## MIKAEL SALO & GUY L. SIEBOLD

# EXPECTED ADJUSTMENT OF BASIC TRAINEES IN THE FINNISH DEFENCE FORCES

An earlier version of this article was presented as a paper entitled "Adjustment of Basic Trainees in the Finnish Defence Forces" at the Session on the Sociology of War, Peace, and Military Institutions I at the 75<sup>th</sup> Annual Meeting of the Eastern Sociological Society, Washington, DC held March 17-20, 2005. The opinions and views in this paper are those of the authors and not necessarily those of the Finnish National Defence College, Finnish Defence Staff, Finnish Ministry of Defence, the U.S. Army Research Institute, the U.S. Department of the Army, or the U.S. Department of Defense.

One of the challenges of every modern military organization is to bring together citizens of diverse backgrounds, different characteristics, various geographical home locations, and differing motivations and enculturate them to the military while training basic military skills. Most new military service members adjust in this socialization process, but some do not. This paper looks at how well a sample of basic trainees in the Finnish Defence Forces expected to adjust to military service and whether their expectations were related to their later adjustment and other criteria. More specifically, the research was designed to determine the major variables that predict initial adjustment expectations and the extent to which those expectations were related to self-perceived adjustment at two later points in time as well as completion of the sixmonth military obligation and leader ratings of conscript training performance.

The paper is divided into several sections. The first section describes the call up and training process in the Finnish military. The second section portrays prior research findings about adjustment to military service. The third section presents the sample, methods, and main measures used in the analyses for the paper. The fourth section provides the findings from the analyses, and the fifth section contains a discussion of the findings and their implications concerning adjustment of service members to the military.

## **Compulsory Military Service in the Finnish Defence Forces**

Every male Finnish citizen is by law liable for compulsory military service from the year when he reaches his 18th birthday until the year he turns 60. Military service training mainly consists of initial conscription training and then refresher courses for reservists. Conscription training lasts 180 days for most rank and file members. The first 8 weeks of that period is for basic training, and the remaining period is for acquiring additional individual training and unit training. Longer periods, of 270 or 362 days, are required for specialized, highly technical rank-and-file duties and for conscript leaders. Approximately 82 percent of a given male cohort performs military service.

The conscript service is preceded by a call-up, which is organized annually for 18-year-old men. Each potential service member is sent a questionnaire, the call-up notification, and a detailed information booklet. Medical examinations for those liable for military service are conducted at the heath centers of municipalities. Based on the medical report and questionnaire, it is decided when a conscript must report for duty or if he will be granted a deferment. The time and location for reporting for duty are determined primarily by the needs of the Defence Forces, the health of the conscript, and his language (Finnish or Swedish). The conscript's own wishes, training, hobbies, and social situation are taken into account as far as possible (CDDS,

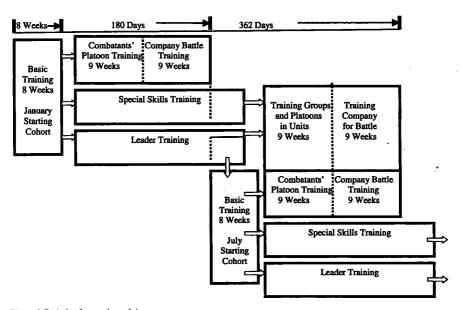


Figure 1. Periods of conscript training.

2003). For professional training, studies, economic considerations, or other pressing personal reasons, deferment of military service can be granted for up to three years in peacetime. Neglect of the call-up without a legitimate cause is a punishable offence under the Finnish Conscription Act.

New conscripts are inducted twice a year, in January or in July. Generally this happens in the year when a male reaches the age of 19 or 20 (IDDS, 2002; CDDS, 2003). During the basic training period (the first 8 weeks of active duty), a conscript's company commander decides, with some input from the conscript, the conscript's future military job according to his or her skills and suitability, whether the conscript will receive any specialized technical training or leadership courses, and the period of service. After basic training, the majority of conscripts receive additional individual training and then unit training; those who are chosen as leaders or to receive specialized technical training start their courses. Conscripts are trained to operate effectively as individuals as well as members of a team. The whole training is aimed towards creating combat-efficient total units. Most combat soldiers are transferred to the reserves after their initial six-month training. Reserve units form the bulk of military personnel for the Finnish Defence Forces in the event of a war. Those who are selected as leaders or chosen for specialized technical training continue serving with the next January or July contingent of conscripts and the units they eventually compose (see Figure 1). Reservists are called back after 5 to 7 years for one week task-based refresher courses and exercises in the same units they were originally trained (CDDS, 2004; IDDS, 2002).

# **Prior Research on Adjustment to Military Service**

Anticipatory Socialization. Most adjustment takes place during the socialization process (Sawrey & Terford, 1971) when an individual copes with psychological, physical, social, and moral demands in order to satisfy essential needs and reduce psychological tension (Heyns, 1958). In this socialization process, a recruit adapts to the organization's value system, norms, and required behavior patterns. The first step in the process is anticipatory socialization which occurs prior to a conscript's entry into the military.

As a child in Finland, each citizen gathers latent impressions about the military from family, the media, and relevant experiences. As the citizen approaches military age, and especially at the time of call-up, impressions about the military become more salient and are formed more actively. Information, with interpretation, about the military and military service may be sought from official sources, the media, national events, teachers, parents, siblings, and friends (Anderson, 1974; Bourdieu, 1977, 1993a, 1993b, 1994; Perry, Griffith, & White, 1991). Probable conscripts may "try on" military roles and discuss the upcoming military service with their peers and others. By the time of the call-up, potential conscripts have gained a certain degree of self-knowledge and perceptions about their capabilities and how well they fit in with others and in organizations. In anticipation of military service, the potential conscripts can compare their knowledge and perceptions about themselves with their impressions of the military and the requirements of military service. This comparison allows them to arrive at expectations about how well they will adjust to the military, including its perceived values, norms, and required behavior. The expectations of the conscripts may be very realistic or much less so. Most likely, the overwhelming majority of conscripts are not fully prepared for the first days of basic training (Hayden, 2000; Nelson & Quick, 1997).

In thinking about military service, future conscripts are likely to consider how well they will adjust to being away from their family, friends, and current environment, how well they will meet the probable physical demands of military service, whether they will fit in socially, and whether they will adjust to the expected orders, regimentation, and personal deprivations (Hicks & Nogami, 1984). Some potential conscripts may also contemplate the benefits that may be gained (or opportunities lost) and the experiences (positive or negative) that military service may offer. For example, some conscripts may desire to get additional education or training in the military. Such a desire might make adjustment more tolerable, increase positive expectations, and also be an indicator of conscripts who might have better planning skills, motivation, and perseverance (Hosek, Antel, & Peterson, 1989). Based on these kinds of comparisons, concerns, and expectations, the future conscripts develop an attitude towards their conscript service prior to entry into the military and have begun the socialization process.

# **Personal Adjustment Factors in Conscript Service**

Adjustment is not a simple matter. Causality exists at the individual, organizational, and manpower policy levels (Siebold, 1981). For example, individuals with certain characteristics (such as low aptitude, inability to respond well to authority, and physical weakness) may have a substantially more difficult time adjusting to the requi-

rements of military service and be prone towards attrition. Likewise, organizations may have excessive turnover, a poor climate, mediocre leadership, and less meaningful training that also promote maladjustment. Similarly, disciplinary policy may be tight or loose, where the same unacceptable behavior may result in remedial training, punishment, or separation from service depending on the policy in force in an organization at the time, the number and rate of other individuals punished or separated from service in the same period, and the shortage or surplus of personnel. As Siebold noted as an example, if manpower policy overly restricts attrition, underlying problems with service member aptitude, attitude, or adjustment may simply be shifted to other arenas such as training, individual and unit performance, or organizational adaptability.

As far as possible, the current research was designed to address the major categories of variables that have been used in prior research to predict different degrees of adjustment at the individual service member level of analysis. These major variable categories consisted of: a) demographic variables, b) aptitude measures, c) background variables, d) mental and physical health, and e) personality and personal attitudes.

<u>Demographic Variables.</u> The demographic variable most consistently related to adjustment is age. Those particularly younger or older than their peers adjust less well to military service (Blandin & Morris, 1982; Buddin, 1984, 1988; Elis, 1999; Etcho, 1996; Perry, Griffith, & White, 1991; Talcott, Haddock, Klesges, Lando, & Fiedler, 1999; Vickers, Walton-Paxton, Hervig, & Conway, 1993).

