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# United States Army Recruiting Command

## USAREC SR 91-3

### OVER-REPRESENTATION IN THE U.S. ARMY OF MINORITIES AND WOMEN IN CAREER MANAGEMENT FIELDS 71, 76, 77, and 94

BY

STEVEN E. GALING

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13. ABSTRACT (Maximum 200 words)

This study examines why minorities and women are migrating into four Career Management Fields (CMFs): 71-Administration, 76-Supply, 77-Petroleum and Water, and 94-Food Service. These CMFs have a disproportionate percentage of minorities and women relative to other Army specialties. The Recruiting Command was researched for any inherent bias which might be directing minorities and women into these skill areas. Youth attitudes pertaining to work preference and military service were scrutinized to determine if minorities and/or women are predisposed to these CMFs. It was found that the Recruiting Command is not encouraging minorities and women to enter these particular specialties. Also, research indicates that minorities score lower on the Armed Services Vocational Aptitude Battery (ASVAB) test. The low ASVAB score requirements of the 4 CMFs coupled with the apparent predisposition of many minorities and/or women to enlist for these types of jobs are the primary reasons for over-representation.

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MINORITIES AND WOMEN IN CAREER MANAGEMENT  
FIELDS 71, 76, 77 AND 94**

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**STEVEN E. GALING**

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**USAREC STUDY REPORT 91-3**

for

**U.S. Army Recruiting Command  
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Plans and Analysis Division  
Fort Sheridan, Illinois 60037**

## **DISCLAIMER**

The views, opinions and findings in this study report are those of the author and should not be construed as an official Department of the Army position, policy or decision, unless so designed by other authorized documents.

## **ACKNOWLEDGMENT**

I take this opportunity to acknowledge the immeasurable assistance I received from Matt Fuller, Rich Graham, June Reynolds and Ronald Cunitz. Matt Fuller developed much of the methodology and computer code used to obtain the information analyzed in this paper. June Reynolds created several files that were used to obtain information on recruiters, guidance counselors and line scores for the Career Management Fields. Rich Graham dedicated many hours graphing data and editing the final document. Ronald Cunitz provided invaluable advice and guidance throughout the entire process. Without their collective technical expertise, advice and support, this paper would not have been possible.

## **EXECUTIVE SUMMARY**

This study examines the migration of minorities and females into Career Management Fields (CMFs) 71 (administration), 76 (supply), 77 (petroleum and water) and 94 (food service). The report is divided into two parts: the first evaluates the U.S. Army Recruiting Command to ascertain if the recruiting process is biased; the second examines youth attitudes pertaining to work preference and military service to determine if minorities and/or women are predisposed to these CMFs.

Research indicates that the Army is fairly representing the percentage of minorities and women in all aspects of the recruiting process except Joint Optical Information Network (JOIN) videos. JOIN videos for CMFs 71, 76, 77 and 94 were found to over-represent minorities as compared to the Army as a whole. The impact of JOIN videos, however, is considered minimal when compared to the influence of recruiters, guidance counselors and advertisements.

Surveys of youth attitudes reveal that minorities have a higher propensity to enlist. In addition, minorities and women are more inclined to work in administrative positions. One may conclude that enlisting minorities are somewhat predisposed to select CMFs 71, 76, 77 and 94. In every Military Occupational Speciality (MOS) there is at least one qualifying Armed Services Vocational Aptitude Battery (ASVAB) score. Also, research shows that minorities score lower on the ASVAB. The low ASVAB score requirements, coupled with the apparent predisposition of many minorities and/or women to work in CMFs 71, 76, 77 and 94, are the main factors contributing to the over-representation of minorities and/or women in these CMFs.

## TABLE OF CONTENTS

<b>TITLE</b>	<b>Page</b>
EXECUTIVE SUMMARY .....	ii
TABLE OF CONTENTS .....	iii
LIST OF TABLES .....	v
LIST OF FIGURES .....	vi
INTRODUCTION .....	1
Minority and Female Representation .....	1
Army Representation versus the Market .....	2
REPRESENTATION IN CMFs 71, 76, 77 AND 94 .....	3
CMF 71: Administration .....	4
CMF 76: Supply .....	5
CMF 77: Petroleum and Water .....	7
CMF 94: Food Service .....	8
USAREC INFLUENCES .....	10
Advertising .....	10
Television .....	10
Print .....	11
Recruiter Publicity Items .....	12
Advertising Summarized .....	12
Recruiters .....	13

	<b>Page</b>
Guidance Counselors .....	13
Sales Presentations .....	14
Sales Book .....	15
JOIN Videos .....	15
<b>YOUTH ATTITUDES</b> .....	<b>17</b>
YATS .....	18
1990 Youth Survey .....	19
New Recruit Survey .....	20
<b>TEST SCORES</b> .....	<b>22</b>
Test Score Categories .....	22
Line Scores .....	23
AFQT Scores .....	25
<b>USAREC MISSION ACHIEVEMENT</b> .....	<b>26</b>
Build-Down Initiatives .....	27
U. S. Army Reserves .....	28
<b>CONCLUSIONS</b> .....	<b>28</b>
<b>BIBLIOGRAPHY</b> .....	<b>30</b>

## LIST OF TABLES

	<b>Page</b>
1 Representation in CMFs 71, 76, 77 and 94 .....	4
2 CMF 71: Typical duties and basic qualifications .....	4
3 CMF 76: Typical duties and basic qualifications .....	6
4 CMF 77: Typical duties and basic qualifications .....	7
5 CMF 94: Typical duties and basic qualifications .....	8
6 Minimum line scores .....	23
7 USAREC mission achievement (1990) for CMFs 71, 76, 77 and 94 .....	27



## LIST OF FIGURES

		<b>Page</b>
1	Total male youth population .....	2
2	Army male accessions .....	2
3	Total female youth population .....	2
4	Army female accessions .....	2
5	Percentage of male and female accessions .....	3
6	Percent entry into CMF 71 .....	5
7	Percentage of whites and minorities in CMF 71 .....	5
8	Percentage of men versus women in CMF 71 .....	5
9	Percent entry into CMF 76 .....	6
10	Percentage of whites and minorities in CMF 76 .....	6
11	Percentage of men versus women in CMF 76 .....	6
12	Percent entry into CMF 77 .....	7
13	Percentage of whites and minorities in CMF 77 .....	7
14	Percentage of men versus women in CMF 77 .....	8
15	Percent entry into CMF 94 .....	9
16	Percentage of whites versus minorities in CMF 94 .....	9
17	Percentage of men versus women in CMF 94 .....	9
18	Percentage of personnel type appearing in television commercials	11
19	Percentage of personnel type appearing in 16 posters .....	11
20	Percentage of personnel type appearing in RPIs .....	12

	<b>Page</b>
21	Percentage of enlistees that entered the same prior CMF of the recruiter ..... 13
22	Percentage of enlistees that entered the same prior CMF of the guidance counselor ..... 14
23	Percentage of personnel type appearing in the sales book ..... 15
24	Percentage of whites and minorities in JOIN videos for CMFs 71, 76, 77, 94, 31 and 88 ..... 16
25	Percentage of men and women in JOIN videos for CMFs 71, 76, 77, 94, 31 and 88 ..... 16
26	Percentage of whites and minorities in JOIN videos for other CMFs ..... 17
27	Percentage of men and women in JOIN videos for other CMFs 17
28	Percentage breakout of future plans, white male responses ..... 18
29	Percentage breakout of future plans, minority male responses ..... 18
30	Percentage breakout of future plans, white female responses ..... 19
31	Percentage breakout of future plans, minority female responses 19
32	Percentage breakout of job choices, males and females ..... 20
33	Percentage breakout of job choices, whites and minorities ..... 20
34	Percentage in CMF 71 who prefer this type of job before and after enlistment ..... 21
35	Percentage in CMF 76 who prefer this type of job before and after enlistment ..... 21
36	Percentage in CMF 77 who prefer this type of job before and after enlistment ..... 21

	<b>Page</b>
37	Percentage in CMF 94 who prefer this type of job before and after enlistment ..... 21
38	Percent of personnel in TSC I-III A ..... 22
39	Percent of personnel in TSC IIIB ..... 22
40	Percent of personnel in TSC IV ..... 23
41	General maintenance test: Percent of Army applicants scoring 90 or higher ..... 24
42	Clerical Test: Percent of Army applicants scoring 95 or higher 24
43	Operator and Food Test: Percent of Army applicants scoring 90 or higher ..... 24
44	Skilled Technician Test: Percent of Army applicants scoring 95 or higher ..... 24
45	Percent eligible for CMF 71 with a CL score of 95 ..... 25
46	Percent eligible for CMF 76 with a CL score of 90 and a GM score of 85 ..... 25
47	Percent scoring below the AFQT median of 56..... 26

## **INTRODUCTION**

The U.S. Army and the other military services have the difficult task of assigning enlisted applicants into appropriate skills. Naturally, the Army must ensure that career management fields (CMFs) are adequately staffed to achieve organizational objectives. CMFs are comprised of at least one military occupational specialty (MOS). Enlistees are assigned to a specific MOS based on the needs of the Army and the individual's preference. However, CMFs and MOSs have varying technical skill-level requirements (i.e., clerical, electrical, general maintenance, etc.). An important criterion in ascertaining whether the applicant has the potential to perform a particular skill is his or her scores on the Armed Services Vocational Aptitude Battery Test (ASVAB). The ASVAB consists of 10 subtests that measure an applicant's aptitude for various occupations. If an applicant's score is equal to or above the minimum required for a particular MOS, and the Army has a need, then the MOS may be offered to the applicant. Available specialties are determined by projected Army needs and the current rates of enlistment and attrition.

The purpose of this paper is to address the apparent migration of minorities and females into four CMFs: 71 (administration), 76 (supply), 77 (petroleum and water) and 94 (food service). Listed below are the ancillary issues investigated:

1. Are minorities and/or females over-represented in these CMFs?
2. Is the U.S. Army Recruiting Command (USAREC) channeling minorities and/or females into these CMFs?
3. Are minorities and/or females predisposed to these CMFs?
4. Will future build-down initiatives adversely affect the racial/gender mix of contracts?

