Why Recruits Separate Early

Stephen Klein, Jennifer Hawes-Dawson,
Thomas Martin

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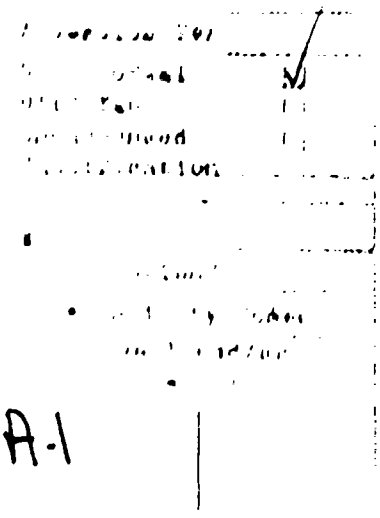

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PREFACE

This study investigated the underlying reason for recruits leaving the military before the end of their first term of service. Results of these analyses are presented, as well as the procedures used to gather and examine the data.

This research should be of interest to manpower accession policymakers and to those who may be charged with designing counter-attrition programs. The research was sponsored by the Assistant Secretary of Defense (Force Management and Personnel) and was carried out in RAND's Defense Manpower Research Center, part of RAND's National Defense Research Institute, a federally funded research and development center sponsored by the Office of the Secretary of Defense and the Joint Staff.

SUMMARY

BACKGROUND

Approximately 27 percent of recruits who enter military service will leave before completing 35 months of their first term of enlistment. This amount of attrition represents a major loss of recruiting and training resources.

Past research on first-term attrition has sought to identify factors correlated with whether or not a recruit separates early. For example, several studies found that high school graduates are less likely to separate early than are nongraduates. However, almost no attention has been given to documenting the prevalence of specific reasons that led to these early separations. To our knowledge, there has been no systematic examination to determine whether the prevalence of various *reasons* for an early separation are related to recruit characteristics such as gender, race, service, year of entry, education, and military occupational specialty (MOS).

If reasons for early separation vary as a function of readily observable recruit characteristics, then information about these relationships could be useful for designing counter-attrition programs and for improving recruiting and screening procedures. The same is true if the pattern of reasons varies with the time during the first term at which attrition occurs.

DESIGN OF THE RESEARCH PLAN

The principal goal of this study is to better understand the underlying reasons for attrition so as to help identify the type of policies and practices that would be effective in combating it. Existing machine-readable databases contain only the official justification for early separations in the form of Interservice Separation Codes (ISCs). They do not contain the real reasons for these separations. However, we learned that specific reasons for separation could be ascertained from recruits' hard-copy personnel folders located at the National Personnel Records Center (NPRC) in St. Louis, Missouri.

We reviewed the personnel records of recruits who separated within 35 months of entering the service to collect data that would allow us to answer the following questions:

- What is the relationship, if any, between the reason(s) a recruit separates early and the official interservice discharge code for that separation?
- What are the most common reasons for early separations?
- Are early separations usually due to a single problem or to multiple problems? What are the most common combinations of problems?
- Has the pattern of reasons changed from one accession cohort to another?
- Do the major reasons for early separations change during the first term within a cohort? That is, are they the same in basic and advanced training as they are during the first duty assignment?
- Do recruits who separate for one type of reason have the same background characteristics (e.g., gender and educational level) as those who separate for other types of reasons?

- Are the major reasons for early separation in occupational specialties with relatively high attrition rates the same as those in specialties with relatively low rates?
- Are the answers to these questions similar across services?

Computer tapes provided by the Defense Manpower Data Center (DMDC) were used to select a stratified random sample of recruits from among those who entered the service in either FY79 or FY85 and whose official justification for an early separation fell in the *adverse* category (i.e., ISCs #60 to #87, #101, and #102). The stratification process selected equal numbers of males and females, FY79 and FY85 accessions, both high- and low-quality recruits,[1] and those whose separations occurred during the first two months after entry, the next four months, the next 14 months, and the last 16 months. These four time periods were chosen to capture major phases of activities during the first term: basic training, advanced training, first duty assignment, and the remainder of the first term. The overall sampling design therefore had 32 cells (2 sex groups × 2 accession cohorts × 2 levels of quality × 4 time periods). All four services were represented in the analysis sample.

We provided NPRC with a list of the 1216 recruits selected by this process. Records for 1134 (93 percent) of these recruits were located and deemed sufficiently complete to permit analysis. The other 7 percent of the cases appeared to be random with respect to the stratification variables.

RESULTS

Our research indicates that most recruits who left the service before completing the first 35 months of their initial enlistment period did so for a combination of two or more quite different types of reasons. One reason almost always cited as part of any combination of reasons was a work/duty problem. This category often appeared to be a symptom of another factor (such as alcohol abuse or a negative attitude) rather than the primary reason given for the discharge. The next three most commonly cited factors leading to early separations were: training problems, minor offenses, and mental health problems. Drug and/or alcohol abuse were cited in about 26 percent of the cases in our sample.

Recruits with serious criminal offenses were relatively more likely to have drug and/or alcohol problems as well, but relatively less likely to have mental health problems. Recruits who left because of reasons associated with homosexuality were relatively less likely than others in our sample to have work/duty or training problems.

The prevalence of a particular category of separation reason was usually *unrelated* to a wide variety of factors, including: the recruit's service, gender, or race; the fiscal year in which the recruit entered the service (1979 or 1985); entry into a military occupational specialty (MOS) with a relatively high attrition rate; and when during the first 35-month enlistment period the attrition took place. For example, although high school graduates were less likely than nongraduates to separate early, little difference was found between the two groups in the prevalence of particular reasons that might distinguish the early discharges that occurred in each group.

Three relationships between separation reasons and other factors were established: (1) certain types of mental health problems were more likely to surface early rather than later

[1]To be consistent with previous RAND research on first-term attrition, we define a high-quality recruit as one who has graduated from high school and scored over the 50th percentile on the Armed Forces Qualification Test (AFQT). Low quality is everyone else.

during a recruit's first term of enlistment; (2) women were more likely than men to have such problems; and (3) men were more likely than women to separate because of use of alcohol, drugs, and both minor and major offenses. Also, the longer a recruit stayed in the service, the more likely a recruit separated for one or more of these four reasons.

CONCLUSIONS

Our research offers a different perspective on why recruits leave the service than would be obtained from an analysis of their ISCs. The difference stems from the focus of the ISC, which is on the single most relevant (or defensible) *justification* for the separation, whereas our focus was on *the actual behavior* that led to the decision to discharge. A comparison of the two approaches reveals that ISCs do not capture the multiplicity of reasons that usually lay behind a given recruit's separation. In addition, ISCs were not consistently assigned to cases involving the same underlying problem(s) documented in the personnel folders. These two findings lead us to conclude that ISCs are neither valid nor reliable indicators of the reasons underlying adverse separations.

The primary goal of our research was to determine whether some of these reasons were more prevalent than others, a determination that will provide a more informed basis for planning counter-attrition programs. To that end, the project was successful. The reasons for a recruit's early separation were reasonably well documented in personnel folders and could be coded for analysis with a high degree of accuracy. Some reasons were much more common than others, and the differences in prevalence were quite stable across accession cohorts.

We also found that over 80 percent of the recruits had multiple reasons for their early release. Differences in individual recruit characteristics among those who separated for one reason and those who separated for another reason were slight. Taken together, the findings indicate that readily available background characteristics do not forecast the reason(s) for which an individual recruit may be discharged early. One reason for early release may merit further study. Over a quarter of the individuals in our sample were reportedly unable to adjust to the military environment due to social or emotional immaturity. This problem was especially prevalent early in the enlistment term. This finding suggests that increased attention might be given to counseling or screening out individuals who lack the maturity to cope with the demands and discipline of military life.

Finally, the findings in this report were based on documents prepared by the services. We do not know how well the reasons reflected in these documents correspond to the recruits' perceptions of why they were discharged. For instance, did recruits purposely behave in ways that would inevitably lead to discharge? This possibility might help to explain why recruit background characteristics are unrelated to the separation reasons given in personnel folders. Thus, an additional layer of reasons must be explored before we can feel confident that the most common sources for early releases have been identified. This could be done through interviews of recruits at the time of their discharge or shortly thereafter.

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David Petree (NPRC Director), Paul Gray (Director of Military Records), his assistant Barbara Davis, and the Research Office staff provided the Official Personnel Folders for our study and the work space our staff needed to complete the records review at NPRC headquarters.

We also are grateful to DMDC staff members Sandra Paulson who arranged for RAND's site visits to selected military training bases and to Robert Hamilton who assembled FY79–FY85 accession cohort data files for our attrition analyses.

The data collection described in this report was carried out by a RAND survey team. Nora Fitzgerald was the field data collection manager. She recruited, trained, and supervised the St. Louis field staff and completed the intercode reliability analyses. Sandy Murray served as the on-site field coordinator and lead validator. The data abstractors were Carol-Anne Hartmann, Cindy Kamerer, Catherine Wendt, and Vivian Paulsen. They all deserve our special thanks for their perseverance and outstanding efforts in dealing with a complex coding operation.

Finally, our thanks also go to our RAND colleagues Lisa Hudson, Sheila Kirby, Judy Lewis, and Mitchell Wade for their many helpful comments on earlier drafts of this report and to Linda Weiss for her assistance in converting the manuscript to finished copy.

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I. INTRODUCTION

Approximately one recruit in four leaves military service before completing the first term of enlistment. The recruits who enlisted in fiscal year 1985 were fairly typical; 27 percent of them separated before completing 35 months of service. Of these losses, roughly 70 percent were classified as "adverse." This category includes inadequate performance during training, behavioral or attitudinal problems, homosexuality, pregnancy, minor or major criminal offenses, and substance abuse. The remaining 20 percent left because of medical problems (such as injuries incurred during training), family hardship, and miscellaneous other reasons.

Some attrition is inevitable and even desirable. For instance, a certain percentage of recruits will undoubtedly get into trouble with the law and it may be in the services' interests to discharge them. Nevertheless, some attrition may be prevented by heading off problems before they become serious enough to require an early separation.

The motivation for such intervention is that adverse attrition is expensive. A conservative analysis (Klein and Martin, forthcoming) of the cost of first-term attrition arrived at a lower bound estimate that was in excess of $200 million per year (in 1989 dollars). This cost represents the human capital investment that was made in recruits who separated early but was not amortized as a result of work performed after training. In addition, the separation process itself requires extra personnel time to justify and handle adverse discharges.

One might assume that the move to a smaller overall force would reduce adverse attrition. With lower recruiting targets, the argument goes, recruiting standards could be higher, screening out many of those who would otherwise be discharged. Unfortunately, this is not the case. Barring all recruits who have not graduated from high school, who have low Armed Forces Qualification Test (AFQT) scores (Categories IIIb and IV), or who can enlist only under a morals waiver would have little effect on attrition rates for most services (Klein and Martin, forthcoming). Although nonhigh school graduates are much more prone to separate early than are graduates, so few nongraduates are allowed to enlist that eliminating this category would screen out few recruits. And the relationship of adverse attrition to test scores and morals waivers is not particularly strong. Eliminating all three categories would reduce early, adverse attrition by perhaps three percentage points.

REDUCING EARLY, ADVERSE ATTRITION

Efforts to reduce this large, expensive, and persistent attrition problem have focused on two general strategies. One strategy emphasizes policies and programs to help retain recruits who would otherwise leave early. To prevent early separations, recruits are provided training, counseling, and other services that will enable them to remain as productive members of the service. The second strategy seeks to identify preservice characteristics (such as high school graduation status) that distinguish between recruits who do and do not separate early. By using this information to help decide who should and should not be encouraged or allowed to enlist, it might be possible to reduce attrition by screening out attrition-prone individuals before they join the service. Neither approach has been fully satisfactory, partly because we do not yet understand the underlying reasons that cause early, adverse attrition or which recruits are most likely to experience those problems.

The first approach is exemplified by the Army's prebasic training physical fitness program. This well-regarded counter-attrition program is designed for recruits who have an especially high risk of failing basic training because of such problems as being overweight. To succeed, it and other counter-attrition programs must target one or more of the common reasons that recruits leave early, and must address that reason specifically, reversing or forestalling the process that leads to separation. To be both effective and efficient, such programs may also need to target a specific group of recruits most likely to experience that particular problem. For example, a target group might be defined by length of service. Typical reasons for a separation at one stage of a recruit's first term (such as basic training, skill training, or initial duty assignment) may be quite different from those that are instrumental at other stages. Programs that are most effective in reducing attrition at one stage may differ substantially from those that are required at other stages. Similarly, the primary reasons for attrition may vary as a function of the recruit's choice of service, educational level, military occupational specialty (MOS), or some combination of these and other characteristics.

The second approach to reducing attrition has sought to improve the process of deciding who should and should not be encouraged and allowed to enlist. For example, several studies have shown that attrition is lower among recruits who graduate from high school (Blandin and Morris, 1982; Buddin, 1981 and 1984; and Means and Heisey, 1986). There is also evidence that recruits who do well on the AFQT are more likely to complete their first term than are other recruits (e.g., Antel, Hosek, and Peterson, 1987). However, even when used together, such factors are not particularly good predictors of who will leave early. For instance, a recent study by Klein and Martin (1991) found that the combination of educational level, AFQT score, age, race, and marital status produced an accuracy rate that was only 10 percentage points better than the rate that would have been obtained without the use of these variables (i.e., by chance).

Like in-service attrition programs, the utility of screening policies might benefit from a deeper understanding of the reasons behind attrition. Prediction studies have treated attrition as a simple dichotomous variable: the recruit does or does not separate early. No attention is given to why the recruit left. Yet the underlying reasons may be important because the factors that predict which recruits leave early for one reason may be different from the factors that predict who leaves for another reason. For example, high school graduation status (HSGS) may correlate with whether a recruit leaves because of trouble with the law, but it may not predict separations that stem from emotional or mental health problems.

Moreover, a given factor (such as marital status) might be positively correlated with a recruit leaving for one reason, but negatively correlated with leaving for some other reason. Similarly, the factors that predict separation during the first few months may be different or may work in the opposite direction from those that predict attrition in subsequent periods. Thus, lumping qualitatively different types of attrition into one category may mask the ability of certain recruit characteristics to predict a given type of reason.

GOALS OF THE STUDY

In summary, data on the reasons for attrition may be useful in determining what might be done to reduce it. Understanding why recruits separate early might allow policymakers and researchers to better design specific programs that would alleviate the problem, and to assess potential programs when they are proposed. Should recruit screening procedures be

changed? If so, how? Should even more emphasis be placed on in-service drug abuse prevention and treatment programs? Should additional effort be devoted to improving a recruit's academic skills? Answers to these and similar questions depend largely on the relative prevalence of the various reasons for attrition, the recruit characteristics most closely associated with each type of reason, and at what point during the first term various reasons are most likely to surface.

To help identify policies, practices, and programs that would reduce early, adverse attrition, this research attempts to answer the following questions:

- What are the most common reasons for early separations?
- Are early separations usually due to a single problem or to multiple problems? What are the most common combinations of problems?
- Has the pattern of reasons changed over time? Has it varied as a function of accession cohort?
- Do the major reasons for early separations vary during the first term within a cohort? For example, are they the same in basic and advanced training as they are during the first duty assignment?
- Do recruits who separate for one type of reason have the same background characteristics (such as gender and educational level) as those who separate for other types of reasons?
- Are the major reasons for early separations in the occupational specialties with relatively high attrition rates the same as those in specialties with relatively low rates?
- Is there a relationship between the reason a recruit separates early and whether or not that recruit wanted to leave early?
- Are the answers to these questions similar across services?

Section II describes the approach we used to determine the reasons recruits left the service before completing the first term of enlistment. Section III presents the findings of this research and Sec. IV offers conclusions.

II. STUDY APPROACH

Identifying the reasons behind adverse attrition is difficult because there is no database on the prevalence of these reasons. The recruit's computer file does contain an Interservice Separation Code (ISC), but only one code is assigned to each case and many codes span a large and diverse group of reasons. For example, the category of *fraudulent entry* includes failure to disclose preservice behaviors and activities such as suicide attempts, homosexual activities, criminal convictions, drug use, knee injuries, cheating behavior, prior military service, and a host of other disqualifying factors. A given reason (such as criminal activity) could be assigned any one of several different codes. Even more important, the ISC assigned essentially reflects only the one official *justification* for the separation. Typically, this is the separation code that the service believes would provide the most direct path to a successful discharge or that would offer the strongest legal case. It does not indicate the actual *reason* why the recruit separated early.

Thus, current computerized data do not provide a basis for identifying the specific reasons that account for most attrition—and which presumably should be the focus of counter-attrition programs and policies. Information about the actual reasons for a premature discharge does exist, but only in a recruit's hard-copy personnel folder. To analyze the reasons behind early, adverse attrition, we reviewed the hard-copy personnel records of a stratified random sample of recruits who did not complete the first 35 months of their enlistment. Our review of these records provided information about the actual reason(s) for each separation as reflected in those records—distinct from the official justification for the separation as documented by the ISC that was assigned to it. It also allowed us to assess what relationship, if any, existed between the reason(s) a recruit separated early and the ISC assigned to that separation.

To determine whether the information in a recruit's hard-copy personnel folder could be used to identify the reasons for an early separation, we first reviewed the folders of 87 recruits who were discharged before completing six months of service. Our review of these files at the National Personnel Records Center (NPRC) in St. Louis, Missouri, indicated that it would be feasible to locate the records of the early separations and to decipher from them the reason(s) for the discharge.

For the second phase of our research, a three-person RAND team reviewed at NPRC the folders of a sample of 340 recruits who were discharged before completing their first enlistment term. All of the recruits in this sample had one of the *adverse* ISCs listed in Table 1. Our review of the recruits' folders in this sample consisted of summarizing in narrative form the statements that were made by doctors, noncommissioned officers (NCOs), officers, and others about the reason(s) for the early separation. A content analysis of these statements provided the basis for constructing a case abstraction form for the main portion of our data collection activities. The use of this form eliminated the need to copy verbatim information from the recruits' folders.

The final phase of our data collection activities began by analyzing computer tapes that were provided to us by the Defense Manpower Data Center (DMDC). These tapes were used to select a stratified random sample of recruits from among those whose official justification for an early separation fell in one of the adverse categories listed in Table 1.

Table 1

PERCENTAGE OF RECRUITS WITH EACH INTERSERVICE DISCHARGE CODE IN THE ANALYSIS SAMPLE AND IN THE POPULATION OF THOSE SEPARATED FOR ADVERSE REASONS IN THE FY79 AND FY85 COHORTS

	Percent with Code		
Code	Analysis Sample (N=1134)	All Adverse Separations (N=112,758)	Description
60	8.6	5.7	Character or behavior disorder
61	4.6	5.6	Motivational problems (apathy)
63	.2	.3	Inaptitude
64	1.1	1.3	Alcoholism
65	3.9	6.9	Discreditable incidents (civilian or military)
66	.2	.1	Shirking
67	7.7	8.8	Drugs
68	.1	.1	Financial irresponsibility
71	.2	.7	Civil court conviction
73	1.5	2.0	Court martial
74	3.4	4.3	Fraudulent entry
75	.1	.1	AWOL, desertion
76	2.9	1.8	Homosexuality
77	.2	.1	Sexual perversion
78	5.7	9.4	Good of the service
80	2.1	2.3	Misconduct (reason unknown)
82	.7	1.1	Unsuitability (reason unknown)
83	2.5	1.8	Pattern of minor disciplinary infractions
84	1.1	1.8	Commission of a serious offense
85	1.1	1.2	Failure to meet retention qualifications
86	12.9	19.1	Expeditious discharge
87[a]	38.2	21.4	Trainee discharge
101	.8	.6	Desertion
102	.4	.6	Imprisonment

[a]Code #87 can be used only during the first six months of enlistment.

The prevalence of a given code in the analysis sample differed somewhat from its prevalence in the population of all adverse separations. This happened because: (1) the sample differed from the population in both the proportion of males and the proportion of those separating during each time period and (2) which ISC is assigned is related to gender and when during the first term a recruit separated. For example, code #87 can be used only during the first six months of a recruit's first term. Table 2 shows the total number of recruits in each cohort. Tables 3 to 6 show the number who separated for adverse reasons. Table 7 shows the percentages by service.

The stratification process selected equal numbers of males and females, FY79 and FY85 accessions, high and low quality recruits, and those whose separations occurred during the first two months after entry, the next 4 months, the next 14 months, and the last 16 months. Thus, the overall sampling design had 32 major cells (2 sex groups × 2 accession cohorts × 2 levels of quality × 4 time periods).