Married personnel have been found less prone to attrition (Moore, 2002). People with dependents had 10% less attrition in a delayed entry program (Kearl & Nelson, 1992). On the other hand, Siebold and Benton (2001) found no relation between marital status or having dependents and attrition from foreign language training.

Aptitude Measures. Aptitude tests have traditionally been used as tools to estimate, in part, recruit quality, the likelihood of adjustment to service, and attrition (Benbenishty, Zirlin-Shemesh, & Kaplan, 1993; Borack, 1994; Hawes, 1990; Horne, 1987; Larson, Booth-Kewley, & Ryan, 2002). It has been found that low mental aptitude or low intelligence increases the probability of attrition (Allison, 1999; Blandin & Morris, 1982; Bohn & Schmitz, 1996; Buddin, 1984, 1988; Dovrat, 1995; Elis, 1999; Etcho, 1996; Fischl & Blackwell, 2000; GAO, 1998; Golding et al., 2001; Hawes, 1990; Hicks & Nogami, 1984; Vickers, Walton-Paxton, Hervig, & Conway, 1993). Conscripts who

had low grades at school also had a higher than average risk of attrition (Dale, 1989). Likewise higher aptitude scores indicate a high likelihood that service members will complete their service (Antel, Hosek, & Peterson, 1987; Bohn & Schmitz, 1996; Elis, 1999; Hawes, 1990). For example, Benton and Siebold (2002) found that the primary determinant of learning success and completion of foreign language training was a student's score on the Defense Language Aptitude Battery. Personal ability, or aptitude, is usually measured in terms of a military entrance examination score such as on the Armed Forces Qualification Test (AFQT) (Buddin, 1984, 1988; Horne, 1987) or in terms of grade point average in civilian schooling. Overall, a high aptitude (such as an AFQT score within categories I-III.A) is associated with better adjustment in the military.

Background Variables. The most used explanatory variables in the military adjustment literature are education level and personal aptitude, frequently expressed together as service member "quality." Previous adjustment to an educational system constitutes a relevant indicator of a recruit's likelihood to adjust to military life (Anderson, 1974). Success at civilian school is an indication of intellectual ability, acceptance of authority, ability to adapt, capacity to tolerate adversity, maturity, and an ability to work persistently for long-range goals - individual characteristics that are also needed for good adjustment in the military (Anderson, 1974; Stephen, Carroll, & Brown, 1972). Education is typically measured by receipt of a high school diploma (Buddin, 1984, 1988; Shaw, Fisher, & Woodman, 1983). Having a low level of education (usually defined as less than a high school education) has been shown to be a significant predictor of military attrition; recruits with a high school diploma have adjusted more easily to the military (Allison, 1999; Antel, Hosek, & Peterson, 1987; Booth-Kewley, Larson, & Ryan, 2002; Buddin, 1984; Dovrat, 1995; Elis, 1999; Etcho, 1996; Fischl & Blackwell, 2000; GAO, 1998; Golding et al., 2001; Hawes, 1990; Hosek, Antel, & Peterson, 1989; Manigart & Prensky, 1982; Manning & Ingraham, 1981; McBride, 1993; Moore, 2002; Price & Sang-Wook, 1993; Quester, 1999; Talcott, Haddock, Klesges, Lando, & Fiedler, 1999; White, Nord, Mael, & Young, 1993; Zook, 1996). In these studies attrition rates of non-high school graduates have been at least 10% higher than those of high school graduates and in some cases even twice as high.

Due to the predictive power of education level, it is typically used for selecting personnel for service in volunteer-based systems. However, since most inductees in the U.S., for example, already have a high school diploma, education level is no longer a good predictor of attrition (Moore, 2002). In some conscription-based military

systems, education level is used at least to understand adjustment problems and to select people for different kinds of tasks (Dovrat 1995). In societies where there is still variance in previous education levels of recruits, school achievement variables may be regarded as valid indicators of prior adjustment within a disciplined and structured environment.

Time spent in education is as an important predictor of adjustment as the education level attained (Blandin & Morris, 1982; Fischl & Blackwell, 2000; Hawes, 1990; Moore, 2002). "Seat-time" in prior schooling may be the reason why high school diploma graduates have a decreased attrition risk (Hawes, 1990). Presumably, experiences at school such as social interaction, with self-discipline, and in learning new things have some kind of adjustment-helping influence. For example, Hawes found that low aptitude high school graduates were less likely to attrit than high aptitude personnel who did not finish high school.

Past research found that those who had problems completing their service were more likely (than those who completed their military training or service) to have been unemployed, to have failed at learning and work, and to come from broken homes (Buddin, 1984; Dovrat, 1995). Overall almost any sign of difficulty in school (discipline, learning, or social problems) is related to problems during military service (Benbenishty, Zirlin-Shemesh, & Kaplan, 1993; Booth-Kewley, Larson, & Ryan, 2002). Similarly, attitudes of family members, friends, and significant others have been shown to be an important source of support for service members (Siebold, 2001a; Thompson & Gignac, 2001) and an influence on a conscript's attitudes and adjustment (Hayden, 2000; Lakhani & Fugita, 1993; Shaw, Fisher, & Woodman, 1983; Siebold, 2001b).

Those who had more adjustment problems had more indications of social and behavioral problems like criminal behavior and alcohol or drug abuse before service (Benbenishty, Zirlin-Shemesh, & Kaplan, 1993; Dawson, Sharon, Brooks, & McGuire, 1994; Dovrat, 1995; Manning & Ingraham, 1981; Wilson & Herrnstein, 1985). Generally, having a criminal record is a strong predictor of a service member's likelihood of attrition (Bohn & Schmitz, 1996; Manning & Ingraham, 1981).

Mental and Physical Health. Benbenishty, Zirlin-Shemesh, and Kaplan (1993) found that a history of mental health problems is strongly related to maladjustment and attrition. For instance, thoughts about committing suicide were noted five times more often by attritees than by those who completed their military obligation. Larson, Booth-Kewley, and Ryan (2002) used a "depression / anxiety" factor which ac-

counted for more of the variance (11.6%) in predicting attrition than any other risk factor. Overall they concluded in their study that the best predictors of maladjustment are psychological and behavioral in nature, not demographic or medical. Generally, mental health problems prevent adaptation to the military (Dawson, Sharon, Brooks, & McGuire, 1994). In Finland, the most serious mental-health cases are selected out during the call-up process.

Being in good physical condition and exercising helps recruits meet both mental and physical stress during the initial entry training (Allison, 1999; Gebicke, 1999; Hayden, 2000). Those physically prepared for military service have a reduced risk of being separated from service (Allison, 1999; Booth-Kewley, Larson, & Ryan, 2002). Although physical health facilitates adjustment, it is not as crucial a factor as mental state for predicting attrition (Benbenishty, Zirlin-Shemesh, & Kaplan, 1993).

Personality and Personal Attitudes. Expectations about various aspects of military service, and whether they are met, can influence the conscript's ability to adjust. Those who have positive, realistic expectations are more likely to adjust (Buddin, 1984; Catanzaro & Mearns 1999; Dawson, Sharon, Brooks, & McGuire, 1994; Kassel, Jackson, & Unrod, 2000; Lazarus & Folkman, 1984; Pierce & Lydon, 1998; Thompson & Gignac, 2001). Expectations toward military service are affected by one's home, friends, school, media, and national events (Anderson, 1974; Bourdieu, 1977, 1993a, 1993b, 1994).

Having accurate and complete information is related to having positive expectations and adjustment (Shaw, Fisher, & Woodman, 1983). A conscript's having realistic expectations may be related to a person's aptitude; those who have a good ability to plan can evaluate their future and possibilities more accurately (Antel, Hosek, & Peterson, 1987). However, positive expectations and attitudes do not guarantee excellent adaptation; those who have the most positive expectations might have more difficulty facing the reality of first weeks of military service (Pancer, Hunsberger, Pratt, & Alisat, 2000; Thompson & Gignac, 2001; Thompson & Holmes, 1996).