### **Minority and Female Representation**

The primary issue is minority and female representation in four specific CMFs. Before scrutinizing the four CMFs, one should first consider the minority/female representation in the Army as a whole. Do the percentages of minorities/females in the Army reflect the percentages in the available market? Minority and female representation in the Army is important as a benchmark for comparing the mix in CMFs 71, 76, 77 and 94. Accessions are used in this paper

instead of total Army strength because the USAREC mission is to access qualified young men and women into the Army.

### Army Representation versus the Market

Minority male representation during the period 1985-90 is shown in figures 1 and 2; figures 3 and 4 depict female representation.

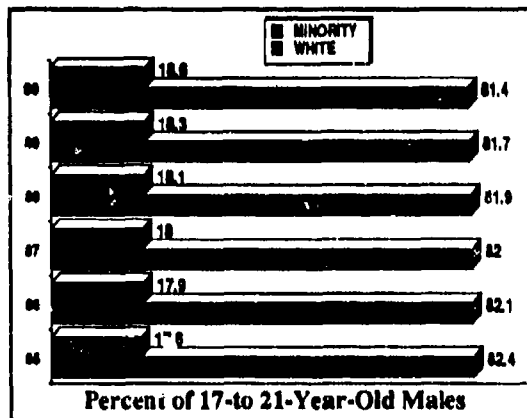


Figure 1. Total male youth population

SOURCE: Woods & Poole Economics, Inc., 1990.

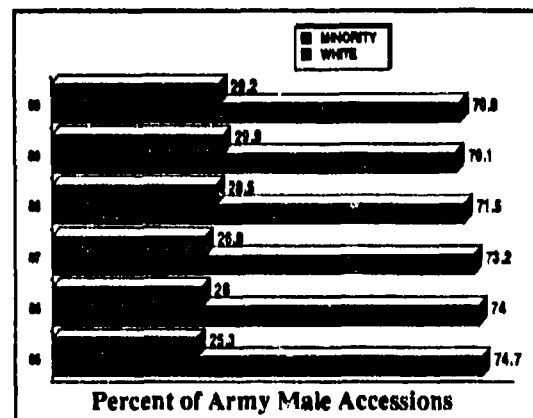


Figure 2. Army male accessions

SOURCE: USAREC mini-master files, 1985-90.

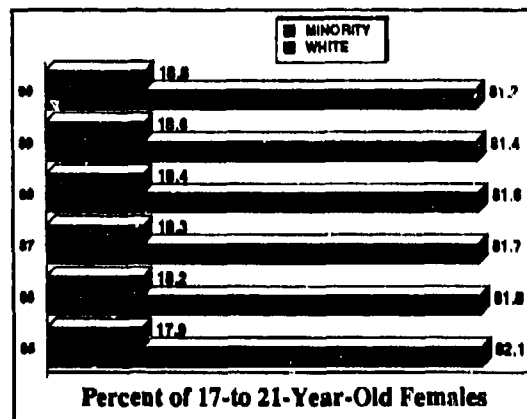


Figure 3. Total female youth population

SOURCE: Woods & Poole Economics, Inc., 1990.

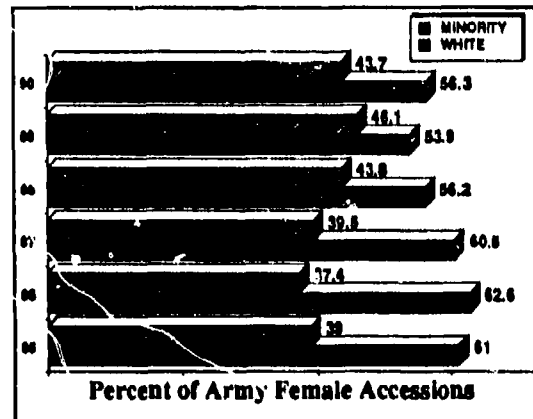


Figure 4. Army female accessions

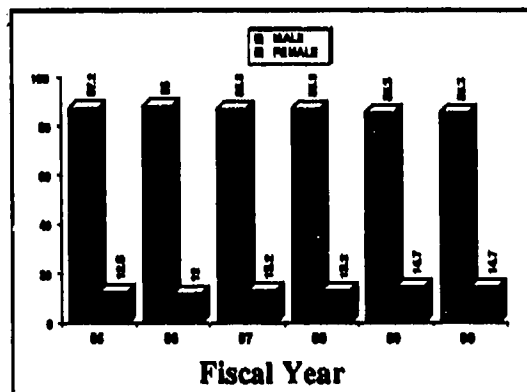
SOURCE: USAREC mini-master files, 1985-90.

Minority male representation in 1985 was 7.7 percent higher than the market. Since 1985, this percentage has gradually increased to 10.6 percent in 1990. It is clear that the percentage of minority males in the Army is greater than the market. Although the percentage of minor-

ity males in the Army has increased only 2.9 percent since 1985, it does indicate a widening gap between the Army and the market.

Minority female representation in the Army is much greater than the market. In 1985, the percentage of minority females was 21.1 percent higher in the Army than the market. This percentage has steadily increased to 24.9 percent in 1990 (it was as high as 27.5 percent in 1989).

Overall female representation in the Army is also gradually increasing. Since 1985, the percentage of female accessions has increased from 12.8 percent to 14.7 percent (figure 5). While this increase does not appear significant, one must realize that women are excluded from many CMFs because of the "combat code." Therefore, other CMFs (such as the four being evaluated) may be receiving a much higher percentage increase in women.



**Figure 5. Percentage of male and female accessions**

SOURCE: USAREC mini-master files, 1985-90.

The composition of the modern Army is changing as the percentage of minorities and females increase. Therefore, one would expect increases in the percentage of minorities and women in CMFs 71, 76, 77 and 94. But is the percentage of minorities and women increasing at a disproportionate rate compared to the Army as a whole?

### **REPRESENTATION IN CMFs 71, 76, 77 AND 94**

The overall minority/female representation in the Army and CMFs 71, 76, 77 and 94 is depicted in table 1.

**Table 1. Representation in CMFs 71, 76, 77 and 94**

	<b><u>Minority Percentage</u></b>	<b><u>Female Percentage</u></b>
<b>Army</b>	<b>31.3</b>	<b>14.7</b>
<b>CMF 71</b>	<b>55.4</b>	<b>50.3</b>
<b>CMF 76</b>	<b>54.0</b>	<b>33.6</b>
<b>CMF 77</b>	<b>48.5</b>	<b>32.4</b>
<b>CMF 94</b>	<b>51.9</b>	<b>30.4</b>

SOURCE: USAREC mini-master files, 1990.

Undoubtedly, these four CMFs are over-represented with respect to minorities and women. The bulk of the remaining text is dedicated to determining why.

It is important to understand the MOSs that comprise the four CMFs. The next section will analyze the typical duties, basic qualifications and minority/female trends from 1985-90.

### **CMF 71: Administration**

CMF 71 is comprised of 11 entry-level MOSs. Typical duties and basic qualifications for this CMF are shown in table 2.

**Table 2. CMF 71: Typical duties and basic qualifications**

<b><u>Typical Duties</u></b>	<b><u>Basic Qualifications</u></b>
<b>Personnel</b>	<b>Typing Skills</b>
<b>Legal</b>	<b>Bookkeeping</b>
<b>General Admin.</b>	<b>Basic Clerical</b>
<b>Clerical Work</b>	<b>Communication Abilities</b>
<b>Fiscal Acctng.</b>	
<b>Club Mgt.</b>	

SOURCE: Army Regulation 611-201, HQDA, 31 Oct. 1987.

Figures 6-8 graphically illustrate the flow of minorities and females into CMF 71.

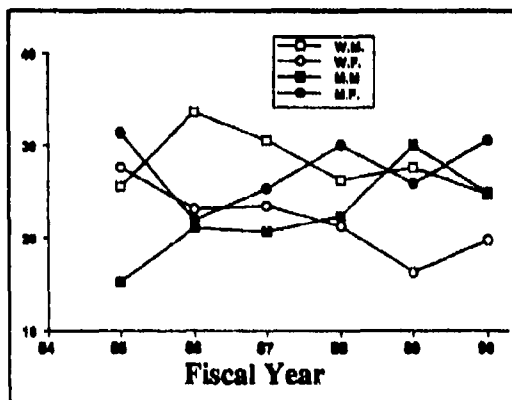


Figure 6. Percent entry into CMF 71  
SOURCE: USAREC mini-master files, 1985-90.

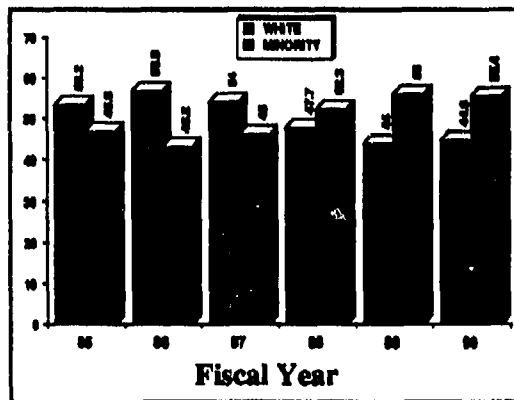


Figure 7. Percentage of whites and minorities in CMF 71  
SOURCE: USAREC mini-master files, 1985-90.

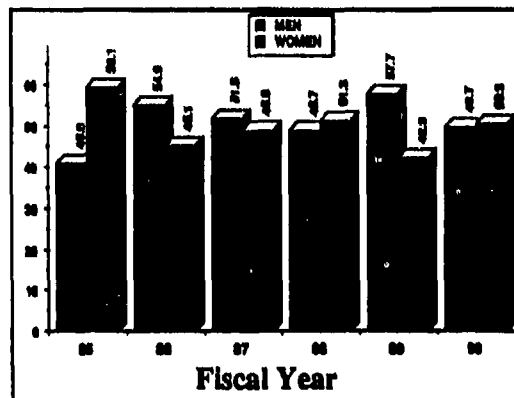


Figure 8. Percentage of men versus women in CMF 71  
SOURCE: USAREC mini-master files, 1985-90.

During the period 1985-90, the percentage of minority accessions into CMF 71 has increased from 43.2 to 55.4 percent. Conversely, the percentage of female accessions has fluctuated, with 50.3 percent comprising the CMF in 1990. Clearly, minorities are over-represented in CMF 71 and are increasing at a much faster rate than the Army as a whole.

