

AD-785 383

THE IMPACT OF MILITARY SERVICE ON LOW
APTITUDE MEN

William E. Beusse

Assistant Secretary of Defense (Manpower
Reserve Affairs)

Prepared for:

Air Force Human Resources Laboratory

February 1974

DISTRIBUTED BY:

NTIS

National Technical Information Service
U. S. DEPARTMENT OF COMMERCE
5285 Port Royal Road, Springfield Va. 22151

UNCLASSIFIED

SECURITY CLASSIFICATION OF THIS PAGE(When Data Entered)

(Item 20 - Cont'd)

dealing with the effects of military service upon post-service economic status were examined.

The results of the data analysis indicate that military service has a positive impact upon the post-service lives of low aptitude men. Compared to their nonveteran twins, it was found that veterans were more likely to (1) complete their high school education or obtain a GED, (2) be employed in the higher skilled, higher paying occupations and industries, (3) have joined a union, and (4) to have migrated from the geographic region in which they resided at age 18.

It was also found that veterans earn significantly higher wages than non-veterans. Veterans fared better than nonveterans within each racial-educational subgroup. These income differences were found to be independent of unmatched background characteristics.

1-a

UNCLASSIFIED

SECURITY CLASSIFICATION OF THIS PAGE(When Data Entered)

TABLE OF CONTENTS

<u>Chapter</u>	<u>Page</u>
1. INTRODUCTION.	3
Background.	3
Purpose	3
Approach.	4
Sample.	4
Weighting of Data	6
2. SELECTED REVIEW OF THE LITERATURE ON THE	9
RELATIONSHIP OF VETERAN STATUS TO SUCCESS IN CIVILIAN LIFE	
Theoretical Positive Effects of Military.	9
Service on Civilian Attainment	
Theoretical Negative Effects of Military.	14
Service on Civilian Attainment	
The Relationship Between Veteran Status	15
and Income	
3. COMPARISON OF VETERANS AND NONVETERANS ON	19
BACKGROUND CHARACTERISTICS AND CURRENT STATUS	
Background Characteristics.	19
Current Status.	20
4. THE IMPACT OF MILITARY SERVICE ON LOW	23
APTITUDE MEN	
The Impact of Military Service on Education	23
The Impact of Military Service on Occupation.	24
The Impact of Military Service on Geographic.	30
Mobility	
The Impact of Military Service on Health.	30
The Impact of Military Service on Job Tenure.	32
5. THE IMPACT OF MILITARY SERVICE ON INCOME.	33
6. SUMMARY AND CONCLUSIONS	41
Bibliography	45

CHAPTER I

INTRODUCTION

BACKGROUND

In October 1966, the Department of Defense (DOD) initiated "Project One Hundred Thousand" which revised the physical and mental standards applicable to potential military accessions. Under this program, men who scored as low as the 10th percentile on the Armed Forces Qualification Test (AFQT) were acceptable for military service. Non-high school graduates who scored between 10 and 30 on the AFQT were also required to pass certain supplementary aptitude tests. Also, men who previously would have been ineligible because of certain physical defects were considered acceptable if their defects were easily correctable (e.g., overweight, underweight, hernia etc.). Personnel who entered the service as a result of the revised entrance criteria are referred to as "New Standards" men.

The primary rationale behind the New Standards program was that both the military and the individual would benefit by opening up recruitment to individuals of lower ability. The military would benefit by being better able to fill manpower needs. In addition, the experience of dealing with large numbers of lower ability personnel would offer opportunities to improve selection, training, assignment and utilization techniques and thereby increase the capability of the services to respond effectively to high manpower requirements in the future. The individual would benefit by the opportunity to increase his educational level, learn skills, and acquire working experience.

The directives covering the administration of Project One Hundred Thousand made provisions for extensive record keeping so that the progress of New Standards personnel could be continually monitored. The characteristics and performance of New Standards men has been reported elsewhere (OASD (M&RA), 1969). In addition, an annotated bibliography of studies relating to the performance of marginal manpower in the military service is being prepared (Nadel and Ratliff, in preparation).

PURPOSE:

The primary objective of this study is to ascertain how well low aptitude men with military service compare economically and occupationally to a similar group of men without military service. This project has been jointly supported by the Office of the Assistant Secretary of Defense (Manpower and Reserve Affairs), the Air Force, the Department of Labor, and the Veterans Administration.

APPROACH

The data for this analysis were gathered through the use of structured field interviews. The interview forms were designed by AFHRL personnel and tested in the field in the Fall of 1971. Marketing Information Service (Division of Retail Credit Company) was contracted to locate and interview approximately 1000 New Standards veterans on a DoD-supplied listing and 1000 matched nonveteran control subjects.

The bulk of the interview schedule dealt with the individual's occupational history. In addition, information on education, training, and geographical mobility was obtained to enable a comprehensive comparison of the veterans and nonveterans on a number of indicators of success in civilian life.

SAMPLE

The subjects were selected by a stratified random sample of Army New Standards separatees who had entered the service between October 1966 and March 1967 under the reduced mental standards criteria, had completed 18-24 months of military service, and were separated under honorable conditions during the period of July 1968 through June 1969. Each stratum was to be composed of randomly selected men:

500 Caucasians:	250 H.S. graduates, 250 non-H.S. graduates
500 Negroes:	250 H.S. graduates, 250 non-H.S. graduates

Equal numbers of enlistees and inductees were to be selected for each stratum of veterans. All men must have scored between 10 and 15 on the AFQT. These selection criteria resulted in a sample composed of individuals with the characteristics shown in Table 1.

Selection of the nonveteran "matched twins" was accomplished by the contractor. The sample listing of veterans which was provided to the contractor contained information on the veteran's demographic characteristics and his Local Selective Service Board. Through the cooperation of the Local Board, the Field Interviewer consulted the "logbook" or Form 102 which lists registrants according to their year of birth and shows the subject's selective service classification. Only those registrants with a I-Y or 4-F classification who were rejected solely on mental test grounds were considered potentially eligible respondents. Review of the registrant's Form 47 and Form 88 provided sufficient data for nonveterans to be matched to veterans using the following criteria:

- A. Same age as veteran (within six months plus or minus)
- B. Same race as veteran.
- C. Same geographic location as veteran (i.e., rural, urban, etc.).
- D. Same educational attainment as veteran (either high school graduate or nongraduate).

TABLE 1

Interview completions from the Stratified Random Samples

<u>Sample Category</u>	<u>Initial Sample</u>	<u>Located & Interviewed</u>	<u>Completion Rate</u>
VETERANS			
Caucasians			
High School Graduate Enlistees	136	70	52%
High School Graduate Inductees	130	82	64
Nongraduate Enlistees	140	104	74
Nongraduate Inductees	134	93	69
Negro			
High School Graduate Enlistees	120	70	64
High School Graduate Inductees	124	86	69
Nongraduate Enlistees	134	73	55
Nongraduate Inductees	<u>130</u>	<u>89</u>	<u>69</u>
Total Veterans	1048	674	65%
NONVETERANS			
Caucasian			
High School Graduates	266	123	55%
Nongraduates	274	210	46
Negro			
High School Graduates	244	135	66
Nongraduates	<u>264</u>	<u>175</u>	<u>77</u>
Total Nonveterans	<u>1048</u>	<u>643</u>	<u>61%</u>
Total:	2096	1317	63%

- E. Must have scored in the range of 7 through 12 on the AFQT if a high school graduate or between 10 and 15 (and low on AQB) if non-high school graduate.
- F. Disqualified for service solely on mental test grounds.
- G. Had never entered the military.

The Field Interviewer accepted the first registrant who met the above qualifications. Small, rural Local Boards frequently did not have registrants who met the matching criteria. In such cases, the State Director of Selective Service was requested to select an alternative Local Board comparable to the original board in terms of population and rural or urban location. Even with this procedure, however, it was not always possible to find a completely suitable match.

The Local Board also provided the subject's last known address. As was expected from the results of a pre-test conducted in the Fall of 1971, locating the subjects proved to be a difficult task. The interviews were conducted in April and May, 1972. Sixty-five percent of the interviews were conducted in person, the remainder being telephone interviews. Completely usable interview forms were received on a set of 477 veterans and 477 nonveteran matches. In addition, data were collected on 197 veterans for which no match could be found and on 166 nonveterans whose veteran match could not be located. Table 2 summarizes the specific reasons for sample attrition. Because this study deals with comparison of veterans and nonveterans, only the set of 477 matches is analyzed in this report.

WEIGHTING OF DATA

Since the sample was stratified to insure a sufficient number of respondents with each of the stratification characteristics and since the completion rates of the various strata differed (although not radically), the raw data did not accurately represent the New Standards population. In order to be able to generalize about New Standards veterans as a group, a weight was attached to each stratum to bring it up to the proportion which it represented in the total 22,009 Army New Standards population during the fourth quarter 1966-first quarter 1967 accession period. Nonveterans received the same weight as their veteran match. Table 3 shows the weighted and unweighted distributions. The information presented in this report is based on weighted data and can be assumed to represent the population as a whole.