People have an ability to prepare mentally and physically for future demands by making calculations and plans, taking on reasonable tasks, seeking information and feedback, training and exercising, preparing for probable difficulties, and keeping their options open (Hamburg, Coelho, & Adams, 1974). People can also assess how their personal coping skills match with the needs of the military environment and the likelihood of positive or negative outcomes based on that coping (Bandura, 1982). Shaw, Fisher, and Woodman (1983) concluded that an individual's actual adjustment

(self-rated) was best predicted by his expected adjustment.

Low motivation by a conscript can be demonstrated in an active way when a conscript struggles against military service by avoiding it (e.g., AWOL, seeking medical exemptions from training, or even dropping out of the system—attrition) or in a passive way when a conscript shows little initiative or desire to learn during training (Dovrat 1995). It is not surprising that a positive attitude towards military service has been seen as an important variable for adjustment and avoiding attrition (Dawson, Sharon, Brooks, & McGuire, 1994; Manning & Ingraham, 1981).

Personality characteristics like low self-esteem, a low frustration level, problems with authority, and aggression are more often found in those who are likely to attrit than others (Dovrat, 1995). Similarly, the more a recruit has problems with morale, self-discipline, self-esteem, pride, and commitment, the less is his or her likelihood to complete their service (Dawson, Sharon, Brooks, & McGuire, 1994; Hayden, 2000; Manning & Ingraham, 1981; Moore, 2002). Dovrat mentioned that those who do not adjust often lack identification with important social values and lack commitment. Generally, attritees have less of a capacity to adjust socially and emotionally to military service (Manning & Ingraham, 1981).

<u>Dependent and Outcome Variables.</u> The most used positive indicator of adjustment is some measure by which the service member indicates by questionnaire or interview response that the service member is adjusted or satisfied with service. The most used negative indicator is attrition, or separation from service, for non-medical reasons (e.g., Dawson, Sharon, Brooks, & McGuire, 1994; Dovrat, 1995). The outcome variables most frequently used are completion of military training or duty and military performance, both being positively associated with adjustment to military service.

While there has been a substantial amount of research on adjustment to military service, much of it is limited in the number and the extent of categories used to predict adjustment (i.e., the predictor space); most of it is based on English-speaking samples; many studies lacked sufficient attention to the measurement of adjustment; and many other studies are limited in the array of the categories of outcome variables they considered (i.e., the criterion space). The current research is an attempt to address these shortcomings in the military adjustment literature.

.

## Sample, Methods, and Measures

All respondents were inducted in 2001 as the first (starting in January) or second (starting in July) contingent to the armored brigade in south-central Finland. The starting sample of this research included close to 100% of both contingents and consisted of 2,003 conscripts. Annually about 30,000 men enter military service in various locations and branches. Thus the sample represented about 1 out of 15 of the military service initial training population in Finland during 2001.

Most data were collected through Finnish-language questionnaires. To develop the questionnaires, interviews were held with instructors and groups of conscripts during the fall of 2000. Information from these interviews and the prior research literature were used to design the final survey instruments. Baseline data were collected by a questionnaire administered to the conscripts immediately upon their entering the service, when they had no direct experience about military life and service. Later questionnaires were administered near the end of basic training (7 weeks after entering military service) and near the end of the six-month conscript training period. Conscripts responded to most of the items using a Likert-type response scale going from a strongly negative answer to a strongly positive one, or vice versa. There were also some dichotomous responses for the occurrence, or not, of specific life changes and some other formats to respond to personal or demographic items.

Based on the adjustment and attrition research literature and factor analyses of conscript responses to the questionnaires, scales measuring the main constructs of interest were developed. Specifically, in the factor analysis, items whose responses loaded strongly (>.40) on the same factor and which were thought to be related to one another by the literature and/or interviews were utilized as measures of over-arching constructs. Items from the questionnaires that did not load significantly on a factor or did not seem logically related to other items in the factor were excluded. In all, nine major adjustment predictor scales were derived from a set of 47 items, accounting for 64% of their variance, along with an index of expected adjustment to military service.

The major questionnaire scales with their individual items, item means, item standard deviations, Cronbach's alpha (reliability), item-scale total correlations, scale means, and scale standard deviations were computed. Some item responses were reverse coded so that higher item and scale scores in each case reflected more positive responses. Also, some individual background items, not part of the scales or factor analyses, were used in various analyses. These scales and their characteristics are presented in Table 1. Inter-scale correlations are given in Table 2 (table 1 and 2 are

located in the appendix after the References section). Training performance was measured by official summary performance ratings made by leaders on each conscript. The primary measures of attrition were data from conscript personnel records that included official categories of reasons for attrition. The training stage during which attrition occurred was also noted.

#### Results

# **Przdictors of Expected Adjustment**

Predictor Scales. A multiple stepwise regression analysis was used to determine the variance accounted for by the predictor scales which individually correlated highly with expected military adjustment. Cases with missing values for any of the variables used in the analysis were excluded. The results of the analysis are presented in Table 3. A basic model with five predictor scales accounted for 62% of the variance in the Military Adjustment Index. An enhanced model explained no meaningful additional amount of variance (0.4%). The scales in order of importance to the stepwise regression basic model were: 1) Attitude Towards Conscript Service, 2) Social Adjustment, 3) Obeying Authority, 4) Physical Health, and 5) Relationship Difficulty. The enhanced model added: 6) a summary of recent Stressful Life Changes, 7) Sense of Military Service Obligation, and 8) Mental (Health) State. The exclusion of Attitude Towards Training from the models is explained by its high correlation (r = .78) with Attitude Towards Conscript Service. It is not clear why prior Adjustment in Civilian Schooling was excluded, but perhaps this was due to its correlation with Obeying Authority (r = .41) or Social Adjustment (r = .37) or due to the restricted range of responses to the scale. In any case, those with low mean responses on the Adjustment in Civilian Schooling scale still expected to adjust to military service as well as the others.

Table 3: Stepwise Regression of Predictor Scales with the Military Adjustment Index

Predictor Scales (Variables Entered in the Basic Model)	r	R <sup>2</sup>	Standardized Coefficients	
Attitude Towards Conscript Service	.61	.39	.26	
2) Social Adjustment	.62	.54	1.37	
3) Obeying Authority	.61	.58	.26	
4) Physical Health	.54	.61	.21	
5) Relationship Difficulty	.39	.62	[0]	
<i>'</i>	.39	.62	11	

Note. R = .79 and Adjusted R Square = .62; n = 2,000. For an enhanced model, Stressful Life Changes, Sense of Military Obligation, and Mental State also were included (R = .79 and Adjusted R Square = .62). Excluded scales were Adjustment in Civilian Schooling and Attitude Towards Training. For all r values, p < .001.

Background and Aptitude Predictors. Because the predictor scales were measured at the same time and with the same method (questionnaire) as the expected Military Adjustment Index, the influence of background and aptitude predictors were examined separately from the predictor scales. Since cases with missing values were excluded and many conscripts did not have aptitude data available, only 1,136 cases were included in this analysis. The results of the stepwise multiple regression are presented in Table 4.

Table 4: Stepwise Regression of Background & Aptitude Items with the Military Adjustment Index

Background and Aptitude Items (Variables Entered in the Model)	г	R²	Standardized Coefficients B
"Significant others" had a positive attitude towards military service	.37	.13	.19
2) Conscript requested longer period of service*	.33	1.18	1.17
3) Received enough information about conscription	.27	.21	1.15
4) Aptitude test 2 (leadership and social skills)	.29	.23	1.13
5) Conscript reported using alcohol	.21	.25	1.11
6) Had a job*	.09	.26	1.11
7) Frequency of exercising	.24	.27	.09
8) Home town distance from current unit	01	.27	.06
Parent have a positive attitude towards military service	.27	.27	.07
IO) Reported sleeping disorders*	25	.28	06

Note. \* = this is a dummy variable. For the correlation coefficient (r), n = 2,002, except for item 4, n = 1,283 and for item 7, n = 1,992. All correlation coefficients were significant at p < .001, except for item 8 where p = n.s.f (.88). In the model, R = .55, and Adjusted R Square = .28; n = 1,136. For the model, variable 1-7 significance levels were p < .001, and variable 8-10 significance levels were p < .001.

