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## ABSTRACT

Data were collected fron the Air Training Command personnel processing files on non－prior－service accessions for male and female basic trainees entering the Air Force during the years 1970 through 1973．Data inclused age，Airman Qualifying Examination （AQE）aptitude indexes，years of education．race，and geographic area of enlistment．Tables show age aptitude infex means and standard deviations by sex and year oif enlistment；percentage by sex i！score range on $A Q E$ conposites and at each index；number and percentage by sex for educational level and for racial subgroup；and racial composition by geographic area of enlistment．Conclusions，based on the data．vere that：（1）using 1970 as a comparative base the 1973 aptitude inderes declined less sharply for females than males and two inderes（Mechanical and Electronics）were higher for females in 1973 than in 1970；（2）the educational level of females has risen，that for males has declined；（3）racial mix is the same for males and females out recruitment of black females varies considerably among fecruiting areas；and（4）younger females tend to have relatively lower aptitude scores．（SA）

## AIR FORCE



# CHARACTERISTICS OF WOMEN IN THE AIR FORCE 1970 THROUGH 1973 

## By

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July 1974

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high-aptitude personnel racial subgroups education levels age groups
20. AESTRACT (Conlinue on revaroe alde lf neceosary end ldentify by block number)

The total input of WAF enlistees for 1970 through 1973 ( $\mathrm{N}=20,988$ ) were compared with male enlistees for the same period ( $\mathrm{N}=324,935$ ). WAF AQE-A and AQE-G scores in 1973 have dropped less than those for males relative to 1970 . WAF AQE-M and AQE-E scores in 1973 were hipher than they were in 1970 , whereas similar scores for males have decl'red sightly. Educational level for males has declined in the years 1970-1973, whereas, for WAF. it has climbed somewhat. Racial mix for females is about the same as for males, but the contribution by the various recruiting areas to the total number of Black women in the Air Force varies considerably from area to area. As with males, the younger females tend to have lower aptitude scores.

## TABLE OF CONTENTS

Pare
I. Introduction ..... 3
II. Method ..... 3
ill. Results and Discussion ..... 3
IV. Conclusions ..... 8
References ..... 9
Appendix A: Racial Subgroup Distributions for 1970 Through 1973 Female Enlistees by Selection Test Measure, Educsticnal Leve, Age, and Enlistment Region ..... 11
LIST OF TABLES
Table Page
1 AQE Aptitude Index Means and Standard Deviations for Air Force Enlistees (1970 through 1973) ..... 4
2 Percent of Enlistees Qualified at Three Aptitude Index Cut-Off Scores (1970 through 1973) ..... 5
3 Percentage of 1970 Through 1973 Male and Female Enlistees With Very High AQE Scores ..... 5
4 Distribution of Educational Levels for 1970 Through 1973 Male and Female Air Forse Enlistees ..... 6
S Distribution of 1970 Through 1973 Male and Female Enlistees by Racial Subgroup ..... 6
6 WAF Racial Compositicn by Geographic Area of Enlistment (1973) ..... 7
7 AQE Aptitude Indexes by Age Group for 1973 Male and Female Enlistees ..... 8
A1 Average AQE Aptitude Indexes for 1970 Through: 1973 Female Air Force En' 'ees by Racial Subgruup ..... 11
A2 Cumulative Percentages of AQE Aptitude Indexes for 1970 T.rough 1973 Female Air Forse Enlistees by Racial Subgroup ..... 11
A3 Percentage of 1970 Through 1973 Female Enistees by Racial Subgroup With Very High AOE Scores ..... 12
A4 Distribution of Education Level for 1970 ahrough 1973 Female Air Force Enlistees by Racial Subgroup ..... 12
AS AQE Aptitude Indexes by Age and Racial Subgroup for 1970 Female Air Force Enlistees ..... 12
A6 AQE Aptitude Indexes by Age and Racial Subgroup for 1971 Female Air Force Enlistees ..... 13
A7 AQE Aptiiude Indexes by Age and Racial Subgroup for 1972 Female Air Force Enlistees ..... 14
A8 AQE Aptitude Indexes by Age and Racial Subgroup for 1973 Female Air Force Enlistees ..... 14
A9 Mean WAF Scores on AQE Aptitude Composites for Racial Subgroups and Total Sample by Enlistment Region, 1973 ..... 15

# CHARACTERISTICS OF WOMEN IN THE AIR FORCE 1970 THROUGH 1973 

## 1. INTRODUCTION

In January, 1973, the Secretary of Defense announced the termination of the draft and the end of conseription in the Armed Services under the Selective Service Draft Lottery System. Although the Air Force had previously relied on voluntary enlistments to maintain its force strength, it was always recognized that a major portion of first-term airmen were motivated to enlist by the prospect of being drafted.

In the 1970 through 1972 time period, studies were done to predict the quality of an allvolunteer force. One of the conclusions of the studies indicated the desirability of considering expanded utilization of Women in the Air Force (WAF). A search of the iterature relating to WAF characteristics revealed that, while some effort had been made to determine the characteristics of first-term WAF, the effort was much less concentrated than that expended in the determination of the qualities of first-term male enlistees. This was probably because WAF enlistees constituted a small percentage of yearly acces. sions. One of the first studies in the WAF area was conducted by McReynolds in 1956. She developed the Armed Forces Women's Selection Test (AFWST) whose characteristics were more appropriate for women than the Armed Forces Qualification Test (AFQT) which, at the time, was being used to screen women desiring to enlist in the Air Force. In that same year Berkeley and Brokaw (1956) surveyed a sample of WAF to determine their attitudes about enlistment, job satisfaction, and satisfaction with Air Force life in general. Elliott (1960) reported that test performance of the incoming WAF population compared favorably with test performance of the non-enlistee female population. Lecznar (1965) compared test performance of 1962 male and female enlistees on the four aptitude composites of the Aiman Qualifying Examination (AQE). Tupes (1965) presented AQE normative data for nationwide groups of 12 th grade girls by region of the country, type of high school curriculum, and size of city within each region. Vitola and Wilboum (1971) compared male and female performance on Air Force selection measures and Vitola, Mullins, Williams, and Michelson (1974) sampled the attitudes of 1973 WAF enlistees.