Table 2
Reasons for Noncompletion of Interviews

<u>Reasons for sample attrition</u>	<u>Veterans</u>		<u>Nonveterans</u>	
	<u>N</u>	<u>%</u>	<u>N</u>	<u>%</u>
Initial sample	1048	100	1048	100
Less:				
Deceased Subjects	16	1.5	2	.2
Vets with "bad" identification data and corresponding number of nonvets	16	1.5	16	1.5
Reenlisted vets or vets outside U.S.	40	3.8	--	---
Subjects who refused	5	.5	7	.7
Vets dropped because no twin could be identified and corresponding number of nonvets	118	11.3	118	11.3
Located but unable to contact after repeated call-backs	18	1.7	20	1.9
Unable to locate	<u>161</u>	<u>15.3</u>	<u>242</u>	<u>23.0</u>
Total Noncompletions	374	35.6	405	38.6
Located and Interviewed	674	64.4%	643	61.4%

Table 3

Unweighted and Weighted Matched Sample Size

	Data Sample Size		Percentage of Weighted Responses
	<u>Unweighted</u>	<u>Weighted*</u>	
VETERANS			
Caucasian			
High School Graduate Enlistees	51	382	2%
High School Graduate Inductees	52	3,091	14
Nongraduate Enlistees	79	3,088	14
Nongraduate Inductees	74	6,092	28
Negro			
High School Graduate Enlistees	51	848	4
High School Graduate Inductees	53	4,529	20
Nongraduate Enlistees	53	1,476	7
Nongraduate Inductees	<u>64</u>	<u>2,503</u>	<u>11</u>
Total Veterans	477	22,009	100%
NONVETERANS			
Caucasian			
High School Graduates	103	3,473	16%
Nongraduates	153	9,180	42
Negro			
High School Graduates	104	5,377	24
Nongraduates	<u>117</u>	<u>3,979</u>	<u>18</u>
Total Nonveterans	<u>477</u>	<u>22,009</u>	<u>100%</u>
Total Sample	954	44,018	100%

* Army New Standards population during the 4th Quarter 1966 - 1st Quarter 1967

CHAPTER 2

SELECTED REVIEW OF THE LITERATURE ON THE RELATIONSHIP OF VETERAN STATUS TO SUCCESS IN CIVILIAN LIFE

There can be many measures of success in civilian life. In the individual's work life, income, socio-economic status, occupation, employment/unemployment record, and educational upgrading are all commonly accepted measures of success. The first part of this chapter will examine the theoretical impact of military service on civilian occupational success. The second part will review the results of empirical research on the relationship between veteran status and income, which is the most commonly used measure of civilian occupational success.

Military service can have both positive and negative effects upon the individual's post-service occupational success. Discussion of these possible effects will concentrate on those which are most likely to have an impact upon low ability men.

THEORETICAL POSITIVE EFFECTS OF MILITARY SERVICE ON CIVILIAN ATTAINMENT

There are six primary ways in which military service can have a beneficial influence on the veteran's life.

1. EDUCATIONAL UPGRADING - The Department of Defense offers servicemen a wide range of educational opportunities during their service careers. For low ability personnel, the high school completion programs are probably the most important. It has been estimated that since World War II, over two million military personnel have attained high school equivalency through the General Educational Development (GED) program (Prothers, 1971). The Predischarge Educational Program (PREP) provides the serviceman with the opportunity to complete his high school education through more traditional channels. For servicemen who have either a high school diploma or its equivalent, the Servicemen's Opportunity College (SOC) allows the individual to pursue a college education through a number of participating institutions of higher education. In addition, the College Level Examination Program (CLEP) enables servicemen to receive college credit for non-traditional learning.

In addition to the wide variety of in-service educational opportunities, the existence of the G.I. Bill allows many veterans to continue their education after separation. Beusse (1974) found that 23% of a sample of Army FY 1973 New Standards separatees reported having used their G.I. Bill education benefits.

The existence of a strong positive relationship between traditional education and income is well documented (Glick and Miller, 1956; Blau and Duncan, 1967; Blum and Coleman, 1970; and Berg, 1970). Also, achievement of GED equivalency has been found to result in

significantly higher civilian earnings (Beusse, 1973).

Aside from education's instrumental relationship to other measures of civilian success, educational attainment can be seen as a measure of success itself. That is, there is an intrinsic aspect associated with increased educational attainment, which can be viewed as raising the quality of life.

By fostering the acquisition of more education, the military should have a beneficial impact upon the post-service life of the veteran.

2. SKILL UPGRADING - The armed services operate the largest training program in the world. All servicemen receive some type of entry level skill training, either formal or informal (on-the-job-training). In addition, there are numerous advanced skill level training programs.

Biderman and Sharp (1968) reported some degree of convergence between the military and civilian occupational structures, although the amount of congruence was fairly small. A study, by Winkler and Thompson (1971), of the transferability of Air Force gained skills to civilian life noted that -

"...nearly three-fourths (72 percent) of the separatees in high-skill, blue-collar civilian occupations held closely related Air Force positions." (p.6)

However, they found the overall utilization to be substantially lower. McCall and Wallace (1967) found that 67% of their sample of Air Force electronic specialists reported using their Air Force training in their post-service job. Such studies appear to imply that military training can be valuable to the veteran, but that its utility is dependent upon other factors. It should be evident that the value of the veteran's military training is highly dependent upon the applicability of his skills to the civilian job market. Also, the utility of the veteran's military training is dependent upon his ability to obtain post-service employment in that field or a related field. These caveats should not be taken lightly since there is a considerable amount of empirical research which generally shows rather low overall utilization rates (Kassing, 1970; Weinstein, 1969; Sharp and Biderman, 1967, as well as the studies mentioned above).

There is reason to believe that the transferability of the training received by New Standards personnel might be somewhat lower than for veterans as a whole. A report prepared by the Office of the Assistant Secretary of Defense (Manpower and Reserve Affairs 1969) showed that approximately two-fifths of the Army New Standards men were assigned to combat skill areas where there is little if any direct transferability to civilian occupations. In addition, their higher than normal training attrition rates limited their acquisition of

"hard-skills" such as electronics and other technical specialties. However, the report notes that many New Standards men received assignments in such "soft-skill" areas as automotive repair, food service, wire communications, etc. for which there is considerable civilian demand.

To the extent that the low-ability serviceman received training in a skill which is marketable in the civilian economy and to the extent that he utilizes his training in his post-service employment, military service should have a positive effect upon post-service success.

Aside from training intended to upgrade the servicemen's performance of his military occupation, DOD maintains a number of programs through which the serviceman can acquire vocational training specifically intended to give him a marketable civilian skill. In January of 1968, DOD implemented Project Transition on a large scale basis. The purpose of this program was to provide maximum guidance counseling and training opportunities to prepare separating servicemen for their reentry into civilian life. The program was primarily oriented toward those servicemen who were ineligible to reenlist; who served almost exclusively in combat military specialties; who had low educational achievement; who entered the service with no civilian job experience and who did not acquire a civilian related skill during their period of active duty. Vocational training was provided by a variety of sources: industry, government agencies (i.e. Labor Department MDTA, Post Office Department), and on-the-job training at the military post. Despite the fact that New Standards personnel were a prime target of Project Transition, their usage of this program appears quite low. A study by Beusse (1974) found that only about 4% to 5% of a sample of Army FY 1969 New Standards separatees participated in the Transition program.

Voluntary training opportunities also exist under the aegis of the G.I. Bill. These training benefits may be used either while the serviceman is on active duty or after separation.

The wide variety of training opportunities available to the serviceman while on active duty and after separation, should act to benefit the veteran's post-service occupational success.

3. GEOGRAPHIC MOTILITY - Occupational opportunities vary greatly among different types of communities and among communities of the same type in different regions. Blau and Duncan (1967) point out that;

"Migration provides a social mechanism for adjusting the geographical distribution of manpower to the geographical distribution of occupational opportunities." (p. 243)

Aside from the direct effect of migration upon the geographic discontinuities between the supply of and demand for labor, there are other indirect effects. Blau and Duncan (1967) noted that the place in which a man is born affects his future employment chances in a variety of ways by subjecting him to the background and educational limitations or advantages associated with that particular locale. They also point out that psychological attachments tend to restrict motility (i.e., the capacity to move).

Studies comparing migrants with nonmigrants generally conclude that migrants achieve a higher level of pay than nonmigrants (Blau and Duncan, 1967; Kohen and Parnes, 1971; and Cutright, 1973). Kohen and Parnes (1971) also found that migrants were more likely than nonmigrants to have experienced an increase in job satisfaction.

Service in the military almost always involves geographic mobility. The experience of moving to a new and different area may serve to break the individual's geographic inertia. To the extent that previous moves serve to limit the saliency of psychological attachments, veterans should be more motile than nonveterans. Their higher propensity to move may enable them to look for and find jobs in locations which otherwise would not even have been considered.

