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UNIFORMED SERVICES UNIVERSITY OF THE HEALTH SCIENCES
DANIEL K. INOUE
GRADUATE SCHOOL OF NURSING
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September 8, 2015

MEMORANDUM FOR PRESIDENT, USU

THROUGH: CHAIR, BOARD OF REGENTS

Subject: Certification of Doctoral Student


The graduate student listed below is presented for certification to receive the Doctor of Philosophy effective upon your approval:

LAURIE A. MIGLIORE

DOCTOR OF PHILOSOPHY

DOCTOR OF NURSING SCIENCE PROGRAM

Attached is the candidate's Certification of Successful Completion of the Final Examination. Also attached are the Certification of Authorized use of Copyrighted Materials, Dissertation Abstract, Dissertation Title Page and Curriculum Vitae.


Carol A. Romano PhD, RN, FAAN
Dean, Graduate School of Nursing

Attachments:
As stated



GSN PhD Program in Nursing Science
PhD Degree Certification

NAME: LAURIE A. MIGLIORE

Degree Date: 5 October 2015

Total Course Units: [REDACTED]

Date passed dissertation proposal oral examination: 9 July 2014

Date passed dissertation oral defense: 14 July 2015

Date dissertation accepted by the GSN: 21 September 2015

I certify that the above named student has fulfilled all requirements for the PhD degree.

Chairperson: Penny F. Pierce PhD, RN, FAAN

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Approval/Disapproval

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Date: 9/29/2015

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Dean, Graduate School of Nursi [REDACTED]

Date: 9/28/2015

Carol A. Romano PhD, RN, FAAN



GSN PhD Program in Nursing Science
Dissertation Defense
Doctor of Philosophy Degree

NAME: LAURIE MIGLIORE

TITLE: The Military Identity Project: A Self-Schema Approach to Investigate a Military Identity Construct

Date of Defense: 14 July 2015 from 1000 hrs. to 1200 hrs.

The decision of the Dissertation Committee is:

PASS

- A. Both the dissertation and the oral defense are satisfactory: _____
- B. Minor changes are recommended by the Dissertation Committee that is to be made to the satisfaction of the Dissertation Chairperson: _____

DEFER

- A. Major changes in the dissertation are required. Changes must be made to the satisfaction of the Dissertation Chairperson: _____
- B. Major changes in the dissertation are required. Changes must be made to the satisfaction of the Dissertation Committee and at that time the oral defense will be rescheduled: _____

FAIL: Neither the oral performance nor the dissertation is adequate: _____

SIGNATURES OF THE COMMITTEE:

Chairperson: Penny F. Pierce PhD, RN, FAAN

Signature: _____

Member: Petra Goodman PhD, RN

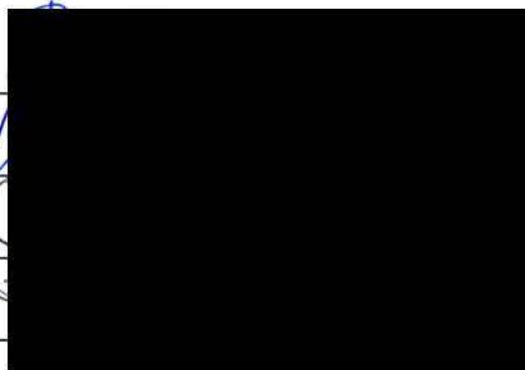
Signature: _____

Member: David O. Keyser PhD

Signature: _____

Member: David S. Riggs PhD

Signature: _____



Approval/Disapproval

Interim Associate Dean for Academic Affairs _____

Date: 28 Sep 2015

Approval/Disapproval

Dean, Graduate School of Nursing: _____

Date: 28 Sept, 2015



**THE MILITARY IDENTITY PROJECT: A SELF-SCHEMA APPROACH TO
INVESTIGATE A MILITARY IDENTITY CONSTRUCT**

By

Laurie A. Migliore

**Dissertation submitted to the Faculty of the
PhD of Nursing Science Graduate Program
Uniformed Services University of the Health Sciences
In partial fulfillment of the requirements for the degree of
Doctor of Philosophy 2015**

ABSTRACT

**Title of Dissertation: The Military Identity Project: A Self-schema Approach to
Investigate a Military Identity Construct**

By

Laurie A. Migliore, Doctor of Philosophy, 2015

**Thesis directed by: Penny Pierce, Ph.D., RN, FAAN
Professor and Director Ph.D. Nursing Science Program,
Daniel K. Inouye Graduate School of Nursing**

Despite a decreased ops tempo and increased military psychological health resources, psychological disorders continue to top the list of active duty military member diagnoses. Cognitive therapies are the evidence-based recommended treatment for the majority of military prevalent psychological disorders. Many of the cognitive therapies are theoretically founded on the premise that psychological disorders stem from cognitive vulnerabilities rooted in the content and structure of the self-schema. These cognitive knowledge structures, known as self-schemas, are the building blocks of our identities. The purpose of this dissertation research was to investigate and describe the presence and content of military self-schemas in active duty U.S. military members as a first step in developing a program of research linking military identity and military psychological health and well-being.

To begin, the concept of military identity was investigated with an evolutionary cultural perspective to describe defining attributes, antecedents and consequences using Rodgers' (2000) methodologies. Health sciences publications from 2001-2015 were critically examined, inductively analyzed, and synthesized to clarify the concept in the context of contemporary military culture. The predominantly cognitive nature of the concept led to an investigation guided by the cognitive, social psychological self-schema framework.

In a novel extension of the self-schema science, the construct of military identity was investigated under the broad title, Military Identity Project (MIP). The MIP studies employed a mixed-methods, cross-sectional, descriptive design to determine the presence and content of U.S. post-9/11 military identity in four groups of active duty military personnel (first and second year students, training instructors, and faculty). A series of seven tasks assessed military identity operationally with explicit and implicit measures of military self-schema. Study 1 examined identity attributes resulting from open-ended and closed-ended military adapted card sorting methods utilizing both inductive and deductive content analysis to detect core cognitive content of military identity. Over 11,000 identity attributes resulted from 140 participants with the combined inductive and deductive content categories culminating in four overarching core categories: *Leadership, Values, Warrior, and Commitment*.

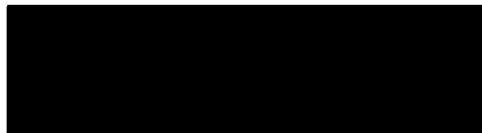
Study 2 enlisted an information processing task where response time indicated presence and identity attributes (highly self-descriptive and valued attributes) indicated contents of military self-schema. Results from the 70 participant, active duty, sub-sample comprised of four schematic groups (military high, military, aschematic, non-military)

suggest the presence of military self-schemas and information processing consequences consistent with self-schemas in other validated identity domains.

Taken together the indicators for, and contents of, military self-schemas characterize and provide empiric measurements for military identity and add the domain “military” to the self-schema body of literature. Furthermore, the preliminary findings provide initial data necessary to acquire funding for a robust, adequately powered, multi-service sample investigation, and are the first steps in developing a program of military identity research.

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Laurie A. Migliore

July 31, 2015

**Board of Regents
Abbreviated Curriculum Vitae**

Name: LAURIE A. MIGLIORE, MS, RN, APHN-BC

Department: PhD Program in Nursing Science, Graduate School of Nursing (GSN), Uniformed Services University of the Health Sciences (USUHS)

Candidate for: PhD **Will this position be newly tenured?** NA X Y__ N__

Citizenship: U.S. Citizen

Current Professional Address, Academic Rank and Title: Student in PhD Nursing Science Program, GSN, USUHS, 4301 Jones Bridge Road, Bethesda, MD 20814

Education:

2012-present	Ph.D. (Nursing) Candidate	Uniformed Services University
	MS (Community/Public Health)	Wright State University
1984-1988	BSN (Nursing)	University of Pittsburgh

GME or Post Doctoral Training:

2011	Air Command and Staff College	Non-residence
2004	Squadron Officer School	Non-residence

Academic Appointments: None

Hospital Appointments: None

Military Assignments:

2007-2012	Director, Center of Excellence for Medical Multimedia, United States Air Force Academy, CO
2006-2007	AFIT Student, Wright State University, Dayton, OH
2004-2005	Chief, Integrated Case Management, 96 Medical Group, Eglin AFB, FL

Licensure: Colorado 2015

Specialty Board Certification: American Nurses Credentialing Center: Advanced Public Health Nursing/2012-2017

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National Professional Committees:

American Psychological Association	Affiliate
Association for Psychological Science	Affiliate
Sigma Theta Tau International Nursing Society	Member
Society for Research on Identity Formation	Member

Editorial Boards: None

Honors and Awards:

2009 Company Grade Officer of the Year, Air Force Surgeon General, USAFA, CO

- 2009 Company Grade Officer of the Year, Air Force Medical Operations Agency, USAFA, CO
- 2009 Company Grade Officer of the Quarter, Air Force Medical Operations Agency, USAFA, CO
- 2007 Mid-West Nursing Research Conference Poster Presentation Award (Ribbon)
- 2007 Sigma Theta Tau Outstanding Student Award Zeta Phi Chapter (\$500)

Publications: List total number of full length articles in peer review journals: 1, books: 0, or book chapters: 0

Complete citations for all publications in the last five years:

Gibbons, S. W., Migliore, L., Greiner, S., Convoy, S., DeLeon, P. H., (2014). Military mental health stigma challenges: Policy and practice considerations. *Journal for Nurse Practitioners*, (10) 6, 365-372.

Presentations:

2014 *Educating Warrior Scholars for Research Careers in Military and Federal Service*. **Pierce, P.F.**, Lewis, P., Kasper, C., Migliore, L., & W. Danchanko. 2014 AMSUS Continuing Education Meeting, Washington, DC, 3 December.

2014 *The Military Identity Project: A Self-Schema Approach to Investigate the Properties and Formation of Military Identity*. Migliore, L. 2014 TriService Nursing Research Program Evidence Based Practice Dissemination Course, San Antonio, TX, 15 September.

External Peer-Reviewed Grant Awards: None

Current Teaching Responsibilities: N/A

Service to Department, School and University over last 3 years:

2013-2015	USUHS, GSN Curriculum Committee	Member
2012-2013	USUHS, GSN, PhD Student Advisory Committee	President



GSN PhD Program in Nursing Science
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Member: Petra Goodman PhD, RN Signature: _____

Member: David O. Keyser PhD Signature: _____

Member: David S. Riggs PhD Signature: _____



Approval/Disapproval

Interim Associate Dean for Academic Affairs



Date: 28 Sept 2015

Approval/Disapproval

Dean, Graduate School of Nursing



Date: 28 Sept, 2015

ABSTRACTThe Military Identity Project: A Self-schema Approach to
Investigate a Military Identity Construct

By

Laurie A. Migliore, PhD in Nursing Science Candidate , 2015

Thesis directed by: Penny F. Pierce, Ph.D., RN, FAAN

Professor and Director Ph.D. Nursing Science Program,

Daniel K. Inouye Graduate School of Nursing

Despite a decreased ops tempo and increased military psychological health resources, psychological disorders continue to top the list of active duty military member diagnoses. Cognitive therapies are the evidence-based recommended treatment for the majority of military prevalent psychological disorders. Many of the cognitive therapies are theoretically founded on the premise that psychological disorders stem from cognitive vulnerabilities rooted in the content and structure of the self-schema. These cognitive knowledge structures, known as self-schemas, are the building blocks of our identities. The purpose of this dissertation research was to investigate and describe the presence and content of military self-schemas in active duty U.S. military members as a first step in developing a program of research linking military identity and military psychological health and well-being.

To begin, the concept of military identity was investigated with an evolutionary cultural perspective to describe defining attributes, antecedents and consequences using Rodgers' (2000) methodologies. Health sciences publications from 2001-2015 were critically examined,

inductively analyzed and synthesized to clarify the concept of identity in the context of contemporary military culture. The predominantly cognitive nature of the concept led to an investigation guided by the self-schema framework.

In a novel extension of the existing self-schema science, the construct of military identity was investigated under the broad title, Military Identity Project (MIP). The MIP studies employed a mixed-methods, cross-sectional, descriptive design to determine the presence and content of post-9/11 military identity in four groups of active duty military personnel of the Air Force Academy (first and second year students, training instructors, and faculty). A series of seven tasks assessed military identity operationally with explicit and implicit measures of military self-schema. Study 1 (Chapter 3) examined identity attributes resulting from open-ended and closed-ended military adapted card sorting methods utilizing both inductive and deductive content analysis to detect core cognitive content of military identity. Over 11,000 identity attributes resulted from 140 participants with the combined inductive and deductive content categories culminating in four overarching core categories: *Leadership, Values, Warrior, and Commitment*.

Study 2 (Chapter 4) enlisted an information processing task where response time indicated presence and identity attributes (highly self-descriptive and valued attributes) indicated contents of military self-schema. Results from the 70 active duty sub-sample comprised of four schematic groups (military high, military, aschematic, non-military) suggest the presence of military self-schemas and information processing consequences consistent with self-schemas in other validated identity domains.

Taken together the indicators for, and contents of, military self-schemas characterize and provide empiric measurements for military identity and add the domain “military” to the self-

schema body of literature. Furthermore, the preliminary findings provide the initial data necessary to acquire funding for a robust, adequately powered, multi-service sample investigation, and are the first steps in developing a program of military identity research.

CHAPTER 1: The Military Identity Project

This dissertation is based on the following manuscripts:

- I Migliore, L. A. & Pierce, P. (2015). Military Identity: A Cultural Perspective and Analysis of an Evolving Concept. Manuscript submitted for publication.
- II Migliore, L. A. & Pound, L. (2015). The Military Identity Project: A Mixed Method Investigation of Military Self-Schema Content. Manuscript submitted for publication.
- III Migliore, L. A. & Nathan, D. E. (2015). The Military Identity Project: Self-descriptive Content and Response Time as Indicators for Presence of Military Self-Schema. Manuscript submitted for publication.

EXECUTIVE SUMMARY

The psychological effects of war and chronically associated burdens to the healthcare system, workplace, family, and individual military members over the past decade are well documented. Despite the decreased operational tempo and increased mental health resources (funding, prevention programs, and availability of mental health providers), over the 14 years of war, there continues to be a high prevalence of mental health conditions in U.S. active duty military members which detract from military readiness, member performance, and the overall mission.

This three-manuscript option for the dissertation describes the systematic investigation of the construct of a U.S. military identity. The rationale for the Military Identity Project (MIP) is based on the following chain of logic: 1) there are several highly prevalent military-related psychological conditions linked to fundamental cognitive processes (post-traumatic stress, depression, substance abuse, anxiety, adjustment disorders), 2) evidence-based practice guidelines recommend cognitive therapies for most of the military-related psychological conditions, 3) many cognitive therapies are founded on the assumption that psychological vulnerabilities are related to self-schema content and structure, 4) self-schemas are the basis of identities, 5) little is known about the cognitive content and structure of a military self-schema and military identity, and importantly, 6) understanding the core cognitive content and structure of military identity may provide novel information to aid in determining specific cognitive vulnerabilities and resources that contribute to common psychological conditions of military members. Therefore, the purpose of this dissertation research was to investigate and describe the presence and content of military self-schemas in active duty military members as a first step in

developing a program of research linking military identity and military psychological health and well-being.

The theoretical underpinning and methodology for the investigation are based largely on a self-schema framework, including measures and scoring criteria developed by Markus (1977), which were adapted in the MIP for a military population. The MIP included a series of seven tasks designed to investigate the cognitive construct of a military self-schema in a sample of 140 active duty U.S. military academy personnel. The self-schema measures, found to be reliable in other validated identity domains, were used to operationally define military identity. The first study (Chapter 3), a mixed methods content analysis, comprised of two military identity attribute tasks, aimed to determine the core content of a military self-schema. The second study (Chapter 4) utilized self-descriptive content from the first study, and scoring criteria consistent with the self-schema framework, to establish four identity (schematic) groups which were compared for speed of information processing in relationship to degree of military identity. Information processing was measured with response times, which were utilized as indicators for the presence of a military self-schema, and by extension, the degree of military identity.

The dissertation dossier includes three manuscripts, all submitted to peer-reviewed journals and in varying stages of the review process. Manuscript I (Chapter 2) analyzes the concept of a post-9/11 military identity and describes defining attributes, antecedents and consequences using Rodgers' (2000) methodologies. Health sciences publications from 2001-2015 were critically examined, inductively analyzed, and synthesized to clarify the concept in the context of contemporary military culture. Attributes of military identity were *cognitive* (dogmatic, competence, stoicism, and belonging), *affective* (suppressed emotion, intense emotion, patriotism, and pride), *behavioral* (doctrinally and ideologically consistent), and

gendered (hypermasculinity). Military indoctrination, training, memory structures and operations were identified as antecedents of military identity. Consequences of military identity were discussed with regard to adaptive and maladaptive attachments, self-representations, and self-advocacy. Measures of military identity were reviewed and clinical, theoretical, and research implications were discussed. The predominantly cognitive nature of the concept led to an investigation guided by the self-schema framework with its roots in both cognitive and social psychology.

Manuscript II (Chapter 3) utilizes Mayring's (2014) inductive and deductive content analysis in a mixed-methods approach to investigate the core contents of military self-schema as a basis for characterizing cognitive components of military identity. An open-ended and a closed-ended identity attribute task were enlisted in a sample of 140 active duty military academy participants to explore the self-descriptive attributes military members use to describe themselves in response to the question: "Who am I as a military member?" The open-ended identity attribute task yielded 2907 attributes which were systematically reduced using Markus's (1977) self-schema criteria along with the inductive methodology, into 28 content categories. The self-schema criteria considers only attributes rated highly self-descriptive (rated 8-11) and highly important (8-11) to be central to identity and determined to characterize self-schema. Of the 28 content categories, the top five by percentage of participants generating attributes per category were: *integrity* (22.9%), *strong* (16.4%), *caring* and *disciplined* (both 15.7%), and *dedicated* (10%). Due to the low percentages of participant generated attributes per category, and an attempt to elicit core content categories with a 50% or higher participant frequency, we further reduced the 28 categories into four final categories: *Leadership* (59%), *Values* (48.6%), *Warrior* (43.5%), and *Commitment* (40%).

