BUDS Candidate Success Through RTC:
First Watch Results

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NPRST
research at work

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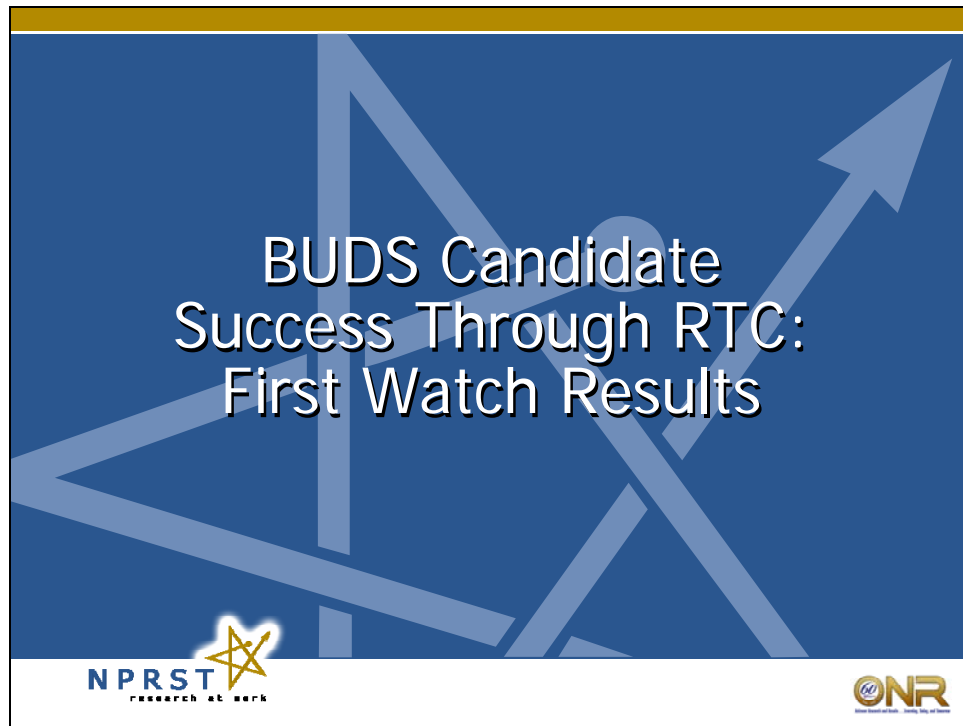| 16. SECURITY CLASSIFICATION OF:			17. LIMITATION OF ABSTRACT	18. NUMBER OF PAGES	19a. NAME OF RESPONSIBLE PERSON
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Foreword

The objective of this study was to identify characteristics of candidates for Basic Underwater Demolition School (BUDS) who successfully completed recruit training. Comparisons were made between those Sailors who began BUDS training and those Sailors who did not using data collected as a part of the First Watch on the First Term of Enlistment (First Watch) research project as well as with information obtained from existing Navy personnel and training databases.

This report in intended for the leadership of the Naval Special Warfare Command and Naval Service Training Command. It may also be of use to those who are interested in the prediction of retention and attrition from Navy training.

DAVID L. ALDERTON, Ph.D.
Director

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ONR

The Institute for Selection and Classification at Navy Personnel Research, Studies, and Technology (NPRST) has several current projects that examine the causes of attrition for Sailors. These projects present ways to identify potential high-performing Sailors early in their Navy career. One of these projects, First Watch on the First Term of Enlistment (First Watch), looks specifically at first-term enlisted Sailors, and assesses those Sailors at key points during their first term. Considering the noted problems with attrition of SEAL candidates prior to their first official Sea/Land/Air (SEAL) training course Basic Underwater Demolition School (BUDS), First Watch results can be used to identify the characteristics of those who are successful through their initial training in the Dive Motivator Program at the Recruit Training Command (RTC). This report will present the characteristics associated with BUDS candidates who are successful through RTC.

Background

- Navy recruits for BUDS before RTC, at start of RTC, and brings in fleet returnees
- High levels of attrition from Dive Motivator Program

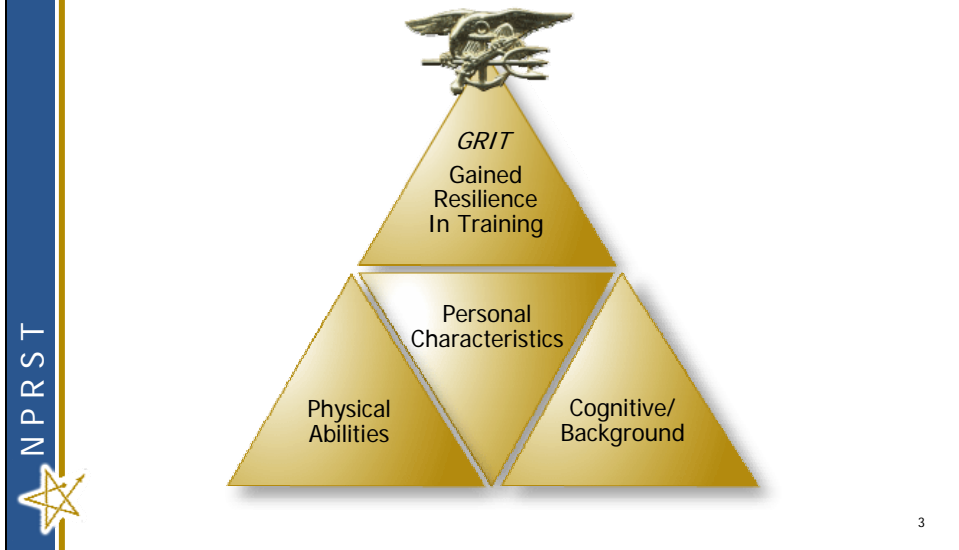**What does a successful BUDS candidate look like?**

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In recent years, there have been shortages in the numbers of Sailors in the Naval Special Warfare and Naval Special Operations communities. These shortages represent a problem for the Navy, especially considering its participation in the War on Terror. In order to meet manning requirements (through FY 08), Naval Special Warfare Command (NSWC) must have 250 enlisted Sailors graduate from BUDS training each year. With attrition in BUDS at about 70 percent, the SEALS must start BUDS training with over 800 candidates a year. Yet, according to NSWC, of the recruits that enter the Navy with a SEAL contract, only 40 percent make it to BUDS training. These initial losses to the SEALS program make the addition of 250 new SEALS personnel a year a much more difficult goal to meet.