To be consistent with previous RAND research on first-term attrition, a "high-quality" recruit was defined as one who had graduated high school and who also scored over the 50th percentile on the AFQT. The four time periods were chosen to capture major phases of

Table 2

NUMBER OF RECRUITS IN FY79 AND FY85 COHORTS

Recruit Characteristic[a]	Army	Air Force	Navy	Marine Corps	Total
1979					
Male					
High	17,319	23,221	20,724	9,227	70,491
Low	91,004	27,507	31,189	26,807	176,507
Total	108,323	50,728	51,913	36,034	246,998
Female					
High	5,417	5,356	3,958	1,309	16,040
Low	11,335	6,962	4,439	791	23,527
Total	16,752	12,318	8,397	2,100	39,567
1985					
Male					
High	42,282	34,644	29,109	15,145	121,180
Low	52,051	17,793	26,563	15,842	112,249
Total	94,333	52,437	55,672	30,987	233,429
Female					
High	8,552	7,846	5,090	1,965	23,453
Low	5,821	2,856	4,048	154	12,879
Total	14,373	10,702	9,138	2,119	36,332
1979 total	125,075	63,046	60,310	38,134	286,565
1985 total	108,706	63,139	64,810	33,106	269,761
Total population	233,781	126,185	125,120	71,240	556,326

[a]The terms "high" and "low" refer to a recruit's level of education and achievement on the AFQT. "High" designates recruits who had *both* a high school diploma and an AFQT score above the 50th percentile. "Low" is everyone else.

activities during the first term (basic training, advanced training, first duty assignment, and the remainder of the first term).

There were 38 recruits in each cell. The number of recruits within a cell, by service, were: Army, 16; Air Force, 14; Navy, 4; and Marine Corps, 4. The Navy and Marine Corps samples were smaller than the others because their records were on microfiche and therefore much more difficult (and costly) to review. We oversampled Army recruits to explore whether recruits in a Military Occupational Specialty (MOS) with a relatively high attrition rate tended to have different reasons for early discharges than recruits in MOSs with relatively low attrition rates. MOS data were not available for the other three services.

The 1979 cohort was selected because its composition and adverse attrition rates were typical of those of other cohorts in the late 1970s and RAND had done other research with this cohort (Antel et al., 1987; Buddin, 1984). The 1985 cohort was chosen because it was the most recent one available when the research was initiated.

We provided NPRC with a list of the 1216 recruits that were selected by the process described above. Records for 1134 (93 percent) of these recruits were located and deemed sufficiently complete to permit analysis. The other 7 percent of the cases were not systematically related to the stratification variables. Most of the missing cases resulted from the

Table 3

NUMBER OF ARMY RECRUITS SEPARATED FOR ADVERSE REASONS IN THE FY79 AND FY85 COHORTS

Recruit Characteristic[a]	Month of Separation				
	1–2	3–6	7–20	21–35	Total
1979 Male					
High	311	331	996	686	2,324
Low	3,606	3,726	10,530	6,992	24,854
Total	3,917	4,057	11,526	7,678	27,178
1979 Female					
High	296	190	345	107	938
Low	774	416	693	255	2,138
Total	1,070	606	1,038	362	3,076
1985 Male					
High	719	854	2,694	2,319	6,586
Low	1,446	1,867	5,363	4,406	13,082
Total	2,165	2,721	8,057	6,725	19,668
1985 Female					
High	243	340	383	237	1,203
Low	146	263	274	177	860
Total	389	603	657	414	2,063
1979 total	4,987	4,663	12,564	8,040	30,254
1985 total	2,554	3,324	8,714	7,139	21,731
Total population	7,541	7,987	21,278	15,179	51,985

[a]The terms "high" and "low" refer to a recruit's level of education and achievement on the AFQT. "High" designates recruits who had *both* a high school diploma and an AFQT score above the 50th percentile. "Low" is everyone else.

recruit's folder having been loaned to another agency (perhaps to the FBI for an employment check or to a veterans' hospital).

The information in the folders for the 1134 recruits whose files were found were abstracted by a specially trained and supervised team of coders. Table 8 shows the number of recruits in the analysis sample by stratification variable. Appendix A describes the procedures used to abstract data on the reasons for separation from each recruit's personnel folder and how these procedures were developed and implemented. Appendix B contains the form that was used to code the information in a recruit's record. Appendix C contains the special coding and programming rules that were used. Appendix D describes the assignment of MOSs to risk groups, and Appendix E discusses the steps that were taken to ensure the confidentiality of the data gathered.

Table 4

NUMBER OF AIR FORCE RECRUITS SEPARATED FOR ADVERSE REASONS IN THE FY79 AND FY85 COHORTS

Recruit Characteristic[a]	Month of Separation				
	1–2	3–6	7–20	21–35	Total
1979 Male					
High	266	389	1,528	1,305	3,488
Low	681	1,032	3,107	2,129	6,949
Total	947	1,421	4,635	3,434	10,437
1979 Female					
High	96	90	214	119	519
Low	246	203	480	235	1,164
Total	342	293	694	354	1,683
1985 Male					
High	975	663	1,548	1,462	4,648
Low	872	508	980	940	3,300
Total	1,847	1,171	2,528	2,402	7,948
1985 Female					
High	345	171	254	209	979
Low	158	68	122	71	419
Total	503	239	376	280	1,398
1979 total	1,289	1,714	5,329	3,788	12,120
1985 total	2,350	1,410	2,904	2,682	9,346
Total population	3,639	3,124	8,223	6,470	21,466

[a]The terms "high" and "low" refer to a recruit's level of education and achievement on the AFQT. "High" designates recruits who had *both* a high school diploma and an AFQT score above the 50th percentile. "Low" is everyone else.

Table 5

NUMBER OF NAVY RECRUITS SEPARATED FOR ADVERSE REASONS IN THE FY79 AND FY85 COHORTS

Recruit Characteristic[a]	Month of Separation				
	1–2	3–6	7–20	21–35	Total
1979 Male					
High	705	222	823	1,003	2,753
Low	2,733	641	1,797	2,629	7,800
Total	3,438	863	2,620	3,632	10,553
1979 Female					
High	192	33	134	95	454
Low	367	45	186	145	743
Total	559	78	320	240	1,197
1985 Male					
High	802	314	1,624	1,417	4,157
Low	1,530	622	2,593	2,048	6,793
Total	2,332	936	4,217	3,465	10,950
1985 Female					
High	259	56	194	106	615
Low	337	92	166	120	715
Total	596	148	360	226	1,330
1979 total	3,997	941	2,940	3,872	11,750
1985 total	2,928	1,084	4,577	3,691	12,280
Total population	6,925	2,025	7,517	7,563	24,030

[a]The terms "high" and "low" refer to a recruit's level of education and achievement on the AFQT. "High" designates recruits who had *both* a high school diploma and an AFQT score above the 50th percentile. "Low" is everyone else.

Table 6

NUMBER OF MARINE CORPS RECRUITS SEPARATED FOR ADVERSE REASONS IN THE FY79 AND FY85 COHORTS

Recruit Characteristic[a]	Month of Separation				
	1–2	3–6	7–20	21–35	Total
1979 Male					
High	354	155	322	477	1,308
Low	1,850	804	1,712	2,374	6,740
Total	2,204	959	2,034	2,851	8,048
1979 Female					
High	145	12	42	38	237
Low	101	12	28	22	163
Total	246	24	70	60	400
1985 Male					
High	1,069	240	656	697	2,662
Low	1,502	354	894	990	3,740
Total	2,571	594	1,550	1,687	6,402
1985 Female					
High	218	35	73	74	400
Low	19	5	9	6	39
Total	237	40	82	80	439
1979 total	2,540	983	2,104	2,911	8,448
1985 total	2,808	634	1,632	1,767	6,841
Total population	5,348	1,617	3,736	4,678	15,289

[a]The terms "high" and "low" refer to a recruit's level of education and achievement on the AFQT. "High" designates recruits who had *both* a high school diploma and an AFQT score above the 50th percentile. "Low" is everyone else.

Table 7

PERCENTAGE OF RECRUITS SEPARATED FOR ADVERSE REASONS IN THE FY79 AND FY85 COHORTS BY SERVICE, GENDER, AND ACADEMIC STATUS

Recruit Characteristic[a]	Army	Air Force	Navy	Marine Corps	Total
1979					
Male					
High	13.4	15.0	13.3	14.2	14.0
Low	27.3	25.3	25.0	25.1	26.2
Total	25.1	20.6	20.3	22.3	22.8
Female					
High	17.3	9.7	11.5	18.1	13.4
Low	18.9	16.7	16.7	20.6	17.9
Total	18.4	13.7	14.3	19.0	16.1
1985					
Male					
High	15.6	13.4	14.3	17.6	14.9
Low	25.1	18.6	25.6	23.6	24.0
Total	20.8	15.2	19.7	20.7	19.3
Female					
High	14.1	12.5	12.1	20.4	13.6
Low	14.8	14.7	17.7	25.3	15.8
Total	14.4	13.1	14.6	20.7	14.4
1979 total	24.2	19.2	19.5	22.1	21.8
1985 total	20.0	14.8	18.9	20.7	18.6
Total	22.2	17.0	19.2	21.5	20.3

[a]The terms "high" and "low" refer to a recruit's level of education and achievement on the AFQT. "High" designates recruits who had *both* a high school diploma and an AFQT score above the 50th percentile. "Low" is everyone else.

Table 8

NUMBER OF RECRUITS IN ANALYSIS SAMPLE

Recruit Characteristic		Army	Air Force	Navy	Marine Corps	Total
Gender	Male	240	220	56	59	575
	Female	232	217	56	54	559
Accession cohort	1979	248	219	62	60	589
	1985	224	218	50	53	545
Recruit quality[a]	High	232	217	57	53	559
	Low	240	220	55	60	575
Months served before release	1–2	125	112	32	27	296
	3–6	109	109	29	29	276
	7–20	119	109	32	29	289
	21–35	119	107	19	28	273
MOS risk level	High	260	—	—	—	260
	Low	212	—	—	—	212
HS grad?	Yes	411	389	87	102	989
	No	61	48	25	11	145
Race	White	360	357	94	87	898
	Black	97	66	16	19	198
	Other	15	14	2	7	38
Age at time of accession	17–18	189	182	44	67	482
	19–20	155	149	36	32	372
	Over 20	128	106	32	14	280
Number selected		512	448	128	128	1216
Number coded		472	437	112	113	1134
Percent coded		92	98	88	88	93

[a]Quality refers to a recruit's level of education and achievement on the AFQT. "High" designates recruits who had *both* a high school diploma and an AFQT score above the 50th percentile. "Low" is everyone else.

Table 9 lists the major categories of reasons for separation that were used in the analysis. A recruit could have more than one reason coded, such as a work/duty or mental health problem. The work/duty category included problems that arose while the recruit was in basic or advanced training but were not directly related to training activities. Determination of a recruit's mental health problem(s) was based on the psychological report in the recruit's folder. Appendix F gives specific examples from the recruits' folders of the behaviors that fell within each of the 10 categories listed in Table 9.

Table 9

REASONS FOR EARLY SEPARATION

1.	Mental health. Phobias, suicide threats and attempts, emotional immaturity, and personality and adjustment disorders.
2.	Training (basic, advanced, or on-the-job). Failure to show progress, inability to attain or maintain proficiency, lack of aptitude, refusal to follow instructions, chronic lateness or absence from training, and failure to do homework.
3.	Work/duty. Lack of motivation, disobeys orders, doesn't get along with others, disrespectful to superiors, chronically late or absent from nontraining activities, and disruptive influence.
4.	Alcohol. Failure at or refusal to participate in rehabilitation; intoxicated while on base; and DUI (driving under the influence) arrests.
5.	Drugs. Failure at or refusal to participate in rehabilitation, positive drug test results, and possession of drugs and drug use prior to enlistment.
6.	Major offenses. Conviction for serious military and civilian offenses, including any that resulted in an incarceration and/or court martial.
7.	Minor offenses. Includes AWOL (absent without leave), non-DUI traffic violations, and failure to disclose prior military service.
8.	Homosexuality. Including failure to disclose prior to entry.
9.	Pregnancy. At time of enlistment or later.
10.	Physical. Failure to meet physical fitness requirements.

III. RESULTS

This section discusses the correspondence between the Interservice Separation Code (ISC) assigned to a recruit as the justification for separation and the reason(s) for that discharge as reflected by the information in the recruit's hard-copy personnel folder. It then describes the prevalence with which the reasons listed in Table 9 occurred, the tendency for certain of these reasons to occur together, and the relationship between a recruit's background characteristics and the reason(s) for that recruit's early separation.

RELATIONSHIP OF SEPARATION CODES TO SEPARATION REASONS

The relationship between the actual reason(s) for a recruit's separation and the ISC assigned to that recruit was analyzed to see if ISCs could serve as useful proxies for the actual reasons underlying adverse separations. The two questions addressed were: (1) what proportion of cases having a specific ISC show evidence of a matching problem category and (2) what proportion of cases having a specific problem category show a matching ISC?

Drug-related separations illustrate the typical results of our investigation. Of the 87 cases in our sample that had an ISC for drug abuse (code #67), 91 percent had documentation in their folders that indicated a drug problem. More importantly, of the 207 cases in our sample with a documented drug problem, only 38 percent had an ISC of #67. In short, recruits with a given ISC usually had that problem documented in their folders, but there were many other recruits with that same documentation who were not assigned the code.

Table 1 shows that 38 percent of the recruits in our sample had an ISC of #87 (trainee discharge). The recruits with this code had a wide range of reasons for their early separations: 58 percent had a mental health problem, 88 percent had a training and/or work duty problem, and 28 percent had an alcohol, drug, or major offense problem. The same broad array of reasons was given for those with other prevalent ISCs, such as #86 (expeditious discharge).

Table 10 shows the relationship between ISCs assigned to the recruits in our sample by the Department of Defense and the reason(s) for their discharge as documented in their personnel folders. The unit of analysis for this table is a combination of ISC and reason. Note that each recruit has only one ISC but up to as many as 10 different reasons. These data again illustrate the relatively poor correspondence between ISCs and reasons.

The data indicate the ISCs do not provide reliable information regarding the reason(s) for a recruit's early separation and thus cannot be used as even coarse proxies for those reasons. They indicate only the best or most defensible justification for the separation. If the services want data on the major reasons recruits leave, they will have to look inside the personnel folders of those who were discharged early. The remainder of this section discusses what we found when we conducted such an investigation.

Prevalence

Figure 1 shows the prevalence in our analysis sample of each of the 10 main categories of reasons that are listed in Table 9. The data indicate that the four most prevalent reasons in our sample (from most to least prevalent) are: work duty, training, minor offenses, and mental health problems.

Table 10

NUMBER OF RECRUITS WITH EACH COMBINATION OF PROBLEM TYPE AND ISC

ISC	Description of ISC	Mental Health	Training	Work/ Duty	Alcohol	Drugs	Major Offenses	Minor Offenses	Homo-sexuality	Preg-nancy	Physical	Total
60	Character of behavior disorder	96	36	61	11	11	7	35	2	5	10	274
61	Motivational problems (apathy)	14	29	47	6	10	25	31	2	3	7	174
63	Inaptitude	1	2	2	0	1	1	0	0	0	1	8
64	Alcoholism	1	4	10	11	0	3	9	0	0	0	38
65	Discreditable incidents	8	22	36	18	12	32	32	1	0	2	163
66	Shirking	1	1	1	0	0	0	1	0	0	1	5
67	Drugs	5	19	56	23	79	21	67	0	3	9	282
68	Financial irresponsibility	0	1	1	1	0	1	0	0	0	0	4
71	Civil court conviction	0	1	1	0	1	0	1	1	0	0	5
73	Court martial	1	2	8	4	10	16	8	0	1	1	51
74	Fraudulent entry	3	8	12	1	14	4	25	6	0	4	77
75	AWOL, desertion	0	0	1	0	0	1	1	0	0	0	3
76	Homosexuality	2	2	8	2	5	2	11	33	0	1	66
77	Sexual perversion	0	0	0	0	0	0	1	2	0	0	3
78	Good of the service	6	6	27	4	7	15	58	0	1	1	125
80	Misconduct (reason unknown)	3	10	21	11	3	21	10	1	0	5	85
82	Unsuitability (reason unknown)	1	1	5	0	2	4	6	0	1	2	22
83	Minor disciplinary infractions	5	11	27	5	2	16	16	0	0	2	84
84	Basic training attrition	4	2	8	4	3	8	7	0	1	0	37
85	Not meet retention qualifications	3	6	12	2	1	5	7	0	3	3	42
86	Expeditious discharge	56	91	127	16	17	46	74	2	4	17	450
87	Trainee discharge	236	328	350	19	26	18	95	6	8	73	1,159
101	Desertion	0	3	4	0	1	1	9	0	0	0	18
102	Imprisonment	0	0	1	0	2	4	1	0	0	0	8
	Total	446	585	826	138	207	251	505	56	30	139	3,183

NOTE: A recruit has only one ISC but can have more than one problem type.

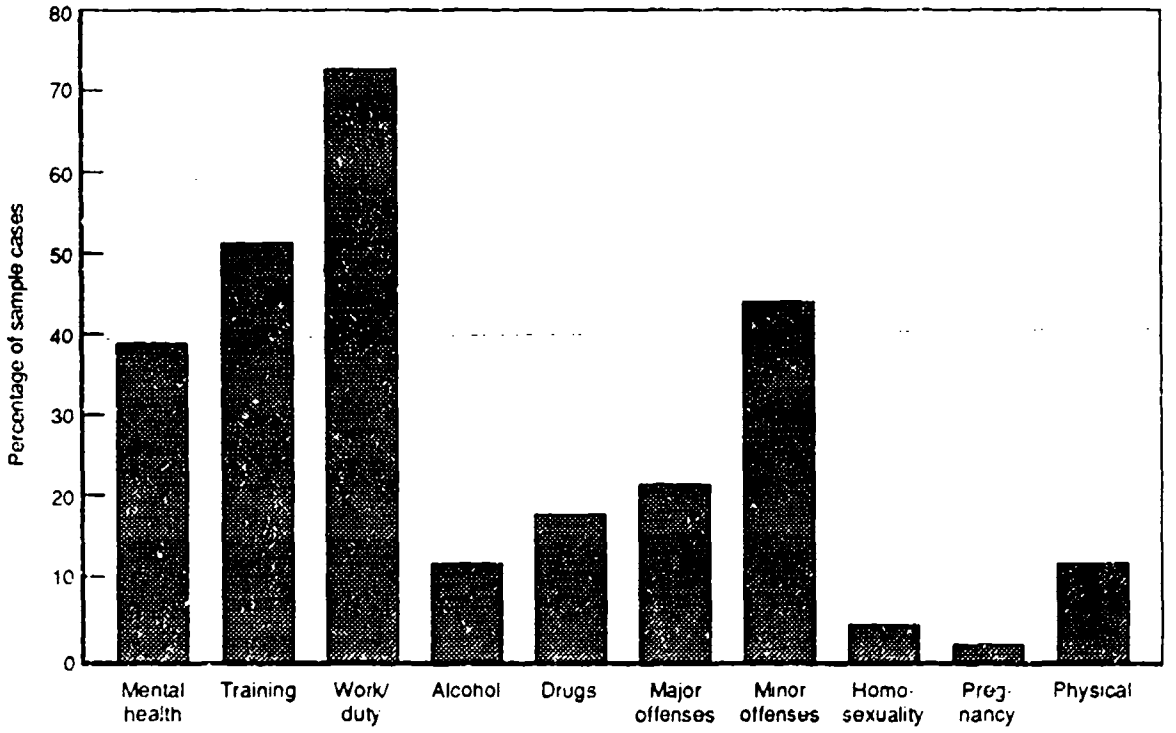

Fig. 1—Prevalence of problem categories (total sample)

As noted previously, the analysis sample was selected to increase precision in examining the relationships between separation reasons and recruit characteristics. It is not a representative sample of all recruits or even of those who separate early. For instance, about half of the analysis sample are women (see Table 8) even though women comprise only 10 percent of all of the recruits who separate early for adverse reasons (see Tables 3–6).

Figure 2 contrasts the prevalence of each reason in the analysis sample with the estimated prevalence in the population of FY79 recruits who were separated for adverse reasons. These estimates were derived by weighting the data in the analysis sample in proportion to the frequencies shown in Table 2. Figure 3 provides the corresponding information for the FY85 cohort.

Figures 2 and 3 show that the weighting had little impact on the prevalence of the reasons. Most of the small differences that did appear were because the analysis sample had far more women than were represented in the population of those who separated early and because (as will be discussed later in this section) the prevalence pattern among women was somewhat different than it was among men. Except as noted otherwise, the remaining tables and figures in this report present the results using the analysis sample.

