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Evaluation of Adverse Impact for US Air Force Officer and Aircrew Selection Tests

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THIS TECHNICAL REPORT HAS BEEN REVIEWED AND IS APPROVED FOR PUBLICATION.

FOR THE DIRECTOR

//signed//

DANIEL G. GODDARD
Chief, Warfighter Interface Division
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14. ABSTRACT

Adverse impact issues have posed a challenge to military personnel selection. The purpose of the current study was to examine group differences in performance on tests used to qualify applicants for US Air Force officer commissioning and aircrew training programs. In particular, the impact of raising minimum qualifying scores on selection ratios for majority and minority groups was examined. Results indicated that strict application of the current minimum qualifying standards, along with top-down selection of qualified applicants, would lead to adverse impact for females and racial/ethnic minorities for both officer commissioning and aircrew training programs. Future test development should focus on the identification of tests that preserve the predictive validity of USAF personnel selection tests while minimizing subgroup differences. Reduction of adverse impact across all subgroups is a challenging issue. Sometimes changes in test content or the addition of a new test may reduce adverse impact for one subgroup but worsen it for another. Setting low minimum qualifying scores allows a greater range of applicants to be considered for training or job opportunities, but may adversely affect organizational performance (i.e., increase training requirements, reduce job performance). Minimum qualifying scores should be based on empirical research (e.g., job analysis) identifying the ability requirements for successful performance of the jobs being targeted.

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PREFACE

This report describes activities performed under work unit 71840972 in support of USAF personnel selection and classification (AF/AIPF). The author thanks AETC SAS/CS for their support in development of the database used in this effort..

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EVALUATION OF ADVERSE IMPACT FOR US AIR FORCE OFFICER AND AIRCREW SELECTION TESTS

There are several important considerations when developing or choosing selection procedures for use in an employment setting. In addition to demonstrating a predictive relationship between performance on the selection procedure and occupational performance, it also is desirable to minimize group differences in performance and discrimination. The US Office of Personnel Management *Uniform Guidelines on Employment Selection* state:

> The use of any selection procedure which has an adverse impact on the hiring, promotion, or other employment or membership opportunities of members of any race, sex, or ethnic group will be considered to be discriminatory and inconsistent with these guidelines, unless the procedure has been validated in accordance with these guidelines ... (Sec. 1607.3 A, *Uniform Guidelines*)
>
> The *Uniform Guidelines* define adverse impact as follows:
>
> A selection rate for any race, sex, or ethnic group which is less than four-fifths (4/5) (or eighty percent) of the rate for the group with the higher rate will generally be regarded by the federal enforcement agencies as evidence of adverse impact ... (Sec. 1067.3 D, *Uniform Guidelines*)

To calculate adverse impact, first determine the number of applicants tested and the number who passed for each group. Next, divide the number that passed by the total number tested for each group. Divide the lower pass rate by the higher pass rate. Ratios of .80 or less are considered evidence of adverse impact.

For example suppose an employment test were administered to 500 males and 200 females. Further, 375 of the 500 males passed (375/500 = .75 pass rate) and 130 of the 200 females passed (130/200 = .65 pass rate). The adverse impact calculation would yield a value of .87 (.65/.75 = .87). Although the pass rates were not the same for males and females no adverse impact occurred since the pass ratio exceeded the .80 adverse impact threshold.

Consider another example. Two hundred Whites and 150 African-Americans apply for a job promotion. Of these, 164 (164/200 = .82 pass rate) of the White applicants and 85 (85/150 = .57 pass rate) of the African-American applicants pass the promotion test. The adverse impact calculation would yield a value of .69 (.57/.82 = .69), indicating that adverse impact has occurred for the African-American applicants.

Selection procedures that demonstrate adverse impact must satisfy two conditions in order to be considered legal. First, the test or selection procedure must be job-related (i.e., validated for the purpose it is being used). Second, there must be a business necessity for using it (e.g., minimize training attrition, cost-avoidance, limited number of training slots).

Adverse Impact and Cognitive Ability Tests

Cognitive Ability

Measures of cognitive ability typically have the highest predictive validity versus training and job performance when compared with other common personnel selection procedures (Jensen, 1998; Ree & Carretta, 2002; Salgado, Anderson, Moscoso, Bertua, & de Fruyt, 2003; Salgado, Anderson, Moscoso, Bertua, de Fruyt, & Rolland, 2003; Schmidt & Hunter, 1998). The validity of cognitive ability tests tends to increase as job complexity also increases (Jensen, 1998). Generally, cognitive ability tests result in group differences in test performance where Whites tend to score higher than do African-Americans or Hispanics (Jensen, 1980, 1998).

Several approaches have been used to reduce adverse impact, including the use of non-cognitive measures (biodata, interest inventories, personality tests), the combination of non-cognitive measures with cognitive ability measures, and the reduction in minimum qualifying scores (i.e., cutoff scores). These approaches are not without their problems.

Approaches for Reducing Adverse Impact

Non-cognitive measures. Biodata, interest, and personality measures are susceptible to intentional distortion or faking (i.e., impression management). Biodata and interest inventories may have adverse impact against females if developed based on a predominantly male sample. Because of the problem with intentional distortion, biodata,

interest inventories, and personality measures are more appropriate for vocational counseling than employment selection.

Combination of non-cognitive and cognitive ability measures. Initial increases in validity although statistically significant, are not great (Schmidt & Hunter, 1998). Also, it is questionable whether it is appropriate to combine measures that are not compensatory. Pleasing personalities generally do not make up for a lack of ability.

Reduction in minimum qualifying scores. There are several problems with this approach. It is illegal to use separate minimum qualifying (i.e., cutoff) scores for different subgroups. Reduction in cutoff scores will reduce the quality of the trainees obtained through testing resulting in poorer occupational performance (e.g., higher training attrition, lower job performance). If the cutoff scores are set too low, a large proportion of the applicants will pass and will need to be reduced by potentially less valid procedures.

Purpose

Adverse impact issues have posed a challenge to military personnel selection. The purpose of the current study was to examine group differences in performance on tests used to qualify applicants for US Air Force officer commissioning programs and aircrew training. In particular, the impact of raising minimum qualifying scores on selection ratios for majority and minority groups will be examined.

METHOD

Participants

Participants were approximately 117,000 US Air Force officer applicants who tested on the AFOQT between 1993 and 2005. The sample was mostly male (74.5%) and white (72.1%). The average age of the participants was 23.0 years. Test scores are for the first-time tested.

Measures

Air Force Officer Qualifying Test (AFOQT)

The AFOQT is a multiple-aptitude cognitive test battery used by the US Air Force to qualify applicants for officer commissioning programs and for aircrew training

(Carretta & Ree, 1996). The form of the test used in this study consisted of 16 subtests that are combined into five operational composites: Verbal, Quantitative, Academic Aptitude, Pilot, and Navigator-Technical. The most recent form of the AFOQT (Forms S1/S2), which was implemented in July 2005, dropped five of the previous 16 subtests, but retained the factor structure and computed the same composite scores as the forms used in this study (Gould & Shore, 2003; Skinner & Alley, 2002). The current study focused on the composites, as the subtest scores are not used operationally.

The AFOQT has demonstrated validity against performance in officer commissioning programs (Roberts & Skinner, 1996) and pilot and navigator training (Carretta & Ree, 1995; Olea & Ree, 1994). Evaluations of gender and racial equity have shown no evidence of differential validity versus performance in officer commissioning (Roberts & Skinner, 1996) or pilot training (Carretta, 1997a) programs. The AFOQT Pilot composite is a component of the Pilot Candidate Selection Method (PCSM) composite, which is used to qualify applicants for pilot training (Carretta, 2000).

Pilot Candidate Selection Method (PCSM)

PCSM is a regression-weighted composite that includes the AFOQT Pilot composite, several subtest scores from the Basic Attributes Test (BAT), and a measure of flying experience (Carretta, 2000). PCSM scores have demonstrated validity against several measures of flying performance including passing/failing training, flying grades, class rank, and number of flying hours needed to complete training. High PCSM scores are associated with greater probability of completing jet training (Carretta 1992a, 1992b, 2000; Carretta & Ree, 2003), fewer flying hours needed to complete training (Duke & Ree, 1996), higher class ranking (Carretta, 1992b), and greater likelihood of being fighter-qualified (Weeks, Zelenski, & Carretta, 1996). Although previous studies have examined mean score differences for males versus females on the BAT (Carretta, 1997b), no previous studies have examined adverse impact for PCSM.

Minimum Qualifying Scores

Air Force Officer Qualifying test (AFOQT)

Minimum qualifying scores for the AFOQT for US Air Force officer commissioning programs and aircrew training programs vary across commissioning sources. Tables A-1through A-4 summarize the minimum AFOQT qualifying scores for the Air National Guard (ANG), Air Force Reserve (AFR), Officer Training School (OTS), and Reserve Officer Training Corps (ROTC).

It is common to have minimum qualifying scores on two or more of the AFOQT composites. For example, OTS pilot training applicants without a private pilot's license (PPL) must achieve the following minimum qualifying scores: Pilot: $\geq 50^{th}$ percentile, Nav/Tech: $\geq 10^{th}$ percentile, Pilot + Nav/Tech total score: ≥ 60, Verbal: $\geq 15^{th}$ percentile, and Quantitative: $\geq 30^{th}$ percentile.

It also should be noted that the minimum qualifying scores are sometimes waived in exceptional cases, based on the "whole person" or on the "needs of the Air force." For example, ANGRC may waive the minimum verbal and quantitative scores for persons who apply for appointment to fill ANGUS vacancies.

Pilot Candidate Selection Method (PCSM)

Although the Air Force Research Laboratory recommended a 25^{th} percentile minimum qualifying PCSM score when it was operationally implemented in 1993, no minimum was set. Upon reviewing several years of post-operational PCSM data, Ness (1997) recommended a 50^{th} percentile minimum qualifying PCSM score for pilot training. Subsequently, some commissioning sources (e.g., Officer Training School) have adopted minimum qualifying scores for their pilot training applicants.

Approach

Several analyses were performed in order to evaluate the effect of raising or lowering minimum qualifying scores on qualification rates for sex and racial/ethnic subgroups. In the simplest case, the effect on qualification rates was examined for a single AFOQT or PCSM composite. However, as noted above it is common for there to be minimum qualifying scores on two or more composites simultaneously. As a result,

the effects of raising or lowering multiple minimum qualifying scores on qualification rates also were examined.

RESULTS AND DISCUSSION

Air Force Officer Qualifying Test

Descriptive Statistics

Tables 1 and 2 summarize the means and standard deviations for USAF officer applicants on the AFOQT composites for sex and race/ethnic groups. The magnitude of the difference between group means (i.e., effect size) was expressed in standard deviation units or *d* (Cohen, 1988). The standard deviation for *d* was defined as the within-group standard deviation ($SD = (Sp^2/n_1 + Sp^2/n_2)^{1/2}$), where Sp^2 is the pooled variance calculated from the weighted average of the variance for the two groups being compared (1.e., males versus females, whites versus African-Americans, etc.). Thus, $d = (Mean_1 - Mean_2)/SD$. Cohen (1988) characterizes a *d* of .20 as small, .50 as moderate, and .80 or larger as large. It should be noted, however, that even "small" *d* values can have a large impact on the proportion of applicants in the lower mean group that would meet or exceed some minimum qualifying score for selection.

Mean score differences favoring males versus females and whites versus racial/ethnic minorities are consistent with previous findings in US Air Force officer applicants (Carretta, 1997a). The magnitude of the mean score differences varied by the groups being compared and by the composite content. For males versus females, the largest differences occurred for the Pilot and Navigator/Technical composites. For whites versus African-Americans and whites versus Hispanics, all mean score differences were moderate to large. Mean score differences favoring whites versus Asians and whites versus Native-Americans were not as large as those for the other racial/ethnic group comparisons.

Table 1. Means and Standard Deviations on the AFOQT Composites for USAF Officer Applicants: Males versus Females

	Males		Females		
Score	Mean	SD	Mean	SD	*d*
Verbal	49.16	25.97	42.73	26.15	0.247
Quantitative	46.81	25.63	34.34	23.03	0.499
Academic Aptitude	47.57	26.26	36.75	24.88	0.418
Pilot	52.64	25.95	33.00	21.60	0.788
Navigator-Technical	51.85	26.59	33.68	23.39	0.704

Note. N Males = 86,938; N Females = 29,677

Table 2. Means and Standard Deviations on the AFOQT Composites for USAF Officer Applicants: Whites versus Racial/Ethnic Minorities

Subgroups/Scores

	Whites		African-Am.		
	Mean	SD	Mean	SD	*d*
Verbal	52.90	24.97	35.39	23.99	0.704
Quantitative	48.53	24.76	32.22	22.52	0.659
Academic Aptitude	50.57	25.12	31.60	23.18	0.761
Pilot	54.27	24.42	35.68	23.45	0.764
Navigator-Technical	53.52	25.26	35.31	24.14	0.724

	Whites		Hispanics		
	Mean	SD	Mean	SD	*d*
Verbal	52.90	24.97	29.40	21.74	0.958
Quantitative	48.53	24.76	24.00	19.27	1.021
Academic Aptitude	50.57	25.12	23.73	19.87	1.099
Pilot	54.27	24.42	21.91	18.50	1.369
Navigator-Technical	53.52	25.26	21.48	19.10	1.311

	Whites		Asian-Am.		
	Mean	SD	Mean	SD	*d*
Verbal	52.90	24.97	37.44	25.86	0.617
Quantitative	48.53	24.76	41.62	25.72	0.278
Academic Aptitude	50.57	25.12	37.92	25.90	0.502
Pilot	54.27	24.42	38.27	24.56	0.655
Navigator-Technical	53.52	25.26	41.91	26.49	0.458

	Whites		Native-Am.		
	Mean	SD	Mean	SD	*d*
Verbal	52.90	24.97	44.55	26.83	0.334
Quantitative	48.53	24.76	39.70	24.84	0.357
Academic Aptitude	50.57	25.12	40.73	26.13	0.392
Pilot	54.27	24.42	45.70	25.68	0.351
Navigator-Technical	53.52	25.26	44.20	26.14	0.369

Note. N Whites = 84,126; N African-Americans = 8,913; N Hispanics = 14,662; N Asians = 7,241; N Native-Americans = 1,126

Adverse Impact Analyses

Tables B-1 through B-25 provide percentile score distribution comparisons for males versus females and whites versus racial/ethnic minorities (African-Americans, Hispanics, Asians, and Native-Americans) for each of the five AFOQT composite scores (Verbal, Quantitative, Academic Aptitude, Pilot, and Navigator-Technical). They can be used to examine questions regarding the effects of lowering or raising a single composite score on subgroup qualification rates.