The closed-ended identity attribute task yielded 8400 attributes which were reduced to 2951, again using self-schema criteria along with the structured deductive analysis. The top five content categories by frequency of endorsement were: *honest* (95%), *loyal* (92.9%), *honorable* (92.1%), *mission-focused* (86.4%), and *self-disciplined* (85.7%)/*team-player* (85.7%). Core content of military identity was characterized by combining the results of the inductive and deductive analysis illustrating the multidimensional nature of military identity as depicted in

Figure 1.1



Figure 1.1 Combined military identity content of inductive and deductive analyses. Attributes in black text were endorsed or generated by 50-75% of participants whereas those listed in red text were endorsed by greater than 75% of participants.

Manuscript III(Chapter 4) describes the investigation of the construct of military identity using self-schema methods and a computerized information processing response time (RT) task. The purpose of this study was to ...A subsample of 70 participants from the original sample of 140, were asked to endorse or reject 60 identity attributes (15 military positive, 15 military negative, 10 control positive/10 negative/10 neutral) to describe themselves as military members. Based on self-schema scoring criteria, four schematic groups (military high, military low?, military aschematic, and non-military) were compared for speed of processing with regard to the identity attributes. Participants from the military high schematic and military schematic groups were significantly quicker to endorse what? and endorsed more military positive and rejected fewer military negative attributes than military aschematics and non-military schematics. These results suggest the presence of military self-schemas and information processing consequences consistent with Markus's (1977) self-schema theory and with validated self-schemas in other domains published in the self-schema literature. In other words, what does response time tell you about the "correctness" of the selected attributes from previous studies

Taken together, the findings from the two investigations, described in Manuscripts II and III, are the first empirical steps to conceptualize and operationally define military identity employing a self-schema framework. This foundational work is an important contribution toward understanding the content and structure of military self-schemas and thus military identity. Although the preliminary results are promising, the MIP studies are limited by a primarily single service branch sample in an elite academic setting which must definitely be replicated on a larger scale with representation from all other service branch samples in more general military settings. Continued MIP investigation, will focus on the detection of military self-schema content and structural patterns with a goal of isolating cognitive vulnerabilities and

resources associated with untoward, negative, problematic... psychological states. Once determined, specific vulnerabilities and resources may contribute to the development of novel military training approaches for recruits and personalized treatment plans for psychological health conditions. The initial MIP findings lay the groundwork for a program of research with the long-term goal of understanding the role of military identity in the psychological well-being of military members across the military life cycle.

QUESTION ABOUT FORMAT THE INTRODUCTORY CHAPTER COULD END HERE AND THEN MOVE TO THE THREE MANUSCRIPTS. HOW DO YOU SEE THE FOLLOWING INFORMATION SUPPORTING CHAPTER 1? IS THIS INFORMATION IN THE CHAPTERS TO FOLLOW? IF SO, WHY PUT IT HERE?

Military Psychological Health

In 2014, of over 130 monitored disease and conditions, “mental disorders” accounted for the highest utilization of hospitalization days and was the second leading cause for lost work days and medical appointments (Armed Forces Health Surveillance Center [AFHSC], 2014). Ranked in the top ten diagnostic burdens were anxiety, mood disorder, and adjustment disorder, with substance abuse as the eleventh highest ranked condition (AFHSC, 2014). While the rankings represent the burden of disease on health care resources, they also signify burdens experienced by work units, family units, and individual duty members. Ironically, despite the high utilization rates reported by the AFHSC, Hoge and colleagues found soldiers with PTSD actually underutilized care with 22% never returning for care after an initial appointment and 41% receiving the minimum recommended number of appointments (Hoge, Grossman, Auchterlonie, Riviere, Milliken & Wilk, 2014). It appears that the reported burden of “mental health disorders” are more likely the tip of the iceberg if military member health seeking behaviors for other categories of psychological conditions mimic those of the soldiers diagnosed with PTSD.

Despite increased investments in research, little attention has been paid to the role of identity in the psychological health of military members. While an identity approach to military psychological health is contemporary, it is widely accepted that cognitive representations of self and identity play a vital role in both depression (Disner, Beevers, Haigh, & Beck, 2011) and PTSD (Dalgleish, 2004), however this perspective has not been instrumental in exploring these problems within a military setting to date. . Furthermore, successful treatment outcomes for anxiety, depression, PTSD, and substance abuse are associated with cognitive therapies which are often recommended as evidence-based treatments (Foa, Gillihan & Bryant, 2013; Gillihan, Conklin & Foa, 2014). Many of the cognitive therapies are founded on a general cognitive-behavioral model of emotional disorders that assumes vulnerabilities for psychological conditions are related to the content and structure of self-schemas (Brewin, 2006; Dobson, 2013). Specifically, an early negative life event develops a latent knowledge structure (self-schema), combining memory and associated emotions that when activated by a later life event trigger re-experiencing and reinforces the content and stability of the structure (Brewin, 2006). The general cognitive-behavioral model of emotional disorders share the concepts of cognitive knowledge structures about the self (self-schemas), and activation of the knowledge content (trigger), with Markus's (1977) self-schema model of self-concept, the underlying framework for this dissertation research. Although previous interventions for several psychological disorders (PTSD, depression, eating disorders) were primarily focused on manipulating negative self-schema content, recent research has focused on interventions directed at both the content (developing more positive content) and structure (increasing positive associative networks) of the self-schema (Stein, Corte, Chen, Nuliyalu & Wing, 2013). Taken together, the fact that cognitive therapies are recommended, effective, and target self-schema content and structure in

military-prevalent psychological conditions, makes the concept of a military self-schema relevant for investigation.

Identity

Our identities are constructed from a lifetime of memories that tell us who we are across all domains; the “I” and the “me”, to encompass our emotions, thoughts, hopes, dreams, attitudes and behaviors (Kelly, 2003). Events and experiences relevant to an individual’s identity are housed in memory and stored as cognitive structures called self-schemas. It is not uncommon to see the terms self, self-concept, identity and self-schema used interchangeably throughout the literature. Definitions of these terms shift according to discipline and level of inquiry. Although perspectives on understanding, explaining and exploring self and identity are vast, this dissertation approaches identity from a social cognitive perspective where components of the self can be envisioned as nested (see **Figure 1.2**), meaning that self-schemas comprise identities which contribute to the self-concept which in turn contribute to the self (Oyserman, Elmore, & Smith, 2012).

Recent studies have reported changes or impairments in the identity of service members as associated with a variety of military life events, described as: *post-deployment reintegration identity strain and change* (Brewin, Garnett, & Andrews, 2011; Griffith, 2011; Harris, Gringart, & Drake, 2013; Rivers, Gordon, Speraw, & Reese, 2013), *identity confusion* (Danish & Antonides, 2013; Green, Emslie, O’Neill, Hunt, & Walker, 2010), *identity conflict* (Griffith & Vaitkus, 2013; Smith & True, 2014), *identity fragmentation* (Berghaus & Cartaagena, 2013) and *liminality* (Demers, 2011). Service members experiencing psychological stressors associated with their identity report feeling alienated, marginalized, insignificant, disillusioned and changed, whereas others report feeling a renewed sense of appreciation for life, optimistic

response to danger, and increased compassion (Brewin et al., 2011; Harris et al., 2013; Scannell-Desch & Doherty, 2010; Smith & True, 2014). While the identity of military members is a central theme in these studies, none had a primary goal to investigate a post-9/11 military identity. It may be stronger to just say that your investigation is moving this work forwardvs. criticizing their primary goal.

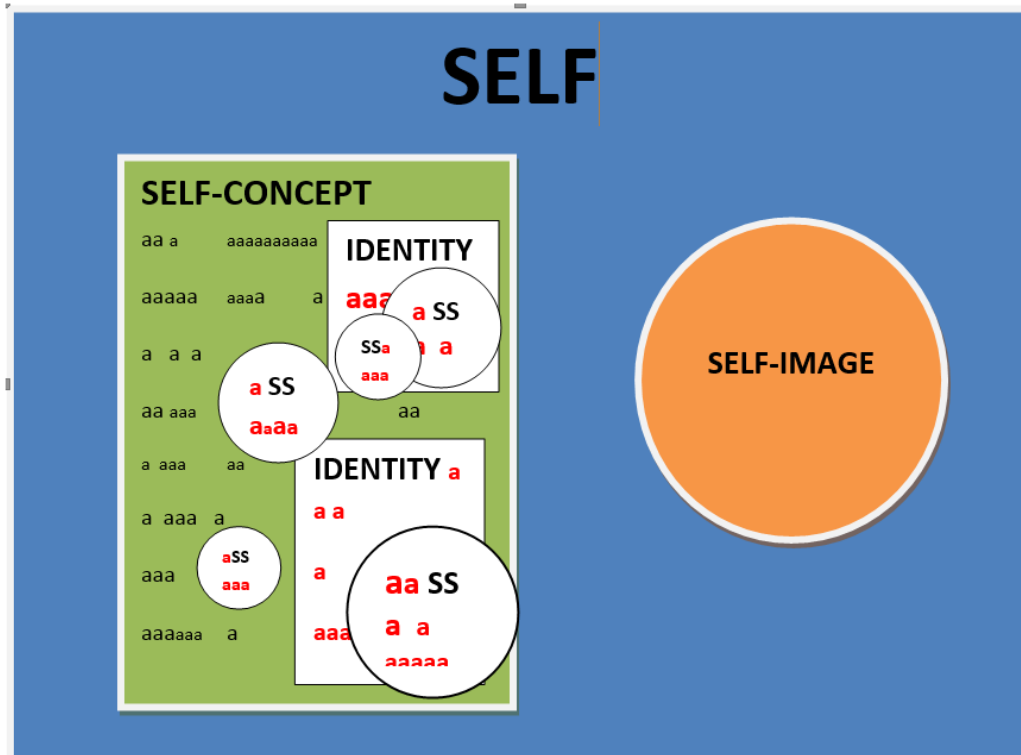


Figure 1.2. Cognitive components of the self, illustrated as nested, with the self comprised of self-concept and self-image; self-concept comprised of identities, self-schemas (SS) and attributes (a); identity comprised of SS and highly self-descriptive and important attributes (red a); SS comprised of highly self-descriptive and important attributes in a particular domain.

Self-Schema

In Markus's (1977) foundational work, self-schemas were described as broad, chronically available generalizations and cognitive representations of the self that are stable yet malleable (Markus, 1977). Abstract constructs, self-schemas are conceptualized as knowledge structures in memory about oneself. Theoretically, self-schemas are constructed primarily from

episodic and semantic memories, and function in relation to their degree of organization, elaboration, memory system of origin, and situational context (Klein, 2012). When information and knowledge about the self are organized and structured around a particular *domain*, individuals are said to be schematic for the domain. As such, self-schemas are fruitful as predictive indicators for such constructs as biased attention, shaping future intentions and behaviors in a variety of domains. Then give examples some of which include: exercise (Kendzierski, 1990), depression (Dozois & Dobson, 2001), eating disorders (Stein & Corte, 2008), risk behaviors (Stein, Keller & Corte, 2014), and borderline personality disorder (Evans, Dalgleish, Dudas, Denman, Howard & Dunn, 2015).

The schema model of self-concept provides a framework for investigating the content and structure of self-concept and identity by examining self-schemas (Markus, 1977; Markus & Wurf, 1987; Stein, 1995; Stein & Corte, 2008). Schematic criteria were established by Markus (1977) to categorize individuals based on the self-descriptiveness, importance, and valence ratings of attributes in a given domain (independence). Based on this criteria, using an eleven-point semantic differential scale (1-11), individuals who rate attributes between eight and eleven in self-descriptiveness *and* eight and eleven in importance are considered *schematic* for that particular domain. Thus, those who describe themselves by endorsing attributes of “independence” for example as highly self-descriptive and highly important to their identity are schematic for independence, whereas those who rate independence between five and seven on self-descriptiveness and seven or less for importance are considered *aschematic* for the same attribute (Markus, 1977). Aschematics are individuals who do not consider a particular domain to be central to their identity. For instance, an aschematic may endorse both independent and/or dependent attributes as highly self-descriptive but if those attributes are not rated as highly

important to the individual then they are considered aschematic or lacking a self-schema in that particular domain. However, individuals rating attributes from one to four in self-descriptiveness and eight to eleven in importance are considered to be schematic on a particular attribute.

Ultimately, how individuals think about themselves with regard to a particular identity (academic, athletic, sexual,) impacts how information relevant to that identity is processed due to the structure and function of the self-schemabo. This is important because as the basis of identities, the more frequently the self-schema is utilized, the more increasingly stable it becomes and the more it is relied upon for future decision-making and behaviors (Markus, 1977). Operationally, self-schemas influence whether information is ignored, remembered, acted on, valued, and cognitively categorized as positive, negative or neutral. For instance, an individual with a “fat” self-schema may ignore numerous positive comments made directly to them regarding excellence in job performance, financial status, and parenting skills but obsessively focus on a single comment overheard in the subway about body size, convinced that someone implied he/she was “fat”. Regardless of reality, the perception of shared information is influenced by the cognitive content and structure of the self-schema whether that content is an accurate assessment or a distortion (Markus, Hamill & Sentis, 1987). Thus, a 19 year old with a fat self-schema may see him or herself as obese despite an actual physical weight of 100 pounds.

Although little is known about the self-schemas of military members, self-schemas have been utilized for decades as indicators and predictors of common behaviors (academic, exercise, eating, sexual) and psychological conditions (alcohol abuse, anorexia, bulimia, depression). Clinical implications of self-schema are related to self-schema content, most often distorted or negative cognitions (I am fat, I am a failure, I am incompetent, I am sad) and self-schema structure (number, hierarchical organization, interrelationships) as in the case of depression

(Beck, 2008; Dozois, Beiling, Patelis-Soitos,...Westra, 2009; Dozois & Dobson, 2003), PTSD (Jobson & O’Kearney, 2008; McNally, Lasko, Macklin & Pitman, 1995) and disordered eating (Stein & Corte, 2008; Stein & Nyquist, 2001). Randomized clinical trials investigating the effects of cognitive therapy on negative cognitive structure and vulnerability for depressive episodes demonstrated that cognitive therapy not only improved symptoms (as did medications) but also altered the structure of the self-schema (Dozios et al., 2009). In addition to clinical relevance for common disorders, self-schemas have utility as predictors of risk behaviors (Stein, Keller & Corte, 2014; Stein, Roeser & Markus, 1998) and as reliable strength-based predictors in the domain of exercise behavior (Banting, Dimmock, Lay, 2009; Kendzierski, 1990), healthy eating behavior (Sangperm, 2006), and academic achievement (Oyserman, 2008).

One distinct advantage of the self-schema is that operationally it can be investigated by both explicit and implicit measures. Common explicit self-schema measures used are self-reported trait ratings and behavioral evidence tasks (Kendzierski, 1988; Kendzierski & Costello, 2004), while common implicit measures are RT (Hedlund, 2010; Popham & Holden, 1990; Siem, 1996) and implicit association tests (Greenwald, Nosek, & Banaji, 2003). It is not uncommon for investigators to use combinations of the two approaches using implicit and explicit measures to explore the content and structure of self-schemas within the self-concept (Dobson & Shaw, 1987; Kendzierski, 1990; Markus, 1977; Stein, & Corte, 2008; Van Ryckeghem, De Houwer, Van Boackstaele, Gan Damme, De Schryver & Crombez, 2013). Self-schema measures provide insight into the interrelationships between properties of self-schema within the self-concept that may lie beyond the individual’s conscious level of awareness.

Predictable patterns in information processing associated with implicit self-schema measures are well established. Then explain how response time gives one this pattern and how

the length of time is associated with the identity, Ultimately, individuals with a self-schema in a particular domain would theoretically respond faster and endorse more stimuli as self-descriptive when stimuli are congruent with the self-schema, be quicker to reject and endorse fewer when stimuli are distinctly incongruent, and be slower to respond to stimuli that are ambiguous. These distinguishing and stable patterns in RT processing speed make self-schema relevant especially for predictive capability as markers for vulnerability in domain-specific clinical conditions (Dozois, et al., 2009; Stein & Corte, 2008; Stein, Corte, Chen, Nuliyalu & Wing, 2013). Exploring the presence and content of military self-schemas as an indicator of military identity through an empirical cognitive approach is an important first step toward understanding the potential role that military identity may have in military psychological health states.

Military Identity

Although the demographic of current U.S. military members include diverse backgrounds, traumatic or stressful exposures, and psychological histories, all military members share a common military heritage, culture, and basic training. Members are indoctrinated through institutional training and socialization, complete with military creeds, core values and oaths into a unique culture known as the Profession of Arms. Cultural expectations and norms are reinforced through customs and courtesies, language and symbols, rank structure and the Uniformed Code of Military Justice (UCMJ). Failure is not an option as professed in military creeds, and mission comes before family, self, and others by virtue of the core values. The degree to which an individual incorporates military cultural values and beliefs into their self-concept, more specifically as a military self-schema, is what we propose determines the potency of military identity. Therefore, the purpose of this dissertation research was to investigate and

describe the presence and content of military self-schemas in active duty U.S. military members in an initial effort to elicit core cognitive content of military identity. This investigation is the first step toward developing a program of research linking military identity and military psychological health and well-being.

SPECIFIC AIMS AND RESEARCH QUESTIONS

The primary purpose of the dissertation investigation was twofold: 1) to identify the core content of military identity and, 2) to explore the construct of military identity by examining response times using an information processing task.

Specific Aim 1: Identify the core content of military identity.