Currently, selection for participation in the SEAL program brings in enlisted Sailors using one of three methods. A new recruit can enter the Navy and volunteer to participate in the SEAL training program in the DEP, a recruit can volunteer for participation in the program upon their arrival at RTC, or a fleet Sailor can volunteer to enter the program. For those who volunteer in the DEP, there have been reported problems with SEAL recruits being unable to pass the physical fitness and swimming ability tests. The Dive Motivator Program at RTC, an additional physical training program for new recruits who have volunteered for Special Warfare or Special Operations ratings, gives recruits additional PT time during their 8 weeks at RTC. There have been high rates of attrition from this program, with attrition in FY05 at 62 percent.

Considering the increased attrition of potential BUDS candidates early in Navy training, more focus has been placed on ways to identify the characteristics of Sailors who successfully complete their initial training. By getting an accurate picture of what a successful BUDS candidate looks like, it may be possible to direct recruiting efforts towards recruits/Sailors who may be more likely to complete the necessary training.

Characteristics of Navy SEALS

GRIT
Gained Resilience In Training

Personal Characteristics

Physical Abilities

Cognitive/ Background

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The first step in obtaining a better understanding of the qualities of a successful BUDS candidate is to consider the major factors that contribute to the definition of a Navy SEAL. The interest in SEALS has been focused in four major areas: Gained Resilience in Training (GRIT), Physical Abilities, Cognitive/Background, and Personal Characteristics.

GRIT:
Gained Resilience in Training

Change that occurs in BUDS

Occurs after Initial selection

GRIT
Gained Resilience In Training

Personal Characteristics

Physical Abilities

Cognitive/ Background
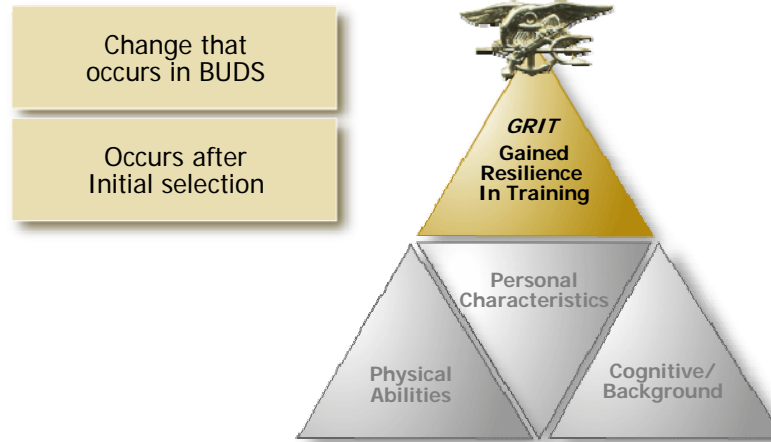
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Gained Resilience in Training (GRIT) refers to the changes that occur during training that transforms the individual into a professional military member with the ability and desire to gain and apply further knowledge and skills through follow on specialized training and on-the-job training (Lords, 2006).
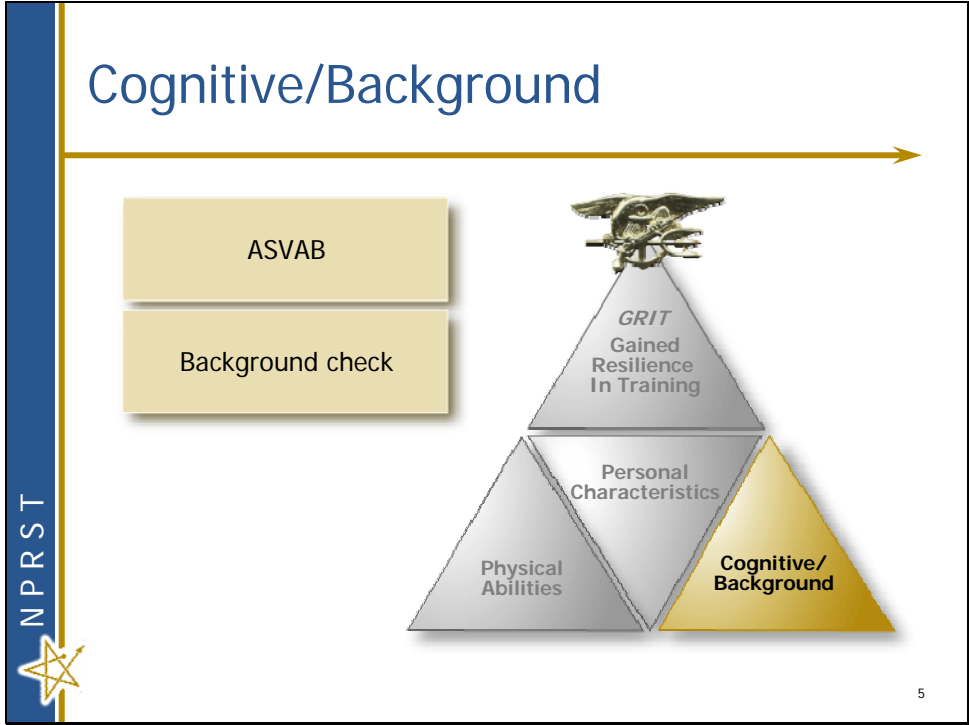
The Navy evaluates the cognitive ability of potential SEALS using Armed Services Aptitude Battery (ASVAB) scores. Additionally, candidates must successfully pass a background screening.

Navy SEALS must meet the physical qualification standards set by the SEAL community.