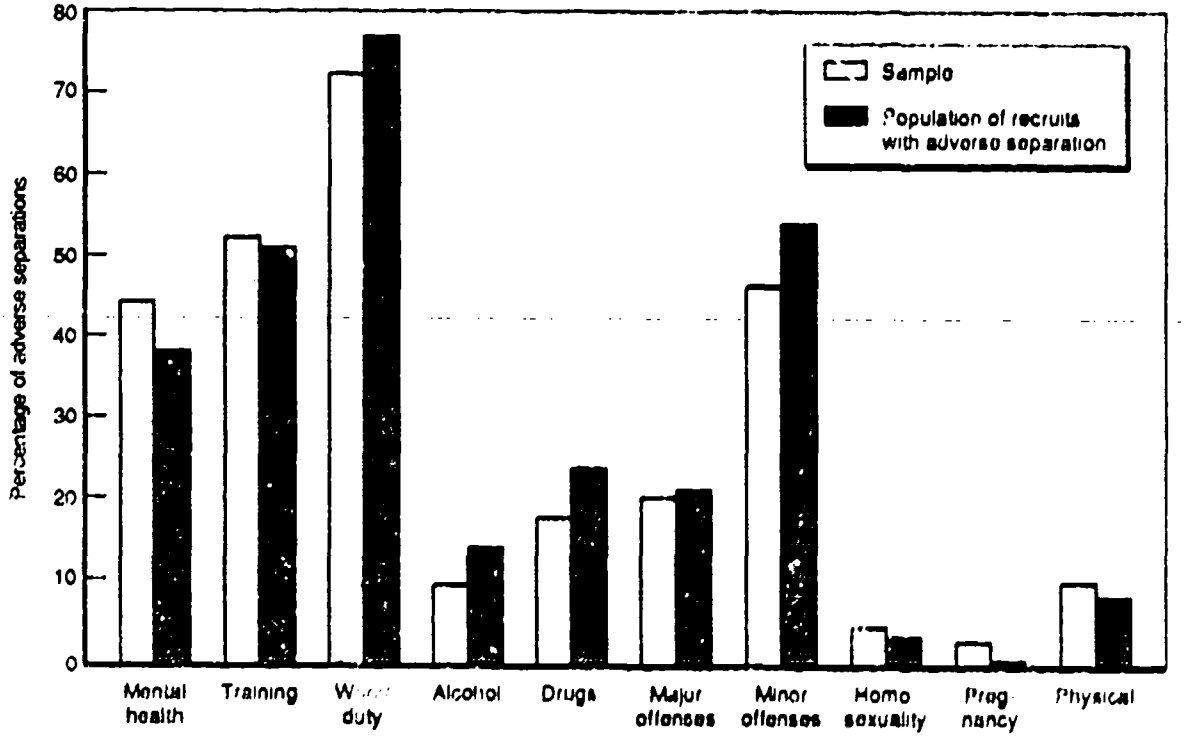

Fig. 2—NPRC sample vs. population of recruits with adverse separation: FY79 cohort

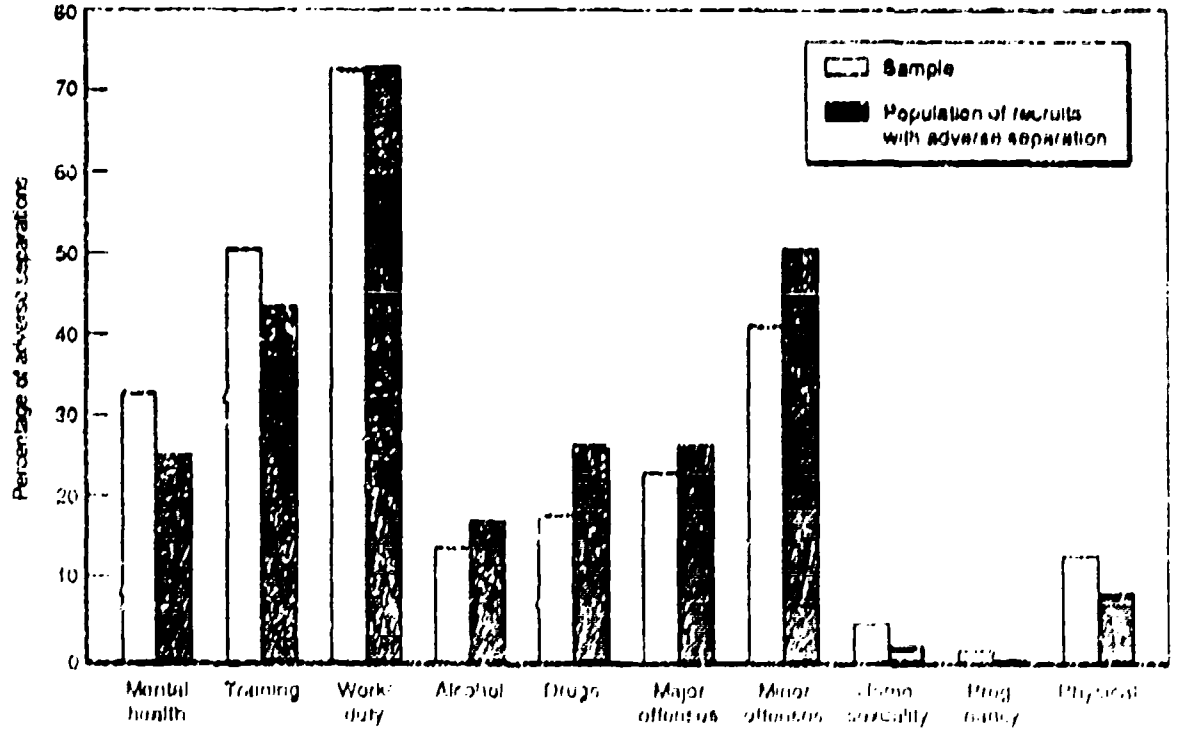

Fig. 3—NPRC sample vs. population of recruits with adverse separation: FY85 cohort

Combinations of Reasons

Table 11 shows that over half the recruits had more than two reasons for separating. The modal separation involved three reasons. Of the 1024 possible combinations of the 10 categories of reason listed in Table 9, 165 actually appeared. Table 12 lists the 13 combinations that account for over half of all separations in the sample. A total of 31 combinations accounted for 75 percent of all separations in the sample. The most prevalent combination was: mental health + training + work duty. But only 10 percent of our analysis sample had this combination.

There was usually no way of determining the dominant factor leading to the separation decision from those noted in a recruit's folder. We suspect, however, that work/duty problems were more likely to be consequences of other problems than the primary reason for an early discharge (e.g., failure to show up for work on time may be a symptom of an alcohol problem). Less than 1 percent of the separations were due to work/duty problems alone.

These findings are consistent with data that we gathered through personal interviews with military staff who are actively involved in the attrition decisionmaking process. The

Table 11

FREQUENCY DISTRIBUTION OF NUMBER OF PROBLEM CATEGORIES

Number of Categories	Number of Recruits	Percent of All Recruits	Cumulative Percentage
1	187	16.5	16.5
2	260	22.9	39.4
3	383	33.8	73.2
4	214	18.9	92.1
5	73	6.4	98.5
6	13	1.1	99.6
7	4	.4	100.0

Table 12

MOST PREVALENT COMBINATIONS OF REASONS

Percentage of Recruits with Pattern	Mental Health	Training	Work/ Duty	Drugs	Major Offenses	Minor Offenses	Physical
10	X	X	X				
7		X	X				
6		X	X			X	
5	X						
4						X	
4	X		X				
3			X			X	
3	X	X	X			X	
3	X	X	X				X
3			X	X		X	
2			X		X	X	
2		X	X		X		
2		X	X				X

staff we interviewed at a sample of basic and advanced training bases confirmed that work/duty problems alone were rarely sufficient legal grounds for obtaining approvals for early discharges. It is thus not surprising that work/duty problems were frequently accompanied by additional offenses that contributed to the early separation.

Factor Analyses

Table 13 shows the correlations among the 10 categories of problems in the total sample. These data show that having a given type of problem was sometimes negatively and sometimes positively correlated with having another type of problem. For instance, recruits who had Problem 1 (mental health) were unlikely to have Problem 6 (major offenses), whereas those who had Problem 6 were also likely to have Problem 4 (alcohol). Table 14 shows the corresponding correlations separately for males and females.

The data in Tables 13 and 14 were subjected to a series of factor analyses to determine whether there were one or more clusters of problems; i.e., did certain types of problems tend to occur together? These analyses (which used a Promax orthogonal rotation) were run separately for each cohort and sex as well as for the sample as a whole. The two factors that

Table 13

CORRELATIONS AMONG PROBLEM TYPES IN THE TOTAL SAMPLE

Problem Category	P1	P2	P3	P4	P5	P6	P7	P8	P9
P1 Mental health									
P2 Training	13								
P3 Work/duty	8	43							
P4 Alcohol	-10	-7	9						
P5 Drugs	-16	-19	-9	15					
P6 Major offenses	-19	-10	13	20	13				
P7 Minor offenses	-28	-16	6	17	23	-3			
P8 Homosexuality	-8	-18	-20	-4	-2	-8	-7		
P9 Pregnancy	-5	-1	-6	-4	-1	-2	0	-4	
P10 Physical	1	12	4	-5	-6	-6	-11	0	-1

NOTE: Decimal points were eliminated to facilitate reading the table.

Table 14

CORRELATIONS AMONG PROBLEM TYPES FOR MALES AND FEMALES

Problem Category	P1	P2	P3	P4	P5	P6	P7	P8	P9	P10
P1 Mental health		17	5	-15	-17	-16	-29	5	NA	6
P2 Training	10		44	-11	-24	-14	-22	-10	NA	14
P3 Work/duty	12	43		7	-11	10	1	-11	NA	10
P4 Alcohol	1	-1	12		14	22	17	-4	NA	-4
P5 Drugs	-11	-12	-10	13		10	24	-4	NA	-5
P6 Major offenses	-18	-6	15	11	11		-9	-8	NA	-9
P7 Minor offenses	-26	-10	11	15	22	2		-11	NA	-14
P8 Homosexuality	-19	-24	-25	-1	2	-6	-4		NA	6
P9 Pregnancy	-11	-1	-7	-4	3	1	1	-7		NA
P10 Physical	-6	10	1	-3	-4	-1	-8	-5	-4	

NOTE: The data for males and females appear above and below the main diagonal, respectively. Problem #9 (pregnancy) was not applicable to males. Decimal points were eliminated to facilitate reading the table.

emerged from these analyses are shown in Fig. 4. The first (vertical) factor in this figure indicates that recruits with criminal offenses as a source of their separations were somewhat more likely than other recruits in our sample to also have drug and alcohol problems. In contrast, recruits with this constellation of problems were unlikely to have mental health problems listed among their reasons for the separation.

The second factor was defined largely by recruits who had work/duty and training problems. Also, recruits who separated for reasons associated with homosexuality were unlikely to have work/duty or training problems.

RELATIONSHIP OF REASONS TO BACKGROUND CHARACTERISTICS

Figures 5 through 9 show the relationship between the 10 categories of separation reasons listed in Table 9 and each of the five major stratification variables (i.e., gender, cohort, quality, time period, and service). Figure 10 compares Army recruits in MOSs with relatively high attrition rates; Fig. 11 compares high school graduates with nongraduates; Fig. 12 presents the results by racial group; and Fig. 13 by age group.

The foregoing figures and Table 15 show that all the background characteristics except MOS risk group had statistically significant relationships with one or more problem types. The largest differences were as follows:

- Women are more likely than men to have mental health problems involved in the separation decision, whereas men are more likely than women to have problems related to alcohol, drugs, and major and minor offenses.
- Compared with other services, the Navy was more likely to have separations involving drug problems but less likely to have early discharges related to training, work/duty, and physical fitness problems.
- Minor offenses related to a separation (such as AWOL) were relatively rare among the Air Force separations.
- Training problems decreased as a reason for attrition during the recruit's first term (which is expected as the recruit moves from training programs to work/duty assignments).
- Mental health problems decreased during the first term.
- The longer the recruit stayed in the service, the more likely alcohol, drugs, and major and minor offenses became reasons for the separation. These reasons plus work/duty problems were more likely to be listed among reasons for an early discharge of a non-high school graduate than of a graduate.

Mental health problems as a reason for adverse attrition tend to surface early during the first term. It is likely these problems were present (but undetected) when the recruit entered the service. The stress of military life, and especially the demands of training and group living, may have simply brought these problems to the surface.

The time-relatedness of separation decisions involving alcohol, drugs, and major offenses may stem from delays associated with the adjudication process and also from a policy of giving a recruit a second or third chance before starting the separation process, especially if the recruit really wants to stay in the service (and the offenses were relatively minor). Thus, some separations may be based on an accumulation of infractions rather than a single offense. Also, because there are substantially fewer opportunities to have access to

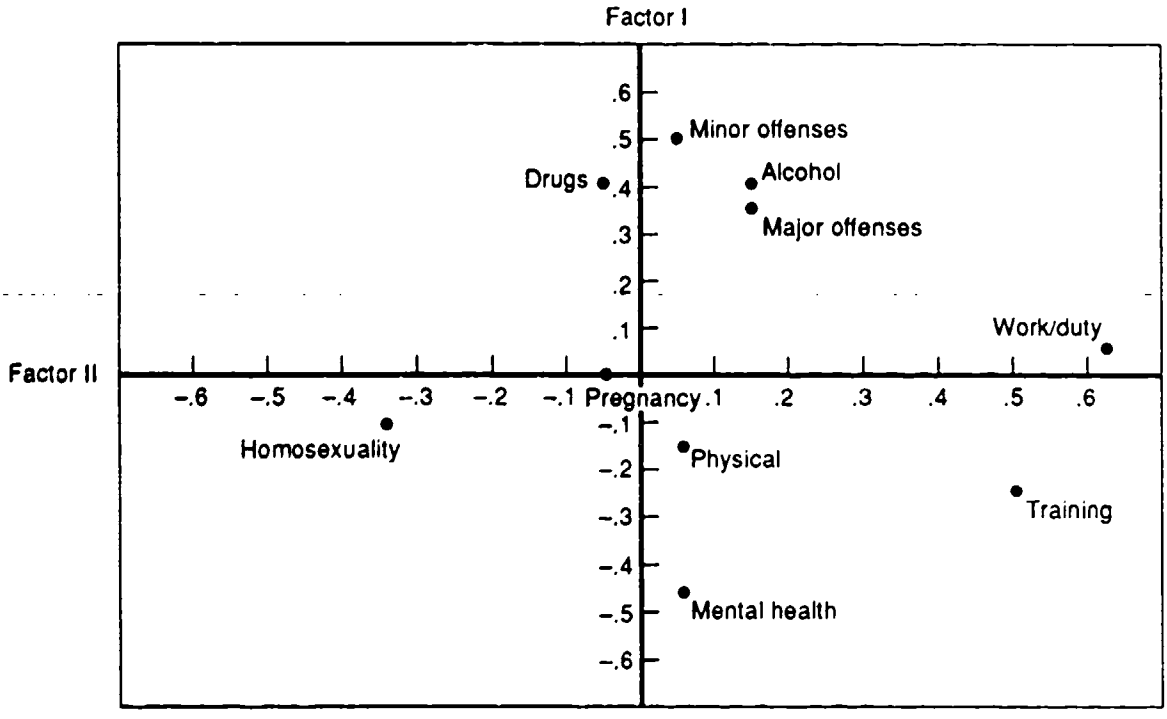

Fig. 4—Relationships among problem types as reflected by an orthogonal factor analysis

