither Accurate Nor Inaccurate  Very Accurate

63. Love to daydream.

Very Inaccurate  Moderately Inaccurate  Neither Accurate Nor Inaccurate  Very Accurate

64. Trust what people say.

Very Inaccurate  Moderately Inaccurate  Neither Accurate Nor Inaccurate  Very Accurate

65. Am always Handle tasks smoothly.

Very Inaccurate  Moderately Inaccurate  Neither Accurate Nor Inaccurate  Very Accurate

66. Panic Lose my temper.

Very Inaccurate  Moderately Inaccurate  Neither Accurate Nor Inaccurate  Very Accurate

67. Prefer to be alone.

Very Inaccurate  Moderately Inaccurate  Neither Accurate Nor Inaccurate  Very Accurate

68. Do not like poetry.

Very Inaccurate  Moderately Inaccurate  Neither Accurate Nor Inaccurate  Very Accurate

69. Take advantage of others.

Very Inaccurate  Moderately Inaccurate  Neither Accurate Nor Inaccurate  Very Accurate

70. Leave a mess in my room.

Very Inaccurate  Moderately Inaccurate  Neither Accurate Nor Inaccurate  Very Accurate

71. Am often down in the dumps.

Very Inaccurate  Moderately Inaccurate  Neither Accurate Nor Inaccurate  Very Accurate

72. Take control of things.

Very Inaccurate  Moderately Inaccurate  Neither Accurate Nor Inaccurate  Very Accurate

73. Rarely notice my emotional reactions.

Very Inaccurate  Moderately Inaccurate  Neither Accurate Nor Inaccurate  Very Accurate

74. Am indifferent to the feelings of others.

Very Inaccurate  Moderately Inaccurate  Neither Accurate Nor Inaccurate  Very Accurate

75. Break rules.

Very Inaccurate  Moderately Inaccurate  Neither Accurate Nor Inaccurate  Very Accurate

76. Only feel comfortable with friends.

Very Inaccurate  Moderately Inaccurate  Neither Accurate Nor Inaccurate  Very Accurate

77. Do a lot in my spare time.

Very Inaccurate  Moderately Inaccurate  Neither Accurate Nor Inaccurate  Very Accurate

78. Dislike changes.

Very Inaccurate  Moderately Inaccurate  Neither Accurate Nor Inaccurate  Very Accurate

79. Insult people.

Very Inaccurate  Moderately Inaccurate  Neither Accurate Nor Inaccurate  Very Accurate

80. Do just enough work to get by.

Very Inaccurate  Moderately Inaccurate  Neither Accurate Nor Inaccurate  Very Accurate

81. Easily resist temptations.

Very Inaccurate  Moderately Inaccurate  Neither Accurate Nor Inaccurate  Very Accurate

82. Enjoy being reckless.

Very Inaccurate  Moderately Inaccurate  Neither Accurate Nor Inaccurate  Very Accurate

83. Have difficulty understanding abstract ideas.

Very Inaccurate  Moderately Inaccurate  Neither Accurate Nor Inaccurate  Very Accurate

84. Have a high opinion of myself.

Very Inaccurate  Moderately Inaccurate  Neither Accurate Nor Inaccurate  Very Accurate

85. Waste my time.

Very Inaccurate  Moderately Inaccurate  Neither Accurate Nor Inaccurate  Very Accurate

86. Feel that I'm unable to deal with things.

Very Inaccurate  Moderately Inaccurate  Neither Accurate Nor Inaccurate  Very Accurate

87. Love life.

Very Inaccurate  Moderately Inaccurate  Neither Accurate Nor Inaccurate  Very Accurate

88. Tend to vote for conservative political candidates.

Very Inaccurate  Moderately Inaccurate  Neither Accurate Nor Inaccurate  Very Accurate

89. Am not interested in other people's problems.

Very Inaccurate  Moderately Inaccurate  Neither Accurate Nor Inaccurate  Very Accurate

90. Rush into things.

Very Inaccurate  Moderately Inaccurate  Neither Accurate Nor Inaccurate  Very Accurate

91. Get stressed out easily.

Very Inaccurate  Moderately Inaccurate  Neither Accurate Nor Inaccurate  Very Accurate

92. Keep others at a distance.

Very Inaccurate  Moderately Inaccurate  Neither Accurate Nor Inaccurate  Very Accurate

93. Keep others at a distance.

Very Inaccurate  Moderately Inaccurate  Neither Accurate Nor Inaccurate  Very Accurate

94. Distrust people.

Very Inaccurate  Moderately Inaccurate  Neither Accurate Nor Inaccurate  Very Accurate