As previously discussed and summarized in Tables A-1 through A-4, the AFOQT composites are often used in combination to determine minimum qualification. That is, applicants must meet some combination of score requirements such as Verbal greater or equal to 15 and Quantitative greater or equal to 10. The sections below summarize analyses that examine joint score requirements.

It should be noted that these analyses focus on the proportion of majority and minority applicants who qualified to be considered for officer commissioning or aircrew training programs, not on who actually was selected. In most typical selection settings, not all minimally-qualified applicants are selected. Only enough applicants are selected to meet manpower requirements. *Adverse impact evaluations are a function not only of who applies or qualifies for training or promotion, but of who is selected.*

Officer commissioning. Table 3 summarizes the effects of varying minimum qualifying scores on selection ratios for officer commissioning programs for males versus females. Tables 4-8 provide similar comparisons for whites versus racial/ethnic minorities of African-Americans, Hispanics, Asians, Native-Americans, and all racial/ethnic minorities.

As shown in Table 3, although females qualified for officer commissioning at a lower rate than did males, the adverse impact ratio did not fall below .80. No adverse impact would have occurred for either the current minimum qualifying scores (Verbal $\geq$ 15 and Quantitative $\geq$ 10) or for an alternative set of minimum qualifying scores (Verbal $\geq$ 15, Quantitative $\geq$ 10, and V + Q $\geq$ 50) if all minimally-qualified applicants had been selected.

Table 3. Impact of Varying Minimum Qualifying Scores on Office Commissioning Qualification: Males versus Females

	Males		Females		
Minimum Qualifying Scores	N	Selection Rate	N	Selection Rate	Adverse Impact Ratio
1. Verbal ≥ 15 and Quantitative ≥ 10	78,373	0.9014	23,247	0.7833	0.8689
2. Verbal ≥ 15, Quantitative ≥ 10, and (V + Q) ≥ 50	69,675	0.8014	19,773	0.6662	0.8313
3. Verbal ≥ 15, Quantitative ≥ 10, and (V + Q) ≥ 50 (top 25% only)	24.777	0.2850	4,843	0.1630	0.5719

Note. Total sample: N Males = 86,938; N Females = 29,677

Suppose we applied the second decision rule (Verbal ≥ 15, Quantitative ≥ 10, and V + Q ≥ 50) to identify applicants who met or exceeded the minimum qualifications, with the additional stipulation that only the top 25% of all of the applicants on the combined Verbal/Quantitative composite would be selected for officer commissioning due to a limited number of training positions. Twenty-five percent of the 116,615 male and female applicants is 29,154. Setting a minimum combined Verbal/Quantitative cut score at 126 will yield 29,620 officer candidates (0.254 selection rate), about 500 above the required number. As shown in Table 3 (Rule 3), the cut score of 126 would result in a selection rate of 0.285 for males and 0.163 for females, and yield an adverse impact ratio of 0.5719. Thus applying top-down selection to select only the best qualified applicants would lead to adverse impact for female applicants.

As summarized in Tables 4-8, the comparisons between whites and the racial/ethnic groups yielded mixed results. Adverse impact was greatest for whites versus African-Americans and Hispanics, lesser but still present for whites versus Asians, and was not observed for whites versus Native-Americans.

Table 4. Impact of Varying Minimum Qualifying Scores on Office Commissioning Qualification: Whites versus Blacks

	Whites		African-Am.		
Minimum Qualifying Scores	N	Selection Rate	N	Selection Rate	Adverse Impact Ratio
1. Verbal ≥ 15 and Quantitative ≥ 10	77,789	0.9246	6,416	0.7198	0.7785
2. Verbal ≥ 15, Quantitative ≥ 10, and (V + Q) ≥ 50	72,132	0.8574	5,149	0.5776	0.6737

Note. Total sample: N Whites = 84,126; N African-Americans = 8,913

Suppose all ethnic minorities (non-whites) were treated as a single group and then compared with whites (see Table 8). When this was done, a determination of adverse impact for officer commissioning was observed for both decision rules. For Rule 1 (Verbal ≥ 15 and Quantitative ≥ 10), the adverse impact ratio was 0.7391 and for Rule 2 (Verbal ≥ 15, Quantitative ≥ 10, and (V + Q) ≥ 50)) it was 0.6322.

Table 5. Impact of Varying Minimum Qualifying Scores on Office Commissioning Qualification: Whites versus Hispanics

	Whites		Hispanics		
Minimum Qualifying Scores	N	Selection Rate	N	Selection Rate	Adverse Impact Ratio
1. Verbal ≥ 15 and Quantitative ≥ 10	77,789	0.9246	8,747	0.5965	0.6452
Verbal ≥ 15, 2. Quantitative ≥ 10, and (V + Q) ≥ 50	72,132	0.8574	6,371	0.4345	0.5067

Note. Total sample: N Whites = 84,126; N Hispanics = 14,662

Table 6. Impact of Varying Minimum Qualifying Scores on Office Commissioning Qualification: Whites versus Asians

	Whites		Asians		
Minimum Qualifying Scores	N	Selection Rate	N	Selection Rate	Adverse Impact Ratio
1. Verbal ≥ 15 and Quantitative ≥ 10	77,789	0.9246	5,329	0.7359	0.7959
2. Verbal ≥ 15, Quantitative ≥ 10, and (V + Q) ≥ 50	72,132	0.8574	4,631	0.6395	0.7459

Note. Total sample: N Whites = 84,126; N Asians = 7,241

Table 7. Impact of Varying Minimum Qualifying Scores on Office Commissioning Qualification: Whites versus Native-Americans

	Whites		Native-Am.		
Minimum Qualifying Scores	N	Selection Rate	N	Selection Rate	Adverse Impact Ratio
1. Verbal ≥ 15 and Quantitative ≥ 10	77,789	0.9246	915	0.8126	0.8788
2, Verbal ≥ 15, Quantitative ≥ 10, and (V + Q) ≥ 50	72,132	0.8574	799	0.7095	0.8276

Note. Total sample: N Whites = 84,126; N Native-Americans = 1,126

As with the male versus female comparisons, suppose the second decision rule (Verbal ≥ 15, Quantitative ≥ 10, and V + Q ≥ 50) was used to identify applicants who met or exceeded the minimum qualifications, with the additional stipulation that only the top 25% of all of the applicants on the combined Verbal/Quantitative composite would be selected for officer commissioning due to a limited number of training positions (Rule 3). Doing so, results in a minimum qualifying score on the combined Verbal/Quantitative composite of 126, selection rates of 0.3110 for whites and 0.1060 for racial/ethnic minorities, and an adverse impact ratio of 0.3408. As with the male/female analyses, applying top-down selection exacerbated the occurrence of adverse impact for racial/ethnic minorities for selection into an officer commissioning program.

Table 8. Impact of Varying Minimum Qualifying Scores on Office Commissioning Qualification: Whites versus All Racial/Ethnic Minorities

Minimum Qualifying Scores	Whites N	Whites Selection Rate	All Minorities N	All Minorities Selection Rate	Adverse Impact Ratio
1. Verbal ≥ 15 and Quantitative ≥ 10	77,789	0.9246	21,831	0.6834	0.7391
2. Verbal ≥ 15, Quantitative ≥ 10, and (V + Q) ≥ 50	72,132	0.8574	17,316	0.5421	0.6322
3. Verbal ≥ 15, Quantitative ≥ 10, and (V + Q) ≥ 50 (top 25% only)	26,163	0.3110	3,386	.1060	0.3408

Note. Total sample: N Whites = 84,126; N All Racial/Ethnic Minorities = 31,942

Pilot candidate selection. As noted earlier and described in Tables A-1 through A-4, minimum qualifying AFOQT scores for aircrew training involve multiple minimums. For example, OTS pilot candidates without a private pilot's certificate must meet the following minimums: Pilot ≥ 50, Nav/Tech ≥ 10, Pilot + Nav/Tech total score ≥ 60, Verbal ≥ 15, and Quantitative ≥ 30. The effect of raising or lowering minimum qualifying scores on the individual AFOQT composites can be determined from examination of Tables B-1 through B-25. The sections below summarize analyses that examined joint score requirements.

Table 9 summarizes the effects of varying minimum qualifying scores on selection ratios for pilot training for males versus females. Table 10 summarizes similar

comparisons for whites versus all racial/ethnic minorities combined (African-Americans, Hispanics, Asians, Native-Americans).

Rule 1 (with PPL) applied the minimum qualifying AFOQT composite scores for OTS pilot candidates who possess a private pilot's certificate (Pilot $\geq$ 25, Nav/Tech $\geq$ 10, (P + N) $\geq$ 50, Verbal $\geq$ 15, and Quantitative $\geq$ 10). Rule 2 (without PPL) sets a higher standard. It applied the minimum qualifying AFOQT composite scores for OTS pilot candidates who do not possess a private pilot's certificate (Pilot $\geq$ 50, Nav/Tech $\geq$ 10, (P + N) $\geq$ 60, Verbal $\geq$ 15, and Quantitative $\geq$ 30).

As shown in Table 9, females qualify at a lower rate for pilot training than do males. The adverse impact ratios for both Rule 1 (with PPL) and Rule 2 (without PPL) fall below the .80 value, indicating the presence of adverse impact for women.

As with the officer commissioning analyses, suppose the second decision rule (without {PPL: Pilot $\geq$ 50, Nav/Tech $\geq$ 10, (Pilot + Nav/Tech) $\geq$ 60, Verbal $\geq$ 15, and Quantitative $\geq$ 30)) was used to identify applicants who met or exceeded the minimum qualifications, with the additional stipulation that only the top 10% of all of the applicants on the combined Pilot/Navigator-Technical composite would be selected for pilot training due to a limited number of training positions (Rule 3). Ten percent of the 116,615 male and female applicants is 11,662. Setting a minimum combined Pilot/Navigator-Technical cut score at 168 will yield 12,011 pilot candidates (0.103 selection rate), about a 350 above the required number. The cut score of 168 would result in a selection rate of 0.131 for males and 0.021 for females, and yield an adverse impact ratio of 0.1603. Thus, applying top-down selection to select only the best qualified applicants would lead to severe adverse impact for female pilot training applicants.

Table 9. Impact of Varying Minimum Qualifying Scores on Pilot Training Qualification: Males versus Females

	Males		Females		
Minimum Qualifying Scores	N	Selection Rate	N	Selection Rate	Adverse Impact Ratio
1. With PPL: Pilot ≥ 25, Nav/Tech ≥ 10, (P + N) ≥ 50, Verbal ≥ 15, and Quantitative ≥ 10	66,603	0.7660	15,403	0.5190	0.6774
2. Without PPL: Pilot ≥ 50, Nav/Tech ≥ 10, (P + N) ≥ 60, Verbal ≥ 15, Quantitative ≥ 30	43,784	0.5036	6,358	0.2142	0.4253
3. Without PPL: Pilot ≥ 50, Nav/Tech ≥ 10, (P + N) ≥ 60, Verbal ≥ 15, Quantitative ≥ 30 (top 10% only)	11,388	0.1310	623	0.0210	0.1603

Note. Total sample: N Males = 86,938; N Females = 29,677

Table 10. Impact of Varying Minimum Qualifying Scores on Pilot Training Qualification: Whites versus All Racial/Ethnic Minorities

	Whites		All Minorities		
Minimum Qualifying Scores	N	Selection Rate	N	Selection Rate	Adverse Impact Ratio
1. With PPL: Pilot ≥ 25, Nav/Tech ≥ 10, (P + N) ≥ 50, Verbal ≥ 15, and Quantitative ≥ 10	68,518	0.8144	13,488	0.4222	0.5184
2. Without PPL: Pilot ≥ 50, Nav/Tech ≥ 10, (P + N) ≥ 60, Verbal ≥ 15, Quantitative ≥ 30	44,264	0.5261	5,878	0.1840	0.3497
3. Without PPL: Pilot ≥ 50, Nav/Tech ≥ 10, (P + N) ≥ 60, Verbal ≥ 15, Quantitative ≥ 30 (top 10% only)	10,936	0.1300	1,022	0.0320	0.2461

Note. Total sample: N Whites = 84,126; N All Racial/Ethnic Minorities = 31,942

As shown in Table 10, the adverse impact analyses results for whites versus all racial/ethnic minorities closely mirror those for males versus females. Racial/ethnic minorities qualified for pilot candidate selection at a much lower rate than did whites for all three decision rules. As with the male versus female comparisons, adverse impact was most severe when candidates were first ranked on their qualifying scores then top-down selection was applied to identify the top 10% of the candidates (Rule 3).

Navigator candidate selection. As with pilot training, minimum qualifying score requirements vary across commissioning sources for navigator training. The Air force Reserve has the least restrictive requirement (Nav/Tech ≥ 25). Air National Guard, OTS, and ROTC share a multiple minimum qualifying score requirement (Pilot ≥ 10, Nav/Tech ≥ 25, (Pilot + Nav/Tech) ≥ 50, Verbal ≥ 15, and Quantitative ≥ 10). The effect of raising or lowering the Navigator/Technical score on subgroup qualification rates and adverse impact can be computed easily from the tables in Appendix B. The sections below summarize analyses that examined the simple Air Force Reserve requirement and the multiple score requirement used by ANG, OTS, and ROTC.

