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IDENTITY AND PSYCHOLOGICAL NEEDS AMONG NATIONAL GUARD SERVICE MEMBERS AND UNDERGRADUATES

Bradley Antonides
Virginia Commonwealth University

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IDENTITY AND PSYCHOLOGICAL NEEDS AMONG NATIONAL GUARD SERVICE
MEMBERS AND UNDERGRADUATES

A thesis submitted in partial fulfillment of the requirements for the degree of Master of Science
at Virginia Commonwealth University

By: BRADLEY J. ANTONIDES

Bachelor of Science, Kansas State University, 2002

Director: Steven Danish, Ph.D.

Professor, Department of Psychology

Virginia Commonwealth University

Richmond, Virginia

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Abstract

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This study measured identity style and identity status within military and academic populations ($N = 286$) to investigate whether low levels of identity commitment predict dissatisfaction in meeting basic psychological needs. Analysis of identity style and identity status subscales examined the reliability of traditional measures of identity in an atypical emerging adult population. Group comparisons based on participant characteristics (identity commitment, work experience, age, combat experience) explored differences between and within institutions. Results supported the reliability of traditional identity measures in a non-traditional population. A diffuse identity status and diffuse identity style both significantly predicted lower reported

levels of psychological needs satisfaction across and within institutions ($p < .001$).

Additionally, full-time college participants who were also affiliated with military service reported significantly higher levels of identity commitment $p < .001$, $\eta_p^2 = .10$. Findings are discussed and potential identity related research directions examined.

Identity And Psychological Needs Among National Guard Service Members And Undergraduates

There has been a growing awareness that research in many areas of psychology may be limited by the lack of diversity in the samples that make up the majority of studies (Arnett, 2009; Henrich, Heine, & Norenzayan, 2010). In identity development research, one limitation is the almost singular focus on studying college students. There is a glaring lack of research addressing adolescents who do not self-select into a post-secondary institution. As Kroger (2000) notes:

...very little is known about identity development for those adolescents who do not undertake tertiary education and proceed immediately to work or become unemployed following high school. Specifically, one might examine conditions within various social contexts that do or do not provide support for identity exploration and then note associated patterns of identity development. (p. 147)

Traditionally, identity is tied to career or work both conceptually and by how it is measured. The work one chooses to do or not do holds substantial influence in determining one's current and future identity. As it relates to identity formation, nearly half of the population of the United States has not been the focus of study. The stark differences between those who choose to enter the workforce rather than academia should be examined if the identity formation process is to be fully understood. In fact, there has been an explicit call from within this community of researchers to expand the research base by including participants who have chosen other routes in their transition to adulthood. Schwartz (2005), also notes that the reliance on university samples creates generalizability problems and specifically recommends the inclusion of non-academic, working and emerging adult populations in identity research.

Due to the considerable lack of identity related research in non-traditional samples, many unanswered questions remain regarding the differences between research of university

undergraduates and the so called “forgotten half” (Arnett, 2000). In many ways, university undergraduates have been granted a moratorium period for exploring and consolidating identity before transitioning to careers. For those who have entered the workforce immediately following adolescence, the pressure to make life decisions may have forced many to adopt an identity prematurely before much exploration could be conducted. From the few studies that have looked at these groups, this difference is reflected in a higher number of identity-achieved individuals in the working class demographic (Marcia, Waterman, Matteson, Archer, & Orlofsky, 1993). One area that is not well understood is what the long-term effects of satisfaction and well-being may be for a foreshortened or disrupted exploration period. In addition, it is not known whether those who enter the workforce sooner, achieve a stable identity or if there is a moratorium period similar to university samples that permits exploration and the construction of stable identities later. Finally, it is unknown whether there are other differences related to identity formation or personality variables between those who enter a work environment instead of an academic environment. This may have implications for the satisfaction of psychological needs of individuals and hence their well-being.

This study will examine the associations between measures of personal identity in different groups of emerging adults. Groups will be determined both by the institutional setting to which they belong and by their level of experience. Experience level will be defined as differential exposure to austere environments. Additionally, measures of satisfaction for psychological needs will be assessed across groups to determine associations with group membership as well as relations between identity measures.

In order to clarify how psychological needs may be related to identity formation, it is necessary to examine how both have been conceptualized and measured. With this in mind, a

review of the theoretical literature surrounding the development of identity as a construct will first be conducted. This will be followed by a description of self-determination theory and a brief examination of recent empirical investigations involving identity and psychological needs. A brief discussion of the participant characteristics and a statement of the problem will refine the research hypotheses.

Defining Key Terms

The following terms and constructs are defined to provide further clarity for this discussion.

Emerging adults. Emerging adults are a distinct class of individuals who differ from adolescents and adults in their subjective self-concepts, demographics, risk behavior and identity exploration. Emerging adults normatively fall within the ages of 18-25, (Arnett, 2000).

Ego identity. Ego identity is a cognitive structure. It is the individual's core sense of who they are resulting largely from unconscious processes that organize, integrate and consolidate values, beliefs, goals and self regulatory mechanisms. It also forms the basis for an individual's sense of continuity and consistency with regard to their perceived character (Erikson, 1950, 1963).

Personal identity. Personal identity is an individual's internalized view of themselves which they intentionally present to others. It is a person's projected concept of self that has been synthesized by intrapersonal processes incorporating their values, goals, beliefs, and self-regulatory mechanisms, (Erikson, 1950, 1963).

Identity status. Identity status is a measure of personal identity that captures an individual's level of exploration and commitment to attitudes, values and beliefs within ideological, occupational, and interpersonal domains (Marcia, 1966).

Identity style. Identity style is a measure of an aspect of personal identity that describes an individual's style of information processing relating to identity relevant attitudes, beliefs and values. It may be characterized as avoidant or engaging/approaching and is correlated with various personality characteristics (Berzonsky, 1989).

Intrinsic motivation. Intrinsic motivation is a type of motivation that is characterized by spontaneous internal and external activities occurring for the inherent satisfaction that accompanies them, (Ryan & Deci, 2000).

Extrinsic motivation. Extrinsic motivation is a type of motivation that is characterized by activities occurring to obtain value yielding outcomes that are separable from (extrinsic to) the inherent experience of the activity itself, (Ryan & Deci, 2000).

Review of the Literature

Identity

Identity as a construct has a storied history (Schwartz, 2001) that originates from Erikson's (1950, 1963) conceptualization as a psychosocial phenomenon. That is, Erikson believed that the workings of identity could be examined at various levels of interaction both within a person and within that person's social environment. At the least accessible level, identity is described as an intrapsychic phenomenon, and one that goes largely unnoticed by the individual. Erikson studied under the psychoanalytic tradition, and he was heavily influenced by Freud as well as the era within which his conceptualization originated (Schwartz, 2001).

The formulation of Erikson's identity concept was substantially influenced by his observations of returning World War II veterans. Erikson (1963) noted with regard to his development of the concept of ego identity:

What impressed me most was the loss in these men of a sense of identity. They knew who they were; they had a personal identity. But it was as if subjectively, their lives no longer hung together-and never would again. There was a central disturbance in what I then started to call ego identity. (p. 42)

He labeled this intrapsychic aspect of identity, "ego identity" (1980). The "silent doings of ego synthesis" (p. 109) are described by Erikson, as the unconscious processes that consolidate a person's core understanding of who they believed themselves to be at the most fundamental and immutable level (Erikson, 1974).

At its most basic level, Erikson's conceptualization is a theory of personality. However, personality is more accurately viewed in part as a *reflection* of a person's identity in the form of enduring patterns of behavior (i.e., the identity aspects that others subjectively experience). Identity researchers largely view identity as an individual's subjective experience of themselves integrated with preferences for how they desire others to see them (Schwartz, 2001). The congruency of these two aspects of ego identity may predict to some extent how functional and stable the identity is. As such, ego identity interacts with the next level of Erikson's psychosocial conceptualization, personal identity.

According to Erikson (1950, 1963), identity can also be observed at the interpersonal level or between individuals. At this level, identity becomes an operating example of not only who one believes they are, but also who one shows others they are and how this interaction with others subsequently influences an individual's identity. Erikson called this "personal identity". Personal identity may or may not be congruent with ego identity and is influenced by the stability and enduring qualities of a person's core identity beliefs. The manner and extent to

which identity is presented to others fosters, in part, personality from the perspective of another person. This still represents an incomplete picture of identity, however. The next level incorporates both previous levels and includes the larger context in which individuals and the groups with whom they associate interact.

Erikson (1974) believed identity interacted at the larger level of society in general. “Social identity” or “group identity” is formed as an individual interprets and then internalizes or rejects the values, norms and expectations of the social milieu to which he or she belongs. This represents a third level of interaction and the one most contextually embedded. In fact, Schwartz (2001) states that Erikson’s model can also be viewed from the perspective of how embedded the person is in the context of their environment. He further summarizes Erikson’s description of three levels of interaction from least to highest level of embeddedness (ego, personal, social) as four distinct angles of identity.

The first two angles are ego synthesis and continuity of personal character and represent Erikson’s intrapsychic conceptualization of ego identity. A person’s interpersonal experience of individual identity represents the third angle of personal identity. Finally, the sense of inner solidarity with a group’s ideals forms a fourth angle that describes social or group identity (Erikson, 1974, 1980). From this telescopic conceptualization, the psychometric development of identity as a measureable construct proceeded awkwardly, and it continues to present challenges for the objective study of identity.

Identity Status

The first successful attempt to measure identity began with Marcia’s identity status paradigm (1966). Working from Erikson’s conceptualization of personal identity, Marcia isolated psychometrically the degree of exploration and commitment an individual reportedly

had within the identity relevant domains of work, politics and religion. One of the first measuring techniques involved having qualified and trained graduate level students and psychologists interview participants and rate their level of exploration and commitment. The degree to which an individual fell on each of the two dimensions placed them in one of either four categories. The four categories were Achieved (high exploration and commitment), Diffuse (low exploration and commitment), Moratorium (high exploration, low commitment), and Foreclosed (low exploration and high commitment). This represented the first reliable measure of identity and is still in use today, though it is often criticized for its narrowness.