Vitola, Mulins, and Brokaw (1974) established 2 data base on 1970 through 1972 male accessions; calendar year 1973 Air Force accessions were compared with this base. This report presents data on the 1970 through 1972 WAF accessions and provides year-by-year comparisons across the dimensions of aptitude, age, education, race, and region of enlistment; calendar year 1973 WAF accessions were compared with this base. Further, comparison of male and female characteristics for the entire four-year time period (1970 through 1973) are nade.

## II. METHOD

Data were collected on female, non-priorervice basic trainecs who entered the Air Force in calendar year 1970 ( $\mathrm{N}=4,238$ ), 1971 ( $\mathrm{N}=4,371$ ), 1972 ( $\mathrm{N}=4,688$ ), and 1973 ( $\mathrm{N}=7,691$ ). Source of the data was the Air Training Command personnel processing files on non-prior-service accessions. Data on the enlistees included day, month, and year of birth, AQE aptitude indexes, years of education completed, race, and geographic area of enlistment. No Officer Training School "holds" were included.

Means and standard deviatiors for the four yearly groups were obtained on the four AQE composites. Score distributions for accessions in sach year were obtained for earh of four levels of education: 16 or more years of schooling compieted, 13 through 15 years, 12 years, and 11 or less. It is noted that in the past, prerequisite for WAF enlistment was completion of high school. However, a policy change in October 1973 provided for WAF enlistments with less than 12 years of completed education. Each yearly group was divided into Black and non-Black racial subgroups. Various comparisons were made between these groups on selection test dimensions, education, age, and geographic area of enlistment. Male data used in male-female comparisons were obtained from the Vitola, Mullins, and Brokaw (1974) study.

## IIL RESULTS AND DISCUSSION

During the data collection period all potential enlistees, both male and female, were required 'o
qualify on the AQE. This test yields four aptitude composites: Mecharical, Administrative, General, and Electronics. Separate fivecentile interval indexes ( $01,05,10, \ldots .95$ ) are developed so that 5 percent of the normative sample falls within each of the 20 intervals of the scale. Tables 1,2, and 3 show AQE data for 1970 through 2973 enlistees. Further information by racial subgroup for 1970 through 1973 enlistees may be found in Appendix A (Tables A1 through A8).

Table 1 data indicate average performance on the AQE aptitude indexes. While mean $A Q E$ scores
of males were lower in 1973 than they wete in 1970 on all indexes, this phenomenon obtained on only two of the indexes (General and Administrative) for females. The other two WAF indexes (Mechanical and Electronic) were higher in 1973 than in 1970.

Compared with 1972, the 1973 Mechanical and Electronic aptitude indexes increased for both males and females, while Administrative and General declined.

Table 1. AQE Aptitude Inciex Means and Standend Deviations for Air Force Enlistees ( 1970 through 1973)

| Aplitude Componte | meen and SD on sercetion mmature |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 1070 |  | 1871 |  | 1072 |  | 1978 |  |
|  | Maen | SD | mean | sD | Moan | 50 | Menn | 50 |
| Males |  |  |  |  |  |  |  |  |
| AQE-Mechanical | 61.4 | 21.2 | 58.3 | 21.2 | 58.9 | 20.5 | 59.7 | 20.4 |
| AQE-Administrative | 61.6 | 22.3 | 57.9 | 22.0 | 56.5 | 20.9 | 52.3 | 20.1 |
| AQE.General | 65.3 | 19.9 | 62.4 | 19.2 | 61.7 | 18.5 | 58.9 | 18.5 |
| AQE-Electronics | 64.2 | 22.2 | 60.8 | 22.2 | 60.7 | 20.5 | 61.6 | 19.6 |
| Females |  |  |  |  |  |  |  |  |
| AQEMechanical | 33.4 | 18.9 | 32.9 | 19.1 | 35.9 | 18.9 | 39.4 | 19.1 |
| AQE-Administrative | 70.1 | 13.7 | 68.9 | 13.8 | 68.5 | 13.6 | 64.4 | 19.1 |
| AQE-General | 69.8 | 12.8 | 68.7 | 12.9 | 68.7 | 12.8 | 64.4 | 16.0 15.4 |
| AQE-Electronics | 30.6 | 18.4 | 50.0 | 18.6 | 51.9 | 12.8 17.9 | 64.9 52.9 | 15.4 18.9 |

Table 2 reveals quite different trends for males and females at different AQE levels across the four years studied. The percentage of males who scored 80 and above on the Mechanical and Electronics composite has dropped a little and the percentage of females has climbed a little. At the same interval on the Administrative and General composites, female performance has dropped sharply, but male performance has dropped even more sharply. At 40 and above, females have risen sharply on the Mechanical composite, and males have dropped sharply on Administrative. No other large changes are observable at this interval for any of the composites.

Table 3 is a male.female comparison of the highest four score intervals ( $80,85,90$, and 95 ) on each of the four composites for 1970 through 1973. These higit score comparisons indicate
substantial superiority of maies in the Mechanicai and Electronics areas, and of females in the General and Administrative areas.

Table 4 indicates educational leved patterns for female accessions relative to males across the four years, 1970 through 1973. The percentage of males with 16 or more years of education has declined from 6 percent in 1970 to 1 percent in 1973. whide the peccentage of females with 16 or more years has risen from 0 percent to 2 percent. Similarly, males at 13 through 15 years of education have declined from 12 percent to 6 percent, while females have increased from 5 percent to 8 percent. The percentage of females with more than a high school education has increased from less than one-third that of males in 1970 to higher than that of males in 1973.