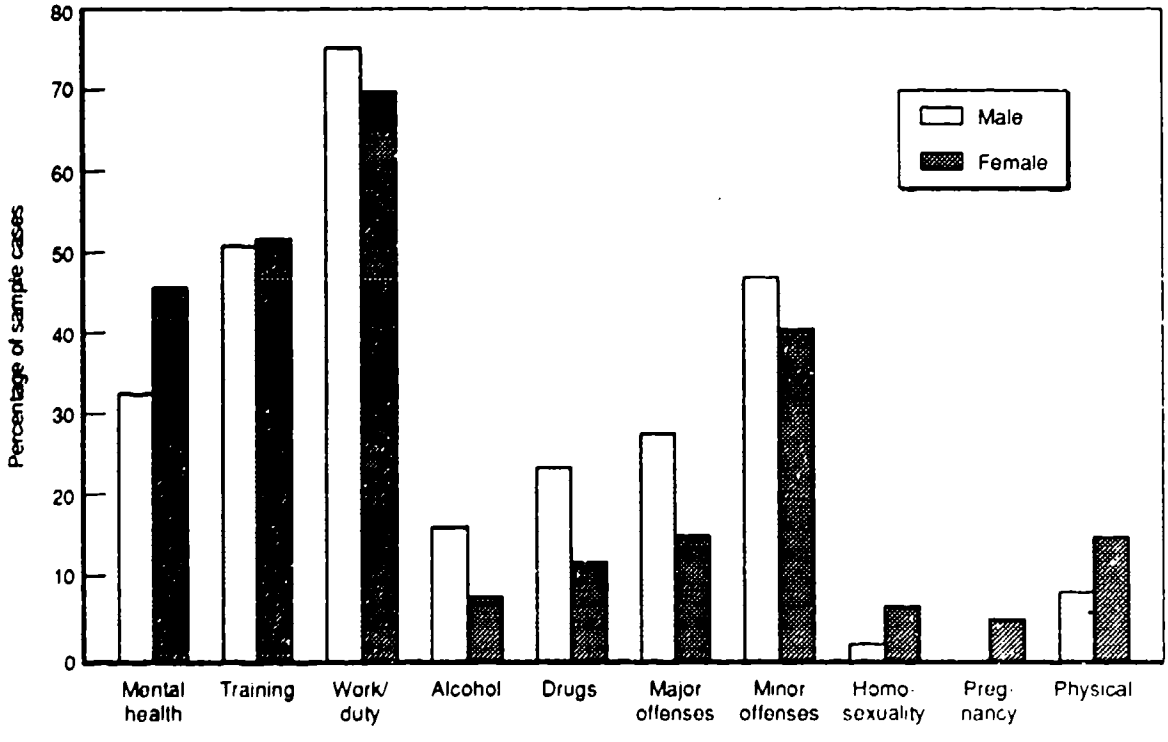

Fig. 5—Problem categories by gender

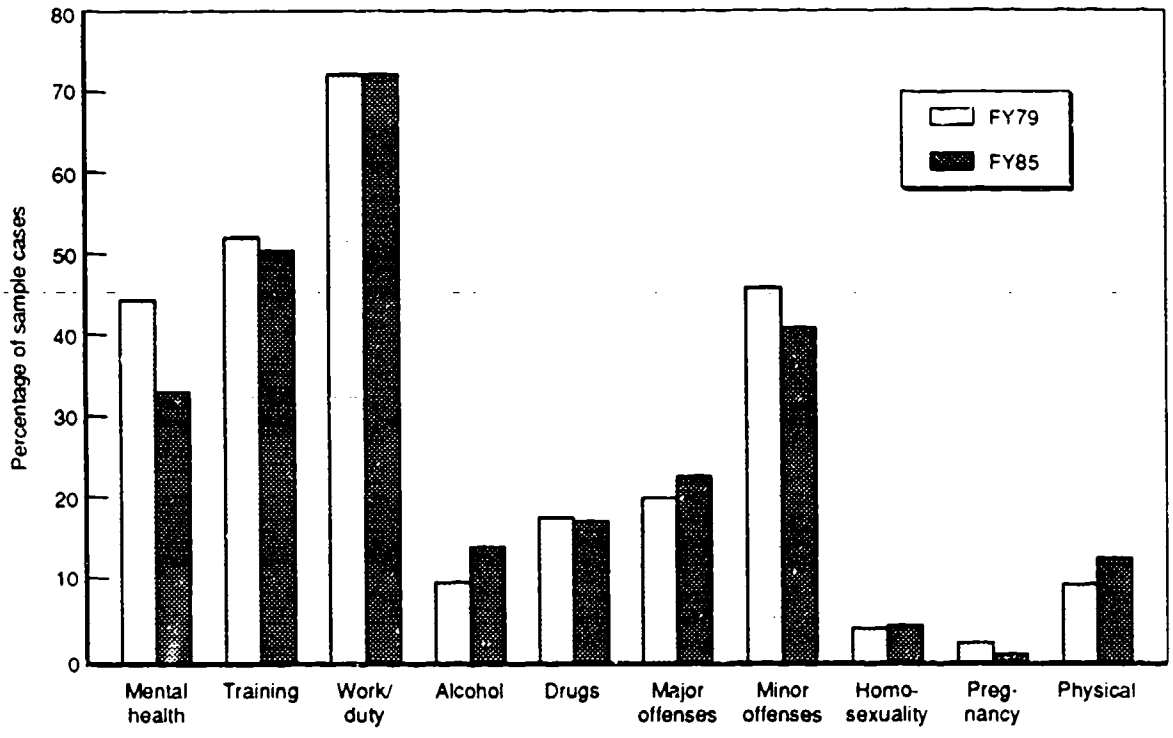

Fig. 6—Problem categories by cohort

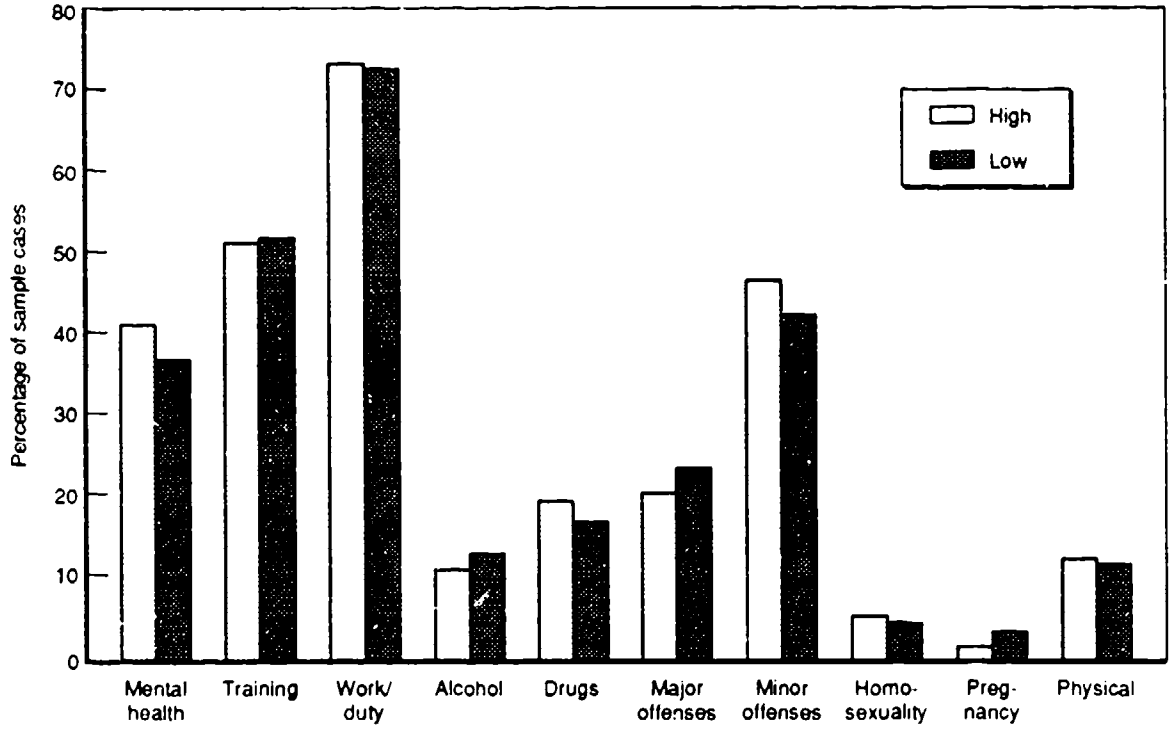

Fig. 7—Problem categories by recruit quality

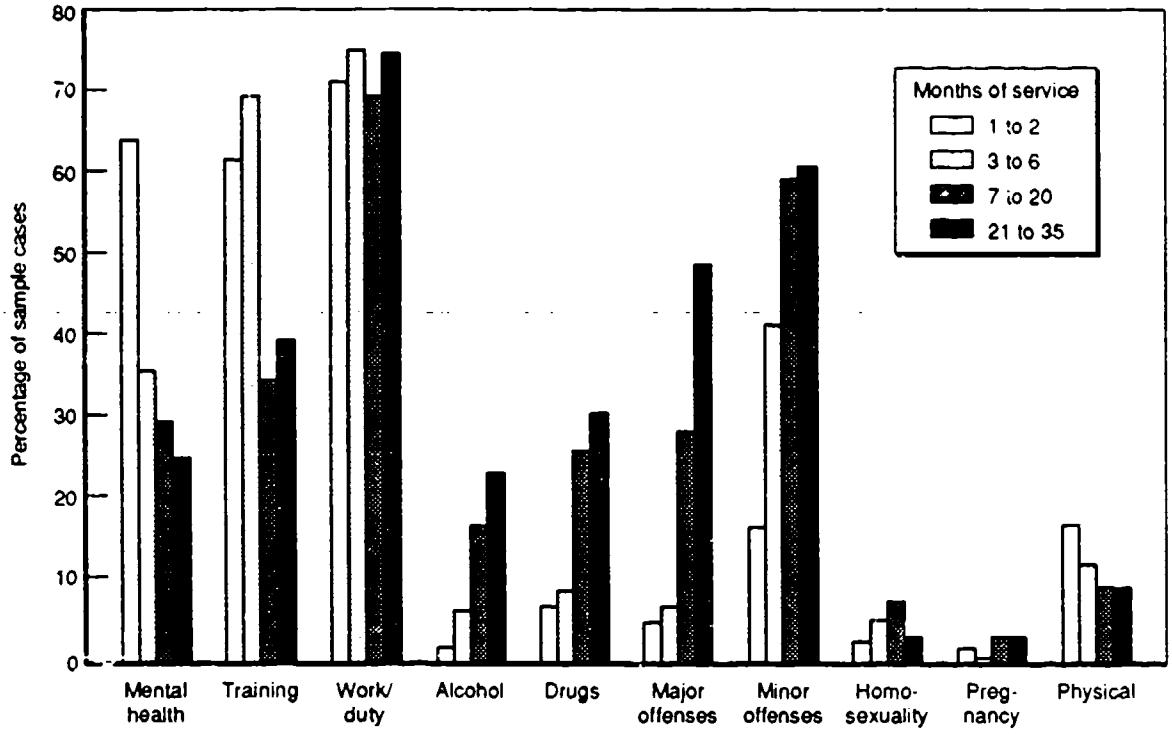

Fig. 8—Problem categories by time of attrition

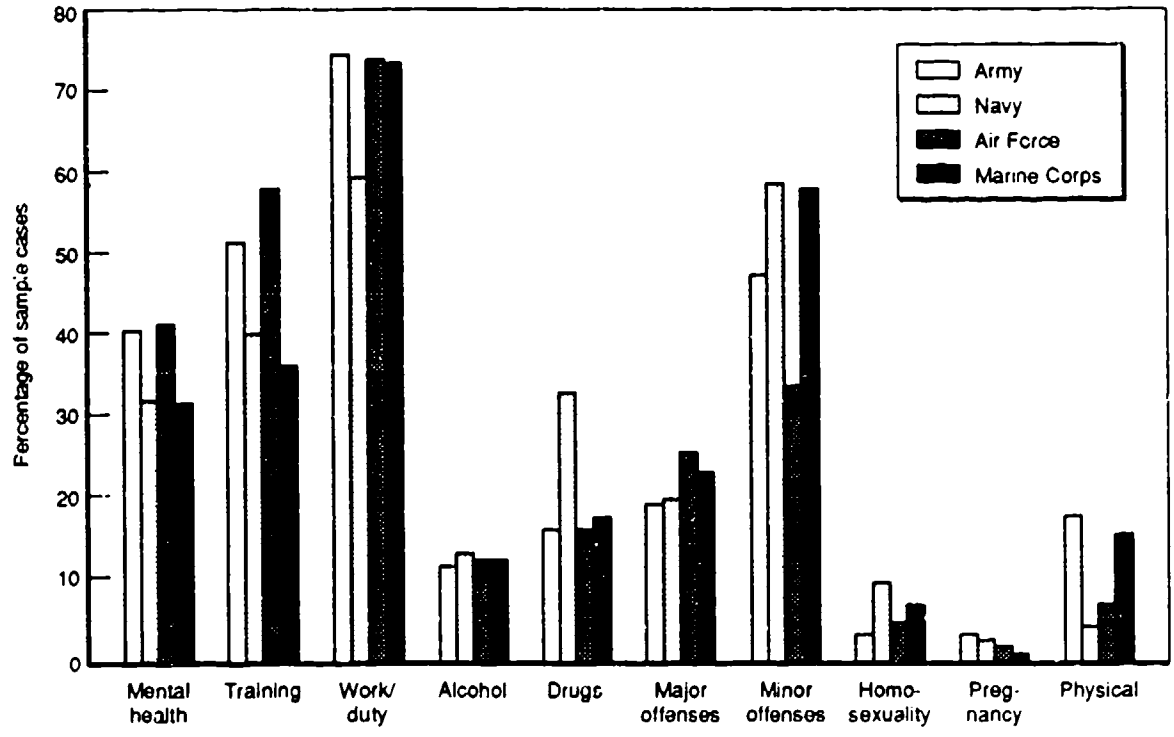

Fig. 9—Problem categories by service

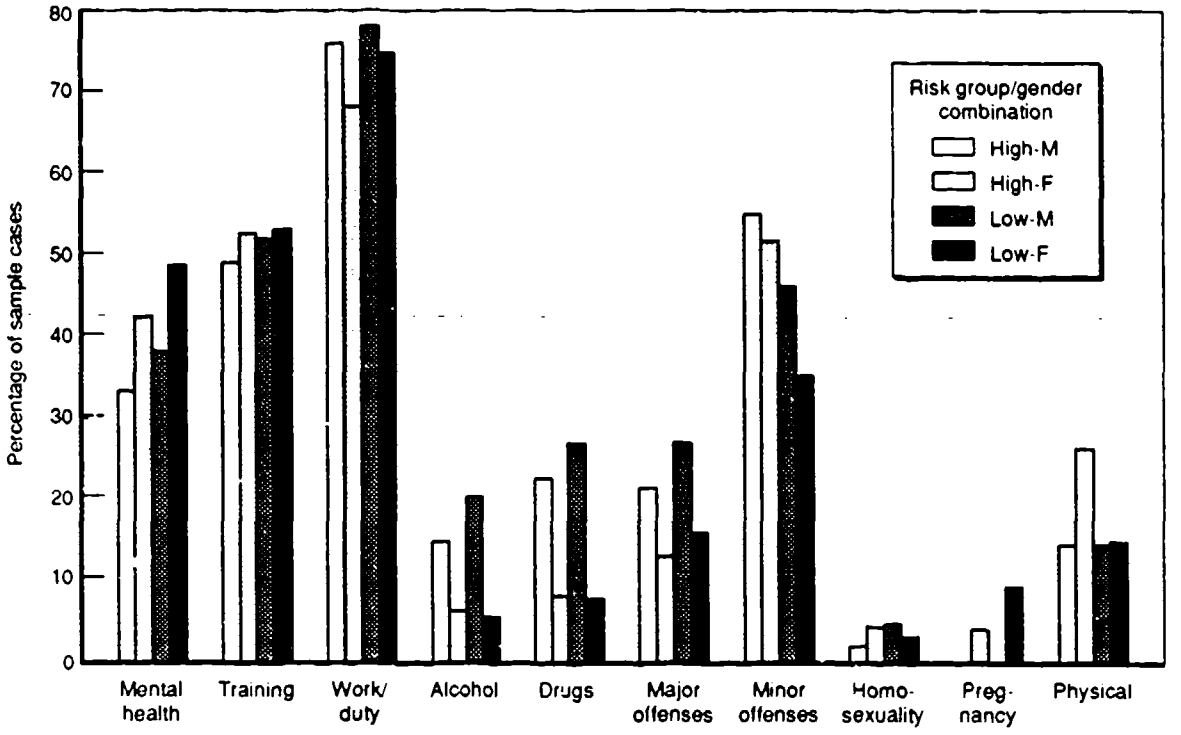

Fig. 10—Problem categories by Army MOS risk group and gender

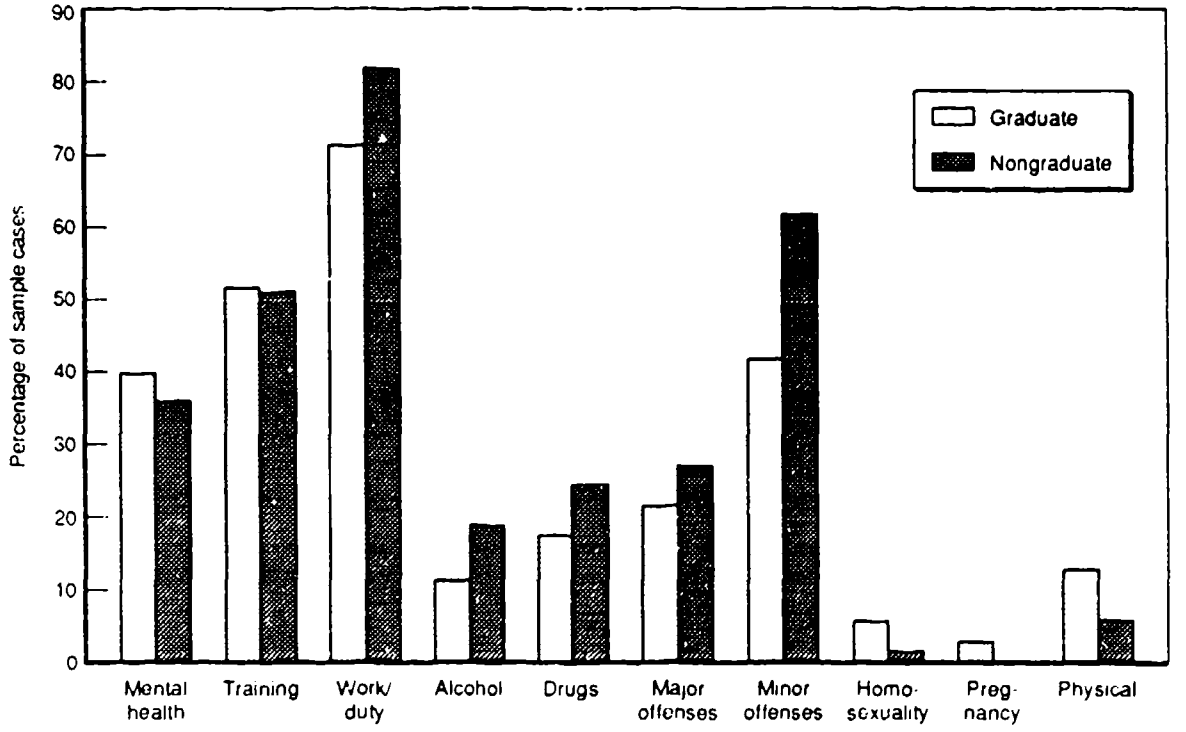

Fig. 11—Problem categories by high school graduation status

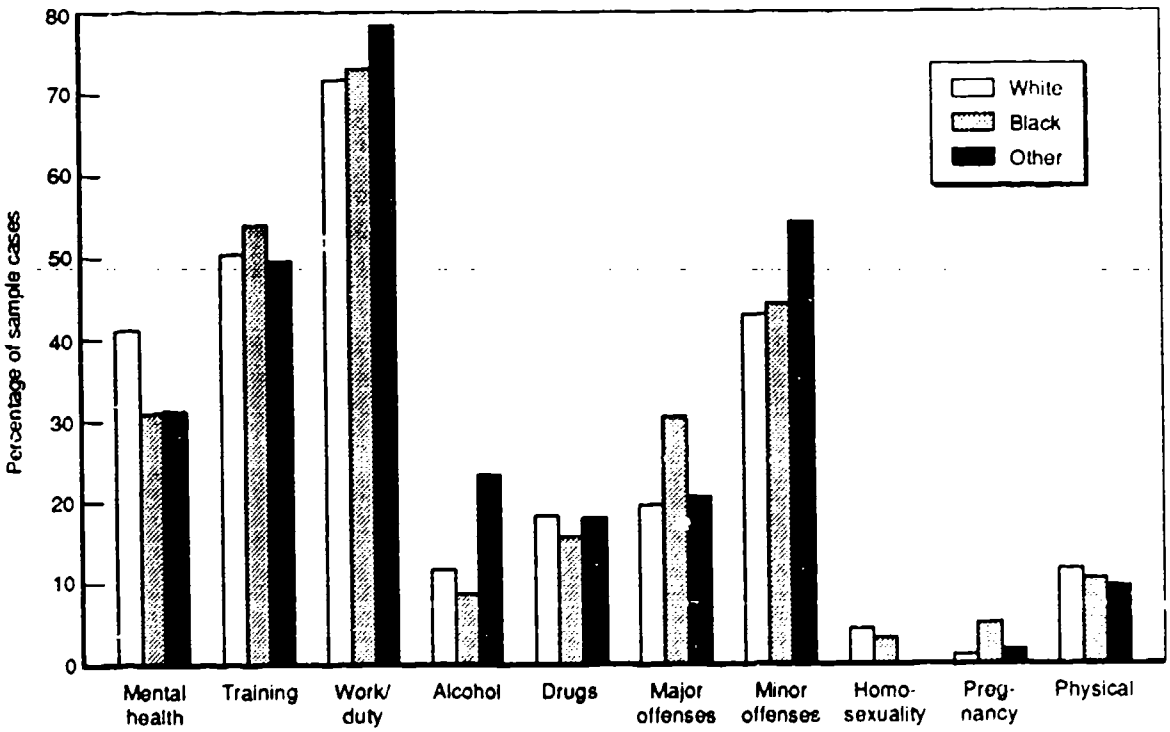

Fig. 12—Problem categories by race

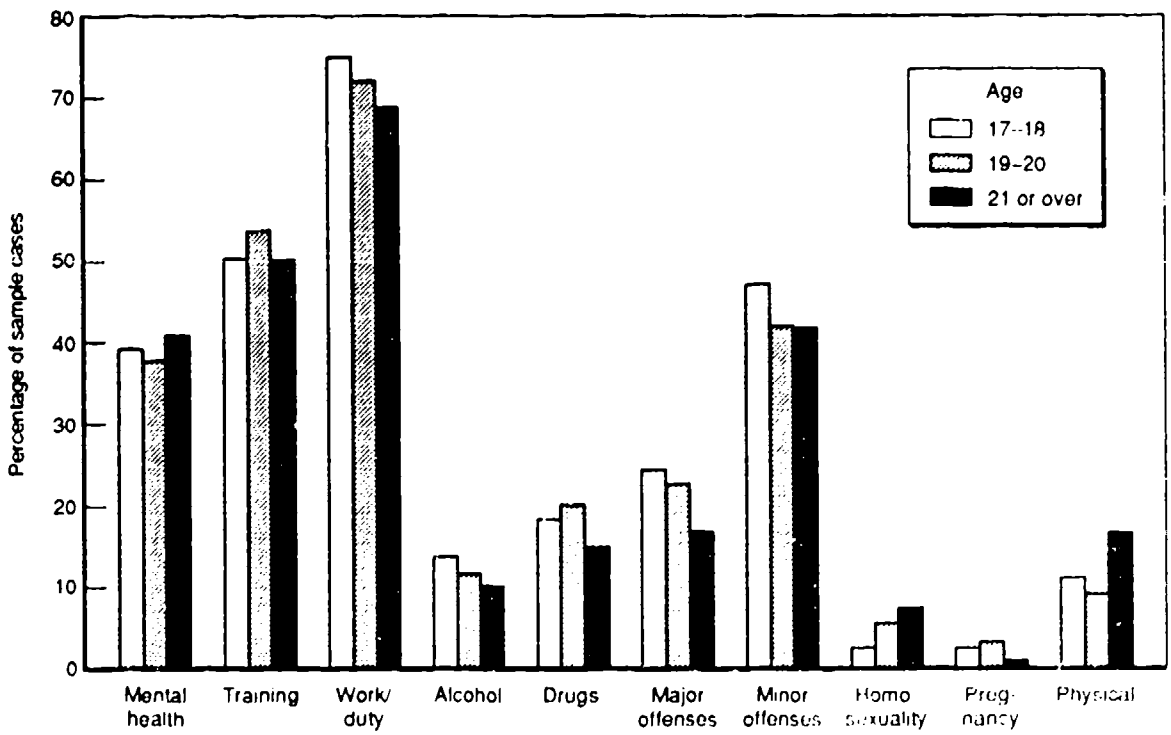

Fig. 13—Problem categories by age group

Table 15

UNIVARIATE SIGNIFICANCE TEST RESULTS

Recruit Characteristic	Mental Health	Training	Work/ Duty	Alcohol	Drugs	Offense Type: Major	Offense Type: Minor	Homosexuality	Pregnancy	Physical	P4–P7
Gender	••		•	••	••	••	•	••	••	••	••
Cohort	••			•							
Marital status				••	•	••					
High school			••	•	•		••	•		••	••
Race	•			•		••			••		
Service		••	•		••		••	•		••	••
MOS risk											
Age group						•		••		•	••
AFQT group					•		•	••			
Separation month	••	••		••	••	••	••	•		••	••

NOTE: The entries denote significance levels for chi square tests of differences in problem prevalence with respect to recruit characteristics. Statistical significance at the .05 level of confidence is denoted by "•". Significance at the .01 level of confidence is denoted by "••". Blank entries denote tests that did not result in significant differences. For example, differences in mental health problem prevalence between males and females are significant at the .01 level of confidence. Readers are cautioned that with 100 comparisons (10 characteristics × 10 reasons), some chi-square tests may achieve statistical significance by chance.

alcohol and drugs during basic training, the chances of a recruit separating for drug or alcohol problems during this period are less than after training. Restrictions on the recruit's activities and personal freedoms (e.g., passes to leave the base) continue through most of advanced training as well.