### CMF 76: Supply

CMF 76 consists of 9 entry-level specialties. Typical duties and some basic qualifications for CMF 76 are shown in table 3.

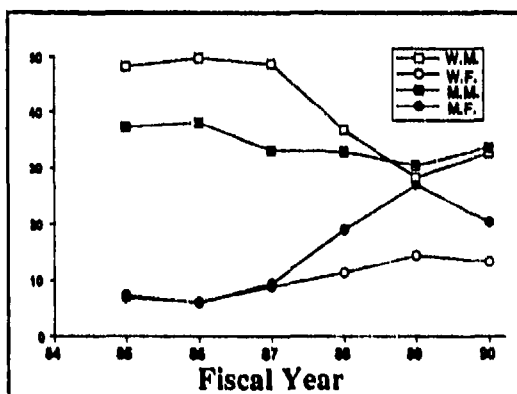


**Table 3. CMF 76: Typical duties and basic qualifications**

<u>Typical Duties</u>	<u>Basic Qualifications</u>
Procurement	Attentiveness
Storage	Initiative
Issue	Dependability
Repair Work	Perceptual Speed
Laundry	Number Facility
Graves Reg.	Verbal Ability
Parachute Rigger	

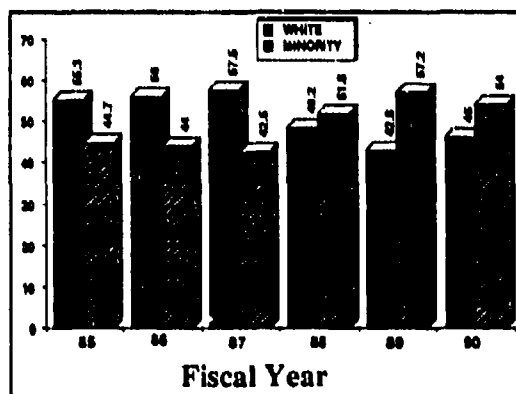
SOURCE: Army Regulation 611-201, HQDA, 31 Oct. 1987.

Figures 9-11 chart the rapid increase of minorities and women in CMF 76 since 1986.



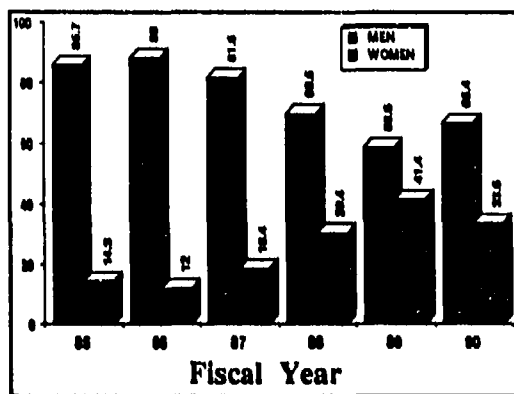
**Figure 9. Percent entry into CMF 76**

SOURCE: USAREC mini-master files, 1985-90.



**Figure 10. Percentage of whites and minorities in CMF 76**

SOURCE: USAREC mini-master files, 1985-90.



**Figure 11. Percentage of men versus women in CMF 76**

SOURCE: USAREC mini-master files, 1985-90.

Minority accessions into CMF 76 have increased from 44.0 percent in 1986 to 54.0 percent in 1990 (peaking at 57.2 percent in 1989). As with CMF 71, the percentage growth of minorities has outpaced that of the Army as a whole. Female accessions have increased from 12.0 percent in 1986 to 33.6 percent in 1990 (with a peak of 41.4 percent in 1989). The almost three-fold increase in the percentage of women combined with the large increase in minority percentages confirms that minorities and women are migrating into this CMF.

**CMF 77: Petroleum and Water**

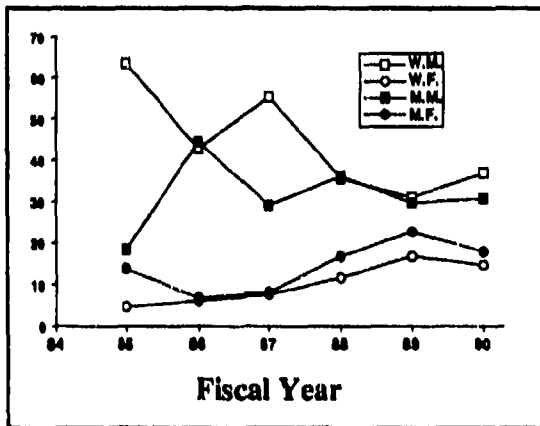
CMF 77 has only three subspecialties. Typical duties and some basic qualifications for CMF 77 are shown in table 4.

**Table 4. CMF 77: Typical duties and basic qualifications**

<u>Typical Duties</u>	<u>Basic Qualifications</u>
Petroleum Storage	Reasoning Ability
Receipt of Petro. Products	Attentiveness
Dist. of Petro. Products	Mechanical Aptitude
Water Storage	Number Facility
Purification Operations	
Testing Petro. Products	

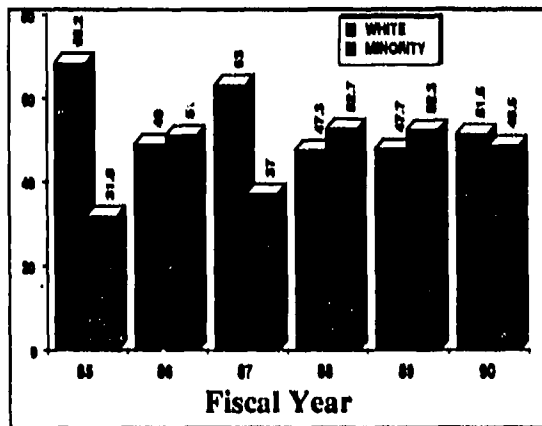
SOURCE: Army Regulation 611-201, HQDA, 31 Oct. 1987.

Minority and female representation in CMF 77 is captured in figures 12-14.



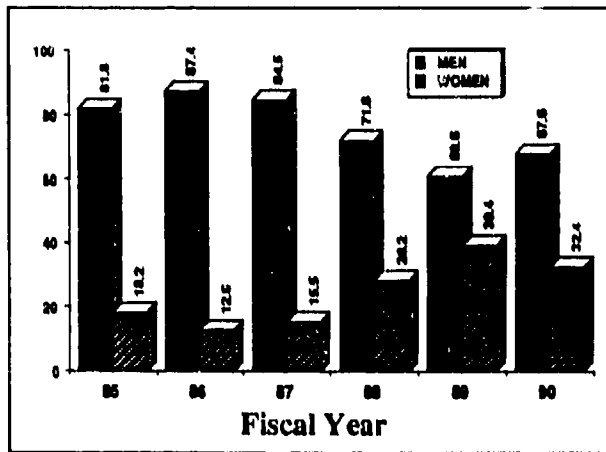
**Figure 12. Percent entry into CMF 77**

SOURCE: USAREC mini-master files, 1985-90.



**Figure 13. Percentage of whites and minorities in CMF 77**

SOURCE: USAREC mini-master files, 1985-90.



**Figure 14. Percentage of men versus women in CMF 77**

SOURCE: USAREC mini-master files, 1985-90.

Female representation in CMF 77 is quite similar to CMF 76. In 1986, only 12.0 percent of the accessions were women while in 1990 it was 32.4 percent. Minority representation has fluctuated somewhat from 1985 to 1990, but constituted 48.5 percent of the accessions in 1990.

#### CMF 94: Food Service

CMF 94 has only one MOS, 94B. Several of the duties and qualifications for this CMF are delineated in table 5.

**Table 5. CMF 94: Typical duties and basic qualifications**

<u>Typical Duties</u>	<u>Basic Qualifications</u>
Planning Food Menus	Knowledge of Sanitary Procedures
Preparing Food	Use of Food Service Machinery
Cooking Food	Attentiveness
Serving Food	Dependability
Administration	Good Near Vision
	Sense of Smell

SOURCE: Army Regulation 611-201, HQDA, 31 Oct. 1987.

the overall accession of personnel into CMF 94 is depicted in figures 15-17.

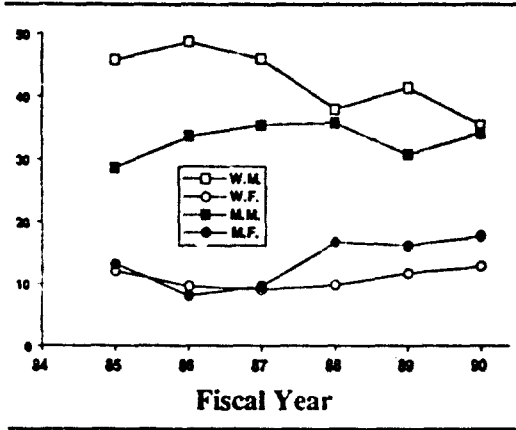


Figure 15. Percent entry into CMF 94  
SOURCE: USAREC mini-master files, 1985-90.

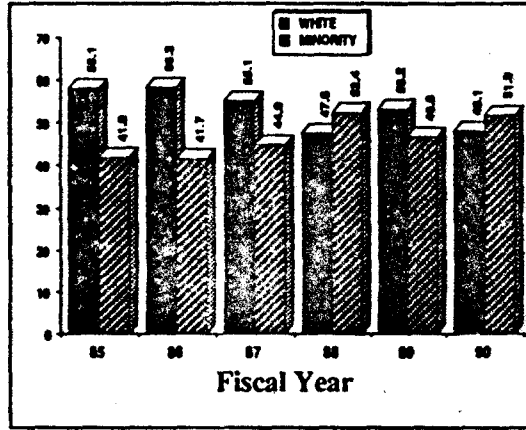


Figure 16. Percentage of whites versus minorities in CMF 94  
SOURCE: USAREC mini-master files, 1985-90.