Table 2. Percent of Enlistees Qualified at Thres A.ptitude Index Cut-Off Scores ( 1970 through 1973;

| AQEAptitide inder | Percentare by sox in score Rame an AaE: Componites |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 1870 |  | 1871 |  | 1072 |  | 1073 |  |
|  | Muse | Female $\%$ | mele | Fomare $\%$ | $\underset{\%}{\text { Mante }}$ | Femate \% | Mante | Femete $\%$ |
| Mechnnical Composite |  |  |  |  |  |  |  |  |
| 80 and above | 25 | 1 | 21 | 1 | 23 | 2 | 23 | 3 |
| 60 and above | 55 | 10 | 51 | 10 | 56 | 12 | 54 | 17 |
| 40 and above | 86 | 40 | 83 | 39 | 86 | 45 | 87 | 53 |
| Af maive Composite |  |  |  |  |  |  |  |  |
| 80 and above | 26 | 32 |  | 28 | 18 | 27 | 12 | 21 |
| 60 and above | 57 | 82 | 52 | 83 | 50 | 83 | 53 | 70 |
| 40 and above | 85 | 99 | 82 | 99 | 81 | 99 | 75 | 96 |
| General Composite |  |  |  |  |  |  |  |  |
| 80 and abovt | 30 | 31 | 26 | 28 | 23 | 27 | 19 | 23 |
| 60 and above | 74 | 84 | 61 | 84 | 58 | 85 | 51 | 72 |
| 40 and above | 90 | 99 | 91 | 99 | 92 | 99 | 91 | 98 |
| Electronics Composite |  |  |  |  |  |  |  |  |
| 80 and above | 33 | 9 | 30 |  | 30 | 10 | 27 | 12 |
| 60 and above | 58 | 36 | 55 | 34 | 54 | 37 | 55 | 39 |
| 40 and above | 86 | 78 | 84 | 77 | 85 | 81 | 90 | 80 |

Table 3. Percentage of 1970 Through 1973 Male and Femnle Enlistees With Very High AQE Scotes:

| index centhe | mercome seoring at Efech mptitude Index |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 1070 |  | 1871 |  | 1072 |  | 1973 |  |
|  | Mete | Fomale | $\bar{M}$ | Female | $\text { Mate }_{*}$ | Famaie | Mano | Fome |
| Mechanical Composite |  |  |  |  |  |  |  |  |
| 95 | 4 | 0 | 4 | 0 | 4 | 0 | 5 | 0 |
| 90 | 8 | 0 | 6 | 0 | 7 | 0 | 6 | 0 |
| 85 | 7 | 0 | 6 | C | 7 | 1 | 7 | 1 |
| 80 | 6 | 1 | 5 | 1 | 5 | 1 | 5 | 2 |
| Total | 25 | 1 | 21 | 1 | 23 | 2 | 23 | 3 |
| Administrative Composite |  |  |  |  |  |  |  |  |
| 95 | - | 6 | 6 | 6 | 4 | 5 | 3 | 5 |
| 90 | 5 | 6 | 4 | 5 | 3 | 4 | 2 | 4 |
| 95 | 7 | 9 | 5 | 7 | ó | 8 | 3 | 6 |
| 80 | 7 | 11 | 7 | 10 | 5 | 10 | 4 | 6 |
| Total | 26 | 32 | 22 | 28 | 18 | 27 | 12 | 21 |
| General Composite |  |  |  |  |  |  |  |  |
| 95 | 8 | 4 | 5 | 3 | 4 | 4 | 5 | 6 |
| 90 | 6 | 4 | 4 | 4 | 4 | 4 | 3 | 4 |
| 85 | : | 11 | 8 | 9 | 7 | 8 | 4 | 5 |
| 80 | 8 | 12 | 9 | 12 | 8 | 11 | 7 | 8 |
| Total | 30 | 31 | 26 | 28 | 23 | 27 | 19 | 23 |
| Electronics Composite |  |  |  |  |  |  |  |  |
| 95 | 12 | 0 | 9 |  | 8 | 1 | 5 | 5 |
| 90 | 6 | 1 | 5 | 1 | 6 | 2 | 6 | 4 |
| 85 | 7 | 3 | 6 | 2 | 6 | 3 | 7 | 2 |
| 8 | 8 | 5 | 10 | 5 | 10 | 4 | 9 | 1 |
| Total | 33 | 9 | 30 | 9 | 30 | 10 | 27 | 12 |

Table 4. Distribution of Educational Levels for 1970 Through 1973 Male and Female Air Force Enlistees

|  | Number end Purceit for Edubelionan Lavel |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 1870 |  | 1871 |  | 1072 |  | 1873 |  |
|  | $N$ | * | $N$ | $\boldsymbol{*}$ | $N$ | * | $N$ | * |
| Males |  |  |  |  |  |  |  |  |
| 16 or more | 4,564 | 6 | 3,351 | 3 | 1,573 | 2 | 824 | 1 |
| 13-15 | 8,450 | 12 | 8,977 | 9 | 8,093 | 10 | 4,201 | 6 |
| 12 | 52,807 | 73 | 70,373 | 71 | 60,967 | 75 | 58,742 | 82 |
| 11 orless | 6,726 | 9 | 16,362 | 17 | 10,928 | 13 | 7,995 | 11 |
| Total | 72,547 | 100 | 99.063 | 100 | 81,563 | 100 | 71,762 | 100 |
| Females |  |  |  |  |  |  |  |  |
| 16 or more | 6 | 0 | 20 | 0 | 64 | 1 | 177 | 2 |
| 13-15 | 211 | 5 | 261 | 6 | 371 | 8 | 633 | 8 |
| 12 | 4,014 | 95 | 4,083 | 94 | 4,246 | 91 | 6,868 | 90 |
| 11 orless | 7 | 0 | 7 | 0 | 7 | 0 | 13 | 0 |
| Total | 4,238 | 100 | 4,371 | 100 | 4,688 | 100 | 7,691 | 100 |

Table 5 shows the distribution of male and female enlistees by racial subzzoup for 1970 through 1973. The percentages are fairly consistent acro's years, with parallel trends apparent.