Table 11 summarizes the effects of varying minimum qualifying scores on selection ratios for navigator training for males versus females. Table 12 summarizes similar comparisons for whites versus all racial/ethnic minorities combined (African-Americans, Hispanics, Asians, Native-Americans).

Rule 1 (Nav/Tech ≥ 25) applied the minimum qualifying score for Air Force Reserve navigator training candidates. Rule 2 sets a higher standard. It applied the minimum qualifying AFOQT composite scores for ANG, OTS, and ROTC navigator training candidates (Pilot ≥ 10, Nav/Tech ≥ 25, (Pilot + Nav/Tech) ≥ 50, Verbal ≥ 15, and Quantitative ≥ 30).

Results for males versus females and for whites versus all racial/ethnic minorities indicate adverse impact for both women and minorities. As with pilot training applicants, the adverse impact was greatest when top-down selection was used and there were few training openings (10% selection rate) (Rule 3).

Table 11. Impact of Varying Minimum Qualifying Scores on Navigator Training Qualification: Males versus Females

	Males		Females		
Minimum Qualifying Scores	N	Selection Rate	N	Selection Rate	Adverse Impact Ratio
1. Nav/Tech ≥ 25	69,724	0.8020	20,943	0.5660	0.7057
2. Pilot ≥ 10, Nav/Tech ≥ 25, (P + N) ≥ 50, Verbal ≥ 15, Quantitative ≥ 10	66,260	0.7621	15,637	0.5269	0.6913
3. Pilot ≥ 10, Nav/Tech ≥ 25, (P + N) ≥ 50, Verbal ≥ 15, Quantitative ≥ 10 (top 10% only)	11,388	0.1310	623	0.0210	0.1603

Note. Total sample: N Males = 86,938; N Females = 29,677

Table 12. Impact of Varying Minimum Qualifying Scores on Navigator Training Qualification: Whites versus All Racial/Ethnic Minorities

	Whites		All Minorities		
Minimum Qualifying Scores	N	Selection Rate	N	Selection Rate	Adverse Impact Ratio
1. Nav/Tech ≥ 25	70,666	0.8400	15,871	0.4968	0.5915
2. Pilot ≥ 10, Nav/Tech ≥ 25, (P + N) ≥ 50, Verbal ≥ 15, Quantitative ≥ 10	68.150	0.8100	13,747	0.4303	0.5312
3. Pilot ≥ 10, Nav/Tech ≥ 25, (P + N) ≥ 50, Verbal ≥ 15, Quantitative ≥ 10 (top 10% only)	10,936	0.1300	1,022	0.0320	0.2461

Note. Total sample: N Whites = 84,126; N All Racial/Ethnic Minorities = 31,942

Pilot Candidate Selection Method

The Pilot Candidate Selection Method (PCSM) score is a regression-weighted composite that combines the AFOQT Pilot composite, several scores from the Basic Attributes test (BAT), and a flying experience scale. As with the AFOQT composites, it is reported as a percentile score with values from 1 to 99.

Descriptive Statistics

Tables 13 summarize the means and standard deviations for USAF pilot training applicants on the PCSM composites for sex and racial/ethnic groups. Due to the small number of racial/ethnic minorities, they were treated as a single group. The large mean score difference favoring males versus females is consistent with results reported earlier in this report for the AFOQT Pilot composite ($d = 0.788$) and for previous studies involving the AFOQT (Carretta, 1997a) and the BAT psychomotor tests (Carretta, 1997b).

Though the difference between whites and racial/ethnic minorities favored whites, the standardized difference is moderate and less than the differences observed for the AFOQT Pilot composite score reported earlier (*d* values from 0.351 (whites versus Native-Americans) to 1.369 (whites versus Hispanics).

Table 13. Means and Standard Deviations on the PCSM Composite for USAF Pilot Training Applicants: Males versus Females and Whites versus Racial/Ethnic Minorities

Score	Mean	SD	*d*
Sex			
Males	59.21	31.57	0.73
Females	36.08	31.24	
Race/Ethnicity			
Whites	58.84	31.71	0.32
Racial/Ethnic Minorities	48.48	33.39	

Note. N Males = 4,539; N Females = 353;
N Whites = 4,302; N Racial/Ethnic Minorities = 601

Adverse Impact Analyses

As previously noted, although the Air Force Research Laboratory recommended a 25th percentile minimum qualifying PCSM score when it was operationally implemented in 1993, no minimum was set. Upon reviewing several years of post-operational PCSM data, Ness (1997) recommended a 50th percentile minimum qualifying PCSM score for pilot training. Subsequently, some commissioning sources (e.g., Officer Training School) have adopted minimum qualifying scores for their pilot training applicants. The qualification rates across the full range of PCSM scores for males versus females and for whites versus racial/ethnic minorities are summarized in Tables C-1 and C-2. Tables 14 and 15 show the impact of PCSM minimum qualifying scores of 25 and 50 on qualification rates for males versus females and for whites versus all racial/ethnic minorities combined (African-Americans, Hispanics, Asians, and Native-Americans).

Adverse impact occurred for females regardless of which minimum qualifying score was used, and was relatively worse for the higher score. In contrast, there was no adverse impact for racial/ethnic minorities at the lower (PCSM ≥ 25) minimum qualifying score, and only a small impact at the higher minimum qualifying score (PCSM ≥ 50). Though the sample was small, it appeared that the PCSM composite had less adverse impact for pilot candidate selection for both females and racial/ethnic minorities than did the AFOQT.

Table 14. Impact of Varying Minimum PCSM Qualifying Scores on Pilot Training Qualification: Males versus Females

	Males		Females		
Minimum Qualifying Scores	N	Selection Rate	N	Selection Rate	Adverse Impact Ratio
1. PCSM ≥ 25	3,654	0.805	189	0.535	0.664
2. PCSM ≥ 50	2,819	0.621	114	0.323	0.520

Note. Total sample: N Males = 4,539; N Females = 353

Table 15. Impact of Varying Minimum PCSM Qualifying Scores on Pilot Training Qualification: Whites versus All Racial/Ethnic Minorities

	Whites		All Minorities		
Minimum Qualifying Scores	N	Selection Rate	N	Selection Rate	Adverse Impact Ratio
1. PCSM ≥ 25	3,442	0.800	408	0.679	0.848
2. PCSM ≥ 50	2,650	0.616	290	0.483	0.784

Note. Total sample: N Whites = 4,302; N All Racial/Ethnic Minorities = 601

CONCLUSION

Personnel selection necessarily implies screening of training or job applicants and rejection of some. As noted by Jensen (1980), there are two justifications for selection: 1) when the pool of applicants is greater than the number of training or job positions and 2) when the predictive validity of the selection procedures can be demonstrated. Both of these apply to US Air Force officer commissioning and aircrew training programs.

The primary goal of personnel measurement and selection is to identify the best qualified training or job applicants. Successful identification and recruitment of high aptitude applicants yields several benefits to the organization. High aptitude applicants are less likely to fail training, require fewer training resources (e.g., number of training hours), and are more likely to perform well on the job. If the only goals were to reduce training attrition and training requirements and to increase job performance, the personnel measurement and selection strategy would be straight-forward: 1) conduct a job analysis (Cascio, 1991; Gael, 1988; McCormick, 1976, 1979) to identify the necessary knowledge, skills, abilities, and other characteristics for successful training/job performance, 2) set minimum qualifying standards based on job analysis results, 3) develop/identify appropriate measures of ability, and 4) rank-order applicants on validated measures of ability and apply top-down selection until the desired number of qualified applicants has been selected.

However, there are other important considerations in addition to the utility of the personnel selection system for identifying those likely to be successful. These include whether or not the selection methods predict training and job performance equally well for members of different sex and racial/ethnic subgroups (i.e. predictive bias) and whether or not a selection method differentially qualifies members of different subgroups (i.e., adverse impact). It is not unusual to find that setting minimum qualifying scores to minimize attrition and maximize job performance has a negative effect on achievement of gender and racial/ethnic diversity.

Several studies have examined subgroup performance on tests used to qualify applicants for US Air Force officer commissioning and aircrew training programs. Although mean score differences have been observed on these tests, there is no evidence of predictive bias for sex and racial/ethnic subgroups. Adverse impact issues have posed a challenge to military personnel selection.

Results of the current study indicated that adverse impact occurred for both officer commissioning and aircrew training qualification. The amount of adverse impact varied by 1) the subgroups being compared 2) the training program (officer commissioning, pilot training, or navigator training), 3) the measure being used (AFOQT or PCSM), and 4) the minimum qualifying score(s). The amount of adverse impact was exacerbated when minimum qualifying scores were raised and when applicants were rank-ordered based on test scores and top-down selection was used.

Future test development should focus on the identification of tests that preserve the predictive validity of the AFOQT and PCSM, while minimizing subgroup differences. This is not easy. Sometimes changes in test content or the addition of a new test may reduce adverse impact for one group but worsen it for another. For instance, consider the PCSM score. The PCSM score combines the AFOQT Pilot composite, several scores from the BAT (cognitive, psychomotor, and attitudes), and previous flying experience to create a pilot aptitude composite. It had much less adverse impact for racial/ethnic minorities than did the AFOQT for pilot training qualification. However, large sex differences favoring males on the BAT psychomotor tests increases adverse impact for female pilot training applicants.

Determining appropriate minimum qualifying scores to meet sometimes competing organizational goals (maximizing performance while increasing gender and ethnic diversity) requires a delicate balance. Setting low minimums allows a greater range of applicants to be considered for training or job opportunities. However, just because applicants are *minimally qualified*, does not mean they are *equally qualified.* Highly-qualified applicants lead to several benefits to the organization including reduced training requirements and higher job performance. Minimum qualifying scores should be based on empirical research (e.g., job analysis) identifying the ability requirements for successful performance of the jobs being targeted.

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Table A-1. AFOQT Category Qualifications for Air National Guard (ANG) Commissioning Program

Program	Condition	AFOQT Minimum Qualifying Scores
Flying Training (Pilot or Helicopter)	With Bachelor's Degree	Pilot: ≥ 25th percentile Nav/Tech: ≥ 10th percentile Pilot + Nav/Tech total score: ≥ 50th percentile Verbal: ≥ 15th percentile Quantitative: ≥ 10th percentile
	Without Bachelor's Degree	Pilot: ≥ 50th percentile Nav/Tech: ≥ 25th percentile Pilot + Nav/Tech total score: ≥ 90th percentile Verbal: ≥ 30th percentile Quantitative: ≥ 25th percentile
Flying Training (Navigator)	With Bachelor's Degree	Pilot: ≥ 10th percentile Nav/Tech: ≥ 25th percentile Pilot + Nav/Tech total score: ≥ 50th percentile Verbal: ≥ 15th percentile Quantitative: ≥ 10th percentile
	Without Bachelor's Degree	Pilot: ≥ 25th percentile Nav/Tech: ≥ 50th percentile Pilot + Nav/Tech total score: ≥ 90th percentile Verbal: ≥ 30th percentile Quantitative: ≥ 25th percentile

All other line officers	With Bachelor's Degree	Verbal: ≥ 15th percentile Quantitative: ≥ 10th percentile
	Without Bachelor's Degree	Verbal: ≥ 30th percentile Quantitative: ≥ 25th percentile

Notes. 1. Air National Guard requirements are described in ANG136-2005 (15 March 2005).

2. Pilot training candidates also must complete the Basic Attributes Test (BAT) and receive a Pilot Candidate selection Method (PCSM) score. PCSM is a weighted composite of AFOQT and BAT scores and previous flying experience.

Table A-2. AFOQT Category Qualifications for Air Force Reserve (AFR) Commissioning Program

Program	Condition	AFOQT Minimum Qualifying Scores
Flying Training (Pilot or Helicopter)	NA	Pilot: ≥ 25th percentile Nav/Tech: ≥ 10th percentile Pilot + Nav/Tech total score: ≥ 50
Flying Training (Navigator)	NA	Nav/Tech: ≥ 25th percentile

Notes. 1. Air Force Reserve flying training program requirements are described in AFRC136-2602 (19 July 2004).

2. Pilot training candidates also must complete the Basic Attributes Test (BAT) and receive a Pilot Candidate selection Method (PCSM) score. PCSM is a weighted composite of AFOQT and BAT scores and previous flying experience.

Table A-3. AFOQT Category Qualifications for Officer Training School (OTS) and Airman Commissioning Programs

Program	Condition	AFOQT Minimum Qualifying Scores
Flying Training (Pilot or Helicopter)	With Private Pilot's License (PPL)	Pilot: ≥ 25th percentile Nav/Tech: ≥ 10th percentile Pilot + Nav/Tech total score: ≥ 50 Verbal: ≥ 15th percentile Quantitative: ≥ 10th percentile
	Without PPL	Pilot: ≥ 50th percentile Nav/Tech: ≥ 10th percentile Pilot + Nav/Tech total score: ≥ 60 Verbal: ≥ 15th percentile Quantitative: ≥ 30th percentile
Flying Training (Navigator)	NA	Pilot: ≥ 10th percentile Nav/Tech: ≥ 25th percentile Pilot + Nav/Tech total score: ≥ 50 Verbal: ≥ 15th percentile Quantitative: ≥ 10th percentile
Non-flying Duties	NA	Verbal: ≥ 15th percentile Quantitative: ≥ 10th percentile

Notes. 1. Officer Training School (OTS) and airman commissioning program requirements are described in Air Force Instruction 36-2013 (1994).

2. Pilot training candidates also must complete the Basic Attributes Test (BAT) and receive a Pilot Candidate selection Method (PCSM) score. PCSM is a weighted composite of AFOQT and BAT scores and previous flying experience.