There is some empirical evidence that military service is associated with post-service geographic mobility. Cutright (1973) found that former servicemen were much more likely than nonveterans to migrate out of the South. The difference was especially strong among low ability men. Also, within a region, ex-servicemen were more likely to have moved to a different state.

In a study of technically trained Air Force personnel, McCall and Wallace (1967) noted that there was a strong inclination for airmen whose pre-military location was North-rural or South-rural to move to urban centers after separation.

Thus it appears that the attendant geographic dislocation of military service and becoming familiar with different areas of the country may serve to increase the individual's motility which can consequently act to improve his economic well being.

4. CREDENTIAL EFFECT - Cutright (1973) notes that the military service provides most men with an honorable discharge. For individuals lacking a high school diploma, the military discharge papers may serve as a substitute credential, indicating to prospective employers that the individual has a reliable record. In the absence of other requirements such an individual is likely to receive preference over nonveterans. This credential effect should yield its strongest benefit to the non-high school graduates.

While there is no concrete evidence of the existence of a credential effect, a survey of the job hunting experiences of a group of GED-holders and non-high school graduates revealed that prospective employers are more likely to ask to see the veteran's separation papers than his high school diploma or GED certificate (Beusse, 1973).

5. SOCIAL ADJUSTMENT - Military service involves a great deal of teamwork and working with others. Also, the serviceman is often put in a position of responsibility which would not be equaled in civilian life. Cutright (1973) contends that the military offers the individual challenges and opportunities to perform in an environment where "personal characteristics are not a barrier to achievement and the subsequent rewards." (p. 65) Thus, while noting that he has no documentary evidence of a positive effect, he feels that maturity developed during military service might be beneficial to post-service success. This maturity hypothesis is a prominent recruitment theme.

6. BRIDGING ENVIRONMENT EFFECT - Browning, Lopreato, and Poston (1973) describe the impact of military service in terms of a "bridging environment." These authors contend that military experience aids assimilation of racial and ethnic minority group members into the civilian occupational structure. They note that minority group members tend to live in enclaves, somewhat isolated from the main stream of society. Service in the military curtails many primary ties to kin and community. This acts to break down the individual's dependence upon racial and ethnic enclaves. They emphasize that while -

"...the forced 'integration' of blacks, Mexican-Americans, and Anglos in the same living quarters...does not by any means imply either acceptance or acculturation, (it) does represent profoundly different conditions of association for many minority men." (p. 76)

Another way in which the military service acts as a bridging environment is by giving minority group members experience in dealing with large-scale organizational structures of the kind that they are likely to encounter in the civilian economy. As Browning, Lopreato, and Poston (1973) point out;

"In the military, the individual learns to live within bureaucratic structures and to subvert and manipulate the rules and regulations to his own advantage." (p. 77)

This increased capability of coping with complex organizations should give veterans an advantage over nonveterans in the civilian industrial and business world.

THEORETICAL NEGATIVE EFFECTS OF MILITARY SERVICE ON CIVILIAN ATTAINMENT

There are three primary ways in which military service can have a negative impact upon the veteran's post-service occupational success.

1. **PHYSICAL DISABILITY** - A physical disability incurred while in the service could obviously be detrimental to the individual's post-service life. Since New Standards men were more likely to be assigned to combat specialties than control group men (OASD/M&RA), 1969), they were also more likely to have received wounds which may result in some physical impairment. Depending upon the severity of an individual's disability, he may be limited in the types of jobs he can perform or he may incur high numbers of absences for illness.

2. **REMOVAL FROM THE LABOR FORCE FOR TWO YEARS** - Cutright (1973) points out two ways in which the veteran may be penalized by loss of two years of labor force experience. First, even though he is guaranteed reemployment rights, the veteran will probably be at some competitive disadvantage with nonveteran peers who never left their civilian job. Second, nonveterans may have had the opportunity to complete their education and enter the labor market with a two-year head start, gaining valuable seniority rights. In addition, since military pay during this period was substantially below the prevailing wage level in the civilian labor market, the veteran would have foregone a portion of his expected life-time earnings.

3. **PSYCHOLOGICAL EFFECTS** - There is reason to believe that military service during the late 1960s may have had a negative psychological impact on the veteran. The divisiveness of attitudes toward U.S. involvement in Vietnam and the publicity about military drug problems have led some Vietnam-era veterans to feel that a stigma is attached to their military experience and that they have not been treated fairly by society.

So far, the incidence of psychiatric problems has been found to be much lower during the Vietnam era than during either the Korean War or World War II (Borne, 1970; Allerton, et al, 1972). However, many psychiatrists maintain that military service during the Vietnam era may have a delayed psychological impact upon the veteran. Segal and Borus (1972) have indicated that psychiatric casualties stemming from Vietnam may not turn up until several years after separation. These delayed emotional and behavioral reactions to combat make it difficult to assess the psychological impact of military service.

There have been a number of recent works attempting to explain what has come to be called the "post-Vietnam syndrome." Tifton (1973) states that American fighting men in Vietnam possessed no religious, ideological, or patriotic framework by which they could justify involvement. Thus they emerged with a deep sense of rage and guilt. Shatan (1973) points out that unlike veterans of previous wars Vietnam-

era veterans returned;

"unheralded and unwanted to an ambivalent nation. Due to the rotation system, they came back piecemeal, one at a time, without their units, without their buddies, without their usual victory parades." (p. 58)

Developments such as these made many veterans feel used and betrayed. The violence of combat has also left some deep emotional scars so that some veterans have become alienated. Fendrich (1971) and Terry (1972) indicate that disenchantment is especially strong among black veterans. Thus, the weight of current studies (Ayers, 1972; Castelli, 1971; as well as others cited) would indicate that military service during the Vietnam era may be psychologically detrimental to the veteran's post-service life.

THE RELATIONSHIP BETWEEN VETERAN STATUS AND INCOME

As was noted earlier in this chapter, there can be many ways of measuring success in civilian life. Probably the most common indicator of occupational success is income. One reason for the popularity of income as a dependent variable is the fact that income is generally related to other measures of success such as prestige and occupation. Also, income is much more easily quantified than other indicators of success. However, despite the apparent clear-cut nature of the income criterion, the evidence concerning the impact of military service on civilian earnings is mixed.

There are a number of econometric studies which have found that military status has a detrimental effect upon income. This penalty has been alternatively referred to as an "implicit tax" (Oi, 1967), a "tax-in-kind" (Davis and Palomba, 1968); and "another cost of conscription" (Willett, 1968). The general thrust of these and other similar studies is that the draft system -

"imposes an implicit income tax on draftees in the form of reduced rates of pay, i.e., the differences between their civilian opportunity cost and the military remuneration - in cash and in kind." (Hansen and Weisbrod, 1967, p. 396)

Other studies consider the long-range effects of military service on future income (Bailey and Cargill, 1969). However, the primary conclusion of all these studies is that compulsory military service imposes an income penalty upon the individual.

Kassing (1970) in a study prepared for the President's Commission on an All-Volunteer Armed Force, concluded that military experience has an unfavorable effect on income. He found that overall, veterans tend to earn less than nonveterans when educational and regional factors are accounted for. Kassing's study also casts doubt on the argument that military training has a positive impact on future civilian earnings. He found that as many as 20 percent of men who serve in the

military do not have the opportunity to acquire transferable training. Also, of the men who leave the military, only about 25 percent locate and accept jobs which they feel are related to their military service. In addition, based on data from Army veterans, he found no positive effect of military vocational training on subsequent earnings.

Giesecke (1974) found that, although military occupation was found to be highly correlated with post-service earnings, the relationship disappeared after the effects of other variables such as age, race, educational level, marital status, number of dependents, geographic area, and AFQT score were controlled.

There have been several recent studies which indicate that military service has a favorable effect on civilian earnings, at least for certain population subgroups. Browning, et al's (1973) findings generally confirm a positive impact of military experience on post-service earnings of minority group veterans. In agreement with the research cited earlier, they found that, for Anglos, the nonveteran has an income advantage over the veteran. However, for Mexican-Americans and blacks the opposite was true, i.e., the veterans earned more than nonveterans. In focusing upon occupational groups, they found that income penalties for military service seem to accrue primarily to occupations which emphasize career continuity and development (professionals, managers and craftsmen), while income advantages seem to accrue to veterans in sales, clerical, operative, service and laborer occupations. They also note that the last three groups (operatives, service workers and laborers) reveal a positive increment for Anglo veterans in comparison to Anglo nonveterans. They concluded that not only do minority group veterans earn greater incomes on the average than nonveterans, but -

"the income advantages are greatest in precisely those occupations where the bridging attributes of the military environment, i.e., geographic mobility, exposure to skill acquisitions, have the most impact." (p. 82)

Blum (1972) also found a positive relationship between military service and income. Military service prior to initial entry into the labor market is positively related to first job income both for blacks and whites, although it has a greater positive impact upon the blacks. However, over a longer run, the situation was somewhat different. When looking at income of the tenth year after their first job, military service before the first job appears to be a handicap for income growth of whites while continuing to be a positive factor in the income growth of blacks.