Researchers agree that the criticism is somewhat justifiable (Kroger, 2000; Schwartz, 2005) if one is attempting to capture the entire identity construct as Erikson envisioned it. However, as an aspect of identity, the identity status paradigm continues to be refined psychometrically with practical, clinical and research utility (Adams, 2010). One criticism of the identity status paradigm is that it provides only a snapshot of someone's identity at a particular time in his or her life. This becomes problematic when one is trying to interpret an individual's more constructive, enduring or structural identity features (Berzonsky, 2003a; Kroger 2003). However, like other dynamic measures, the usefulness of an instrument is tied directly to the question or problem trying to be answered.

Identity Style

The first successful attempt to expand the measurement of identity was made by Berzonsky, (1989) who sought to understand identity from a process perspective. Influenced by self-construction theory (Kelly, 1955; Epstein, 1980), Berzonsky's identity style views identity formation from the perspective of how individuals process identity related information in self-constructive ways (1990). Empirically, he demonstrated that the way individuals approached

making decisions about identity relevant domains could be linked to other personality characteristics, in particular, information processing strategies (Berzonsky, 1989, 1992).

Whether a person approaches or avoids the process of determining their identity correlates with identity status (Berzonsky, 1990; Berzonsky & Kuk, 2000; Berzonsky & Neimeyer, 1994) as well as with other personality variables. Berzonsky determined that there were three styles, Diffuse-Avoidant, Informational and Normative.

Berzonsky, (1992) demonstrated that a diffuse-avoidant style is positively related to a diffuse identity status, and it is characterized by a confused or apathetic approach (avoidant orientation) to identity relevant information. An informational style is evident in those with an achieved status and characterized by active engagement (approach orientation) and seeking out of identity relevant information. A normative style reflects those who have foreclosed on an identity (accepted without critical examination) and who defer to another authority (parental, institutional) when considering and evaluating identity relevant information. The normative style is devoid of any deliberate or critical examination for personal preferences other than whether it conforms to what the individual has internalized from higher authorities. As such, it is also considered an avoidant strategy.

There have been subsequent attempts to either expand or extend the conceptualization of identity by various researchers (Schwartz, 2001). Arguments remain over whether identity is better conceived as an extension of Marcia's paradigm or whether the entire construct needs to be more inclusive and incorporate a broader array of domains. However, Erikson's view of identity formation as a developmental process using the identity status paradigm also presents challenges. The fact that an individual's status can change from a seemingly more progressive status (Berzonsky & Adams, 1999; Berzonsky, 2003a), back to a less developed status (e.g.

Achieved to Foreclosed), seems contrary to the Erikson's original view that identity develops in a epigenetic or progressively structural manner (see also Kroger, 2003). However, others characterize a natural differentiation and integration aspect in response to a crisis in the individual's current context (Adams & Marshall, 1996; Adams, 2010). This crisis might be predictable, (university students transitioning to adulthood) or less predictable events such as trauma or unexpected cultural changes.

The relation between style and status has been demonstrated reliably using objective measures of identity (Berzonsky, 1989, 1990; Berzonsky & Kuk, 2000; Schwartz, Mullis, Waterman & Dunham, 2000; Streitmatter, 1993). Within the identity literature, there is evidence supporting associations between how an individual processes identity relevant information (either avoiding or approaching) and other social-cognitive variables including self-regulatory processes and well-being (Berzonsky, 1992, 2003b; Nurmi, Berzonsky, Tammi, Kinney, 1997). What remains relatively constant within these research paradigms are the participants' environments, namely academic settings. The relation between measures of identity outside academic settings is not as well understood.

Identity Formation and Emerging Adulthood

The transition to adulthood is a key developmental period in an individual's life. As described first by Erikson (1950, 1968), one of the paramount achievements of adolescence and a defining feature of adulthood is the formation of an identity. An intact and stable identity represents to individuals who they think they are, and equally important, who they show the world they are. From this starting point emerges the bulk of identity research regarding the individual's concept of self in relation to others and how it develops. As Erikson initially noted, one's personal identity significantly influences an individual's interpersonal and social

interactions. This in turn has an impact on an individual's well-being or, as Erikson (1950, 1980) termed it, "healthy personality".

Traditionally, adolescence marks the beginning of the process of identity formation with the culmination occurring for most following post-secondary education or apprenticeship into a chosen field of work. For those who choose routes other than college or university, directly entering the work force often marks the boundary between adulthood and adolescence. Although adolescence has traditionally been viewed as the predominate context from which the adult identity develops (Erikson, 1950; Marcia, 1966), increases in individual freedom and improvements in standards of living for some groups in industrialized societies have afforded many the chances to prolong the exploration of ideological, career, and interpersonal commitments.

Increasingly it is argued that western culture and industrialized societies have allowed a prolongation of this period when adolescents transition to adulthood (Arnett, 2000, 2002). The effect of delaying this process may create new obstacles for young adolescents who are in the midst of trying to discern who they are and who they hope to become. Alternatively, this delay does allow the potential for greater depth of exploration. Whether the allowance of extra time is a burden or something beneficial is arguable (Baumeister, 1987; Cote, 2002; Cote & Schwartz, 2002; Schwartz, 2000).

One unintended consequence of this prolonged developmental period may be the emergence of a distinct period of transition between adolescence and adulthood (Arnett, 2000, 2002). It has been reported that the large number of non-college bound youth in America make up a substantial proportion of this emerging adult population (William T. Grant Foundation Commission on Work, Family, and Citizenship, 1988). Unfortunately, there has been little

empirical research conducted on this so called “forgotten half,” in part because college and university student populations are more easily accessible (Arnett, 2000).

Individuals do not always choose a highly structured pathway to career and life domains. Instead, they may choose, either actively or passively, to defer commitment in favor of less defined or structured environments (Erikson, 1968; Marcia, 1966). Berzonsky (1989), taking a social-cognitive perspective, contends that identity has a measureable information processing aspect that consistently emerges in the patterns of individuals’ identity relevant decisions. It has been argued and demonstrated (Berzonsky, et al. 2003; Nurmi, Berzonsky, Tammi, & Kinney, 1997; Schwartz, Côté & Arnett, 2005), that these identity related processes predict qualitative differences when individuals either delay or pursue the construction of their identities.

From a sociological perspective, identity formation, also termed “individualization,” may be viewed as the process of making choices and determining the direction of one’s life when left by society to make one’s way in the world (Côté & Schwartz, 2002). Accordingly, evidence suggests a bifurcation of this process into two probable developmental paths based on an individual’s enduring proclivity for either an agentic approach to growth or an avoidant strategy in their transition to adulthood (Schwartz, Côté, & Arnett, 2005). This bifurcation also is found in the way adolescents cope with most stressful situations (Compas, Conner-Smith, Saltzman, Thomsen & Wadsworth, 2001).

Identity and Well-being

There is both recent empirical evidence and theoretical support to suggest that identity disturbances have negative consequences that influence well-being and satisfaction across life domains (Berzonsky, 2003b; Berzonsky & Luyckx, 2008; Erikson, 1968; Luyckx, et al., 2007; Ryan & Deci, 2000). These negative consequences appear particularly salient in the age group

that captures the emerging adult population (18-25). How the environment or setting affects the search is an empirical focus in this study.

Additionally, personality variables, strategies of coping, and psychological motivations appear to substantially influence various measured outcomes of identity and well-being (Berzonsky, 1989, 1992, 2003b). Both theorists and researchers who study motivation (Gagné, 2003; Ryan & Deci, 2000; Waterman, 2004), suggest that how individuals think, feel and behave, is inextricably influenced by how that individual is motivated, and what needs are being met or thwarted in a given situation. The rationale for examining the correlates of well-being in this susceptible, emerging adult population becomes clearer when viewed through the lens of psychological needs.

Bridging motivation and identity

Recently there has been a growing interest in bridging motivation theory and identity theory (Luyckx, et al., 2007; Luyckx, Goossens, Duriez, & Vansteenkiste, 2009; Vignoles, 2011). Researchers begin with the assumption that who one thinks they are and who they show the world they are (identity) might influence and interact with how their behavior is motivated and regulated. Behaviors, thoughts and feelings relevant to the self-concept (self-esteem) subsequently affect an individual's sense of well-being or ill being. Further, the style of motivation will influence an individual's ability to satisfy certain innate and irreducible psychological needs (Ryan, Kuhl, & Deci, 1997; Ryan & Deci, 2000).

There is preliminary evidence to suggest a link between stable identities and the satisfaction of both psychological needs and psychological well-being (Deci & Ryan, 2008; Ryan & Deci, 2000; Vignoles, Gollidge, Regalia, Manzi, & Scabini, 2006). A stable or achieved identity, one that has been both thoroughly explored and committed to, may have a greater

likelihood of demonstrating an internal style of motivation and consequentially satisfying existing psychological needs. Likewise, those with unstable identities, who lack an understanding of who they are or have not committed to an internalized view of themselves, would presumably have difficulty satisfying innate psychological needs and might remain focused on external influences to regulate their behavior. Apart from factors that influence both identity formation and well-being separately, there is an interest in understanding how the two might be influenced by common factors.

Person in Context

Few recent studies have examined differences in reported identity statuses for those who choose to enter work over school. Adams (2010) reported that an earlier study (Munro & Adams, 1977) found support for the hypothesis that the work environment may stimulate movement toward identity formation. In this small study ($N = 57$) a majority of college students between the ages of 18-21 were found to be in a diffuse status compared with working youth of the same age who were in either achieved or moratorium statuses. Further analysis revealed, however, that ideological (religious and political) differences accounted for status differences above occupational commitments. Mixed results were also reported by Marcia, et al., (1993) in two studies by Morash (1980) and Archer and Waterman (1980).

Consistent with Erikson's view (1950) that identity formation is a psychosocial phenomenon, there remain unanswered questions regarding what impact particular social environments have on identity formation. One preliminary way to measure that impact might be by evaluating the congruency between an individual and the environment in terms of an individual's level of satisfaction. The rationale for measuring satisfaction begins with an assertion that satisfaction within social environments will vary considerably with how

accommodating the environment is. A higher measure of congruence between an individual and the environment, from the individual's perspective, validates not only the environment but also their identity. In other words, a satisfied individual is simultaneously satisfied with the environment and presumably, by extension, their identity.