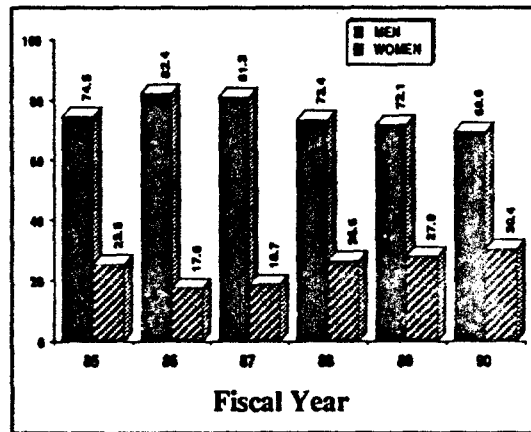


Figure 17. Percentage of men versus women in CMF 94  
SOURCE: USAREC mini-master files, 1985-90.

Female representation in CMF 94 has been steadily increasing since 1986. The 12.8 percent increase in accessions during the period 1986 to 1990 (30.4 minus 17.6) is not as great as other three CMFs, but it is still much higher than the overall increase in the Army. Minorities in CMF 94 have increased from a low of 41.7 percent of accessions in 1986 to 51.9 percent in 1990.

From the foregoing analysis, it is evident that minorities and females are over-represented

in these four CMFs. Two questions still remain: (1) Is the Army somehow encouraging minorities and women to enlist in these CMFs? (2) Are minorities and/or women predisposed to the types of jobs available in these CMFs? The first question is answered by examining the influence that USAREC has on the enlistee.

### **USAREC INFLUENCES**

USAREC influences the unsold market in many ways. Listed below are four areas that were evaluated.

1. Advertising
2. Recruiters
3. Guidance Counselors
4. Sales Promotions

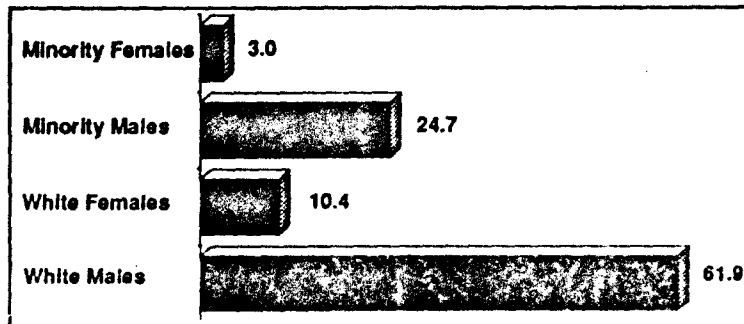
Each of the above four areas is analyzed in depth to ascertain if USAREC is channeling minorities and/or women into CMFs 71, 76, 77 or 94.

#### **Advertising**

Advertising is critical in reaching the unsold market. The goal is to generate enough interest so that the individual either contacts a recruiter or responds positively when approached by a recruiter. Three advertising mediums were evaluated to determine if minorities and/or women are over-represented or depicted in stereotyped roles. Only visual delivery mediums were evaluated because many radio messages are locally developed and are not available for analysis.

#### **Television**

A total of 41 different television commercials were evaluated covering the period 1985-90. The percentage of minorities and women depicted were counted to determine racial representation (figure 18). Because many commercials are fast moving, only the prominent individuals were counted.



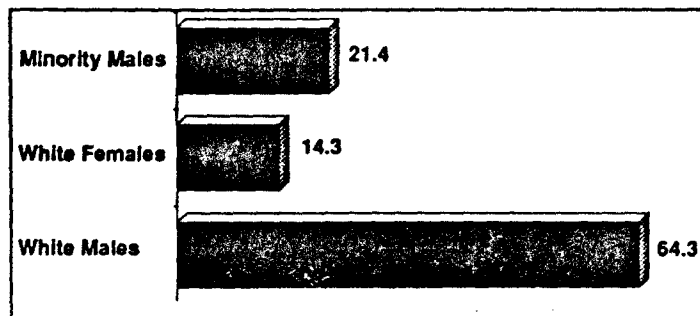
**Figure 18. Percentage of personnel type appearing in television commercials**

SOURCE: Compiled from data from Advertising and Public Affairs Directorate, USAREC.

Overall, the commercials accurately reflect the Army's racial mix (27.7 percent minorities were shown while the actual Army percentage is 31.3 percent). Personnel are shown in a variety of skills without stereotyping minorities or females. From this analysis, it appears that television, arguably the Army's most potent advertising tool, is unbiased.

### Print

Sixteen posters currently on the market were evaluated. The percentage of prominent personnel were counted. Results are shown in figure 19.



**Figure 19. Percentage of personnel type appearing in 16 posters**

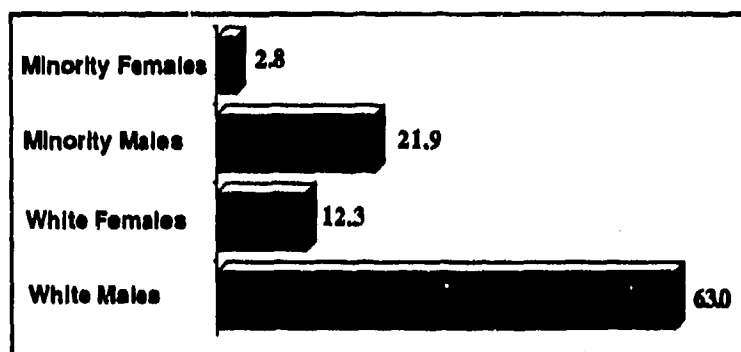
SOURCE: Compiled from data from Advertising and Public Affairs Directorate, USAREC.

The vast majority of the posters depict only one or two prominent individuals. Therefore,

the sample size is quite small. However, the individuals portrayed are performing a variety of important Army skills without stereotyping or under-representing minorities or women. In summary, print advertisements accurately reflect the Army's mix of minorities and women.

### Recruiter Publicity Items

USAREC currently uses 34 different recruiter publicity items (RPIs). Again, the number of minorities and women were counted to determine if minorities and/or women are under- or over-represented (figure 20).



**Figure 20. Percentage of personnel type appearing in RPIs**

**SOURCE:** Compiled from data from Advertising and Public Affairs Directorate, USAREC.

Overall, the percentage of females depicted (15.1 percent) in RPIs compares favorably with their representation (14.7 percent) in the Army. Minority representation in RPIs is 24.7 percent. This is close but below the Army average of 31.3 percent. RPIs appear to adequately represent the racial mix in the Army.

### Advertising Summarized

Many of the advertisements portray the Army as an institution that offers valuable technical skills in addition to educational benefits. White and minority women are not stereotyped; rather, they are shown in a variety of exciting and challenging positions such as communications and aviation. The percentage of minority men performing tasks in combat and academic scenarios accurately reflects actual Army representation. The advertisements do not appear to encourage minorities to join the Army for a particular skill.

## Recruiters

Although advertising is important, the primary responsibility for contracting young men and women into the Army falls on the recruiter. The recruiter's task is to sell the Army. However, it is conceivable that Army recruiters could be selling a specific CMF to a recruit. This leads to the question: Is it possible that recruiters are selling skills based on their Army experiences? This question is answered by analyzing the percentage of accessions that entered the same prior CMF of the recruiter during the period 1985-90. In order to provide a basis for comparison, two other CMFs that accept women (31: Signal Operations and 88: Transportation) were also evaluated (figure 21).

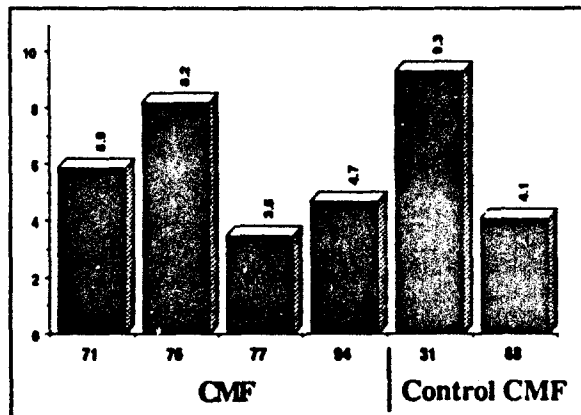


Figure 21. Percentage of enlistees that entered the same prior CMF of the recruiter

SOURCE: USAREC mini-master files, 1985-90.

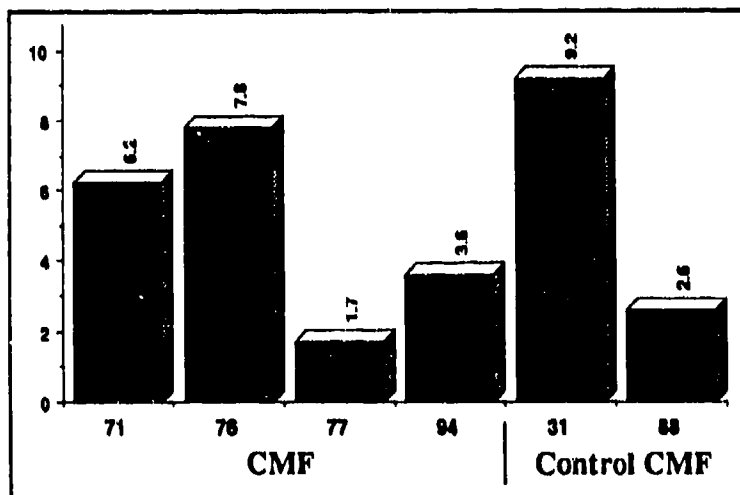
Less than 8.3 percent of accessions in CMFs 71, 76, 77 and 94 were enlisted by recruiters with the same previous CMF. Therefore, one may conclude that recruiters are not channeling minorities or women into these particular CMFs.

## Guidance Counselors

Guidance counselors are responsible for closing the sale. They enter pertinent personal data about the applicant into a centralized database called REQUEST. Based on the needs of the Army and the applicant's qualifications, REQUEST offers the applicant one or more MOSSs. The applicant is given the opportunity to view a Joint Optical Information Network (JOIN) video



that describes typical jobs in a specific MOS. Ideally, the guidance counselor tries to sell the MOSs that REQUEST identifies as the most critically short. There is room for negotiation but the needs of the Army are paramount. As with the recruiter, it is possible that guidance counselors could bias applicants' choices by selling MOSs based on their previously held CMF. This possibility is explored by analyzing the percentage of processed applicants that enter the same previous CMF of the guidance counselor during the period 1985-90. CMFs 31 and 88 were also evaluated to provide a basis for comparison (figure 22).