Using Selective Service and Social Security Administration data, Cutright, (1973) was able to compare veterans and nonveterans of similar mental ability. His findings, however, were mixed. For a Korean War era cohort, he found that for low-ability men (men scoring below 29 on the AFQT), veterans received higher earnings than nonveteran AFQT failures and medical rejects. However, he also found that deferred

nonveterans earned more than veterans of similar mental ability. Since the most common reasons for deferment were educational and responsibility for dependents (both of which have generally been found to be positively related to income), there is some question concerning the comparability of the deferred group.

The evidence indicates the relationship of training to earnings is mediated by post-service use. Jurkowitz (1968) found that military vocational training had a significant positive effect upon income only if it was used by the individual in all of his post-service jobs or if it was related to his pre-service job. McCall and Wallace (1967) found that, if other influences on earnings were held constant, an airman trained in electronics who was using his training in his post-service job earned about \$637 a year more than those who were not utilizing their training.

Upon closer examination, the apparent discrepancies among the studies reviewed above may not be that great. The studies by Browning et al (1973) and Blum (1972) were able to analytically segregate minority groups and Cutright (1973) was able to isolate different ability groups. They found that military service had a positive impact upon the incomes of minority group members. It may well be that by using aggregated income data and not controlling for race, important population subgroup differences concerning the effects of military service on income in other studies were masked. Such uncontrolled aggregated data tends to be dominated by Caucasians.

The results of several of the econometric studies are consistent, at least in direction, with the finding that various population subgroups are affected differently. Davis and Palomba (1968) found that the implicit tax on military service increases with the amount of education. Bailey and Cargill (1969) found that the implicit tax was higher among those segments of veterans who are subject to higher costs associated with disruption of educational careers. Also, Hansen and Weisbrod (1967) noted that for draft-affected men with poor civilian income opportunities, the implicit tax becomes a negative income tax (i.e., such individuals are better off in the military). Thus, although these studies show earnings disadvantages for veterans, they acknowledge that some segments fare better than others.

On the basis of the studies reviewed here, it is expected that the present research will find that the military service has had a beneficial impact on the post-service experiences of New Standards men. More specifically, it is expected that veterans generally will have achieved higher educational levels and better jobs. Also, they are expected to have been more mobile than nonveterans. Although it is anticipated that veterans will have lower seniority and have had higher rates of illness, these factors should be overridden by a positive impact in other areas.

CHAPTER 3

COMPARISON OF VETERANS AND NONVETERANS ON BACKGROUND CHARACTERISTICS AND CURRENT STATUS

BACKGROUND CHARACTERISTICS

Since differences existing at some time (T_1) may be due either to differences in intervening experiences or differences which existed at an earlier time (T_0), it is important to analyze the background characteristics of the two samples. Presumably, the sampling plan controlled for differences in race, age, geographical area, and educational level, and allowed for only a slight variation in aptitude level (as measured by AFQT score). These factors, which have usually been found to have an impact upon economic status, were controlled so that the veteran and nonveteran samples would be as closely identical as possible except for military service. Table 4 shows the degree of success of the sample selection process in controlling for these variables.

Table 4

Comparison of Veterans and Nonveterans
on the Sample Selection Criteria

<u>Control Variable</u>	<u>Veterans</u>	<u>Nonveterans</u>	<u>Significance</u>
Mean present age	24.4	24.4	NS
Mean AFQT score	12.9	10.1	.01
Percent Negro	42%	42%	NS
Percent of High School graduates when classified by Selective Service	40%	40%	NS

As the above table shows, there are no differences between veterans and nonveterans on age, race, or education. Also, there are less than three points separating the mean AFQT scores of the two groups. Since the AFQT scores in this sample were found to correlate only .09 with present hourly wage, this difference is not considered serious. Thus, it appears that the sample selection procedure succeeded in selecting closely comparable groups.

The interview schedule also gathered information on a number of other background variables: Table 5 shows the distribution of veterans and nonveterans on high school curriculum, age when the individual left high school, and what the individual did immediately after leaving high school.

Table 5

Comparison of Veterans and Nonveterans
on Additional Background Characteristics

<u>Background Characteristic</u>	<u>Veterans</u>	<u>Nonveterans</u>	<u>Significance</u>
High School Curriculum:			NS
General	83%	83%	
Trade or Vocational	14	14	
Business or Commercial	3	3	
Academic	0	0	
Mean age of leaving school	17.6	17.7	NS
Initial Post-School Activity			.01
Full-time employment	62%	66%	
Part-time employment	9	11	
Unemployed	13	19	
Continued Education	5	5	
Military	11	-	

As Table 5 indicates, there are no differences in the type of high school curriculum taken by veterans and nonveterans nor in the age at which they left school. The vast majority of both groups took a general course of study. There are a number of differences between the two groups in their initial post high school activity. A much higher proportion of the nonveterans were unemployed immediately following high school. When only those veterans who did not immediately enter the military are considered, 70% were employed full time, 10% employed part time, 15% unemployed and 6% continued their education. Generally, the veterans appeared to be somewhat better off than the nonveterans immediately after leaving school.

Overall, it appears that the study design was successful in controlling for a number of background characteristics which are known to have an impact upon economic status. Therefore, the probability is fairly high that any differences which may exist between the two groups now are the result, either directly or indirectly, of one group having had military service while the other group had none.

CURRENT STATUS

The distribution of current activities of the veterans and nonveterans is shown in Table 6.

Table 6
Comparison of Veterans and Nonveterans
on Current Activities

<u>Classification of Current Activities</u>	<u>Veterans</u>	<u>Nonveterans</u>
Student	4%	1%
Unemployed	6	9
Employed Part-Time	8	8
Employed Full-Time	82	82

The information in Table 6 shows that a higher proportion (significant at $p < .01$) of nonveterans are unemployed and a higher proportion of veterans are in school. It is possible that some veterans may view education (with attendant VA support) as a practical alternative to unemployment. At the time these data were collected, the national unemployment rate was 6.1%. Of those veterans who were presently attending school, 68% were using the G.I. Bill.

The currently unemployed veterans have been out of work for an average (median) of five months compared to six months for the nonveterans. Thus, there seems to be no significant difference in the duration of unemployment.

Several other current status variables are displayed in Table 7. There is very little difference between veterans and nonveterans in the type of environment in which they live. There are some differences, however, in marital status and number of dependents. Veterans are more likely to be married than nonveterans. However, veterans tend to have fewer dependents. This may be due to veterans marrying later than nonveterans.

Although differences do exist between veterans and nonveterans on some of the current status variables, differences are not found in those variables which are usually related to income, such as the proportion employed full time and urbanicity. Thus, in general, it appears that the study was quite successful in controlling for the variability of important current demographic variables.

Table 7

Comparison of Veterans and Nonveterans
on Additional Current Status Variables

<u>Current Status Variable</u>	<u>Veterans</u>	<u>Nonveterans</u>	<u>Significance</u>
Type of Residential Environment			NA
Large City	37%	36%	
Small City	19	19	
Suburb	8	7	
Small Town	21	20	
Rural, non-farm	13	15	
Farm	2	3	
Marital Status			.01
Single	39%	42%	
Married	54	50	
Widowed, Separated, Divorced	7	8	
Number of Dependents			.01
None	32%	34%	
One	21	16	
Two	25	27	
Three	16	18	
Four or More	6	5	

CHAPTER 4

THE IMPACT OF MILITARY SERVICE ON LOW APTITUDE MEN

The interview form used in this study gathered information relevant to several of the areas mentioned in Chapter 2. This chapter explores the impact of military service on education, occupation, mobility, health and job tenure.

THE IMPACT OF MILITARY SERVICE ON EDUCATION

As was pointed out earlier, the Department of Defense operates an extensive variety of educational programs. Consequently it is expected that a higher proportion of veterans will have increased their educational levels than nonveterans.

One way of measuring educational upgrading is to subtract the individual's grade level at age 18 from his present grade level. The mean grade level increase for veterans was .58 compared to .51 for nonveterans. While this difference is statistically significant, it does not appear to be of practical significance.

Studying the increase in grade levels may be somewhat misleading because it assumes that an increase from 10th grade level to 11th grade level is equivalent to an increase from the 11th grade level to the 12th grade level (i.e., graduating from high school). However, since the latter case involves attainment of a high school diploma, it may be a far more important gain.

One type of credential which might be attained by the non-high school graduates is a General Educational Development (GED) Certificate. Ten percent of the veterans as opposed to 3% of the nonveterans obtained a GED certificate.

Non-high school graduates may also return to and complete a regular high school program. Twenty-three percent of the veterans who were non-high school graduates now list themselves as high school graduates compared to only 17% of the nonveterans.

The past and present educational levels of veterans and nonveterans appear in Table 8.