Although there could be great utility for a selection and classification system for use with the SEAL population, relatively little research has been published in the past decade. Braun, Prusaczyk, Goforth, and Pratt (1994) using the NEO-PI (a 5-factor model personality test) reported that SEALS score differently than males in the general population on Neuroticism and Extraversion. SEALS low scores on the Neuroticism facets of Depression and Vulnerability indicate that they ar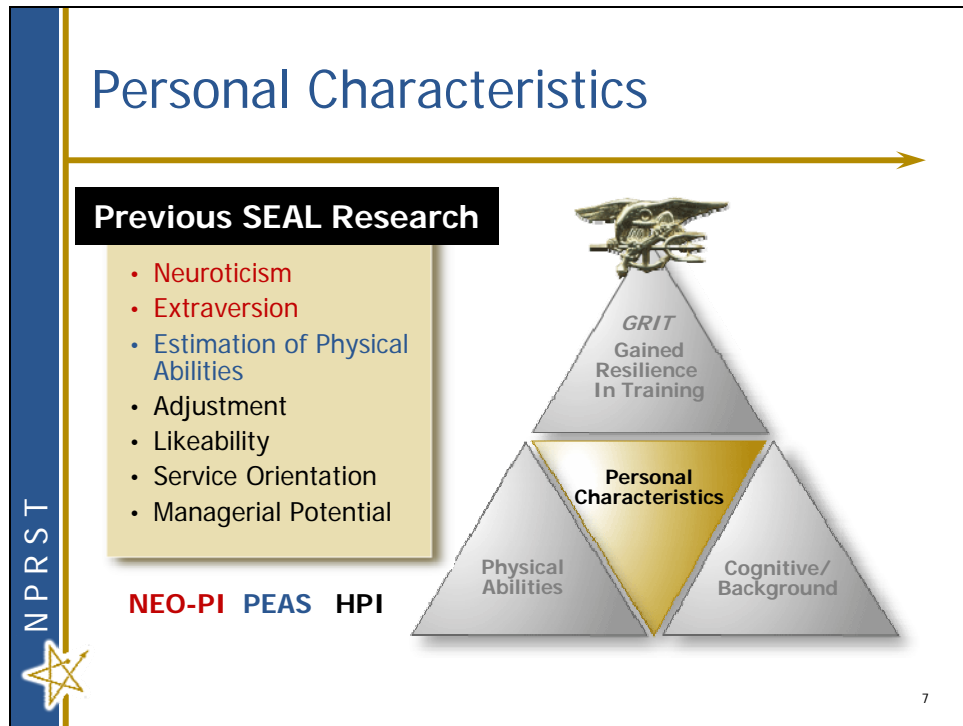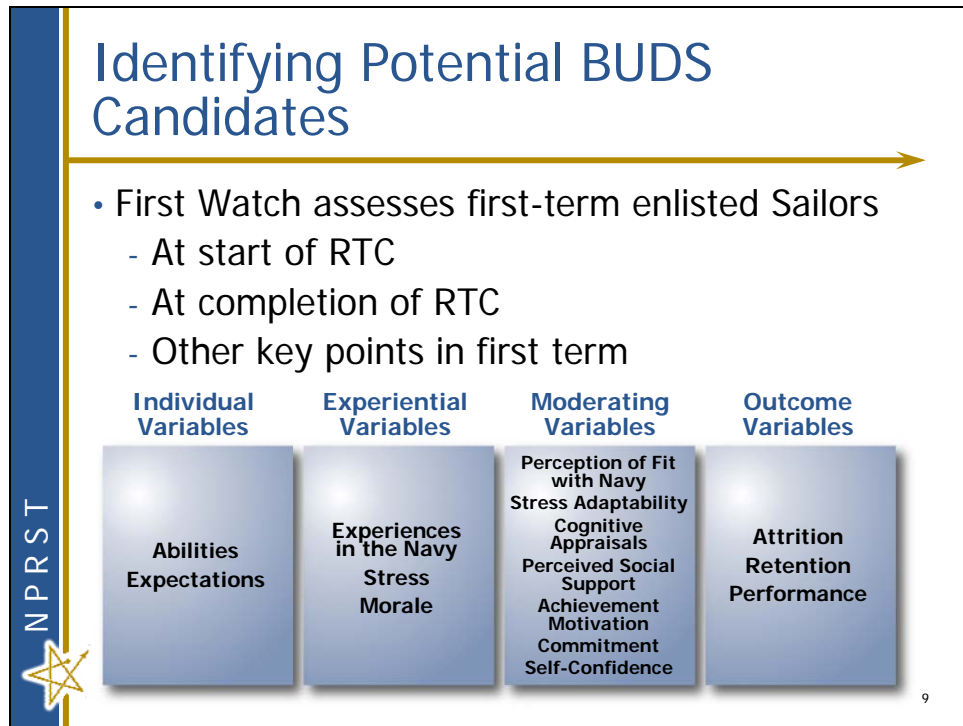e less prone to experience feelings of depression and that they perceive themselves as capable of handling themselves in difficult situations. High scores on the Extraversion facets of Excitement Seeking, Assertiveness, and Activity indicate that SEALS tend to crave excitement and stimulation, are dominant and forceful, often become group leaders, enjoy a rapid tempo and vigorous environment, and have a desire to keep busy (Costa & McCrea, 1992).

While it is not surprising that there are differences between the general population and the highly selected SEALS, others have found differences between successful and unsuccessful students at BUDS (McDonald, Norton, & Hodgdon, 1988). Successful students tended to rate their physical abilities higher than their unsuccessful counterparts on the Physical Estimation and Ability Scales (PEAS). Additionally there were several differences on the Hogan Personality Inventory (HPI). Although the HPI was not designed for the military, successful students at BUDS scored higher on Adjustment, Likeability, Service Orientation, and Managerial Potential suggesting that they have high self confidence and composure under pressure, they are cordial and even tempered, they are courteous to customers, and they have leadership ability.
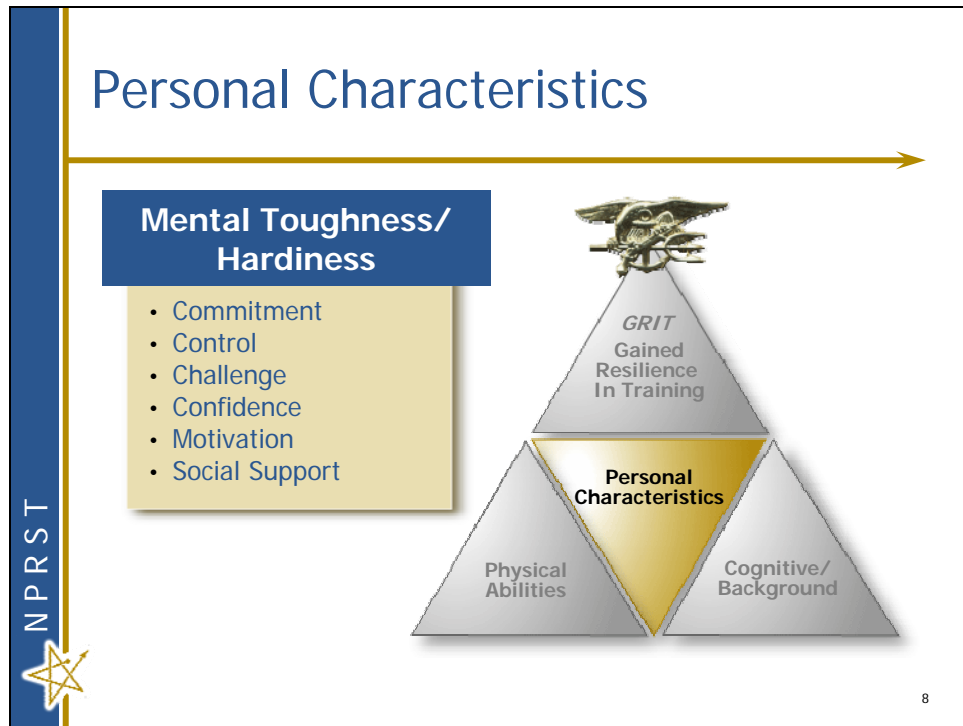
Mental toughness generally refers to an individual's ability to pursue a goal in spite of obstacles or the amount of time necessary to reach that goal. Much of the research has focused around the ideas of hardiness and mental toughness. Hardiness, studied by Kobasa (1979) and often referred to in military settings, is defined in the literature as a stable personality trait with three facets: commitment (individual more committed to what he is doing), control (individual feels that he has control over problems/situations), and challenge (individual sees changes as challenges and opportunities for growth). Also, hardy individuals seem to have a clear sense of direction, an active approach to stressful situations, and a sense of confidence and control.