Question 1: Based on Markus's (1977) self-schema criteria, what are the attributes and categories generated from both the open-ended and closed-ended card sorting methods?

Question 2: Based on Markus (1977) self-schema criteria, using open and closed-methods, which attributes have >50% (core attributes) occurrence rate?

Question 3: Using open and closed-methods, what are the top 5 rank-ordered attributes for self-descriptiveness, importance and, valence (positive and negative)?

Specific Aim 2: Examine the effect of military identity on information processing response times.

Question 1: Are there statistically significant differences among the categories of: high military schematic, low military schematic, non-military schematic and aschematic, on information processing response times?

You need a closing paragraph to transition to the following papers



MILITARY IDENTITY PROJECT

**A Self-Schema Approach to Investigate
a Military Identity Construct**

DISCLOSURE

This study was funded by the Jonas Center for Nursing Excellence and the Uniformed Services University of the Health Sciences, *Daniel K. Inouye Graduate School of Nursing* (Grant # TO-61-2960).

Support and resources were also provided by the United States Air Force Academy, Department of Behavioral Sciences and Leadership.

DISCLAIMER

The opinions or assertions contained herein are the private views of the author and are not to be construed as reflecting the official policy or position of the Uniformed Services University of the Health Sciences, the Department of Defense or the United States government.

Agenda

- **Background and Significance**
- **Specific Aims**
- **Methods**
- **Results**
- **Acknowledgements**
- **Questions**

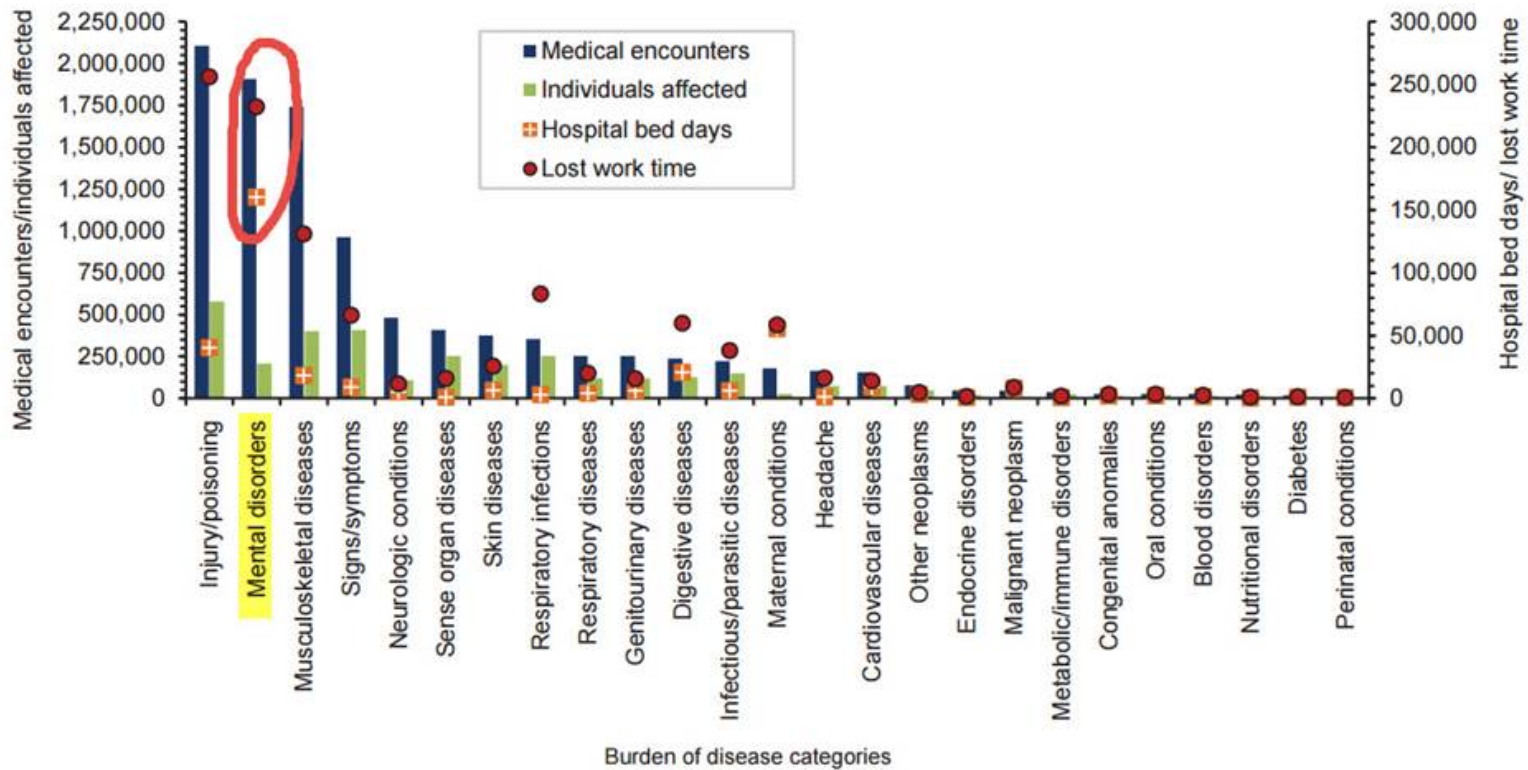
BACKGROUND & SIGNIFICANCE

Background and Significance

- **Military Psychological Health**
- **Self, Identity, & Self-Schema**
- **Military Identity**

Military Psychological Health

FIGURE 1a. Medical encounters,^a individuals affected,^b hospital bed days, and lost work time^c by burden of disease category,^d active component, U.S. Armed Forces, 2014



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Articles

PTSD Treatment for Soldiers After Combat Deployment: Low Utilization of Mental Health Care and Reasons for Dropout

[Charles W. Hoge](#), M.D., [Sasha H. Grossman](#), B.A., [Jennifer L. Auchterlonie](#), M.S., [Lyndon A. Riviere](#), Ph.D., [Charles S. Milliken](#), M.D., [Joshua E. Wilk](#), Ph.D.

<http://dx.doi.org/10.1176/appi.ps.201300307>

Abstract

[Full Text](#)

[References](#)

[PDF](#)

TABLE 1. Healthcare burdens attributable to various diseases and injuries, active component, U.S. Armed Forces, 2014

Major category condition ^a	Medical encounters ^b		Individuals affected ^c		Bed days	
	No.	Rank	No.	Rank	No.	Rank
Injury and poisoning						
Arm and shoulder	520,475	(5)	156,325	(5)	2,963	(23)
Knee	485,556	(6)	151,543	(6)	1,412	(38)
Foot and ankle	369,052	(9)	146,970	(8)	2,746	(25)
Leg	197,032	(15)	77,830	(17)	4,459	(17)
Hand and wrist	134,324	(23)	68,553	(21)	1,773	(34)
Unspecified injury	124,344	(24)	81,012	(16)	937	(48)
Head and neck	93,207	(29)	56,471	(23)	6,273	(11)
Back and abdomen	76,733	(31)	46,614	(27)	3,902	(19)
Other complications	36,112	(41)	19,663	(45)	10,306	(8)
Environmental	26,247	(49)	20,469	(44)	1,234	(42)
Other injury, external	18,749	(61)	11,051	(62)	435	(68)
Other injury	16,351	(65)	11,080	(61)	801	(52)
Poisoning, nondrug	4,433	(94)	3,148	(80)	301	(78)
Poisoning, drugs	3,879	(97)	2,467	(87)	2,712	(26)
Mental disorders						
Anxiety	570,307	(4)	75,445	(18)	29,793	(4)
Mood	398,838	(7)	56,471	(24)	48,432	(1)
Adjustment	379,779	(8)	81,250	(15)	24,134	(5)
Substance abuse dis	355,686	(11)	28,685	(39)	46,059	(2)
Other mental dis	141,135	(21)	52,712	(25)	3,807	(20)
Tobacco dependence	21,957	(55)	13,261	(58)	6	(131)
Psychotic	19,127	(60)	2,525	(86)	5,953	(13)
Personality	12,251	(73)	2,770	(84)	1,459	(37)
Somatoform	9,320	(76)	2,326	(88)	404	(70)
Musculoskeletal diseases						
Other back problems	1,002,216	(1)	223,094	(3)	7,409	(10)
Other musculosk dis	672,350	(2)	245,428	(2)	8,197	(9)
Other knee disorders	32,838	(45)	13,868	(57)	1,474	(36)
Respiratory infections						
Upper respiratory	280,173	(12)	216,394	(4)	572	(62)
Lower respiratory	46,134	(40)	31,745	(35)	2,334	(27)
Otitis media	27,271	(48)	21,285	(43)	48	(111)
Respiratory diseases						
Allergic rhinitis	99,067	(27)	42,859	(28)	12	(129)
Other respiratory dis	66,523	(32)	38,339	(31)	3,265	(22)
Asthma	33,354	(44)	14,978	(54)	372	(74)
Chronic sinusitis	31,845	(46)	23,629	(40)	125	(94)
Chron obstr pulm dis	21,614	(56)	17,896	(48)	118	(97)
Genitourinary diseases						
Other genitourinary dis	150,045	(20)	84,047	(14)	2,839	(24)
Female genital pain	27,570	(47)	15,928	(50)	287	(80)
Menstrual disorders	22,338	(54)	14,149	(56)	609	(61)
Other breast disorders	21,569	(57)	11,609	(60)	375	(73)
Kidney stones	20,067	(59)	7,796	(67)	795	(53)
Nephritis and nephrosis	7,866	(83)	2,185	(91)	1,086	(44)
Prostatic hypertrophy	2,830	(102)	1,878	(93)	71	(105)
Digestive diseases						
Other digestive dis	116,972	(25)	58,179	(22)	12,818	(7)
Gastroenteritis/colitis	63,073	(33)	52,288	(26)	967	(47)
Esophagus disease	35,456	(42)	22,684	(42)	868	(50)
Inguinal hernia	12,462	(71)	5,493	(72)	536	(63)
Appendicitis	6,093	(87)	3,098	(81)	4,875	(14)
Cirrhosis of the liver	1,972	(109)	1,404	(96)	91	(101)
Peptic ulcer disease	1,478	(112)	910	(101)	461	(67)
Infectious and parasitic diseases						
Other infectious/para-	138,906	(22)	82,638	(13)	4,120	(15)



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Behaviour Research and Therapy 44 (2006) 765–784

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Understanding cognitive behaviour therapy: A retrieval competition account

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Received 14 October 2005; received in revised form 3 February 2006; accepted 10 February 2006

Abstract

Vulnerability to emotional disorders is thought to lie in memory representations (e.g. negative self-schemas) that are activated by triggering events and maintain negative mood. There has been considerable uncertainty about how the influence of these representations can be altered, prompted in part by the development of new metacognitive therapies. This article reviews research suggesting there are multiple memories involving the self that compete to be retrieved. It is proposed that CBT does not directly modify negative information in memory, but produces changes in the relative activation of positive and negative representations such that the positive ones are assisted to win the retrieval competition. This account is related to the treatment of common symptoms typical of emotional disorders, such as phobic reactions,

Generic Cognitive Behavioral Model Of Emotional Disorder

Causal Factors

1. Vulnerability

Negative life experiences (particularly if uncontrollable, repeated etc.)

2. Onset

Negative experiences in later life

3. Maintenance

Interactions (e.g., vicious circle) between mood and processes such as selective attention, selective memory, selective interpretation, reasoning bias, avoidance, safety behaviours, thought suppression, metacognitive beliefs, etc.

Consequences

Formation of latent representations in memory (associations, episodic memories, schematic knowledge) summarising experiences with negative mood

Experience of negative mood
Activation of inaccurate or inappropriately generalised representations.
Experiencing of intrusive thoughts, images, impulses etc.

Persistence and exacerbation of negative thoughts and behaviours

**Brewin,
2006 p.766**

Fig. 1. A generic cognitive-behavioural model of emotional disorder.

Background and Significance

- **Military Psychological Health**
- **Self, Identity, & Self-Schema**
- **Military Identity**

Self & Identity

- **Cognitive social psychology conceptualization**
- **Nested components of the Self**
- **Self**
 - **Self-concept**
 - **Identities**
 - **Self-schemas**
 - **Attributes**

Identity

- **Self-defining characteristics, traits, social roles, relationships, group memberships**
- **Past, present & future possible selves**
- **Orienting-- cognitive GPS**
- **Mental construct* social product* force for action**
 - **(Oyserman, Elmore & Smith, 2012)**

Self-schemas

Markus, 1977

- **Basis of identities**
- **Knowledge structures in memory about self**
- **Based on multiple/repeated episodes**
- **Broad generalizations, lacking detail**
- **Chronically available in valued domains**
- **Internalized norms & cultural values**
- **Organizing framework**
 - **Selective attention**
 - **Greater recall**
 - **Predictable behaviors**

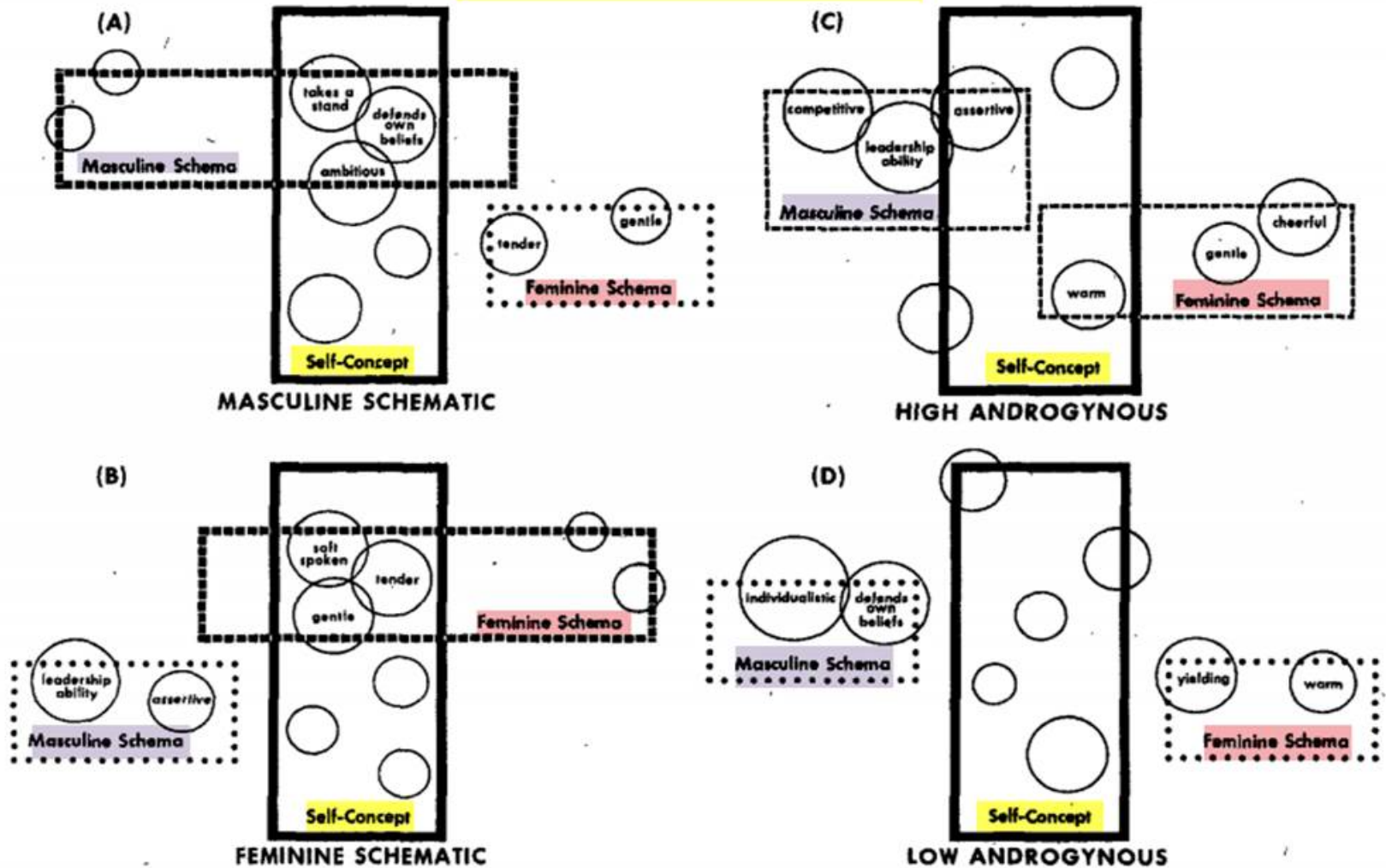
Markus (1977) Schematic Criteria

- **Schematic**
 - High self-descriptive
 - (8-11)
 - High importance (8-11)
- **Aschematic**
 - Self-descriptive (5-7)
 - Importance (< 7)
- **Non-schematic**
 - Low self-descriptive (1-4)
 - High importance (8-11)

<u>Box A</u>										
<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>	<u>10</u>	<u>11</u>
Not Me							Me			
<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>	<u>10</u>	<u>11</u>
Not Important							Very Important			
<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>	<u>8</u>	<u>9</u>	<u>10</u>	<u>11</u>
Negative							Positive			