A strong effort has been made to provide expanded opportunity for minority groups, and for women. Table 6 displays percentages of Black, non-Black, and Total WAF enlistments by geograhic area in 1973. The geographic areas are designated as follows:

Table 5. Diatribution of 1970 Thnough 1973 Male and Female Enlistees by Recial Subgroup

| roons ofEnfintment | Number and Percent for Raciat Subrroupa |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | Geak |  | Non-bleck |  | combred Grouph |
|  | $N$ | * | $N$ | * |  |
| Males |  |  |  |  |  |
| 1970 | 10,221 | 14 | 62,326 | 86 | 72,547 |
| 1971 | 15,679 | 16 | 83,384 | 84 | 99,063 |
| 1972 | 10,475 | 13 | 71,088 | 87 | 81.563 |
| 1973 | 10,985 | 15 | 60,71? | 85 | 71,762 |
| Toial | 47,360 | 15 | 277,575 | 85 | 324,935 |
| Females |  |  |  |  |  |
|  | 594 | 14 | 3,644 | 86 |  |
| 1971 | 740 | 17 | 3,631 | 83 | 4,238 4,371 |
| 1972 | 629 | 13 | 4,059 | 87 | 4,688 |
| 1973 | 1.196 | 16 | 6,495 | 84 | 7,691 |
| Total | 3,159 | 15 | 17,829 | 85 | 20.988 |

Area 1. Maine, New Hampahire, Vemont, Massachusetts, Connecticut, Rhode ILLand, New York.
Asea 2. New Jersey, Pennsylvanin, Delaware, Maryland, West Virginia, Virginia, District of Columbia.
Area 3. North Carolina, South Carolina, Georgla, Flotida, Alsbama, Mississippi, Tennessee.
Area 4. Arkanses, Louidana, OkJehoms, New Mexico, Texss, Aizom.

> Area 5. Ohio, Indiana, Michigan, lllinois, Kentucky.

Area 6. Weshington, Oregon, Californin, Nevada, Idaho, Montana, Utuh, Alaska, Hawali.
Area 7. Missouri, Io'va, Minnesota, North Dakota, South Dakota, Kanses, Nebraska, Colorado, Wyoming, Wisconsin.
Asea 8. Other than Areas 1 through 7.
Esch area (! through 7) corresponds to an Air Force recruiting group area.

Table 6. WAF Recial Composition by Geographi: Area of Eulianent (1973)

| $\begin{gathered} \text { Rogion } \\ \text { Enuthefmont } \end{gathered}$ | mack |  |  | Non-Etock |  |  | Total sample |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | $N$ | ${ }_{*}^{\text {now }}$ | Columen | $N$ | $\operatorname{Row}_{\%}$ | columin | $N$ | ${ }_{*}^{\text {Row }}$ | $\mathrm{cosumn}_{\mathrm{m}}^{\mathrm{cos}}$ |
| 1. ME, NH, VT, MA, RU, NY, CT | 109 | 11 | 9 | 880 | 89 | 14 | 989 | 100 | 13 |
| 2. NJ, PA, DE, MD, WV, VA, DC | 212 | 20 | 18 | 828 | 80 | 13 | 1,040 | 100 | 14 |
| 3. NC, SC, GA, FL, AL, MS, TN | 359 | 29 | 30 | 897 | 71 | 14 | 1,256 | 100 | 16 |
| 4. AR, LA, OK, NM, TX, AZ | 203 | 21 | 17 | 772 | 79 | 12 | 975 | 100 | 13 |
| 5. OH, IN, MI, IL, KY | 191 | 14 | 16 | 1,204 | 86 | 19 | 1,395 | 100 | 18 |
| 6. WA, OR, CA, NV, ID, MT, UT, AL, Hil | 77 | 7 | 6 | 1,065 | 93 | 16 | 1,142 | 100 | 15 |
| 7. MO, IA, MN, ND, SD, KS, NE, CO, WY, WI | 45 | 5 | 4 | 838 | 95 | 13 | 883 | 100 | 11 |
| 8. Other | 0 | 0 | 0 | 11 | 100 | 0 | 11 | 100 | 0 |
| Total | 1,196 | 16 | 100 | 6,495 | 84 | $101{ }^{\text {a }}$ | 7,691 | 100 | 100 |

${ }^{4}$ Brceede $100 \%$ because of rounding.

The row pencentages in Table 6 indicate the mix of Black and non-Black female enlistees from the given areas and the column percentages indicate the proportions of enlistees from the various areas comprising the Black (and the non-Black and Total) samples. For example, 29 percent of the female enlistees from Area 3 are Black, wheress only 5 percent of those from Area 7 are Black. Of all female Black enlistees, 30 percent come from Area 3 and only 4 percent from Area 7. There are considerable disproportions in both row and coiumn percentages for Blacks.

Assuming that vigorous efforts to recruit minority group membera will contirace, Table A9 (in the Appendix) was prepared to show regional differences in AQE means for Blacks and non-Blecks separately.

Tabie 7 distributes mean aptitude scores across intervals of age at enlistment, for males and females separately. For both male and female accessions, there is a strong trend for mean AQE aptiture indexes to increase with age.