Table 8

Comparison of Veterans and Nonveterans
on Educational Variables

<u>Education Variables</u>	<u>Veterans</u>	<u>Nonveterans</u>	<u>Significance</u>
Mean grade level at age 18	10.3	10.0	.01
Percent NHSG when classified by Selective Service	60%	60%	NS
Mean grade level at present	10.8	10.5	.01
Percent NHSG at present	47%	54%	.01

Although both groups reduced their proportion of non-high school graduates, a higher percentage of veterans gained high school credentials. Both groups underwent only a modest gain in the mean grade level. This would indicate that the majority of those who increased their educational level were already near high school graduation.

THE IMPACT OF MILITARY SERVICE ON OCCUPATION

The theoretical link between military service and occupation is through training and experience gained in service. If this relationship exists, then veterans should gravitate toward better jobs. As noted earlier, approximately 82% of both groups were employed full time. Table 9 shows the distribution of veterans and nonveterans across one-digit Dictionary of Occupational Titles (DOT) categories. These job categories have been ranked in descending order according to mean hourly wage.

When looking at the one-digit DOT classifications, the types of jobs held by veterans and nonveterans do not appear to be too different. They differ by more than a single percentage point in only two of the ten categories; a higher percentage of veterans doing structural work and a higher percentage of nonveterans in processing occupations.

In order to make a better determination of whether differences exist in the distribution of full-time occupations between veterans and non-veterans, it is necessary to go beyond the general, one-digit breakout. However, problems arise from the relatively low sample available when compared with the number of two-digit occupational categories. For this reason, it was decided to restrict the more in-depth study to the 20 most common two-digit job groups. Although these 20 categories include

76% and 74% of the full-time employed veterans and nonveterans respectively, many of the percentages are based on very small sample Ns. The distribution across these occupations is shown in Table 10. Again, the categories have been arranged in decending order, according to the mean hourly wage of the individuals within that category.

Table 9
Distribution of Full-Time Occupations
Across One-Digit DOD Job Categories

<u>One-Digit DOD Job Category</u>	<u>Mean Hourly Wage</u>	<u>Veterans</u>	<u>Nonveterans</u>
(8) Structural Work	\$3.57	25%	21%
(2) Clerical and Sales	3.41	8	7
(6) Machine Trades	3.19	17	17
(7) Bench Work	3.12	5	5
(5) Processing Occupations	3.00	11	14
(9) Misc. Occupations	2.95	19	20
(0,1) Prof., Mgrl., Tech.	2.90	3	2
(3) Service Occupations	2.63	9	10
(4) Farming, Fishing, Forestry	2.35	3	4

As Table 10 shows veterans are more likely than nonveterans to be employed in electrical assembly, metal fabrication, welding, metal machining, transportation, motor freight, managerial and textile occupations, and less likely to have metal working, package and material handling, leather and textile processing, general construction, and building services and related occupations. Reviewing the differences listed above, it appears that veterans are more likely to be employed in skilled trade areas than nonveterans. If this inference is correct, a higher proportion of veterans should be employed in those occupations which have the highest average hourly wage rate (assuming a direct relationship between skill level and pay). To test this interpretation, the twenty occupations were grouped into three categories; the seven highest pay occupations, the six middle pay range occupations, the seven lowest paying occupations. The proportion of veterans falling in each of these categories is shown in table 11. The data (significant at $P < .05$ level) indicate that veterans tend to gravitate toward higher skill, better paying occupations than do nonveterans.

Table 10

Distribution of Full-Time Occupations
Across the Twenty Most Common Two-Digit
DOT Job Categories*

<u>Two-Digit DOT Job Category</u>	<u>Mean Hourly Wage</u>	<u>Veterans</u>	<u>Nonveterans</u>
(29) Merchandising	\$4.05	2%	2%
(82) Electrical Assembly	3.80	5	3
(86) Construction n.e.c.	3.79	9	13
(80) Metal Fabrication	3.70	9	4
(84) Painting; Plastering	3.66	2	3
(81) Welders etc.	3.64	5	3
(60) Metal Machining	3.54	7	4
(61) Metal Working	3.38	4	7
(52) Food Processing	3.30	3	4
(91) Transportation n.e.c.	3.28	6	4
(22) Material & Production Recording	3.10	4	5
(62) Machinery Repair	3.08	3	4
(92) Package & Material Handling	2.93	8	10
(90) Motor Freight	2.82	11	8
(58) Processing Leather & Textiles	2.81	7	10
(38) Building Services Occup.	2.72	6	8
(68) Textile Occupations	2.71	3	2
(31) Food & Beverage Service	2.43	2	2
(18) Mgrs. & Officials n.e.c.	2.42	3	1
(85) Excavation, Grading & Paving	2.13	2	2

* Note: 1% equals a sample N of 3.

Table 11

Proportion of Veterans and Nonveterans
Employed in High, Middle, and Low
Pay Range Occupations

<u>Pay Range Group of Occupation</u>	<u>Mean Hourly Wage</u>	<u>Veterans</u>	<u>Nonveterans</u>
High	\$3.73	39%	32%
Middle	3.14	28	36
Low	2.70	34	33

The type of industry in which an individual is employed is another indicator of skill level. Table 12 shows the distribution of the industries which currently employ the full-time workers in this study, presented in descending order according to mean hourly wage.

Table 12

Comparison of Full-Time Employed
Veterans and Nonveterans by Industry*

<u>Standard Industrial Classification Groups</u>	<u>Mean Hourly Wage</u>	<u>Veterans</u>	<u>Nonveterans</u>
Construction	\$3.76	8%	15%
Public Utilities	3.30	12	7
Manufacturing	3.20	49	45
Public Administration	2.92	7	5
Commerce or Trade	2.76	12	13
Services	2.71	9	9
Extractive	2.60	3	6

* Note: Each 1% represents a sample N of 4.

As shown in Table 12, veterans and nonveterans tend to differ in the types of industries in which they are employed. Again, veterans appear to be in higher proportions in the more skilled areas such as public utilities and manufacturing while nonveterans show higher proportions in the more general skilled extractive and construction industries.

Union membership is a prominent factor in occupational life. Thirty-five percent of the veterans report having joined a labor union compared to 25% of the nonveterans. Unfortunately, the way the union membership question was worded, present membership in a union cannot be determined. That is, the question was: "(Since leaving the military) or (During the past three years) have you joined any organization such as...a union?" It is possible therefore that these figures do not accurately portray current union membership. Also veterans and nonveterans who had joined a union prior to the referent time frame may not be included.

Since the existence of unions is somewhat dependent upon type of occupation and industry, these factors were controlled in an effort to determine whether differences in union membership are due solely to differences in these distributions. The results of this analysis appear in Tables 13 and 14.

As the data in Tables 13 and 14 indicate, the higher proportion of veterans who have joined unions is not due solely to differences in the types of occupations and industries in which they are employed. Within the twenty most common occupations, veterans show a higher proportion of union members in twelve occupations, nonveterans show a higher proportion in seven, while there is no difference between them in two of the occupations. Also, when type of industry is controlled, we find veterans having a higher proportion of union members in seven out of the eight groups. Caution should be used on interpreting these percentages since the sample Ns they are based on are fairly small due to the detail of the breakdown. However, it does seem clear that military service is positively associated with joining a union.

In summary, it appears that military service has had a positive impact upon occupational attainment of New Standards veterans. Veterans tend to be employed in higher paying, higher skill level occupations than nonveterans. Also, veterans are more likely than nonveterans to have joined a union.

Table 13

Comparison of Union Membership of Veterans
and Nonveterans Controlling for Occupation

<u>Twenty Most Common Two-Digit DOT Categories</u>	<u>Veterans</u>	<u>Nonveterans</u>
(29) Merchandising	37%	0%
(82) Electrical Assembly	31	46
(86) Construction n.e.c.	28	35
(80) Metal Fabrication	58	47
(84) Painting & Plastering	29	29
(81) Welders	69	41
(60) Metal Machining	30	34
(61) Metal Working	45	34
(52) Food Processing	26	20
(91) Transportation n.e.c.	51	36
(22) Material & Production	11	14
(62) Machinery Repair	11	38
(92) Package & Material Handling	44	33
(90) Motor Freight	19	22
(58) Processing Leather & Textiles	51	34
(38) Building Services Occupations	31	16
(68) Textile Occupations	0	0
(31) Food and Beverage Services	11	0

Table 14

Comparison of Union Membership of
Veterans and Nonveterans Controlling for Industry

<u>Industry</u>	<u>Veterans</u>	<u>Nonveterans</u>
Construction	29%	24%
Public Utilities	36	28
Manufacturing	44	30
Public Administration	33	14
Commerce or Trade	18	15
Services	12	21
Extractive	44	23

THE IMPACT OF MILITARY SERVICE ON GEOGRAPHIC MOBILITY

It was hypothesized that individuals who served in the military would most likely have been subjected to some geographical dislocation as a result of their military service and that this experience may make them more mobile in their post-service life. By using the present zip code and the zip code of the individual's draft board, two measures of gross mobility were constructed. A measure of "area mobility" was constructed by comparing the first digit of both zip codes. If they were the same, the individual was assumed not to have moved from the geographic region he lived in at age 18. If they differed he was assumed to have experienced area mobility. Likewise, a measure of "section mobility" was constructed by comparing the first two digits. Again, if they were the same the individual was categorized as experiencing no section mobility; if they differed he was classified as mobile. Table 15 shows the proportion of veterans and nonveterans experiencing mobility.