Markus, Crane,
Bernstein &
Siladi, 1982

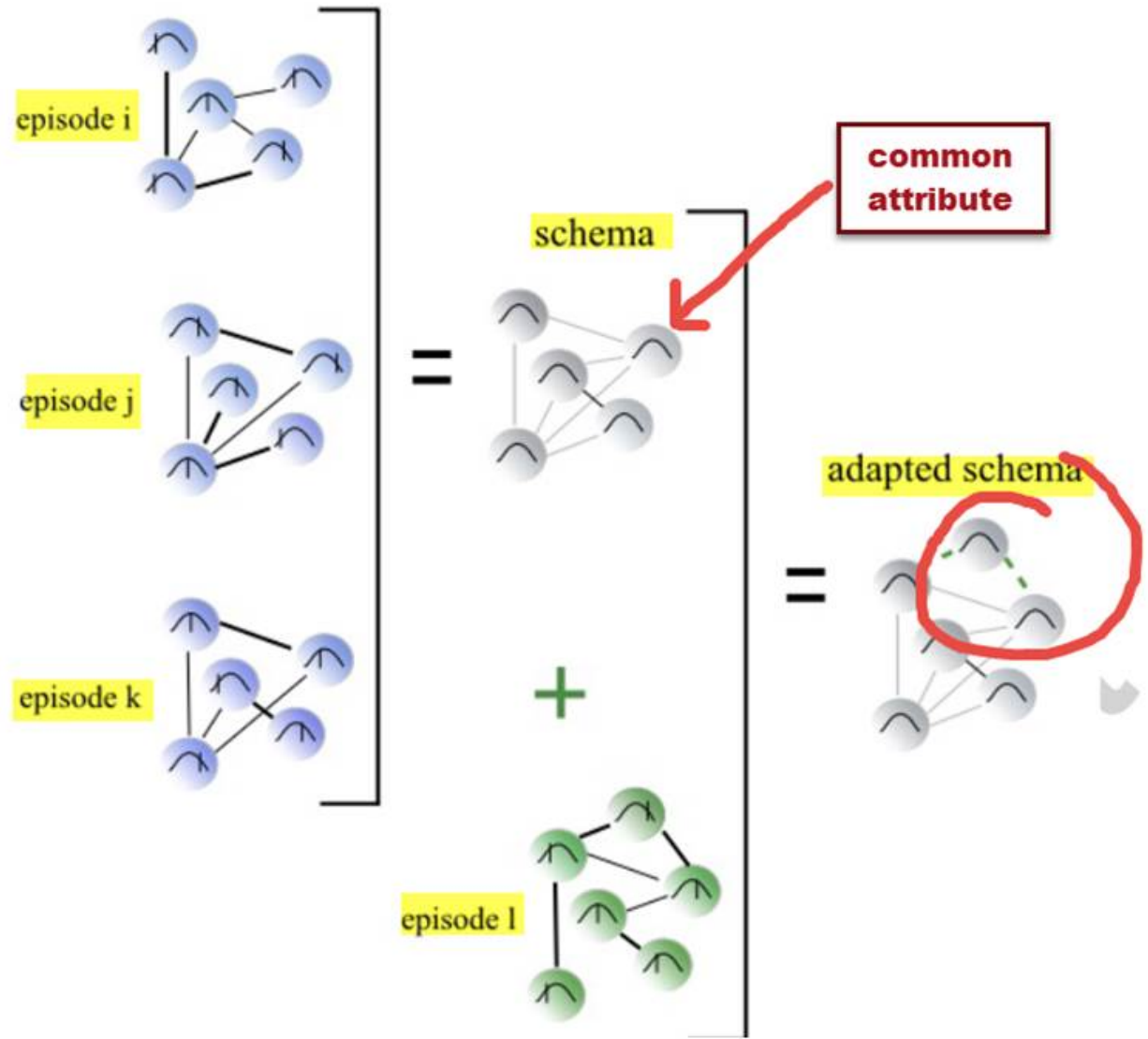
Journal of
Personality
and
Social
Psychology
42 (1) (1982) p
38-50



MEMORY SCHEMA

Necessary features

- **Associative network**
- **Based on multiple episodes**
- **Lack of unit detail**
- **Adaptability**



Self-schema: Clinical Utility

- **Identify cognitive vulnerabilities/resources**
- **Target for interventions**
 - **Depression** (Beck, 2008; Dozois, Beiling, Patellis-Soitos,...Westra, 2009; Dozois & Dobson, 2003)
 - **Disordered Eating** (Stein & Corte, 2008; Stein & Nyquist, 2001)
 - **Sexual Health** (Cyranski, Aarestad, & Andersen, 2009)
 - **Healthy Eating** (Sangperm, 2006)
 - **Exercise** (Banting, Dimmock, Lay, 2009; Kendzierski, 1990)
 - **Risky Behavior** (Stein, Keller & Corte, 2014; Stein, Roeser & Markus, 1998)

The Identity Impairment Model

A Longitudinal Study of Self-schemas as Predictors of Disordered Eating Behaviors

Karen Farchaus Stein ▼ Colleen Corte

Editor's Note

Materials documenting the review process for this article are posted at <http://www.nursing-research-editor.com>.

- ▶ **Background:** There is broad consensus that the eating disorders of anorexia nervosa and bulimia nervosa stem from fundamental disturbances in identity development, but theoretically based empirical support is lacking.
- ▶ **Objective:** To extend work on the identity impairment model (Stein, 1996) by investigating the relationship between organizational properties of the self-concept and change in disordered eating behaviors (DEB) in an at-risk sample of college

The proposition that the eating disorders (EDs) of anorexia nervosa (AN) and bulimia nervosa (BN) stem from fundamental disturbances in identity development is a basic tenet in a diverse array of ED theories ranging from early psychoanalytic theories to cultural and feminist approaches (for a review, see Stein & Corte, 2003). Yet, related studies generally have failed to converge into a coherent and compelling set of findings neces-

Changes in Self-Schema Structure in Cognitive Therapy for Major Depressive Disorder: A Randomized Clinical Trial

David J. A. Dozois
University of Western Ontario

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Susan Chudzik, and Katie McCabe
St. Joseph's Healthcare and McMaster University

Henny A. Westra
York University

Negative cognitive structure (particularly for interpersonal content) has been shown in some research to persist past a current episode of depression and potentially to be a stable marker of vulnerability for depression (D. J. A. Dozois, 2007; D. J. A. Dozois & K. S. Dobson, 2001a). Given that cognitive therapy (CT) is highly effective for treating the acute phase of a depressive episode and that this treatment also reduces the risk of relapse and recurrence, it is possible that CT may alter these stable cognitive structures. In the current study, patients were randomly assigned to CT+ pharmacotherapy ($n = 21$) or to pharmacotherapy alone ($n = 21$). Both groups evidenced significant and similar reductions in level of depression (as measured with the Beck Depression Inventory–II and the Hamilton Rating Scale for Depression), as well as automatic thoughts and dysfunctional attitudes. However, group differences were found on cognitive organization in favor of individuals who received the combination of CT+ pharma-



Contents lists available at ScienceDirect

Addictive Behaviors



Self-concept disturbances: Cognitive vulnerability for early drinking and early drunkenness in adolescents at high risk for alcohol problems [☆]

Colleen Corte ^{*}, Robert A. Zucker

University of Michigan, USA

ARTICLE INFO

Keywords:
Risk factors
Risk behavior
Schema model
Identity development

ABSTRACT

We tested the hypotheses that adolescents with few positive and many negative self-schemas would drink and get drunk earlier than adolescents with many positive and few negative self-schemas. Adolescents ($N=264$) from an ongoing prospective family study of alcoholism [Zucker, R. A., Fitzgerald, H., Refior, S., Puttler, L., Pallas, D., & Ellis, D. (2000). The clinical and social ecology of childhood for children of alcoholics: Description of a study and implications for a differentiated social policy. In H. Fitzgerald, B. Lester, & B. Zuckerman (Eds.), *Children of addiction: Research, health, and policy issues* (pp. 109–141). New York, NY: Routledge Falmer] were assessed at ages 12 to 14 and again at ages 15 to 17. When considering the combined effects of the number of positive and negative self-schemas, antisociality, and parental alcoholism on drinking outcomes, the number of negative self-schemas directly predicted early drinking onset, whereas the number of positive self-schemas moderated the effects of antisociality on early drunkenness. Moreover, although self-concept properties at baseline did not differentiate level of alcohol involvement at follow-up in mid-adolescence, they did distinguish earlier from later age of onset among those who initiated, with effects tending to be somewhat stronger for boys than girls. Self-schemas appear to be an additional risk factor in the pathway to problem alcohol involvement in adolescence, above and beyond the contributions of such known risk factors as antisocial behavior and parental alcoholism.

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Background and Significance

- **Military Psychological Health**
- **Self, Identity, & Self-Schema**
- **Military Identity**

Military Identity: Conceptual Ambiguity

- **Concept of post 9/11 U.S. military identity: UNKNOWN**
- **Definition/characteristics of U.S. military identity: AMBIGUOUS**
- **Studies & theory-based approach: LIMITED**
- **Role of military identity in psychological health and well-being: LIMITED**

Military Identity: Current State

- **Military as Ethnic Identity (Daley, 1999)**
- **Social Identity of West Point Cadets (Volker, 2000)**
- **Reserve Identity/Social Identity (Griffith, 2009; 2011)**
- **Norwegian Military Identity (Johansen, 2012)**
- **Warrior Identity U.S. Military Identity & Psychological Functioning (Lancaster & Hart, 2015)**

AIMS

Specific Aim 1

Determine the core content of military identity

Based on Markus (1977) self-schema criteria:

- Q1: What are the attributes and categories generated from both the open and closed-ended Identity Attribute Tasks?**
- Q2: Which identity attributes have >50% (core) occurrence rate?**
- Q3: What are the top five rank-ordered identity attributes for:**
- **Self-descriptiveness**
 - **Importance**
 - **Positive/Negative valence**

Specific Aim 2:

Examine the effect of military identity on information processing response times

Q1: Are there statistically significant differences among the categories of: military high schematic, military schematic, military aschematic, and non-military schematic participants on information processing response times (RT)?

METHODS

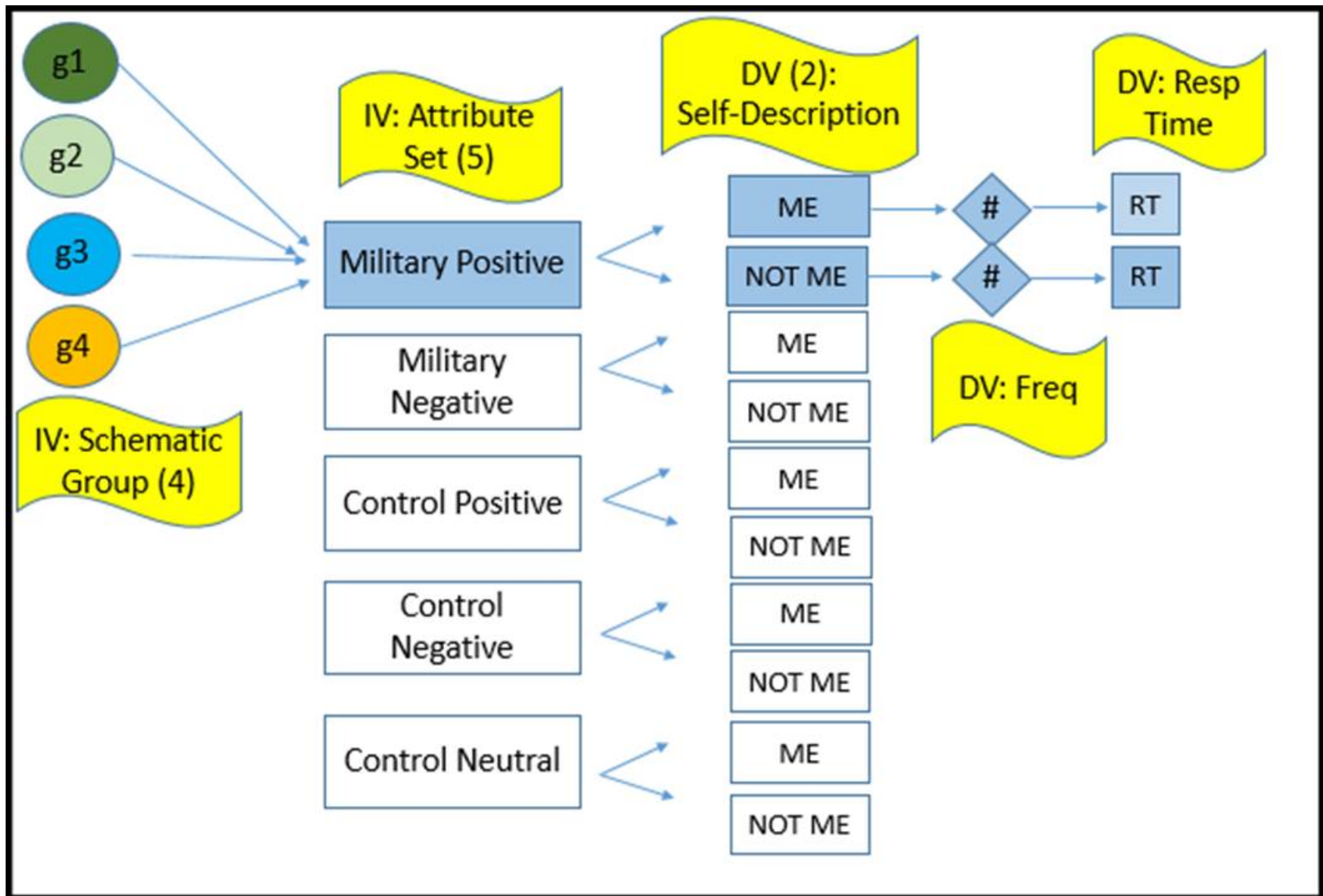
Methods

- **AIM 1: Military adapted Zajonc card sort method**
 - **Open-Ended Identity Attribute Task**
 - **Closed-Ended Identity Attribute Task**

- **AIM 2: Information processing paradigm**
 - **Response time task**
 - **Implicit measure**

Methods

- **Design**
 - **Exploratory Mixed methods cross-sectional for content analysis**
 - **Four group, five factor (attribute sets) X 2 (me/not me) X 2 (frequencies and RTs)**
- **Human Participant Protections**
 - **USUHS & USAFA IRB approval**
 - **Implied consent by participation**
 - **Non-identifiable data**
- **Recruitment**
 - **Inclusion criteria: USAFA active duty cadet, training instructor, faculty**
 - **Sona system cloud-based participant pool software**
 - **Flyers, email, word of mouth**



Sample Size

- **G-power analysis for a power 0.80 and alpha .05**
 - **Minimum group size n=19**
 - **Target for n=30 per group**
- **Actual USAFA Sample n=140**
 - **Freshmen Cadets n=49**
 - **Junior Cadets n=41**
 - **Training Instructors n=20**
 - **Faculty n=30**

USAFA Sample Characteristics

- **70% male**
- **Age 17- 47 (M=24.9 SD=7.77)**
- **65% cadet**
- **35% faculty & training instructors (TI)**
- **72% Caucasian, 6% African American, 6% Hispanic, 16% other**
- **25% raised in military family**
- **17% ROTC**



Sample Characteristics

Subset of Faculty and TI's

- **78% married**
- **43% enlisted**
- **35% Company Grade Officer**
- **22% Field Grade Officer**
- **20% never deployed**
- **55% 1-2 deployments**
- **29% 3-7 deployments**

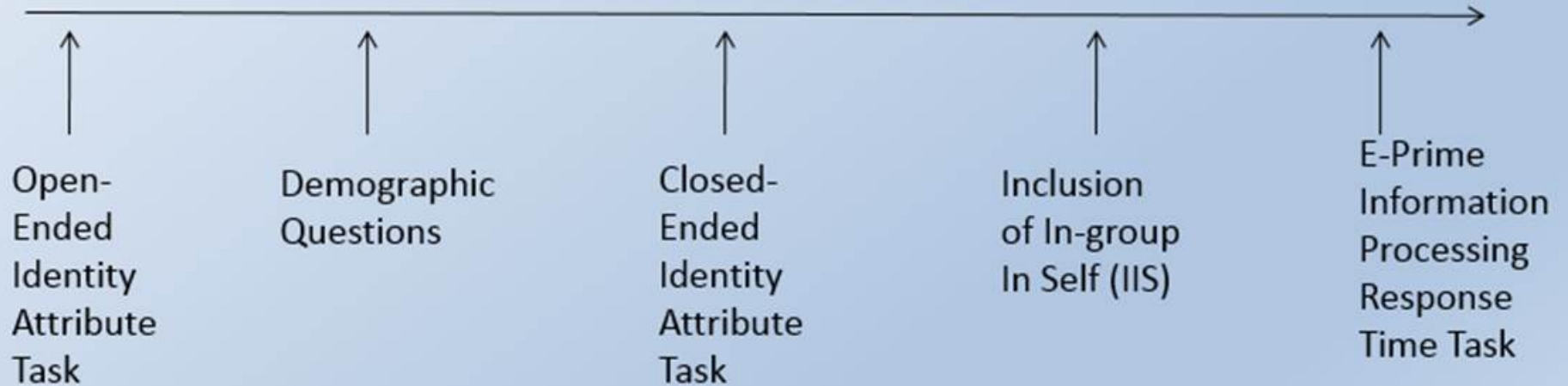


Measures

- **Open-ended Identity Attribute Task**
- **Demographic Questionnaire**
- **Closed-ended Identity Attribute Task**
- **Inclusion of Ingroup In Self (IIS)**
- **Information Processing RT Task**

Military Identity Project

Sequence of tasks



Procedures

- **For all tasks**
 - **Small group appointments**
 - **Separate enlisted, cadet and faculty appointments**
 - **Active duty researcher in civilian attire**
 - **Quiet laboratory**
 - **Individual cubicles**
 - **Reviewed instructions verbally, print copy**
 - **Instructed to work quickly and accurately**

Procedures

- **All tasks keep in mind:**
- ***Who Am I as a military member?***
- ***What attributes are central to who I am as a member of the military?***
- ***What makes me, Major Payne, ME?***