Restated, satisfaction in general implies some measure of stability within the person/environment system. From an "identity status" perspective, identity changes are not likely to be as evident if there is no external (environmental) or internal (intrapsychic) pressure to change. Instability within the system however, might prompt an individual to accommodate environmental demands by regulating their behavior in some way. An alternative solution might be to attempt to leave or change the environment. Identity changes might occur if neither of the two preceding solutions is tenable. This represents a third possibility and captures the connotation of *crisis* now termed exploration in the moratorium status.

To illustrate this from an identity style perspective, a person who avoids processing identity relevant information (Avoidant-Diffuse Style) will likely continue with this strategy if they are satisfied in their current environment. Conversely, individuals may show substantial engagement in how they approach this process (Informational Style) if unsatisfied. One would expect to see significant differences between groups as a function of their subjectively experienced environmental condition. Specifically one would expect to see less certainty (commitment), more searching (exploration) and more confused (diffuse) individuals within a dissatisfied group.

With this rationale, one would expect to find a higher rate of change or instability within identity statuses for those who have experienced a disruption within their environments or extreme threats and challenges to their beliefs, attitudes, values and behaviors. This effect should

be separate from the effect that time and the natural processes of aging and maturation have on those individuals. A relatively benign environment, while not totally void of external pressures, should reflect stability of identity or less change in terms of status. How satisfied an individual is in their environment can be viewed as a reflection of the level of disruption or threat/challenge an individual experiences. The rationale for inclusion of a measure of satisfaction then, follows from the assumption that there are expected associations between how satisfied an individual is in a given environment and their current identity style and status.

Psychological Needs Satisfaction

Satisfaction can be measured in various ways (Ryan & Deci, 2001; Waterman, 1993, 2008). The most often is through subjective measures of well-being, happiness or life satisfaction. These measures provide a subjective appraisal of a person's current and/or past state of well-being, but often it is without any degree of specificity as to what areas are being satisfied or why. There do exist, however, less direct measures of well-being that are both theoretically and empirically linked to satisfaction (Ryan, 1995; Ryan & Deci, 2000). Physical and biological needs are somewhat obvious with regard to the effect on a person's health. Less obvious, but no less important, are psychological needs or needs that describe innate and irreducible conditions for the psychological health of an individual. One theory that describes the mechanisms by which these psychological needs operate and affect individuals is Self Determination Theory (Deci & Ryan, 1985; Ryan, Kuhl & Deci, 1997).

Self- Determination Theory

Self Determination Theory (SDT) assumes that humans have an innate desire to be active agents in the construction of meaning and purpose for themselves in the context of their environment and the activities they pursue (Ryan, Kuhl & Deci, 1997). SDT is further described

as an organismic metatheory that attributes a person's tendency to self-motivate and consolidate a stable personality (identity) to the innate desire to satisfy three psychological needs. In this manner, individuals foster environments that allow them to grow to optimal levels of functionality. SDT proponents also contend that the three enduring and irreducible psychological needs that individuals strive to fulfill are, autonomy, relatedness and competence. Finally, the thwarting of these needs has been shown to cause a sense of dysphoria that over time and depending on the developmental context, may lead to disorders of thought and emotion throughout the lifespan (Deci & Ryan, 2008; La Guardia, Ryan, Couchman & Deci, 2000).

SDT also proposes that the satisfaction of psychological needs will influence the type of motivation an individual experiences in the context of the activities in which they engage (Deci, et al., 2001). An intrinsically motivated individual inherently enjoys an activity or activities that are required or established within a group (Ryan & Deci, 2000). This is also true in the context of activities that the individual spontaneously enjoys and participates in irrespective of group affiliation. Not surprisingly, the need for relatedness is also met when those activities are enjoyed with others who identify with similar values, attitudes, beliefs and behaviors. In the domain of work, interactions between self and others are apparent. The same can be said for other group-oriented domains like religion, politics and academics. Finally, SDT proponents believe that the more satisfied individuals are with respect to meeting their psychological needs, the more intrinsically motivated to perform an activity they will be (Ryan & Deci, 2000).

Extrinsically motivated individuals experience less autonomy, relatedness and competence while engaged in activities when the activity provides little or no inherent enjoyment. At the furthest range of the extrinsic continuum lie apathetic individuals who must be coerced in some way to perform an activity (Ryan & Deci, 2000). This extreme end of

extrinsically motivated individuals is, not surprisingly, the least satisfied in terms of well-being. It is worthwhile to note that each of the three psychological needs have independent as well as interactive effects with regard to the type of motivation and the degree of satisfaction and well-being that are experienced. This may be particularly true when the activity is in the context of group affiliations. Environments that have strong, value-laden or institutionalized beliefs and attitudes within their framework may have greater implications for needs satisfaction when they conflict with individual attitudes, values, beliefs and goals.

In the context of identity research, motivation becomes more salient from the standpoint that a psychosocial approach to identity implies interaction with others. The domains in which people most often interact with others, particularly in formative identity age groups, include, for the most part, work environments and academic institutions. Identity viewed in this way is more complex. It is no longer exclusively a cognitive (ego), experiential perspective. It encompasses behavioral and motivational aspects as well. Identity in this context is: “who I am and who I show myself to be to others in the context of what I do and why I do it.”

In two separate studies, identity processes were examined in the context of Self Determination Theory. Luyckx, Goossens, Duriez & Vansteenkiste (2009) found evidence for the relation of psychological needs to the identity statuses in a study with high school and university participants ($N = 714$). The achieved status showed the strongest correspondence to the satisfaction of all three needs, and a reciprocal effects model received the most support between both psychological needs and the identity dimensions. Previously, Luyckx, et al., (2007) found moderating effects for outcomes associated with identity commitment, identity integration, self-esteem and well-being ($N=263$). Autonomy played a positive moderating role for informational style participants with respect to the examined outcome variables.

The quality of motivation that individuals experience may indicate their evaluative stance with regard to identity. In many ways this approach takes Erikson's three levels of identity and rates the individual's satisfaction with that identity within the social environment. An innately satisfying fit with a given environment may be determined by how autonomous the individual feels in that environment, how competent they perceive themselves to be, and the level of belongingness they experience with others. A stable (good fitting) identity should satisfy all three needs and an unstable identity (poor fit) should not.

Statement of the Problem

The purpose of this study is to: (1) to assess if the traditional relation between identity style and identity status can be replicated in a military population; (2) to examine whether existing instruments can be used to determine that relation; (3) to determine whether psychological needs satisfaction is associated with an intact, stable identity across different groups; and (4) to explore the associations between identity stability across and within different institutional groups. Several factors were considered in selecting a population for this study. They are discussed below.

With regard to identity development in career domains, an intuitive perspective regards those who self-select into highly structured occupations with predetermined role expectations as being more secure and committed to their identity. However, commitment represents only one dimension of the identity status paradigm. The level of exploration may be less reliably expected in such an environment. For example, a typical first year university student may possess less clarity or commitment to life and work identities than an individual who has selected an apprenticeship or skilled trade program of instruction. However, the student may be freer to explore a range of ideological, career and lifestyle opportunities. In selecting a comparison to

this group, I chose a population that exhibits the characteristics of similar demographic structure but well-defined work related features. Further, it was deemed important to select a group that belongs to an institution or organization having similar affiliation characteristics (i.e. group membership).

I also chose a population that is unique in the relation that identity may have with matters of well-being and health. Groups who incur a higher degree of risk for experiencing psychological distress may be particularly susceptible to identity disturbances. The desired characteristics of the populations described, (demographic representativeness, tight organizational structure and higher degrees of embedded risk), corresponds well to one particular group among the overall population of emerging adults.

The Reserve Forces of the United States Army are the target population for this study. In addition to contributing to the identity research base for emerging adults, choosing this population expands our understanding of military service members and the unique diversity of their experiences. The examination of this special group is particularly important in the current historical context following nearly ten years of continuous warfare. While military service members are consistently portrayed in the context of media reporting and, increasingly, cinematic and dramatic representations of their experience, rarely are opportunities for close study permitted. The opportunity, therefore, for the collection and analysis of a diverse data set of significant size and representativeness is both fortunate and timely.

A comparison of Reserve Components of the US Army with traditional university students shows a notably similar age structure. The total number of Service Members between the ages of 18-24 approaches 50% (Office of Army Demographics, 2009). When 25-29 year olds, the upper limits of emerging adult populations (Arnett, 2000) are included, it represents the majority of

Service Members in the Reserve Components. This age range is similar to the average age (18-24) of college and university students.

A second similarity in both groups is the prevalence of mental health distress. Recent studies suggest a substantial increase in the prevalence of mental health distress reported by college attending emerging adults (American College Health Association National College Health Assessment Spring, 2006). Likewise, the prevalence of psychological distress among post-deployment service members throughout all components of the Armed Forces are by some estimates currently exceeding 50% (Tanielian, & Jaycox, 2008). Moreover, in both groups there is a reluctance to seek help due to stigma. While there are intensely different environmental influences at work within the starkly contrasted settings, the resonating feature they both share is the striking opportunities for identity related changes to, in fact, occur. Examining psychological needs in the context of identity changes rather than psychopathology is remarkably important if it helps to overcome the associated stigma of mental illness.

In the context of the present study and the two populations of interest, the proposed identity-motivation conceptual framework can easily be illustrated by contrasting two hypothetical cases. Imagine first a 23-year-old undergraduate with no work experience, an unexplored and dispassionately pursued degree and no prospects for future income or career. He may cling to his friendships and academic identity while approaching a crisis internally as graduation nears. His identity is intact but disintegrating. Soon his relationships, his perceived competence, his sense of control may dissipate if a newly constructed identity or his current one is not applied to a new context in the working world. He may then become dysregulated with either a poorly constructed foreclosed (career) identity or an obsolete (academic) identity.