**Figure 22. Percentage of enlistees that entered the same prior CMF of the guidance counselor**

SOURCE: USAREC mini-master files, 1985-90.

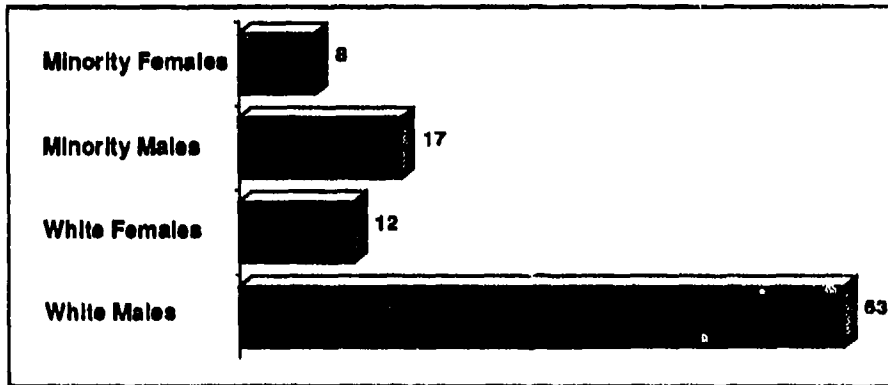
The results show that there is little correlation between the prior CMF of the guidance counselors and the CMFs of their enlistees. Therefore, one can conclude that guidance counselors are not channeling minorities or women into CMFs 71, 76, 77 and 94.

### Sales Presentations

Throughout the recruitment process, potential enlistees are shown a wide variety of audio and visual material about the Army. Recruiters often use the sales book to help convince an individual that the Army provides excellent skill training, educational benefits and adventure. In addition, two- to three-minute JOIN videos are available (these are also used by the guidance counselors). These two sales mediums were analyzed to determine if the Army is consciously or subconsciously encouraging minorities or women to select an MOS in CMF 71, 76, 77 or 94.

### Sales Book

A sales book was reviewed to determine the percentage of minorities and women. Results are shown in figure 23.



**Figure 23. Percentage of personnel type appearing in the sales book**

SOURCE: Compiled from USAREC sales book, 1991.

The percentage of minorities and females depicted in the sales book is 25.0 and 20.0 percent, respectively. This compares favorably with the Army average of 31.3 percent for minorities and 14.7 percent for females. In addition, the pictorials avoid stereotyping minorities or women by portraying them in a variety of skills and environments.

### JOIN Videos

JOIN videos are designed to show the applicant various jobs entailed in a specific MOS. Real soldiers perform their duties in a wide variety of settings in both pleasant and adverse weather conditions. Ideally, applicants would receive an unbiased view of an MOS.

Is it possible, however, that the JOIN videos for CMFs 71, 76, 77 and 94 under- or over-represent minorities and/or women? If a JOIN video shows an inordinately high percentage of minorities and/or women, the Army could inadvertently be encouraging minorities and/or women to enter these CMFs.

A total of 43 JOIN videos for CMFs 71, 76, 77, 94, 31 and 88 were viewed to determine the minority/female representation. CMFs 31 and 88 were included to provide a basis for comparison (figures 24 and 25).

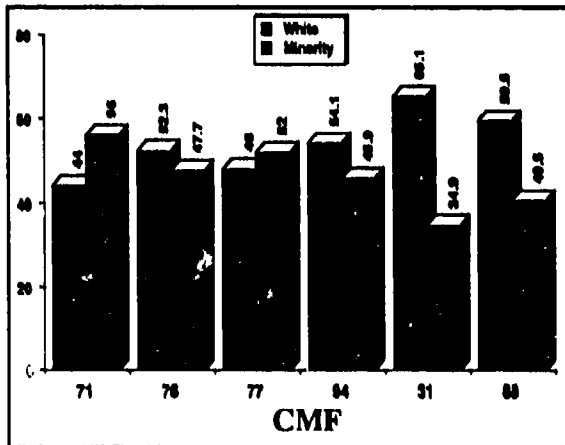


Figure 24. Percentage of whites and minorities in JOIN videos for CMFs 71, 76, 77, 94, 31 and 88

SOURCE: Compiled from JOIN videos, Recruiting Operations Directorate, USAREC.

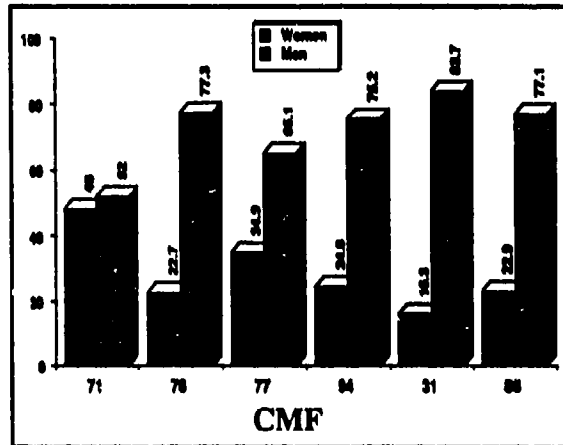


Figure 25. Percentage of men and women in JOIN videos for CMFs 71, 76, 77, 94, 31 and 88

SOURCE: Compiled from JOIN videos, Recruiting Operations Directorate, USAREC.

The percentage of minorities in JOIN videos for CMFs 71, 76, 77 and 94 are much higher than in CMFs 31 and 88. In CMF 71, minorities are depicted 56.0 percent of the time versus only 40.5 percent for CMF 88 (the highest control percentage). Female representation, except for CMF 76, is generally much higher than the control CMFs. An initial conclusion is that perhaps the high percentage of minorities and women in the JOIN videos is subliminally encouraging minorities/women to enter CMFs 71, 76, 77 and 94.

In order to validate or refute the initial conclusion, another 54 JOIN videos for CMFs 31 (Signal Operations), 55 (Ammunition), 91 (Medical), 81 (Topographic Engineering), 11 (Infantry), 19 (Armor) and 12 (Combat Engineering) were evaluated to determine if the minority/female representation in CMFs 71, 76, 77 and 94 was inordinately high (figures 26 and 27).

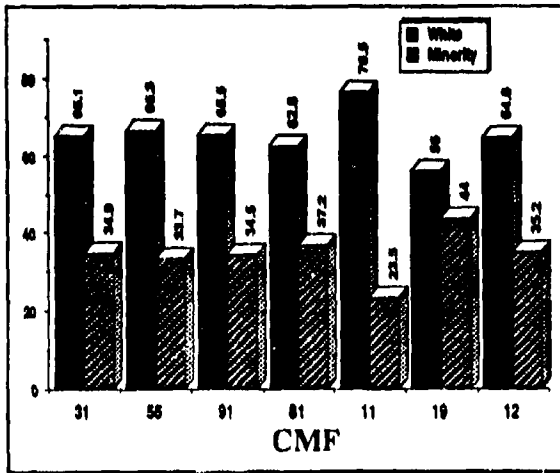


Figure 26. Percentage of whites and minorities in JOIN videos for other CMFs

SOURCE: Compiled from JOIN videos, Recruiting Operations Directorate, USAREC.

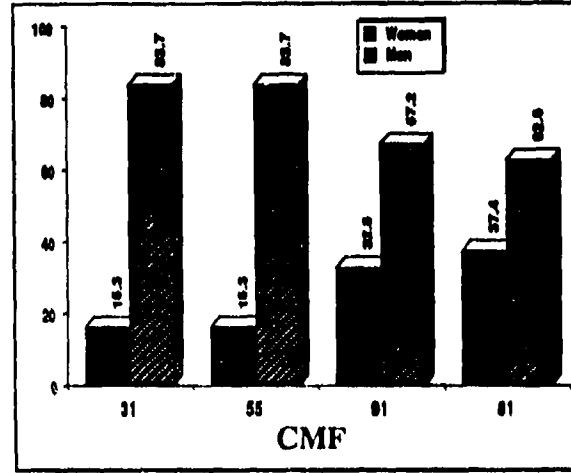


Figure 27. Percentage of men and women in JOIN videos for other CMFs

SOURCE: Compiled from JOIN videos, Recruiting Operations Directorate, USAREC.

Minority representation in JOIN videos for CMFs 71, 76, 77 and 94 exceeded representation in the JOIN videos for the additional CMFs, sometimes by as much as 22.5 percent (56.0 percent in CMF 71 versus 23.5 percent in CMF 11). Female representation yielded mixed results as CMFs 81 and 91 were greater than CMFs 76 and 94. In conclusion, minorities appear to be over-represented in JOIN videos for CMFs 71, 76, 77 and 94. It is conceivable that minorities are being encouraged to enter these CMFs because they are over-represented in the videos.

### YOUTH ATTITUDES

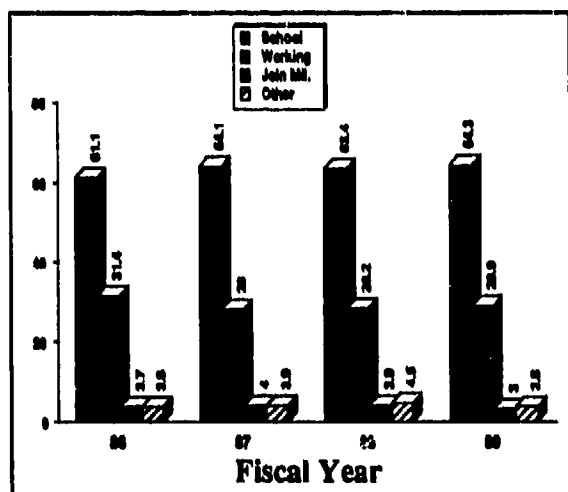
The attitude held by a young American toward the military will definitely influence that individual's decision to enlist in the military. Attitudes toward certain types of work will also influence decisions to enter certain CMFs. These attitudes may be a key element in determining why minorities and females are over-represented in CMFs 71, 76, 77 and 94. Contrary to USA-REC's efforts, much of which are controlled and easily measured, youth are difficult to assess. Appealing to their interests can be extremely difficult, even if their attitudes are understood.