Other researchers have studied this concept of hardiness in stressful situations. Bartone (2000) studied hardiness with cadets at the U.S. Military Academy (West Point). He found that hardiness, situational judgment, and the Big 5 personality traits (Neuroticism, Extraversion, Openness to Experience, Agreeableness, Conscientiousness) to be predictors of success among cadets. Studies with the Israeli military have found that hardiness can minimize the likelihood of developing Post-Traumatic Stress Disorder (PTSD); pilots with higher levels of hardiness showed fewer PTSD symptoms than pilots with lower hardiness scores. Additionally, the Israelis have found that mental health at the end of training is predicted by measures of commitment and control, the use of problem solving and seeking support from social networks (Florian, Mikulincer, & Taubman, 1995).

Identifying Potential BUDS Candidates

- First Watch assesses first-term enlisted Sailors
  - At start of RTC
  - At completion of RTC
  - Other key points in first term

Individual Variables	Experiential Variables	Moderating Variables	Outcome Variables
Abilities Expectations	Experiences in the Navy Stress Morale	Perception of Fit with Navy Stress Adaptability Cognitive Appraisals Perceived Social Support Achievement Motivation Commitment Self-Confidence	Attrition Retention Performance

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The First Watch on the First Term of Enlistment project was developed out of a desire to determine what factors contribute to retention and attrition for first-term Sailors. Questionnaires were developed that include unique measures, and use a longitudinal design which allows for monitoring the transformation of civilians into Sailors. By gaining an understanding of the dynamics of first-term enlistment, we can identify those recruits or Sailors who are at risk for leaving, identify critical points in the first term where interventions could prove useful, and design tools for those interventions. This would create Sailors of a better quality, who are more prepared to take on their tasks in the Fleet.

First Watch questionnaires have been administered at RTC since April 2002. The questionnaires have been given at three different points during RTC Training: (1) At the beginning of training (New Sailor); (2) at graduation (RTC Graduate); and (3) just before a recruit leaves training to be processed out of the Navy (Exit). There are currently over 127,000 cases of New Sailor Data (approximately 95% of all those who entered the Navy as an enlisted Sailor since April 2002), over 92,000 cases of RTC Graduate Data (about 75% of all those who graduated), and over 5,500 cases of RTC Exit data (about 42% of those who attrited during this time period).

Of particular interest are several variables being examined across the questionnaires. This includes what the individual brings with them to the Navy in terms of their ability and their expectations, as well as experiential factors such as their experiences in the Navy, and how their levels of stress and morale contribute to outcomes such as attrition, retention, and performance. These relationships are moderated by personality-related characteristics such as need for achievement, stress adaptability, and self-confidence, as well as their perception of fit with aspects of their environment. While this situation is a complex one, by modeling these relationships, we can gain an understanding of first-term attrition that will help in the prediction and reduction of this attrition.

Methodology

Use New Instruments and Existing Data with Longitudinal and Cross-Sectional Samples

Begin RTC — End RTC — End "A" School — End 1st Term

New Sailor Survey · Exit from Training Survey · RTC Graduate Survey · "A"/Apprentice School Graduate Survey · Fleet Survey

Database Links:
• PRIDE
• CETARS
• EMF

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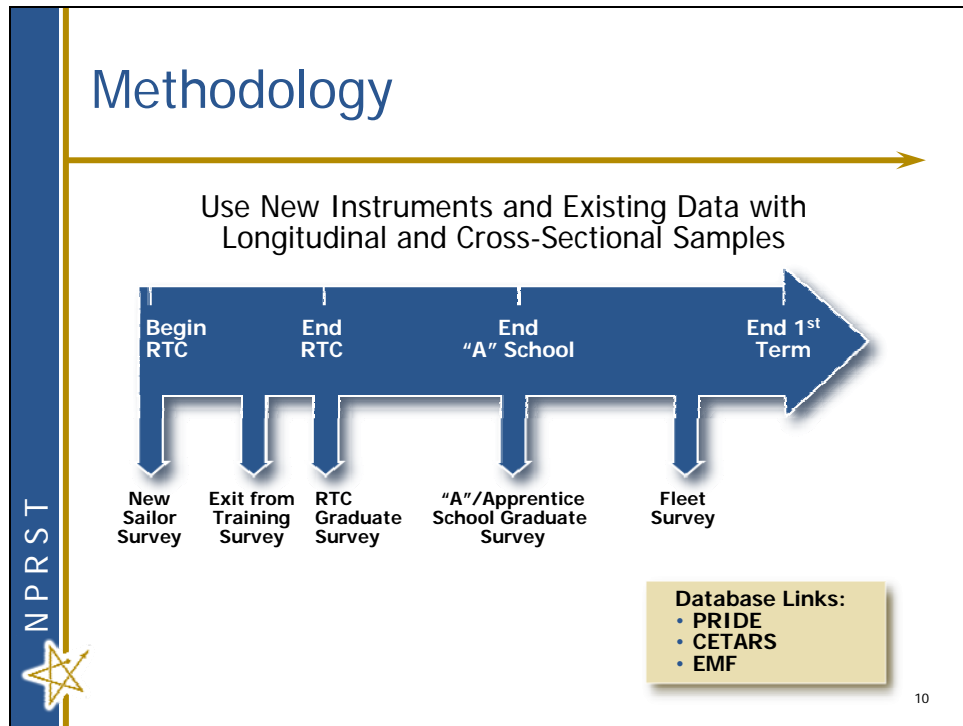
First Watch uses a longitudinal design which allows us to monitor the transformation of civilians into Sailors. The design of First Watch allows for data collection at several points during the first term of enlistment. Specifically:

- The New Sailor Survey is a survey administered to new recruits during their in-processing at Great Lakes.

- The RTC Graduate Survey is administered just prior to graduation from RTC.

- An Exit from Training Survey is administered for those who attrite from RTC, at the separation barracks, shortly before they officially leave the Navy.

- The "A"/Apprentice School Survey is a web-based instrument given at the end of "A" School for the schools at Great Lakes and at the Yeoman's School in Meridian.