Alternatively, a 21-year-old female Soldier recently returned from combat may have performed remarkably in the face of life-threatening danger, survived in a terrifying and austere environment and received the adulation of family and friends. In beginning her pursuit of an academic degree full time she may feel proud, competent and in control of herself and her actions. She might navigate academic and institutional obstacles with ease; however, she may not feel connected to the students her age who neither recognize her achieved “Soldier” identity nor respond to her in the manner she enjoyed in the company of other Soldiers. She may begin to feel invisible, misunderstood, and angry. Her identity is intact, but it *will not* disintegrate. Soon her relationships, perceived competence and sense of control may dissipate if a newly constructed identity or her current one cannot return to or recreate the environment she feels most connected with, the combat environment. She may also become dysregulated with either a poorly constructed foreclosed (academic) identity or an obsolete and persistent (combat-veteran) identity.

In both these examples, the individual may not perceive their distress as resulting from mental illness. By those around them, however, their distress may be attributed to any number of causes, most often psychopathology. Distressing, but otherwise healthy and expected developmental phenomena are rarely considered. As previously mentioned, the stability of identity or the confidence an individual has to re-construct their self-concept if necessary would intuitively have implications for well-being. It has been demonstrated that an achieved identity is related to having a greater sense of agency with regard to how individuals determine the course of their present and future life outcomes (Schwartz, Côté, & Arnett, 2005). It less clear whether differences in opportunities for identity exploration have consequences for those who choose a different path. A substantial part of the thesis of emerging adulthood rests on the assumption that

18-25 year-olds are at a critical point of identity exploration in terms of their demography and subjective self-appraisals (Arnett, 2000). It should not be overlooked then that the age group with the highest prevalence of psychological distress within the armed forces currently is also 18-24 year olds (Institute of Medicine, 2010).

More recently, a report released from U.S Army (2010) indicated that there is a relation between this age group and other psychosocial variables, particularly with regard to risk-taking behavior. Arnett (2000) identified risk-taking behavior as an indicator that separates emerging adults from those who have transitioned to adulthood and achieved an identity. The measurement of identity then, is an appropriate starting point for a preliminary investigation between these groups. Their respective differences, shared processes and motivations with regard to identity formation will be measured and examined for expected correlations and associations. If identity formation and change is to be understood and applied generally, then it is advisable to properly measure it in populations that may benefit most.

The chosen populations were categorized as follows. Group A was comprised of VCU undergraduate students with no military service history. Group B was categorized into four separate groups. Group 1B was comprised of contractually obligated National Guard service members who have no substantive military experience (RSP). Group 2B was comprised of National Guard service members with more than 60 days of military experience but no combat experience. Group 3B is comprised of National Guard service members with past combat experience (more than one year since combat exposure). Group 4B was comprised of National Guard service members with recent combat experience (less than one year since exposure).

General Hypotheses

The identity formation process, while beginning in adolescence, may continue through the lifespan as an individual's experiences accumulate and contextual changes within the environment occur. As the stability (status) of identity fluctuates, the process by which individual's engage in this process (style) has been shown to fluctuate in a predictable manner for traditional academic samples. It is suggested that this relation will be evident as well for samples having qualitatively different experiences and institutional affiliations.

Individuals who have a clear sense of who they are may be better able to adapt well within their current environment. As a diffuse identity represents the least optimal status for an individual's identity, this should be reflected in lower levels of satisfaction for meeting basic psychological needs. It was hypothesized that individuals who have neither explored their identity nor committed to an identity will report lower levels of basic psychological needs satisfaction across groups.

Environments that exert demands but satisfy certain psychological needs (workplace settings) may have a stabilizing effect on an individual's identity. Conversely, environments may destabilize identities when earlier commitments become challenged by novel experiences (e.g., combat experiences) and unbounded opportunities for exploration (e.g., university settings). It is suggested that novel experiences may initially decrease commitment levels within traditional identity domains. It was also hypothesized that entering the work force earlier has a stabilizing effect on identity as reflected by more commitment to an identity. While this was not a stated aim of the study, the above associations are expected to occur and may have implications for future studies.

Research Hypotheses

It was hypothesized that the traditional correlations between identity status and identity style will be replicated in a military affiliated population.

Hypothesis 1 (a): An Achieved identity status, as measured by the Objective Measure of Ego Identity Status (OMEIS-24), will be significantly, positively correlated with an informational identity style, as measured by Identity Style Inventory - Version 4 (ISI-4) across group B.

Hypothesis 1 (b): A Moratorium identity status, as measured by the OMEIS-24, will be significantly, positively correlated with an informational identity style, as measured by ISI-4 across group B.

Hypothesis 1 (c): A Diffuse identity status, as measured by the OMEIS-24, will be significantly, positively correlated with a diffuse/avoidant identity style, as measured by ISI-4 across group B.

Hypothesis 1 (d): A Foreclosed identity status, as measured by OMEIS-24, will be significantly, positively correlated with a normative identity style, as measured by ISI-4 across group B.

Hypothesis 2: A diffuse identity status is expected to reflect lower levels of psychological needs satisfaction. The defining feature of identity diffusion is avoidance or lack of exploration and commitment. While the individual circumstances provoking this stance may vary (i.e., enduring characteristics, current context, past experiences), it was expected that a lack of personal meaning and direction will influence the diffuse individual's perception of whether or not basic psychological needs have been met. Therefore, a diffuse identity status, as measured by

the OMEIS-24, will significantly predict lower reported levels of autonomy, relatedness, and competence (total psychological needs satisfaction) in group B. Likewise, a diffuse identity style, as measured by the ISI-4 will significantly predict lower reported levels of autonomy, relatedness, and competence (total psychological needs satisfaction) in group A and B combined.

Hypothesis 3 (a): Novel experiences such as recent combat exposure are expected to produce a disintegrating effect with respect to identity formation initially. It was hypothesized that this effect will be evident in the degree of differentiation with respect to commitment in the identity statuses. Specifically, within group B, Moratorium and Diffuse statuses will be significantly higher in Group 4B (recent combat), while Achieved and Foreclosed Statuses will be significantly higher in group 3B (past combat) than groups 1B (no experience), 2B (no combat experience) and 4B (recent combat experience).

Hypothesis 3 (b): More opportunity for exploration and less demand for commitment to values and goals in a university setting is expected to produce a disintegrating effect with respect to identity formation. It is hypothesized that this effect will be evident in the degree of differentiation with respect to commitment in the identity statuses. Specifically, Moratorium and Diffuse statuses as measured by OMEIS-24 will be over-represented in Group A (VCU undergraduates), while Achieved and Foreclosed Statuses as measured by OMEIS-24 will be significantly higher in Group B (National Guard).

Method

Participants

Demographic data are summarized in Table 1. The participants ($N = 286$) were comparable to the Virginia population in terms of their racial and demographic characteristics.

Ages were restricted to 18-25 year olds. International participants, participants who spoke another 1st language, incomplete surveys and VCU undergraduates with military experience were excluded from the study. Participants were differentiated by two criteria as previously described. The first criterion was membership in one of two institutional settings, an academic institution (Virginia Commonwealth University undergraduates) and a military institution (National Guard Service Members). The second criterion was level of military experience.

Design

This study is a descriptive, non-experimental survey design. The aim of the study was to identify group differences in measures of identity as well as replicate associations between measures previously established in academic populations. This study used three validated pen and paper self-report measures.

Measures

Identity Status was measured using the Objective Measure of Ego Identity Status (OMEIS- revision, 2010), a 6-point Likert-type scale assessing specific content domains of politics, religion and occupation (Adams, 2010). The scale contains 24 items with subscales representing four identity statuses (Diffusion, Foreclosed, Moratorium and Achieved). Sample questions are, "I haven't made up my mind about religion because I'm not done exploring options (Moratorium); "My parents decided what occupation I should have and I'm following their plans for me (Foreclosure). Cronbach's alpha for the four subscales have been reported as: .88 (Diffusion), .84 (Foreclosure), .91(Moratorium) and .90 (Achievement).

Identity style was measured using the Identity Style Inventory - Version 4 (ISI-4), a 5-point Likert-type scale assessing style of information processing related to identity relevant

topics (Smits, Berzonsky, Soenens, Luyckx, Goossens, Kunnen, & Bosma, 2008). The measure contains 24 items assessing a responder's identity style as having a normative, diffuse-avoidant, or informational orientation, as well as a 9-item subscale measuring level of identity commitment. Sample questions are, "I'm not sure where I'm heading in my life; I guess things will work themselves out." (Diffuse-Avoidant Style) and "Talking to others helps me explore my personal beliefs" (Informational Style). Luyckx, Lens, Smits & Goossens (2010) obtained Cronbach's alphas for information-oriented, normative and diffuse-avoidant styles of: .78, .74 and .77, respectively.

Psychological needs assessment was measured using the Basic Needs Satisfaction in General scale. This scale, adapted from Ilardi, Leone, Kasser, & Ryan (1993), is a 7 point Likert-type scale assessing the domains of competence, relatedness and autonomy. There are 21 items in this scale. Sample questions are; "People I know tell me I am good at what I do" (competence) and "There is not much opportunity for me to decide for myself how to do things in my daily life." (autonomy). This adapted scale has been validated in two separate studies using samples of undergraduate students and military veterans (Gagné, 2003; Kashdan, Julian, Merritt, & Uswatte, 2006). This scale has demonstrated acceptable psychometric properties for each of the domains subscales reporting Cronbach's alphas of .69 (Relatedness), .83 (Competence) and .61 (Autonomy), but has higher reliability estimates (.89) when combined and averaged as an index of total needs satisfaction(Deci, et al., 2001).

Procedure

Group A (VCU undergraduates) completed the questionnaires over the internet, in a setting of their choice as SONA participants. SONA is a voluntary program which gives course credit to enrollees for participating in research studies undertaken by VCU. Additionally, 14

VCU undergraduates completed the paper version of the questionnaire in a classroom setting to assess for any effects of survey method. In group 1B (no military experience), service members were assembled by their unit leaders and briefly informed by the researcher about the intent of the study and their option not to participate. Consent was implied for those who completed the questionnaire. After each participant indicated that they had completed the questionnaires, they were collected, screened for completion and the participant was thanked and dismissed.