If only the background predictors were entered in the stepwise regression (i.e., without the aptitude predictors), the *n* would increase to 1,973, and *R* would = .55 and Adjusted *R* Square would = .30. The order of the "background predictors only" model would be (similar to the results presented in Table 4): 1) ignificant others?had a positive attitude towards military service (?= .22), 2) Conscript requested longer period of service (?= .20), 3) Conscript received enough [military service] information about conscription (?= .18), 4) Conscript had sleeping disorders (?= -.13), 5) Frequency of exercising (?= .11), 6) Conscript had quarreled with teacher or supervisor (?= -.09), 7) Conscript reported using alcohol [moderate amount] (?= .09), 8) Conscript had a job before military service (?= .08). One important result was the identification of items which were excluded from the models explaining expected adaptation, particularly many items thought to be related to attrition. These items are education level, GPA at

school, age, gender, attitude towards or against drugs, and criminal record. It is also important to notice that conscripts' work and study situations and socio-economic background were not among the predictors.

Scales and Background Items as Predictors of Adjustment. All scales and background items were entered together in a stepwise regression analysis. Aptitude variables were not included because there were insufficient data on too many conscripts. The first five stepwise entries were the same as the basic model in Table 3. The stepwise inclusion of other predictor scales or background items did not materially improve on this basic model in explaining variance but are presented for a more full description, to assist future research, and for policy considerations. See Table 5. An alternate stepwise regression analysis was computed including aptitude variables, but the resulting model was basically unchanged and did not include the aptitude variables.

Table 5: Stepwise Regression of Scales and Background Items with the Military Adjustment Index

	R²	Standardized Coefficients B
.61	.39	.26
.62	.54	.36
.61	.58	.25
.54	.61	.24
.39	.62	10
.24	.62	09
09	.62	06
.39	.63	.05
-	.62 .61 .54 .39 .24 09	.62 .54 .61 .58 .54 .61 .39 .62 .24 .62 09 .62

Note. S after a numbered row entry means it is a scale. In this model, R = .79 and Adjusted R Square = .63; n = 1,992. No aptitude measures were included in the stepwise regression because that would substantially reduce the sample size.

Summary—Predictors of Expected Adjustment. Expected conscript adjustment was measured by the Military Adjustment Index, which demonstrated reasonably good psychometric properties and face validity (Table 1). The five best predictors of expected adjustment (the Military Adjustment Index) were: a) Attitude Towards Conscript Service, b) Social Adjustment, c) Obeying Authority, d) Physical Health, and e) Relationship Difficulty (Table 3). Together these predictors accounted for 62% of the variance in expected adjustment. Many additional predictor variables were considered, but they did not add meaningful independent explanation of variance. Background items and aptitude, which had less common method variance with the Military Ad-

justment Index criterion, were correlated to some extent with the criterion but not strongly. Of particular interest was the fact that some variables useful in predicting conscript attrition (e.g., Mental (Health) State, Sense of Military Service Obligation, education level, criminal record, and past economic difficulties) were not useful in predicting expected adjustment. In short, what predicts (expected) success is different from what predicts failure in the Finnish military service. In all, the five best predictors tell a coherent story. Expected adjustment is high for those with a positive attitude towards their military service, are generally sociable, can accept orders, and perceive themselves up to the physical demands of military service.

## **Conscript Adjustment**

<u>Later Perceived Adjustment.</u> The ability to predict expected adjustment to military service is important to the extent that expected adjustment predicts actual adjustment and other positive outcomes. Actual adjustment can be measured in two ways—conscript perceived adjustment at a later time and the completion of the military service obligation, i.e., avoidance of attrition. In the current research, the expected adjustment at the start of basic training was correlated with self-reported adjustment near the end of basic training (7 weeks of service) at r = .54; n = 1,831; p < .001 and with self-reported adjustment near the end of the six-month service obligation at r = .40; n = 1,660; p < .001. In addition, self-reported later adjustment at the end of basic training was correlated with the same near the end of the six-month military service obligation at r = .58; n = 1,651; p < .001. Self-reported adjustment was measured by the Military Adjustment Index, modified to reflect the appropriate verb tense. This association between initial expected adjustment and later adjustment suggests that it is important to provide sufficient information to conscripts before entry into military service and to help them develop positive expectations for military service prior to entry into the military. Also, the pattern of association suggests that later adjustment is a function of other factors than just initial expected adjustment, as one would expect, since adjustment is not by itself a stable personality trait.

Separation from Service. During the six months of their initial military service obligation, 211 of the 2,003 conscripts in the sample were separated from military service. Of those 211 attritting, 170 were separated during basic training (131 of these in the first two weeks), and the remaining 41 were separated between the end of basic and the end of their six-month obligation. Of the 211 attritting, 174 were at least in part for

mental health reasons or they selected an option to choose alternative civilian service (13 months) for ethical reasons. The mean value of the Military Adjustment Index upon entry into military service was 3.2~(SD=.95) for the "drop-out" group (of 174) compared to a mean of 4.0~(SD=.62) for the group (n=1,621) that completed their military service without any (primarily minor health) restrictions on further service. The difference of means is significant (p<.001). Those separated for physical health reasons did not differ in expected adjustment from those who completed their service. In other words, those in the drop-out group had significantly lower expectations of adjustment to military service at the time they entered service.

Expected Adjustment as a Discriminator. Many variables impact on conscript attrition. The current research examined the relative importance of expected adjustment on attrition in terms of its relative ability to discriminate those who completed their military service obligation without any restrictions (n = 1,599) from those who attritted at least in part for mental health reasons or chose the civilian service alternative for ethical reasons (n = 171). The results of the discriminant analysis are shown in Table 6 in terms of the relative weights of the discriminating variables. Expected adjustment was the second most important variable as rated by its canonical correlation, and it was in the discriminant function. The discriminant function using the variables noted in Table 6 was able to correctly classify 47% of those attritting, 97% of those completing service, and 92% of all conscripts considered in the analysis. Briefly stated, expected adjustment, the Military Adjustment Index, is a potential discriminator of attrition, although it is relatively less strong than the predictor scale: Sense of Military Service Obligation.

Table 6: Weights of Predictor Scales and Background Items in Discriminating Between Those Who Completed Their Military Service and Those Who Attritted

Predictor Scales and Background Items	Within-group Corre-	Standardized Coef- ficients
Sense of Military Service Obligation (S)*	.61	.41
Military Adjustment (S)*	.55	.19
Obeying Authority (S)	.52	•
Attitude Towards Conscript Service (S)	.52	-
Adjustment in Civilian Schooling (S)*	.52	.15
Physical Health (S)*	.50	.16
Attitude Towards Training (S)	.49	•
Mental (Health) State (S)*	.46	.13
I) Highest education level*	.46	.31
2) Conscript had learning troubles in comprehensive school*	42	16
Conscript asked for special technical or leadership training or longer period of service*	.41	.13
4) GPA in comprehensive school	.40	-
Social Adjustment (S)	.38	-
5) Conscript was reported for a criminal offence*	-,34	11
6) "Significant others" had a positive attitude towards military service	.33	-
7) Conscript had sleeping disorders*	33	11
8) Conscript exercised	.33	•
9) Parents had a positive attitude towards military service	.31	•
10) Conscript was accused of a crime	31	-
II) Conscript did get along with parents	.30	-
Relationship Difficulty (S)*	.30	16
12) Conscript was arrested / put in detention*	29	18
13) Conscript attitude against drugs	.29	•
14) Conscript had one or more loans	27	-
15) Conscript had quarreled with a teacher or a supervisor	26	-
16) "Marital status" / relationship*	24	15
17) Conscript had a little money	24	-
18) Conscript thought drug tests should not be allowed	23	-
19) Criminal record	21	-
20) Conscript had lived with parents	.19	-
21) Conscript had no job or studying place in school*	18	10
22) Conscript got enough service information in advance	.18	-
23) Father was unemployed*	18	10
24) Number of places conscript has lived *	17	14
25) Age*	16	18
26) Reported quarrels at home	16	•
27) Reported quarrels with girlfriend	15	-
28) Parents were divorced	15	-
29) Conscript was fired form a job	14	-
30) Conscript shared the cost of family living expenses	14	-
31) Conscript seldom used alcohol*	.13	15
32) Reported disease or injury	13	-
33) Father was mid-level white collar	.13	-
34) Father completed military service, with the rank of*		13
35) Conscript had a job before military service	.10	•
36) Conscript was studying before military service	.07	-

Note. Pooled within-groups correlations are between the discriminating variables and standardized canonical

discriminant functions. Variables are ordered by absolute size of correlation within function. \* = This variable (bolded) was included in the best model. Aptitude variables were not entered into the analysis because that would substantially reduce the n.