One factor that may have influenced the comparison of high school graduates and nongraduates is that the latter group tended to have more reasons cited per separation than did the former group. Overall, 26 percent of the graduates but 35 percent of the nongraduates had more than three reasons cited. Although MOS risk group was not significantly related to any problem type, we find that female recruits in MOSs with higher than average attrition rates were more likely than those in other MOSs to have separations involving physical problems.

Multivariate Analyses

Logistical regression analyses were conducted to assess how well the combination of all of the available data on a recruit in our database was able to predict whether that recruit had a given problem type. There was one equation for predicting the likelihood a recruit had a mental health problem, another equation for predicting the likelihood the recruit had a training problem, and so forth. The analysis for a given problem type involved the following steps:

1. A logistical regression equation was constructed to yield an estimate of the likelihood that a recruit had a given problem using that recruit's particular combination of characteristics.[1] The following characteristics were used in the analysis: sex, cohort (FY79 or FY85),

[1]All of the logit models in the multivariate analysis are simple additive models with no interaction or power terms. We assumed that additive models (no interaction or power terms) can adequately depict the relationships between the independent and dependent variables. We checked the validity of this assumption by employing Tukey's one-degree-of-freedom test for non-additivity. In ordinary regression, the Tukey test is computed by adding the square of the predicted outcome variable Y from an additive model as a predictor in a second regression model. The inclusion of this new predictor has the effect of adding a complete complement of both interaction and square terms to the new model. If the coefficient of the new predictor is statistically significant, then there is evidence that

race (white, black, or other), service, age group, marital status, education (high school graduate versus non-high school graduate), and AFQT category. The logistical regression procedure assigned weights to the characteristics in a way designed to maximize their combined ability to predict whether or not a recruit in our sample had the problem.

2. A recruit's characteristics as defined above were entered into the problem's equation to produce an estimate of the likelihood that the recruit would have this problem. The process was repeated for each recruit so that every one of them had a predicted likelihood of having the problem.

3. The recruits were then rank ordered from highest to lowest in terms of their predicted likelihoods. The list was then split into two parts so that the number of recruits above the cutoff point was equal to the number of recruits in our sample who had the problem. For instance, 446 of the 1134 recruits in our sample had a mental health problem. Thus, the 446 recruits with the highest predicted likelihoods of having this problem were designated as those who were predicted to have it and the other 688 were predicted to not have it.

4. The degree to which the foregoing predictions corresponded to reality was analyzed. Specifically, how many recruits who were predicted to have the problem actually had it? How many of those who were predicted to not have the problem did not in fact have it? The sum of these two counts is the number of correct classifications. This sum divided by 1134 is the proportion of all the recruits in our analysis sample who were classified correctly.

The foregoing procedures were repeated for each problem type. Table 16 presents the results of these analyses. The first column of data in the table shows the prevalence of each problem type in our database (e.g., 39.3 percent of the recruits had a mental health problem). The next column shows the percentage of correct classifications that would occur by chance

Table 16

CLASSIFICATION ACCURACY OF LOGISTICAL REGRESSION EQUATIONS

Problem Category	Percent of Recruits Having Problem	Percentage of Recruits Classified Correctly		Gain in Accuracy Over Chance
		By Chance	By Model	
1 Mental health	39.3	52.3	62.1	9.8
2 Training	51.6	50.1	56.1	6.0
3 Work/duty	72.8	60.4	64.6	4.2
4 Alcohol	12.2	78.6	81.5	2.9
5 Drugs	18.3	70.1	75.8	5.7
6 Major offenses	22.1	65.5	72.5	7.0
7 Minor offenses	44.5	50.6	61.0	10.4
8 Homosexuality	4.9	90.7	92.4	1.7
9 Pregnancy	5.4	89.8	92.1	2.3
10 Physical	12.3	78.4	82.5	4.1
P4, P5, P6, and/or P7	60.4	52.2	63.1	10.9

the simple additive model is not capturing a more complex relationship between the variables in the model. In logistic regression, the predicted log odds is squared and used as a predictor in the second logit regression. The Tukey test was employed with all the logit regressions. In no case was the coefficient of the test variable statistically significant at the .05 level. This result provides some assurance that there are not large departures from simple additive models in our data

given the prevalence shown in column 1. The third column shows the percentage of recruits who were classified correctly by the regression model and the last column shows the difference between this and the chance rate. Because of the way in which we conducted the analyses, the number of false positives equaled the number of false negatives.

Table 16 shows that the likelihood of having certain categories of problems was somewhat more predictable than having other categories. However, none of the models was especially accurate in forecasting whether a recruit who separated early would or would not have a particular problem. For instance, the combination of all the recruit's background characteristics had an accuracy rate in predicting Problem 1 (mental health) that was 10 percentage points better than chance. In contrast, the prediction of Problem 8 (homosexuality) was only about two points better than chance.

The factor analyses discussed previously indicated that four of the 10 categories (alcohol, drugs, and minor and major criminal offenses) tended to cluster together. In other words, a recruit who had a separation reason in one of these categories was more likely than others in our sample to have a separation reason in one or more of the other three categories. The last row of Table 16 shows that whether or not a recruit had a separation reason in one or more of these four categories could be predicted with about 63 percent accuracy (i.e., about 11 percentage points better than chance).

Tables 17 and 18 show the odds ratios for the variables in each model that made a statistically significant contribution to predictive accuracy (at alpha = .10). For example, Table 17 shows that the odds ratio for men was 1.9 in the model for Problem 4 (alcohol). This

Table 17

PROBABILITY RATIOS FROM THE LOGISTICAL REGRESSION ANALYSES: DICHOTOMOUS CHARACTERISTICS

Recruit Characteristic	Mental Health	Training	Work Duty	Offense Type				Homosexuality	Pregnancy	Physical	P4–P7[a]
				Alcohol	Drugs	Major	Minor				
Gender											
Male	.7**			1.9**	1.9**	1.8**		.4**		.7*	1.2**
Female											
Cohort											
FY79	1.4**			.7*							
FY85											
Marital status											
Married				.2*	.6	.5*		.2			
Single											
High school											
Nongraduate			1.2**	1.7*			1.5**			.5	1.3**
Graduate											

NOTE: The entries are probability ratios for each characteristic. These ratios should be interpreted with respect to the other recruit subgroup for the characteristic. For example, after controlling for other recruit characteristics, the probability of a drug reason occurring among males is 1.9 times the probability of it occurring among females.

The symbols * and ** denote probability ratio significance at the .05 and .01 levels of confidence, respectively. Nonstarred entries are significant at the .10 level of confidence.

[a]The entries in the last column are for recruits who had one or more of the following four reasons: alcohol, drugs, major offenses, or minor offenses.

means that men in our sample were twice as likely as women to have alcohol listed as a reason for early separation. Similarly, Table 18 shows that the recruits in our sample with the highest AFQT scores (i.e., 93–99 percentile) were nearly three times more likely to have homosexuality as a reason listed for discharge than was the typical recruit in this sample.

Analysis of Subcategories

Analysis of the specific reasons within each of the 10 general categories listed in Table 9 indicated that the prevalence of the subcategories was usually unrelated to any of the stratification variables. Figure 14 illustrates the pattern of results obtained from this in-depth analysis. The figure shows that among those with at least one mental health problem (as described in Table 9), there was virtually no difference between males and females in specific types of problems.

When during the first term the separation occurred was the only factor that was related to a particular subcategory of mental health problems. Figure 15 shows that the longer the recruit was in the service, the less likely that recruit would have a separation reason related to "emotional instability" or "inability to adjust." These were the two most prevalent mental health problems and the recruits who had one of them were likely to have the other one as well.

The third most prevalent mental health subcategory, personality disorders, exhibited the opposite pattern. A problem in this subcategory was more likely to surface toward the end than the beginning of a recruit's first term. The other six subcategories were not systematically related to when the problem arose. Thus, virtually all of the time relatedness exhibited by the mental health category in Fig. 8 came from this category's two most prevalent subcategories.

The major implication of these findings is that improved screening procedures might be focused on detecting the types of mental health problems that are most likely to surface soon after enlistment.

The pattern of increased prevalence over time for alcohol, drug, major, and minor offense-related problems supports the idea that counter-attrition measures tailored for these problems need to target individuals throughout the entire enlistment term. There does not appear to be a convenient point at which the risk of incurring these problems peaks or drops.

An analysis of the subcategories in the major offense category indicated that only a handful of the recruits in our sample had a separation reason involving a serious felony, such as robbery or burglary. Table 19 shows that the most common major offense was writing bad checks. About 46 percent of the 164 males and 25 percent of the 87 females with Problem 6 were incarcerated as a result of their criminal activities.

Table 18

PROBABILITY RATIOS FROM THE LOGISTICAL REGRESSION ANALYSES: MULTICHOTOMOUS CHARACTERISTICS

Recruit Characteristic	Mental Health	Training	Work/ Duty	Alcohol	Drugs	Offense Type: Major	Offense Type: Minor	Homosexuality	Pregnancy	Physical	P4-P7[a]
Race											
White	1.1**					.9**			.8*		
Black	.8**					1.5**			2.1*		1.2**
Other				2.0*							
Service											
Army							1.1*			1.6**	1.1*
Navy	.8	.8*	.8**		1.9**		1.3**	2.1*		.4*	1.2*
Air Force		1.2**				1.2*	.8**			.7**	.9**
Marine Corps	.8	.7**					1.3**			1.4	
Air group											
17–18								.6*			
19–20										.8	
> 20								1.6*	.4*	1.4*	.9*
AFQT category											
93–99		.6**						2.8*			1.2
65–92					1.3**		1.2**				
50–64								.6*		1.3*	
31–49											
< 30					.7		.7**				.7**

NOTE: The entries are probability ratios for each characteristic. These ratios should be interpreted with respect to all recruits in the analysis sample. For example, after controlling for other recruit characteristics, the probability of a drug reason occurring among Navy recruits is 1.9 times the probability of it occurring among the other recruits in the study.

The symbols "*" and "**" denote odds ratio significance at the .05 and .01 level of confidence, respectively. Non-starred entries are significant at the .10 level of confidence.

[a]The entries in the last column are for recruits who had one or more of the following four reasons: alcohol, drugs, major offenses, or minor offenses.

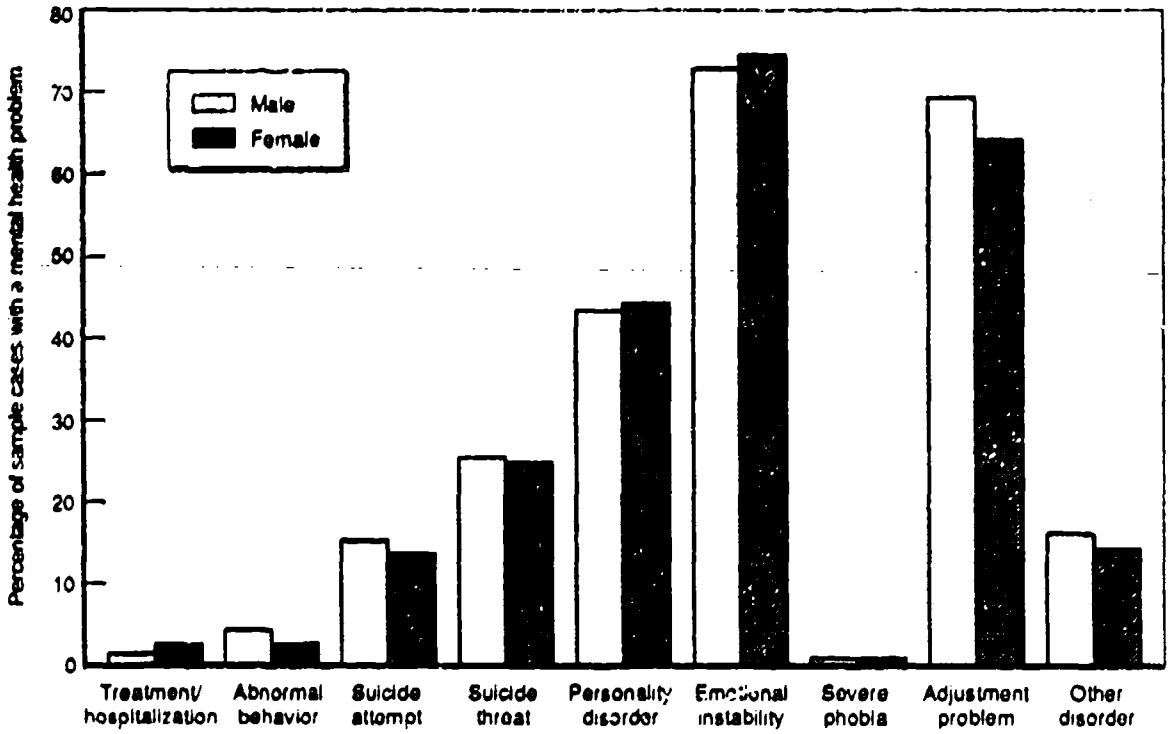

Fig. 14—Mental health problems by gender

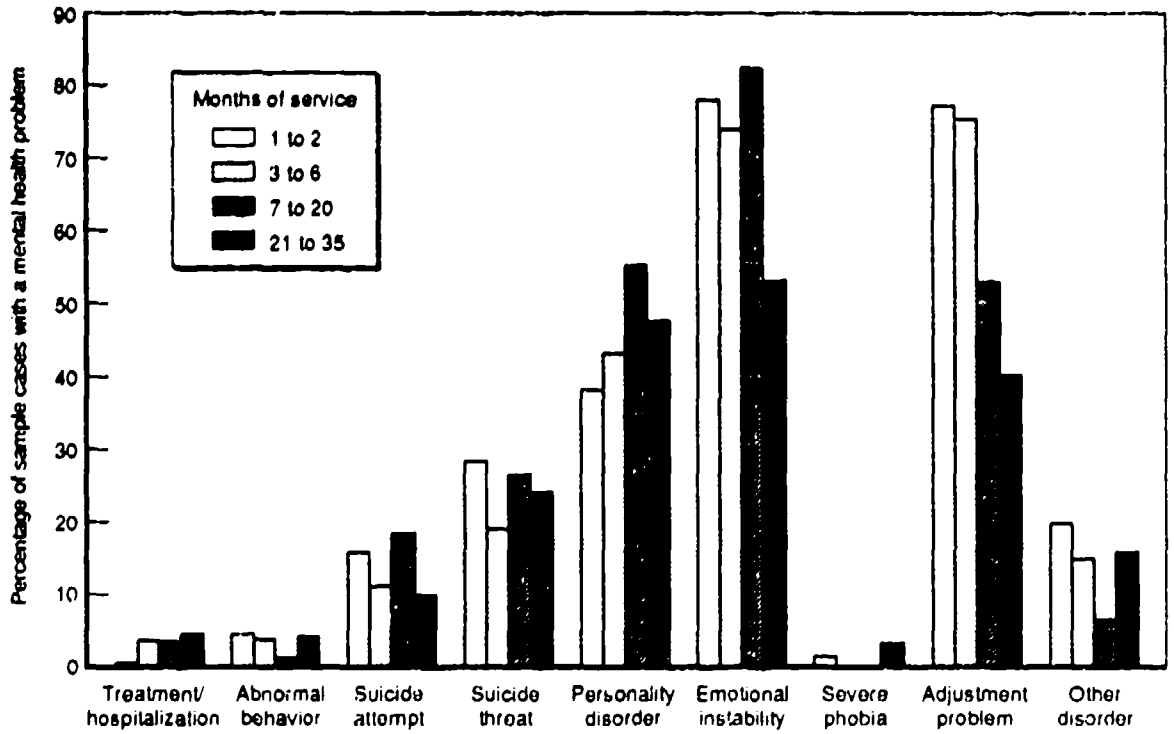

Fig. 15—Mental health problems by time of attrition

Table 19

PERCENTAGE OF MALES AND FEMALES WITH MAJOR OFFENSES BY OFFENSE TYPE

Offense Category	Males (164)	Females (87)
Assault	15	10
Bad checks	35	59
Burglary	1	0
Child or spouse abuse	1	0
Drug trafficking	2	5
Failure to pay support	1	0
Larceny (theft)	15	13
Motor vehicle theft	1	1
Murder, nonnegligent manslaughter	1	1
Robbery	2	0
Vandalism	13	6
Falsification of military records	4	7
Nature of serious offense not in file	27	10

NOTE: The sum of the column percentages exceed 100 because a recruit may have more than one type of offense.

IV. CONCLUSIONS

The research described in this report provides a new perspective on early, adverse attrition. Recruits who left the service before completing the first 35 months of their initial enlistment period typically did so for two or more quite different types of reasons. Although no combination predominated, a few patterns did emerge. One reason that almost always surfaced was a work/duty problem. This problem type often appeared to be a symptom of another factor (such as alcohol abuse or a negative attitude) rather than the primary reason for the discharge. The next three most commonly cited factors leading to an early separation were: training problems, minor criminal offenses, and mental health problems. Drug and/or alcohol abuse were cited in about 26 percent of the cases in our sample. Recruits with major problems were also likely to have alcohol and drug problems, but unlikely to have mental health problems. Recruits who left for reasons associated with homosexual behavior were unlikely to have training or work/duty problems. They also tended to have high AFQT scores. This is a different picture from the one that would have emerged from a study of Interservice Separation Codes (ISCs). Our analysis revealed little relationship between the ISC assigned to a recruit and the actual reason(s) for that recruit's separation. Weighting the sample data to reflect population parameters had little or no effect on prevalence patterns or relationships (see Figs. 2 and 3).

IDENTIFYING THOSE AT RISK FOR ATTRITION

Unfortunately, the prevalence of a given category of separation reason was not related to most of the wide variety of observable recruit characteristics that we analyzed, including the recruit's service or race, the fiscal year the recruit entered the service (1979 or 1985), whether the recruit had a Military Occupational Specialty (MOS) with a relatively high or low attrition rate, and whether the recruit graduated from high school. Although high school graduates were less likely than nongraduates to separate early, there was little difference between the two groups in the prevalence of various reasons for the early discharge.

Likewise, there was little relationship between the particular type of reason cited within a given general category of reason for early separation and any of the recruit characteristics we examined. For example, among recruits with mental health problems (as determined by a psychological consult), there was no difference between men and women in the rate at which a suicide attempt was mentioned as a reason for the discharge.

The study did find some exceptions to the general lack of relationship between separation reason and other factors. Mental health problems were more likely to surface early rather than later during a recruit's first enlistment term; women were more likely than men to have such problems; and men were more likely than women to separate because of use of alcohol or drugs and both major and minor offenses. The longer the recruit stayed in the service, the more likely these four factors became reasons for a separation.

IMPLICATIONS FOR POLICY AND FUTURE RESEARCH

The findings of this study do not directly suggest policies to reduce adverse attrition. Because mental health problems were more likely to surface during the beginning than during the middle or end of a recruit's first term, increased attention might be given to improving mental health screening procedures. Because the two most prevalent mental health problems—emotional instability and inability to adjust—exhibited this pattern, the screening process might profitably concentrate on identifying those who are especially likely to lack the social and emotional maturity needed to cope with the demands and discipline of military life. However, this group accounts for only a small fraction of all adverse attrition. Moreover, screening for this problem may not be cost effective; mental health testing generally tends to be expensive and not particularly accurate.

In a similar way, the relatively high incidence of drug and alcohol problems during the first term suggests that more frequent prevention (and perhaps testing) programs should be considered. The utility of such programs would have to be evaluated in light of their potential costs and benefits. For example, only about 4 percent of the recruits in an entering cohort (i.e., 18 percent of those in our adverse attrition sample) are likely to be separated early for a problem involving drug abuse. However, this figure probably underestimates the full extent of drug problems because it does not include those recruits who had such problems but were not separated early (such as those in rehabilitation programs).

Overall, then, although our findings represent an improvement over previous data, they are clearly not sufficient to guide policies aimed at reducing adverse attrition. Whether the policy goal is to screen out potential problem recruits before they join or to address the causes of separation once the recruit is in the service, we still do not understand enough about the cause of attrition. But our findings and analysis do suggest a number of policy changes and research efforts that could lay the empirical foundation for developing and evaluating counter-attrition policy.

Supplement the ISC system. Our findings show that ISCs do not accurately reflect the problems or circumstances leading to separations. Legitimate and probably inevitable organizational concerns have shaped the ISC system to focus on the single most defensible *justification* for the discharge, and to include a number of amorphous categories. To analyze patterns in early attrition, a system of computerized data, specifically designed to focus on the process, events, and behaviors leading up to separation, could be quite helpful. The separation reasons used in such a system might be based on the ones developed for this research, although refining the categories might produce more useful results.