All materials were collected, safeguarded and securely transported to Virginia Commonwealth University psychology department computer laboratory for compilation and analysis of the data. In group 2B, 3B and 4B (no combat experience, past combat experience and recent combat experience), participants were administered the questionnaires in an identical fashion as Group 1B. Data collection for groups 1B-4B ($n = 192$) occurred during a regularly scheduled training assembly (drill) day in various locations across Virginia. Participants were selected by the Virginia National Guard according to their needs and convenience. National Guard personnel directors coordinated directly with researchers to arrange specific times and locations of each data collection. Unit liaisons assisted researchers by providing classroom settings to conduct the data collection. Units selected for participation included a Transportation unit, an Engineer unit, an Infantry unit and a group with no specific unit affiliation or substantive military experience (contractually obligated).

Response bias is the major threat to reliability and subsequently to the external validity of this analysis. Due to the highly controlled and authoritarian environment within the Armed Services, it is possible that some participants in the National Guard sample might feel obligated to respond in a manner that is desirable to superiors ranked above them. In an effort to control for this possibility, assurances were made to Service Members that participation is both

anonymous and voluntary. Administration of the measures were made in a non- coerced environment by an administrator unaffiliated with the Service Member's chain of command (supervisors). Additionally, Service Members can be easily influenced by significant morale events (e.g., pending deployments, death of unit member, group disciplinary actions), that may affect the style of response to items on questionnaires. To control for this possibility, interviews within the chain of command about such events were conducted as well as appropriate statistical techniques.

Plan of Analysis

SPSS version 19.0 was used to analyze the data. The data were entered by the experimenter, and appropriate statistical analyses were performed to determine associations between all groups on each of the three measures. The categorical variable, Identity Status, was created for the National Guard sample by computing each participant's subscale score within the OMEIS-24. Original validation studies (Adams, 2010) computed cutoff values based on one standard deviation above the mean. Following the author's recommendations, these values were used to assign participants to one of four categories: diffuse, foreclosed, moratorium or achieved. A fifth category, undifferentiated, captured scores falling below all cutoff values.

Following preliminary analyses, a correlational analysis was conducted to determine whether traditional relations between identity style and status were replicated in the military groups (1B-4B). Multilevel modeling was used to determine whether psychological needs satisfaction was significantly predicted by an unstable identity style and/or status (Diffuse/Diffuse-Avoidant) across groups. Logistic Regression and Analysis of Variance were conducted to determine whether level of identity commitment predicted group membership and determine group differences. Confounding variables were investigated with appropriate

statistical techniques in preliminary analyses as well as in the main analysis. Participant demographics are provided in Table 1.

Table 1

National Guard and VCU Undergraduate Characteristics as a Percentage of the Sample

Characteristic	National Guard (<i>n</i> = 192)	Virginia Commonwealth Univ. (<i>n</i> = 94)
Age Category (% sample)		
18-19	23.4	53.8
20-21	31.3	31.9
22-23	23.4	12.1
24-25	21.9	2.2
Gender (% sample)		
Female	27.1	44.7
Male	72.9	55.3
Race (% sample)		
Caucasian	68.2	48.9
African-American	16.7	28.7
Latino/Latina	2.6	3.2
Asian/Pacific Island	2.6	14.9
Other/ More than one	9.9	3.2
Work >20 hours (% sample)	67.2	7.4
Full-Time College (% sample)	46.4	100
Marital Status (% sample)		
Married	11.6	2.1
Divorced	4.7	0
Never Been Married	83.7	97.9
Parent (% sample)	18.3	4.3
Rank (% sample)		
E4 and below	94.3	
E5 and above	5.7	
Combat History (% sample)		
Never	71.3	
Recent (< 12 Months)	16.7	
Past (> 12 Months)	12.0	
Unit Affiliation (% sample)		
Transportation	34.9	
Engineers	21.9	
Infantry	19.3	
RSP	24.0	
Year in School (% sample)		
1 st year		47.9
2 nd year		14.9
3 rd year		22.3
4 th year		14.9

Results

In this study, I examined (a) whether the traditional relation between identity style and identity status can be replicated in a military population with existing instruments; (b) whether psychological needs satisfaction is associated with an intact, stable identity between different groups; and (c) associations between identity commitment (stability), selected subject variables and group membership.

Preliminary Analysis

SPSS 19 was used in all analyses. First, the data were screened for missing responses. As the data were nested within institutions and units, group mean substitutions were used for National Guard and VCU participants with missing data (15 items) on all scales and subscales. Data were examined for outliers, normality, linearity and independence. Tests for normality using skewness or kurtosis values above one showed that all variables were acceptable. With the exception of one analysis, outliers were retained as they were better explained by non-normality of the variables rather than not belonging to the target population.

Two institutions comprised of National Guard service members ($n = 192$) and Virginia Commonwealth University undergraduates ($n = 94$) remained after removing participants meeting exclusion criteria for age, language, nationality, academic status and service history. Means and Standard Deviations by gender for psychological needs and identity commitment level are provided in Table 2.

Table 2

Psychological Needs and Identity Commitment Level by Institution and Gender

Statistic/Variable	<u>National Guard (not in college)</u>		<u>VCU Undergraduates</u>	
	Men (<i>n</i> = 82)	Women (<i>n</i> = 21)	Men (<i>n</i> = 42)	Women (<i>n</i> = 52)
<i>M</i>				
Identity Commitment	37.23	37.24	32.83	34.29
Psychological Needs Index	5.45	5.19	5.16	5.07
<i>SD</i>				
Identity Commitment	5.46	4.97	6.06	6.17
Psychological Needs Index	0.76	0.92	0.83	0.92

Before combining institutions into one group, separate analyses were performed on each institution sample. For the National Guard sample, a two-way independent analysis of variance was conducted to determine group differences between the dependent variable and independent variables of interest. There was a small but significant main effect of unit affiliation, $F(2,184) = 3.62, p = .01, \eta_p^2 = .06$, and full-time college participation, $F(1,184) = 6.10, p = .01, \eta_p^2 = .03$ on psychological needs satisfaction.

Post-hoc comparisons using the Tukey HSD test indicated that the mean score for total psychological needs satisfaction was higher for the Engineer unit ($M = 5.73, SD = .58$) compared to RSP service members ($M = 5.28, SD = .78$). There were no significant differences between the Infantry unit and the Transportation unit or other units for psychological needs.

The main effect for full-time college participation on level of psychological needs revealed that National Guard participants in college full-time ($M = 5.59, SD = .77$) scored significantly higher than those not in college full-time ($M = 5.39, SD = .80$). The interaction between full-time college participants and unit affiliation was not significant.

To determine whether any significant differences existed between VCU participants who used different survey methods (online survey or paper version) and between VCU participants with different class standing (1st - 4th year), a multivariate analysis of variance was performed. There were no statistically significant differences between survey methods ($p = .97$) or between 1st-4th year students ($p = .39$) for level of psychological needs, level of identity commitment and level of diffuse identity style. The interaction between survey methods and class standing was also not statistically significant ($p = .88$).

After combining the National Guard sample and VCU sample ($N = 286$), a two-way independent analysis of variance was conducted to determine group differences between the dependent variable and independent variables of interest. There was a significant main effect of gender, $F(1,275) = 4.05$, $p = .05$, $\eta_p^2 = .01$ on psychological needs satisfaction, a small effect. The main effect for gender on level of psychological needs revealed that men ($M = 5.46$, $SD = .79$) scored significantly higher than women ($M = 5.18$, $SD = .83$). There were no statistically significant difference between ages ($p = .22$) for level of psychological needs. The interaction between age and gender was also not statistically significant ($p = .81$).

Unit affiliation, age, gender and academic participation were regarded in subsequent analyses as potentially confounding variables. Further analyses were performed on the institutional groups individually as well as combined. The rationale for analyzing groups separately and together follows from the specific hypotheses determined prior to collection of data.

Main Analyses

Hypothesis 1 (a).

An Achieved Identity status was significantly, positively correlated with an Informational Identity style in group B (National Guard Service Members) $r = .19$ $p < .01$. The hypothesis was supported.

Hypothesis 1 (b).

A Moratorium Identity status was not significantly, positively correlated with an Informational Identity style in group B, (National Guard Service Members) $r = -.002$ $p > .05$. The hypothesis was not supported.

Hypothesis 1 (c).

A Diffuse Identity status was significantly, positively correlated with a Diffuse Identity style in group B, (National Guard Service Members) $r = .36$ $p < .01$. The hypothesis was supported.

Hypothesis 1 (d).

A Foreclosed Identity status was significantly, positively correlated with a Normative Identity style in group B, (National Guard Service Members) $r = .46$ $p < .01$. The hypothesis was supported.

Hypothesis 2.

In group B (National Guard Service Members), a diffuse identity status significantly predicted lower reported levels of total psychological needs satisfaction, $F(1,192) = 13.9$, $p < .001$; $b = -.04$. Full-time college participation did not significantly predict total psychological needs satisfaction ($p = .36$). The contextual variable, unit affiliation, was included in the model to assess for significant level two effects of nested data within units. It was assumed that the intercepts, but

not the slopes, between predictor and outcome variables would vary across units. Accounting for varied intercepts did not produce a significant improvement in the model $\Delta\chi^2(1) = 2.41, p > .05$.

Likewise, a diffuse identity style as measured by the ISI-4 in the combined groups A (VCU undergraduates and B (National Guard Service Members) significantly predicted lower reported levels of total psychological needs satisfaction, $F(1, 283) = 82.41, p < .001; b = -.07$. Age did not significantly predict total psychological needs satisfaction ($p = .27$). The contextual variable, military service was included in the model to assess for significant level two effects of nested data within institutions. Accounting for varied intercepts did not produce a significant improvement in the model $\Delta\chi^2(1) = 1.53, p > .05$. Hypothesis 2 was supported.

Hypothesis 3 (a).