Table 7. AQE Aptitudx Indexes by Age Group for 1973
Male and Female Endistes

| $\begin{aligned} & \text { reare } \\ & \text { of } \\ & \text { ape } \end{aligned}$ | Number ence Apfltupe Incen for Mouse and Femarat |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | metoe |  |  |  |  | Fameles |  |  |  |  |
|  | $N$ | Mach Mesin | Admit man | $\begin{gathered} \text { aen } \\ \text { ntepn } \end{gathered}$ | $\begin{gathered} \text { Elac } \\ \text { Mest } \end{gathered}$ | N | Mach Moan | Admin Moan | Gen mean | Elec Men |
| 17 | 2,763 | 55.3 | 46.8 | 54.9 | 58.5 |  |  |  |  |  |
| 18 | 20,760 | 59.1 | 50.1 | 57.4 | 60.6 | 1.541 | 38.1 | 63.1 | 63.6 | 51.2 |
| 19 | 20,493 | 59.2 | 50.8 | 58.2 | 61.6 | 2,162 | 39.1 | 63.7 | 63.9 | 52.1 |
| 20 | 13.404 | 59.8 | 52.3 | 58.8 | 61.8 | 1,344 | 39.6 | 63.9 | 64.1 | 53.4 |
| 21 | 6,567 | 60.4 | 55.3 | 60.1 | 63.0 | 863 | 39.9 | 65.7 | 66.1 | 54.2 |
| 22 | 3,623 | 61.7 | 58.6 | 63.1 | 64.8 | 584 | 40.3 | 66.2 | 66.8 | 53.9 |
| 23 | 1.964 | 64.0 | 62.5 | 66.3 | 67.: | 405 | 40.8 | 66.8 | 66.9 | \$3.8 |
| 24+ | 2.188 | 63.0 | 62.1 | 65.1 | 66.6 | 792 | 41.9 | 68.0 | 68.2 | 553 |
| Tuial | 71,762 | 59.7 | 52.3 | S8.9 | 61.6 | 7,691 | 39.4 | 64.4 | 64.9 | 52.9 |

## IV. CONClusions

The purpose of this study was to describe WAF enlisiees for 1970 through 1973, and to compare them with male enlistees for the same period.

The results of this study lead to the following conclusions:
(a) Overall, using 1970 as a comparative base, the 1973 WAF aptitude indexes declined less sharply than did those of their male contemporaries. In fact, two of the WAF indexes, Mechanical and Electroniss, were higher in 1973 than in 1970.
(b) Whereas educational level of male acces. slons has declined in the years 1970 ihrough 1973, it has climbed somewhat for WAF.
(c) Racial mix for females is about the same as for males, but recruitment of Black females varies considerably among recruiting areas.
(d) Younger females tend to have relatively lower aptitude scores.

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## APPENDIX A: RACIAL SUBGROUP DISTRIBUTIONS FOR 1970 THROUGH 1973 FEMALE ENLISTEES BY SELECTION TEST MEASURE, EDUCATIONAL LEVEL, AGE, AND ENLISTMENT REGION

Table A1. Average AQE Aptitude Indexes for 1970 Through 1973 Female Air Force Enlinteea by Racial Subgroup

| Aptruce Compontio | menn and SD on Sovecton Mcosure |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 1070 |  | 1871 |  | 1072 |  | 1079 |  |
|  | Menn | so | Mann | SD | mean | 3 s | Mean | so |
| Btack |  |  |  |  |  |  |  |  |
| AQE-Mechanical | 28.8 | 17.0 | 26.3 | 16.7 | 28.9 | 16.5 | 31.6 | 17.9 |
| AQE-Administrative | 65.2 | 12.1 | 63.4 | 11.7 | 62.9 | 118 | 59.1 | 15.4 |
| AQEGeneral | 64.2 | 11.5 | 62.: | 10.6 | 62.7 | 10.9 | 57.3 | 13.7 |
| AQE-Electronics | 42.1 | 17.2 | 40.3 | 16.4 | 41.9 | 15.9 | 42.1 | 17.1 |
| Nor-Black |  |  |  |  |  |  |  |  |
| AQE-Mechanical | 34.2 | 19.1 | 34.3 | 19.3 | 37.1 | 18.9 | 40.9 | 18.9 |
| AQE-Administrative | 70.9 | 13.8 | 69.9 | 13.9 | 69.3 | 13.7 | 65.4 | 15.9 |
| AQE-General | 70.7 | 12.7 | 70.1 | 12.8 | 69.6 | 12.9 | 66.4 | 153 |
| AQE-Electronics | 51.9 | 18.2 | 51.9 | 18.5 | 53.4 | 17.8 | 54.9 | 18.5 |

Table A2. Cumulative Pescentagey of AQE Aptitude Indexce for 1970 Through 1973 Female Air Force Enlistess by Recia Subgroup

| $\begin{gathered} \text { ARE } \\ \text { Aptruce } \\ \text { Inde. } \end{gathered}$ | Porcontinye sy Rachin Subproup in Secte Range on AaE Compostio |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 1070 |  | 1878 |  | 1672 |  | 1879 |  |
|  | $m_{k}$ | Non- Eleck | meck | Nor-mack | minck | Nondenere | $\underset{*}{\text { mack }}$ | Non-Wereck |
| Mechanical Composite |  |  |  |  |  |  |  |  |
| 80 and above | 0 | 2 | 0 | 2 | 0 | 2 | 1 | 3 |
| 60 and above | 3 | 11 | 3 | 10 | 4 | 14 | 8 | 19 |
| 40 and above | 31 | 41 | 26 | 42 | 30 | 47 | 36 | 56 |
| Administrative Composite |  |  |  |  |  |  |  |  |
| 80 and above | 17 | 35 | 12 | 32 | 11 | 29 | 11 | 23 |
| 60 and above | 76 | 83 | 75 | 84 | 77 | 84 | 60 | 72 |
| 40 and above | 100 | 100 | 99 | 99 | 98 | 99 | 93 | 96 |
| General Composite |  |  |  |  |  |  |  |  |
| 80 and above | 14 | 34 | 8 | 32 | 10 | 30 | 8 | 25 |
| 60 and above | 74 | 85 | 71 | 87 | 75 | 87 | 54 | 75 |
| 40 and above | 100 | 100 | 99 | 99 | 100 | 99 | 95 | 98 |
| Electronics Composite |  |  |  |  |  |  |  |  |
| 80 and above | 2 | 10 | 1 | 10 | 2 | 11 | 3 | 14 |
| 60 and above | 19 | 38 | 14 | 39 | 17 | 40 | 17 | 43 |
| 40 and above | 63 | 80 | 61 | 80 | 61 | 84 | 63 | 84 |