Table A-4. AFOQT Category Qualifications for Reserve officer Training Corps (ROTC) Commissioning Programs

Program	Condition	AFOQT Minimum Qualifying Scores
Flying Training (Pilot or Helicopter)	See Note 2	Pilot: ≥ 25th percentile Nav/Tech: ≥ 10th percentile Pilot + Nav/Tech total score: ≥ 50 Verbal: ≥ 15th percentile Quantitative: ≥ 10th percentile
Flying Training (Navigator)	See Note 2	Pilot: ≥ 10th percentile Nav/Tech: ≥ 25th percentile Pilot + Nav/Tech total score: ≥ 50 Verbal: ≥ 15th percentile Quantitative: ≥ 10th percentile
Non-Flying Duties	See Note 3	Verbal: ≥ 15th percentile Quantitative: ≥ 10th percentile

Notes. 1. Reserve Officer Training Corps (ROTC) commissioning program and flying training requirements are described in Air Force Instruction 36-2005 (19 May 2003).

2. In exceptional cases, based on the "whole person" or on the "needs of the Air force," ANGRC may waive the minimum verbal and quantitative scores for persons who apply for appointment to fill ANGUS vacancies.

3. Applicants for appointments to fill authorized vacancies in the USAFR Ready Reserves must also score at least at the 15th percentile of the Academic Aptitude composite and have at least a combined composite score of 100 in the Academic Aptitude, Verbal, and Quantitative composites.

4. Pilot training candidates also must complete the Basic Attributes Test (BAT) and receive a Pilot Candidate selection Method (PCSM) score. PCSM is a weighted composite of AFOQT and BAT scores and previous flying experience.

Table B-1. USAF Applicants - AFOQT Verbal Composite: Males vs. Females

Score	% At or Above Score Males	Females	Score	% At or Above Score Males	Females
1	100.0	100.0	36	64.0	55.9
2	99.2	98.8	37	61.6	53.4
3	98.9	98.4	38	61.6	53.4
4	98.3	97.5	39	59.0	50.7
5	97.8	96.7	40	59.0	50.7
6	97.3	95.9	41	56.4	48.3
7	96.7	95.1	42	53.8	45.8
8	96.1	94.0	43	53.8	45.8
9	95.4	93.1	44	53.8	45.8
10	94.6	92.0	45	51.1	43.1
11	93.7	90.7	46	51.1	43.1
12	92.7	89.3	47	48.4	40.6
13	91.7	87.9	48	48.4	40.6
14	90.6	86.5	49	45.7	38.0
15	89.3	84.8	50	45.7	38.0
16	87.0	82.0	51	41.8	34.4
17	87.0	82.0	52	41.8	34.4
18	85.3	80.0	53	41.8	34.4
19	83.4	77.8	54	39.2	32.0
20	81.5	75.5	55	39.2	32.0
21	81.5	75.5	56	36.6	29.7
22	80.4	74.1	57	36.6	29.7
23	80.4	74.1	58	34.0	27.5
24	78.2	71.6	59	34.0	27.5
25	76.0	69.1	60	34.0	27.5
26	76.0	69.1	61	31.5	25.4
27	73.7	66.4	62	31.5	25.4
28	71.4	63.8	63	29.1	23.4
29	71.4	63.8	64	29.1	23.5
30	71.4	63.8	65	26.7	21.5
31	69.0	61.1	66	26.7	21.5
32	69.0	61.1	67	26.7	21.5
33	66.5	58.5	68	24.3	19.5
34	64.0	55.9	69	24.3	19.5
35	64.0	55.9	70	23.1	18.4

Table B-1. USAF Applicants - AFOQT Verbal Composite: Males vs. Females (concluded)

Score	% At or Above Score Males	Females	Score	% At or Above Score Males	Females
71	23.1	18.4	86	11.2	8.9
72	23.1	18.4	87	9.4	7.5
73	21.7	17.3	88	8.7	6.1
74	21.7	17.3	89	8.7	6.1
75	19.5	15.4	90	8.7	6.1
76	19.5	15.4	91	6.1	4.9
77	19.5	15.4	92	6.1	4.9
78	17.3	13.7	93	4.7	3.9
79	15.2	11.9	94	3.5	2.9
80	15.2	11.9	95	3.5	2.9
81	15.2	11.9	96	3.5	2.9
82	13.1	10.3	97	2.8	2.4
83	13.1	10.3	98	1.9	1.6
84	13.1	10.3	99	1.2	1.0
85	11.2	8.9			

Note. N Males = 86,938; N Females = 29,677

Table B-2. USAF Applicants - AFOQT Quantitative Composite: Males vs. Females

Score	% At or Above Score Males	Females	Score	% At or Above Score Males	Females
1	100.0	100.0	36	59.5	39.4
2	99.5	98.9	37	59.5	39.4
3	99.1	97.1	38	59.5	39.4
4	98.1	95.3	39	57.2	37.0
5	97.6	94.2	40	57.2	37.0
6	97.0	92.9	41	57.2	37.0
7	96.3	91.3	42	54.8	34.7
8	96.3	91.3	43	54.8	34.7
9	94.7	88.0	44	48.9	29.1
10	93.9	86.1	45	48.9	29.1
11	93.3	84.9	46	46.5	26.9
12	91.0	80.6	47	46.5	26.9
13	91.0	80.6	48	46.5	26.9
14	91.0	80.6	49	43.9	24.9
15	89.7	78.3	50	43.9	24.9
16	88.2	75.9	51	43.9	24.9
17	88.2	75.9	52	43.9	24.9
18	85.2	71.0	53	39.0	20.8
19	85.2	71.0	54	39.0	20.8
20	82.8	67.4	55	36.6	18.9
21	82.8	67.4	56	36.6	18.9
22	79.2	62.0	57	36.6	18.9
23	79.2	62.0	58	34.1	17.1
24	79.2	62.0	59	34.1	17.1
25	77.2	59.5	60	31.7	15.4
26	77.2	59.5	61	31.7	15.4
27	73.2	54.6	62	29.4	13.7
28	73.2	54.6	63	29.4	13.7
29	71.2	51.9	64	29.4	13.7
30	71.2	51.9	65	27.1	12.2
31	71.2	51.9	66	27.1	12.2
32	66.7	46.7	67	24.7	10.7
33	66.7	46.7	68	24.7	10.7
34	64.3	44.2	69	24.7	10.7
35	59.5	39.4	70	22.5	9.4

Table B-2. USAF Applicants - AFOQT Quantitative Composite: Males vs. Females (concluded)

Score	% At or Above Score Males	Females	Score	% At or Above Score Males	Females
71	22.5	9.4	86	8.8	2.9
72	20.3	8.3	87	7.3	2.3
73	20.3	8.3	88	7.3	2.3
74	20.3	8.3	89	7.3	2.3
75	20.3	8.3	90	7.3	2.3
76	18.2	7.3	91	5.7	1.7
77	16.2	6.1	92	4.3	1.2
78	16.2	6.1	93	3.0	0.8
79	14.2	5.1	94	3.0	0.8
80	14.2	5.1	95	2.4	0.7
81	12.4	4.3	96	1.5	0.4
82	12.4	4.3	97	1.5	0.4
83	10.6	3.5	98	0.7	0.2
84	10.6	3.5	99	0.2	0.0
85	10.6	3.5			

Note. N Males = 86,938; N Females = 29,677

Table B-3. USAF Applicants - AFOQT Acad. Apt. Composite: Males vs. Females

Score	% At or Above Score Males	Females	Score	% At or Above Score Males	Females
1	100.0	100.0	36	63.0	45.7
2	99.7	99.5	37	61.6	44.2
3	99.3	88.3	38	60.1	42.8
4	98.6	96.7	39	57.3	39.8
5	98.2	95.9	40	57.3	39.8
6	97.2	93.6	41	55.8	38.5
7	96.4	91.9	42	54.4	37.1
8	95.7	90.4	43	54.4	37.1
9	95.3	89.6	44	52.9	35.8
10	93.4	86.2	45	51.4	34.6
11	92.3	84.4	46	50.0	33.0
12	91.1	82.2	47	50.0	33.0
13	90.5	81.1	48	48.6	31.7
14	89.8	79.8	49	48.6	31.7
15	89.1	78.7	50	47.1	30.5
16	88.4	77.5	51	45.6	29.2
17	85.9	73.9	52	44.0	27.9
18	85.0	72.6	53	42.5	26.6
19	83.1	69.9	54	40.9	25.3
20	82.9	68.6	55	37.9	23.0
21	81.9	67.3	56	37.9	23.0
22	79.0	64.5	57	37.9	23.0
23	78.0	63.0	58	36.4	21.7
24	76.9	61.7	59	36.4	21.7
25	75.8	60.3	60	34.9	20.6
26	74.6	58.8	61	34.9	20.6
27	73.5	57.4	62	33.5	19.5
28	72.3	55.9	63	32.0	18.4
29	69.8	53.0	64	30.5	17.4
30	68.4	51.5	65	30.5	17.4
31	68.4	51.5	66	29.0	16.4
32	67.0	51.1	67	29.0	16.4
33	67.0	51.1	68	27.6	15.5
34	65.6	48.7	69	26.2	14.5
35	64.4	47.2	70	24.8	13.5

Table B-3. USAF Applicants - AFOQT Academic Aptitude Composite: Males vs. Females (concluded)

Score	% At or Above Score		Score	% At or Above Score	
	Males	Females		Males	Females
71	23.4	12.6	86	9.3	4.2
72	22.1	11.7	87	8.4	3.8
73	20.9	10.8	88	7.5	3.3
74	20.9	10.8	89	6.7	2.9
75	20.9	10.8	90	6.3	2.7
76	19.7	10.0	91	5.6	2.3
77	17.8	9.0	92	4.8	2.0
78	17.8	9.0	93	4.1	1.7
79	16.7	8.3	94	3.0	1.3
80	15.5	7.5	95	2.5	1.1
81	14.4	6.9	96	1.7	0.7
82	13.3	6.3	97	1.2	0.5
83	12.3	5.7	98	0.7	0.3
84	11.3	5.2	99	0.3	0.1
85	10.3	4.7			

Note. N Males = 86,938; N Females = 29,677

Table B-4. USAF Applicants - AFOQT Pilot Composite: Males vs. Females

Score	% At or Above Score Males	Females	Score	% At or Above Score Males	Females
1	100.0	100.0	36	71.2	40.4
2	99.4	98.8	37	70.1	38.9
3	99.1	98.3	38	69.0	37.4
4	98.6	96.6	39	67.9	36.0
5	98.1	95.3	40	66.8	34.7
6	97.7	94.4	41	66.8	34.7
7	96.9	92.0	42	65.6	33.2
8	96.1	89.8	43	63.7	30.4
9	95.4	87.8	44	62.0	29.1
10	95.2	87.3	45	60.8	27.8
11	94.5	85.5	46	59.5	26.6
12	93.6	83.4	47	58.2	25.3
13	92.8	81.1	48	57.0	24.2
14	91.4	77.6	49	56.2	23.6
15	90.9	76.4	50	56.2	23.6
16	90.3	75.1	51	54.9	22.4
17	90.0	74.4	52	53.6	21.2
18	88.9	71.5	53	52.2	20.1
19	88.2	70.1	54	50.9	19.1
20	87.6	68.7	55	49.6	18.1
21	85.5	64.2	56	47.5	16.6
22	84.9	62.7	57	46.2	15.7
23	84.1	61.3	58	44.8	14.9
24	83.3	59.8	59	43.5	14.1
25	81.8	56.8	60	43.5	13.2
26	80.9	55.2	61	42.1	12.4
27	80.1	53.7	62	40.7	11.7
28	79.6	52.8	63	39.4	10.1
29	77.8	49.7	64	36.7	9.5
30	76.8	48.2	65	35.4	8.8
31	75.8	46.8	66	34.1	8.2
32	75.3	46.1	67	32.8	7.7
33	74.3	44.7	68	31.5	7.7
34	73.3	43.3	69	31.5	7.1
35	72.2	41.9	70	30.3	6.6

Table B-4. USAF Applicants - AFOQT Pilot Composite: Males vs. Females (concluded)

Score	% At or Above Score Males	Females	Score	% At or Above Score Males	Females
71	29.0	6.1	86	11.7	1.2
72	27.8	6.1	87	10.0	1.1
73	27.8	5.6	88	9.3	1.0
74	26.6	5.0	89	8.6	0.8
75	24.7	4.7	90	7.5	0.7
76	23.6	4.4	91	6.9	0.6
77	22.3	4.0	92	6.3	0.6
78	21.2	3.7	93	5.7	0.5
79	20.1	3.3	94	5.2	0.4
80	19.0	3.1	95	4.2	0.2
81	17.9	2.8	96	3.2	0.1
82	16.9	2.5	97	2.1	0.1
83	15.9	2.2	98	0.9	0.0
84	14.9	1.7	99	0.3	0.0
85	12.6	1.5			

Note. N Males = 86,938; N Females = 29,677

Table B-5. USAF Applicants - AFOQT Nav/Tech Composite: Males vs. Females

Score	% At or Above Score Males	Females	Score	% At or Above Score Males	Females
1	100.0	100.0	36	70.2	42.6
2	99.2	98.5	37	68.5	40.5
3	98.6	96.4	38	67.6	39.4
4	98.0	94.5	39	65.9	37.3
5	97.5	93.0	40	65.0	36.4
6	96.8	91.1	41	64.1	35.5
7	96.4	90.0	42	63.2	34.6
8	95.8	88.3	43	62.2	33.5
9	95.0	86.3	44	59.4	30.7
10	94.0	83.9	45	58.5	29.7
11	93.7	83.1	46	57.2	28.5
12	92.9	81.1	47	56.2	27.5
13	91.8	78.7	48	55.3	26.7
14	91.0	76.9	49	54.7	26.3
15	90.2	75.1	50	53.8	25.5
16	89.0	72.2	51	52.9	24.7
17	88.0	70.3	52	51.9	23.8
18	87.0	68.3	53	49.8	22.2
19	85.4	65.4	54	48.8	21.4
20	84.8	64.3	55	47.8	20.5
21	84.0	62.9	56	46.8	19.7
22	82.8	60.7	57	45.8	19.1
23	82.2	59.7	58	44.9	18.3
24	80.9	57.7	59	43.9	17.5
25	80.2	56.6	60	42.9	16.8
26	79.2	55.0	61	41.9	16.2
27	78.5	53.9	62	40.9	15.5
28	77.8	52.9	63	39.8	14.9
29	77.1	51.8	64	37.8	13.6
30	75.7	49.8	65	36.7	13.1
31	74.1	47.6	66	34.2	11.7
32	73.4	46.6	67	33.3	11.1
33	72.6	45.6	68	32.3	10.6
34	71.8	44.6	69	31.4	10.1
35	71.0	43.6	70	30.4	9.6