Several surveys are used to try and understand youth attitudes. For the unsold market, an annual Youth Attitude Tracking Survey (YATS) is administered to obtain data pertaining to youth propensity, attitudes and motivation toward military service. Because 1990 YATS information was not available, a parent/youth survey was used to capture the previous year's

attitudes. The sold market was measured through the New Recruit Survey. A representative sample of new recruits was given a survey to provide the Army with additional insights about the motivations and attitudes of new soldiers. Several questions also provided clues on the effectiveness of advertising and recruiters.

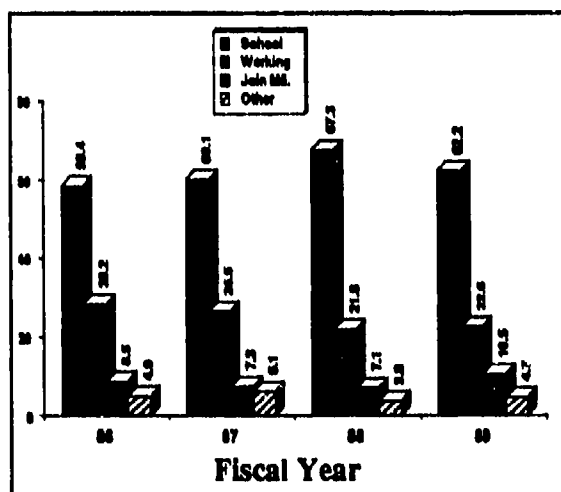
### YATS

In the YATS for 1986-89, youth were queried about their plans for the next few years. They were asked if they plan to attend college, work, join the military or do something else. Male responses are shown in figures 28 and 29.



**Figure 28. Percentage breakout of future plans, white male responses**

SOURCE: Youth Attitude Tracking Study, Defense Manpower Data Center, 1986-89.



**Figure 29. Percentage breakout of future plans, minority male responses**

SOURCE: Youth Attitude Tracking Study, Defense Manpower Data Center, 1986-89.

Male responses may be interpreted at least two ways. First, the percentage of minority males who indicated they might join the military far exceeds that of the white male population. This suggests that male minorities have a higher propensity to enlist. Secondly, a lower percentage of male minorities (with the exception of 1988) are inclined to continue their education. One may conclude that educational benefits are more important to white males while other incentives, such as bonuses and station of choice, are more attractive to minority males.

Female responses to the same question are depicted in figures 30 and 31.

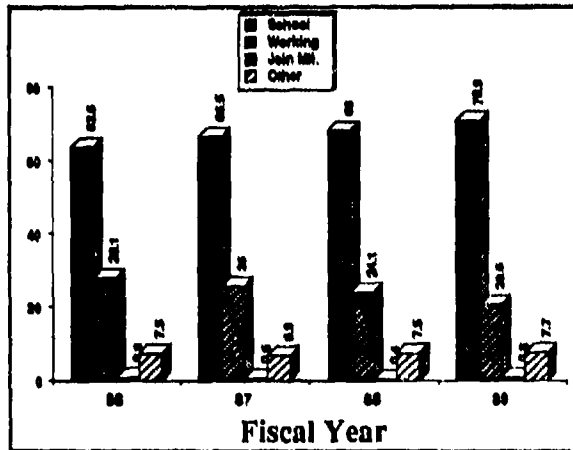


Figure 30. Percentage breakout of future plans, white female responses

SOURCE: Youth Attitude Tracking Study, Defense Manpower Data Center, 1986-89.

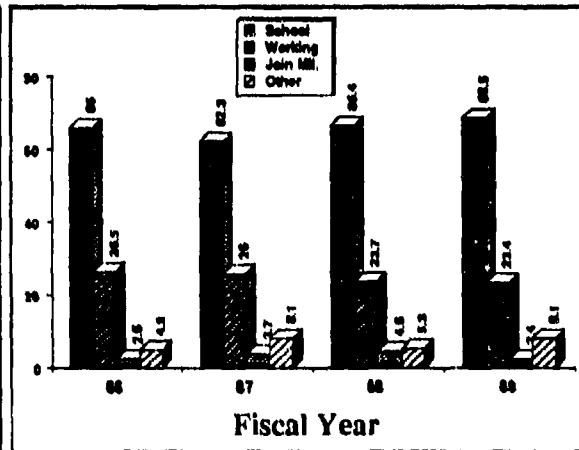


Figure 31. Percentage breakout of future plans, minority female responses

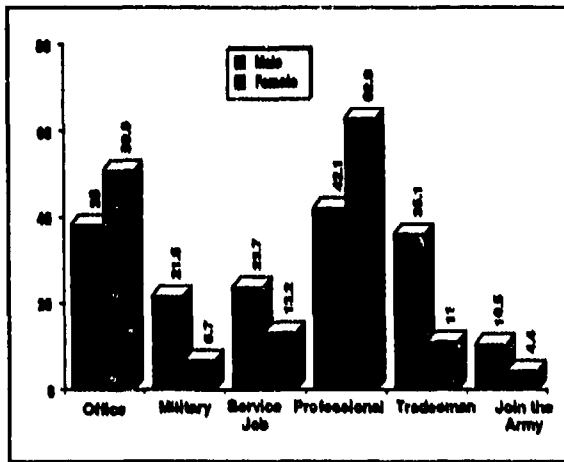
SOURCE: Youth Attitude Tracking Study, Defense Manpower Data Center, 1986-89.

The percentage of minority females planning to continue their education (except for 1986) is slightly lower than for white females. Drawing inferences on the differences is difficult because the differential is so small. Positive responses on working ranged from 20.6 to 28.1 percent for both minority and white females. However, one conclusion is that minority women are more likely to serve in the military. The highest white female response was 0.8 percent; the lowest minority female response was 2.4 percent. While the differential is not great, it does suggest that minority women have a higher propensity to enlist.

### 1990 Youth Survey

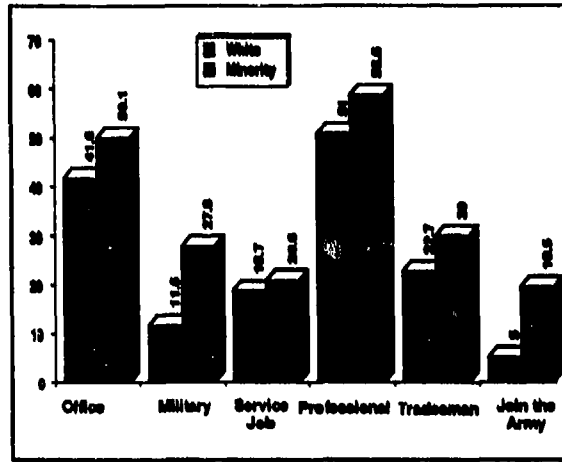
The 1990 Youth Survey was given to a sample of high school juniors and seniors and to parents of high school juniors and seniors. Questions were specifically designed to parallel subjects in YATS.

One question pertains to future employment. The type of job(s) they anticipate holding are summarized in figures 32 and 33.



**Figure 32. Percentage breakout of job choices, males and females**

SOURCE: The 1990 Survey of High School Youth and Parents.



**Figure 33. Percentage breakout of job choices, whites and minorities**

SOURCE: The 1990 Survey of High School Youth and Parents.

Several conclusions may be inferred from figures 32 and 33. First, minorities have a higher propensity to serve in the military. A higher percentage of minorities felt that they might join the military (50.1 to 41.6 percent of whites). In addition, when queried about joining the Army, 14.5 percent more minorities responded in a positive manner. Secondly, both minorities and women prefer to work in an office environment. This preference may imply that minorities and women are more receptive to joining administrative CMFs. Lastly, a higher percentage of minorities indicated a preference for working in a service position or as a tradesman. Since CMFs 71, 76, 77 and 94 consist of service-type or tradesman MOSs, it is not surprising that these CMFs have a relatively high percentage of minorities.

### New Recruit Survey

The New Recruit Survey yields insight on reasons for enlistment. One question asks the new recruit if his/her MOS is similar to previously held positions and if he/she would like to work in a similar position in the future. Figures 34-37 summarize responses during the period 1987-89 from new recruits in CMFs 71, 76, 77 and 94, respectively.

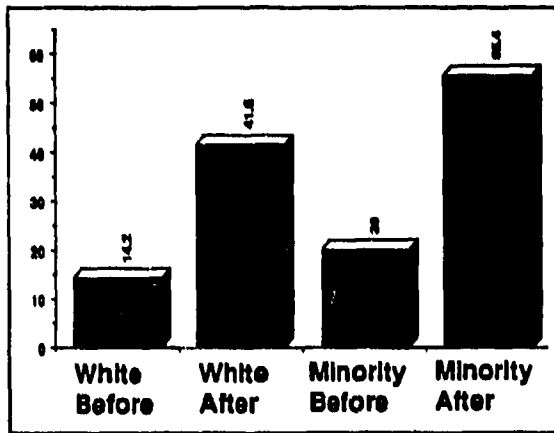


Figure 34. Percentage in CMF 71 who prefer this type of job before and after enlistment

SOURCE: New Recruit Survey, Data Recognition Corporation, 1987-89.

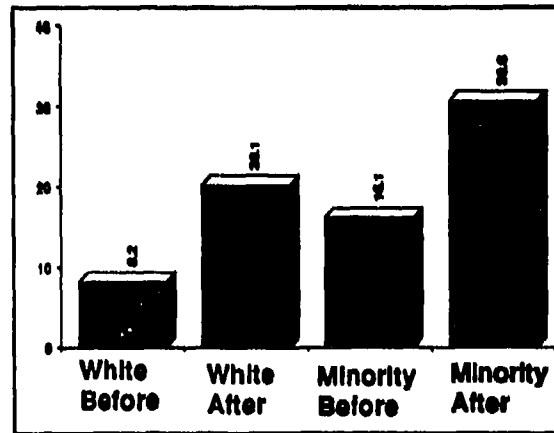


Figure 35. Percentage in CMF 76 who prefer this type of job before and after enlistment

SOURCE: New Recruit Survey, Data Recognition Corporation, 1987-89.

