

GAO

Report to the Chairman, Subcommittee
on Military Personnel and
Compensation, Committee on Armed
Services, House of Representatives

August 1991

WOMEN IN THE MILITARY

Air Force Revises Job Availability but Entry Screening Needs Review



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**National Security and
International Affairs Division**

B-230552

August 30, 1991

The Honorable Beverly B. Byron
Chairman, Subcommittee on Military
Personnel and Compensation
Committee on Armed Services
House of Representatives

Dear Madam Chairman:

This report is in response to your request that we determine if the Air Force enlisted accessions are gender-neutral as required by the National Defense Authorization Act for Fiscal Year 1989. By gender-neutral, the act meant that accessions decisions should not be influenced by gender.

To make this determination, we evaluated whether (1) the enlisted job match system was gender-neutral, (2) the Air Force had the ability to apply gender limits in relation to the combat exclusion for women, (3) the Air Force had established who could apply gender limits, and (4) related accession procedures were gender-neutral.

Background

Before October 1, 1989, the Air Force maintained separate computerized job lists for men and women. The number of jobs in each separate job list was determined by an Air Force analysis of the proportion of men and women in the eligible population who were interested in, and qualified for, those jobs. Those separate male and female job listings limited the number and kinds of jobs that women could compete for to only those jobs listed for women.¹

The National Defense Authorization Act for Fiscal Year 1989 required the Air Force to enlist persons on a gender-neutral basis by October 1, 1989. The act prohibits

- setting minimum or maximum percentages of men or women who could be accepted for a first enlistment or
- in any other way, basing acceptance of a person for a first enlistment on gender.

¹See Women in the Military: More Military Jobs Can be Opened Under Current Statutes (GAO/NSIAD-88-222, Sept. 7, 1988).

The act's requirement for gender-neutral enlistment policies does not apply to those enlisted positions closed to women by the combat exclusion law in 10 U. S. C., section 8549. The combat exclusion law prohibits the assignment of Air Force women to aircraft engaged in combat missions.

Results in Brief

The Air Force has eliminated separate job listings for men and women as required by the National Defense Authorization Act for Fiscal Year 1989. The Air Force has retained the capability to apply gender limits to meet potential changes in the combat exclusion prohibitions.

Initially, there was no clear designation of who could apply gender limits. However, in response to our review, the Air Force subsequently assigned that responsibility within the Air Force Directorate of Personnel Plans.

We identified one related issue that appears to go against a gender-neutral policy. Tests used by the Air Force to screen applicants measure applicants' prior knowledge in subject areas that have a strong gender association, according to accessions policy officials in the Office of the Assistant Secretary of Defense. This screening mechanism eliminates female applicants at a higher rate than male applicants.

Enlisted Job Availability Is Gender-Neutral

In response to the requirements of the National Defense Authorization Act for Fiscal Year 1989, the Air Force has reprogrammed its computer-based job listing for enlisted openings to provide for gender-neutral access to all positions not closed to women by the combat exclusion. The Air Force has replaced separate male and female job lists with a single job listing that is accessed by both male and female applicants seeking job commitments from the Air Force.

Ability to Apply Gender Limits Retained to Meet Combat Exclusion Requirements

Although the Air Force has not applied gender limits under the new system, it can do so in individual job categories to respond to changes in the impact of the combat exclusion law without having to redesign the computer-based job list system. Limits can be applied in several ways. First, those job categories completely closed by the combat exclusion are designated in the computer records of the job list as "male only," thereby preventing access to those jobs by women applicants. Air Force Regulation 35-60 identifies the current closed job categories as: combat control, tactical air command and control, aerial gunner, and pararescue

and recovery. Changes in closed job categories require a revision to the regulation.

Next, the Air Force Recruiting Service and its parent organization, the Air Training Command, can, if authorized, apply gender-based limits to part or all of an enlisted job category through their management of job availability listings. This can be done in two ways.