The model based on the best discriminators had Eigenvalue = .348 and Wilk's Lambda = .742, while correctly classifying 47.1% of the dropouts, 97.1% of the completers, and 92.2% of cases overall. Dropout (attritee) n = 171: completer n = 1.599.

Expected Adjustment as a Predictor of Performance. The ability to predict expected adjustment to military service is made further important to the extent that expected adjustment predicts other positive outcomes, especially conscript performance during military service. The military performance of the conscripts was rated from 1 (poor) to 5 (excellent) by their immediate leaders near end of the six-month military service obligation. Expected adjustment upon entry to military service was correlated with the leader-rated conscript performance at r = .18; n = 1,782; p < .001. A performance rating of 1 to 3 was considered low performance; a rating of 4 or 5 was considered high performance. The mean on the Military Adjustment Index of those who performed at a low level was M = 3.8; SD = .68; n = 520; the mean for those who performed at a high level was M = 4.0; SD = .60; n = 922.

A series of discriminant function analyses were carried out to determine those weighted variables that could distinguish the group of conscripts who completed their service at a low performance level (rated 1 to 3) from the group who performed at a high level (rated 4 or 5). The following variables were components of a model that best discriminated low from high performance groups in military service: 1) GPA in comprehensive school, 2) Physical Health, 3) Highest education level, 4) Conscript asked for special technical or leadership training or longer period of service, 5) Parents were divorced, 6) Mental State, 7) Sense of Military Service Obligation, 8) Age, and 9) Adjustment in Civilian Schooling. Other variables were highly correlated with the standardized canonical discriminant function (i.e., were associated with differing low from high performance) but were not included in the model due to other variables having greater discriminating power. Table 7 provides the relative strength of the predictor scales and background items that discriminate the performance groups. Overall, 72.5% of the cases were correctly classified, including 51.6% of those with low performance and 84.2% of those performing highly. Although the Military Adjustment Index is clearly associated with discriminating those who perform poorly from those who perform well, the Index is only the 9th strongest variable in the set and did not contribute enough independent discrimination power to be included in the best model.

Table 7. Predictors that Discriminate Low and High Performers in Military Service

Predictor Scales and Background Items	Within-group Correlation	Standardized Coefficients
GPA in comprehensive school*	.74	.42
2) Highest education level*	.60	.21
Adjustment in Civilian Schooling (S)*	.56	.14
3) Conscript asked for special technical or leadership training or longer period of service*	.54	.25
Physical Health (S)*	.51	.27
Obeying Authority (S)	.45	
Mental (Health) State (S)*	.42	.12
Sense of Military Service Obligation (S)*	.41	.22
Military Adjustment (S)	.41	-
4) Frequency of Exercising	.40	<u> -</u>
Attitude Towards Training (S)	.40	
Attitude Towards Conscript Service (S)	.40	<del>-</del>
5) Conscript had learning troubles at school	37	-
Relationship Difficulty (S)	.36	<u> </u>
Social Adjustment (S)	.34	-
6) Father completed military service, with the rank of	.31	
7) Parents were divorced*	28	16
8) Conscript did get along with parents	.31	
9) Conscript was reported for a criminal offence	25	-
10) Conscript attitude against drugs	.24	-
11) Conscript was accused of a crime	24	-
12) Age*	.23	.12
13) Conscript had one or more loans	23	<b>-</b>
14) Parents had a positive attitude towards military service	.22	-
15) Conscript seldom used alcohol	.22	-
16) Conscript had a little money	22	-
17) "Significant others" had a positive attitude towards military service	.21	-
18) Father was mid-level white collar	.20	-
19) Conscript thought drug tests should not be allowed	18	-
20) Conscript had sleeping disorders	17	
21) Conscript had quarreled with a teacher or a supervisor	-,17	-
22) Conscript was studying before military service	.16	-
23) Conscript had a criminal record	12	<b>-</b>
24) Father was unemployed	12	-
	<del> </del>	<del></del>
25) Reported quarrels at home	08	-

Note. Pooled within-groups correlations are between discriminating variables and standardized canonical discriminant functions. Variables are ordered by absolute size of correlation within function. \* = This variable (bolded) was included in the model. In the model based on these variables, low performers are correctly classified 51.6% (n = 271), wrongly 48.4% (n = 254); high performers are correctly classified 84.2% (n = 786); wrongly 15.8% (n = 147), for an overall correct classification rate of 72.5% (n = 1,458); Eigenvalue = .258 and Wilk's Lambda = .795.

#### **Discussion**

This research was designed to determine the major variables that predict initial adjustment expectations at the start of military service and the extent to which those expectations were related to self-perceived adjustment at two later points in time as well as completion of the six-month military obligation and leader ratings of conscript training performance. The measure of expected adjustment, the Military Adjustment Index, demonstrated good psychometric properties (Table 1). The variables that predicted the Military Adjustment Index were well identified (Table 5) as: a) Attitude Towards Conscript Service, b) Social Adjustment, c) Obeying Authority, d) Physical Health, e) Relationship Difficulty, f) Frequency of exercising, g) Marital status, and h) Adjustment in Civilian Schooling; together the variables explained 63% of the variance in the Military Adjustment Index.

The importance of expected adjustment was verified through its correlation with self-perceived adjustment at the end of basic training (r = .54) and the end of the military service obligation (r = .40). Its further importance was shown in its ability to contribute to discriminating conscripts who completed military service from those who attritted (Table 6). However, the Index was not needed for predicting leader-rated performance by a conscript near the end of military service. For this prediction, variables related to prior civilian schooling, Physical Health, Mental (Health) State, and Sense of Military Service Obligation were more valuable (Table 7). Nonetheless, in both types of analyses (dropouts vs. completers and low vs. high performers) and in its correlation with later adjustment, expected military adjustment demonstrated that it was an important construct.

When the predictor scales and background items were considered together in the analyses, the predictor scales tended to be the more useful or explanatory variables. Part of the reason for this is due to common method variance between the measurement of the predictor scales and the criterion Military Adjustment Index. On the other hand, part of the reason is that the attitudes, perceptions, and personality characteristics measured by the predictor scales are most likely stronger and more direct influences on the expected adjustment of conscripts. As such, the predictor variables need to be considered in any efforts to improve or make more realistic the expected adjustment of conscripts.

The identified relation of certain background variables with expected adjustment (Table 4) suggests that, although the relation is less strong than with the predictor scales, those background variables too should be considered in any efforts to improve

or make more realistic the expected adjustment of conscripts. In particular, extra efforts should be made to ensure conscripts are provided with sufficient information prior to reporting for military service, and "significant others" and family members should be persuaded as well as the conscripts about the value and importance of military service. As often found, those with negative past experiences (crime, substance abuse, school problems, work problems, interpersonal problems) should be given extra attention so that they can better develop positive attitudes and adjustment expectations. Finally, it is useful to recognize variables which were found to have little or no significance for expected adjustment so that time and resources are not wasted addressing people identified with those characteristics (e.g., parents' class/status or whether a conscript was a student or working prior to entering service).

#### References

Allison, R. E., Jr. (1999). Analysis of first-term Army attrition. USAWC Strategy Research Project. Carlisle Barracks, PA: U.S. Army War College.

Anderson, B. S. (1974). Adjustment to recruit training (master's thesis). Monterey, CA: Naval Post-graduate School. (DTIC No. ADA-003516)

Antel, J., Hosek, J. R., & Peterson, C. E. (1987). Military enlistment and attrition: An analysis of decision reversal (R-3510-FMP). Santa Monica, CA: RAND.

Bandura, A. (1982). Self-efficacy: Mechanism in human agency. American Psychologist, 37, 122-147.

Benbenishty, R., Zirlin-Shemesh, N., & Kaplan, Z. (1993). Policy capturing: Discharge from the Israeli Army due to mental difficulties. *Military Psychology*, 5(3), 159-172.

Benton, M. H., & Siebold, G. L. (2002, April). *Prediction of foreign language training success*. Paper presented at the 65<sup>th</sup> Annual Meeting of the Southern Sociological Society, Baltimore, MD.

Blandin, J. S., & Morris, J. H. (1982). Predicting attrition among non-high school graduate Army enlistees. Armed Forces and Society, 8(4), 643-655.

Bohn, D., & Schmitz, E. (1996). Waiver policy and attrition (Research Report. NRC-96-01). Arlington, VA: Navy Recruiting Command.