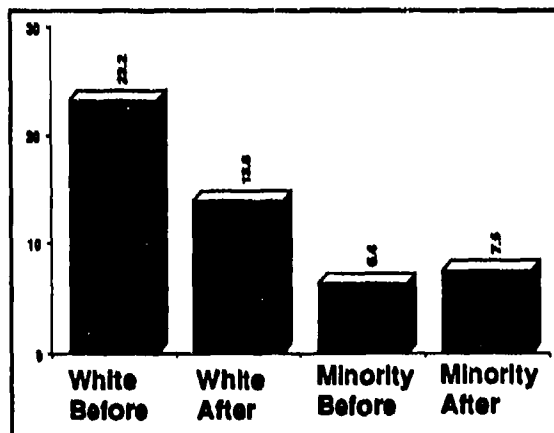


Figure 36. Percentage in CMF 77 who prefer this type of job before and after enlistment

SOURCE: New Recruit Survey, Data Recognition Corporation, 1987-89.

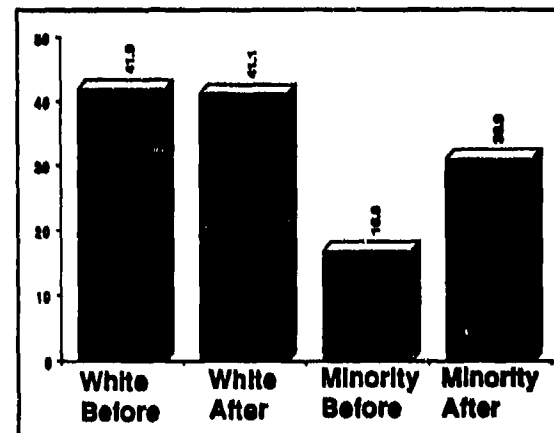


Figure 37. Percentage in CMF 94 who prefer this type of job before and after enlistment

SOURCE: New Recruit Survey, Data Recognition Corporation, 1987-89.

It is clear that many new recruits expect to use job skills acquired in CMFs 71, 76 and 94 in future positions. In addition, one may infer that many youth worked in restaurants prior to enlisting in CMF 94. It is possible that many enlistees join CMF 94 because they are comfortable performing restaurant-related functions, revealing a predisposition for this type of work.

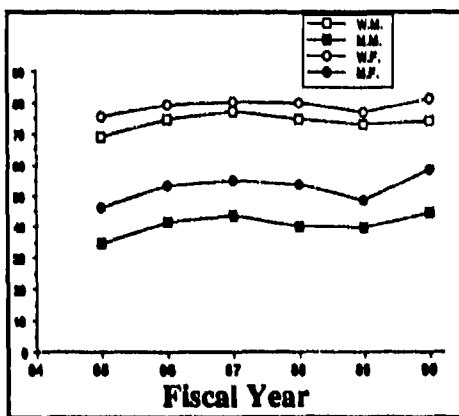


## TEST SCORES

Every specialty in the Army requires technical proficiency in one or more fields. Since many applicants do not have prior training or job experience, the Army uses results from the ASVAB in assessing an applicant's potential to succeed in a particular MOS. In CMFs 71, 76, 77 and 94, the primary qualifying ASVAB scores are clerical (CL), General Maintenance (GM), Operator and Food (O&F) and Skilled Technician (ST). Another important measure of an applicant's potential is his or her Armed Forces Qualification Test (AFQT) score. The AFQT score represents a combination of scores from four ASVAB subtests: Word Knowledge, Paragraph Comprehension, Arithmetic Reasoning and Mathematics Knowledge. The AFQT is used to classify an applicant into test score category I-III A, IIIB or IV. Recruiting goals and policies are based on category quotas from the Deputy Chief of Staff for Personnel (DCSPER). Although the AFQT score is not specifically used to qualify an individual for CMF 71, 76, 77 or 94, it can be used to evaluate the quality of personnel accessing into those CMFs. Since minimum ASVAB scores are necessary to enter an MOS, it is conceivable that many minorities and/or women may not qualify for more than a few MOSs. Is it possible that a high percentage of minorities and/or women have limited choices of CMFs because of their ASVAB scores?

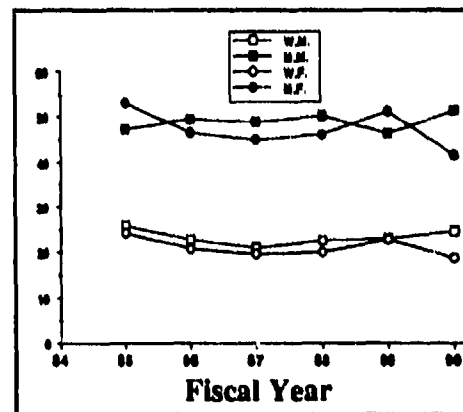
### Test Score Categories

The applicant's AFQT score places him or her into a particular test score category (TSC). Figures 38-40 depict the percentage of white and minority accessions since 1985 for each TSC.



**Figure 38. Percent of personnel in TSC I-III A**

SOURCE: USAREC mini-master files, 1985-90.



**Figure 39. Percent of personnel in TSC IIIB**

SOURCE: USAREC mini-master files, 1985-90.

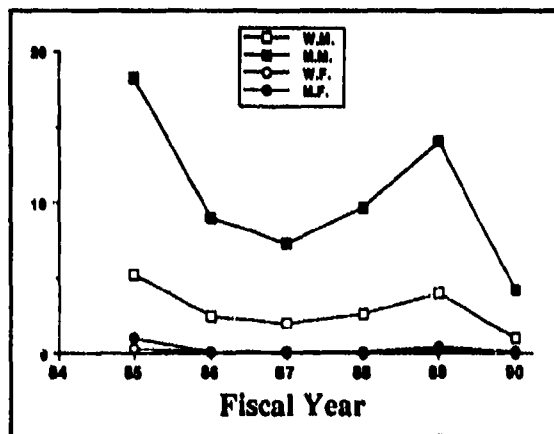


Figure 40. Percent of personnel in TSC IV

SOURCE: USAREC mini-master files, 1985-90.

The percentage of minorities is much higher than the percentage of whites in TSC IIIB. This means that minorities score lower on the four ASVAB tests that are used to qualify applicants for specific MOSs. Since many MOSs require high ASVAB test scores, those scoring low are not qualified to enter certain CMFs.

### Line Scores

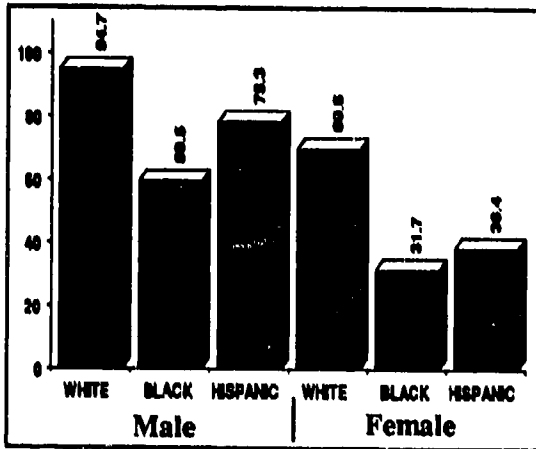
An applicant's line score (ASVAB) is used to determine if he or she has the potential to succeed in a particular MOS. As alluded to earlier, a high percentage of applicants will qualify for an MOS if the line score minimum(s) are low. Table 6 lists the applicable scores required to qualify for most of the MOSs in CMFs 71, 76, 77 and 94.

Table 6. Minimum line scores

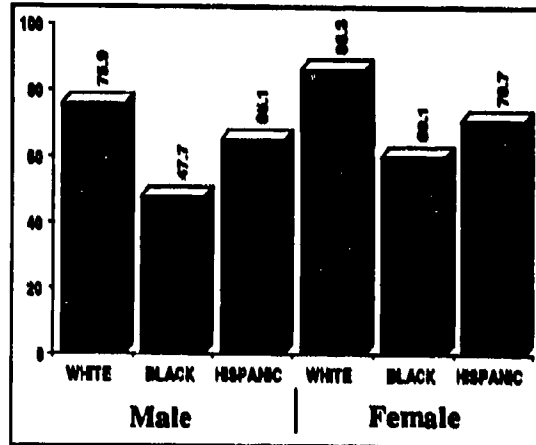
<u>Test</u>	<u>Minimum Score</u>
General Maintenance (GM)	90
Clerical (CL)	95
Operator & Food (OF)	90
Skilled Technician (ST)	95

SOURCE: Qualifications Report, Operations Branch, Recruiting Operations Directorate, USAREC, 9 Jan. 1991.

Figures 41-44 depict the percentage of Army enlistees (whites, blacks and Hispanics) who had a high enough line score to enter CMFs 71, 76, 77 and 94.



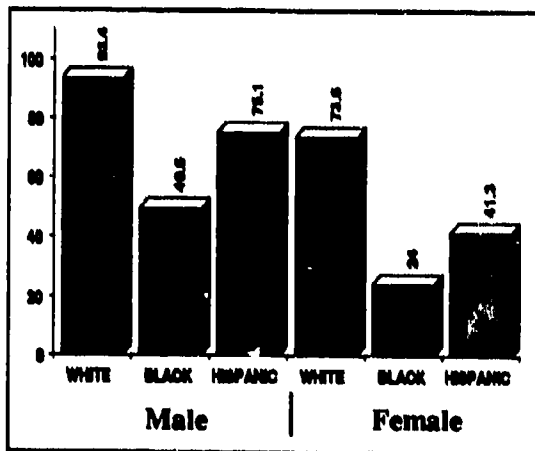
**Figure 41. General Maintenance Test:**  
Percent of Army applicants scoring 90 or higher.



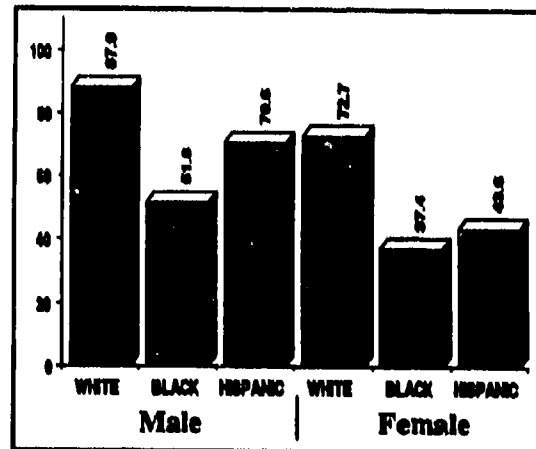
**Figure 42. Clerical Test:**  
Percent of Army applicants scoring 95 or higher.