- The Fleet Survey was recently administered to Sailors in the fleet – it was administered once (Nov 2004 – Jan 2005) to first-term Sailors with at least one year at their fleet job; the Fleet Survey is web-based.

The goal is to take the information collected from each of these questionnaires and tie them together, along with the information from existing databases such as Personalized Reservation for Immediate and Delayed Entry (PRIDE), Corporate Enterprise Training Activity Resource System (CETARS) and the Enlisted Master File (EMF) to give us an idea about the many factors that influence Sailors in their first term.

Methodology (cont.)

Modification of Original Collection for BUDS Candidates

Begin RTC — End RTC — BUDs Indoc — End 1st Term

New Sailor Measure — RTC Graduate Measure — Attendance at BUDs

Database Links:
• PRIDE
• RTC Data
• NTMPS
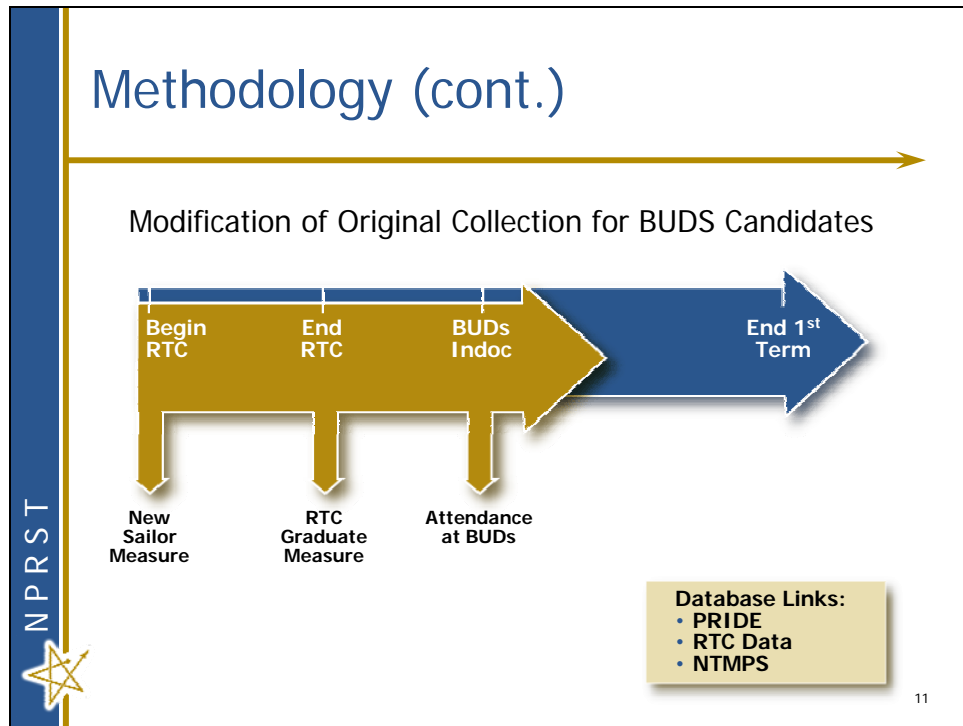
To get a good look at the characteristics of successful BUDS candidates, we used data that we collected from new Navy recruits as they came into RTC, and data from those that completed RTC between February 2004 and May 2005 (N ~ 70,028). In order to identify those who entered the Navy with a designation for participation in the Navy SEALS program, we linked our data with information from the PRIDE database (using social security numbers), noting those who had an indicator for the SEALS program (N = 1,729). Additionally, from the NTMPS (Navy Training Management and Planning System) database, we identified relevant course information for the BUDS indoctrination course including enrollment and completion data, and linked this information with our existing database.

After linking all of the relevant information, we were able to identify those who arrived at BUDS indoctrination (Indoc) training (N = 613), and to determine whether those arrivals entered the Navy with a SEALS indicator as noted in the PRIDE database (N = 443) or whether they entered the program at some point after joining the Navy (either upon arrival at RTC, or as a returnee from the fleet), N = 170. We compared all BUDS Indoc arrivals to those males who completed RTC training but did not attend BUDS training. By doing this analysis, we were able to see how BUDS attendees are different from other Navy members. We found that those who were successful in making it through to BUDS training had several qualities that were quite different than typical recruits early in their Navy career.

Results—Reasons for Joining

Arrivals at BUDS

Joined Navy for the challenge

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In the New Sailor Survey, respondents were asked to indicate to what extent each item was an influence for them in deciding to join the Navy. The items were grouped into five different categories: (1) to escape situations at home (ex., "Get away from hometown," "Wanted a break from school"), (2) challenge ("Challenging or interesting work," "Wanted to test myself in a demanding situation"), (3) benefits and stability of a Navy job ("Medical or dental benefits," "Navy pay"), (4) training and/or education ("Training in skills useful for civilian employment," "Opportunity to work in a specific occupation of interest"), and (5) because of family encouragement ("Parents encouraged me to join," "Military tradition in my family").

Those recruits/Sailors who successfully made it through their preliminary training and enrolled in BUDS training indicated that they joined the Navy more for the personal challenge. BUDS enrollees had the lowest ratings for joining for the benefits or joining to escape situations at home. Interestingly, for those who did not attend BUDS training, the most highly rated reason for joining was joining for the training or education provided.

Results—Fit with Navy

Arrivals at BUDS

Joined Navy for the challenge

Higher estimation of military bearing, leadership, and teamwork

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At the completion of RTC, respondents provided a self-reported comparison of their performance in RTC as compared with their fellow recruits. The areas presented (personal accomplishment, quality of work, teamwork, respect for others, military bearing/character, leadership, and physical fitness) were designed to be in line with the evaluation standards presented on the performance appraisal form for E-1 to E-6 Sailors. These measures were interpreted as indicators of fit with the Navy.

Those who enrolled in the BUDS course rated themselves highly relative to their fellow recruits on their fit with the Navy, particularly in terms of their military bearing, leadership, and teamwork.