Investigate the recruits' perspective. The findings in this report are based on documents prepared by the services (i.e., the hard-copy personnel folders at the NPRC). We do not know how closely the reasons reflected in these documents correspond to the recruits' perceptions of why they were discharged. Although the recruits' understanding of the circumstances that led to their early separation is unlikely to be objective, it may well be extremely relevant, offering exactly the insight needed to understand and reduce attrition.

It is possible, for example, that many recruits deliberately attempt to initiate the discharge process. Our interviews with base personnel suggested that some recruits may do or say things just so they can be discharged.

The final portion of the Data Abstraction Form described in App. C was used to code whether there was evidence in the personnel folder to indicate if the recruit wanted to be discharged before completing the first term of enlistment. An analysis of these data

indicated that 42 percent of our sample wanted to be discharged early, and 11 percent did not want to be discharged early. For the remaining 47 percent, it was not possible to determine from their records whether they wanted an early separation.

Because in almost half the cases it was not possible to identify whether a recruit wanted to leave, results based on this variable must be interpreted with extreme caution. With that caveat in mind, we prepared Table 20 to determine whether recruits with a certain category of reason for discharge tended to have a higher or lower rate of wanting an early separation than was observed in our total sample.

The data suggest that recruits who wanted to leave early were more likely to have their preferences noted in their records than were the other recruits with an early separation. Those who want to leave early are more likely to manifest certain types of problems than are other recruits. Put another way, the presence of certain problems may be symptomatic of a recruit's desire to leave early. If so, then this relationship could be used in counseling recruits (i.e., by signaling the underlying source of observed problems) and in deciding whether or not to discharge them early.

These possibilities may well be worth investigating. Since the variable captured here could not be coded for almost half of our sample, further analysis using the current data would not be productive; any findings would be extremely tentative at best. And although future research could conceivably produce more complete data using service-based records, interviews with recruits at the time they separate or shortly thereafter would presumably be a more accurate way to measure desire for an early discharge. Future studies may therefore want to explore the feasibility and utility of collecting such data directly from recruits in exit interviews.

Our analyses demonstrate that early, adverse attrition is a complex problem. Based on our current understanding, no simple solution seems likely. Yet the size and substantial cost of the problem imply that some policy response is needed. Learning more about the reasons

Table 20

PERCENTAGE OF RECRUITS FOR WHOM INFORMATION WAS AVAILABLE ABOUT WHETHER THEY WANTED TO SEPARATE EARLY, AND THE PERCENTAGE DESIRING AN EARLY SEPARATION AMONG THOSE WITH A RECORDED PREFERENCE

Problem Category	Percent with a Recorded Preference	Percent Desiring to Separate Early Among Those with a Recorded Preference
Mental health	67	93
Training	62	82
Homosexuality	61	86
Physical	58	83
Work/duty	55	80
Minor offenses	44	76
Major offenses	43	65
Alcohol	43	51
Drugs	40	71
Pregnancy	37	69
Total sample	53	80

NOTE: In the sample of 1134 recruits whose records were analyzed, 42 percent were described as wanting an early discharge and 11 percent as not wanting one. The preferences of the remaining 47 percent could not be determined from the available records.

behind attrition—through interviews with departing recruits and possibly through improved data collection to supplement the ISC—could help. The exit interviews, in particular, seem likely to provide a rich source of data about the real reasons enlistees leave the service before completing their initial term of enlistment. Understanding these reasons appears to be the most promising step toward reducing early attrition.

Appendix A

DATA COLLECTION PROCEDURES

Data were collected in six phases:

1. Determine the feasibility of gathering adequate information from hard-copy personnel records regarding the reasons recruits left the service before the end of their first term of enlistment.

2. Abstract the data on 275 recruits to create a master list of the specific reasons cited for an early separation.

3. Use the Phase 2 list to develop and test a questionnaire for coding the reasons in the field.

4. Hire and train field coders in the use of the data abstraction instrument.

5. Code the records of 1134 recruits.

6. Edit, key enter, and clean the coded data.

The remainder of App. A summarizes the activities in each phase. Appendix F describes the procedures that were used to protect the confidentiality of individual recruit records.

PHASE 1: FEASIBILITY STUDY

RAND staff visited the National Personnel Records Center (NPRC) in St. Louis, Missouri, to determine the feasibility of gathering information from Official Personnel Folders (OPFs) regarding the reasons recruits left the service before completing the first 35 months of their first enlistment term.

With data obtained from the Defense Manpower Data Center, RAND provided NPRC with a list of 170 recruits who had separated within six months of their accession date. The sample consisted of 10 recruits from each service in each of the following Interservice Separation Code (ISC) categories: #10, medical disqualification for conditions existing prior to service; #16, medical disqualification for conditions that did not exist prior to service; #74, fraudulent entry; and #87, trainee discharge. The remaining 10 recruits were Navy enlistees; 5 had a code of #60 (character or behavior disorder) and 5 had a code of #67 (drugs). The Navy recruits were selected because of the prevalence of those codes in that service.

Recruits with "medical" codes (#10 and #16) as well as those with "adverse" codes (#60, #67, #74, and #87) were selected so that we could investigate whether the medical category was confined to truly medical reasons.

NPRC located the records for 139 (82 percent) of the recruits in the sample. Over the course of 2.5 days, our two-person team abstracted data on 87 of these recruits.

We concluded from our review that it would be feasible to locate a high percentage of sampled military records at the NPRC in St. Louis and that these records could be used by trained coders to abstract the reasons for early separations. It also appeared that the actual

reasons for the early separations could be ascertained with a reasonably high degree of confidence from a variety of narrative summaries, memos, notes, and evaluations in the hard-copy OPFs.

The seeming credibility of these documents stemmed from their containing specific details about the problems and events leading to the separation decision, including evaluations by military officers and enlisted personnel who played a key role in the separation decision (such as unit-level commanders and their senior NCOs, training instructors, mental health and social work professionals, medical doctors, and legal staff).

We noted that the official discharge form (DD 214, Certificate of Release or Discharge) did not list the actual reason(s) for the separation. Instead, the form contained the same separation code number that appeared in the computerized personnel database—the legal justification rather than the actual reasons for the separation.

We found considerable variation across services and bases in their record-keeping practices. The number and type of separation documents and the accessibility of the records also varied across services and bases. For example, hard-copy personnel records were available for the Army and Air Force; but, the Navy and Marine Corps records were available only on microfiche.

As a general rule, the Army and Air Force personnel folders were considerably larger, more detailed, and easier to use. The Air Force records were the most organized and uniform compared with the other services. They generally contained standard separation forms and more formal memoranda regarding discharge decisions. The Navy and Marine Corps files, on the other hand, contained less detailed information than was usually available for the other two services. Their records were stored on microfiche and the entire content of the recruit's personnel folder did not seem to appear in the microfiche records, although it was not clear what data were missing.

Given the variation in the size and content of the military records, a critical first step in determining the reasons for separation was to carefully examine the entire content of the personnel folder (which varied from 10 pages to over 50 pages) and to isolate the source documents that pertained to the separation decision. A careful review of the OPF documentation had to be completed before we could identify all the reasons for the early discharge.

There were six types of source documents in the OPFs that contained useful information for our assessment of the real reasons for first-term attrition. The single most helpful report was the written narrative summary (see item 1 below), included in most personnel files. Below is a brief description of each of the key types of source documents.

1. Narrative summary of separation decision. There is almost always a typed summary memo, usually prepared by a base commander, describing both the official justification for the discharge (e.g., ISC code) as well as the specific reason(s) and events leading up to the separation decision. Although the content of these summaries is typically uniform across services, the name and format of the documents vary by service and base.

2. Medical history documents. Most personnel records contained routine medical history and ongoing medical and mental health reports on specific medical problems and separation recommendations.

3. Evaluation memos/letters/forms. The personnel jacket frequently contained a variety of staff evaluation forms completed by basic or advanced training staff, platoon or squad leaders, and unit commanders. They typically included reports of counseling sessions, formal performance evaluation ratings, letters of reprimand or other unfavorable military

actions (fines, demotions, incarcerations, Article 15s), and other memos and notes describing the recruit's training or work performance problems that led or contributed to the separation.

4. Reports of illegal activities or military infractions. Information pertaining to the recruit's military or civilian offenses was included in the personnel file. The documents usually indicated the offenses committed by the recruit as well as the punishment that he or she received.

5. Reports of drug and/or alcohol abuse. Documentation of drug or alcohol abuse, including results of random drug testing and monitoring, incidents of abuse while on-duty or on-base, and efforts at rehabilitation were found in the personnel files.

6. Miscellaneous source documents. Additional source documents regarding the separation decision include: (a) letters written by recruits describing their reasons for wanting to leave or remain in the service; (b) letters and notes from the recruit's commanders and NCOs with recommendations regarding separation or retention; (c) documentation regarding fraudulent enlistment, if applicable; and (d) miscellaneous notes from conversations with the recruit regarding the separation decision.

The feasibility study suggested that the official "adverse" separation codes (the ISCs) that appear in computerized personnel files do not accurately reflect the true reasons for first-term attrition. We found many illustrations in our examination of the hard-copy files. We also found that a high percentage of the recruits with adverse discharges had multiple problems, although the coding scheme used by the services forces staff to select only one code that presumably represents the strongest legal justification for the early discharge.

We often found variation across the services and bases in their assignment of separation codes for recruits with drug problems. Which one of four separation codes routinely used for such problems appeared to depend largely on local coding practices. The four codes used were: #10 (medical discharge—pre-service condition), #67 (drug abuse), #74 (fraudulent enlistment—e.g., concealed pre-service drug use), and #87 (general trainee discharge). Consequently, it is impossible to determine from the separation codes the true extent of drug abuse among recruits who separate early.

We also discovered that code #74 (fraudulent enlistment) is used by the services to cover a multitude of recruit problems that one might expect to find under other separation codes. Some of the specific situations found under fraudulent entry were: concealment of prior-service drug use, homosexuality, convictions, mental health problems, juvenile offenses, prior military service, true citizenship status, test fraud, and false statements that presumably can be traced to fraudulent answers on the enlistment contract. Whereas fraudulent enlistment might be listed as the legitimate legal justification and authority for the discharge, use of this code rather than the more descriptive codes (for example, for drug use, homosexuality, or medical problems) makes it impossible to detect the true reason for the discharge from the computer codes.

Another illustration of the limitations of the ISCs to obtain a true understanding of first-term attrition is the services' extensive use of code #87, general trainee discharge, for recruits separated during basic training. We found that this code covered a gamut of training and performance problems, including mental health disorders, drug use, minor disciplinary infractions, negative attitude, academic failures, unsatisfactory work performance, and phobias (fear of weapons, heights, or water).

Our analysis of the recruit files with medical discharge codes (#10 and #16) indicated that these codes almost always accurately reflect the true reasons for the separation. Our review of

cases with ISC #10 (medical—conditions existing prior to service) indicates that in most cases, the services are uniformly using this code for recruits with more severe medical disabilities, such as psychiatric disorders, ulcers, hearing impairments, or deformities that existed prior to enlistment. The documentation for these medical discharges almost always includes a clear and concise typed description of the diagnosis and separation recommendation.

Our review of code #16 medical discharge cases (unqualified for active duty—other medical problem) provided further evidence of the reliability of the medical attrition codes. Code #16 is normally used for less severe medical conditions that are not permanently disabling (chronic knee or back pain, flat feet, or poor eyesight) but nonetheless make the recruit medically disqualified to continue military service. We found no evidence that nonmedical problems were a consistent factor in any of these medical discharges.

In summary, our Phase 1 study confirmed the feasibility and utility of using NPRC data to identify the actual reasons (as distinct from the justifications) for first-term adverse attrition.

PHASE 2: CREATE MASTER LIST OF REASONS

Our content analysis of 87 Phase 1 records indicated that a further analysis of a larger and more representative sample of records was needed before we could develop a data abstraction form and coding procedures for the main study.

In November 1988, we made a follow-up visit to NPRC to abstract data from 340 records for further study. These records belonged to Army and Air Force recruits who entered the service in FY79, FY84, and FY85 but were discharged within 35 months of their accession date for adverse reasons (i.e., as distinct from the Phase 1 sample which was limited to recruits who left within six months of their accession date).

NPRC once again located the hard-copy files for a remarkably high percentage of the sample: 91 percent of the records requested. We were able to abstract 275 of these records.

While at NPRC, we tested alternative data collection forms to examine the feasibility of having on-site coders classify the reasons for a separation from the NPRC records in lieu of transcribing the narrative reasons in long-hand for subsequent analysis. We found that our initial code list needed substantial modification to ensure adequate intercoder reliability in categorizing information from the NPRC files.

Our efforts to code the "single primary reason" for the separation were especially unsuccessful. Almost all the records had multiple recruit problems underlying the separation decision and there was no clear-cut information regarding the single main reason.

Despite these problems, we were able to use our narrative summaries of the 275 cases to create a master list of the specific reasons cited in all the cases.

PHASE 3: CONSTRUCT SURVEY QUESTIONNAIRE

We conducted a series of content analyses with the Phase 2 master list to create a set of broad but policy relevant categories of reasons into which the specific ones on the list could be reliably classified. These activities involved blind recoding of the same cases by different staff to detect possible differences in their interpretation of the coding categories. We continued these activities until we were confident that the final coding form and coding definitions and rules would yield adequate inter- and intracoder reliability.

This phase of our research culminated in a data collection instrument and a written plan that described the procedures that would be used by a team of trained coders to abstract NPRC data for the main data collection wave.

PHASE 4: PREPARE FOR FINAL DATA COLLECTION

We used a specially trained team consisting of an off-site field supervisor and four full-time coders for data abstraction. Field staff were experienced working with military records or other complex public or private data. The field supervisor was an experienced survey specialist who had worked with NPRC records for several years. In addition, each coder was experienced in abstracting data from legal, medical, or other complex office records.

Staff training was in two phases: a two-day classroom training session and a two-day on-the-job training (OJT) session at the National Personnel Records Center. First, senior RAND staff members held a formal two-day training session to provide the field staff with detailed instructions on how to code data from military personnel records. We used the Phase 1 and 2 records to create a master data collection manual for use in training the field staff. The training manual and agenda covered five major topics: (1) background and purpose of the project, (2) structure and content of military records, (3) data safeguarding procedures (see details below), (4) standard survey research coding conventions for record abstraction, and (5) question-by-question coding instructions and practice exercises (from the Phase 1 and 2 records). Training emphasized providing staff with detailed question-by-question instructions on how to interpret and code each variable on the 12-page survey instrument.

We used the master data collection manual to train the field staff on the purpose of each question, special code definitions, and rules governing the inclusion or exclusion of specific information. Practice cases from the Phase 1 and Phase 2 records acquainted the coders with the character of the military records and common coding situations that they would encounter in the field. Each trainee and the field supervisor coded all practice cases. A group discussion on how each person coded the practice exercises identified and resolved coding problems. We continued the practice coding exercises until we were confident that the field staff had mastered the coding rules for each question and were ready to begin the final data collection.

Second, in on-the-job training at the NPRC headquarters abstractors coded the same batches of records (about 10–20 cases) so that their work could be carefully checked by senior RAND staff and problems reviewed by the group and individually. We divided the trainees into two work groups for the first two days at the records center. One group was invited to two morning OJT sessions and the second group to two afternoon OJT sessions so we could closely monitor the staff's initial data abstraction and give immediate feedback.

All but one of the original data abstractors successfully completed the training activities. One trainee's productivity and error rate was not acceptable and was replaced by a new field coder.

PHASE 5: CONDUCT FINAL DATA COLLECTION

The sample for the final data collection phase of our research contained 1216 recruits. We were able to locate and code the data on 1134 (93 percent) of these cases, thereby exceeding our target completion rate by 3 percent.

The final data were collected from March 20 to May 9, 1989. It took about 36 minutes per case to read and code data from the personnel folder, to ascertain the events and problems leading to the separation decision, and to code that information into the survey booklet.

Rigorous field quality-control procedures were used to ensure coding accuracy. These procedures were based on those used in previous RAND civil and criminal justice projects to abstract and code complex data from public and private records and included both supervisor and intercoder reliability checks. Taken together, the two procedures resulted in quality checks of close to 30 percent of all the records coded.

Following standard survey research procedures for record abstraction, the RAND on-site supervisor validated a portion of each abstractor's work throughout the two-month data collection period. This review involved comparing the responses on the coding form with the actual military record to ensure that each item was coded properly. The supervisor examined the coding for each item on the abstraction form and changed it if the coding was not consistent with project specifications. Any changes that were made were reviewed with the individual abstractor so that the coder would avoid making similar mistakes in the future.

The supervisor or a RAND senior staff member checked all of an abstractor's work for the first week following the training session. By the second week of the coding, the validation rate was reduced to 50 percent. By the third week it was evident that each coder's work met acceptable quality standards. We therefore moved to a 10 percent monitoring level for the remainder of the field period.

We also checked the intercoder reliability among the four data collectors by randomly reassigning a recruit's personnel folder to a second abstractor who coded it without knowledge of how the first abstractor coded it. Once an abstractor reached the 10 percent validation range of proficiency, we had 10 of his or her cases recoded per week. These procedures resulted in reliability checks on close to 20 percent of all the coded records.

The reliability checks were helpful in identifying coding problems that the supervisor's validation process had missed. In particular, recoding enabled us to better pinpoint problems that all (or some) abstractors were having coding specific types of reasons. Results from the recoding process were used by the field supervisor to give immediate feedback to coders about problem areas and to refine coding definitions and rules to maximize intercoder reliability. The original coding form was compared with the recoded case to identify where there were coding differences. These differences were flagged for the supervisor to review and reconcile by double-checking the source documents. The supervisor then determined which response was correct and made the appropriate change on the original coding form.

PHASE 6: DATA CLEANING AND CODING RULES

Two types of data cleaning checks were made. The first was for out-of-range values, such as a response that was keyed as a "3" when the only possible values to the question were 1 and 9. The second check was for codes on one portion of the form being logically inconsistent with those on another portion, such as one code indicating the recruit did not have any mental health problems and another indicating he made a suicide attempt. About 4 percent of the recruits had one or more logical inconsistencies on their forms, but virtually all were resolved by reference to the other codes on the recruit's data abstraction form.

Appendix E describes the steps that were taken to ensure confidentiality.

Appendix B

DATA COLLECTION FORMS

CARD 1

3/7/89

1989 FIRST TERM MILITARY ATTRITION PROJECT
DATA ABSTRACTION FORM

Study Purpose

This research is part of a study of reasons why enlisted personnel from the Army, Navy, Marine Corps and Air Force leave the service before completing their first term of military service. The study is being conducted by The RAND Corporation, a non-profit research center in Santa Monica, CA for the Department of Defense. As part of this study, we are reviewing a sample of 1,000 Official Personnel Folders (OPFs) at the National Personnel Records Center (NPRC) in St. Louis to code reasons for adverse attrition.

RAND ID LABEL

NPRC NO.

ABSTRACTOR _____ DATE ___ / ___ / 89
MO DAY YR

VALIDATOR _____ DATE ___ / ___ / 89
MO DAY YR

THE RAND CORPORATION

SECTION 1: BACKGROUND DATA

This part of the abstraction form asks for some background information about former military members. Items 1-10 are contained on the DD 214-Discharge Form and Items 11-12 are found on the written Narrative Summary of the separation reason(s).

1. BRANCH OF SERVICE:

(Circle One)

Army 1 31
Navy 2
Air Force 3
Marines 4

2. ENLISTEE'S SEX:

(Circle One)

Male 1 32
Female 2

3. DATE OF BIRTH: ☐☐/☐☐/☐☐ (MO/DAY/YR) 33-38/

4. LAST DUTY STATION: _____ ☐☐☐☐ 39-42/

5. STATION AT TIME OF SEPARATION: _____ ☐☐☐☐ 43-46/

6. DATE ENTERED ACTIVE DUTY: ☐☐/☐☐/☐☐ (MO/DAY/YR) 47-52/

7. SEPARATION DATE: ☐☐/☐☐/☐☐ (MO/DAY/YR) 53-58/

8. TOTAL TIME ON ACTIVE DUTY: ☐ ☐☐ ☐☐ (YRS MOS DAYS) 59-63/

CARD 01

9. CHARACTER OF DISCHARGE:

(Circle One)

Honorable	1
Under honorable conditions	2
Other than honorable	3
Bad conduct	4
Uncharacterized	5
Other - Specify: _____	6
Not reported	9

65-66/

10. REENLISTMENT ELIGIBILITY STATUS CODE:

(Circle One)

RE-3	1
RE-4	2
2Q	3
3B3	4
Locally imposed bar to reenlistment	5
Other	6
Specify: _____	
Not reported	9

(Office Use Only)

[ ] [ ]

11. DATE ON NARRATIVE SUMMARY OF SEPARATION REASON: [ ][ ] / [ ][ ] / [ ][ ]
MO DAY YR

Not reported 9

CARD 02 5-6/ 1-4/

12. GRADE, TITLE, AND POSITION OF OFFICIAL WHO SIGNED THE NARRATIVE SUMMARY:

Not reported 9

GRADE: _____ [ ][ ] 8-9/

TITLE: _____ [ ][ ]

POSITION: _____ [ ][ ]

13. DATE OF FIRST REFERENCED EVENT LEADING TO SEPARATION: [ ][ ] / [ ][ ] / [ ][ ]
MO DAY YR

Not reported 9

CARD 01/02

SECTION 2
SEPARATION DUE TO MENTAL HEALTH PROBLEMS

1. Did enlistee have a mental health problem? Include phobias, emotional, personality, and adjustment disorders.

(Circle One)

Yes 1 21/
No/Not reported...(Go to Section 3, Page 5) ... 9

2. Was a mental health evaluation conducted by the military?

(Circle One)

Yes 1 22/
No/Not reported...(Go to Q.7, Page 4) 9

3. When was the most recent evaluation conducted?

[ ][ ] / [ ][ ] / [ ][ ] 23-28/
MO DAY YR

Not reported 9 29/

4. Who conducted the most recent mental health evaluation?

(Circle All That Apply)

Psychiatrist 1 30/
Psychologist 2 31/
Other mental health professional 3 32/
Specify type: _____
Not reported 9 33/
34-35/

5. What were the diagnosis and recommendations in the evaluator's report? (RECORD VERBATIM)

Not reported 9 36/

_____
_____
_____
_____
_____
_____ (Office Use Only)
_____ [ ][ ][ ] 37-39/
_____ [ ][ ][ ] 40-42/
_____ [ ][ ][ ] 43-45/
_____

CARD 02

6. Did the evaluator indicate that hospitalization was necessary or might be necessary in the future to treat the enlistee's mental health problem?