95. Know how to get things done.

Very Inaccurate  Moderately Inaccurate  Neither Accurate Nor Inaccurate  Very Accurate

96. Am not easily annoyed.

Very Inaccurate  Moderately Inaccurate  Neither Accurate Nor Inaccurate  Very Accurate

97. Avoid crowds.

Very Inaccurate  Moderately Inaccurate  Neither Accurate Nor Inaccurate  Very Accurate

98. Do not enjoy going to art museums.

Very Inaccurate  Moderately Inaccurate  Neither Accurate Nor Inaccurate  Very Accurate

99. Obstruct others' plans.

Very Inaccurate  Moderately Inaccurate  Neither Accurate Nor Inaccurate  Very Accurate

100. Leave my belongings around.

Very Inaccurate  Moderately Inaccurate  Neither Accurate Nor Inaccurate  Very Accurate

101. Fell comfortable with myself.

Very Inaccurate  Moderately Inaccurate  Neither Accurate Nor Inaccurate  Very Accurate

102. Wait for others to lead the way.

**Very Inaccurate**  **Moderately Inaccurate**  **Neither Accurate Nor Inaccurate**  **Very Accurate**

103. Don't understand people who get emotional.

**Very Inaccurate**  **Moderately Inaccurate**  **Neither Accurate Nor Inaccurate**  **Very Accurate**

104. Take no time for others.

**Very Inaccurate**  **Moderately Inaccurate**  **Neither Accurate Nor Inaccurate**  **Very Accurate**

105. Break my promises.

**Very Inaccurate**  **Moderately Inaccurate**  **Neither Accurate Nor Inaccurate**  **Very Accurate**

106. Am not bothered by difficult social situations.

**Very Inaccurate**  **Moderately Inaccurate**  **Neither Accurate Nor Inaccurate**  **Very Accurate**

107. Like to take it easy.

**Very Inaccurate**  **Moderately Inaccurate**  **Neither Accurate Nor Inaccurate**  **Very Accurate**

108. Am attached to conventional ways of doing things.

**Very Inaccurate**  **Moderately Inaccurate**  **Neither Accurate Nor Inaccurate**  **Very Accurate**

109. Get back at others.

**Very Inaccurate**  **Moderately Inaccurate**  **Neither Accurate Nor Inaccurate**  **Very Accurate**

110. Put little time and effort into my work.

**Very Inaccurate**  **Moderately Inaccurate**  **Neither Accurate Nor Inaccurate**  **Very Accurate**



111. Am able to control my cravings.
- Very Inaccurate  Moderately Inaccurate  Neither Accurate Nor Inaccurate  Very Accurate
112. Act wild and crazy.
- Very Inaccurate  Moderately Inaccurate  Neither Accurate Nor Inaccurate  Very Accurate
113. Am not interested in theoretical discussions.
- Very Inaccurate  Moderately Inaccurate  Neither Accurate Nor Inaccurate  Very Accurate
114. Boast about my virtues.
- Very Inaccurate  Moderately Inaccurate  Neither Accurate Nor Inaccurate  Very Accurate
115. Have difficulty starting tasks.
- Very Inaccurate  Moderately Inaccurate  Neither Accurate Nor Inaccurate  Very Accurate
116. Remain calm under pressure.
- Very Inaccurate  Moderately Inaccurate  Neither Accurate Nor Inaccurate  Very Accurate
117. Look at the bright side of things.
- Very Inaccurate  Moderately Inaccurate  Neither Accurate Nor Inaccurate  Very Accurate
118. Believe that we should be tough on crime.
- Very Inaccurate  Moderately Inaccurate  Neither Accurate Nor Inaccurate  Very Accurate
119. Try not to think about the needy.
- Very Inaccurate  Moderately Inaccurate  Neither Accurate Nor Inaccurate  Very Accurate
120. Act without thinking.

Very Inaccurate  Moderately Inaccurate  Neither Accurate Nor Inaccurate  Very Accurate

## Appendix F

### DRS-15

	Not at all true	A little true	Quite true	Completely true
1. Most of my life gets spent doing things that are meaningful				
2. By working hard you can nearly always achieve your goals				
3. I don't like to make changes in my regular activities				
4. I feel that my life is somewhat empty of meaning				
5. Changes in routine are interesting to me				
6. How things go in my life depends on my own actions				
7. I really look forward to my daily activities				
8. I don't think there is much I can do to influence my own future				
9. I enjoy the challenge when I have to do more than one thing at a time				
10. Most days, life is really interesting and exciting for me				
11. It bothers me when my daily routine gets interrupted				
12. It is up to me to decide how the rest of my life will be				
13. Life in general is boring for me				
14. I like having a daily schedule that doesn't change very much				