Table A3. Percentage of 1970 Through 1973 F male Enlintees by Racial Subgroup With Very High AQE Scores

| index Centlle | Peromit of Raclal Subyroup Seortin at Ench Aptltucte index Conthe |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 1870 |  | 1971 |  | 1072 |  | 1073 |  |
|  | $\begin{gathered} \text { maek } \\ \% \end{gathered}$ | $\begin{gathered} \text { Mon-meeck } \\ \hline \mathbf{~} \\ \hline \end{gathered}$ | $\begin{aligned} & \text { Elack } \\ & \hline \end{aligned}$ | $\begin{gathered} \text { Max } x \text { elack } \\ x \end{gathered}$ | $F$ | Mon-mack | Etack | Nondmeck |
| Mechanical Composite |  |  |  |  |  |  |  |  |
| 95 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 90 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| 85 | 0 | 1 | 0 | 1 | 0 | 1 | 0 | 1 |
| 80 | 0 | 1 | 0 | 1 | 0 | 1 | 1 | 1 |
| Total | 0 | 2 | 0 | 2 | 0 | 2 | 1 | 3 |
| Administrative Composite |  |  |  |  |  |  |  |  |
| 95 | 1 | 7 | 1 | 7 | 1 | 6 | 2 | 6 |
| 90 | 4 | 6 | 2 | 5 | 2 | 4 | 2 | 6 |
| 85 | 4 | 10 | 4 | 8 | 3 | 8 | 3 | 5 |
| 80 | 8 | 12 | 5 | 12 | 5 | 11 | 4 | 6 |
| Total | 17 | 35 | 12 | 32 | 11 | 29 | 11 | 23 |
| General Composite |  |  |  |  |  |  |  |  |
| 95 | 0 | 4 | 0 | 4 | 0 | 4 | 0 |  |
| 90 | 2 | 5 | 0 | 5 | 1 | 5 | 1 | 4 |
| 85 | 4 | 12 | 3 | 10 | 3 | 9 | 2 | 6 |
| $\stackrel{80}{80}$ | 8 14 | 13 | 5 | 13 | 6 | 12 | 5 | 9 |
| Total | 14 | 34 | 8 | 32 | 10 | 30 | 8 | 25 |
| Electronics Composite |  |  |  |  |  |  |  |  |
| 95 | 0 | 1 | 0 | 1 | 0 | 1 | 0 | 1 |
| 90 | 0 | 1 | . 5 | 2 | 0 | 2 | 1 | 3 |
| 85 | 0 | 3 | 0 | 2 | 1 | 3 | 1 | 4 |
| 80 | 2 | 10 | . 5 | 5 | 1 | 5 | 1 | 6 |
| Total | 2 | 10 | 1 | 10 | 2 | 11 | 3 | 14 |

Table A4. Distribution of Education Level for 1970 Through 1973
Female Air Fonce Entistees by Racial Subgroup

| Yeare Schoollng complata | Number ind mercent by Reclal Suberoup for Each Exducation Lami |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 1970 |  | 1871 |  | 1972 |  | 1873 |  |
|  | $N$ | * | $N$ | * | $N$ | * | $N$ | * |
| Black |  |  |  |  |  |  |  |  |
| 16 or more | 1 | 0 | 0 | 0 | 6 | 1 | 15 | 1 |
| $13-15$ | 13 | 2 | 26 | 4 | 36 | 6 | 78 | 7 |
| 12 | 580 | 98 | 713 | 96 | 586 | 93 | 1,101 | 92 |
| 11 orless | 0 | 0 | 1 | 0 | 1 | 0 | 1,2 | 0 |
| Total | 594 | 100 | 740 | 100 | 629 | 100 | 1,196 | 100 |
| Non-Black |  |  |  |  |  |  |  |  |
| 16 or mure | 5 | 0 | 20 | 1 | 58 | 2 | 162 | 2 |
| $13-15$ | 198 | 6 | 235 | 6 | 335 | 8 | 555 | 9 |
| $\stackrel{12}{11}$ or less | 3,434 | 94 | 3,370 | 93 | 3,660 | 90 | 5,767 | 89 |
| 11 orless Total | 3,644 | ${ }_{100}^{0}$ | 3,631 | 0 | -6,6 | 0 | 11 | 0 |
| Total | 3,644 | 100 | 3.631 | 100 | 4,059 | 100 | 6,495 | 100 |

14

Table A5. AQE Aptitude Indexes by Age and Recial Subgroup for 1970 Female Air Force Enlistees

| $\begin{aligned} & \text { Yeers } \\ & \text { of } \\ & \text { of } \end{aligned}$ | Number and Aptituce indox by Radel Subiroup |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | cack |  |  |  |  |  | Non-mack |  |  |  |
|  | $N$ | MeCA | Romin | Gen | Eloc mean | $N$ | Mect mona | Admin Math | Gen | $\underset{\text { mean }}{\text { Elec }}$ |
| 18 | 135 | 28.2 | 64.1 | 61.8 | 39.5 | 1,120 | 33.2 | 70.6 | 69.9 | 509 |
| 19 | 223 | 28.7 | 65.8 | 64.6 | 42.9 | 1,263 | 34.0 | 70.9 | 70.8 | 52.8 |
| 20 | 126 | 27.1 | 65.9 | 64.8 | 43.2 | 635 | 36.0 | 71.5 | 708 | 52.7 |
| 21 | 61 | 32.5 | 65.9 | 66.4 | 44.1 | 308 | 35.3 | 71.8 | 71.5 | 52.5 |
| 22 | 27 | 30.8 | 64.4 | 66.1 | 41.7 | 154 | 35.9 | 71.4 | 73.2 | 54.3 |
| 23 | 9 | 21.2 | 55.6 | 60.0 | 43.3 | 70 | 32.2 | 72.5 | 70.9 | 50.3 |
| 24 | 13 | 27.8 | 63.8 | 62.3 | 40.4 | 90 | 31.7 | 73.2 | 71.9 | 51.8 |
| Total | 594 | 28.8 | 65.2 | 64.2 | 42.1 | 3,644 | 34.2 | 70.9 | 70.7 | 51.9 |