(Circle One)

Yes	1	46/
No/Not reported	9	

7. Describe the severity of the enlistee's mental condition.

(Circle All That Apply)

Psychiatric problems requiring hospitalization or treatment	1	47/
Strange, abnormal behavior - DESCRIBE BELOW	2	48/
Suicide attempt (s)	3	49/
Suicide threat(s)/ideations	4	50/
Personality disorders	5	51/
Emotional instability: hysteria, crying, anxiety attacks, immature, manipulative, depressed	6	52/
Severe phobia - DESCRIBE BELOW	7	53/
Unable to adjust to military environment due to social or emotional immaturity	8	54/
Other disorders - DESCRIBE BELOW	9	55/

INSTRUCTIONS FOR Q.7: USE THE LINES BELOW TO DESCRIBE CONDITIONS FOR CODE 02, 07, AND 09. IF CONDITION WAS PREVIOUSLY DESCRIBED UNDER Q.5 IN SECTION 2, DO NOT REPEAT DIAGNOSIS.

(Office Use Only)

56-58/

59-61/

62-64/

8 Was the enlistee hospitalized or treated for a psychiatric, emotional, or personality disorder while in the military?

(Circle One)

Yes	1	65
No/Not reported	9	

CARD 02

SECTION 3
SEPARATION DUE TO TRAINING AND WORK PERFORMANCE PROBLEMS

1. Did the enlistee have any training and/or work performance problems?

	(Circle One)	
Yes	1	66/
No/Not reported...(Go to Section 4, Page 6)	9	

2. Which of the following problems (if any) did the enlistee have during BASIC TRAINING, ADVANCED TECHNICAL TRAINING (AIT), OR ON-THE-JOB TRAINING (OJT)?

(Circle One Number On Each Line)	Yes	No/ Not Reported	
a. Failed or showed slow progress in training courses/program	1	9	67/
b. Failed to attain/maintain job skill proficiency	1	9	68/
c. Slow learner/lacked aptitude/could not grasp course materials or perform training tasks	1	9	69/
d. Refused to follow instructions/perform training tasks	1	9	70/
e. Failed to show up for training/school	1	9	71/
f. Was chronically late for training/school	1	9	72/
g. Didn't do homework	1	9	73/

3. Did the enlistee have any of the following WORK/DUTY performance problems?

(Circle One Number On Each Line)	Yes	No/ Not Reported	
a. Lacked motivation or discipline/had bad attitude	1	9	74/
b. Disobeyed orders/was disrespectful to superiors	1	9	75/
c. Failed to show up for work/duty/field exercises	1	9	76/
d. Was chronically late for work/duty	1	9	77/
e. Was a disruptive influence/unable to get along with unit members/was a troublemaker	1	9	78/
f. Committed minor disciplinary infractions, such as violated dress codes, or dorm/barracks rules, missed appointments/briefings/meetings, etc.	1	9	79/

CARD 03 5-6/
1-4/

SECTION 4
SEPARATION DUE TO ALCOHOL OR DRUG ABUSE

1. Did the enlistee abuse alcohol?

(Circle One)

Yes	1	7/
No/Not reported...(Go to Q.2)	9	

A. IF YES: Which of the following describe the enlistee's alcohol abuse?

(Circle All That Apply)

Failed alcohol abuse rehabilitation program	1	8/
Refused to participate in alcohol abuse rehabilitation program	2	9/
Reported to be intoxicated while on duty or on base	3	10/
Arrested and/or prosecuted (civilian or military) for criminal incident(s) involving alcohol (DUI)	4	11/
None of the above	5	12/

2. Did the enlistee use marijuana or other illegal drugs?

(Circle One)

Yes	1	13/
No/Not reported...(Go to Section 5, Page 7)	9	

A. IF YES: Which of the following describe the enlistee's drug abuse?

(Circle All That Apply)

Failed drug abuse rehabilitation program	1	14/
Refused to participate in drug abuse rehabilitation program	2	15/
Tested positive on urinalysis	3	16/
Possessed or used marijuana or other drugs	4	17/
Used marijuana or other drugs PRIOR TO ENLISTMENT	5	18/
None of the above	6	19/

SECTION 5

SEPARATION DUE TO MILITARY AND CIVILIAN OFFENSES

1. Did the enlistee commit any offenses or infractions which resulted in letters of reprimand, arrest, or prosecution by MILITARY AUTHORITIES?

(Circle One)

Yes	1	20/
No/Not reported...(Go to Q.2)	9	

A. IF YES: Which of the following describe the enlistee's MILITARY PROSECUTION?

(Circle All That Apply)

Arrested or detained (no prosecution)	1	21/
Acquitted or charges dropped	2	22/
Convicted: fined/lost privileges/demoted/put on probation BUT NOT INCARCERATED	3	23/
Convicted and incarcerated: given jail sentence/put in corrective custody/put in prison or stockade	4	24/
Discharged in lieu of court martial	5	25/
Court-martialed	6	26/
Not reported	9	27/

2. Did enlistee receive any Article 15 military violations?

(Circle One)

Yes	1	28/
No/Not reported (Go to Q.3)	9	

A. IF YES: How many Article 15's did he/she receive?

Article 15's [ ][ ] 29-30/

Not reported 9 31/

3. Did the enlistee commit any offenses which resulted in arrest or prosecution by CIVILIAN LAW ENFORCEMENT AUTHORITIES?

(Circle One)

Yes	1	32/
No/Not reported (Go to Q.4, Page 8)	9	

A. IF YES: Which of the following describe the enlistee's CIVILIAN PROSECUTION?

(Circle All That Apply)

Arrested or detained (no prosecution)	1	33/
Acquitted or charges dropped	2	34/
Convicted: fined/put on probation BUT NOT INCARCERATED	3	35
Convicted and incarcerated: given jail or prison sentence	4	36
Not reported	9	37

APP. C-1

4. Which of the following offenses did the enlistee commit while in the service? Include military and civilian offenses.

None...(GO TO PAGE 9)	0	38/
Not reported...(GO TO PAGE 9)	9	39/

OR

(Circle All That Apply)

Arson	01	40-41/
Assault	02	42-43/
AWOL	03	44-45/
Bad check writing/delinquent accounts	04	46-47/
Burglary	05	48-49/
Child or spouse abuse	06	50-51/
Drug trafficking	07	52-53/
Failure to pay child or spouse support payments	08	54-55/
Forcible rape or sexual assault	09	56-57/
Larceny - theft	10	58-59/
Motor vehicle theft	11	60-61/
Murder and nonnegligent manslaughter	12	62-63/
Robbery	13	64-65/
Stolen property trafficking	14	66-67/
Traffic violations	15	68-69/
Other offenses	16	70-71/

Specify: _____ 72-73/

_____ 74-75/

_____ 76-77/

CARD 04 5-6/ 1-4/

SECTION 6
SEPARATION DUE TO PERSONAL, FAMILY, OR OTHER PROBLEMS

1. Enlistee reported to be a homosexual?

(Circle One)

Yes 1 7/
No/Not reported 9

2. Enlistee reported to be pregnant?

(Circle One)

Not applicable, male enlistee... (Go to Q.3, Page 10) 1 8/
Yes 2
No/Not reported...(Go to Q.3, Page 10) 9

IF YES, ANSWER A - C:

A. Was enlistee pregnant WHEN SHE ENLISTED?

(Circle One)

Yes 1 9/
No 2
Not reported 9

B. Was pregnancy a factor in the separation decision?

(Circle One)

Yes 1 10/
No 2
Not reported 9

C. What specific reason was given for why the female enlistee left the service?

None/Not reported 9 11/

_____
_____
_____
_____
_____
_____
_____
_____

(Office Use Only)

[ ][ ][ ] 12-14/
[ ][ ][ ] 15-17/

CARD 04

3. Enlistee reported to:

(Circle One Number On Each Line)	Yes	No/ Not Reported	
a. Be overweight?	1	9	18/
b. Fail physical fitness requirements for other reasons? (DESCRIBE BELOW)	1	9	19/
c. Have any other physical problems? (DESCRIBE BELOW)	1	9	20/

INSTRUCTIONS FOR Q.3: IF YOU CODED YES IN Q.3b OR Q.3c, USE THE LINES BELOW TO DESCRIBE THE PHYSICAL PROBLEMS.

_____

_____

_____ (Office Use Only)

_____ [ ][ ][ ] 21-23/

4. Was FRAUDULENT ENTRY reported to be a reason for separation?

(Circle One)

Yes 1 24/

No/Not reported...(Go to Q.5, Page 11) 9

A. IF YES: Which of the following official justifications was given for the fraudulent enlistment?

(Circle One)

Concealed prior military service 1 25/

Concealed prior juvenile record 2

Concealed prior criminal record 3

Concealed pre-service homosexuality 4

Concealed pre-service drug use 5

Other - (Specify below) 6

_____ 26-27/

5. Did the enlistee want a discharge from the military?

(Circle One)

Yes	1	28/
No...(GO TO PAGE 12)	2	
Not reported...(GO TO PAGE 12)	9	

A. IF YES: Why did the enlistee want to leave the service?

Not reported...(GO TO PAGE 12)	9	29/

OR

(Circle All That Apply)

Dissatisfied with job training/assignment	01	30-31/
Dissatisfied with in-service education opportunities	02	32-33/
Conflict with supervisors	03	34-35/
Dissatisfied with job location	04	36-37/
Dissatisfied with pay and benefits	05	38-39/
Desire to live as a homosexual	06	40-41/
Homesick for family and friends	07	42-43/
Trouble finding affordable housing for family	08	44-45/
Dependent care consideration - (DESCRIBE BELOW)	09	46-47/
Family health problems (DESCRIBE BELOW)	10	48-49/
Family emergency situation - (DESCRIBE BELOW)	11	50-51/
Other - Specify: (DESCRIBE BELOW)	12	52-53/

INSTRUCTIONS FOR Q.5A: USE THE LINES BELOW TO DESCRIBE IN DETAIL REASONS FOR SEPARATION IF YOU CIRCLED CODE(S) 09-12 ABOVE.

(Office Use Only)

54-56/

57-59/

CARD 14

INSTRUCTIONS

- Review each item in the following six sections to make sure the Data Abstraction Form is complete and legible.

Section 1:	Background Data
Section 2:	Mental Health Problems
Section 3:	Training and Work Performance Problems
Section 4:	Alcohol and Drug Problems
Section 5:	Military and Civilian Convictions
Section 6:	Personal, Family, and Other Problems

- If the reason(s) reported for separation DO NOT fit into the existing questions/codes or you don't know how to code a particular reason listed, FILL OUT A FIELD PROBLEM FORM and refer it to the RAND supervisor for resolution.

(Office Use Only - Additional Reasons For Separation)

☐☐☐	60-62/
☐☐☐	63-65/
☐☐☐	66-68/
☐☐☐	69-71/
☐☐☐	72-74/

CARD 04

Appendix C

CODING RULES

This appendix presents the rules that were used to determine if a recruit had a given category of separation reason. The sections, item numbers, and codes referred to in these rules conform to those on the Data Abstraction Form in Appendix B.

Category	Section on form	Recruit had this problem if:
1 Mental health	2	Item 1 is coded 1 and one or more of Item 7's subitems are circled.
2 Training	3	Item 1 is coded 1 and one or more of Item 2's subitems are coded 1.
3 Work/duty	3	Item 1 is coded 1 and one or more of Item 3's subitems are coded 1.
4 Alcohol	4,5	Item 1 in section 4 is coded 1 and one or more of Item 1A's subitems are circled; and/or Item 4 in section 5 is coded 16 and the additional code of 20, 21, or 22 appears.
5 Drugs	4,5,6	Item 2 in section 4 is coded 1 and one or more of Item 2A's subitems are circled; and/or Item 4 in section 5 is coded 16 and the additional code of 25 appears; and/or Item 4A in section 6 is coded 5.
6 Major offenses	5,6	Item 1 in section 5 is coded 1 and one or more of Item 1A's subitems 3–6 are circled; and/or one or more of the following Item 4 offenses in section 5 are circled: 01, 02, 04, 05, 06, 07, 08, 09, 10, 11, 12, 13, and 14; and/or offense 16 is circled and the additional code of 31 or 63 appears. HOWEVER, if only subitem 3 or subitem 5 in Item 1A is circled and none of the Item 4 offenses cited above are circled; then DO NOT categorize as major offense, categorize instead as a minor offense (Category 7).
7 Minor offenses	5,6	Item 4 in section 5 is coded 03 or 15; and/or offense 16 is circled and the additional codes of 31 and 63 do not appear and no criminal offenses are indicated; and/or Item 4A in section 6 is coded 1, 2, or 3; and or Only subitem 3 or subitem 5 in Item 5A is circled and none of the Item 4 offenses cited above for Category 6 are circled.

8	Homosexuality	6	Item 1 is coded 1 and/or Item 4A is coded 4 and/or Item 5A is coded 6.
9	Pregnancy	6	Item 2 is coded 2.
10	Physical	6	Item 3a and/or 3b and/or 3c is coded 1.

Appendix D

ASSIGNMENT OF OCCUPATIONS TO RISK GROUPS

Army male enlistees were randomly sampled from 16 groups of military occupational specialties (MOSs). Female enlistees were sampled from 12 groups of MOSs. The first two digits of an MOS's five-digit code number were used to determine its group. MOSs were chosen to reflect a diversity of occupational types (combat, mechanical, administrative, etc.) and to include those with both relatively high and low adverse attrition rates. Risk was categorized separately for males and females.

An MOS was categorized as "high" risk if its adverse attrition rate was above the average rate for all MOSs in both the FY79 and FY85 accession cohorts; otherwise it was categorized as "low" risk. Of the 240 Army males in our sample, 152 were categorized as being in "high" risk MOSs and 88 were in "low" risk MOSs. Of 232 Army females in our sample, 108 were in "high" risk MOSs and 124 were in "low" risk MOSs.

The occupations used in this study are listed below. High-risk occupations are designated by an asterisk (*).

M	* 05	signal intelligence/security
	* 11	infantry
	24	HAWK missile mechanic/repair
	35	calibration/test equipment mechanic
	* 43	fabric repair
	44	metal work
	52	power equipment repair
	* 54	chemical operations
	62	heavy construction equipment operation/repair
	67	helicopter repair
	75	personnel
	82	surveyor
	* 94	food services
	95	military police
Females	* 05	signal intelligence/security
	* 16	air defense system crew
	* 31	radio/communications equipment operator
	* 36	switching systems operation & repair
	* 43	fabric repair
	* 55	ammunition handling/inspection
	* 63	track vehicle repair/maintenance
	71	administration
	76	supply
	91	medical
	* 94	food services
	* 95	military police

Appendix E

STEPS TAKEN TO ENSURE CONFIDENTIALITY

We implemented rigorous data safeguarding procedures to protect the confidentiality of highly sensitive military record data as they were collected in the field, transmitted to RAND, and throughout the data processing and analysis. In addition to standard RAND confidentiality procedures, we also implemented Department of Defense regulations governing the use of military personnel files. These procedures are fully documented in the project's Data Safeguarding Plan, dated March 6, 1989, which was approved by RAND's Privacy Resource Center.

Below is a summary of the steps taken to ensure data confidentiality:

1. The RAND databases will be used only for the First-Term Military Attrition Project, as specified in the interagency agreement between the Office of the Assistant Secretary of Defense (our sponsor) and the National Archives and Records Administration (NARA), the legal custodian of the NPRC records.
2. We implemented the following government guidelines for data safeguarding hard-copy military personnel records. We
   - Kept the military records in the secure section of the NPRC research room at all times.
   - Abstracted only the reasons for early separations and supporting documentation of first-term attrition, and did not collect any other information of a personal nature.
   - Included a RAND disclosure statement in each sample record to serve as a permanent record that RAND staff were authorized access to the military file. NPRC provided one of their standard forms (NA Form 13096, Finding Aid Reports) for this purpose.
   - Collected data from NPRC records and transferred them to RAND in a form that was not individually identifiable. Each record was identified on the Data Abstraction Form solely by its RAND identification number. The Data Abstraction Forms and accompanying materials did not contain the recruit's name, social security number, or other identifying information.
3. RAND did not collect the names or addresses of sample members. No names were listed on any hard-copy or machine-readable data files for this study.
4. No identifiable data were (or will be) released to the military or any other individual or organization if they could be used to link respondents to sensitive data contained in their personnel files.

AGENCY AGREEMENTS

To obtain the DoD authorization needed to access confidential records at the National Personnel Records Center in St. Louis, RAND provided written confirmation that our data collection procedures for the OSD-sponsored study were consistent with government

guidelines under 32 CFR Part 286.41(g), Nonconsensual Disclosures. We agreed that RAND would adhere to the following agency guidelines:

- The records will be used as statistical research or reporting records;
- The records will be transferred only in a form that does not identify individuals by name; and
- The records will not be used, in whole or in part, to make any determination about the rights, benefits, or entitlements of specific individuals.

Per government regulation 32 CFR Part 286a.41(g), Nonconsensual Disclosures of Military Records, military records may be disclosed to approved research projects for statistical research and reporting without the consent of the individuals to whom they pertain provided the procedures outlined above are followed.

ADDITIONAL RAND DATA SAFEGUARDING PROCEDURES

Following accepted RAND procedures, identifiable private and sensitive data were (or will be) protected throughout all stages of the data collection and analysis, as described below:

A. All sensitive data received by the project will be listed, dated, and destroyed upon completion of the project.

B. Project staff received a copy of the project's data safeguarding plan and were trained on data sensitivity and data safeguarding procedures. All staff signed a standard RAND confidentiality agreement. Standard data safeguarding rules included instructions to abstractors that they never code the case of an individual whose name they recognize.

C. Sensitive hard copy was (1) hand-carried to RAND or shipped by Federal Express/UPS/Express Mail, (2) processed in a centralized location with established access procedures, and (3) stored in locked files or rooms when not in use. Any hard copy containing ID links to sensitive data was stored separately from those data.

D. Sensitive data tapes and other machine-readable data (e.g., diskettes) were hand-carried to RAND or shipped by Federal Express/UPS/Express Mail. Tapes were privacy-labeled and diskettes stored in locked files. Mainframe files will be stored in protected directories and personal computer disk files will be protected with encryption software. Sensitive computer output will be routed to a privacy-controlled pickup bin (bin = HOLD).

E. Data abstraction forms contained only indirect identifiers (e.g., RAND ID numbers) and were stored separately from data containing ID links. These hard-copy forms were edited and processed in a centralized location in the Survey Research Group and were stored in locked files or rooms when not in use.

F. Prior to the release of data outside the project or RAND, all personal identifiers and identifiable data will be deleted.

G. Unless additional longitudinal research is proposed, all individual links to data will be destroyed after the final report has been issued.

Appendix F

EXAMPLES OF PROBLEMS WITHIN CATEGORIES

Below are examples of the behaviors that fell within each of the 10 major categories of reasons for early separations. The case summaries listed below were abstracted verbatim from the separation documents contained in recruits' hard-copy personnel folders. Following each case summary, we indicate how the data were coded into the 10 problem categories (and their subcategories).