Table 15

Comparison of Veterans and Nonveterans on Geographic Mobility

<u>Mobility Indicator</u>	<u>Veterans</u>	<u>Nonveterans</u>	<u>Significance</u>
Percent experiencing area mobility	9%	5%	.01
Percent experiencing section mobility	16	12	.01

As expected, a higher proportion of veterans have migrated out of the geographic area and geographic section where they were living at the time they registered with the Selective Service.

THE IMPACT OF MILITARY SERVICE ON HEALTH

It was hypothesized that veterans would have had more health problems than their nonveteran twins, due to injuries sustained during service. Approximately 8% of the veterans indicated they were receiving disability payments. Disability percentages ranged from 10% to 100% with a median value of 20%. As of April 1972, 5.1% of all Vietnam era veterans were receiving compensation (Veterans Administration, 1972). Thus it appears that the number and severity of service-related injuries to low aptitude men was not unreasonably high.

The subjects were also asked whether they had suffered any serious illness or disability which affected their ability to obtain or hold a

job. However, the referent time frames differed. Veterans were asked to include all occurrences since leaving the service while nonveterans were asked to include all occurrences since their 18th birthday. No significant differences were found between the two groups concerning the occurrence of illnesses or injuries which affected their jobs. Twelve percent of the veterans reported such instances compared to 11% of the nonveterans.

In looking at the duration of the reported illnesses we find that the median total number of weeks of illness was nine for veterans and 12 for nonveterans. About half of the veterans were sick for only one month or less compared to about 25% of the nonveterans. As far as long-term illness is concerned, 6% of those veterans who were sick were out for a year or longer compared to 10% of the nonveterans.

These data do not provide support for the hypothesis that veterans are more likely to experience debilitating illnesses or injuries than nonveterans.

Eighteen men selected for this study were found to be deceased, 16 veterans and two nonveterans. Table 16 summarizes the causes of death for these men.

Table 16

Comparison of Cause of Death of
Deceased Veterans and Nonveterans

<u>Cause of Death</u>	<u>Veterans</u>	<u>Nonveterans</u>
Auto accident	4	
Heart Condition	2	
Meningitis		1
Self-inflicted deaths	2	
Murdered	3	
Cause of death non-ascertained	<u>5</u>	<u>1</u>
Total deceased	16	2

The above information, while hardly being conclusive evidence, would indicate that the veterans tended to have a higher mortality rate and that a large proportion of those deaths were from violent causes. This lends some anecdotal support for the hypothesis that military service during the Vietnam era can have a debilitating effect on post-service psychological adjustment. However, it should be

recalled that the contractor was unable to locate a higher proportion of nonveterans than veterans. Also the contractor's interviewers usually attempted to interview the veteran first, and thus if a veteran was determined to be unlocatable, uncooperative or disqualified for some other reason, no attempt would have been made to look for his "twin." In addition, since the families of deceased veterans, in many cases, are entitled to death benefits, such as burials, we are likely to have more information on veteran deaths than nonveteran deaths. These factors could have combined to "hide" a number of nonveteran deaths from the interviewers.

THE IMPACT OF MILITARY SERVICE ON JOB TENURE

Since wage rates are partially determined by seniority, the veteran is expected to be at some disadvantage caused by his two-year absence from the civilian labor market. Among the full-time employed men, veterans have held their jobs for an average of 21 months while nonveterans, on the average, have held theirs for 30 months. Non-veterans therefore do seem to have somewhat more seniority than veterans. Since the mean is likely to be affected by extreme values, (i.e., non-veterans who have held a single job their entire working life) it was felt that the median number of months on the job was a better measure of average tenure. As expected, when the median values are used, the gap between veterans and nonveterans narrows substantially, to a difference of only three months.

Both groups were also asked approximately how many jobs they have had during the past three years. The mean number of jobs for veterans was 2.9 compared to 2.5 for nonveterans. Thus it would appear that the veterans were less stable in their employment. However, since for many of the veterans their post-service jobs represent their first entry into the civilian labor market, we should expect a certain amount of job changing.

To get a more comparable measure of job stability, an index was constructed by dividing the number of months on the present job by 24. By converting any values larger than 1 to 1, this index of job stability gives the percent of time during the past two years that the individual has been in his present job. No difference was found between veterans and nonveterans on this index of job stability, the mean value for both groups being about 69%. Thus it turns out that if you discount their initial post-service job experimentation, veterans are no less stable a group of employees than nonveterans.

CHAPTER 5

THE IMPACT OF MILITARY SERVICE ON INCOME

The foregoing analysis has indicated that the veterans have: (1) achieved higher educational levels, (2) obtained employment in the better paying, higher skilled occupations and industries, (3) been more likely to join a union, and (4) been more mobile than nonveterans. Each of these factors has usually been found to have a positive effect upon income. This study also found that veterans possess less seniority than nonveterans. Because seniority generally has a positive effect on income, the veteran's lack of job tenure should exert a negative effect upon his income. To the extent that the positive effects outweigh the negative effects, we should expect to find that veterans earn more money than nonveterans. The data showed that full-time employed veterans earned an average of \$3.28 an hour compared to \$2.97 an hour for nonveterans, a difference of 31¢ an hour. Thus the hypothesis that low aptitude veterans would experience economic benefit from their military service is upheld.

Naturally, some subgroups benefit more than others. Tables 17 to 20 show the mean hourly wages for various subgroups of veterans and nonveterans. Differences denoted by an asterisk (*) are significant at the $p < .01$ level.

Table 17

Comparison of Hourly Wages by Educational Level
at Time of Selective Service Classification

Sample Category	Non-High School Graduate	High School Graduate	Mean advantage to High School Graduate
Veterans	\$3.27	\$3.29	+.02
Nonveterans	2.90	3.06	+.16*
Mean advantage to veteran	+.37*	+.23*	

As Table 17 shows, veteran non-high school graduates earn an average of 37¢ an hour more than their nonveteran twins. For high school graduates,

the differential is 23¢ in favor of the veteran. Since there is only a 2¢ per hour difference, it appears that military service has all but erased the gap between high school graduate and non-high school graduate incomes. Veteran non-high school graduates earn 21¢ an hour more than nonveteran high school graduates. This lends support for the "credential effect" hypothesis.

Table 18
Comparison of Hourly Wages by Race

Sample Category	Negro	Caucasian	Mean advantage to Caucasian
Veterans	\$3.03	\$3.46	+.43*
Nonveterans	2.83	3.08	+.25*
Mean advantage to veteran	+.20*	+.38*	

Table 18 shows that Caucasians tend to gain more than Negroes from their military service. Caucasian veterans earn an average of 38¢ an hour more than Caucasian nonveterans, while Negro veterans earn an average of 20¢ an hour more than their nonveteran counterparts. The data show that Negroes who serve in the military are able to substantially reduce the differential between their incomes and those of Caucasians who did not serve, as only 5¢ an hour separate them.

Tables 19 and 20 break out hourly wage by race and educational level. Among Caucasians, non-high school graduate veterans earn about 45¢ an hour more than nonveterans. Among Caucasian high school graduates the difference is 22¢ again in favor of the veteran. A dramatic narrowing of the gap between the incomes of high school graduate nonveterans and non-graduate veterans is also visible.

Among Negroes the trend is somewhat different, with the high school graduate veteran making a larger gain than the nongraduate veteran, 22¢ and 19¢ respectively. Among the Negro veterans, the gap between graduates and nongraduates actually increases slightly. Thus there seems to be an interaction between race and educational level; among Caucasian veterans the non-high school graduates make the largest gains while among Negro veterans there is almost no difference in the gains between veterans with different educational levels.

Table 19

Comparison of Hourly Wages Among Caucasians, by Educational Level
at Time of Selective Service Classification

Sample Category	Caucasians		Mean advantage to High School Graduate
	Non-High School Graduate	High School Graduate	
Veterans	\$3.41	\$3.59	+.18*
Nonveterans	2.96	3.37	+.41*
Mean advantage to veteran	+.45*	+.22*	

Table 20

Comparison of Hourly Wages Among Negroes, by Educational Level
at Time of Selective Service Classification

Sample Category	Negroes		Mean advantage to High School Graduate
	Non-High School Graduate	High School Graduate	
Veterans	\$2.93	\$3.10	+.17*
Nonveterans	2.74	2.88	+.14*
Mean advantage	+.19*	+.22*	

Although the study design was successful in minimizing the variation between the background characteristics of the veterans and those of the nonveterans, the two groups still differed somewhat on several variables usually associated with earnings. The veterans group had a higher mean AFQT, a higher mean grade level at age 18, and as a group, their immediate post-school activities appeared to be more productive. Thus, before it can be inferred that the difference in current wage rates of the two groups is attributable to military service, the impact of these background differences must be assessed.