Table A6. AQE Aptitude Indexes by Age and Racial Subgroup for 1971 Female Air Force Enlistes

| $\begin{aligned} & \text { Yoart } \\ & \text { of } \\ & \text { Ape } \\ & \hline \end{aligned}$ | Number and Aptitucte indox Dy Rectil Subyroup |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Esack |  |  |  |  | Mon-Etack |  |  |  |  |
|  | N | $\underset{\text { Mach }}{\text { Meoch }}$ |  | gen | Elee Meen | $N$ | Meen | Admin main | Gen | Eves |
| 18 | 117 | 24.8 | 62.9 | 61.5 | 40.2 | 877 | 33.8 | 69.5 | 69.5 | 515 |
| 19 | 261 | 25.5 | 63.2 | 61.8 | 40.3 | 1,188 | 34.3 | 69.7 | 69.7 | 51.8 |
| 20 | 164 | 26.2 | 63.9 | 62.3 | 40.5 | 692 | 35.4 | 69.9 | 69.8 | 52.1 |
| 21 | 82 | 26.4 | 64.8 | 62.9 | 41.2 | 338 | 35.5 | 69.9 | 70.7 | 52.6 |
| 22 | 64 | 27.5 | 62.3 | 03.0 | 42.9 | 232 | 32.5 | 71.6 | 70.9 | 51.8 |
| 23 | 23 | 25.5 | 65.2 | 63.7 | 43.0 | 139 | 33.8 | 72.3 | 71.7 | 51.8 |
| 24+ | 29 | 23.8 | 63.9 | 61.7 | 39.3 | 165 | 34.5 | 71.4 | 72.6 | 52.4 |
| Total | 740 | 26.3 | 63.4 | 62.1 | 40.8 | 3,631 | 34.3 | 69.9 | 70.1 | 51.9 |

Table A7. AQE Aptitude Indexce by Age and Recial Subgroup for 1972 Female Air Fonce Enlistee

| $\begin{gathered} \text { Yam } \\ \text { if } \\ \text { not } \end{gathered}$ | Number and Aptituce Indox by Raciu subyroup |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Mack |  |  |  |  |  | Non-meck |  |  |  |
|  | $N$ | Mect maan | $\begin{gathered} \text { Admintr } \\ \hline \end{gathered}$ | Gen Moen | ace Maent | $N$ | Mech | Admen Masin | gan | Elec |
| 18 | 129 | 26.6 | 61.8 | 61.4 | 40.5 | 897 | 36.1 | 68.6 | 68.6 | 52.3 |
| 19 | 192 | 27.7 | 61.7 | 62.2 | 40.9 | 1,273 | 36.8 | 68.8 | 68.8 | 53.4 |
| 20 | 119 | 28.5 | 62.6 | 62.9 | 42.6 | 737 | 36.3 | 69.1 | 69.5 | 53.0 |
| 21 | 76 | 29.6 | 64.5 | 62.6 | 42.6 | 425 | 37.6 | 69.7 | 70.2 | 53.8 |
| 22 | 48 | 31.3 | 65.4 | 64.1 | 45.8 | 280 | 39.1 | 70.4 | 72.1 | 55.1 |
| 23 | 17 | 28.9 | 59.7 | 62.9 | 38.8 | 156 | 40.0 | 70.0 | 71.8 | 55.0 |
| 24+ | 48 | 29.1 | 64.5 | 65.4 | 42.2 | 281 | 38.6 | 72.4 | 72.5 | 55.1 |
| Total | 629 | 28.9 | 62.9 | 62.7 | 41.9 | 4,059 | 37.1 | 69.3 | 69.6 | 53.4 |

Talle A8. AQE Aptitude Indexes by Age and Recial Subgroup for 1973 Female Air Forse Enlistess

| $\begin{aligned} & \text { Vars } \\ & \text { app } \end{aligned}$ | Number and Aptitude !ndox by Recled Subyroup |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | menct |  |  |  |  | Non-Euck |  |  |  |  |
|  | N | $\begin{gathered} \text { Moeth } \\ \text { mcen } \end{gathered}$ | $\underset{\text { Meinlin }}{\text { Admin }}$ | $\begin{aligned} & \text { Gen } \\ & \text { mean } \end{aligned}$ | $\begin{gathered} \text { Eiec } \\ \hline \text { Ment } \end{gathered}$ | $N$ | $\begin{aligned} & \text { Mech } \\ & \text { Maan } \end{aligned}$ | nampa | $\underset{\text { Mon }}{\text { Gen }}$ | $\overline{\text { Enec }}$ Masen |
| 18 | 223 | 30.9 | 58.6 | 55.9 | 40.6 | 1,318 | 39.2 | 63.8 | 64.9 | 52.9 |
| 19 | 315 | 31.3 | 58.9 | 56.4 | 41.7 | 1,847 | 39.9 | 64.0 | 65.4 | 54.3 |
| 20 | 210 | 33.9 | 59.2 | 57.4 | 42.6 | 1,128 | 41.3 | 64.2 | 65.5 | 55.7 |
| 21 | 140 | 30.7 | 59.8 | 59.1 | 42.7 | 723 | 42.1 | 66.9 | 67.5 | 56.5 |
| 22 | 104 | 31.4 | 59.5 | 59.4 | 43.5 | 480 | 42.8 | 67.4 | 68.4 | 55.3 |
| 23 | 67 | 26.2 | 59.2 | 56.0 | 38.4 | 338 | 43.2 | 68.3 | 69.0 | 56.7 |
| 24+ | 131 | 33.2 | 59.8 | 59.2 | 43.3 | 661 | 43.3 | 69.8 | 70.6 | 57.6 |
| Total | 1,196 | 31.6 | 59.1 | 57.3 | 42.1 | 6,495 | 40.9 | 65.4 | 66.4 | 54.9 |