REASONS FOR EARLY SEPARATIONS

1. Mental health—Phobias, suicide threats and attempts, emotional immaturity, and personality and adjustment disorders.

EXAMPLES:

CASE SUMMARY #0555

Primary Diagnosis: Manic depressive illness, manic type, manifested in patient by recurrent acute psychotic episodes of an intensely manic nature which do respond to lithium. He was hospitalized following an acute psychotic episode in which he became disruptive in his barracks, screaming that snakes were crawling on his legs. Patient had undergone several previous psychiatric hospitalizations prior to enlistment. While hospitalized patient was treated with drugs and therapy. Medical Board after evaluating patient and his records agrees he suffers from a mental illness of psychotic proportions that does preclude his rendering any further useful military service.

CODING FOR CASE #0555

Major Problem(s):	Category 1:	Mental health
	Subcategory:	Psychiatric problems requiring hospitalization (did not receive medical discharge)

CASE SUMMARY #0197

Evaluated after suicide attempt.

History: Severe marital and financial problems. Her affect was labile, rapidly alternating from hostile, angry, and sullen to depression and despair.

Diagnosis: Immature personality disorder, severe, manifested by impulsive behavior, low self-esteem, irresponsibility, failure to fulfill commitments, tendency to blame others for her problems, attempts to cope with stress by denial and avoidance, manipulative passive-dependent behavior, poor judgment and total lack

of insight. This diagnosis represents long history of maladaptive patterns of behavior which existed prior to her enlistment. Generally, these are lifelong patterns not amenable to any effort at retraining or rehabilitation, and are considered unfitting for further military service.

CODING FOR CASE #0197

Major Problem(s):	Category 1:	Mental health
	Subcategory:	Suicide attempt/ personality disorder

CASE SUMMARY #0472

Examination reveals that the individual manifests a severe compulsive personality, characterized by behavior which is overconscientious, rigid, overinhibited, perfectionist, indecisive, compliance in place of defiance, and inability to relax with anger against authority figures. There is depression with suicidal ruminations and she has had a suicidal attempt prior to her entrance into military service. She has excessive worry, preoccupation with the future, and would tend to respond poorly to stress-related activities. She has no real insight into this condition. Her character and behavior disorder is considered to be severe. If she continues in the service, she will probably require disciplinary action, or medical care, or both.

— No psychosis or neurosis to warrant action under ATM 35-4.
— Airman (AM) is unable to adjust socially and/or emotionally to service life, and there is no evidence AM is attempting to obtain discharge to avoid further service.
— AM meets criteria for administrative separation.

CODING FOR CASE #0472

Major Problem(s):	Category 1:	Mental health
	Subcategory:	Suicide threats/ personality disorder/ emotional instability/ adjustment disorder

2. Training (basic, advanced, or on-the-job)—Failure to show progress, inability to attain or maintain proficiency, lack of aptitude, refusal to follow instructions, chronic lateness or absence from training, and failure to do homework.

EXAMPLES:

CASE SUMMARY #0103

Marginal performer. Academic deficiency. Failed block I test with 55% before passing with a score of 74%. Failed block II test with a score of 60% before passing with 88%. He then failed block III twice with scores of 50% and 38%, respectively. Due to the apparent academic deficiency and his attitude towards further productive military service, this airman should be discharged immediately. His reasons for entering the AF were to get away from his family. Now that he entered, he feels he cannot adjust and wants to return home to settle his family problems. These problems, he states, cause a lack of concentration and motivation.

CODING FOR CASE #0103

Major Problem(s):	Category 2:	Training
	Subcategory.	Failed or showed slow progress

CASE SUMMARY #0107

Counseled 17 times for apathy and poor performance during technical training, for failing grades, sleeping in class, failure to do homework, etc. Showed slow academic progress. Experienced difficulty conforming to the established policies and progressing within reasonable amount of time. Not willing to apply himself and wants out of the military. Eliminated from technical training for prejudicial conduct.

CODING FOR CASE #0107

Major Problem(s):	Category 2:	Training
	Subcategories:	Failure to show progress/ didn't do homework

CASE SUMMARY #0147

Failure to attain the required job skill proficiency. Her presence is creating an administrative burden to the command due to minor disciplinary infractions. Her performance is noncontributory to unit readiness and mission accomplishment as specifically evidenced by below-average performance ratings and specific demonstrated incapacity to meet performance standards. Offenses include: article 15 for being AWOL for 5 days. Six letters/records of reprimand and counseling. Reporting late for duty and drinking alcohol prior to reporting to work to an extent that [you] had to be released from duty and sent home.

CODING FOR CASE #0147

Major Problem(s):	Category 2:	Training
	Subcategory:	Failed to attain job skill proficiency
	Category 3:	Work/duty
	Subcategory:	Minor disciplinary infraction/ Late for work/duty
	Category 4:	Alcohol
	Subcategory:	Drunk on duty
	Category 7:	Other offenses
	Subcategory:	AWOL

3. **Work/duty—Lack of motivation, disobeyed orders, inability to get along with others, disrespectful attitude toward superiors, chronic lateness or absence from nontraining activities, and disruptive influence.**

EXAMPLES:

CASE SUMMARY #0179

Unsatisfactory performance. Over the past 33 months, serviceman (SM) has been late for duty on numerous occasions and has received four Article 15s. Has been habitually late for formations and failed to report for duty. Has missed scheduled weigh-ins. Has long history of bad check writing. He performed adequately only when closely supervised.

CODING FOR CASE #0179

Major Problem:	Category 3:	Work/duty
	Subcategories:	Failure to report for duty/ chronic lateness and absences

CASE SUMMARY #0108

Unsuitable for service. Reasons for action: apathy, defective attitude, and inability to expend effort constructively. Specific offenses include:

- Disobeying orders from a commissioned officer and NCO
- Failure to report for duty
- Going from place of duty under false pretenses
- Leaving place of duty for extended period
- Identified as "possible" drug user. Classified as a drug rehab failure because he refused to participate.

CODING FOR CASE #0108

Major Problem(s):	Category 3:	Work/duty
	Subcategories:	Lack of motivation/ Disobeying orders/ Failure to report for duty
	Category 5:	Drugs
	Subcategory:	Refused to participate in rehab

CASE SUMMARY #0112

SM's presence is creating an administrative burden to the command due to minor military and disciplinary infractions, as demonstrated by: failure to report for duty at prescribed time on 13 different occasions. Was counseled about this several times. Failed to attend a scheduled appointment with clinic for required shots. Failed to meet scheduled military formation. Reported to duty in a dirty uniform three times. Was issued a letter of reprimand for unprofessional duty performance. Wrongfully used marijuana. Corrective/remedial actions have included numerous counselings, both verbal and written. These actions have been fruitless. Due to marijuana use, he was relieved of his regular duty as a law enforcement specialist and his Air Force Specialty Code (AFSC) was withdrawn. Drug use is totally incompatible with the AF and its policies. SM willfully broke security police code of ethics and AF policies. Further remedial/corrective actions are considered futile and immediate discharge is considered to be in the best interest of the service.

CODING FOR CASE #0112

Major Problem(s):	Category 3:	Work/duty
	Subcategories:	Minor disciplinary infractions, failure to report for duty
	Category 5:	Drugs
	Subcategory:	Marijuana user

4. Alcohol—Failure at or refusal to participate in rehabilitation; intoxicated while on base; and DUI arrests.

EXAMPLES:

CASE SUMMARY #0111

SM received a series of counselings, reprimands, and an Article 15 and was entered into the alcohol rehabilitation program. [Your] presence is creating an administrative burden to the command due to minor military or disciplinary infractions. Article 15 for failure to report for duty and drunk on duty. Civilian arrest for DUI. Lost ammunition. Missed appointments (e.g., dental, doctor). Notification of revocation of on-base driving privileges. Delinquent accounts on base. Counseled regarding above with little if any progress noted.

CODING FOR CASE #0111

Major Problem(s):	Category 4:	Alcohol
	Subcategories:	Failed rehab/intoxicated while on-duty/DUI
	Category 3:	Work/duty
	Subcategories:	Minor disciplinary infractions

CASE SUMMARY #0114

Recommendation for discharge for failure to complete the alcohol rehab program and unsuitability. Not recommended for promotion two months prior to separation for involvement with marijuana and [for the fact that you are] currently serving a period of suspended punishment for an Article 15 violation. Received a letter of reprimand and Article 15 for wrongful use of marijuana, an Article 15 for being drunk and disorderly on station, escaping custody of a security policeman, and for communicating a threat. Was placed in the alcohol rehab program and now refuses to continue. SM wants out of the AF. Feels that the seriousness of his misconduct has been exaggerated—although he does drink alcoholic beverages, drinking is not a problem to him.

CODING FOR CASE #0114

Major Problem(s):	Category 4:	Alcohol
	Subcategories:	Refused rehab, drunk on duty
	Category 5:	Drugs
	Subcategory:	Marijuana user

CASE SUMMARY #0118

Failed alcohol rehab program. Frequent involvement with alcohol and inability to expend efforts constructively. Alcohol use has on occasion led to violent and erratic behavior. Pattern of inability to get along with co-workers. Tendency to miss appointments. Failure to follow instructions report for duty. Drunk and disorderly on post. Continued history of disciplinary problems involving alcohol and physical abuse both to himself and others. Poor maintenance of dorm room. Writing bad checks. Three Article 15 violations.

CODING FOR CASE #0118

Major Problem(s):	Category 4:	Alcohol
	Subcategories:	Rehab failure drunk on duty
	Category 3:	Work/duty
	Subcategories:	Minor disciplinary infractions disruptive influence in unit disobeyed orders failure to report for duty

5. Drugs—Failure at or refusal to participate in rehabilitation, positive drug test results, possession of drugs and drug use prior to enlistment.

EXAMPLES:

CASE SUMMARY #0144

Erroneous enlistment. SM prior service drug use exceeds those limits established for entry into the USAF. Had this been known prior to enlistment, SM would not have been allowed to enlist. SM admitted to Drug Abuse Officer prior service illegal involvement with stimulants, depressants, hallucinogens, and narcotics.

CODING FOR CASE #0144

Major Problem:	Category 5:	Drugs
	Subcategory:	Used prior to enlistment

CASE SUMMARY #0259

General discharge—misconduct for drug abuse. SM did within the territorial limits of the U.S. wrongfully use marijuana. SM denies using marijuana. Before recommending this discharge, I have carefully reviewed SM's records. Based on the positive urinalysis indicating the use of marijuana, there seems to be sufficient proof of a direct violation. The illegal use of drugs by members of the Strategic Air Command and especially those who work around the flightline can neither be condoned or tolerated. My recommendation for discharge is based on this fact.

CODING FOR CASE #0144

Major Problem:	Category 5:	Drugs
	Subcategory:	Positive urinalysis test

CASE SUMMARY #0106

Honorable discharge for his personal abuse of drugs. Specifically, he refused to participate in, cooperate in, or complete a drug abuse treatment and rehabilitation program. Member refused to change his philosophy on drugs. Categorized as a marijuana user and past user of LSD. Heavy user of pot and LSD prior to enlistment but stopped before enlisting. Then started again. Revealed a few episodes of flashbacks. He voluntarily entered rehab program but then refused to cooperate with treatment program. Said sessions were not helping and that he found it difficult to talk about drug use with the military doctors. His urine tests revealed morphine use.

CODING FOR CASE #0106

Major Problem:	Category 5:	Drugs
	Subcategories:	Refused to participate in rehab/ positive urinalysis results/ used drugs prior to enlistment

6. Major offenses—Military and civilian, including failure to disclose prior criminal record.

EXAMPLES:

CASE SUMMARY #0030

Separation as a result of court-martial. Wrote numerous bad checks at AFEES. Guilty of fraudulent entry because concealed prior convictions by civil court for felonious offenses; concealed prior military service. Military punishment included forfeit pay for six months; confined for three months; reduced in rank.

CODING FOR CASE #0030:

Major Problem:	Category 6:	Criminal offense
	Subcategories:	Concealed civilian convictions/ bad check writing
	Category 7:	Other offense
	Subcategory:	Concealed prior military service

CASE SUMMARY #0168

Fraudulent entry. Concealment of prior convictions. SM concealed the fact that he had several arrests including drug trafficking and theft and had spent time incarcerated.

CODING FOR CASE #0168

Major Problem:	Category 6:	Criminal offense
	Subcategory:	Concealed prior civilian record

CASE SUMMARY #0252

General discharge. Misconduct-pattern of discreditable involvement with military or civil authorities. Evidence summarized as follows: 1) AWOL; 2) civilian arrest for shoplifting; 3) bad check writing; and 4) civilian conviction for auto burglary.

CODING FOR CASE #0252

Major Problem: Category 6: Criminal offenses (with subcategories for specific offenses listed above)
Category 7: Other offenses
Subcategory: AWOL

7. Minor offenses—Includes AWOL, non-DUI traffic violations, and failure to disclose prior military service.

EXAMPLES:

CASE SUMMARY #0185

Fraudulent entry—concealed prior military service and the fact that SM has a reenlistment code of 3B which made him ineligible for reenlistment unless a waiver was granted. Since no waiver was granted, SM is a fraudulent enlistment and was discharged as such. Admitted no recruiter connivance in enlistment.

CODING FOR CASE #0185

Major Problem(s): Category 7: Other offense
Subcategory: Concealed prior service

CASE SUMMARY #0029

AWOL for nearly two months. Wife having a baby and has serious health problems. Family also has financial difficulties. SM wishes to terminate service and get job in an asbestos factory so he can be close to family. He is determined to get out of Army at any cost.

CODING FOR CASE #0029

Major Problem(s): Category 7: Other offense
Subcategory: AWOL

CASE SUMMARY #0020

Was AWOL for two months because of personal and family problems. SM desires a discharge—he requested personal leave and it was denied. Stated if returned to duty, he would go AWOL again. Discharged in lieu of court martial.

CODING FOR CASE #0020

Major Problem(s): Category 7: Other offense
Subcategory: AWOL

8. Homosexuality—Including failure to disclose prior to entry.

EXAMPLES:

CASE SUMMARY #0087

Discharged—by reason of misconduct.homosexual actions. Case file reflects that SM made homosexual advances toward two different airmen in a base dormitory and in another incident was apprehended for assault and battery as well as being drunk and disorderly. During the investigation of this incident it was determined that he had committed an indecent assault on a male airman. As a result, he received an Article 15. Action initiated because the policy is that homosexuality is not tolerated in the Air Force. Participation in a homosexual act, or proposing or attempting to do so, is considered serious misbehavior. Similarly, airmen who have homosexual tendencies do not meet Air Force standards.

Major Problem(s):	Category 8:	Homosexuality
	Category 6:	Criminal offense
	Subcategory:	Assault
	Category 4:	Alcohol abuse
	Subcategory:	Drunk and disorderly

CASE SUMMARY #0145

Unsuitable—homosexual tendencies—pre-service acts. AWOL for five days after which she revealed to commander that she is gay. Airman's statement: She is presently having difficulty adjusting to AF environment because of her sexual orientation. She is straightforward about her sexual preference and describes that this preference distracts her from her duty requirements. She is conscientious in her work and likes to perform well but does not want to continue her military service. Was also referred to mental health for an evaluation. Their diagnosis was—sexual deviation, homosexuality—adjustment reaction to adult and military life.

CODING FOR #0145

Major Problem(s):	Category 8:	Homosexuality
	Category 7:	Other offense
	Subcategory:	AWOL

CASE #0208

Admission of homosexuality. Profession of homosexual tendencies. Statement by SM:

> "I, SM, have engaged in homosexual relations between the time span of. . . . These acts did not happen on post, in public view, with anyone under 16, with anyone in my company, nor prior to my active duty service. I felt this matter should be brought to your attention immediately as opposed to the possibility of it being revealed by some other means later."
>
> Received an honorable discharge. Many written statements from his supervisors with commendations of his good work. One commanding officer (CO)

said that SM's willingness to learn helped the company through some trying times due to a shortage of mechanics. He went on to say that SM's attitude, adaptability to work put him ahead of his fellow soldiers. However, an honorable discharge was eventually granted.

Major Problem: Category 8: Homosexuality

9. Pregnancy—At time of enlistment or later.

EXAMPLES:

CASE SUMMARY #0121

Erroneous enlistment in that she was pregnant prior to enlistment and would have been disqualified from military service. [You] will not be entitled to maternity care in military medical facilities subsequent to discharge.

CODING FOR CASE #0121:

Major Problem: Category 9: Pregnancy
Subcategory: Pregnant at time of enlistment

CASE SUMMARY #0135

SM requested separation. "Reason for my request is pregnancy. At my present duty station, I feel that adequate day care services are not available. That the first few years of my child's growth are of prime importance in the building of her character and I wish to be able to raise her during her formative years. Remaining in the service would distract my husband and me from carrying out our military duties."

CODING FOR CASE #0135:

Major Problem: Category 9: Pregnancy
Subcategory: After enlistment/
requested by servicemember

CASE SUMMARY #0149

SM requested separation . . . Reason for request—"I desire to relocate to my home of record and set up housing and procure my family physician's services during my term of pregnancy."

CODING FOR CASE #0149:

Major Problem: Category 9: Pregnancy
Subcategory: After enlistment/
requested by servicemember

10. Physical—Failure to meet physical fitness requirements; overweight.

EXAMPLES:

CASE SUMMARY #0149

SM is physically unfit for military service by reason of a painful right wrist. Injury is considered to have occurred in line of duty. SM was participating in the horizontal ladder event and fell while participating in physical training (PT). The degree of impairment warrants separation with entitlement to disability severance pay. Separated under honorable conditions, general discharge by reason of physical disability, severance pay.

CODING FOR CASE #0032

Major Problem:	Category 10:	Physical
	Subcategory:	Other: wrist pain (not eligible for medical discharge)

CASE SUMMARY #0183

Arrived at BT overweight and had problems with physical fitness. Lacks the necessary self-discipline, physical ability, and motivation desired of a productive soldier. Entry level separation.

CODING FOR CASE #0183

Major Problem:	Category 10:	Physical
	Subcategory:	Overweight

CASE SUMMARY #0243

Hearing loss is diagnosis. SM's physical profile (hearing) does not meet the standards for his AFSC. Eliminated from training based on hearing evaluation completed at Fitzsimmons Hospital. Military physician recommended retraining into another AFSC. But SM stated that he did not desire to be retrained into another AFSC. He was given an entry level performance and conduct separation.

CODING FOR CASE #0243

Major Problems:	Category 10:	Physical
	Subcategory:	Other: hearing loss

EXAMPLES OF MULTIPLE PROBLEMS

Below are three examples of cases that illustrate that recruits often had two or more problems leading to the early separation.

CASE SUMMARY #0189

SM has consistently been a substandard and unacceptable performer who has required too much attention from his chain of command. In light of his poor attitude and his unwillingness to alter his behavior, reassignment would not be beneficial to the US Army [illegible] Received several Article 15s for [illegible] Received two Article 15s for [illegible] [illegible] language [illegible]

CODING FOR CASE # 0189

Major Problems:	Category 5:	Drugs
	Subcategory:	Used cocaine
	Category 6:	Major offenses
	Subcategory:	Assault/ carrying concealed weapon bad check writing/ disorderly conduct

CA[illegible]UMMARY #0140

[illegible]man (AMN) concealed three pre-service convictions for shoplifting. Found guilty of drunk and disorderly conduct and guilty of professional negligence causing injuries while DUI. Several failed attempts at alcohol rehabilitation. AMN also deliberately concealed the fact that she had been an in-patient at a mental hospital. Currently diagnosed by AF medical authorities as having a personality disorder—Anti-social personality.

CODING FOR CASE #0140

Major Problems:	Category 1:	Mental health
	Subcategory:	Concealed prior hospitalization/ personality disorder
	Category 4:	Alcohol abuse
	Subcategory:	DUI failed rehabilitation
	Category 6:	Major offenses
	Subcategory:	Concealed prior record for shoplifting

CASE SUMMARY #0169

SM has been a totally unsatisfactory performer during his assignment with this unit. He was arrested by the civilian authorities for selling marijuana from a van. Was also arrested by the MPs for stealing government property and trying to pawn it. Was AWOL. Diagnosed by base psychiatrist as having an atypical personality disorder with antisocial features. MH evaluation also noted: continuous cannabis abuse; continuous alcohol abuse. This SM is making suicidal threats and expressing feelings of hopelessness which are contingent upon his facing punishment and/or having to stay in the Army. SM stated that he would rather die than have to spend much time in jail again. It was the examiner's opinion that these threats are a manipulative attempt based on the SM's character disorder rather than because of any serious affective disorder. SM states that if he were suddenly a civilian and able to do what he wanted, he would probably feel much better about things and no longer feel suicidal.

CODING FOR CASE #0169

Major Problems:	Category 1:	Mental Health
	Subcategory:	Personality disorder/ suicidal threats
	Category 4:	Alcohol abuse
	Category 5:	Drug abuse
	Subcategory:	Marijuana user
	Category 6:	Major offenses
	Subcategory:	Selling illegal drugs/ stealing government property
	Category 7:	Minor offenses
	Subcategory:	AWOL

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