Table B-5. USAF Applicants - AFOQT Nav/Tech Composite: Males vs. Females (concluded)

Score	% At or Above Score Males	Females	Score	% At or Above Score Males	Females
71	29.4	9.1	86	13.0	2.6
72	28.5	8.6	87	11.7	2.2
73	27.6	8.2	88	10.4	1.9
74	25.7	7.2	89	9.0	1.4
75	23.9	6.4	90	7.9	1.2
76	23.0	6.0	91	6.9	1.1
77	22.1	5.7	92	6.0	0.8
78	21.2	5.3	93	5.6	0.6
79	20.4	5.0	94	4.8	0.4
80	18.7	4.6	95	3.7	0.3
81	18.0	4.1	96	2.6	0.1
82	16.4	3.6	97	1.6	0.0
83	15.7	3.4	98	0.8	0.0
84	14.3	3.0	99	0.4	0.0
85	13.6	2.7			

Note. N Males = 86,938; N Females = 29,677

Table B-6. USAF Applicants - AFOQT Verbal Composite: Whites vs. Blacks

Score	% At or Above Score Whites	Blacks	Score	% At or Above Score Whites	Blacks
1	100.0	100.0	36	73.0	43.5
2	99.7	98.6	37	70.5	41.0
3	99.6	97.9	38	70.5	41.0
4	99.5	96.7	39	67.9	38.3
5	99.3	95.8	40	67.9	38.3
6	99.1	94.7	41	65.2	36.0
7	98.9	93.4	42	62.5	33.8
8	98.7	92.0	43	62.5	33.8
9	98.3	90.2	44	62.5	33.8
10	98.0	88.4	45	59.6	31.7
11	97.5	86.6	46	59.6	31.7
12	97.0	84.7	47	56.7	29.5
13	96.4	82.7	48	56.7	28.5
14	95.7	80.5	49	53.7	27.3
15	94.9	78.2	50	53.7	27.3
16	93.3	74.3	51	49.5	24.3
17	93.2	74.2	52	49.5	24.3
18	91.9	71.3	53	49.5	24.3
19	90.5	68.3	54	46.6	22.2
20	89.0	65.7	55	46.6	22.2
21	89.0	65.6	56	43.7	20.4
22	88.0	64.0	57	43.7	20.4
23	88.0	64.0	58	40.8	18.7
24	86.1	61.0	59	40.8	18.7
25	84.3	58.1	60	40.8	18.7
26	84.2	58.1	61	37.9	17.0
27	82.2	54.8	62	37.9	17.0
28	80.1	52.0	63	35.1	15.0
29	80.1	52.0	64	35.1	15.0
30	80.1	52.0	65	32.3	13.4
31	77.9	49.1	66	32.3	13.4
32	77.9	49.1	67	32.3	13.4
33	75.4	46.2	68	29.5	11.7
34	73.0	43.5	69	29.5	11.7
35	73.0	43.5	70	28.1	11.0

Table B-6. USAF Applicants - AFOQT Verbal Aptitude Composite: Whites vs. Blacks (concluded)

Score	% At or Above Score Whites	Blacks	Score	% At or Above Score Whites	Blacks
71	28.1	11.0	86	14.0	4.3
72	28.1	11.0	87	11.7	3.4
73	26.5	10.1	88	9.6	2.7
74	26.5	10.1	89	9.6	2.7
75	23.9	8.9	90	9.6	2.7
76	23.9	8.9	91	7.7	2.2
77	23.9	8.9	92	7.7	2.2
78	21.3	7.7	93	5.9	1.7
79	18.7	6.3	94	4.3	1.2
80	18.7	6.3	95	4.3	1.2
81	18.7	6.3	96	4.3	1.2
82	16.2	5.1	97	3.6	1.0
83	16.2	5.1	98	2.4	0.7
84	16.2	5.1	99	1.5	0.4
85	14.0	4.3			

Note. N Whites = 84,126; N Blacks = 8,913

Table B-7. USAF Applicants - AFOQT Quantitative Composite: Whites vs. Blacks

Score	% At or Above Score Whites	Blacks	Score	% At or Above Score Whites	Blacks
1	100.0	100.0	36	62.8	35.0
2	99.7	98.4	37	62.8	35.0
3	99.5	97.2	38	62.8	35.0
4	98.9	94.6	39	60.3	32.9
5	98.6	93.2	40	60.3	32.9
6	98.2	91.5	41	60.3	32.9
7	97.8	89.9	42	57.8	30.6
8	97.8	89.9	43	57.8	30.6
9	96.7	86.3	44	51.5	25.5
10	96.1	84.3	45	51.5	25.5
11	95.6	82.9	46	48.9	23.5
12	93.7	78.4	47	48.9	23.5
13	93.7	78.4	48	48.9	23.5
14	93.7	78.4	49	46.1	21.6
15	92.6	75.5	50	46.1	21.6
16	91.3	72.8	51	46.1	21.6
17	91.3	72.8	52	46.1	21.6
18	88.5	67.6	53	40.9	18.1
19	88.5	67.6	54	40.9	18.1
20	86.3	63.5	55	38.2	16.7
21	86.3	63.5	56	38.2	16.7
22	82.7	58.3	57	38.2	16.7
23	82.7	58.3	58	35.6	15.0
24	82.7	58.3	59	35.6	15.0
25	80.9	55.6	60	33.0	13.6
26	80.9	55.6	61	33.0	13.6
27	76.9	50.9	62	30.5	12.1
28	76.9	50.9	63	30.5	12.1
29	74.8	48.1	64	30.5	12.1
30	74.8	48.1	65	28.1	10.6
31	74.8	48.1	66	28.1	10.6
32	70.2	42.8	67	25.6	9.1
33	70.2	42.8	68	25.6	9.1
34	67.8	40.0	69	25.6	9.1
35	62.8	35.0	70	23.3	8.0

Table B-7. USAF Applicants - AFOQT Quantitative Composite: Whites vs. Blacks (concluded)

Score	% At or Above Score Whites	Blacks	Score	% At or Above Score Whites	Blacks
71	23.3	8.0	86	9.0	2.4
72	21.0	7.0	87	7.4	1.9
73	21.0	7.0	88	7.4	1.9
74	21.0	7.0	89	7.4	1.9
75	21.0	7.0	90	7.4	1.9
76	18.8	6.1	91	5.9	1.4
77	16.7	5.3	92	4.4	1.0
78	16.7	5.3	93	3.6	0.6
79	14.6	4.4	94	3.6	0.6
80	14.6	4.4	95	2.5	0.6
81	12.7	3.7	96	1.5	0.3
82	12.7	3.7	97	1.5	0.3
83	10.8	3.1	98	0.7	0.1
84	10.8	3.1	99	0.2	0.0
85	10.8	3.1			

Note. N Whites = 84,126; N Blacks = 8,913

Table B-8. USAF Applicants - AFOQT Academic Apt. Comp.: Whites vs. Blacks

Score	% At or Above Score Whites	Blacks	Score	% At or Above Score Whites	Blacks
1	100.0	100.0	36	68.4	36.4
2	99.8	99.3	37	66.9	35.2
3	99.7	97.9	38	65.4	33.8
4	99.4	95.8	39	62.3	31.3
5	99.3	94.6	40	62.3	31.3
6	98.7	91.6	41	60.7	30.0
7	98.3	89.7	42	59.2	28.7
8	97.9	87.3	43	59.2	28.7
9	97.7	86.3	44	57.7	27.3
10	96.5	82.4	45	56.1	26.2
11	95.8	80.0	46	54.5	25.2
12	94.9	77.3	47	54.5	25.2
13	94.4	75.9	48	52.9	24.0
14	93.9	74.5	49	52.9	24.0
15	93.3	72.9	50	51.3	22.9
16	92.7	71.4	51	49.7	21.5
17	90.6	66.9	52	48.0	20.6
18	89.8	65.5	53	46.3	19.4
19	88.2	62.2	54	44.6	18.4
20	87.3	60.8	55	41.3	16.4
21	86.4	59.3	56	41.3	16.4
22	84.4	56.1	57	41.3	16.4
23	83.6	54.5	58	39.7	15.4
24	82.6	53.1	59	39.7	15.4
25	81.3	51.4	60	38.0	14.6
26	80.2	49.9	61	38.0	14.6
27	79.1	48.2	62	36.4	13.8
28	77.9	46.6	63	34.8	12.8
29	75.4	43.6	64	33.2	12.2
30	74.0	42.1	65	33.2	12.2
31	74.0	42.1	66	31.6	11.3
32	72.6	40.8	67	31.6	11.3
33	72.6	40.8	68	30.1	10.7
34	71.2	39.2	69	28.5	9.8
35	69.8	37.8	70	27.0	9.1

Table B-8. USAF Applicants - AFOQT Academic Aptitude Composite: Whites vs. Blacks (concluded)

Score	% At or Above Score		Score	% At or Above Score	
	Whites	Blacks		Whites	Blacks
71	25.5	8.3	86	10.0	2.5
72	24.1	7.8	87	9.0	2.1
73	22.7	7.2	88	8.1	1.8
74	22.7	7.2	89	7.3	1.6
75	22.7	7.2	90	6.8	1.5
76	21.4	6.8	91	6.0	1.3
77	19.3	6.0	92	5.2	1.0
78	19.3	6.0	93	4.5	0.9
79	18.0	5.4	94	3.2	0.5
80	16.8	4.8	95	2.7	0.5
81	15.5	4.4	96	1.8	0.4
82	14.4	3.9	97	1.2	0.3
83	13.3	3.5	98	0.7	0.1
84	12.2	3.1	99	0.3	0.1
85	11.1	2.8			

Note. N Whites = 84,126; N Blacks = 8,913

Table B-9. USAF Applicants - AFOQT Pilot Composite: Whites vs. Blacks

Score	% At or Above Score Whites	Blacks	Score	% At or Above Score Whites	Blacks
1	100.0	100.0	36	74.6	43.6
2	99.5	99.1	37	73.4	42.2
3	99.4	98.6	38	72.2	41.1
4	99.2	97.2	39	70.9	39.8
5	99.0	96.1	40	69.8	38.4
6	98.8	95.4	41	69.8	38.4
7	98.5	93.2	42	68.4	37.1
8	98.1	91.2	43	65.8	34.6
9	97.6	89.4	44	64.4	33.2
10	97.6	88.9	45	63.1	31.9
11	97.1	87.1	46	61.7	30.7
12	96.6	85.3	47	60.3	29.7
13	96.0	83.1	48	58.9	28.5
14	95.0	79.5	49	58.2	27.8
15	94.6	78.4	50	58.2	27.8
16	94.1	77.2	51	56.7	26.6
17	93.8	76.4	52	55.2	25.5
18	92.8	73.7	53	53.8	24.5
19	92.3	72.3	54	52.4	23.4
20	91.7	70.9	55	50.9	22.3
21	89.7	67.7	56	48.7	20.8
22	89.1	65.3	57	47.3	19.9
23	88.3	63.8	58	45.9	19.0
24	87.5	62.3	59	44.5	18.2
25	85.9	59.6	60	44.5	18.2
26	85.0	58.2	61	43.0	17.1
27	84.1	56.7	62	41.5	16.3
28	83.6	56.0	63	40.2	15.4
29	81.6	52.8	64	37.3	14.1
30	80.6	51.2	65	35.9	13.4
31	79.6	49.9	66	34.5	12.6
32	79.0	49.2	67	33.2	12.0
33	77.9	47.7	68	31.9	11.3
34	76.9	46.2	69	31.9	11.3
35	75.7	44.7	70	30.6	10.8

Table B-9. USAF Applicants - AFOQT Pilot Composite: Whites vs. Blacks (concluded)

Score	% At or Above Score Whites	Blacks	Score	% At or Above Score Whites	Blacks
71	29.2	10.2	86	11.6	3.3
72	27.9	9.8	87	9.9	2.7
73	27.9	9.8	88	9.2	2.4
74	26.7	9.4	89	8.5	2.2
75	24.8	8.5	90	7.4	2.0
76	23.7	8.0	91	6.8	1.8
77	22.4	7.4	92	6.2	1.6
78	21.2	6.8	93	5.6	1.4
79	20.1	6.3	94	5.1	1.3
80	19.0	5.8	95	4.2	1.0
81	17.9	5.5	96	3.2	0.7
82	16.8	5.2	97	2.0	0.5
83	15.8	4.8	98	0.9	0.2
84	14.8	4.4	99	0.3	0.0
85	12.4	3.6			