15. My choices make a real difference in how things turn out in the end				
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## Appendix G

### Demographic Questionnaire

**Directions: Please provide the following information:**

1. Age:
  - 18-24
  - 25-34
  - 35-44
  - 45-54
  - 55-64
  - 65-74
  - 75-older
  
2. Sex/gender:
  - Male
  - Female
  
3. Marital status:
  - Single
  - Married
  - Divorced
  - Separated
  - Widowed
  
4. Race (Please check all that apply):
  - White
  - Black or African American
  - American Indian / Alaska Native
  - Asian
  - Native Hawaiian / Other Pacific Islander
  - Some Other Race: \_\_\_\_\_
  
5. Ethnicity:
  - Hispanic, Latino, or Spanish origin
  - Not of Hispanic, Latino, or Spanish origin
  
6. Highest Level of Education:
  - High School

- Some College
- Associate's Degree
- Bachelor's Degree
- Some Graduate School
- Graduate Degree

7. Military Branch:

- Army
- Navy
- Air Force
- Marines
- Coast Guard
- National Guard

8. Socioeconomic Status (SES). Please select the category that best applies to you:

- Lower class
- Working class
- Middle class
- Upper class

## **Appendix H**

### **Debriefing Statement**

Thank you for participating in this research. In the study, the researcher studied demographics, personality factors, and psychological hardiness as it relates to college enrollment. If you would like a copy of the results of the study, please contact the researcher and arrangements will be made.

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

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

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

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

Thank you for participating in this research and thank you for your services to this country.

Oklahoma State University Institutional Review Board

Date: Wednesday, November 25, 2015

IRB Application No ED15146

Proposal Title: Psychological hardiness, big five personality, and demographic factors as predictors of college enrollment among military veterans

Reviewed and Exempt

Processed as:

Status Recommended by Reviewer(s): Approved Protocol Expires: 11/24/2018

Principal

Investigator(s):

Rogers Loche

Julie Koch

434 Willard

418 Willard

Stillwater, OK 74078

Stillwater, OK 74078

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

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

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

1. Conduct this study exactly as it has been approved. Any modifications to the research protocol must be submitted with the appropriate signatures for IRB approval. Protocol modifications requiring approval may include changes to the title, PI advisor, funding status or sponsor, subject population composition or size, recruitment, inclusion/exclusion criteria, research site, research procedures and consent/assent process or forms 2. Submit a request for continuation if the study extends beyond the approval period. This continuation must receive IRB review and approval before the research can continue.

3. Report any adverse events to the IRB Chair promptly. Adverse events are those which are unanticipated and impact the subjects during the course of the research; and

4. Notify the IRB office in writing when your research project is complete.



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

Sincerely,

A handwritten signature in black ink, appearing to read "Hugh Crethar". The signature is fluid and cursive, with a long horizontal stroke extending to the right.

Hugh Crethar, Chair

Hugh Crethar, Chair

Institutional Review Board

## VITA

Rogers W. Loche III

Candidate for the Degree of

Doctor of Philosophy

Dissertation: PSYCHOLOGICAL HARDINESS, BIG FIVE PERSONALITY, AND DEMOGRAPHIC FACTORS AS PREDICTORS OF COLLEGE ENROLLMENT AMONG MILITARY VETERANS

Major Field: Counseling Psychology

Biographical:

Education:

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

Completed the requirements for the Master of Science in Clinical Psychology at Northwestern State University, Natchitoches, Louisiana in August 2012.

Completed the requirements for the Bachelor of Science in Psychology at Northwestern State University, Natchitoches, Louisiana in December 2009.

Experience:

- Predoctoral Psychology Resident, Federal Correctional Institution, Fort Worth, Texas, 2016 – Present
- Doctoral Practicum Student, Jack C. Montgomery Veteran Affairs Medical Center, Muskogee, OK, 2015 – 2016
- Doctoral Supervisor, Oklahoma State University, Stillwater, Oklahoma, 2015
- Doctoral Practicum Student, Oklahoma State University Counseling Services, Stillwater, Oklahoma, 2014 – 2015
- Doctoral Practicum Student, Payne County Youth Services, Stillwater, Oklahoma, 2013-2014.
- Masters Practicum Counselor, Veteran Affairs Hospital, Pineville, Louisiana, Spring 2012.

Professional Memberships:

- American Psychological Association (APA)
- Southwest Psychological Association