Fit with Navy—Physical Fitness

Arrivals at BUDS

Joined Navy for the challenge

Higher estimation of military bearing, leadership, and teamwork

Higher estimation of physical fitness

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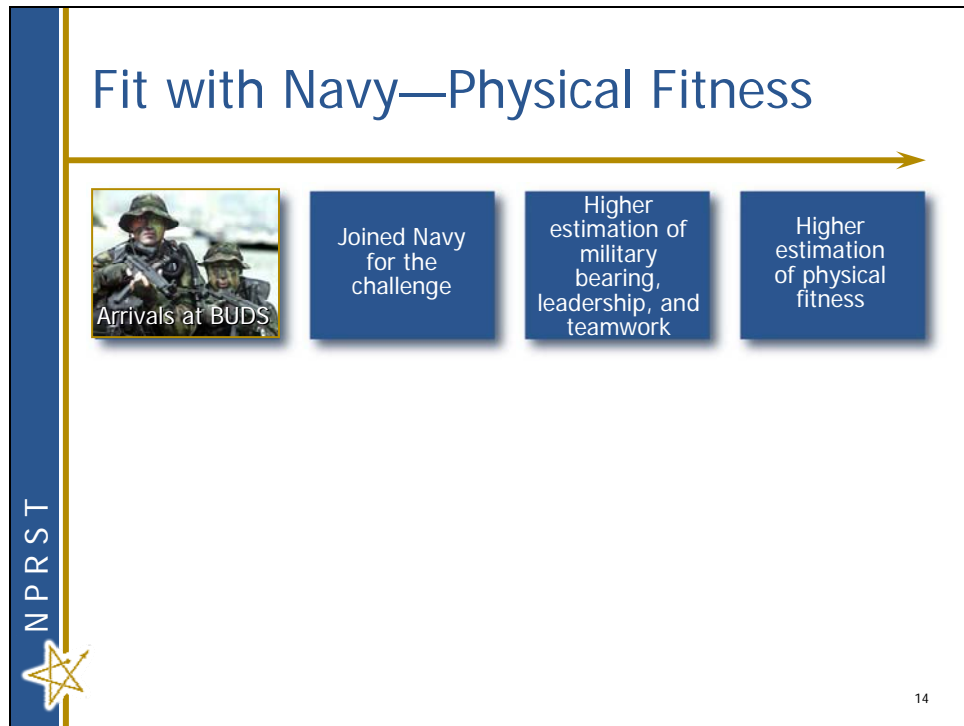
In the section of the RTC Graduate Survey where we ask for self-ratings of performance as indicators of fit, a single item provided an estimate of physical fitness as compared to other recruits.

BUDS enrollees indicated higher estimations of their own physical fitness than non-enrollees, which points to the importance of physical fitness as a qualification for SEALS training. While much of the previous work focused on actual scores on swim tests and timed runs, this finding highlights the importance of the confidence that a Sailor has in his ability to perform the physical tasks. Not only are successful BUDS enrollees fit in terms of meeting PT standards, but they also see themselves as more fit than other recruits, even at boot camp.

Fit with Navy—Value Similarity

Arrivals at BUDS

Good fit with Navy values

Joined Navy for the challenge

Higher estimation of military bearing, leadership, and teamwork

Higher estimation of physical fitness

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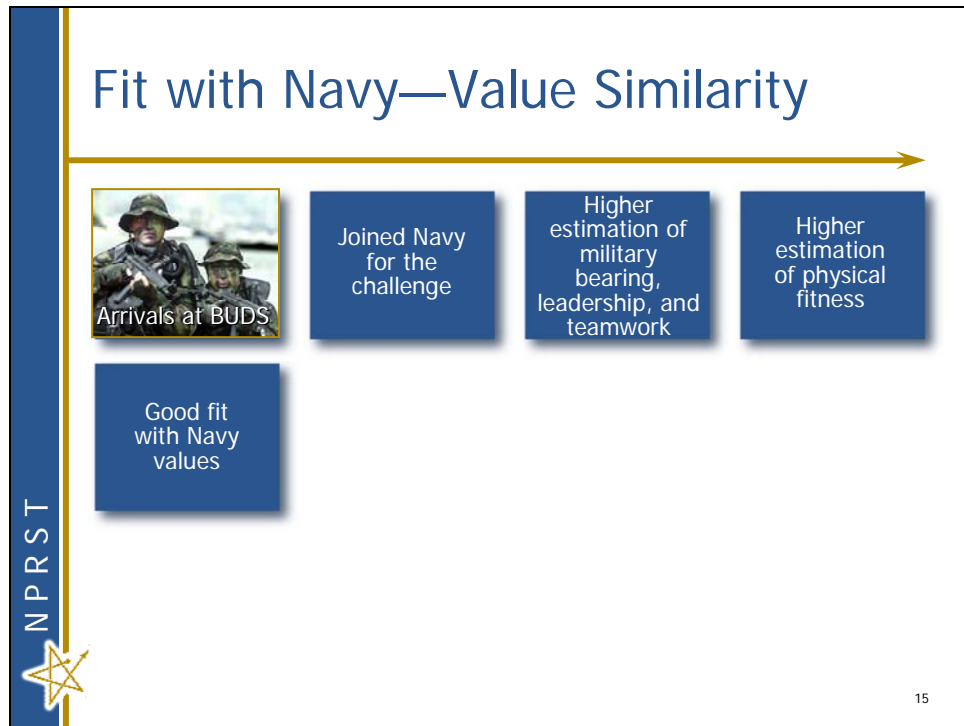
At the end of RTC (on the RTC Graduate Survey), we collected data on a single item that asked respondents to indicate how well their personal values match those of the Navy.

Enrollees at BUDS indicated that their values matched those of the Navy "very well," another indication of a BUDS candidate's perception of his strong fit with the Navy as a whole.

Results—Confidence

Arrivals at BUDS

Joined Navy for the challenge

Higher estimation of military bearing, leadership, and teamwork

Higher estimation of physical fitness

Good fit with Navy values

Confident in abilities in training

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In the New Sailor assessment, respondents indicated their expectations for their performance during boot camp. One New Sailor item asked how difficult boot camp would be for them; a second item asked how successful they thought that they would be in boot camp from their perspective as a new recruit. Essentially, the items demonstrated how confident the new recruit was about his/her ability to succeed in an environment in which they had no experience.

Those who enrolled in BUDS generally showed confidence about how well they would do at RTC, with most indicating that it would not be very difficult and that they would be more successful than most other recruits at boot camp.

Results—Commitment

Arrivals at BUDS

Joined Navy for the challenge

Higher estimation of military bearing, leadership, and teamwork

Higher estimation of physical fitness

Good fit with Navy values

Confident in abilities in training

Strong commitment to completing 1st Term

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In both the New Sailor and RTC Graduate assessments, items measured commitment both to completing the first term and to the Navy in general. We asked new recruits to indicate the importance of completing their enlistment. Additionally, the RTC Graduate instrument included scales measuring recruits' emotional attachment to the Navy (affective commitment) and their commitment to the Navy based simply on a lack of alternatives (continuance commitment).