Note. N Whites = 84,126; N Blacks = 8,913

Table B-10. USAF Applicants - AFOQT Nav/Tech Composite: Whites vs. Blacks

Score	% At or Above Score Whites	Blacks	Score	% At or Above Score Whites	Blacks
1	100.0	100.0	36	73.5	44.3
2	99.5	98.8	37	71.7	42.0
3	99.2	97.3	38	70.7	40.8
4	98.9	95.7	39	68.9	38.9
5	98.7	94.5	40	68.0	38.0
6	98.3	92.9	41	67.0	37.2
7	98.0	92.0	42	66.0	36.3
8	97.6	90.2	43	65.0	35.3
9	97.1	88.3	44	61.9	32.3
10	96.5	86.2	45	60.9	31.4
11	96.2	85.4	46	59.5	30.1
12	95.6	83.4	47	58.4	29.3
13	94.9	80.9	48	57.4	28.3
14	94.2	79.0	49	56.9	28.0
15	93.6	77.2	50	55.9	27.2
16	92.4	74.4	51	54.9	26.4
17	91.5	72.6	52	53.8	25.6
18	90.6	70.6	53	51.6	24.1
19	89.1	67.5	54	50.5	23.3
20	88.6	66.5	55	49.4	22.5
21	87.7	64.8	56	48.4	21.6
22	86.6	62.8	57	47.3	20.9
23	85.9	61.8	58	46.3	20.3
24	84.7	59.4	59	45.1	19.6
25	84.0	58.4	60	44.1	19.0
26	83.0	56.8	61	43.0	18.2
27	82.3	55.8	62	42.0	17.6
28	81.6	54.8	63	40.9	16.9
29	80.8	53.8	64	38.7	15.8
30	79.3	51.8	65	37.6	15.1
31	77.7	49.6	66	35.0	13.6
32	76.9	48.5	67	34.0	13.2
33	76.1	47.5	68	32.9	12.7
34	75.2	46.4	69	32.0	12.2
35	74.4	45.3	70	31.0	11.7

Table B-10. USAF Applicants - AFOQT Nav/Tech Composite: Whites vs. Blacks (concluded)

Score	% At or Above Score Whites	Blacks	Score	% At or Above Score Whites	Blacks
71	29.9	11.1	86	13.0	3.7
72	29.0	10.6	87	11.7	3.2
73	28.0	10.1	88	10.4	2.9
74	26.0	9.2	89	9.0	2.4
75	24.1	8.3	90	7.9	2.0
76	23.2	7.9	91	6.9	1.6
77	22.2	7.4	92	6.0	1.4
78	21.4	7.1	93	5.5	1.3
79	20.5	6.6	94	4.7	1.1
80	18.8	6.0	95	3.6	0.8
81	18.0	5.8	96	2.6	0.5
82	16.4	5.1	97	1.5	0.3
83	15.7	4.9	98	0.8	0.2
84	14.3	4.3	99	0.4	0.1
85	13.6	4.0			

Note. N Whites = 84,126; N Blacks = 8,913

Table B-11. USAF Applicants - AFOQT Verbal Composite: Whites vs. Hispanics

Score	% At or Above Score Whites	Hispanics	Score	% At or Above Score Whites	Hispanics
1	100.0	100.0	36	73.0	33.5
2	99.7	97.4	37	70.5	31.2
3	99.6	96.6	38	70.5	31.2
4	99.5	94.4	39	67.9	28.7
5	99.3	92.9	40	67.9	28.7
6	99.1	91.2	41	65.2	26.3
7	98.9	89.4	42	62.5	24.2
8	98.7	87.4	43	62.5	24.2
9	98.3	85.5	44	62.5	24.2
10	98.0	83.4	45	59.6	22.3
11	97.5	81.1	46	59.6	22.3
12	97.0	78.5	47	56.7	20.2
13	96.4	75.8	48	56.7	20.2
14	95.7	73.0	49	53.7	18.2
15	94.9	70.2	50	53.7	18.2
16	93.3	65.9	51	49.5	15.7
17	93.2	65.9	52	49.5	15.7
18	91.9	62.8	53	49.5	15.7
19	90.5	59.5	54	46.6	14.2
20	89.0	56.1	55	46.6	14.2
21	89.0	56.1	56	43.7	12.7
22	88.0	54.4	57	43.7	12.7
23	88.0	54.4	58	40.8	11.3
24	86.1	51.1	59	40.8	11.3
25	84.3	47.8	60	40.8	11.2
26	84.2	47.8	61	37.9	9.9
27	82.2	44.9	62	37.9	9.9
28	80.1	41.8	63	35.1	8.9
29	80.1	41.8	64	35.1	8.9
30	80.1	41.8	65	32.3	8.0
31	77.9	38.8	66	32.3	8.0
32	77.9	38.8	67	32.3	8.0
33	75.4	36.2	68	29.5	6.9
34	73.0	33.5	69	29.5	6.9
35	73.0	33.5	70	28.1	6.5

Table B-11. USAF Applicants - AFOQT Verbal Aptitude Composite: Whites vs. Hispanics (concluded)

Score	% At or Above Score		Score	% At or Above Score	
	Whites	Hispanics		Whites	Hispanics
71	28.1	6.5	86	14.0	2.4
72	28.1	6.5	87	11.7	1.9
73	26.5	5.8	88	9.6	1.5
74	26.5	5.8	89	9.6	1.5
75	23.9	5.1	90	9.6	1.5
76	23.9	5.1	91	7.7	1.1
77	23.9	5.1	92	7.7	1.1
78	21.3	4.3	93	5.9	0.8
79	18.7	3.6	94	4.3	0.6
80	18.7	3.6	95	4.3	0.6
81	18.7	3.6	96	4.3	0.6
82	16.2	3.0	97	3.6	0.5
83	16.2	3.0	98	2.4	0.3
84	16.2	3.0	99	1.5	0.2
85	14.0	2.4			

Note. N Whites = 84,126; N Hispanics = 14,662

Table B-12. USAF Applicants - AFOQT Quantitative Comp.: Whites vs. Hispanics

Score	% At or Above Score Whites	Hispanics	Score	% At or Above Score Whites	Hispanics
1	100.0	100.0	36	62.8	20.7
2	99.7	98.1	37	62.8	20.7
3	99.5	95.9	38	62.8	20.7
4	98.9	90.8	39	60.3	19.0
5	98.6	88.7	40	60.3	19.0
6	98.2	86.0	41	60.3	19.0
7	97.8	83.1	42	57.8	17.3
8	97.8	83.1	43	57.8	17.3
9	96.7	77.1	44	51.5	13.8
10	96.1	73.1	45	51.5	13.8
11	95.6	72.0	46	48.9	12.5
12	93.7	65.3	47	48.9	12.5
13	93.7	65.3	48	48.9	12.5
14	93.7	65.3	49	46.1	11.3
15	92.6	61.9	50	46.1	11.3
16	91.3	58.7	51	46.1	11.3
17	91.3	58.7	52	46.1	11.3
18	88.5	52.2	53	40.9	9.1
19	88.5	52.2	54	40.9	9.1
20	86.3	47.9	55	38.2	8.1
21	86.3	47.9	56	38.2	8.1
22	82.7	41.8	57	38.2	8.1
23	82.7	41.8	58	35.6	7.3
24	82.7	41.8	59	35.6	7.3
25	80.9	38.8	60	33.0	6.4
26	80.9	38.8	61	33.0	6.4
27	76.9	33.4	62	30.5	5.6
28	76.9	33.4	63	30.5	5.6
29	74.8	31.0	64	30.5	5.6
30	74.8	31.0	65	28.1	4.8
31	74.8	31.0	66	28.1	4.8
32	70.2	26.5	67	25.6	4.1
33	70.2	26.5	68	25.6	4.1
34	67.8	24.4	69	25.6	4.1
35	62.8	20.7	70	23.3	3.6

Table B-12. USAF Applicants - AFOQT Quantitative Composite: Whites vs. Hispanics (concluded)

Score	% At or Above Score Whites	Hispanics	Score	% At or Above Score Whites	Hispanics
71	23.3	3.6	86	9.0	1.0
72	21.0	3.0	87	7.4	0.8
73	21.0	3.0	88	7.4	0.8
74	21.0	3.0	89	7.4	0.8
75	21.0	3.0	90	7.4	0.8
76	18.8	2.6	91	5.9	0.5
77	16.7	2.2	92	4.4	0.4
78	16.7	2.2	93	3.6	0.3
79	14.6	1.9	94	3.6	0.3
80	14.6	1.9	95	2.5	0.2
81	12.7	1.5	96	1.5	0.1
82	12.7	1.5	97	1.5	0.1
83	10.8	1.2	98	0.7	0.1
84	10.8	1.2	99	0.2	0.0
85	10.8	1.2			

Note. N Whites = 84,126; N Hispanics = 14,662

Table B-13. USAF Applicants - AFOQT Acad. Apt. Comp.: Whites vs. Hispanics

Score	% At or Above Score Whites	Hispanics	Score	% At or Above Score Whites	Hispanics
1	100.0	100.0	36	68.4	22.6
2	99.8	99.0	37	66.9	21.4
3	99.7	96.4	38	65.4	20.2
4	99.4	92.9	39	62.3	18.4
5	99.3	91.0	40	62.3	18.4
6	98.7	86.4	41	60.7	17.4
7	98.3	82.8	42	59.2	16.5
8	97.9	79.9	43	59.2	16.5
9	97.7	78.5	44	57.7	15.6
10	96.5	71.9	45	56.1	14.5
11	95.8	68.4	46	54.5	13.6
12	94.9	64.8	47	54.5	13.6
13	94.4	63.0	48	52.9	12.9
14	93.9	61.1	49	52.9	12.9
15	93.3	59.6	50	51.3	12.3
16	92.7	57.8	51	49.7	11.7
17	90.6	52.6	52	48.0	11.0
18	89.8	51.0	53	46.3	10.3
19	88.2	47.4	54	44.6	9.7
20	87.3	45.7	55	41.3	8.6
21	86.4	44.0	56	41.3	8.6
22	84.4	40.9	57	41.3	8.6
23	83.6	39.3	58	39.7	8.1
24	82.6	37.7	59	39.7	8.1
25	81.3	36.0	60	38.0	7.5
26	80.2	34.5	61	38.0	7.5
27	79.1	33.1	62	36.4	7.0
28	77.9	31.7	63	34.8	6.5
29	75.4	28.6	64	33.2	6.1
30	74.0	27.4	65	33.2	6.1
31	74.0	27.4	66	31.6	5.6
32	72.6	26.1	67	31.6	5.6
33	72.6	26.1	68	30.1	5.1
34	71.2	24.9	69	28.5	4.7
35	69.8	23.8	70	27.0	4.4

Table B-13. USAF Applicants - AFOQT Academic Aptitude Composite: Whites vs. Hispanics (concluded)

Score	% At or Above Score		Score	% At or Above Score	
	Whites	Hispanics		Whites	Hispanics
71	25.5	3.9	86	10.0	1.0
72	24.1	3.7	87	9.0	0.9
73	22.7	3.3	88	8.1	0.8
74	22.7	3.3	89	7.3	0.7
75	22.7	3.3	90	6.8	0.7
76	21.4	2.9	91	6.0	0.6
77	19.3	2.6	92	5.2	0.5
78	19.3	2.6	93	4.5	0.4
79	18.0	2.3	94	3.2	0.3
80	16.8	2.0	95	2.7	0.2
81	15.5	1.9	96	1.8	0.2
82	14.4	1.7	97	1.2	0.1
83	13.3	1.5	98	0.7	0.1
84	12.2	1.3	99	0.3	0.0
85	11.1	1.2			

Note. N Whites = 84,126; N Hispanics = 14,662

Table B-14. USAF Applicants - AFOQT Pilot Composite: Whites vs. Hispanics

Score	% At or Above Score Whites	Hispanics	Score	% At or Above Score Whites	Hispanics
1	100.0	100.0	36	74.6	18.7
2	99.5	97.8	37	73.4	17.8
3	99.4	96.3	38	72.2	16.9
4	99.2	92.6	39	70.9	16.2
5	99.0	89.6	40	69.8	15.4
6	98.8	87.5	41	69.8	15.4
7	98.5	82.2	42	68.4	14.6
8	98.1	77.9	43	65.8	13.2
9	97.6	73.7	44	64.4	12.7
10	97.6	72.7	45	63.1	12.0
11	97.1	69.1	46	61.7	11.3
12	96.6	65.4	47	60.3	10.7
13	96.0	61.7	48	58.9	10.1
14	95.0	56.2	49	58.2	9.8
15	94.6	54.3	50	58.2	9.8
16	94.1	52.3	51	56.7	9.2
17	93.8	51.2	52	55.2	8.8
18	92.8	47.4	53	53.8	8.4
19	92.3	45.5	54	52.4	7.9
20	91.7	43.8	55	50.9	7.5
21	89.7	38.5	56	48.7	6.8
22	89.1	37.1	57	47.3	6.4
23	88.3	35.4	58	45.9	6.1
24	87.5	34.1	59	44.5	5.8
25	85.9	31.3	60	44.5	5.8
26	85.0	29.8	61	43.0	5.5
27	84.1	28.7	62	41.5	5.1
28	83.6	27.9	63	40.2	4.8
29	81.6	25.4	64	37.3	4.3
30	80.6	24.2	65	35.9	4.1
31	79.6	23.1	66	34.5	3.8
32	79.0	22.5	67	33.2	3.5
33	77.9	21.7	68	31.9	3.3
34	76.9	20.6	69	31.9	3.3
35	75.7	19.6	70	30.6	3.1

Table B-14. USAF Applicants - AFOQT Pilot Composite: Whites vs. Hispanics (concluded)

Score	% At or Above Score Whites	Hispanics	Score	% At or Above Score Whites	Hispanics
71	29.2	2.9	86	11.6	1.0
72	27.9	2.7	87	9.9	0.8
73	27.9	2.7	88	9.2	0.7
74	26.7	2.4	89	8.5	0.6
75	24.8	2.3	90	7.4	0.6
76	23.7	2.2	91	6.8	0.5
77	22.4	2.0	92	6.2	0.5
78	21.2	1.9	93	5.6	0.5
79	20.1	1.8	94	5.1	0.4
80	19.0	1.7	95	4.2	0.3
81	17.9	1.5	96	3.2	0.2
82	16.8	1.4	97	2.0	0.1
83	15.8	1.3	98	0.9	0.1
84	14.8	1.2	99	0.3	0.0
85	12.4	1.0			