Booth-Kewley, S., Larson, G. E., & Ryan, M. A. K. (2002). Predictors of Navy attrition. I. Analysis of 1-year attrition. *Military Medicine*, 167, 760-769.

Borack, J. I. (1994). Estimating predictive validity when range restriction due to selection and attrition is present. *Military Psychology*, 6(3), 193-204.

Bourdieu, P. (1977). Outline of a theory of practice. Cambridge, England: University Press.

Bourdieu, P. (1993a). Sociology in question. London, England: Sage Publications.

Bourdieu, P. (1993b). The field of cultural production. *Essays on art and literature* (2<sup>nd</sup> ed.). Cambridge, England: Polity Press.

Bourdieu, P. (1994). Distinction. A social critique of the judgement of taste (4th ed.). London, England: Routledge.

Buddin, R. (1984). Analysis of early military attrition behavior (R-3069-MIL). Santa Monica, CA: The RAND Corporation.

Buddin, R. (1988). Trends in attrition of high-quality military recruits (R-3539-FMP). Santa Monica, CA: The RAND Corporation.

Catanzaro, S. J., & Mearns, J. (1999). Mood-related expectancy, emotional experience, and coping behaviour. In I. Kirsch (Ed.), How expectancies shape experience (pp. 67-91). Washington, D.C.: American Psychological Association.

Conscript Division of the Defence Staff (CDDS) (2003). Expatriate Finnish men are also liable for military service. Helsinki, FI: Finnish Defence Forces. (http://www.mil.fi/varusmies/expatriate.pdf)

Conscript Division of the Defence Staff (CDDS) (2004). Social guide for conscripts. Helsinki, FI: Finnish

- Defence Forces. (http://www.mil.fi/varusmies/socialguide en2004-2005.pdf)
- Dale, C. (1989). The determinants of attrition from the Army Selected Reserves (Technical Report 831). Alexandria, VA: U.S. Army Research Institute for the Behavioral and Social Sciences.
- Dawson, R., Sharon, B., Brooks, K., & McGuire, W. J. (1994). Coping and adaptation: Theoretical and applied perspectives (Research Note 95-06). Alexandria, VA: U.S. Army Research Institute for the Behavioral and Social Sciences.
- Dovrat, R. (1995). Adaptation of disadvantaged soldiers to military service in the I.D.F. London, England: European Science Coordination Office, U.S. Army Research Institute for the Behavioral and Social Sciences.
- Elis, H. (1999). A decomposition analysis of first-term attrition in the U.S. military (master's thesis). Monterey, CA: Naval Postgraduate School.
- Etcho, L. L. (1996). The effect of moral waivers on first-term, unsuitability attrition in the Marine Corps (master's thesis). Monterey, CA: Naval Postgraduate School.
- Fischl, M. A., & Blackwell, D. L. (2000). Attrition in the Army from the signing of the enlistment contract through 180 days of service (Research Report 1750). Alexandria, VA: U.S. Army Research Institute for the Behavioral and Social Sciences.
- GAO (U.S. General Accounting Office) (1998). Military attrition: DoD needs to better understand reasons for separation and improve recruiting systems (GAO/T-NSIAD-98-109). Washington, D.C.: U.S. Government Printing Office.
- Gebicke, M. E. (1999). Military attrition: DoD needs to follow through on actions initiated to reduce early separations. Testimony Febraury 24, 1999 before the Subcommittee on Personnel, Committee on Armed Services, U.S. Senate. As General Accounting Office report GAO/T-NSIAD/-99-80. Washington, D.C.: U.S. Government Printing Office.
- Golding, H. L. W., Gasch, J. L., Gregory, D., Hattiangadi, A. U., Husted, T. A., Moore, C. S., Shuford, R. W., & Seiver, D. A. (2001). Fleet attrition: What causes it and what to do about it. Alexandria, VA: The CAN Corporation.
- Hamburg, D. A., Coelho, G. V., & Adams, J. E. (1974). Coping and adaptation: Steps toward a synthesis of biological and social perspectives. In G. V. Coelho, D. A. Hamburg, & J. E. Adams (Eds.), Coping and Adaptation (pp. 403-440). New York: Basic Books.
- Hawes, E. A. (1990). An application of survival analysis methods to the study of Marine enlisted attrition (master's thesis). Monterey, CA: Naval Postgraduate School.
- Hayden, T. W. (2000). Initial entry training: Reducing first term attrition through effective organizational socialization. USAWC Strategy Research Project. Carlisle Barracks, PA: U.S. Army War College.
- Heyns, R. W. (1958). The Psychology of Personal Adjustment. New York: Henry Holt.
- Hicks, J. M., & Nogami, G. Y. (1984). Counter-attrition programs in the United States Armed Forces (Research Note 84-112). Alexandria, VA: U.S. Army Research Institute for the Behavioral and Social Sciences.
- Horne, D. K. (1987). The impact of soldier quality on Army performance. *Armed Forces & Society*, 13(3), 443-455.
- Hosek, J. R., Antel, J., & Peterson, C. E. (1989). Who stays, who leaves? Attrition among first-term enlistees. *Armed Forces & Society*, 15(3), 389-409.
- Information Division of the Defence Staff (IDDS) (2002). Finnish military defence. Helsinki, FI: Art-Print Oy. (http://www.mil.fi/perustietoa/julkaisut/sotilaallinen\_maanpuolustus/sotmp\_englanti\_02.pdf)
- Kassel, J. D., Jackson, S. I., & Unrod, M. (2000). Generalized expectancies for negative mood regulation and problem drinking among college students. *Journal of Studies on Alcohol*, 61, 332-340.
- Kearl, C. E., & Nelson, A. (1992). The Army's delayed entry program. Armed Forces and Society, 18(2), 253-268.
- Lakhani, H., & Fugita, S. S. (1993). Reserve/Guard retention: Moonlighting or patriotism? Military Psychology, 5(2), 113-125.
- Larson, G. E., Booth-Kewley, S. & Ryan, M. A. K. (2002). Predictors of Navy attrition. II. A demonstration of potential usefulness for screening. (Report No. 01-06). Military Medicine, 167, 770-776.
- Lazarus, R. S., & Folkman, S. (1984). Stress, appraisal, and coping. New York: Springer.
- Manigart, P., & Prensky, D. (1982). Recruitment and retention of volunteers: Problems in the Belgian armed forces. Armed Forces and Society, 9(1), 98-114.
- Manning, F. J., & Ingraham, L. H. (1981). Personnel attrition in the U.S. Army in Europe. *Armed Forces and Society*, 7(2), 256-270.
- McBride, J. R. (1993). Compensatory screening model development. In T. Trent & J. H. Laurence (Eds.), *Adaptability Screening for the Armed Forces* (pp. 163-214). Washington, D.C.: Office of Assistant Secretary of Defence.

- Moore, B. L. (2002). The propensity of junior enlisted personnel to remain in today's military. *Armed Forces & Society*, 28(2), 257-278.
- Nelson, D. L., & Quick, J. C. (1997). Organizational Behavior: Foundations, Realities, and Challenges. St. Paul, MN: West Publishing.
- Pancer, S. M., Hunsberger, B., Pratt, M. W., & Alisat, S. (2000). Cognitive complexity of expectations and adjustment to university in the first year. *Journal of Adolescent Research*, 15, 38-57.
- Perry, S., Griffith, J., & White, T. (1991). Retention of junior enlisted soldiers in the all-volunteer Army Reserve. Armed Forces & Society, 18(1), 111-133.
- Pierce, T., & Lydon, J. (1998). Priming relational schemas: Effects of contextually activated and chronically accessible interpersonal expectations on responses to a stressful event. *Journal of Personality and Social Psychology*, 75, 1441-1448.
- Price, J. L., & Sang-Wook, K. (1993). The Relationship between demographic variables and intent to stay in the military: Medical personnel in a U.S. Air Force hospital. Armed Forces & Society, 20(1), 125-144.
- Quester, A. O. (1999). Bootcamp attrition rates: Predictions for FY 1999 (CAB 99-57, Annotated Briefing).
  Alexandria, VA: Center for Naval Analyses.
- Sawrey, J. M. & Teleford, C. W. (1971). Psychology of Adjustment. Boston: Allyn and Bacon.
- Shaw, J. B., Fisher, C. D., & Woodman, R. W. (1983). A predictive model of transfer adjustment in the U.S. Marine Corps (Technical Report). College Station, Texas: Texas A&M University.
- Siebold, G. L. (1981). Attrition: Causality, explanation, and level of analysis. In *Proceedings of the 23*<sup>rd</sup>

  Annual Conference of the Military Testing Association, Volume 2 (1099-1108). Alexandria, VA: U.S.