Table 21 shows mean hourly wages for veterans and nonveterans, controlling for AFQT, grade level at age 18, and initial post-school activity. Since there were no veterans with AFQT scores below 10 and very few nonveterans with scores above 13, only four AFQT score levels are analyzed. At three of the four AFQT scores, veterans earned significantly more than nonveterans. When grade level at age 18 was controlled, veterans still

earned significantly higher wages than nonveterans. Also, within each category of post-school activity, veterans had higher present wage rates than nonveterans. These results indicate that wage differences found between veterans and nonveterans were not due to differences in their background characteristics.

Table 21

Mean Present Hourly Wage Rates Controlling
for Unmatched Background Characteristics

Unmatched Background Characteristic	Veterans	Nonveterans	Advantage to veteran
AFQT			
10	\$2.88	\$3.07	-.19
11	3.24	3.01	+.23
12	3.24	3.02	+.22
13	3.39	2.98	+.41
Grade Level at Age 18			
8 or less	3.00	2.77	+.23
9	3.36	2.78	+.58
10	3.37	2.97	+.40
11	3.41	2.99	+.42
12	3.07	2.98	+.09
Initial Post-School Activity			
Full-Time Employed	3.36	3.06	+.30
Part-Time Employed	3.21	2.90	+.31
Unemployed	3.16	2.89	+.27
Continued Education	3.13	2.99	+.14
Military	3.49	--	--

Since veterans have been shown to have higher wage rates than nonveterans in every subgroup, the question becomes, "Which veterans receive the most benefits?"

In almost all previous studies of the impact of military service on income, inductees have been found to have experienced the greatest

disadvantage. The data in this study indicate the opposite. That is, among low aptitude personnel inductees benefit more from their military service than enlistees. The mean hourly wage of inductees is \$3.37 an hour versus \$3.04 an hour for enlistees, a difference of 33¢.

Tables 22 to 25 show the tendency for inductees to earn higher wage rates than enlistees in every category. The advantage accruing to the inductees is especially great among non-high school graduates. Inductee non-high school graduates were found to earn higher wage rates than enlistee and inductee high school graduates. Among just enlistees, however, the high school graduate retains his advantage over the non-graduate. Both racial groups seem to display the same characteristics with regard to source of accession and educational level.

Table 22

Comparison of Hourly Wages by Source of Accession and Educational Level at Entry

Sample Category	Non-High School Graduate	High School Graduate	Mean advantage to High School Graduate
Enlistees	\$3.01	\$3.17	+.16*
Inductees	3.42	3.31	-.11*
Mean advantage to inductee	+.41*	+.14*	

Table 23

Comparison of Hourly Wages by Source of Accession and Race

Sample Category	Negro	Caucasian	Mean advantage to Caucasian
Enlistees	\$2.79	\$3.16	+.37*
Inductees	3.10	3.58	+.48*
Mean advantage to Inductee	+.31*	+.42*	

Table 24

Comparison of Hourly Wages Among Caucasians
by Source of Accession and Educational Level

Sample Category	Non-High School Graduate	High School Graduate	Mean Advantage to High School Graduate
Enlistee	\$3.14	\$3.42	+.28*
Inductee	3.57	3.61	+.04
Mean Advantage to Inductee	+.43*	+.19*	

Table 25

Comparison of Hourly Wages Among Negroes by Source
of Accession and Educational Level at Entry

Sample Category	Non-High School Graduate	High School Graduate	Mean Advantage to High School Graduate
Enlistee	\$2.63	\$3.04	+.41*
Inductee	3.07	3.11	+.04
Mean Advantage to Inductee	+.44*	+.07	

Another variable which can be expected to have an impact upon the degree of advantage enjoyed by the veteran is the amount and kind of training received while in the military. Table 26 shows the distribution of one-digit Military Occupational Specialty (MOS) categories.

Table 26

Distribution of one-digit MOS Categories

One-Digit MOS Category	All Veterans
(1) Tactical Operations	43%
(3) General Electronic Maintenance	9
(4) Precision Maintenance	1
(5) Auxilliary Services	9
(6) Motors	15
(7) Clerical	14
(9) General Technical	9

The MOS categories can be broken down into two groups; those veterans who had combat specialties (MOS one-digit category 1) and those who had specialties which were more readily transferable to the civilian labor market (all other MOS categories). This type of breakout can be used as a proxy variable representing training. Those veterans with combat specialties can be considered to have had only general training whereas veterans with other MOS's can be considered to have had more specific kinds of job training. The mean hourly wage rate of the combat specialty group is \$3.20 compared to \$3.34 for the group with noncombat specialties. Since there was no significant difference between the two groups on aptitude (AFQT), this indicates that the more specific training is worth an average of 14¢ per hour. The fact that even the veterans with combat specialties have, on the average, attained a higher wage level than non-veterans would indicate that even the general component of military training is worth about 23¢ an hour.

The use of reemployment rights is another variable which should have an effect upon the degree of benefit the veteran derives from his military service. Overall, about 8½% of the veterans in this sample indicated that they had used their reemployment rights. Inductees were more likely to use their reemployment rights than enlistees, 10% and 4% respectively. Of course, inductees were more likely to have been employed immediately prior to accession and they were more likely to have had a job to return to.

The veteran's use of his reemployment rights seems to have been selective. When the twenty most common jobs are grouped into three categories according to wage rate, we find that 12% of the veterans in the highest paying jobs, 9% in the middle pay range, and 7% in the lowest pay range occupations indicated they returned to their preservice employers.

CHAPTER 6

SUMMARY AND CONCLUSIONS

The purpose of this study was to examine the impact of the military service upon the post-service lives of low aptitude men. The data were collected by interview on samples of 477 Army New Standards FY 1969 separatees and 477 nonveterans who had been "matched" by race, educational level, age, geographic location, and were within a narrow AFQT range. When the data were checked on these and other background variables, little or no differences were found.

The literature concerning the post-service effects of military service was reviewed with special emphasis being placed upon those aspects which are most likely to have an impact on low aptitude men. Six areas of potential benefit for the servicemen were identified: (1) educational upgrading, (2) skill upgrading, (3) increased geographic motility, (4) "credentials" effect, (5) improved social adjustment and (6) a "bridging environment" effect. The review also identified three areas upon which service in the military might have an unfavorable effect upon the veteran's post-service life: (1) health problems, (2) psychological problems, and (3) removal from the labor market for two years.

Studies dealing with the effects of military service upon post-service economic status were also examined. The findings of these studies were mixed. Some found military service to be a detriment to civilian earnings and others found military service beneficial to civilian earnings. Upon closer examination, it was found that the two types of findings were actually somewhat compatible. The differences in their results stemmed primarily from the way they handled their sample populations. Those studies which were able to separate various population subgroups found that military service was of benefit to disadvantaged subgroups such as certain racial and ethnic minorities. Since aggregated data tends to be dominated by white, middle-class characteristics, important subgroup differences were overlooked.

On the basis of the literature review, a number of hypotheses were formulated concerning the effects of military service on a low ability population. It was hypothesized that veterans would: (1) achieve higher educational levels, (2) obtain employment in the higher skilled, higher paying occupations and industries, and (3) be more mobile than nonveterans. Also, it was felt that veterans would experience a higher incidence of health problems and would possess less seniority on the

job. Furthermore, it was expected that the positive influence exerted by the first three items would have overcome the negative impact of the two unfavorable factors and thus the veteran would have higher earnings than his nonveteran "twin."

In an analysis of the current status of the two groups, veterans were found to have a higher proportion of full-time students while non-veterans had a higher proportion of unemployed. About 82% of both groups were currently employed full-time.

The results tended to support most of the hypotheses. In the area of education, it was found that veterans were much more likely than nonveterans to complete their high school education or obtain a GED certificate.

Occupationally, a higher proportion of veterans were found to be employed in the higher skilled, higher paying occupations and industries. Veterans were also more likely than nonveterans to have joined a union, even when differences in the distribution of occupations and industries were controlled.

Also as expected, veterans were found to be more mobile than non-veterans. A higher proportion of veterans subsequently moved away from the geographic region in which they resided at the time they registered with the Selective Service System.

Contrary to expectations, veterans did not suffer any more serious illnesses or disabilities than nonveterans. Although there was some evidence of higher mortality rates among the veterans, the data were not considered conclusive.

In general, veterans held their jobs for fewer months than nonveterans. However, when adjustments are made for nonveterans who may have held a single job for most of their working lives, these differences are substantially reduced. Also, if the initial job experimentation period is discounted, veterans exhibited the same amount of job stability as non-veterans.

The results indicated that veterans earn significantly higher wages than nonveterans. On the average, there is a 31¢ an hour advantage accruing to the veteran. Non-high school graduates were found to benefit more than high school graduates and Caucasians reaped more benefit than Negroes. Veterans fared better than nonveterans within each of the various racial-educational subgroups. These differences were found to be independent of unmatched background characteristics.

Several factors were identified which have an impact upon the amount of benefit the veteran receives from his military experience. Inductees were consistently found to earn more than enlistees. Also, the individual's military occupation and use of veterans' reemployment rights were found to have a strong impact upon current earnings.