Procedures: Identity Attribute Tasks

Open-ended

Closed-ended

<p>Box A _____</p> <p>1 2 3 4 5 6 7 8 9 10 11 Not Me Me</p> <p>1 2 3 4 5 6 7 8 9 10 11 Not Important Very Important</p> <p>1 2 3 4 5 6 7 8 9 10 11 Negative Positive</p>	<p>Box B _____</p> <p>1 2 3 4 5 6 7 8 9 10 11 Not Me Me</p> <p>1 2 3 4 5 6 7 8 9 10 11 Not Important Very Important</p> <p>1 2 3 4 5 6 7 8 9 10 11 Negative Positive</p>	<p>Box A: Misunderstood _____</p> <p>1 2 3 4 5 6 7 8 9 10 11 Not Me Me</p> <p>1 2 3 4 5 6 7 8 9 10 11 Not Important Very Important</p> <p>1 2 3 4 5 6 7 8 9 10 11 Negative Positive</p>	<p>Box B: Selfless _____</p> <p>1 2 3 4 5 6 7 8 9 10 11 Not Me Me</p> <p>1 2 3 4 5 6 7 8 9 10 11 Not Important Very Important</p> <p>1 2 3 4 5 6 7 8 9 10 11 Negative Positive</p>
<p>Box D _____</p> <p>1 2 3 4 5 6 7 8 9 10 11 Not Me Me</p> <p>1 2 3 4 5 6 7 8 9 10 11 Not Important Very Important</p> <p>1 2 3 4 5 6 7 8 9 10 11 Negative Positive</p>	<p>Box E _____</p> <p>1 2 3 4 5 6 7 8 9 10 11 Not Me Me</p> <p>1 2 3 4 5 6 7 8 9 10 11 Not Important Very Important</p> <p>1 2 3 4 5 6 7 8 9 10 11 Negative Positive</p>	<p>Box D: Friendly _____</p> <p>1 2 3 4 5 6 7 8 9 10 11 Not Me Me</p> <p>1 2 3 4 5 6 7 8 9 10 11 Not Important Very Important</p> <p>1 2 3 4 5 6 7 8 9 10 11 Negative Positive</p>	<p>Box E: Self-disciplined _____</p> <p>1 2 3 4 5 6 7 8 9 10 11 Not Me Me</p> <p>1 2 3 4 5 6 7 8 9 10 11 Not Important Very Important</p> <p>1 2 3 4 5 6 7 8 9 10 11 Negative Positive</p>

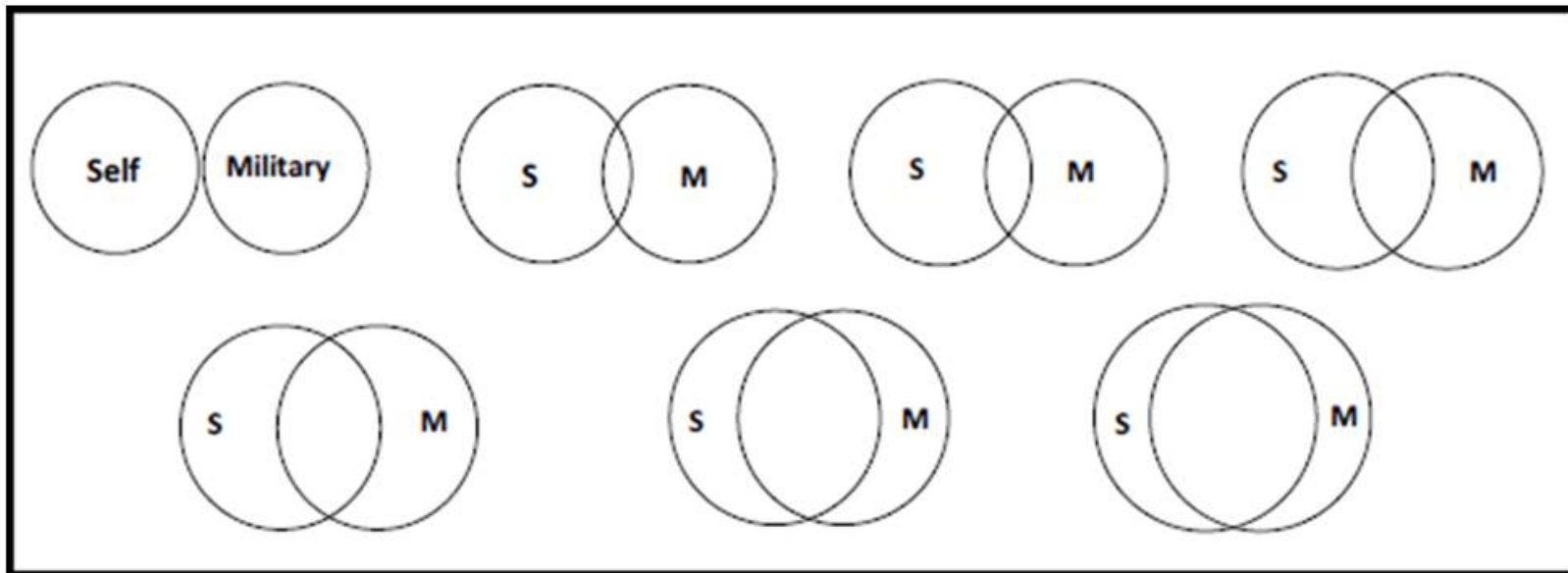
Appendix A: Table 1*Closed-ended Identity Attribute Task with Anderson's (1968) Ratings*

		<u>Control</u>		
<u>Military</u>				
Positive	Negative	Positive	Negative	Neutral
Brave*	Alien*	Creative (462)	Anxious (246)	Choosy (272)
Courageous (471)	Angry (169)	Friendly (519)	Annoying (84)	Curious (432)
Guardian*	Ashamed*	Generous (459)	Boring (97)	Eccentric (257)
Honest (555)	Broken	Happy (514)	Grouchy (117)	Hesitant (290)
Honorable (507)	Conflicted*	Humble (427)	Loudmouth (83)	Ordinary (266)
Loyal (547)	Cowardly (110)	Individualistic (467)	Mean (37)	Silly (219)
Military*	Detached*	Kind (520)	Messy (147)	Strict (266)
Mission-focused*	Disillusioned*	Pleasant (495)	Rude (76)	Talkative (352)
Obedient (373)	Empty*	Warm (522)	Stingy (143)	Quiet (311)
Self-disciplined (491)	Fragmented*	Understanding (549)	Stubborn (196)	Unique*
Selfless (510)	Guilty			
Strong*	Insignificant*			
Team player*	Misunderstood*			
Unfailing*	Unsatisfied*			
Warrior*	Weak (155)			

Note. Attributes* not listed in Anderson's (1968) 555 listing, those with (number) reflect the likableness of the attribute in descending order with 555 being the most likeable. Control identity attributes were selected from the top (positive), middle (neutral), and bottom (negative) thirds of the 555 trait listing. Although military identity attributes were not selected from the 555 listing, ratings are provided if the attribute appeared in the listing. Attempts were made to control attribute characteristics for similarity in use, length, complexity, and readability.

Procedures

- **Demographic Questionnaire**
- **Inclusion of Ingroup In Self (IIS)**



RT Procedures

- **60 attributes: Closed-ended Identity Attribute Task**
 - **Randomized**
 - **E-prime 2.0**
- **17 inch HP Envy laptop computer**
 - **ATTRIBUTE centered mid screen in 72 font, five second intervals**
- **Selections: Index finger of the left or right hand**
 - **green key/ “me” /endorsement**
 - **red key/ “not me” /rejection**

Desktop Set-Up: EPrime



← *New word
every 5
seconds.*

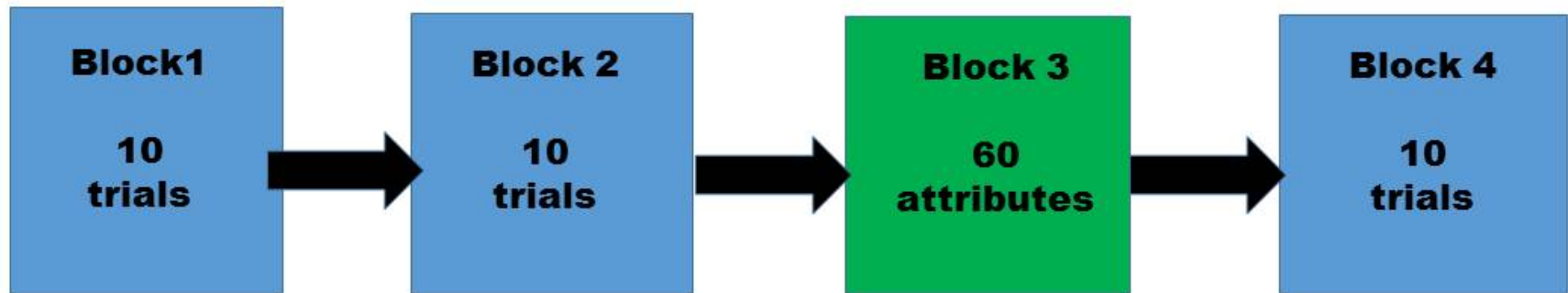
Left
Key

Right
Key

Not me

Me

RT Sequence



DATA ANALYSIS

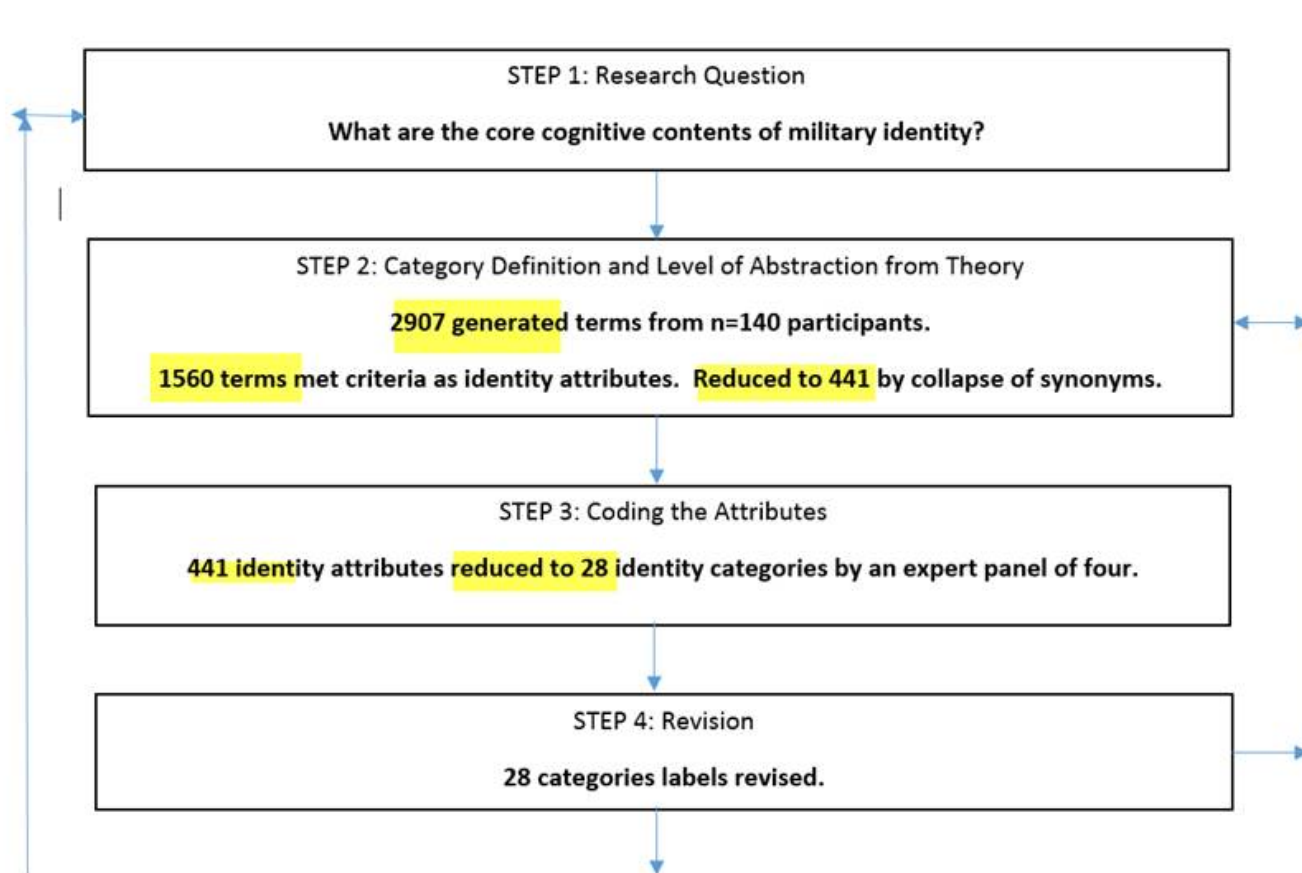
Specific Aim 1:
**Determine the core content of
military identity**

Mayring (2014) Content Analysis

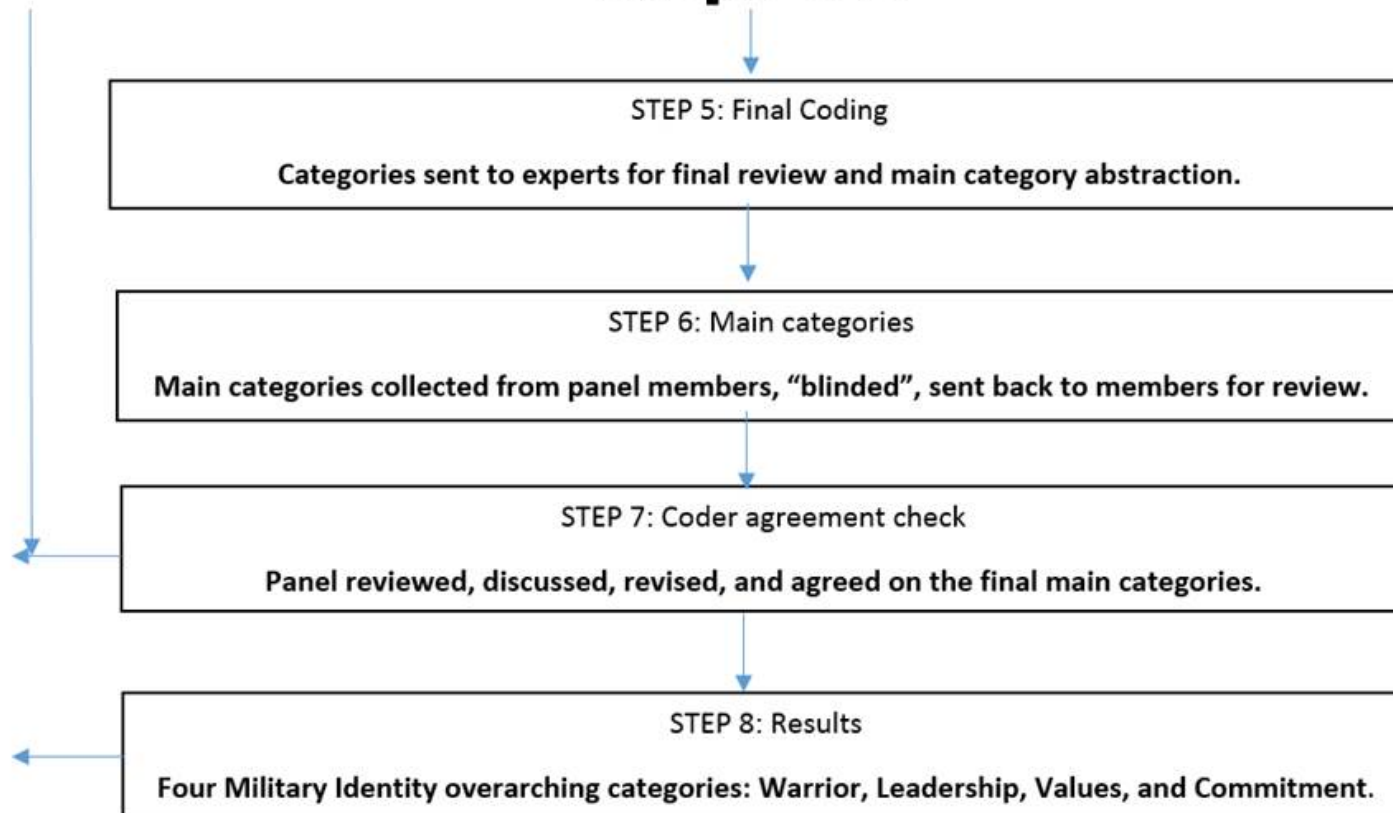
- **Inductive 8 steps**
- **Deductive 7 steps**
- **Unit of analysis for both methods is a single attribute**
- **Research team of four for content analysis**
- **Additional researcher reviewed for agreement**