It was determined that the assumption for expected frequencies was insufficient to proceed with the intended chi square analysis for this hypothesis; therefore, an alternative analysis was selected. A standard logistic regression analysis was conducted to assess whether level of commitment to identity and full-time college participation significantly predicted whether a Service Member had recently been exposed to combat. Considered individually the predictor variables did not significantly predict recent combat exposure, ($p = .47$ and $.53$ respectively). Considered together the overall model was not significant, $\chi^2 = 3.85, p = .28$. The degree of differentiation with respect to commitment in identity was not significantly reflected between group 4B (recent combat) and remaining groups 1B-3B. The hypothesis was not supported.

Hypothesis 3 (b)

It was determined that the assumption for expected frequencies was insufficient to proceed with the intended chi square analysis for this hypothesis; therefore, an alternative analysis was selected. Full-time college VCU and National Guard participants were combined into one

category ($n = 183$) A two-way independent analysis of variance was conducted to determine group differences between the dependent variable and independent variables of interest. There was a significant main effect for military affiliation on commitment to identity, $F(1,179) = 19.88, p < .001, \eta_p^2 = .10$, a small to moderate effect. There was no significant main effect for full-time work on commitment to identity ($p = .96$). The interaction between military affiliation and full-time work was also not significant ($p = .54$). The main effect for military service on Identity commitment revealed that in this sample, full-time college students who were also affiliated with the military ($M = 38.90, SD = 4.74$) scored significantly higher than VCU undergraduates not affiliated with the military ($M = 33.64, SD = 6.13$). The hypothesis was partially supported.

Due to poor reliability among Identity Status subscales in the VCU undergraduate sample, intended analyses for Hypothesis 2 and 3(b) using identity categories were not performed. The rationale for chosen subscales and statistical techniques are offered in the discussion section. Reliability estimates for subscales in all groups are reported in Table 3. Intercorrelations among all dependent variables for group B are reported in Table 4. Identity categories for Group B are found in Table 5.

Table 3

Reliability Estimates for Identity Subscales by Group

Index/Subscale	National Guard (<i>n</i> =192)	VCU (<i>n</i> =94)	Combined (<i>N</i> =286)
Identity Style			
Identity Commitment Style	.80	.83	.84
Normative Identity Style	.70	.77	.73
Diffuse Identity Style	.79	.69	.77
Informational Identity Style	.75	.74	.75
Identity Status			
Diffuse Identity Status	.69	.52	.64
Foreclosed Identity Status	.73	.78	.75
Moratorium Identity Status	.71	.78	.74
Achieved Identity Status	.68	.68	.69
Psychological Needs Index			
Autonomy	.62	.64	.62
Competence	.65	.82	.73
Relatedness	.80	.82	.81

Table 4

Intercorrelations of subscales for group B

Variable	1	2	3	4	5	6	7	8	9
1. IScom	1								
2. ISIinf	.241**	1							
3. ISdif	-.534**	-2.09**	1						
4. ISnorm	.225**	.036	.181*	1					
5. ST-ach	.406**	.190**	-.151*	.111	1				
6. ST-mor	-.500**	-.002	.436**	-.030	-.461**	1			
7. ST-dif	-.358**	-.123	.361**	.057	-.476**	.436**	1		
8. ST- for	-.036	-.105	.272**	.455**	.142	-.028	-.113	1	
9. PN-ndx	.481**	.228**	-.412**	-.001	.319**	-.369**	-.279**	-.167*	1

Note $N = 192$. IScom = Identity Commitment; ISIinf = Informational Identity Style; ISdif = Diffuse Identity Style; ISnorm = Normative Identity Style; ST-ach = Achieved Identity Status; ST-mor = Moratorium Identity Status; ST-dif = Diffuse Identity Status; ST- for = Foreclosed Identity Status; PN-ndx = Total Psychological Needs Satisfaction

* $p < .05$, ** $p < .01$ (two-tailed)

Table 5

Identity Categories for Group B (National Guard) by Unit

Identity Category	RSP (n=43)	Transportation (n=67)	Engineers (n=41)	Infantry (n=37)	Total (% Category) (N=188)
Diffuse	3.7	6.4	4.3	4.3	18.6
Foreclosed	2.7	1.6	1.6	0.5	6.4
Moratorium	1.1	1.6	2.1	0.5	5.3
Achieved	7.4	6.9	6.9	6.9	28.2
Undifferentiated	8.0	19.1	6.9	7.4	41.5
Total (% Sample)	22.9	35.6	21.8	19.7	100

Discussion

In the present study, identity and basic psychological needs were examined in two populations, those affiliated with military service and an academic population that was not affiliated. The intent was to ascertain whether the relation between traditional measures of identity could be replicated with a population that was not exclusively academic. Additionally, this study sought to determine whether psychological needs satisfaction is associated with an intact, stable identity as measured by the commitment and exploration dimensions of identity as proposed by Marcia (1966). Finally, I wanted to explore identity stability, as measured by commitment (Berzonsky, 1992, 2008), between different institutions and within institutional groups.

Results in this study generally supported the proposed hypotheses. In the military affiliated group, traditional correlations were replicated, although a moratorium identity status was not correlated with an informational identity style as proposed by the initial hypothesis. After review, it was found that the specific hypothesis was still consistent with previous empirical evidence, (Berzonsky & Kuk, 2000), which demonstrated that level of identity commitment can suppress the relation between the two subscales. This was not tested in the current study; however, intercorrelations of all eight subscales (Table 4) were also consistent with existing empirical evidence. Finally, reliability estimates for the military sample were adequate and supported the construct validity of the instruments in the population of interest. The reliable measurement of identity in this population is a meaningful first step toward understanding the identity formation process in non-traditional emerging adults.

As hypothesized, higher levels of diffuse identity status and style both significantly predicted lower levels of total psychological needs satisfaction across and within institutions. For military affiliated participants, the data were nested within units. In this sample, it did not appear to

affect the relation between predictor and outcome variables. This lends support to the theoretical proposition that identity and psychological needs are both universal phenomena robustly related to one another. If true, this suggests that identity formation, as a process related to well-being, is a ripe area for further study in populations other than exclusively academic ones.

An exploratory aim of this study was to investigate whether identity status categories reflecting lower levels of identity commitment (i.e., Diffuse and Moratorium) would be found in populations experiencing recent exposure to potentially disruptive life events. Secondly, it was of interest to know whether specific group characteristics (e.g., academic participation, military service) would demonstrate differential levels of reported commitment to identity. The results were mixed with regard to supporting these proposed hypotheses.

Whereas recent combat exposure did not significantly predict lower levels of identity commitment, it may be that the rationale for the hypothesis was flawed. It was assumed that recent combat exposure would be perceived as a disruptive (negative) life event, when participants may, in fact have other perceptions of the experience. In line with this, it may be that higher levels of identity commitment actually predict recent exposure to combat; however, this was not an a priori hypothesis and not tested. Additionally, the intended analyses were not used as lower than expected frequencies for recent combat participants ($n = 32$) were too low to test the hypothesis without violating assumptions. The assignment of the categories past (> 12 months) and recent combat (< 12 months) with regard to exposure was also somewhat arbitrary.

Likewise, Identity categories were not used for the second exploratory hypothesis, although the hypothesis was still supported by the results using a more reliable subscale. Among all full-time college participants, military affiliation significantly predicted higher levels of identity commitment than non-affiliated VCU undergraduates, after controlling for those who also worked

full-time. The results suggest that in this sample, military affiliation and not merely academic participation or working more than 20 hours per week, influences identity commitment more directly.

One unexpected discovery, was the high percentage of undifferentiated status participants in both the military (41.5%) and VCU sample (not reported). Adams (2010) suggests that this category of participants could represent a distinct class of diffuse identity, but the lack of theoretical clarity warrants caution when making inferences with this group. Transitional groups, those exceeding cutoff scores for two or more statuses, also represented a significant percentage of participants and were collapsed into the least organized status as recommended by the scale's author. Adams (2010) demonstrates in longitudinal studies that while there is a general progression among undergraduate students over periods of three years, this can often be a two-step process of differentiation and integration.

The results of this study suggest that while identity may be complex conceptually and difficult to measure as a unitary construct, it is neither unimportant nor limited by its traditional use in academic settings. As identity formation is considered by many to be a life-span endeavor with implications for psychological health and well-being, this research perspective has potential for informing many clinical and programmatic interventions in a variety of populations.

Future Directions

Identity is frequently thought of as a psychological phenomenon that entails various conscious and unconscious cognitive processes within the individual. Many perspectives, in fact, are converging on the idea of identity formation as a motivational system (Gregg, Sedikides & Gebauer, 2011; Vignoles, 2011). However, as emerging literature also suggests (Chen, Boucher & Kraus, 2011), identity formation is as much a dynamic interpersonal process, and likely involves

not just the individual's intrapsychic experiences and drives, but also interactions with the environment in the form of relationships. This is consistent with an organismic conceptualization that involves both constructive cognitive processes and integrative or assimilative processes (Ryan, 1995). It is also analogous to anchoring and then adjusting to one's self-commitments that are subsequently challenged within the individual's social setting. In simpler terms, once an identity has been committed to, it must thrive, adapt or perish within some context.

The high number of undifferentiated participants while unexpected is not necessarily surprising or indicative of problems in scale reliability. The present study endeavored to lay the groundwork for future investigations into what occurs when committed-to identities suffer some insult or disintegrative experience. Identity stability is a concept that has not been measured in precise ways though it is often conceived and discussed in terms of commitments (Marcia, 1966, Berzonsky, 2003b) or self-concept clarity (Campbell, et al., 1996). Other researchers (Brewer & Roccas, 2001; Kroger, 2004) focus on the balance between maintaining ones socially derived needs for distinctiveness and competing, simultaneous desire for inclusion. Howsoever it is discussed; identity stability remains elusive to measure, though it continues to be discussed as though it were a universal phenomenon.