14

Table A9. Mean WAF Scores on AQE Aptitude Composites for Recial Subgroups and Total Sample by Enlistment Region, $1973^{\circ}$

| Requon of Endistment | Etack |  |  | Non-meack |  |  | Total sempie |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | $N$ | Mesn | sD | $N$ | moan | SD | $N$ | Meen | so |
| Mechanical |  |  |  |  |  |  |  |  |  |
| 1. ME, NH, VT, MA, RI, NY, CT | 109 | 29 | 16 | 880 | 41 | 19 | 989 | 39 | 19 |
| 2. NJ, PA, DE, MD, WV, VA, DC | 212 | 32 | 17 | 828 | 39 | 19 | 1,040 | 38 | 19 |
| 3. NC, SC, GA, FL, AL, MS, TN | 359 | 31 | 18 | 897 | 39 | 19 | 1,256 | 37 | 19 |
| 4. AR, LA, OK, NM, TX, AZ | 203 | 30 | 18 | 772 | 40 | 20 | 975 | 38 | 20 |
| 5. $\mathrm{OH}, \mathrm{IN}, \mathrm{MI}, \mathrm{IL}, \mathrm{KY}$ | 191 | 35 | 19 | 1,204 | 42 | 18 | 1,395 | 41 | 19 |
| 6. WA, OR, CA, NV, ID, MT, UT, AL, HI | 77 | 35 | 17 | 1,065 | 42 | 19 | 1,142 | 41 | 19 |
| 7. MO, IA, MN, ND, SD, KS, NE, CO, WY, WI | 45 | 24 | 15 | 838 | 43 | 18 | 883 | 42 | 18 |
| 8. Other | 0 | 0 | 0 | 11 | 40 | 18 | 11 | 40 | 18 |
| Total | 1,196 |  |  | 6,495 |  |  | 7,691 |  |  |
| Administrative |  |  |  |  |  |  |  |  |  |
| 1. ME, NH, VT, MA, RI, NY, CT | 109 | 55 | 15 | 880 | 64 | 16 | 989 | 63 | 16 |
| 2. NJ, PA, DE, MD, WV, VA, DC | 212 | 60 | 14 | 828 | 68 | 16 | 1,040 | 66 | 16 |
| 3. NC, SC, GA, FL, AL, MS, TN | 359 | 58 | 15 | 897 | 67 | 15 | 1,256 | 65 | 16 |
| 4. AR, LA, OK, NM, TX, AZ | 203 | 61 | 15 | 772 | 67 | 15 | 975 | 66 | 15 |
| 5. OH, IN, MI, IL, KY | 191 | 60 | 16 | 1,204 | 65 | 16 | 1,395 | 64 | 16 |
| 6. WA, OR, CA, NV, ID, MT, UT, AL, HI | 77 | 58 | 14 | 1,065 | 62 | 17 | 1,142 | 61 | 16 |
| 7. MO, IA, MN, ND, SD, KS, NE, CO, WY, WI | 45 | 62 | 15 | 838 | 66 | 16 | 883 | 66 | 16 |
| 8. Other | 0 | 0 | 0 | 11 | 52 | 15 | 11 | 52 | 15 |
| Total | 1,196 |  |  | 6,495 |  |  | 7,691 |  |  |
| General |  |  |  |  |  |  |  |  |  |
| 1. ME, NH, VT, MA, RI, NY, CT | 109 | 58 | 14 | 880 | 66 | 16 | 989 | 65 | 16 |
| 2. N, PA, DE, MD, WV, VA, DC | 212 | 57 | 14 | 828 | 57 | 16 | 1,040 | 65 | 16 |
| 3. NC, SC, GA, FL, AL, MS, TN | 359 | 55 | 13 | 897 | 67 | 14 | 1,256 | 63 | 15 |
| 4. AR, LA, OK, NM, TX, AZ | 203 | 59 | 12 | 772 | 67 | 14 | 975 | 4.5 | 14 |
| 5. OH, IN, MI, IL, KY | 191 | 58 | 14 | 1,204 | 66 | 15 | 1,395 | 55 | 15 |
| 6. WA, OR, CA NV, ID, MT, ITT, AL, Hi | 77 | 59 | 13 | 1,065 | 65 | 16 | 1,142 | 65 | 16 |
| 7. MO, IA, MN, ND, SD, KS, NE, CO, WY, WI | 45 | 59 | 15 | 838 | 67 | 16 | 883 | 57 | 16 |
| 8. Other | 0 | 0 | 0 | 11 | 57 | 12 | 11 | . 57 | 12 |
| Total | 1,196 |  |  | 6,495 |  |  | 7,691 |  |  |
| Electronics |  |  |  |  |  |  |  |  |  |
| 1. ME, NH, VT, MA, RI, NY, CT | 109 | 43 | 17 | 880 | 55 | 18 | 989 | 54 | 19 |
| 2. NJ, PA, DE, MD, WV, VA, DC | 212 | 42 | 18 | 828 | 54 | 19 | 1,040 | 52 | 20 |
| 3. NC, SC, GA, FL, AL, MS, TN | 359 | 40 | 17 | 897 | 52 | 18 | 1,256 | 48 | 19 |
| 4. AR, LA, OK, NM, TX, AZ | 203 | 38 | 16 | 772 | 54 | 19 | 975 | 51 | 20 |
| 5. OH, IN, MI, IL, KY | 191 | 47 | 15 | 1,203 | 56 | 17 | 1,394 | 55 | 17 |
| 6. WA, OR, CA, NV, ID, MT, UT, AL, HI | 77 | 47 | 17 | 1,065 | 55 | 19 | 1,14? | 55 | 19 |
| 7. MO, IA, MN, ND, SD, KS, NE, CO, WY, WI | 45 | 47 | 19 | 838 | 57 | 18 | 883 | 57 | 18 |
| 8. Other | 0 | 0 | 0 | 11 | 50 | 21 | 11 | 50 | 21 |
| Total | 1,196 |  |  | 6,493 |  |  | 7,691 |  |  |

[^0]
[^0]:    ${ }^{2}$ Means and Standard Deviations have been rounded so nearest whole number.