- The recruiting service can impose gender-based minimums to one or more job categories and/or specific months when enlisted openings are made available for job commitments to applicants. In the Air Force, this can occur as far as 12 months in advance of an enlistee's entrance to active duty. During those 12 months, the recruiting service can reserve jobs appearing in the job list for the specified gender.
- The training command can also impose gender-based limits on positions when it identifies the number of openings in each job category that will be made available to the recruiting service. This determination can be made as much as 3 months before jobs are available to the recruiting service for commitment to applicants during the 12 open months.

New Policy Guidance on Applying Limits

Officials at recruiting service headquarters, and at Air Force Headquarters in Washington, D.C., stated that neither the training command nor the recruiting service could apply limits without authorization from Air Force Headquarters. However, during our review, officials acknowledged that there was no written policy guidance requiring specific authorization from Air Force Headquarters before the establishment of limits.

Our review has resulted in the Air Force issuing policy guidance that designates the Policy Division of the Air Force Directorate of Personnel Plans, which oversees the operation of the computer job listing, as the decision-making authority for the activation of gender-based job limits. The guidance states that use of controlled ratios of males to females was never implemented, and any changes would require Policy Division approval.

Records Document If Gender-Based Limits Applied

The Air Force maintains records that show if and when gender-based limits have been used. These records enable review of the Air Force's use of limits to determine if use conforms with the requirements of the law.

The recruiting service produces a daily job category transaction report that documents activation of gender-based limits by either the recruiting service or the training command. The recruiting service retains a record of that report for a minimum of 5 years.

Intermediate Screening of Applicant Qualification May Adversely Affect Women

The Air Force screens the qualification of potential enlistees three times before accepting them for enlistment. All 3 screenings use various combinations of a person's scores on the 10 tests that comprise the Armed Services Vocational Aptitude Battery (ASVAB). The second, or intermediate screening of an applicant's qualifications, eliminates women at higher rates than men.

The first screening is common to all of the services and uses the Armed Forces Qualification Test score, which is based on the Word Knowledge, Paragraph Comprehension, Arithmetic Reasoning, and Mathematics Knowledge tests of ASVAB.

The Air Force's second, or intermediate screening, uses 4 composite scores derived from different combinations of scores attained on some of the 10 ASVAB tests. Although the intermediate screening is not related to any single job qualification skill, the individual composite scores refer to the four basic types of jobs available to enlisted personnel. They are mechanical (M score), administrative (A score), general (G score), and electronics (E score).

The M composite (a weighted score), for example, is derived from the ASVAB's Mechanical Comprehension test score, the General Science test score, and two times the Auto and Shop Information test score. Half of the M score, therefore, relies on the applicant's ability to successfully respond to questions concerning auto and shop information. The A composite, on the other hand, relies on tests of other skills. It is derived from the ASVAB's Numerical Operations, Coding Speed, Word Knowledge, and Paragraph Comprehension test scores.

An applicant must achieve a minimum G score and a minimum combined M, A, G, and E score to be considered for an opening in the Air Force. Air Force regulation requires a G score of not less than 30 and a combined composite score of at least 133 to qualify for enlistment. The regulation authorizes the recruiting service to apply a higher minimum score for entry in the best interest of the Air Force. The Air Force currently requires an applicant to have a minimum G score of 40 and a minimum combined composite score of 185 to qualify for entry.

An applicant who passes this intermediate screening must also pass one additional screening—that is, an applicant must possess a qualifying minimum composite score for a particular job in one of the four job areas. Only then can an applicant's enlistment be matched with a specific job opening, confirmed, and reserved.

Women Eliminated at Higher Rates Than Men

The Air Force's intermediate screening eliminates women applicants at a higher rate than men. Some people take ASVAB in high school, either voluntarily or because the school requires it. An applicant for any service, who has not taken ASVAB in high school must take it at one of the designated test sites across the country. Those who take the test at a test center are frequently pre-tested by the respective service to assess their potential. The Air Force uses the pre-testing to evaluate an applicants' likelihood of meeting the Air Force composite score requirements.

We reviewed the high school test results to observe the effect of the Air Force's intermediate screening on an uncontrolled testing group that was not pre-screened by the services. We also reviewed the results of everyone who took ASVAB at a military test facility to observe the effect of the screening on as broad a population as possible.