SOURCE: Eitelberg, Mark J., Manpower for Military Operations. Office of the Asst. Secretary of Defense (Force Management and Personnel), April 1968, pp. 202-213.

SOURCE: Eitelberg, Mark J., Manpower for Military Operations. Office of the Asst. Secretary of Defense (Force Management and Personnel), April 1968, pp. 202-213.



**Figure 43. Operator and Food Test:**  
Percent of Army applicants scoring 90 or higher.



**Figure 44. Skilled Technician Test:**  
Percent of Army applicants scoring 95 or higher.

SOURCE: Eitelberg, Mark J., Manpower for Military Operations. Office of the Asst. Secretary of Defense (Force Management and Personnel), April 1968, pp. 202-213.

SOURCE: Eitelberg, Mark J., Manpower for Military Operations. Office of the Asst. Secretary of Defense (Force Management and Personnel), April 1968, pp. 202-213.

In all four categories, minorities scored much lower than whites. This means that minorities, on the whole, qualify for fewer CMFs. For example, 94.7 percent of whites compared to 59.5 percent of minorities qualify for CMFs requiring a GM test score of 90 or higher.

Similar results are obtained when analyzing the percentage of MOSs available with a particular line score. Figures 45 and 46 show this relationship for CMFs 71 and 76.

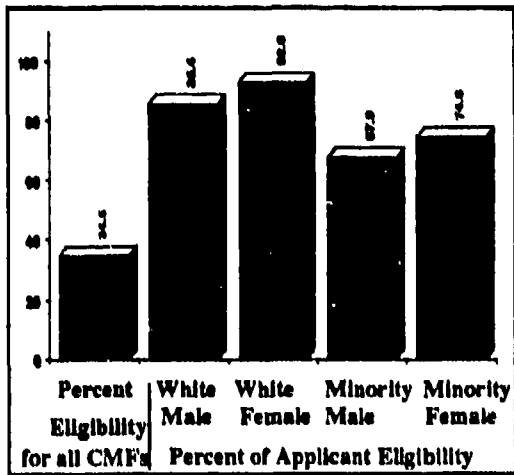


Figure 45. Percent eligible for CMF 71 with a CL score of 95

SOURCE: UNIVAC database in USAREC, 1990.

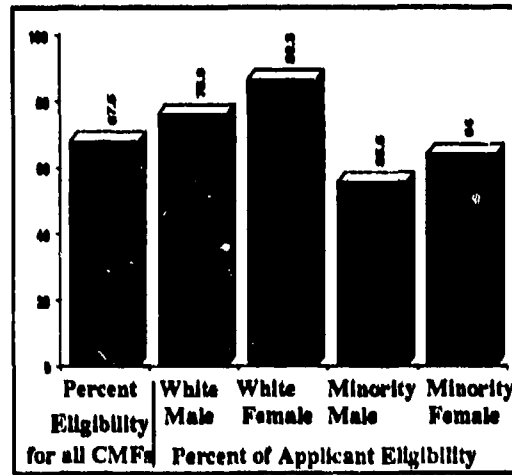


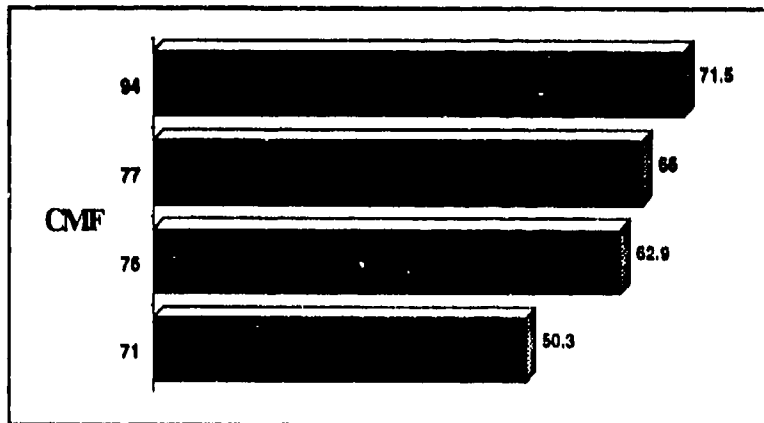
Figure 46. Percent eligible for CMF 76 with a CL score of 90 and a GM score of 85

SOURCE: UNIVAC database in USAREC, 1990.

Once again, minorities do not qualify for the same percentage of CMFs as whites. For example, of the white males in CMF 76, 75.9 percent have a clerical score high enough to qualify for 67.5 percent of all other MOSs. In comparison, only 55.5 percent of minority males have the same high clerical scores.

### AFQT Scores

An individual's AFQT score also provides valuable information on the quality of accessions into a specific MOS. Figure 47 depicts the percentage of individuals in CMFs 71, 76, 77 and 94 who score below the median on the AFQT.



**Figure 47. Percent scoring below the AFQT median of 56**

SOURCE: USAREC mini-master file, 1990.

Except for CMF 71, a high percentage of accessions into these CMFs are in the bottom 50 percent of AFQT scores. Since the median score in 1990 was 56, it follows that a large percentage of accessions into these CMFs are TSC IIIB and IV personnel.

### **USAREC MISSION ACHIEVEMENT**

USAREC receives an annual mission from the Deputy Chief of Staff for Personnel (DCSPER) for each MOS. In addition, DCSPER gives a specific quota by MOS for women (except for those coded "combat"). Table 7 lists the target and achieved percentages for CMFs 71, 76, 77 and 94 in 1990.

**Table 7. USAREC mission achievement (1990) for CMFs 71, 76, 77 and 94**

<b>MALES AND FEMALES</b>				
<b>CMF</b>	<b>I - IIIA</b>		<b>IIIB</b>	
	<b>TARGET</b>	<b>ACHIEVED</b>	<b>TARGET</b>	<b>ACHIEVED</b>
<b>71</b>	<b>66.6%</b>	<b>63.2%</b>	<b>29.9%</b>	<b>36.7%</b>
<b>76</b>	<b>52.3%</b>	<b>50.8%</b>	<b>41.2%</b>	<b>47.6%</b>
<b>77</b>	<b>48.8%</b>	<b>45.3%</b>	<b>41.3%</b>	<b>53.4%</b>
<b>94</b>	<b>42.0%</b>	<b>38.2%</b>	<b>48.0%</b>	<b>58.2%</b>
<b>ARMY</b>	<b>63.8%</b>	<b>64.6%</b>	<b>29.7%</b>	<b>33.2%</b>

<b>FEMALES</b>				
	<b>TARGET</b>	<b>ACHIEVED</b>	<b>TARGET</b>	<b>ACHIEVED</b>
	<b>71</b>	<b>66.0%</b>	<b>65.5%</b>	<b>30.0%</b>
<b>76</b>	<b>53.8%</b>	<b>46.8%</b>	<b>40.2%</b>	<b>53.2%</b>
<b>77</b>	<b>48.7%</b>	<b>40.8%</b>	<b>40.9%</b>	<b>58.9%</b>
<b>94</b>	<b>42.0%</b>	<b>23.4%</b>	<b>47.9%</b>	<b>76.6%</b>
<b>ARMY</b>	<b>64.8%</b>	<b>65.5%</b>	<b>29.2%</b>	<b>34.5%</b>

SOURCE: Recruiting Operations Directorate, Seabrook Report, 1990.

With the exception of CMF 71, the percentage of IIAs were well below the target while the percentage of IIIBs were well above the target. One may conclude that a high percentage of minority women could not qualify for other CMFs.

### **Build-Down Initiatives**

Build-down initiatives are not expected to affect the racial/gender mix of future contracts. Current plans call for the USAREC battalio strength to decrease by eight (from 55 to 47 battalions). Recruiter authorizations will be reduced by 252 (from 5,152 to 4,900). However,

USAREC will realign much of the recruiting force to ensure that the entire market can be contacted. Therefore, ongoing build-down initiatives should not affect the racial/gender mix of contracts.

### U. S. Army Reserves

Minority and female representation in the U.S. Army Reserves (USAR) was not addressed in this paper. While many USAREC recruiting influences, such as advertising, JOIN videos and sales promotion, remain unchanged, recruiting for the USAR is affected by other factors not germane to active Army recruiting. Unit type, vacancies and geographic location significantly impact on the Reserve recruiter's and the individual's option. Examining these unique influences was not within the scope of this paper.

### CONCLUSIONS

The purpose of this paper was to determine if the apparent migration of minorities and women into CMFs 71, 76, 77 and 94 was the result of shortcomings in the recruiting process or environmental factors. Initially, it was proven that minorities are over-represented in the Army relative to the market population. This establishes that CMFs in the Army should have higher percentages of minorities vis-a-vis the general population. Next, it was shown that CMFs 71, 76, 77 and 94 do have a higher percentage of minorities and women relative to other CMFs. In order to explain this phenomenon, the recruiting process was scrutinized to ascertain if USAREC was channeling minorities and/or women into these CMFs.

The advertising mediums of television, print and RPIs were deemed to fairly represent elements of the Army population. Recruiters and guidance counselors were found to be unbiased as they process applicants equally into all CMFs. The only component of the recruiting process that was found to possibly channel minorities and/or women into CMF 71, 76, 77 or 94 were the JOIN videos, which over-represented the percentage of minorities and women compared to the Army population.

Environmental factors were then examined to determine if youth are predisposed to these CMFs. Results from youth attitude surveys indicate that minorities have a higher propensity to enlist. In addition, minorities and women are more inclined to work in administrative positions. It was also shown that a small percentage of enlistees gravitate toward CMFs 71, 76 and 94 due to past job experiences.

Lastly, minorities tend to score lower on the ASVAB and are not qualified to enter certain CMFs. Coincidentally, CMFs 71, 76, 77 and 94 are comprised of many MOSs that have relatively low line score requirements. The low line score requirements coupled with the apparent predisposition of many minorities and/or women to work in CMFs 71, 76, 77 and 94 are the main factors contributing to the over-representation of minorities and/or women in these CMFs.



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