For those who enrolled at BUDS, completing their enlistment was reported as very important at the time that they entered the Navy, even more so than their fellow recruits. This indication of commitment is also shown by their high ratings of emotional attachment at the end of boot camp. BUDS enrollees showed low levels of continuance commitment, indicating that recruits thought that they had options or alternatives outside of the Navy. Considering this, it seems that those who are enrolled in BUDS are likely to stay in the Navy because they are choosing to be in the Navy.

Results—Support from Others

Arrivals at BUDS

Joined Navy for the challenge

Higher estimation of military bearing, leadership, and teamwork

Higher estimation of physical fitness

Good fit with Navy values

Confident in abilities in training

Strong commitment to completing 1st Term

Support from others

NPRST

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Social support from various sources (family, friends, significant other, RDC, fellow recruits) was measured on both the New Sailor and RTC Graduate assessments.

BUDS enrollees reported the highest levels of support overall, and those greater levels of support were consistent throughout their training at RTC. Additionally, those recruits who enrolled at BUDS but did not have a SEAL indicator from the PRIDE data showed the highest levels of support from family, from friends, and from significant others.

Results—Personality Measures

Arrivals at BUDS

Joined Navy for the challenge

Higher estimation of military bearing, leadership, and teamwork

Higher estimation of physical fitness

Good fit with Navy values

Confident in abilities in training

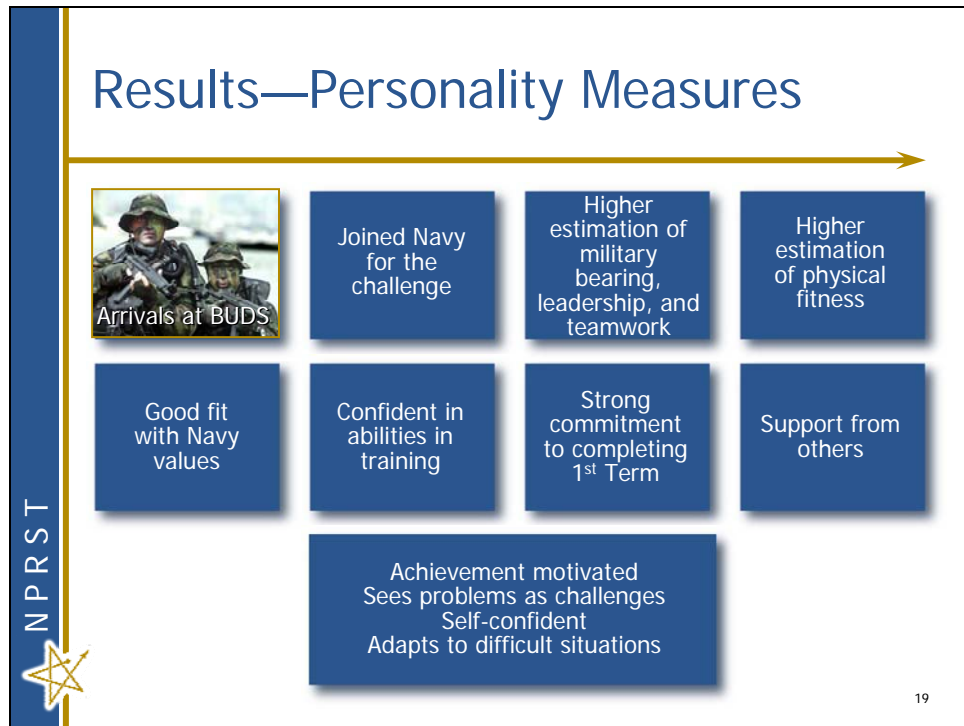Strong commitment to completing 1st Term

Support from others

Achievement motivated
Sees problems as challenges
Self-confident
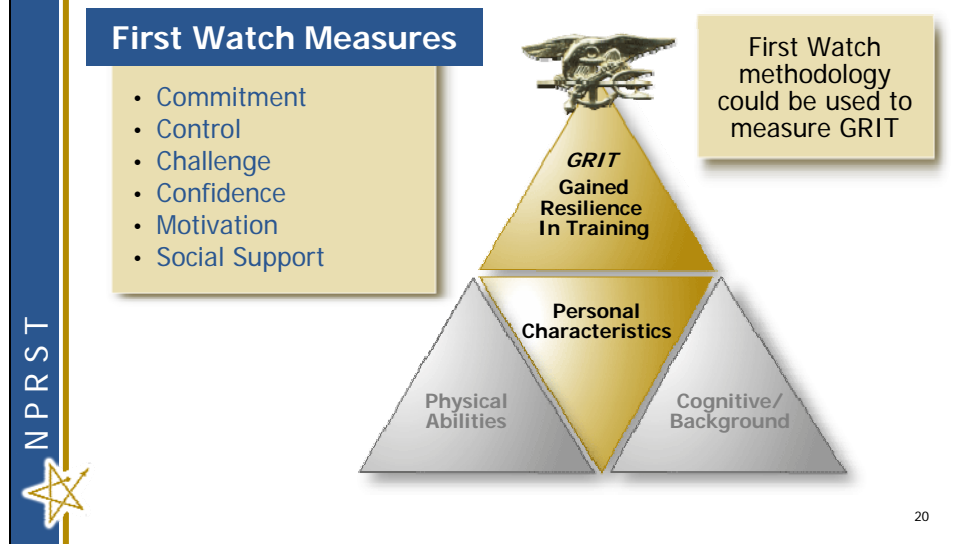Adapts to difficult situations

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Several scales that measured different personality characteristics were presented on the New Sailor assessment, including: achievement motivation (as measured by work ethic, dominance, competitiveness, and excellence), self-efficacy (an individual's belief in his ability to perform across a variety of situations), cognitive appraisal-threat (lack of confidence in ability to handle a situation), and cognitive-appraisal-challenge (confidence in achieving a positive outcome) scales.