Note. N Whites = 84,126; N Hispanics = 14,662

Table B-15. USAF Applicants - AFOQT Nav/Tech Composite: Whites vs. Hispanics

Score	% At or Above Score Whites	Hispanics	Score	% At or Above Score Whites	Hispanics
1	100.0	100.0	36	73.5	20.1
2	99.5	96.8	37	71.7	18.8
3	99.2	92.1	38	70.7	18.1
4	98.9	88.4	39	68.9	16.9
5	98.7	85.3	40	68.0	16.2
6	98.3	81.7	41	67.0	15.7
7	98.0	78.9	42	66.0	15.0
8	97.6	75.6	43	65.0	14.4
9	97.1	71.7	44	61.9	12.8
10	96.5	67.2	45	60.9	12.2
11	96.2	65.9	46	59.5	11.6
12	95.6	62.5	47	58.4	11.2
13	94.9	58.8	48	57.4	10.8
14	94.2	56.2	49	56.9	10.5
15	93.6	53.5	50	55.9	10.1
16	92.4	49.5	51	54.9	9.7
17	91.5	47.0	52	53.8	9.3
18	90.6	44.5	53	51.6	8.5
19	89.1	40.8	54	50.5	8.0
20	88.6	39.5	55	49.4	7.6
21	87.7	37.9	56	48.4	7.3
22	86.6	35.6	57	47.3	7.0
23	85.9	34.6	58	46.3	6.7
24	84.7	32.5	59	45.1	6.6
25	84.0	31.5	60	44.1	6.1
26	83.0	30.0	61	43.0	5.8
27	82.3	29.0	62	42.0	5.5
28	81.6	28.1	63	40.9	5.2
29	80.8	27.2	64	38.7	4.7
30	79.3	25.5	65	37.6	4.4
31	77.7	23.8	66	35.0	3.9
32	76.9	23.0	67	34.0	3.7
33	76.1	22.2	68	32.9	3.6
34	75.2	21.5	69	32.0	3.4
35	74.4	20.7	70	31.0	3.2

Table B-15. USAF Applicants - AFOQT Nav/Tech Composite: Whites vs. Hispanics (concluded)

Score	% At or Above Score		Score	% At or Above Score	
	Whites	Hispanics		Whites	Hispanics
71	29.9	3.1	86	13.0	1.0
72	29.0	3.0	87	11.7	0.9
73	28.0	2.8	88	10.4	0.7
74	26.0	2.5	89	9.0	0.6
75	24.1	2.2	90	7.9	0.5
76	23.2	2.1	91	6.9	0.4
77	22.2	2.0	92	6.0	0.3
78	21.4	1.9	93	5.5	0.3
79	20.5	1.8	94	4.7	0.3
80	18.8	1.6	95	3.6	0.2
81	18.0	1.5	96	2.6	0.1
82	16.4	1.4	97	1.5	0.1
83	15.7	1.3	98	0.8	0.0
84	14.3	1.1	99	0.4	0.0
85	13.6	1.0			

Note. N Whites = 84,126; N Hispanics = 14,662

Table B-16. USAF Applicants - AFOQT Verbal Composite: Whites vs. Asians

Score	% At or Above Score Whites	Asians	Score	% At or Above Score Whites	Asians
1	100.0	100.0	36	73.0	47.9
2	99.7	97.3	37	70.5	45.6
3	99.6	96.4	38	70.5	45.6
4	99.5	94.6	39	67.9	43.4
5	99.3	93.4	40	67.9	43.4
6	99.1	92.1	41	65.2	40.8
7	98.9	90.7	42	62.5	38.1
8	98.7	89.2	43	62.5	38.1
9	98.3	88.1	44	62.5	38.1
10	98.0	86.4	45	59.6	35.8
11	97.5	84.6	46	59.6	35.8
12	97.0	83.0	47	56.7	33.5
13	96.4	81.5	48	56.7	33.5
14	95.7	79.4	49	53.7	31.2
15	94.9	77.2	50	53.7	31.2
16	93.3	73.8	51	49.5	27.6
17	93.2	73.8	52	49.5	27.6
18	91.9	71.4	53	49.5	27.6
19	90.5	69.2	54	46.6	25.7
20	89.0	67.0	55	46.6	25.7
21	89.0	67.0	56	43.7	23.6
22	88.0	65.7	57	43.7	23.6
23	88.0	65.7	58	40.8	21.8
24	86.1	63.4	59	40.8	21.8
25	84.3	60.8	60	40.8	21.8
26	84.2	60.8	61	37.9	20.1
27	82.2	58.3	62	37.9	20.1
28	80.1	55.3	63	35.1	18.2
29	80.1	55.3	64	35.1	18.2
30	80.1	55.3	65	32.3	16.6
31	77.9	52.6	66	32.3	16.6
32	77.9	52.6	67	32.3	16.6
33	75.4	50.2	68	29.5	14.9
34	73.0	47.9	69	29.5	14.9
35	73.0	47.9	70	28.1	14.0

Table B-16. USAF Applicants - AFOQT Verbal Aptitude Composite: Whites vs. Asians (concluded)

Score	% At or Above Score		Score	% At or Above Score	
	Whites	Asians		Whites	Asians
71	28.1	14.0	86	14.0	6.3
72	28.1	14.0	87	11.7	5.4
73	26.5	13.2	88	9.6	4.3
74	26.5	13.2	89	9.6	4.3
75	23.9	11.6	90	9.6	4.3
76	23.9	11.6	91	7.7	3.4
77	23.9	11.6	92	7.7	3.4
78	21.3	10.3	93	5.9	2.4
79	18.7	8.7	94	4.3	1.8
80	18.7	8.7	95	4.3	1.8
81	18.7	8.7	96	4.3	1.8
82	16.2	7.6	97	3.6	1.4
83	16.2	7.6	98	2.4	1.0
84	16.2	7.6	99	1.5	0.5
85	14.0	6.3			

Note. N Whites = 84,126; N Asians = 7,241

Table B-17. USAF Applicants - AFOQT Quantitative Composite: Whites vs. Asians

Score	% At or Above Score Whites	Asians	Score	% At or Above Score Whites	Asians
1	100.0	100.0	36	62.8	50.7
2	99.7	99.2	37	62.8	50.7
3	99.5	98.4	38	62.8	50.7
4	98.9	96.5	39	60.3	48.7
5	98.6	95.8	40	60.3	48.7
6	98.2	95.1	41	60.3	48.7
7	97.8	94.0	42	57.8	46.3
8	97.8	94.0	43	57.8	46.3
9	96.7	91.5	44	51.5	40.4
10	96.1	90.2	45	51.5	40.4
11	95.6	89.3	46	48.9	38.4
12	93.7	86.0	47	48.9	38.4
13	93.7	86.0	48	48.9	38.4
14	93.7	86.0	49	46.1	36.2
15	92.6	84.3	50	46.1	36.2
16	91.3	82.3	51	46.1	36.2
17	91.3	82.3	52	46.1	36.2
18	88.5	78.3	53	40.9	31.9
19	88.5	78.3	54	40.9	31.9
20	86.3	75.7	55	38.2	29.7
21	86.3	75.7	56	38.2	29.7
22	82.7	71.4	57	38.2	29.7
23	82.7	71.4	58	35.6	27.6
24	82.7	71.4	59	35.6	27.6
25	80.9	69.4	60	33.0	25.7
26	80.9	69.4	61	33.0	25.7
27	76.9	65.2	62	30.5	23.6
28	76.9	65.2	63	30.5	23.6
29	74.8	62.7	64	30.5	23.6
30	74.8	62.7	65	28.1	21.3
31	74.8	62.7	66	28.1	21.3
32	70.2	58.0	67	25.6	19.2
33	70.2	58.0	68	25.6	19.2
34	67.8	55.5	69	25.6	19.2
35	62.8	50.7	70	23.3	17.4

Table B-17. USAF Applicants - AFOQT Quantitative Composite: Whites vs. Asians (concluded)

Score	% At or Above Score Whites	Asians	Score	% At or Above Score Whites	Asians
71	23.3	17.4	86	9.0	7.0
72	21.0	15.6	87	7.4	5.7
73	21.0	15.6	88	7.4	5.7
74	21.0	15.6	89	7.4	5.7
75	21.0	15.6	90	7.4	5.7
76	18.8	14.0	91	5.9	4.3
77	16.7	12.4	92	4.4	3.2
78	16.7	12.4	93	3.6	2.2
79	14.6	10.8	94	3.6	2.2
80	14.6	10.8	95	2.5	1.7
81	12.7	9.4	96	1.5	1.1
82	12.7	9.4	97	1.5	1.1
83	10.8	8.2	98	0.7	0.4
84	10.8	8.2	99	0.2	0.1
85	10.8	8.2			

Note. N Whites = 84,126; N Asians = 7,241

Table B-18. USAF Applicants - AFOQT Academic Apt. Comp.: Whites vs. Asians

Score	% At or Above Score Whites	Asians	Score	% At or Above Score Whites	Asians
1	100.0	100.0	36	68.4	46.7
2	99.8	99.6	37	66.9	45.5
3	99.7	98.4	38	65.4	44.0
4	99.4	96.9	39	62.3	41.2
5	99.3	96.2	40	62.3	41.2
6	98.7	93.6	41	60.7	40.0
7	98.3	92.1	42	59.2	38.6
8	97.9	90.5	43	59.2	38.6
9	97.7	89.7	44	57.7	37.3
10	96.5	86.1	45	56.1	36.3
11	95.8	84.4	46	54.5	34.8
12	94.9	82.5	47	54.5	34.8
13	94.4	81.3	48	52.9	33.7
14	93.9	80.0	49	52.9	33.7
15	93.3	79.0	50	51.3	32.3
16	92.7	78.0	51	49.7	31.1
17	90.6	74.2	52	48.0	29.9
18	89.8	73.0	53	46.3	28.9
19	88.2	70.3	54	44.6	27.4
20	87.3	68.8	55	41.3	25.2
21	86.4	67.6	56	41.3	25.2
22	84.4	64.6	57	41.3	25.2
23	83.6	63.4	58	39.7	24.1
24	82.6	62.0	59	39.7	24.1
25	81.3	60.7	60	38.0	23.0
26	80.2	59.1	61	38.0	23.0
27	79.1	57.7	62	36.4	21.9
28	77.9	56.5	63	34.8	20.8
29	75.4	53.9	64	33.2	19.6
30	74.0	52.2	65	33.2	19.6
31	74.0	52.2	66	31.6	18.5
32	72.6	50.9	67	31.6	18.5
33	72.6	50.9	68	30.1	17.6
34	71.2	49.5	69	28.5	16.6
35	69.8	48.3	70	27.0	15.5

Table B-18. USAF Applicants - AFOQT Academic Aptitude Composite: Whites vs. Asians (concluded)

Score	% At or Above Score		Score	% At or Above Score	
	Whites	Asians		Whites	Asians
71	25.5	14.5	86	10.0	5.7
72	24.1	13.6	87	9.0	5.2
73	22.7	12.7	88	8.1	4.6
74	22.7	12.7	89	7.3	4.1
75	22.7	12.7	90	6.8	3.8
76	21.4	11.9	91	6.0	3.3
77	19.3	10.7	92	5.2	2.8
78	19.3	10.7	93	4.5	2.3
79	18.0	10.0	94	3.2	1.7
80	16.8	9.2	95	2.7	1.5
81	15.5	8.7	96	1.8	0.9
82	14.4	8.1	97	1.2	0.6
83	13.3	7.5	98	0.7	0.4
84	12.2	6.8	99	0.3	0.1
85	11.1	6.3			

Note. N Whites = 84,126; N Asians = 7,241

Table B-19. USAF Applicants - AFOQT Pilot Composite: Whites vs. Asians

Score	% At or Above Score Whites	Asians	Score	% At or Above Score Whites	Asians
1	100.0	100.0	36	74.6	48.0
2	99.5	99.0	37	73.4	46.7
3	99.4	98.5	38	72.2	45.4
4	99.2	97.0	39	70.9	44.1
5	99.0	95.9	40	69.8	42.9
6	98.8	95.1	41	69.8	42.9
7	98.5	93.3	42	68.4	41.4
8	98.1	91.4	43	65.8	39.1
9	97.6	89.8	44	64.4	37.9
10	97.6	89.4	45	63.1	36.8
11	97.1	87.9	46	61.7	35.7
12	96.6	86.2	47	60.3	34.3
13	96.0	84.3	48	58.9	33.4
14	95.0	81.2	49	58.2	32.6
15	94.6	80.2	50	58.2	32.6
16	94.1	79.0	51	56.7	31.5
17	93.8	78.3	52	55.2	30.3
18	92.8	76.0	53	53.8	29.0
19	92.3	74.7	54	52.4	27.9
20	91.7	73.3	55	50.9	26.7
21	89.7	69.8	56	48.7	25.3
22	89.1	68.5	57	47.3	24.1
23	88.3	67.3	58	45.9	23.2
24	87.5	65.9	59	44.5	22.2
25	85.9	63.3	60	44.5	22.2
26	85.0	62.0	61	43.0	21.2
27	84.1	60.6	62	41.5	20.2
28	83.6	59.8	63	40.2	19.2
29	81.6	57.1	64	37.3	17.6
30	80.6	55.6	65	35.9	16.8
31	79.6	54.7	66	34.5	16.0
32	79.0	53.9	67	33.2	15.1
33	77.9	52.3	68	31.9	14.3
34	76.9	50.9	69	31.9	14.3
35	75.7	49.6	70	30.6	13.6

Table B-19. USAF Applicants - AFOQT Pilot Composite: Whites vs. Asians (concluded)

Score	% At or Above Score Whites	Asians	Score	% At or Above Score Whites	Asians
71	29.2	12.7	86	11.6	4.6
72	27.9	12.0	87	9.9	3.8
73	27.9	12.0	88	9.2	3.5
74	26.7	11.2	89	8.5	3.1
75	24.8	10.2	90	7.4	2.6
76	23.7	9.7	91	6.8	2.3
77	22.4	9.1	92	6.2	2.0
78	21.2	8.7	93	5.6	1.8
79	20.1	8.1	94	5.1	1.6
80	19.0	7.6	95	4.2	1.2
81	17.9	7.2	96	3.2	0.9
82	16.8	6.7	97	2.0	0.6
83	15.8	6.3	98	0.9	0.2
84	14.8	5.9	99	0.3	0.1
85	12.4	4.9			