It is possible that this difficulty results from unintentionally merging two distinct phenomena of identity that might best be represented by two. A constructive component, ending with commitment, and a regulation component that functions to address problems with the newly constructed identity may better describe the differentiation and integration process mentioned earlier (Adams, 2010). This would seem to explain higher percentages of undifferentiated individuals within the sample as one can be undifferentiated but still unstably integrated into one's social environment. This might also explain how Erikson (1960) seemed perplexed by returning

Soldiers who had answered the question “Who am I?” (cognitively differentiated) but still could not keep their lives together (socially disintegrated). Their constructed (ego) identities could no longer be regulated in a social setting that could not comprehend, relate to and/or value their experiences. If the identity formation phenomenon and identity stability are better represented by a construction-regulation system each potentially being stable or unstable, then future investigations into which aspect is disturbed might clarify the clinical conceptualization of those in distress. It may also present unique intervention opportunities for reformulating a crisis (instability) of identity as a reorganizing process toward higher order stability (Danish & D’Augelli, 1980).

It was not a coincidence that this study’s selected motivational framework presented by Self Determination Theory is primarily concerned with self-regulation (autonomy) and self-construal (competence) in the context of self-other stability (relatedness). The qualitative distinction between those who are least self-determined (extrinsically motivated) and most self-determined (intrinsically motivated) is one of differences in the balance between those three basic needs (Deci & Ryan, 2000). One might be competent (positive self-construal), but poorly related to others (dysregulated) if perceived autonomy is low. One might feel incompetent (negative self-construal), but have their belongingness needs met by others (regulated) and experience a fragile sense of self that is dependent on remaining connected to close others.

Self-esteem may best represent the underlying process component of identity formation that has become destabilized in these examples. From an SDT perspective, self-esteem can be conceptualized in terms of contingent and true self-esteem (Ryan & Deci, 2004). Contingent self-esteem represents the extrinsically motivated form of self-esteem, and true self-esteem, the intrinsically generated form. Contingent self-esteem relies on externally derived sources to maintain high levels. Any threat to those sources represents also a subsequent threat to one’s

identity. Any negative self-construal potentially calls into question the validity of one's identity and may drive one to either reconstruct an identity around the threatening information or leave the environment (Pyszczynski, Greenberg, Solomon, Arndt & Schimel, 2004). For those who derive their self-esteem from feeling competent, autonomous and related, (intrinsically motivated), threats to external sources of self-esteem are often disregarded.

In the service member and student examples outlined in the introduction, the reduction in basic psychological needs satisfaction resulted from either the threat of removal or the actual displacement from the contextual situations that supported the individual's self-esteem. Self-esteem was contingent upon the environment and externally derived. It was a fragile system, and there are now few choices available to reenergize the system. One can change their self-constructed identity and seek out new supporting environments. One can try to find environments that will support the old identity, or one can languish. The choice may depend on how one's self-efficacy for reconstructing and reintegrating an identity is perceived and what prior experiences have prepared them when suddenly faced with the threat of self-esteem destabilization.

Limitations

There are several limitations to the present study. First, the study used a correlational, cross-sectional design that does not imply causality. It was descriptive in nature and should be interpreted with caution as to its generalizability to either population examined. Common source method variance is also potentially detrimental to validity. Although different collection formats (online and paper) were used, self-report measures were the sole method used to sample the population. Finally, the identity status scale demonstrated questionable reliability estimates on two subscales (diffusion and achievement), particularly within the academic population. This may have been a consequence of small sample size considering Adams (2010) demonstrated strong reliability

estimates in original validity studies ranging from .84 to .91 in a larger sample ($N = 1620$). Identity categories, therefore, were not used in the main analyses, though frequency counts by unit in the military sample are provided for descriptive purposes.

Summary

Identity style, identity status and basic psychological needs were reliably measured and applied to infer relations between aspects of identity in this sample. Group differences were also successfully explored in populations that have structurally different social settings and group-member expectations. While the results of this study should not be haphazardly generalized to other groups or institutions, the successful application of identity measurement in atypical emerging adult populations should give confidence and invite further investigation. The aims of this study were objectively met and will prepare the ground for other more refined studies to examine identity related phenomena and their correlates to well-being and psychological health.

Other recommended approaches to the study of identity formation might benefit from the assessment of individual perceptions of identity construction as an accessible process. Self-efficacy from a social-cognitive perspective (Bandura, 1997) is congruent with the identity style conceptualization and represents an open direction for the pursuit of new identity related research. The implications for clarifying the identity formation phenomenon as an activity that is available throughout the life span, removes it from the confines of adolescence where it originated. In line with a changing cultural viewpoint, that makes allowances for lengthy periods of exploration, this is an appropriate era historically to revisit Erikson's contribution to see how congruent those concepts remain. A new generation of emerging adults is in fact "in crisis" and may benefit in knowing that crisis originally connoted "crossroads" or decision point, not "emergency" as it is frequently understood today.

List of References

List of References

- Adams, G., (2010). *Ego-Identity Formation in Adolescence and Early Adulthood-Theory and Measurement*. Lexington, KY.
- Adams, G., & Marshall, S. (1996). A developmental social psychology of identity: Understanding the person-in-context. *Journal of Adolescence*, 19(5), 429.
- Adams, G., Munro, B., Doherty-Poirer, M., Munro, G., Petersen, A., & Edwards, J. (2001). Diffuse-Avoidance, Normative, and Informational Identity Styles: Using Identity Theory to Predict Maladjustment. *Identity*, 1(4), 307-320.
- American College Health Association National College Health Assessment Spring 2006 Reference Group Data Report (Abridged). *Journal of American College Health*, 55(4), 195-206.
- Archer, S., & Waterman, A. (1988). Psychological individualism - Gender differences or gender neutrality. *Human Development*, 31(2), 65-81.
- Arnett, J. (2000). Emerging adulthood: A theory of development from the late teens through the twenties. *American Psychologist*, 55(5), 469-480.
- Arnett, J. (2002). The psychology of globalization. *American Psychologist*, 57(10), 774-783.
- Arnett, J. (2009). The Neglected 95%, a Challenge to Psychology's Philosophy of Science. *American Psychologist*, 64(6), 571-574.
- Baumeister, R. (1987). How the Self Became a Problem: A Psychological Review of Historical Research. *Journal of Personality and Social Psychology*, 52(1), 163-176.
- Berzonsky, M. (1989). Identity style: Conceptualization and measurement. *Journal of adolescent research*, 4(3), 268-282.
- Berzonsky, M. (1990). Self-construction over the lifespan: A process perspective on identity formation. In G. J. Neimeyer & R. A. Neimeyer (Eds.), *Advances in personal construct theory* (Vol. 1, pp. 155-186). Greenwich, CT: JAI.

- Berzonsky, M. (1992). Identity style and coping strategies. *Journal of Personality*, 60(4), 771-788.
- Berzonsky, M. (2003a). The Structure of Identity: Commentary on Jane Kroger's View of Identity Status Transition. *Identity*, 3(3), 231-245.
- Berzonsky, M. (2003b). Identity style and well-being: Does commitment matter?. *Identity: An International Journal of Theory and Research*, 3(2), 131-142.
- Berzonsky, M., & Adams, G. (1999). "Reevaluating the identity status paradigm: Still useful after 35 years. *Developmental Review* 19(4), 557-590.
- Berzonsky, M., & Kuk, L. (2000). Identity status, identity processing style, and the transition to university. *Journal of Adolescent Research*, 15(1), 81-98
- Berzonsky, M., & Luyckx, K. (2008). Identity Styles, Self-Reflective Cognition, and Identity Processes: A Study of Adaptive and Maladaptive Dimensions of Self-Analysis. *Identity*, 8(3), 205-219.
- Berzonsky, M., Macek, P., & Nurmi, J. (2003). Interrelationships Among Identity Process, Content and Structure: A Cross-Cultural Investigation. *Journal of Adolescent Research*, 18(2), 112.
- Berzonsky, M., & Neimeyer, G.J. (1994). Ego identity status and identity processing orientation: The moderating role of commitment. *Journal of Research in Personality*, 28, 425-435.
- Chen, S., Boucher, H., & Kraus, M. (2011). The Relational Self. In Schwartz, Luyckx & Vignoles (Eds.), *Handbook of Identity Theory and Research, Vol. I*, (pp. 149-176). New York, NY: Springer.
- Compas, B., Connor-Smith, J., Saltzman, H., Thomsen, A., & Wadsworth, M. (2001). Coping with stress during childhood and adolescence: Problems, progress, and potential in theory and research. *Psychological bulletin*, 127(1), 87-127.
- Côté, J. E., (1996). Identity: a Multidimensional Analysis. In G. R. Adams, R. M. Montemayor, & T. P. Gullotta (Eds.), *Psychosocial Development During Adolescence* (pp. 130 -180). Thousand Oaks, CA: Sage Publications.
- Côté, J. (2002). The Role of Identity Capital in the Transition to Adulthood: The Individualization Thesis Examined. *Journal of Youth Studies*, 5(2), 117-134.
- Côté, J. E., & Schwartz, S. J. (2002). Comparing psychological and sociological approaches to identity: Identity status, identity capital, and the individualization process. *Journal of Adolescence*, 25, 571-586.