A measure of stress coping adaptability was also included on the RTC Graduate instrument. This scale provides a measure of an individual's ability to use the appropriate judgment, determination, and self-control in changing and stressful situations.
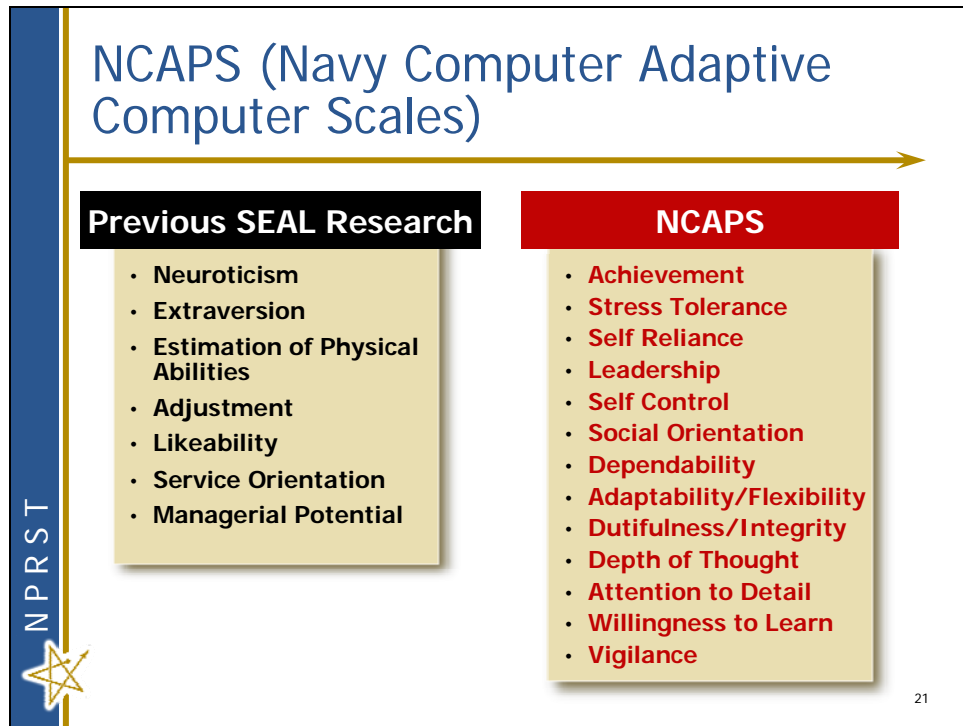
Those who enrolled in BUDS training had higher levels of achievement motivation, had confidence in their ability to succeed; viewed uncertain situations as a challenge, rather than as a threat; and indicated that they were more able to deal with stressful situations.

Use of First Watch Methodology

First Watch Measures
- Commitment
- Control
- Challenge
- Confidence
- Motivation
- Social Support

First Watch methodology could be used to measure GRIT

GRIT
Gained Resilience In Training

Personal Characteristics

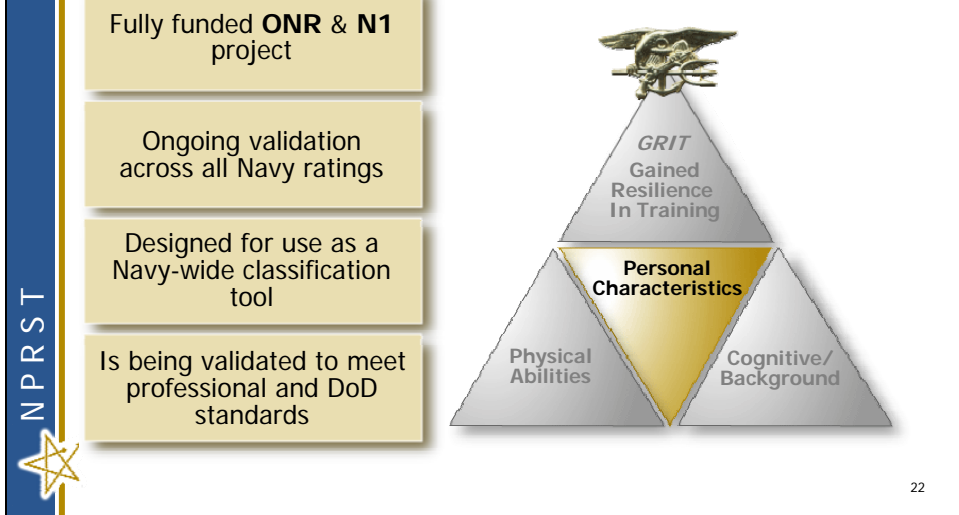Physical Abilities

Cognitive/ Background

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This analysis of just over 600 BUDS candidates gives an updated picture of what makes a successful candidate and suggests characteristics that may be related to completion of BUDS training. Looking across the information gathered from the First Watch data, one gets a good picture of what a Sailor who gets to BUDS training looks like. Much of what was found—the confidence in abilities, strong commitment, high estimation of physical ability—is in line with other research on hardiness, or what some would call mental toughness. Thus, the instruments being used in part provide a successful replication of some of the work that has been done.

While First Watch data shows comparability with previous research, it also goes beyond the earlier work in identifying the importance of fit, commitment, social support, and achievement motivation.

NCAPS (Navy Computer Adaptive Computer Scales)

Previous SEAL Research

- Neuroticism
- Extraversion
- Estimation of Physical Abilities
- Adjustment
- Likeability
- Service Orientation
- Managerial Potential

NCAPS

- Achievement
- Stress Tolerance
- Self Reliance
- Leadership
- Self Control
- Social Orientation
- Dependability
- Adaptability/Flexibility
- Dutifulness/Integrity
- Depth of Thought
- Attention to Detail
- Willingness to Learn
- Vigilance

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Although First Watch measures cover aspects of hardiness, it contains limited measures of many of the other constructs identified as important from the earlier research on Navy SEALS. The earlier work involved instruments not developed specifically for the military population. The Navy Computer Adaptive Personality Scales (NCAPS), however, was developed specifically to predict success across all Navy occupations. NCAPS assesses 13 personality traits that are used to construct profiles of successful personnel across all Navy occupations. Traditional paper-and-pencil tests and most computerized surveys are easily faked; test-takers can make themselves appear more favorable. However, a recent study determined that while test-takers could fake traditional tests to impress potential employers, NCAPS can't be faked (Underhill, Lords, & Bearden, 2006). NCAPS is web enabled and test-takers typically take roughly 22–30 minutes to complete NCAPS.

NCAPS (cont.)

Fully funded **ONR** & **N1** project

Ongoing validation across all Navy ratings

Designed for use as a Navy-wide classification tool

Is being validated to meet professional and DoD standards

NPRST

GRIT Gained Resilience In Training

Personal Characteristics

Physical Abilities

Cognitive/ Background

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NCAPS is an innovative instrument developed with Office of Naval Research and the Chief of Naval Personnel to assess personal attributes for the purpose of classifying or screening individuals into occupations across the U.S. Navy. The NCAPS validation plan is based on professional and DOD standards so that it can be a legally defensible classification tool for the Navy. A fleet pilot study demonstrated that NCAPS traits correlate with supervisors' performance ratings and large-scale validation commenced in October 05. To date, NCAPS data has been collected from students undergoing training at five different Learning Centers. Initial results are promising, especially for ratings with high attrition such as Air Traffic Controller and Explosive Ordinance Disposal-Diver. Because of the steps taken to establish NCAPS as a legally defensible tool, once adequate data is collected for particular ratings or communities, NCAPS will be implemented as a screening tool for all Navy ratings, and may prove to be the best selection instrument for future Navy SEALS.

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