  Army Research Institute for the Behavioral and Social Sciences.
- Siebold, G. L. (2001a). Motivators and de-motivators. In B. E. Whelan (Ed.), Workshop on language student attrition (Study Report 2002-02) (pp. D1-D4). Alexandria, VA: U.S. Army Research Institute for the Behavioral and Social Sciences.
- Siebold, G. L. (2001b). Student views on attrition. In B. E. Whelan (Ed.), Workshop on language student attrition (Study Report 2002-02) (pp. E1-E4). Alexandria, VA: U.S. Army Research Institute for the Behavioral and Social Sciences.
- Siebold, G. L., & Benton, M. H. (2001). DLI completion/attrition study (Briefing). In B. E. Whelan (Ed.), Workshop on language student attrition (Study Report 2002-02) (pp. 23-35). Alexandria, VA: U.S. Army Research Institute for the Behavioral and Social Sciences.
- Stephen, R. A., Carroll, H. E., & Brown, N. (1972). Comparison of Naval and Air Force administrative and disciplinary discharges. Arlington, VA: Center for Naval Analysis.
- Talcott, G. W., Haddock, C. K., Klesges, R. C., Lando, H., & Fiedler, E. (1999). Prevalence and predictors of discharge in United States Air Force basic military training. *Military Medicine*, 164, 269-274.
- Thompson, M. M., & Gignac, M. A. M. (2001). A model of psychological adaptation in peace support operations: An overview (Technical Report 2001-050). Toronto, Ontario, Canada: Defence and Civil Institute of Environmental Medicine.
- Thompson, M. M., & Holmes, J. G. (1996). Ambivalence in close relationships: Conflicted cognitions as a catalyst for change. In R. Sorrentino and E. T. Higgins (Eds.), The handbook of motivation and cognition (pp. 497-530). New York: Guilford Press.
- Vickers, R. R., Jr., Walton-Paxton, E., Hervig, L. K., & Conway, T. L. (1993). Stress reactivity and attrition in two basic training populations (Report No. 93-39). San Diego, CA: Naval Health Research Center.
- White, L. A., Nord, R. D., Mael, F. A., & Young, M. C. (1993). The assessment of background and life experiences (ABLE). In T. Trent & J. H. Laurence (Eds.), Adaptability Screening for the Armed Forces (pp. 215-228). Washington, D.C.: Office of Assistant Secretary of Defence.
- Wilson, J. Q., & Herrnstein, R. J. (1985). Crime and human nature. New York: Simon and Schuster.
- Zook, L. M. (1996). Soldier selection: Past, present, and future (Special Report 28). Alexandria, VA: U.S. Army Research Institute for the Behavioral and Social Sciences.

## **Appendix: Basic Measures**

Table 1. Scales Measuring Conscript Adjustment and Predictor Constructs

# Military Adjustment Index

```
I will adjust to military discipline. (M = 3.7; SD = .81)
```

I will adjust to being away from my family. (M = 4.2; SD = .89)

I will adjust to being away from my friends. (M = 3.9; SD = 1.05)

I will adjust to military service. (M = 4.0; SD = .93)

I will adjust to the fast pace and strict timetables. (M = 3.6; SD = 1.08)

I can cope with the mental pressure of conscript training. (M = 3.9; SD = .88)

Response alternative for all items: Poorly, Fairly poorly, I am not sure, Fairly good, Good. Scale data: alpha = .81; item-total r range = .42 - .70; M = 3.89; SD = .69.

## **Attitude Towards Conscript Service**

```
Military service is useless and unnecessary. (M = 3.9; SD = 1.20)
```

I am not interested in military service. (M = 3.7; SD = 1.27)

I am highly motivated to complete my military service. (M = 3.7; SD = 1.22)

I will feel at home in military service. (M = 3.4; SD = 1.08)

My personal contribution to military service is important. (M = 3.6; SD = 1.17)

I am stepping into military service with positive expectations. (M = 3.5; SD = 1.25)

Response alternative for following scale items: Totally agree, Partly agree, Difficult to say, Partly disagree, Totally disagree.

Scale data: alpha = .88; item-total r range = .62 - .75; M = 3.63; SD = .96.

## **Attitude Towards Training**

Getting military training is important and significant to me. (M = 3.4; SD = 1.34) I want to learn the things that are taught thoroughly. (M = 4.2; SD = 1.06) I am willing to participate in training that is intellectually demanding. (M = 3.5; SD = 1.26) To me it is important to do well in the army. (M = 3.7; SD = 1.21) I will try to do my best in training. (M = 4.3; SD = 1.06)

Scale data: alpha = .84; item-total r range = .55 - .72; M = 3.80; SD = .93.

## Sense of Military Service Obligation

```
I have considered applying to unarmed service. (M = 4.6; SD = 1.05)
```

I have considered dropping out of service. (M = 4.5; SD = 1.03)

All men should carry out military service as a part of total defence. (M = 4.1; SD = 1.20) Military service is every male citizen's duty. (M = 4.3; SD = 1.15)

Scale data: alpha = .79; item-total r range = .53 - .70; M = 4.36; SD = .87.

## Social Adjustment

```
I will adjust to dormitory accommodations. (M = 4.1; SD = .81)
I can adjust to being around people I do not know. (M = 4.2; SD = .77)
I normally adjust to a new environment. (M = 4.1; SD = .79)
```

Scale data: alpha = .80; item-total r range = .51 - .64; M = 3.98; SD = .65.

## Relationship Difficulty

Belonging to a squad or a group feels pressing beforehand. (M = 4.1; SD = 1.10) I usually do not share my thoughts with other people. (M = 3.4; SD = 1.23) I feel myself uncomfortable with other people. (M = 4.0; SD = 1.09) It is easy for me to make new friends. (M = 3.9; SD = 1.11)

Scale data: alpha = .71; item-total r range = .48 - .59; M = 3.87; SD = .82.

## Mental (Health) State

```
I often feel depressed. (M = 4.1; SD = 1.15)
I have had suicidal thoughts. (M = 4.6; SD = .99)
I have often had feelings that life is not worth of living. (M = 4.5; SD = 1.09)
I am often anxious and tense. (M = 4.0; SD = 1.17)
If I could live my life all over again, I would do almost everything differently. (M = 4.1; SD = 1.17)
```

If I could live my life all over again, I would do almost everything differently. (M = 4.1; SD = 1.10)

Scale data: alpha = .78; item-total r range = .45 - .58; M = 4.26; SD = .79.

## Physical Health

My health corresponds to the demands of military service. (M = 4.1; SD = 1.01) I can manage the physical performances of military service. (M = 3.8; SD = .98)

Scale data: alpha = .76; item-total r = .62; M = 3.93; SD = .90.

#### Obeying Authority

I cannot stand being ordered around and commanded. (M = 3.9; SD = 1.15) It is easy for me to obey given orders. (M = 3.9; SD = 1.11) Explicit chain of command promotes action in the army. (M = 4.0; SD = 1.03)

Scale data: alpha = .67; item-total r range = .42 - .53; M = 3.91; SD = .86.

## Prior Adjustment in Civilian Schooling

I adjusted to comprehensive school. (M = 4.2; SD = 1.04)I felt at home at school. (M = 3.5; SD = 1.14)

Scale data: alpha = .71; item-total r range = .56 - .56; M = 3.87; SD = .96.

Note. Item means are rounded to one decimal place. Alpha is Cronbach's alpha. Item-total r range is the range of correlations between each item and the scale mean with the item deleted. Items were originally in the Finnish language.