Inductive Content Analysis

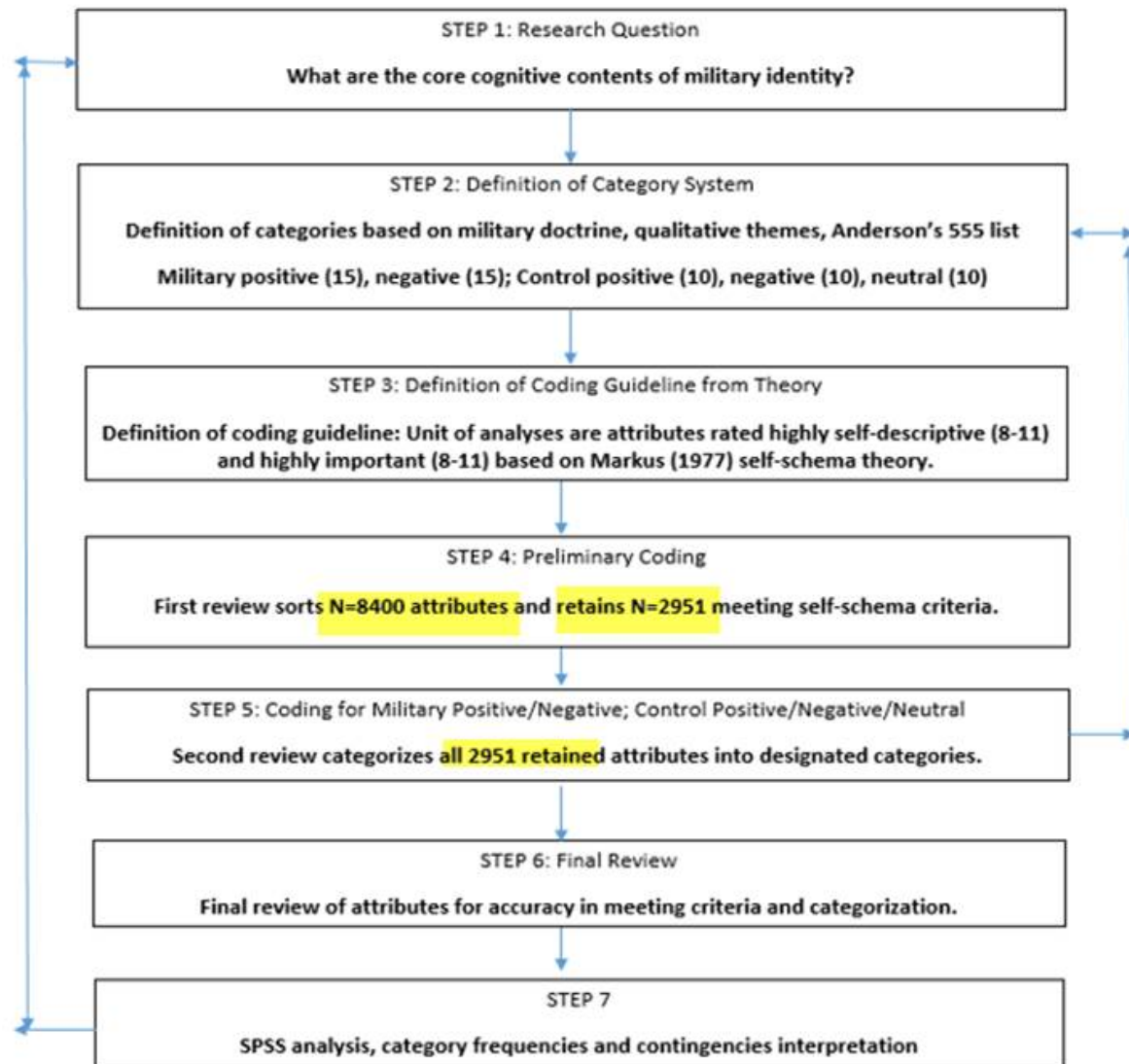
steps 1-4



Inductive Content Analysis steps 5-8



Deductive Content Analysis



Analysis of Category Content

- **SPSS 22.0**
- **Frequencies by category and individual**
 - **Descriptiveness & Importance together**
 - **Descriptiveness**
 - **Importance**
 - **Valence**

Specific Aim 2:

**Examine the effect of military identity on
information processing response times**

RT Analysis

- **Data preparation-scoring into schematic groups**
- **One-way ANOVA cross-group analysis**
 - **separate for each attribute set**
 - **separate for self-descriptive endorsements and rejections**
 - **Military positive set endorsements**
 - **Military positive set rejections**
- **Unit of analysis: schematic group mean RT per attribute set**

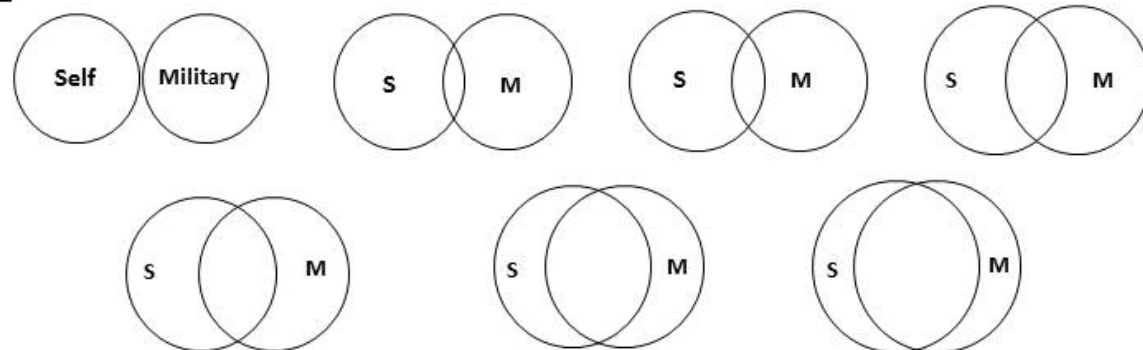
Schematic categories based on criteria for 3 scores

- 1: MILITARY attribute rating
- 2: WARRIOR attribute rating
- 3: IIS Score

Inclusion of Ingroup in Self (IIS)

MILITARY (same for WARRIOR)

1	2	3	4	5	6	7	8	9	10	11
Not Me										Me
1	2	3	4	5	6	7	8	9	10	11
Not Important							Very Important			
1	2	3	4	5	6	7	8	9	10	11
Negative								Positive		

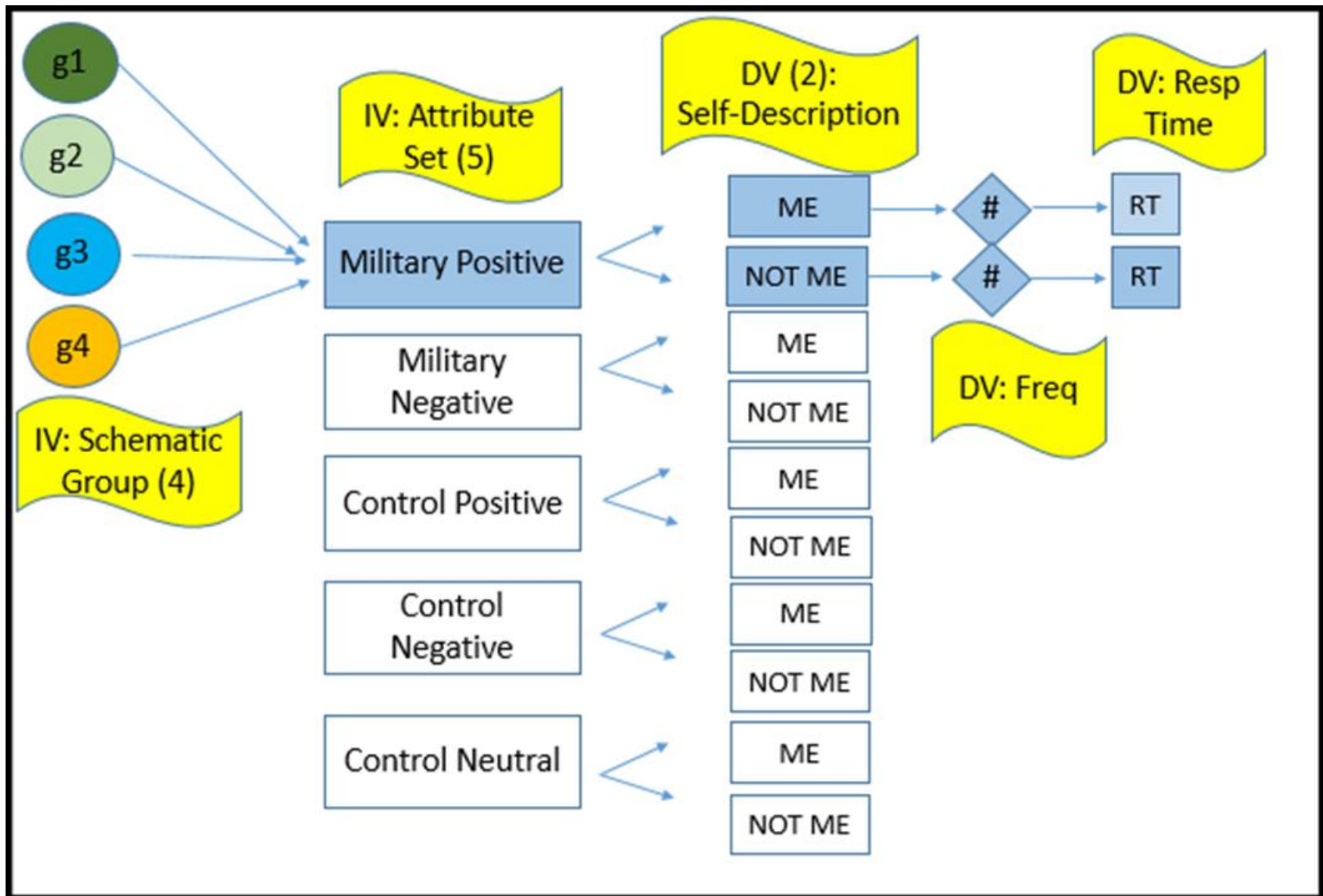


Participants must have 2 out of 3 criteria to meet group requirements

Schematic Grouping Criteria

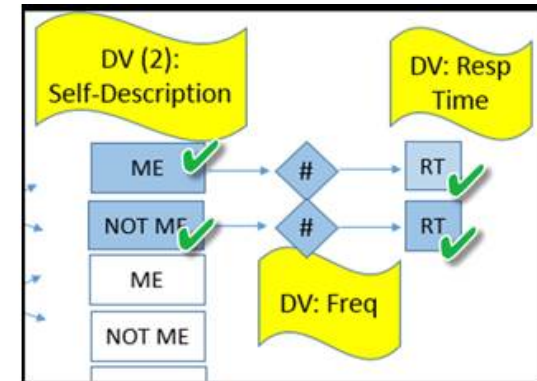
Schematic Group	IIS Score	“Military” attribute rating		“Warrior” attribute rating	
		Self-descriptive	Important	Self-descriptive	Important
Military high (n=20)	6-7	10-11	10-11	10-11	10-11
Military (n=19)	6-7	8-9	8-9	8-9	8-9
Aschematic (n=22)	3-5	5-7	< 7	5-7	< 7
Non-military (n=9)	1-2	1-7	8-11	1-7	8-11

Note: Inclusion of In-group in Self (IIS). Participants must meet criteria for two of three scores to be categorized in a schematic group. The group of military schematics was so large that two groups were determined after initial group categorization. Military high schematics scored at the upper bound for criteria (IIS=7, self-descriptiveness and importance 11/11) while Military schematics were at the lower bound (IIS=6, self-descriptiveness and importance 8-9/8-9). N=2 met criteria for non-military, thus self-descriptiveness criteria was extended to 1-7.



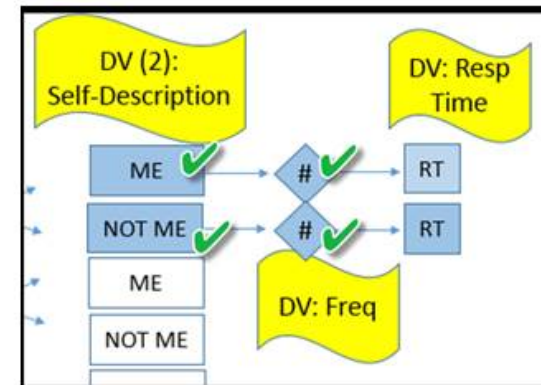
RT Analysis

- **Normality: histogram & Shapiro Wilk test**
- **Data departed normality**
 - **Outliers removed 2 SD cut-off points and $RT < 300$ ms eliminating $< 2\%$ data**
- **Homogeneity of Variance: Levene's test**
- **Bonferroni or Games Howell post hoc**
- **Partial eta squared for effect size of F test**
- **Cohen's d for post hoc results**



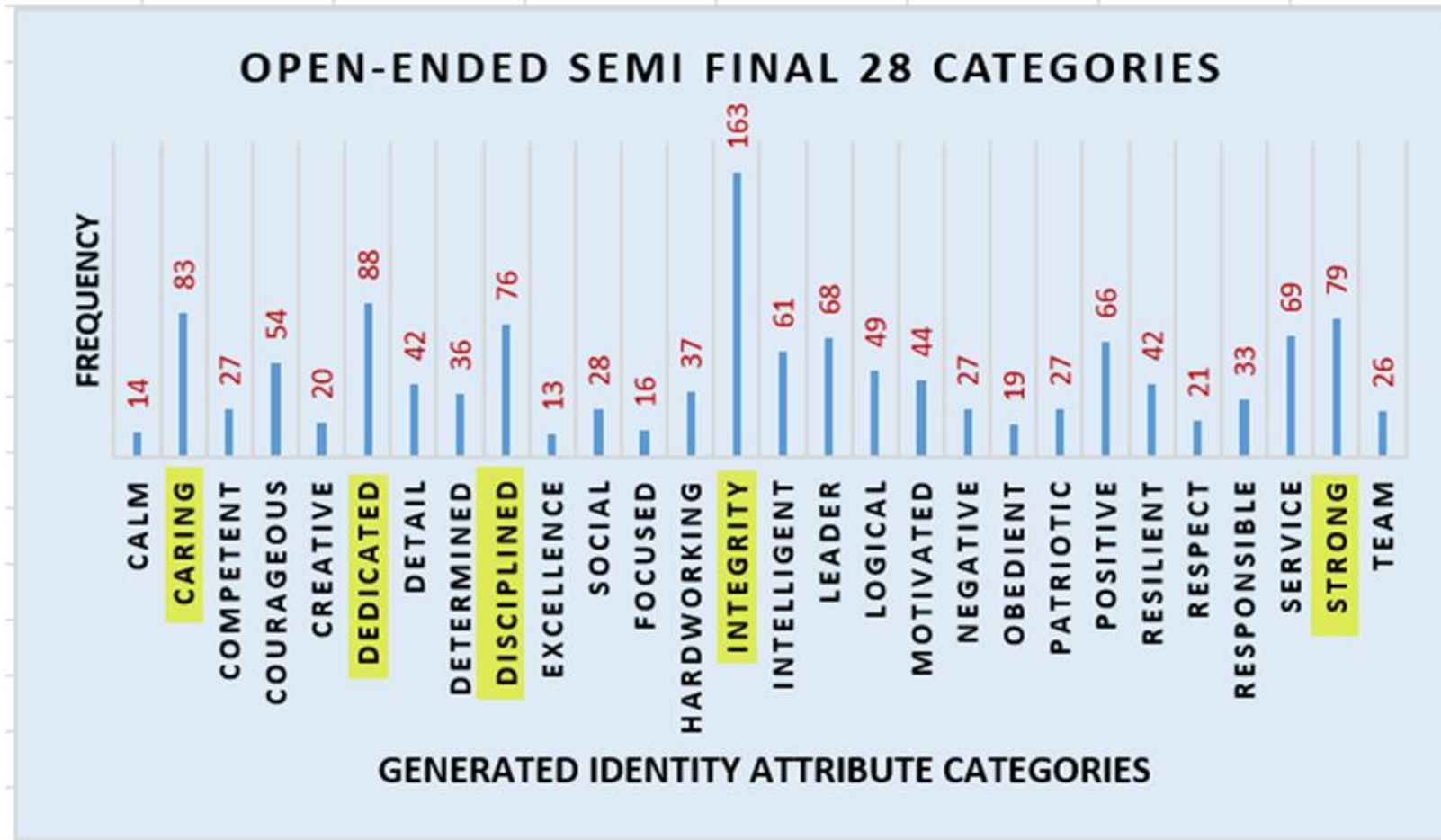
Self-descriptive Frequency Analysis

- **Data departed from normal**
- **Data valid thus no outlier treatment**
- **Transformations ineffective for normalizing**
- **Kruskal Wallis test**
- **Post hoc: Dunn's (1964) pairwise multiple comparisons with Bonferroni correction**



RESULTS

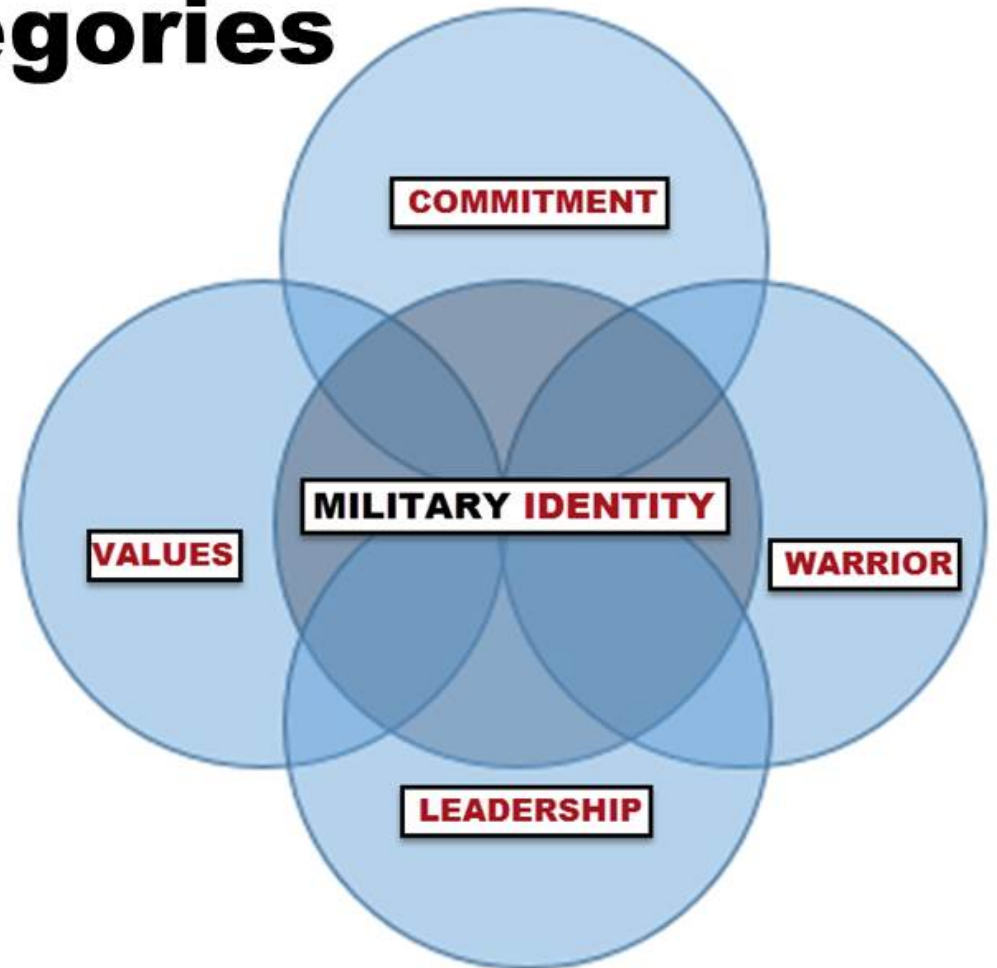
Content Analysis Results



Open-ended Categories

Final Categories of Self-generated Identity Attribute

- **Leadership 59%**
- **Values 49%**
- **Warrior 43.5%**
- **Commitment 40%**



Open-ended Attribute Frequency

Open-ended Identity Attributes: Ranked Attributes Rated both Highly Self-Descriptive (8-11) and Highly Important (8-11)

Warrior	n (%)	Leadership	n (%)	Commitment	n (%)	Values	n (%)
Strong	79 (16.4)	Caring	83 (15.7)	Dedicated	88 (10)	Integrity	163 (22.9)
Courageous	54 (9.2)	Leader	68 (14.3)	Detailed	42 (12.1)	Disciplined	76 (15.7)
Motivated	44 (6.4)	Positive	66 (15.7)	Hardworking	37 (5.7)	Service	69 (7.9)
Resilient	42 (10.7)	Intelligent	61 (7.9)	Responsible	33 (6.4)	Respect	21 (2.9)
Determined	36 (10)	Logical	49 (9.2)	Patriotic	27 (7.1)	Excellence	13 (1.4)
		Social	28 (8.6)	Obedient	19 (2.9)		
		Competent	27 (5.7)				
		Team	26 (9.2)				
		Creative	20 (6.4)				
		Calm	14 (7.1)				
		Focused	14 (2.9)				

Note. Open-ended Identity Attributes generated and endorsed as both highly self-descriptive (8-11) and highly important (8-11) are displayed ranked by frequency from n=140 participants. The percentage represents the percentage of participants contributing attributes to the category. Attributes were rated on an 11-point scale where 1 represents “Not Me” and 11 represents “Me” for self-descriptiveness (“Who I am as a military member”).