The composite score minimum requirement eliminated women at a higher rate than men. For the 1988-89 school year, for example, a change in the composite total from 133 to 185 eliminated 26 percent of the high school men who qualified at the 133 score, but 38 percent of the high school women who qualified at 133. For service applicants during fiscal year 1990, the higher composite score requirement eliminated only 21 percent of the men, but 31 percent of the women.

If the Air Force raises the minimum score again, the impact would continue. For example, raising the composite score to 200 would have eliminated 10 percent of the high school men who qualified at the 185 level, and 16 percent of the women. For service applicants, such a change would have eliminated 9 percent of the men and 15 percent of the women.

Test results also show that the proportion of women who met the total composite score requirement is smaller than the proportion of men who met the minimum requirement. Of all the service applicants tested in fiscal year 1990, 79 percent of the women who tested qualified for entry at the 133 score level, while 85 percent of the men qualified. At the 185 score level, the differences increase, with the proportions at 55 percent

for women and 67 percent for men. At the 200 level, 47 percent of the women tested would qualify, while 61 percent of the men would qualify.

For persons taking the test in high school during the 1988-89 school year, there were also differences in the proportion of women and men who met the minimum composite requirement. At the 133 score level, 61 percent of the women and 73 percent of the men met the requirement. At the 185 score level, those proportions were 38 percent for women and 54 percent for men. At the 200 level, 32 percent of the women and 49 percent of the men would have met the composite total requirement.

The ASVAB tests used to derive the M and E scores include the three ASVAB tests that women score the most poorly on compared to men: Mechanical Comprehension, Auto and Shop Information, and Electronics Information. For example, table 1 shows the average scores for men and women on the 10 ASVAB tests for all fiscal year 1990 non-prior service applicants for all the services. Scores for applicants in the prior 3 fiscal years vary little from those for fiscal year 1990.

Table 1: ASVAB Subtest Standard Score Averages for All Services' Non-Prior Service Applicants in Fiscal Year 1990

	Number tested	General science	Arithmetic reasoning	Word knowledge	Paragraph comprehension	Numerical operations
Men	402,109	51.2	51.3	51.2	51.1	52.3
Women	84,323	48.2	49.5	51.5	52.0	54.9
Men minus women		3.0	1.8	-0.3	-0.9	-2.6

	Coding speed	Auto and shop information	Mathematics knowledge	Mechanical comprehension	Electronics information
Men	402,109	51.2	52.2	52.1	50.9
Women	84,323	55.4	42.8	52.1	44.3
Men minus women		-4.2	9.4	0	6.6

Accessions policy officials in the Office of the Assistant Secretary of Defense for Force Management and Personnel explained that tests which measure information obtained in part through educational courses that are generally associated with one gender are likely to have a deleterious effect on the other gender. These officials noted that including the ASVAB tests of Mechanical Comprehension and Auto and Shop Information in the Air Force's M composite, and the Electronics

Information test in the E composite impede women's ability to survive the intermediate screening in competition with men.

The effect of these tests may be seen in men's and women's average composite scores. As shown in table 2, women's average M and E scores tend to be considerably lower than men's without compensating higher averages in the G or A composites. The results are comparable for those who took the examination in high school and for applicants for all of the services. While these differences do not prevent some women from entering the Air Force, as noted earlier, we showed that the change from 133 to 185 made a difference.

Table 2: Average Composite Scores for Fiscal Years 1986 Through 1990^a

Composite	High school testers			Service applicants		
	Men	Women	Men minus women	Men	Women	Men minus women
1986^b						
Mechanical	54	28	26	62	36	26
Administrative	46	53	-7	54	64	-10
General	47	41	6	55	52	3
Electronics	50	39	11	57	46	11
1987^b						
Mechanical	53	28	25	61	36	25
Administrative	48	55	-7	56	66	-10
General	48	42	6	54	52	2
Electronics	51	40	11	56	46	10
1988^b						
Mechanical	53	27	25	60	35	25
Administrative	48	54	-6	56	66	-10
General	47	42	5	54	51	3
Electronics	51	40	11	55	45	10
1989^b						
Mechanical	52	27	25	58	33	25
Administrative	48	55	-7	53	64	-11
General	47	42	5	52	49	3
Electronics	51	40	11	54	44	10
1990						
Mechanical	c	c	c	58	34	24
Administrative	c	c	c	55	65	-10
General	c	c	c	54	51	3
Electronics	c	c	c	56	46	10

^aAverages have been rounded to the nearest whole number.