Table 2  Correlations Between Measurement Scales	Mili- tary Ad- just- ment	Con- script Servi- ce	Trai- ning At- titude	Social Ad- just- ment	Rela- tion- shiDif- ficulty	Phy- sical Health	Men- tal State	Service Obliga- tion		Ad- just- ment in School
Measurement Scale					ļ					
Military Adjustment	l ·	.61	.53	.62	39	.54	.41	.45	.61	.39
Attitude Towards Conscript Service	.61	I	.78	.42	.41	.39	.37	.68	.61	.34
Attitude Towards Training	.53	.78	1	.37	.39	.35	.33	.65	.60	.33
Social Adjustment	.62	.42	.37	I	.56	.44	.43	.34	.41	.37
Relationship Difficulty	.39	.41	.39	.56	1	.36	.55	.38	.44	.34
Physical Health	.54	.39	.35	.44	.36	I	.36	.34	.38	.33
Mental (Health) State	.41	.37	.33	.43	.55	.36	1	.41	.43	.36
Sense of Military Service Obligation	.45	.68	.65	.34	.38	.34	.41	I	.55	.25
Obeying Authority	.61	.61	.60	.41	.44	.38	.43	.55	I	.41
Adjustment in Civilian Schooling	.39	.34	.33	.37	.34	.33	.36	.25	.41	Î

Note. Each correlation is significant at the p < .001 level (2-tailed). First column bolding is to highlight scale correlations with the Military Adjustment Index. n = 2,002.

Table 4: Stepwise Regression of Background & Aptitude Items with the Military Adjustment Index

Background and Aptitude Items (Variables Entered in the Model)	r	R²	Standardized Coefficients β
"Significant others" had a positive attitude towards military service			
2) Conscript requested longer period of service*	.37	.13	.19
3) Received enough information about consc-	.33	.18	.17
ription	.27	.21	.15
4) Aptitude test 2 (leadership and social skills)	.29	.23	.13
5) Conscript reported using alcohol	.21	.25	.11
6) Had a job*	.09	.26	.11
7) Frequency of exercising	.24	.27	.09
8) Home town distance from current unit	01	.27	.06
9) Parent have a positive attitude towards mili-	.27	.27	.07
tary service 10) Reported sleeping disorders*	25	.28	06

Note. \* = this is a dummy variable. For the correlation coefficient (r), n = 2,002, except for item 4, n = 1,283 and for item 7, n = 1,992. All correlation coefficients were significant at p < .001, except for item 8 where p = n.s.f (.88). In the model, R = .55, and Adjusted R Square = .28; n = 1,136. For the model, variable 1-7 significance levels were p < .001, and variable 8-10 significance levels were p < .05.

Table 5: Stepwise Regression of Scales and Background Items with the Military Adjustment Index

Predictor Scales and Background Items	r	R²	Standardized Coefficients
Attitude Towards Conscript Service (S)	.61	.39	.26
2) Social Adjustment (S)	.62	.54	.36
3) Obeying Authority (S)	.61	.58	.25
4) Physical Health (S)	.54	.61	.24
5) Rélationship Difficulty (S)	.39	.62	10
6) Frequency of exercising	.24	.62	09
7) Marital status	09	.62	06
8) Adjustment in Civilian Schooling (S)	.39	.63	.05

Note. S after a numbered row entry means it is a scale. In this model, R = .79 and Adjusted R Square = .63; n = 1,992. No aptitude measures were included in the stepwise regression because that would substantially reduce the sample size.

Table 6: Weights of Predictor Scales and Background Items in Discriminating Between Those Who Completed Their Military Service and Those Who Attritted

Predictor Scales and Background Items	Within-group Correlation	Standardized Coef- ficients
Sense of Military Service Obligation (S)*	.61	.41
Military Adjustment (S)*	.55	.19
Obeying Authority (S)	.52	-
Attitude Towards Conscript Service (S)	.52	-
Adjustment in Civilian Schooling (S)*	.52	.15
Physical Health (S)*	.50	.16
Attitude Towards Training (S)	.49	-
Mental (Health) State (S)*	.46	.13
I) Highest education level*	.46	.31
2) Conscript had learning troubles in comprehensive school*	42	16
Conscript asked for special technical or leadership training or longer period of service*		.13
4) GPA in comprehensive school	.40	-
Social Adjustment (S)	.38	-
5) Conscript was reported for a criminal offence*	34	11
6) "Significant others" had a positive attitude towards military service	.33	-
7) Conscript had sleeping disorders*	33	s.H
8) Conscript exercised	.33	-
9) Parents had a positive attitude towards military service	.31	_
10) Conscript was accused of a crime	31	
Conscript was accessed of a crime     Conscript did get along with parents	.30	_
Relationship Difficulty (S)*	.30	-,16
12) Conscript was arrested / put in detention*	29	18
13) Conscript was arrested 7 put in detendion  13) Conscript attitude against drugs	.29	10
, ,	27	-
14) Conscript had one or more loans	26	•
15) Conscript had quarreled with a teacher or a supervisor	2 <del>6</del> 2 <del>4</del>	15
16) "Marital status" / relationship*	2 <del>4</del> 24	13
17) Conscript had a little money		•
18) Conscript thought drug tests should not be allowed	23	•
19) Criminal record	21	•
20) Conscript had lived with parents	.19	
21) Conscript had no job or studying place in school*	18	10
22) Conscript got enough service information in advance	.18	-
23) Father was unemployed*	18	10
24) Number of places conscript has lived *	17	14
25) Age*	16	18
26) Reported quarrels at home	16	-
27) Reported quarrels with girlfriend	15	-
28) Parents were divorced	15	-
29) Conscript was fired form a job	14	•
30) Conscript shared the cost of family living expenses	14	
31) Conscript seldom used alcohol*	.13	15
32) Reported disease or injury	13	-
33) Father was mid-level white collar	.13	•
34) Father completed military service, with the rank of*	.12	13
35) Conscript had a job before military service	.10	•

Note. Pooled within-groups correlations are between the discriminating variables and standardized canonical discriminant functions. Variables are ordered by absolute size of correlation within function. \* = This variable (bolded) was included in the best model. Aptitude variables were not entered into the analysis because that would substantially reduce the n.

The model based on the best discriminators had Eigenvalue = .348 and Wilk's Lambda = .742, while correctly classifying 47.1% of the dropouts, 97.1% of the completers, and 92.2% of cases overall. Dropout (attritee) n = 171; completer n = 1,599.

Table 7. Predictors that Discriminate Low and High Performers in Military Service

Predictor Scales and Background Items	Within-group Correlation	Standardized Coefficients
I) GPA in comprehensive school*	.74	.42
2) Highest education level*	.60	.21
Adjustment in Civilian Schooling (S)*	.56	.14
3) Conscript asked for special technical or		
leadership training or longer period of ser-	.54	.25
vice*		
Physical Health (S)*	.51	.27
Obeying Authority (S)	.45	•
Mental (Health) State (S)*	.42	.12
Sense of Military Service Obligation (S)*	.41	.22
Military Adjustment (S)	.41	-
4) Frequency of Exercising	.40	-
Attitude Towards Training (S)	.40	-
Attitude Towards Conscript Service (S)	.40	-
5) Conscript had learning troubles at school	37	-
Relationship Difficulty (S)	.36	-
Social Adjustment (S)	.34	-
6) Father completed military service, with	.31	
the rank of	.31	•
7) Parents were divorced*	28	16
8) Conscript did get along with parents	.31	•
9) Conscript was reported for a criminal	25	
offence	25	•
10) Conscript attitude against drugs	.24	
11) Conscript was accused of a crime	24	•
12) Age*	.23	.12
13) Conscript had one or more loans	23	-
14) Parents had a positive attitude towards	22	
military service	.22	-
15) Conscript seldom used alcohol	.22	-
16) Conscript had a little money	22	•
17) "Significant others" had a positive at-	.21	
titude towards military service	.21	-
18) Father was mid-level white collar	.20	-
19) Conscript thought drug tests should not	18	
be allowed	10	-

20) Conscript had sleeping disorders	17	•
21) Conscript had quarreled with a teacher or a supervisor	17	-
22) Conscript was studying before military service	.16	-
23) Conscript had a criminal record	12	-
24) Father was unemployed	12	-
25) Reported quarrels at home	08	-
26) Number of jobs in work history	.08	

Note. Pooled within-groups correlations are between discriminating variables and standar-dized canonical discriminant functions. Variables are ordered by absolute size of correlation within function. \* = This variable (bolded) was included in the model. In the model based on these variables, low performers are correctly classified 51.6% (n = 271), wrongly 48.4% (n = 254); high performers are correctly classified 84.2% (n = 786); wrongly 15.8% (n = 147), for an overall correct classification rate of 72.5% (n = 1,458); Eigenvalue = .258 and Wilk's Lambda = .795.