Closed-ended Attribute Frequency

Closed-Ended Military Identity Attributes: Ranked Attributes Rated both Highly Self-Descriptive (8-11) and Highly Important (8-11)

		<u>Military Attributes</u>				<u>Control Attributes</u>			
Positive	n (%)	Negative	n (%)	Positive	n (%)	Negative	n (%)	Neutral	n (%)
Honest	133 (95)	Unsatisfied	19 (13.6)	Understanding	116 (82.9)	Stubborn	24 (17.1)	Curious	79 (56.4)
Loyal	130 (92.9)	Misunderstood	15 (11)	Happy	98 (70)	Anxious	9 (6.4)	Unique	26 (42.9)
Honorable	129 (92.1)	Disillusioned	7 (5)	Friendly	97 (69.3)	Loudmouth	6 (4.3)	Strict	42 (30)
Mission-focus	121 (86.4)	Alien	6 (4.3)	Kind	96 (68.6)	Messy	5 (3.6)	Choosy	32 (22.9)
Self-disciplined	120 (85.7)	Weak	6 (4.3)	Humble	95 (67.9)	Boring	4 (2.9)	Talkative	32 (22.9)
Team Player	120 (85.7)	Broken	5 (3.6)	Pleasant	79 (56.4)	Annoying	3 (2.1)	Eccentric	22 (15.7)
Brave	109 (77.9)	Empty	5 (3.6)	Generous	77 (55)	Mean	3 (2.1)	Silly	18 (12.9)
Courageous	109 (77.9)	Guilty	5 (3.6)	Creative	67 (47.9)	Stingy	3 (2.1)	Hesitant	17 (12.1)
Selfless	108 (77.1)	Ashamed	4 (2.9)	Warm	48 (34.3)	Grouchy	2 (1.4)	Quiet	15 (10.7)
Strong	108 (77.1)	Detached	4 (2.9)	Individualistic	49 (34.7)	Rude	1 (0.7)	Ordinary	9 (6.4)
Obedient	102 (72.9)	Fragmented	4 (2.9)						
Guardian	101 (72.1)	Insignificant	4 (2.9)						
Military	94 (67.1)	Angry	3 (2.1)						
Warrior	82 (58.6)	Cowardly	3 (2.1)						

Note. Identity attributes displayed from the Closed-ended Identity Attribute Task ranked by number (%) endorsed by the n=140 participants. 60 attributes were presented: 30 stimuli (15 military positive and 15 military negative) and 30 control (10 positive, 10 negative, 10 neutral). Attributes were rated on an 11-point scale where 1 represents “Not Me” (Not Important) and 11 represents “Me” (Very Important) for self-descriptiveness (importance) to “Who I am as a military member”. Number (%) attributes endorsed as both highly self-descriptive (8-11) and highly important (8-11) are displayed.

Top 5 Attributes Open & Closed Methods

Top Five Category Content From Open and Closed-Ended Identity Attribute Tasks

Self-Descriptiveness		Importance		Positive Valence		Negative Valence	
<u>Open-Ended</u>	<u>Closed-Ended</u>	<u>Open-Ended</u>	<u>Closed-Ended</u>	<u>Open-Ended</u>	<u>Closed-Ended</u>	<u>Open-Ended</u>	<u>Closed-Ended</u>
Integrity	Honest	Integrity	Honest	Integrity	Honorable	Burned-out	Stubborn
Dedicated	Honorable	Dedicated	Honorable	Dedicated	Brave	Insignificant	Unsatisfied
Disciplined	Loyal	Disciplined	Loyal	Service	Loyal	Skeptical	Misunderstood
Strong	Mission-focused	Service	Mission-focused	Strong	Courageous	Bad Habits	Anxious
Service*	Self-disciplined*	Leader	Self-disciplined*	Leader	Honest	Inexperience	Disillusioned
Caring*	Team-player*		Team-player*				

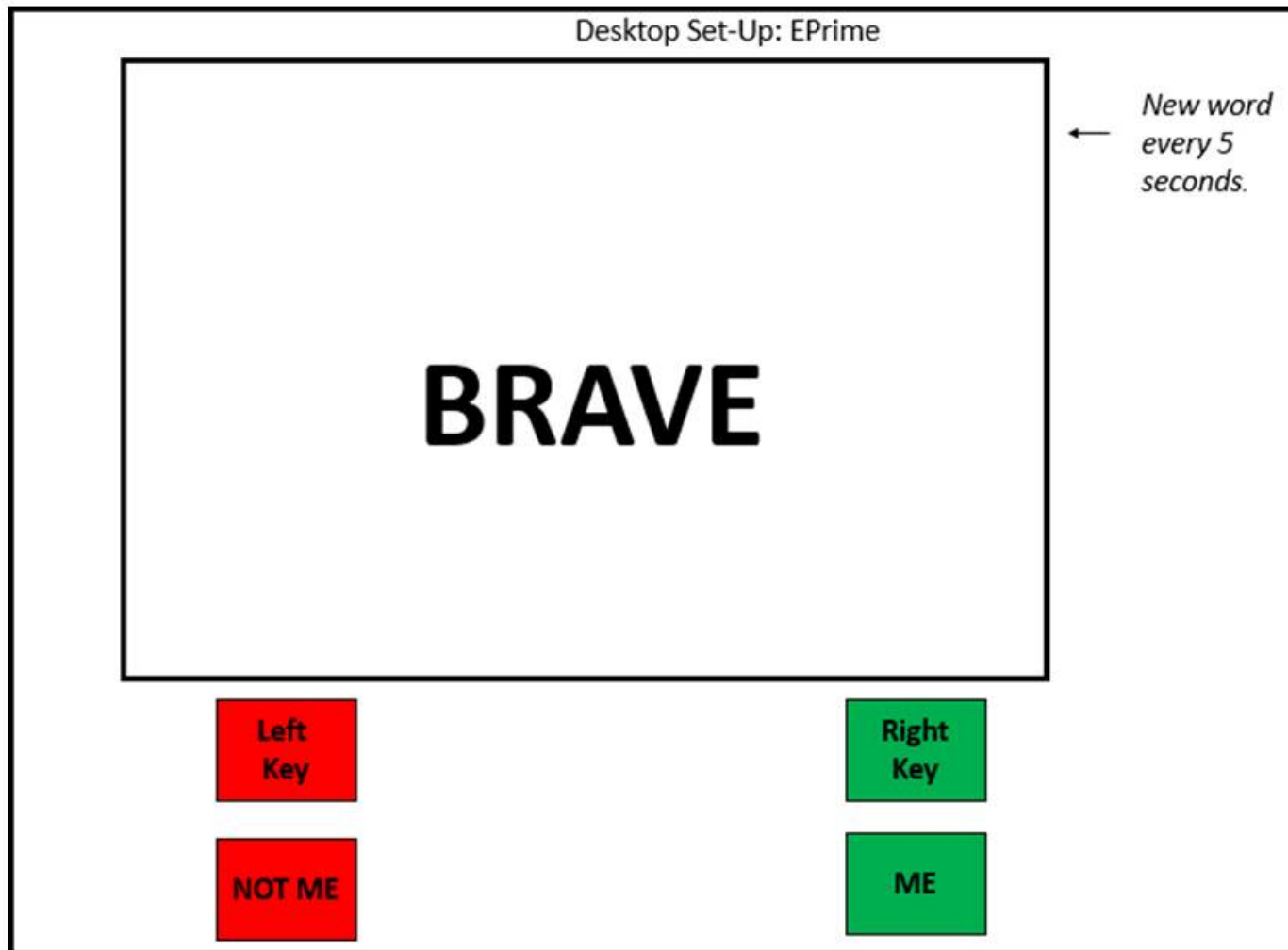
Note: Attributes are displayed in descending rank order according frequency. * Denotes duplicate frequency and shared position.

Merge of Open & Closed Results

- **Open-Ended final categories**
- **Closed-ended core attributes**
 - **Identity attributes > 50% frequency**
 - **Nested in associated open-ended category field**



Information Processing RT Results



Characteristics of RT Participants

Table 1

Characteristics of Response Time Participants

Schematic Group	(n)	Age M (SD)	TIS M (SD)	Gender Male	Rank O/E/S	Role F/TI/S	Military Family
Mil High	(20)	25.0 (8)	6.1 (7.4)	71	5/24/71	5/24/71	24
Military	(19)	24.4 (7.8)	6.0 (6.4)	89	6/28/66	6/28/66	28
Aschematic	(22)	29.5 (9.2)	8.1 (6.7)	64	59/9/32	59/9/32	23
Non-mil	(9)	26.8 (11.0)	6.4 (9.0)	90	40/0/60	40/0/60	0

Note: Means, and standard deviations for continuous data and percent of n=70 sample for nominal data. TIS=Time in Service, O=Officer, E=Enlisted, S=Student, F=Faculty, TI=Training Instructor.

Block Trials: No difference between groups

- **Start Trial**

- **Me: $F(3, 69)=1.413$ $p=0.247$**
- **Not me: $F(3, 70)=2.305$ $p=0.085$**

- **Word Trial**

- **Me: $F(3, 69)=1.195$ $p=0.318$**
- **Not Me: $F(3, 69)=1.343$ $p=0.268$**

- **End Trial**

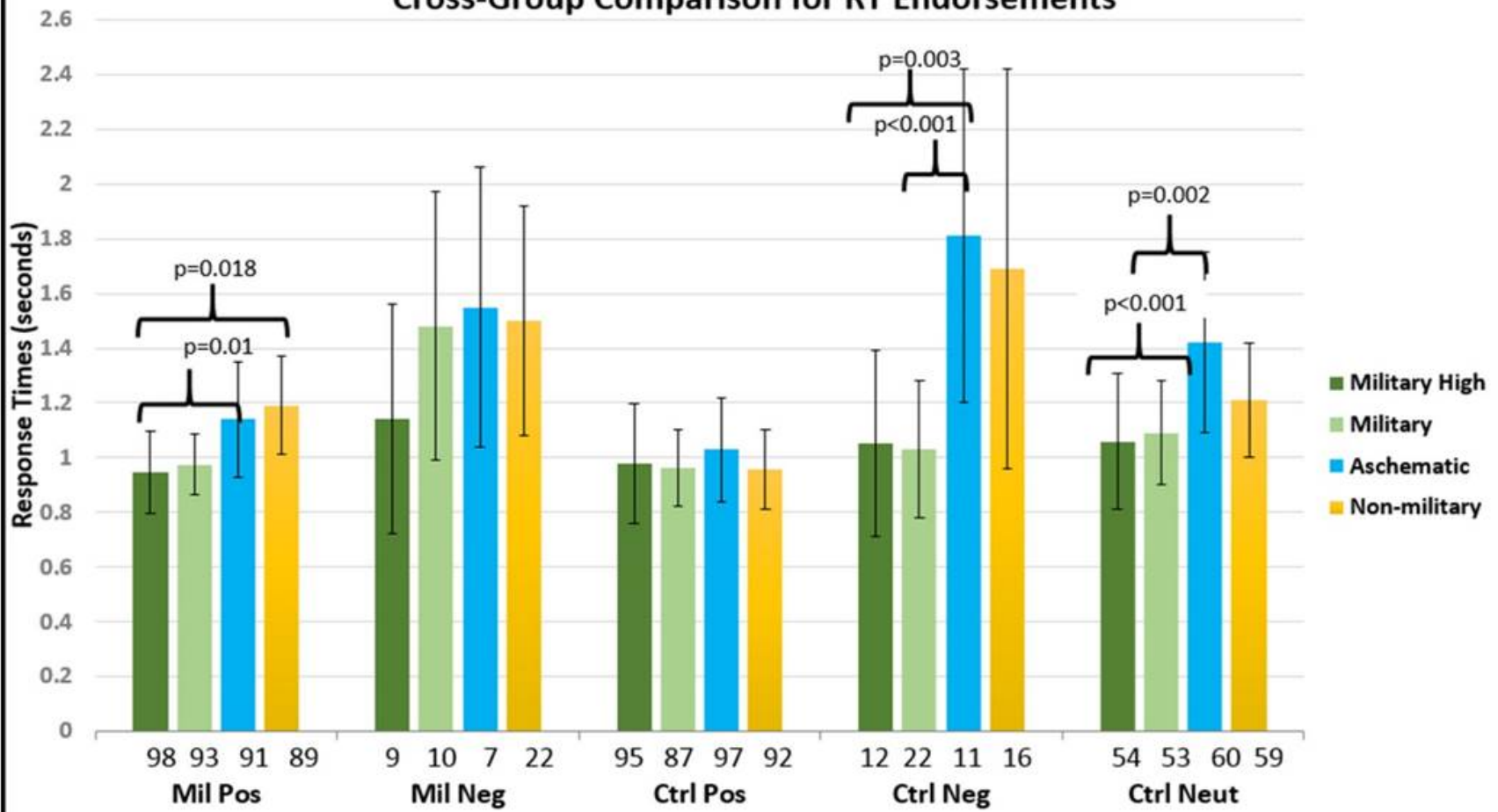
- **Me: $F(3,69)= 1.990$ $p=0.124$**
- **Not me: $F(3, 69)=0.323$ $p=0.809$**

RT Endorsements & Rejections

Endorsements (Me)					
Attribute Set	Mil Pos	Mil Neg	Ctrl Pos	Ctrl Neg	Ctrl Neut
Schematic Group	M (SD)	M (SD)	M (SD)	M (SD)	M (SD)
Military high	.949 (0.15) ^a	1.14 (0.42)	.978 (0.22)	1.05 (0.34) ^d	1.06 (0.25) ^g
Military	.975 (0.11)	1.48 (0.49)	.962 (0.14)	1.03 (0.25) ^e	1.09 (0.19) ^h
Aschematic	1.14 (0.21) ^b	1.55 (0.51)	1.03 (0.19)	1.81 (0.61) ^f	1.42 (0.33) ⁱ
Non-military	1.19 (0.18) ^c	1.50 (0.42)	.958 (1.44)	1.69 (0.73)	1.21 (0.21)
Rejections (Not Me)					
Schematic Group	M (SD)	M (SD)	M (SD)	M (SD)	M (SD)
Military high	.869 (0.37)	1.05 (0.17)	1.12 (0.29)	1.08 (0.30)	1.31 (0.35)
Military	1.16 (0.51)	1.06 (0.19)	1.15 (0.28)	1.15 (0.31)	1.17 (0.26) ^j
Aschematic	1.36 (0.44)	1.15 (0.20)	1.27 (0.45)	1.23 (0.27)	1.51 (0.44) ^k
Non-military	1.29 (0.42)	1.16 (0.24)	1.42 (0.71)	1.19 (0.21)	1.32 (0.21)

Note: Means, and standard deviations for response times (in seconds) for endorsements and rejections per attribute set by schematic group (N=70). Superscripts represent significant differences based on one-way ANOVA for each attribute set with Bonferroni or Games Howell post-hoc test depending on homogeneity of variances. **a<b, a<c; d<f, e<f; g<i, h<i; j<k, all differences at the p<.05 level of significance.**

Cross-Group Comparison for RT Endorsements



Military Positive Attributes

Accounting for Group Differences

- ***brave*, $F(3, 67) = 2.99$, $p = .037$, $\eta p^2 = .118$**
- ***loyal*, $F(3, 65) = 3.33$, $p = .025$, $\eta p^2 = .133$**
- ***military*, $F(3, 59) = 5.46$, $p = .002$, $\eta p^2 = .217$**
- ***mission-focused*, $F(3, 63) = 5.24$, $p = .003$, $\eta p^2 = .200$**