^bData is for the school year starting the previous September and ending in June of the designated year.

^cData for high school testers for the 1989 to 1990 school year was not yet available.

Because of these differences, the intermediate screening could preclude women from competing for jobs in the administrative or general categories because of their lower total composite scores. On the other hand, men who have survived the intermediate screening but had lower administrative and general scores than the disqualified women may be accepted for a job in the administrative or general job categories.

In commenting for the Air Force on a draft of our report, an Air Force official said that the intermediate screening enables the Air Force to enlist the most qualified applicants and to enlist people who can be professionally flexible. The official noted that about 63 percent of first term enlistees reenlist, and estimated that between one-fourth to one-third of those reenlisting must retrain for another career field. The official stated that use of the combined composite scores allows the Air Force to enlist people who demonstrate an ability to do well in more than one job area. When a person is reenlisting 2 to 6 years later, these original scores are used to determine the job areas available for retraining.

In commenting for the Office of the Assistant Secretary of Defense on a draft of our report, an accessions policy official said that the Air Force composite scores do have a differential effect. The official said that effect raises the question of the validity of the composites as measures of the capabilities for which they are testing. This official told us that the Defense Manpower Data Center is currently studying the validity of the service composite scores. The results of the study are expected in the fall of 1991.

This official also explained that the Air Force's policy of using the composite scores of applicants to decide what retraining is most appropriate when an enlistee has completed a first term differs from the practices of the other services, which retest personnel before deciding retraining directions.

Recommendation

We recommend that the Secretary of the Air Force ensure that Air Force policy and procedures associated with the current four composite scores used to screen applicants before they compete for specific jobs are gender-neutral.

Scope and Methodology

Our assessment of the gender-neutral enlisted accession program was based on a review of documents on the transition to, and actual operation of, the new gender-neutral job listing system. We discussed program operations with officials at the Air Force Recruiting Service at Randolph Air Force Base in Texas, which operates the computerized job listing system, at its parent organization, the Air Training Command, also at Randolph Air Force Base, and at Air Force headquarters in Washington, D.C., which oversees the operation of enlisted accession procedures and operations.

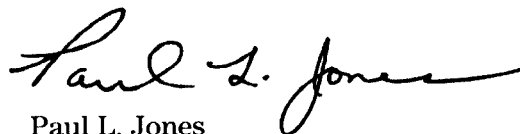
In addition, we discussed the enlisted accession program and recruiting activities with Air Force representatives at military entrance processing stations in San Antonio, Texas; Butte, Montana; Milwaukee, Wisconsin; Indianapolis, Indiana; and Baltimore, Maryland. We also met with selected Air Force recruiters who worked in the recruiting districts served by those stations. Processing station locations and recruiters were chosen based on the volume of the Air Force total and women enlistees, geographical location, and socioeconomic environment.

We conducted our review from July 1990 to March 1991 in accordance with generally accepted government auditing standards. Air Force and Department of Defense officials reviewed a draft of this report and their oral comments have been incorporated where appropriate.

As arranged with your Office, unless you publicly announce its contents earlier, we plan no further distribution of this report until 7 days from its issue date. At that time we will send copies to the Secretaries of Defense and the Air Force; the Director, Office of Management and Budget; and other interested congressional committees. Copies will also be made available to others on request.

If you or your staff have any questions, please call me on (202) 275-3990. Major contributors to this report were Foy D. Wicker, Assistant Director and Beverly Ann Bendekgey, Evaluator-in-Charge.

Sincerely yours,



Paul L. Jones
Director,
Defense Force Management Issues

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