- Danish, S. J., & D' Augelli, A. R. (1980), Promoting Competence and Enhancing Development through Life Development Intervention. In L.A. Bond & J.C. Rosen (Eds.), *Competence and Coping During Adulthood* (pp. 105-129). Hanover, NH: University Press of New England.
- Deci, E., & Ryan, R. (1985). *Intrinsic Motivation and Self-Determination in Human Behavior*. New York, NY, Plenum Press.
- Deci, E., & Ryan, R. (2008). Facilitating Optimal Motivation and Psychological Well-Being Across Life's Domains. *Canadian Psychology*, 49(1), 14-23.
- Deci, E., Ryan, R., Gagné, M., Leone, D., Usunov, J., & Kornazheva, B. (2001). Need Satisfaction, Motivation, and Well-Being in the Work Organizations of a Former Eastern Bloc Country: A Cross-Cultural Study of Self-Determination. *Personality & Social Psychology Bulletin*, 27(8), 930.
- Epstein, S. (1980). The self-concept: A review and the proposal of an integrated theory of personality. In E. Staub (Ed.), *Personality: Basic aspects and current research* (pp. 81 – 132). Englewood Cliffs, NJ: Prentice-Hall.
- Erikson, E. (1950, 1963). *Childhood and society*. New York: Norton.
- Erikson, E. (1956). The problem of ego identity. *Journal of the American Psychoanalytic Association*, 456-121.
- Erikson, E. (1968). *Identity: Youth and crisis*. New York: Norton.
- Erikson, E. (1974). *Dimensions of a New Identity*. New York: Norton.
- Erikson, E. (1980). *Identity and the Life Cycle*. New York: Norton.
- Gagné, M. (2003). The Role of Autonomy Support and Autonomy Orientation in Prosocial Behavior Engagement. *Motivation & Emotion*, 27(3), 199-223.
- Gregg, A., Sedikides, C., Gebauer, J. (2011). Dynamic of Identity: Between Self-Enhancement and Self-Assessment. In Schwartz, Luyckx & Vignoles (Eds.), *Handbook of Identity Theory and Research, Vol. I*, (pp. 305-328). New York, NY: Springer.
- Grotevant, H, & Adams, G. (1984). Development of an objective-measure to assess ego identity in adolescence - Validation and replication. *Journal of Youth and Adolescence*, 13(5), 419-438.
- Henrich, J., Heine, S., & Norenzayan, A. (2010). The weirdest people in the world? *The Behavioral and Brain Sciences*, 33(2-3), 61-83.

- Hunt, J., & Eisenberg, D. (2010). Mental health problems and help-seeking behavior among college students. *Journal of Adolescent Health, 46*(1), 3-10.
- Ilardi, B., Leone, D., Kasser, T., & Ryan, R. (1993). Employee and Supervisor Ratings of Motivation: Main Effects and Discrepancies Associated with Job Satisfaction and Adjustment in a Factory Setting. *Journal of Applied Social Psychology, 23*(21), 1789-1805.
- IOM (Institute of Medicine). 2010. *Returning Home from Iraq and Afghanistan: Preliminary Assessment of Readjustment Needs of Veterans, Service Members, and Their Families*. Washington, DC: The National Academies Press.
- Kashdan, T., Julian, T., Merritt, K., & Uswatte, G. (2006). Social anxiety and posttraumatic stress in combat veterans: relations to well-being and character strengths. *Behaviour Research And Therapy, 44*(4), 561-583.
- Kelly, G. A. (1955). *The psychology of personal constructs*. New York: Norton.
- Kroger, J. (2000). Ego identity status research in the new millennium. *International Journal of Behavioral Development, 24*(2), 145-148.
- Kroger, J. (2003). What Transits in an Identity Status Transition? *Identity, 3*(3), 197-220.
- La Guardia, J., Ryan, R., Couchman, C., & Deci, E. (2000). Within-Person Variation in Security of Attachment: A Self-Determination Theory Perspective on Attachment, Need Fulfillment, and Well-Being. *Journal of Personality & Social Psychology, 79*(3), 367-384.
- Luyckx, K., Goossens, L., Duriez, B., & Vansteenkiste, M. (2009). Basic Need Satisfaction and Identity Formation: Bridging Self-Determination Theory and Process-Oriented Identity Research. *Journal of Counseling Psychology, 56*(2), 276-288.
- Luyckx, K., Lens, W., Smits, I., & Goossens, L. (2010). Time perspective and identity formation: Short-term longitudinal dynamics in college students. *International Journal of Behavioral Development, 34*(3), 238-247.
- Luyckx, K., Soenens, B., Berzonsky, M., Smits, I., Goossens, L., & Vansteenkiste, M. (2007). Information-oriented identity processing, identity consolidation, and well-being: The moderating role of autonomy, self-reflection, and self-rumination. *Personality & Individual Differences, 43*(5), 1099-1111.
- Marcia, J. E. (1966). Development and validation of ego identity status. *Journal of Personality and Social Psychology, 5*, 551 – 558.
- Marcia, J. E., Waterman, A. S., Matteson, D. R., Archer, S. L. & Orlofsky, J. L. (1993). *Ego identity: a handbook for psychosocial research*. New York: Springer-Verlag.

- Morash, M. (1980). Working-class membership and the adolescent identity crisis. *Adolescence*, 15(58), 313-320.
- Munro, G., & Adams, G. (1977). Ego-identity formation in college students and working youth. *Developmental Psychology*, 13(5), 523-524.
- Nurmi, J., Berzonsky, M., Tammi, K., & Kinney, A. (1997). Identity Processing Orientation, Cognitive and Behavioural Strategies and Well-being. *International Journal of Behavioral Development*, 21(3), 555-570.
- Office of Army Demographics. (2009). *Army Demographics Report for FY2005*. Retrieved May, 09, 2010, from <http://www.armyg1.army.mil/hr/demographics.asp>
- Pyszczynski, T., Greenberg, J., Solomon, S., Arndt, J., & Schimel, J. (2004). Why Do People Need Self-Esteem? A Theoretical and Empirical Review. *Psychological Bulletin*, 130(3), 435-468.
- Ryan, R. (1995). Psychological Needs and the Facilitation of Integrative Processes. *Journal of Personality*, 63(3), 397-427.
- Ryan, R., & Deci, E. (2000). Self-Determination Theory and the Facilitation of Intrinsic Motivation, Social Development, and Well-Being. *American Psychologist*, 55(1), 68.
- Ryan, R., & Deci, E. (2001). On happiness and human potentials: A review of research on hedonic and eudaimonic well-being. *Annual Review of Psychology*, 52, 141-166.
- Ryan, R., Kuhl, J., & Deci, E. (1997). Nature and autonomy: An organizational view of social and neurobiological aspects of self-regulation in behavior and development. *Development and Psychopathology*, 9(4), 701-728.
- Schwartz, B. (2000). Self-determination: The tyranny of freedom. *American Psychologist*, 55, 79-88.
- Schwartz, S. (2001). The Evolution of Eriksonian and ,Neo-Eriksonian Identity Theory and Research: A Review and Integration. *Identity*, 1(1), 7-58.
- Schwartz, S. (2005). A new identity for identity research: Recommendations for expanding and refocusing the identity literature. *Journal of adolescent research*, 20 (3), 293.
- Schwartz, S., Côté, J., & Arnett, J. (2005). Identity and Agency in Emerging Adulthood: Two Developmental Routes in the Individualization Process. *Youth & Society*, 37(2), 201-229.
- Schwartz, S, Mullis, R, Waterman, A & Dunham, (2000). Ego identity status, identity style, and personal expressiveness: An empirical investigation of three convergent constructs. *Journal of adolescent research*, 15 (4), 504-521.

- Smits, I., Berzonsky, M.D., Soenens, B., Luyckx, K., Goossens, L., Kunnen, S.E., & Bosma, H.A. (2008). The identity style inventory– 4. Internal research report, Catholic University Leuven, Belgium.
- Streitmatter, J. (1993). Identity status and identity style - A replication study. *Journal of Adolescence*, 16 (2), 211-215.
- Tanielian, T., & Jaycox, L. (Eds.). (2008). *Invisible wounds of war: Psychological and cognitive injuries, their consequences and services to assist recovery*. Santa Monica, CA: RAND.
- U.S. Army. (2010). *Health Promotion, Risk Reduction, Suicide Prevention Report*. Washington, D.C: Author.
- Vignoles, V. (2011). Identity Motives. In Schwartz, Luyckx & Vignoles (Eds.), *Handbook of Identity Theory and Research, Vol. I*, (pp. 403-432). New York, NY: Springer.
- Vignoles, V. L., Gollidge, J. J., Regalia, C. C., Manzi, C. C., & Scabini, E. E. (2006). Beyond self-esteem: influence of multiple motives on identity construction. *Journal of Personality & Social Psychology*, 90(2), 308-333.
- Waterman, A. (1993). Two conceptions of happiness - Contrasts of personal expressiveness (eudaimonia) and hedonic enjoyment. *Journal of personality and social psychology*, 64(4), 678-691.
- Waterman, A. (2004). Finding Someone to be: Studies on the Role of Intrinsic Motivation in Identity Formation. *Identity*, 4(3), 209-228.
- Waterman, A. (2008). Reconsidering happiness: a eudaimonist's perspective. *Journal of Positive Psychology*, 3(4), 234-252.
- William T. Grant Foundation Commission on Work, Family, and Citizenship. (1988). *The forgotten half: Non-college-bound youth in America*. Washington, DC: William T. Grant Foundation.

Appendix

Demographic Questionnaire

Please answer the following questions:

What is your age today? 17 18-19 20-21
 22-23 24-25 26+

What is your gender? Male Female

What is your Rank? E4 and below E5 and above Officer

What is your race? (Please check all that apply)

Caucasian/White African-American/Black Asian/Pacific Islander
 Latino/Latina Indian/Native American Other

Ethnicity: Hispanic Not Hispanic

What is your combat experience?

Have you ever been deployed to a Combat Zone for 30 days or longer?
Y___ N___

Have you been deployed to a Combat Zone in the last 12 months for 30 days or longer?
Y___ N___

What is your academic experience/status?

Are you enrolled full time at a college or university?
Y___ N___

If yes, are all of your classes over the internet?
Y___ N___

If you are a full time college or university student, are you participating in Reserve Officer Training Program (ROTC)? Y___ N___ N/A___

What is your current work status?

Do you work a full time position (40+ hrs/wk) with the National Guard/Reserves? Y___ N___

Other than National Guard/Reserve duties, are you also employed 20+ hours/wk? Y___ N___

What is your marital status?

_____ Married _____ Divorced _____ Never been married

Are you a parent? _____ Y _____ N

Vita

Bradley Joline Antonides was born on December 5th, 1971, Adams County, Nebraska, and is an American citizen. He graduated from Ferguson High School, Newport News, Virginia in 1990. He received his Bachelor of Science in Life Science from Kansas State University, Manhattan, Kansas in 2002 and subsequently served as an officer in the United States Army. He has served in the United States Army for nineteen years as both an enlisted member and as a commissioned officer. He was awarded the Bronze Star Medal for service in Iraq in 2005.