Control Neutral Attributes

Accounting for Group Differences

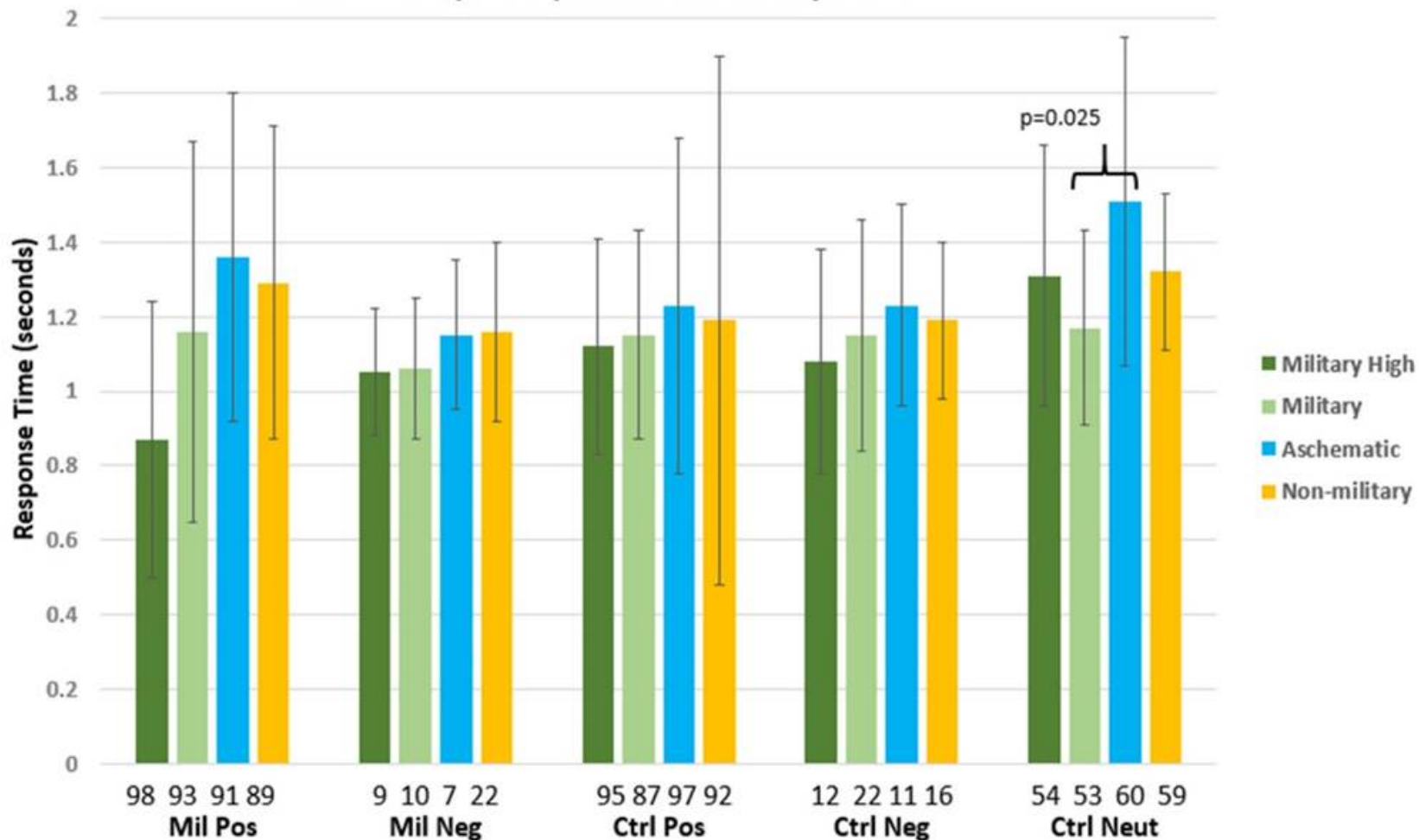
Military high endorsement of *ordinary*, $F(3, 20) = 3.68$, $p = .029$, $\eta p^2 = .356$ as quicker than non-military ($p = .036$)

Control Negative Attributes

Accounting for Group Differences

Individual control negative attribute endorsement group sizes were too small for analysis.

Cross-Group Comparison for RT Rejections



Control Neutral Attributes

Accounting for Group Differences

- ***hesitant* $F(3, 45) = 4.31, p = .009, \eta p^2 = .223$**
- ***ordinary*, $F(3, 41) = 2.91, p = .046, \eta p^2 = .176$**
- ***quiet*, $F(3, 36) = 5.50, p = .003, \eta p^2 = .320$**

Self-Descriptive Endorsement and Rejection Frequency

Self-Descriptive Endorse/Reject

Endorsement (Me)					
Attribute Set	<u>Mil Pos</u>	<u>Mil Neg</u>	<u>Ctrl Pos</u>	<u>Ctrl Neg</u>	<u>Ctrl Neut</u>
Schematic Group	Md (%)	Md (%)	Md (%)	Md (%)	Md (%)
Military high	15 (97.7)*	1 (9)	10 (94.5)	1 (12)	5 (54)
Military	14 (93.3)	1 (10)	9 (87)*	2 (21.6)	5 (53.2)
Aschematic	14 (91.2)*	0.5 (6.7)	10 (97.2)*	1 (11.4)	6 (59.5)
Non-military	14 (88.5)	1 (22.2)	9 (92.2)	1 (15.7)	6 (58.7)
Rejections (Not Me)					
Attribute Set	<u>Mil Pos</u>	<u>Mil Neg</u>	<u>Ctrl Pos</u>	<u>Ctrl Neg</u>	<u>Ctrl Neut</u>
Schematic Group	Md (%)	Md (%)	Md (%)	Md (%)	Md (%)
Military high	0 (2.3)*	14 (91)	0 (5.5)	9 (88)	5 (46)
Military	1 (6.7)	14 (90)	1 (13)*	8 (78.4)	5 (46.8)
Aschematic	1 (8.8)*	14 (93)	0 (2.7)*	9 (88.6)	4 (40.5)
Non-military	1 (11.5)	14 (76.)	1 (7.8)	9 (83.3)	4 (41.1)

Note: Maximum possible endorsements/rejections for military attributes were 15 while control attribute maximums were 10. Medians, and percent attribute set endorsement/rejection by schematic group (n=70). *Military high schematics endorsed more and rejected less military positive attributes than aschematics at a significance level of $p < .05$. Likewise, aschematics endorsed more and rejected less control positive attributes than military schematics at a significance level of $p < .05$.

Self-descriptive Frequencies

• Endorsements

- **Military positive set**
 - **KWH ($X^2 [3] = 10.76, p = .013$)**
 - **Military high more than aschematics**
- **Control positive set**
 - **KWH ($X^2 [3] = 13.61, p = .003$)**
 - **Aschematics more than military schematics**

• Rejections

- **Military positive set**
 - **KWH ($X^2 [3] = 10.61, p = .014$)**
 - **Military high fewer than aschematics**
- **Control positive set**
 - **KWH ($X^2 [3] = 11.78, p = .008$)**
 - **Aschematics fewer than military schematics**

Content Implications

- **Decreased conceptual ambiguity**
- **Evidence to reject the assumption that military identity is internalized by all service members**
- **Preliminary core content**
 - **Starting point for clarifying most valued and descriptive content across services**
 - **Identified target content for future research exploring vulnerabilities and resources**
 - *Leadership, Values, Warrior, Commitment*
 - *Burn-out*: most frequent negative self-generated attribute
 - *Unfailing*: low % positive ratings ? Unrealistic expectations?
 - *Brave and courageous* rated most positive but not most self-descriptive or important
 - **Multidimensional: Superordinate military self-schema?**

RT Implications

- **Theoretically consistent with established identity domains**
- **Value as implicit indicator of cognitive vulnerability or resource**
- **Individual contributions by specific attributes may suggest “core” content**

Overarching Implications of Results

- **Preliminary construct validity for military self-schema**
- **Advantage of implicit RT measures to distinguish otherwise similar cases**
- **How one THINKS about self as military member has potential cognitive consequences regardless of BEING or DOING military**

Limitations

- **Elite homogenous academic sample**
- **Service specific (AF)**
- **Small sample size**
- **Control attributes not domain specific**
- **Sequence of tasks with RT last**
 - **Priming effect?**
- **Would benefit from phased approach for data collection**
 - **Score into adequate size schematic groups for improved power**

Future Directions

- **Replication in joint service population**
- **Web-based collection of identity attributes using both methods and RT task for larger population**
- **Qualitative study advancing findings from content analysis**

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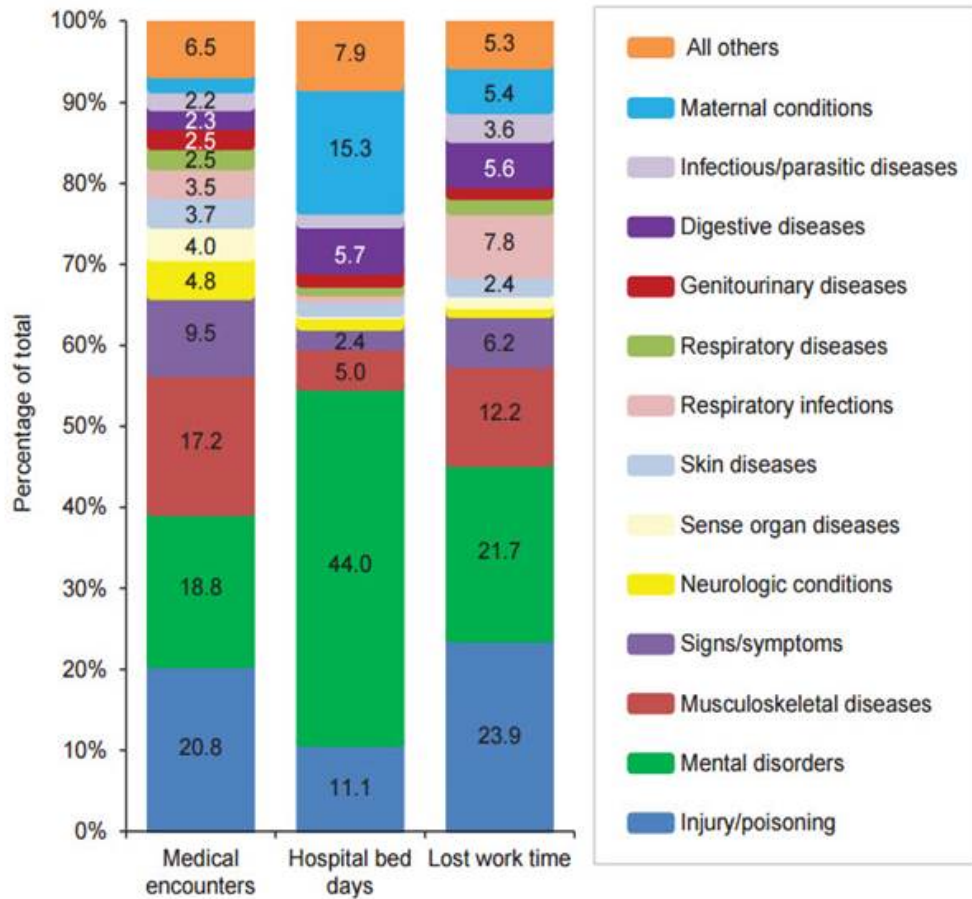
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- **Penny Pierce, PhD, Chair (GSN)**
- **Petra Goodman, PhD (Catholic University)**
- **David Keyser, PhD (TIRP)**
- **David Riggs, PhD (Center for Deployment Psychology)**
- **Warrior Scholars**
- **GSN Support Staff**
- **Family & Friends**
- **The Great I Am**

Questions?

Backup Slides

FIGURE 1b. Percentage of medical encounters,^a hospital bed days,^b and lost work time^c attributable to burden of disease categories,^d active component, U.S. Armed Forces, 2014



2014 U.S. Armed Forces Percent % Active Duty Medical Encounters, Bed Days, Lost Work Time

Variables

- **IV: Schematic group**
 - **Military High Schematic**
 - **Military Schematic**
 - **Military Aschematic**
 - **Non-military Schematic**
- **Attribute Sets**
 - **Military positive (15)**
 - **Military negative (15)**
 - **Control neutral (10)**
 - **Control positive (10)**
 - **Control negative (10)**
- **DV1: Self-descriptive content**
- **Frequency per attribute set by schematic group**
 - **Attribute endorsement (me)**
 - **Attribute rejection (not me)**
- **DV2: Self-descriptive RT**
- **Mean RT per attribute set by schematic group**
 - **RT endorsement (me)**
 - **RT rejection (not me)**

Military Positive Endorsement RT

- **F (3, 27.18) = 7.103, p < .001 est. $\eta p^2 = .292$**
- **Post Hoc: Games Howell**
 - **Military high schematics vs Non-military (p=.018, d=1.44) and Aschematics (p=.010, d=1.05)**
 - **Military low schematics vs Non-military (p=.030, d=1.45) and Aschematics (p=.016, d=1.0)**
- **Military high schematics were quickest to endorse with mean RT 949 ms**
- **Non-military schematics were slowest to endorse with mean RT 1186 ms**
- **Aschematics mean RT 1143 ms**
- **Military low schematics mean RT 974 ms**

Control Attributes Response Time

- **Difference between groups**
 - **Control Negative endorsement RT**
 - **Control Neutral endorsement and rejection RT**
- **No difference between groups RT**
 - **Control Positive attribute endorsement or rejection RT**
 - **Control Negative rejection RT**

Control Negative Endorsement RT

- **F (3, 17.39) = 7.744, p = .002 est. $\eta p^2 = .350$**
- **Post Hoc: Games Howell**
 - **Aschematics and Military high schematics (p=.003, d=1.53, r=.607) and Military low schematics (p<.001, d=1.66, r=.638)**
 - **Military low schematics were quickest to endorse with mean RT 1035 ms**
 - **Military high schematics mean RT 1052 ms**
 - **Aschematics were slowest to endorse with mean RT 1812 ms**

Control Neutral Endorsement RT

- **F (3, 26.75) = 6.697, p = .002 est. $\eta p^2 = .235$**
- **Post Hoc: Games Howell**
 - **Aschematics and Military high schematics (p=.001, d=1.26, r=.532) and Military low schematics (p=.002, d=1.24, r=.527)**
 - **Military high schematics were quickest to endorse with mean RT 1057 ms**
 - **Military low schematics mean RT 1090 ms**
 - **Aschematics were slowest to endorse with mean RT 1425 ms**

Control Neutral Rejection RT

- **F (3, 30.82) = 2.942, p = .048 est. $\eta p^2 = .154$**
- **Post Hoc: Games Howell**
 - **Aschematics and Military low schematics (p=.025, d=.947, r=.428)**
 - **Military low schematics were quickest to endorse with mean RT 1172 ms**
 - **Aschematics were slowest to endorse with mean RT 1513 ms**

Military Positive Attribute Self-Description Endorsement

- **“Me” endorsement frequency**
- **$X^2(3) = 10.76, p = .013$**
- **Military high endorsed more than Aschematics**
 - **Dunn’s (1964) pairwise comparisons with Bonferroni adjusted $p = .025$**
 - **Military high Median 15, Range 13-15, 97.7% endorsements**
 - **Aschematic Median 14, Range 9-15, 91.2% endorsements**

Military Positive Attribute Self-Description Rejections

- “Not Me” frequency
- $X^2(3) = 10.61, p = .014$
- **Aschematic rejected more than Military high schematics**
 - **Dunn’s (1964) pairwise comparisons with Bonferroni adjusted $p = .016$**
 - **Military high Median 0, Range 0-1, 2.3% rejections**
 - **Aschematic Median 1, Range 0-5, 8.8% rejections**

Military Negative Attribute Self-Description Endorsement and Rejection

- **No significant differences between any groups**
- **Endorsements**
 - **$\chi^2 (3) = XXX, p = .515$**
- **Rejections**
 - **$\chi^2 (3) = XXX, p = .564$**

Control Attributes Self-Descriptive Endorsements and Rejections

- **Difference between groups**
 - **Control Positive endorsement and rejection frequency**
- **No difference between group response frequency**
 - **Control Negative attribute endorsement or rejection**
 - **Control Neutral attribute endorsement or rejection**

Control Positive Self-Description Endorsement

- **Endorsement**
- **$X^2(3) = 13.61, p = .003$**
- **Aschematics endorsed more than Military low schematics**
- **Dunn's (1964) pairwise comparisons with Bonferroni adjusted $p = .003$**
 - **Aschematic Median 10, Range 7-10, 97.2% endorsements**
 - **Military Low Median 9, Range 3-10, 87% endorsements**

Control Positive Self-Description Rejection

- **Rejections**
- **$\chi^2 (3) = 11.78, p = .008$**
- **Aschematics rejected fewer attributes than Military low schematics**
- **Dunn's (1964) pairwise comparisons with Bonferroni adjusted $p = .003$**
 - **Military Low Median 1, Range 0-7, 13% rejections**
 - **Aschematic Median 0 Range 0-3, 2.7% rejections**

Challenges and Successes in Dissemination of Evidence-Based Treatments for Posttraumatic Stress: Lessons Learned From Prolonged Exposure Therapy for PTSD

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Summary

Posttraumatic stress disorder (PTSD) poses monumental public health challenges because of its contribution to mental health, physical health, and both interpersonal and social problems. Recent military engagements in Iraq and Afghanistan and the multitude of resulting cases of PTSD have highlighted the public health significance of these conditions.

There are now psychological treatments that can effectively treat most individuals with PTSD, including active duty military personnel, veterans, and civilians. We begin by reviewing the effectiveness of these treatments, with a focus on prolonged exposure (PE), a cognitive-behavioral therapy (CBT) for PTSD. Many studies conducted in independent research labs have demonstrated that PE is highly efficacious in treating PTSD across a wide range of trauma types,

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