On the basis of these results, it can be concluded that definite benefits do accrue to the low aptitude man as a result of his military service. Moreover, these are tangible benefits in the form of higher income. Further research is warranted to investigate the ways in which the benefit the veteran derives from his military service can be maximized.

As was noted earlier, the results of this study tend to be somewhat at odds with the conclusions of previous studies. There are three primary reasons for this. First, the present study scrupulously controlled for differences in race, education, age, geographic locale, and aptitude. Second, this study dealt with a specific subpopulation, i.e., low aptitude men. Finally, this study allowed about a three-year period between separation and measurement of economic status, thereby giving the benefits of military service time to show up.

Finally, some mention should be made concerning the generalizability of these findings. As with all studies dealing with a particular population during a particular period of time, there are limits to the extent to which these findings can be generalized. First, it deals only with a sample of Army New Standards men. Hence, differences in the training and other experiences undergone by New Standards men in other services may limit the applicability of these results. However, since, with the exception of the Marine Corps, the Army has the highest proportion of combat-oriented jobs, it is felt that low aptitude men in the other services would do equally well in civilian life.

Also it should be remembered that this study covered a particular period of time, from about 1965 to 1972. Thus the results have been affected by the state of the economy during this period. On this count, however, it is felt that this study provides a test of the impact of military service under conditions which can generally be expected to impose higher than normal costs upon the veteran for his absence from the labor market. Table 27 shows the national unemployment rates during the month of April for the last eight years.

During the period from late 1966 to early 1969, the period during which these veterans served, the labor market was very loose, a factor which should have acted to give the nonveterans a greater choice among potential jobs. The three years following the reentry of the veterans into the

Table 27

National Unemployment Rates
During April 1965 to 1972*

Year	Percent Unemployed
1965	4.9
1966	3.8
1967	3.7
1968	3.6
1969	3.4
1970	4.7
1971	6.0
1972	6.1

* SOURCE: U.S. Department of Labor, Employment and Earnings,
Vol. 18, No. 11, May 1972

civilian job market saw a general tightening of the labor market along with increasing unemployment rates. In this kind of labor market situation, seniority and tenure should be expected to exert their maximum effect upon the individual. Thus the veterans in this study were caught in a two-way squeeze. On the one hand, the contracting economy made it more difficult to find jobs and, on the other hand, in the face of layoffs, their lack of seniority made it more difficult for them to keep jobs they already had. Despite these disadvantages, the data clearly indicate that the veteran has achieved a higher economic level than a comparable nonveteran. Thus, the results of this study should be considered even more impressive because they took place under what can generally be considered adverse conditions.

BIBLIOGRAPHY

- Allerton, Dr., W.S., et al, "Psychiatric Casualties in Vietnam," in The Vietnam Veteran in Contemporary Society, Washington, D.C.: Veterans Administration, Department of Medicine and Surgery, May 1972.
- Ayres, B.D., "The Vietnam Veteran: Silent, Perplexed, Unnoticed," in The Vietnam Veteran in Contemporary Society, Washington, D.C.: Veterans Administration, Department of Medicine and Surgery, May 1972.
- Bailey, D. and Cargill, T.F., "The Military Draft and Future Income," Western Economic Journal 7: 365-370, December 1969.
- Beusse, W.E., In-Service and Post-Service Benefits of GED Program Participation, MR 73-3, Air Force Human Resources Laboratory, Manpower Development Division, Alexandria, VA., 1973.
- Beusse, W.E., Utilization of Veterans' Benefits by Army New Standards FY 1969 Separatees, Air Force Human Resources Laboratory, Manpower Development Branch, Alexandria, VA, 1974 (in preparation)
- Berg, I., Education and Jobs: The Great Training Robbery, New York: Praeger, 1970.
- Biderman, A.D. and Sharp, L.M., "The Convergence of Military and Civilian Occupational Structures," American Journal of Sociology, 73: 381-399, 1968.
- Blau, P.M. and Duncan, O.D., The American Occupational Structure, New York: Wiley, 1967.
- Blum, Z.D., "White and Black Careers During the First Decade of Labor Force Experience. Part II: Income Differences," Social Science Research, 1: 271-292, 1972.
- Blum, Z.D. and Coleman, J.S., Longitudinal Effects of Education on the Incomes and Occupational Prestige of Blacks and Whites, Baltimore, MD: The Johns-Hopkins University, The Center for the Study of Social Organization of Schools, Report #70, June 1970.
- Bourne, Dr. P.G., "Military Psychiatry and the Viet Nam Experience," American Journal of Psychiatry, 127: 481-488, 1970.
- Brothers, W.L., "The Opportunity for Self Development," Madison, WI: United States Armed Forces Institute, mimeo, 1971.

- Browning, H.L. Lopraeto, S.C., and Poston, D.L., Jr., "Income and Veteran Status: Variations Among Mexican Americans, Blacks, and Anglos," American Sociological Review, 38: 74-85, 1973.
- Castelli, J., "Society and the Vietnam Veteran," Catholic World, 212: 184-188, January 1971.
- Cutright, P., Achievement, Mobility, and the Draft: Their Impact on the Earnings of Men, DHEW Publication No. (SSA) 73-11854, U.S. Department of Health, Education, and Welfare, Social Security Administration, Office of Research and Statistics, 1973.
- Davis, J.R., and Palomba, N.A., "On the Shifting of the Military Draft as a Progressive Tax-in-Kind," Western Economic Journal, 6: 150-153, March 1968.
- Fendrich, Dr. J.M., "The Returning Black Vietnam Era Veteran," Paper presented at the 16th Annual Conference, VA Cooperative Studies in Psychiatry, St. Louis, MO, April 1971.
- Giesecke, L., "The Effects of Military and Civilian Occupation on Early Post-Service Earnings: Army Enlisted Personnel Separating 7/68 through 9/69," Unpublished manuscript, Human Resources Research Organization, Alexandria, VA, 1974.
- Glick, P.C. and Miller, H.P., "Educational Level and Potential Income," American Sociological Review, 21: 307-312, June 1956.
- Hansen, W.L. and Weisbrod, B.A., "Economics of the Military Draft," Quarterly Journal of Economics, 81: 395-421, 1967.
- Jurkowitz, E.L., "An Estimation of the Military Contribution to Human Capital," PhD dissertation, Columbia University, 1968.
- Kassing, D.B., "Military Experience as a Determinant of Veterans' Earnings," Studies Prepared for the President's Commission on an All-Volunteer Armed Force, Vol II. Washington, D.C.: U.S. Government Printing Office, November 1970.
- Kohen, A.I. and Parnes, H.S., Career Thresholds: A Longitudinal Study of the Educational and Labor Market Experience of Male Youth, Vol 3, U.S. Department of Labor, Manpower Research Monograph No. 16, 1971.
- McCall, J. and Wallace, N., Training and Retention of Air Force Airmen: An Economic Analysis, RM-5384-PR, Santa Monica, CA: The RAND Corporation, August 1967.
- Nadel, A.B. and Ratliff, F.R., Bibliography of Published Research on Project 100,000: 1967-1972, Air Force Human Resources Laboratory, Alexandria, VA (in preparation).

- Office of Assistant Secretary of Defense, Manpower and Reserve Affairs, Project One Hundred Thousand: Characteristics and Performance of "New Standards" Men, December 1969.
- Oi, W.Y., "The Economics of the Draft," American Economic Review, 57: 39-63, May 1967.
- Segal, C. and Borus, J., Paper presented at American Psychological Association meeting 1972 (cited in Shatan (1973)).
- Sharp, L.M. and Biderman, A.D., "Out of Uniform: The Employment Experience of Retired Servicemen Who Seek a Second Career," Monthly Labor Review, 90(1):15-21, January 1967 (A).
- Sharp, L. M. and Biderman, A.D., "Out of Uniform: II. Educational Attainment Seen as Key Factor for Retired Servicemen in the Establishment of a Second Career," Monthly Labor Review, 90(2): 39-47, February 1967 (B).
- Shatan, C.F., "How Do We Turn Off the Guilt?," Human Behavior, pp. 56-61, February 1973.
- Terry, W., "Bringing the War Home," in The Vietnam Veteran in Contemporary Society, Washington, D.C.: Veterans Administration, Department of Medicine and Surgery, May 1972.
- Tifton, R.J., Home from the War, New York: Simon and Schuster, 1973
- Veterans Administration, Office of Controller, "Active Compensation, Pension, and Retirement Cases," RCS 21-14, April 1972.
- Weinstein, P.A., Final Report of the Military Training Study, College Park, MD, University of Maryland, Department of Economics, 1969.
- Willett, T.D., "Another Cost of Conscription," Western Economic Journal, 6: 425-426, December 1968.
- Winkler, A.J. and Thompson, P.D., Post-Service Utilization of Air Force Gained Skills, AFHRL-TR-71-2, Air Force Human Resources Laboratory, Manpower Development Division, Alexandria, VA, September 1971.