Note. N Whites = 84,126; N Asians = 7,241

Table B-20. USAF Applicants - AFOQT Nav/Tech Composite: Whites vs. Asians

Score	% At or Above Score Whites	Asians	Score	% At or Above Score Whites	Asians
1	100.0	100.0	36	73.5	54.8
2	99.5	98.9	37	71.7	53.2
3	99.2	97.4	38	70.7	52.1
4	98.9	96.1	39	68.9	50.0
5	98.7	95.0	40	68.0	49.1
6	98.3	93.7	41	67.0	48.1
7	98.0	93.0	42	66.0	47.0
8	97.6	91.9	43	65.0	46.1
9	97.1	90.7	44	61.9	43.2
10	96.5	88.8	45	60.9	42.4
11	96.2	88.3	46	59.5	41.3
12	95.6	86.8	47	58.4	40.4
13	94.9	84.9	48	57.4	39.5
14	94.2	83.5	49	56.9	39.0
15	93.6	82.0	50	55.9	38.0
16	92.4	79.9	51	54.9	37.2
17	91.5	78.6	52	53.8	36.5
18	90.6	77.0	53	51.6	34.6
19	89.1	74.6	54	50.5	33.8
20	88.6	73.7	55	49.4	33.1
21	87.7	72.6	56	48.4	32.3
22	86.6	70.9	57	47.3	31.3
23	85.9	70.1	58	46.3	30.5
24	84.7	68.4	59	45.1	29.8
25	84.0	67.4	60	44.1	28.9
26	83.0	65.7	61	43.0	28.2
27	82.3	64.8	62	42.0	27.4
28	81.6	63.8	63	40.9	26.5
29	80.8	62.9	64	38.7	24.9
30	79.3	60.9	65	37.6	24.1
31	77.7	59.1	66	35.0	22.0
32	76.9	58.2	67	34.0	21.2
33	76.1	57.3	68	32.9	20.5
34	75.2	56.6	69	32.0	20.0
35	74.4	55.8	70	31.0	19.2

Table B-20. USAF Applicants - AFOQT Nav/Tech Composite: Whites vs. Asians (concluded)

Score	% At or Above Score Whites	Asians	Score	% At or Above Score Whites	Asians
71	29.9	18.5	86	13.0	7.2
72	29.0	17.7	87	11.7	6.2
73	28.0	17.1	88	10.4	5.4
74	26.0	15.7	89	9.0	4.5
75	24.1	14.5	90	7.9	4.0
76	23.2	14.0	91	6.9	3.5
77	22.2	13.4	92	6.0	3.1
78	21.4	12.7	93	5.5	2.8
79	20.5	12.3	94	4.7	2.4
80	18.8	11.2	95	3.6	1.9
81	18.0	10.6	96	2.6	1.5
82	16.4	9.5	97	1.5	0.8
83	15.7	9.0	98	0.8	0.4
84	14.3	7.9	99	0.4	0.2
85	13.6	7.5			

Note. N Whites = 84,126; N Asians = 7,241

Table B-21. USAF Applicants - AFOQT Verbal Comp.: Whites vs. Native-Am.

Score	% At or Above Score Whites	Nat-Am	Score	% At or Above Score Whites	Nat-Am
1	100.0	100.0	36	73.0	57.9
2	99.7	98.8	37	70.5	55.9
3	99.6	98.5	38	70.5	55.9
4	99.5	98.0	39	67.9	53.3
5	99.3	97.3	40	67.9	53.3
6	99.1	96.4	41	65.2	51.0
7	98.9	95.7	42	62.5	47.8
8	98.7	94.8	43	62.5	47.8
9	98.3	93.6	44	62.5	47.8
10	98.0	92.6	45	59.6	45.4
11	97.5	91.6	46	59.6	45.4
12	97.0	90.6	47	56.7	44.0
13	96.4	89.2	48	56.7	44.0
14	95.7	87.6	49	53.7	40.9
15	94.9	86.1	50	53.7	40.9
16	93.3	84.2	51	49.5	37.4
17	93.2	84.2	52	49.5	37.4
18	91.9	81.6	53	49.5	37.4
19	90.5	79.0	54	46.6	35.4
20	89.0	76.7	55	46.6	35.4
21	89.0	76.7	56	43.7	32.8
22	88.0	75.3	57	43.7	32.8
23	88.0	75.3	58	40.8	30.4
24	86.1	72.9	59	40.8	30.4
25	84.3	70.8	60	40.8	30.4
26	84.2	70.8	61	37.9	27.9
27	82.2	68.7	62	37.9	27.9
28	80.1	65.2	63	35.1	25.3
29	80.1	65.2	64	35.1	25.3
30	80.1	65.2	65	32.3	23.4
31	77.9	62.6	66	32.3	23.4
32	77.9	62.6	67	32.3	23.4
33	75.4	59.9	68	29.5	22.0
34	73.0	57.9	69	29.5	22.0
35	73.0	57.9	70	28.1	21.0

Table B-21. USAF Applicants - AFOQT Verbal Aptitude Composite: Whites vs. Native-Americans (concluded)

Score	% At or Above Score Whites	Nat-Am	Score	% At or Above Score Whites	Nat-Am
71	28.1	21.0	86	14.0	10.7
72	28.1	21.0	87	11.7	8.5
73	26.5	19.4	88	9.6	7.2
74	26.5	19.4	89	9.6	7.2
75	23.9	17.7	90	9.6	7.2
76	23.9	17.7	91	7.7	5.9
77	23.9	17.7	92	7.7	5.9
78	21.3	16.3	93	5.9	5.2
79	18.7	14.1	94	4.3	4.2
80	18.7	14.1	95	4.3	4.2
81	18.7	14.1	96	4.3	4.2
82	16.2	12.3	97	3.6	3.9
83	16.2	12.3	98	2.4	3.2
84	16.2	12.3	99	1.5	1.9
85	14.0	10.7			

Note. N Whites = 84,126; N Native-Americans = 1,126

Table B-22. USAF Applicants - AFOQT Quantitative Comp.: Whites vs. Native-Am

Score	% At or Above Score Whites	Nat-Am	Score	% At or Above Score Whites	Nat-Am
1	100.0	100.0	36	62.8	47.5
2	99.7	99.0	37	62.8	47.5
3	99.5	98.1	38	62.8	47.5
4	98.9	96.6	39	60.3	44.6
5	98.6	95.9	40	60.3	44.6
6	98.2	95.2	41	60.3	44.6
7	97.8	94.5	42	57.8	42.0
8	97.8	94.5	43	57.8	42.0
9	96.7	91.2	44	51.5	35.3
10	96.1	90.1	45	51.5	35.3
11	95.6	88.8	46	48.9	34.1
12	93.7	86.0	47	48.9	34.1
13	93.7	86.0	48	48.9	34.1
14	93.7	86.0	49	46.1	32.0
15	92.6	83.7	50	46.1	32.0
16	91.3	81.7	51	46.1	32.0
17	91.3	81.7	52	46.1	32.0
18	88.5	78.6	53	40.9	28.3
19	88.5	78.6	54	40.9	28.3
20	86.3	74.6	55	38.2	26.5
21	86.3	74.6	56	38.2	26.5
22	82.7	70.0	57	38.2	26.5
23	82.7	70.0	58	35.6	24.2
24	82.7	70.0	59	35.6	24.2
25	80.9	67.8	60	33.0	21.6
26	80.9	67.8	61	33.0	21.6
27	76.9	62.9	62	30.5	20.1
28	76.9	62.9	63	30.5	20.1
29	74.8	60.4	64	30.5	20.1
30	74.8	60.4	65	28.1	18.7
31	74.8	60.4	66	28.1	18.7
32	70.2	56.5	67	25.6	17.0
33	70.2	56.5	68	25.6	17.0
34	67.8	52.8	69	25.6	17.0
35	62.8	47.5	70	23.3	15.5

Table B-22. USAF Applicants - AFOQT Quantitative Composite: Whites vs. Native-Americans (concluded)

Score	% At or Above Score Whites	Nat-Am	Score	% At or Above Score Whites	Nat-Am
71	23.3	15.5	86	9.0	5.2
72	21.0	13.9	87	7.4	4.4
73	21.0	13.9	88	7.4	4.4
74	21.0	13.9	89	7.4	4.4
75	21.0	13.9	90	7.4	4.4
76	18.8	12.3	91	5.9	3.9
77	16.7	10.7	92	4.4	2.9
78	16.7	10.7	93	3.6	1.9
79	14.6	9.5	94	3.6	1.9
80	14.6	9.5	95	2.5	1.8
81	12.7	7.9	96	1.5	1.2
82	12.7	7.9	97	1.5	1.2
83	10.8	6.1	98	0.7	0.5
84	10.8	6.1	99	0.2	0.2
85	10.8	6.1			

Note. N Whites = 84,126; N Native-Americans = 1,126

Table B-23. USAF Applicants - AFOQT Acad. Apt. Comp. – Whites vs. Native-Am

Score	% At or Above Score Whites	Nat-Am	Score	% At or Above Score Whites	Nat-Am
1	100.0	100.0	36	68.4	51.3
2	99.8	99.6	37	66.9	49.9
3	99.7	98.8	38	65.4	48.4
4	99.4	97.5	39	62.3	45.6
5	99.3	97.1	40	62.3	45.6
6	98.7	95.4	41	60.7	44.6
7	98.3	93.9	42	59.2	43.2
8	97.9	92.0	43	59.2	43.2
9	97.7	91.5	44	57.7	41.3
10	96.5	88.4	45	56.1	40.0
11	95.8	86.7	46	54.5	39.5
12	94.9	84.8	47	54.5	39.5
13	94.4	84.2	48	52.9	37.8
14	93.9	83.6	49	52.9	37.8
15	93.3	83.0	50	51.3	37.0
16	92.7	82.0	51	49.7	35.3
17	90.6	78.8	52	48.0	33.5
18	89.8	77.6	53	46.3	32.0
19	88.2	74.8	54	44.6	30.6
20	87.3	73.7	55	41.3	28.0
21	86.4	71.1	56	41.3	28.0
22	84.4	70.2	57	41.3	28.0
23	83.6	69.1	58	39.7	26.1
24	82.6	68.4	59	39.7	26.1
25	81.3	66.9	60	38.0	25.3
26	80.2	65.5	61	38.0	25.3
27	79.1	63.9	62	36.4	24.2
28	77.9	62.1	63	34.8	23.1
29	75.4	58.7	64	33.2	21.7
30	74.0	57.5	65	33.2	21.7
31	74.0	57.5	66	31.6	20.8
32	72.6	55.8	67	31.6	20.8
33	72.6	55.8	68	30.1	19.3
34	71.2	54.0	69	28.5	17.9
35	69.8	52.8	70	27.0	16.7

Table B-23. USAF Applicants - AFOQT Academic Aptitude Composite: Whites vs. Native-Americans (concluded)

Score	% At or Above Score		Score	% At or Above Score	
	Whites	Nat-Am		Whites	Nat-Am
71	25.5	16.3	86	10.0	7.4
72	24.1	15.3	87	9.0	6.0
73	22.7	14.5	88	8.1	5.9
74	22.7	14.5	89	7.3	5.3
75	22.7	14.5	90	6.8	4.8
76	21.4	13.9	91	6.0	4.2
77	19.3	13.0	92	5.2	3.8
78	19.3	13.0	93	4.5	3.2
79	18.0	12.4	94	3.2	2.5
80	16.8	11.5	95	2.7	2.4
81	15.5	10.2	96	1.8	2.0
82	14.4	9.3	97	1.2	1.5
83	13.3	8.6	98	0.7	1.0
84	12.2	8.1	99	0.3	0.3
85	11.1	7.5			

Note. N Whites = 84,126; N Native-Americans = 1,126

Table B-24. USAF Applicants - AFOQT Pilot Comp.: Whites vs. Native-Americans

Score	% At or Above Score Whites	Nat-Am	Score	% At or Above Score Whites	Nat-Am
1	100.0	100.0	36	74.6	61.9
2	99.5	99.5	37	73.4	60.5
3	99.4	99.0	38	72.2	58.3
4	99.2	98.2	39	70.9	56.3
5	99.0	97.2	40	69.8	54.4
6	98.8	96.6	41	69.8	54.4
7	98.5	95.4	42	68.4	53.1
8	98.1	93.9	43	65.8	50.8
9	97.6	93.1	44	64.4	49.3
10	97.6	93.1	45	63.1	48.0
11	97.1	92.5	46	61.7	46.4
12	96.6	91.0	47	60.3	45.0
13	96.0	89.1	48	58.9	44.5
14	95.0	86.9	49	58.2	43.6
15	94.6	86.1	50	58.2	43.6
16	94.1	85.3	51	56.7	42.5
17	93.8	85.1	52	55.2	41.2
18	92.8	84.1	53	53.8	40.1
19	92.3	83.2	54	52.4	38.7
20	91.7	82.8	55	50.9	37.7
21	89.7	79.9	56	48.7	36.0
22	89.1	79.0	57	47.3	34.3
23	88.3	77.7	58	45.9	33.6
24	87.5	76.8	59	44.5	32.1
25	85.9	75.3	60	44.5	32.1
26	85.0	73.7	61	43.0	30.6
27	84.1	73.0	62	41.5	29.7
28	83.6	72.4	63	40.2	28.1
29	81.6	70.1	64	37.3	25.5
30	80.6	68.4	65	35.9	24.9
31	79.6	67.4	66	34.5	23.8
32	79.0	66.9	67	33.2	22.7
33	77.9	65.5	68	31.9	21.7
34	76.9	64.4	69	31.9	21.7
35	75.7	63.5	70	30.6	21.0

Table B-24. USAF Applicants - AFOQT Pilot Composite: Whites vs. Native-Americans (concluded)

Score	% At or Above Score Whites	Nat-Am	Score	% At or Above Score Whites	Nat-Am
71	29.2	20.2	86	11.6	8.2
72	27.9	19.4	87	9.9	7.0
73	27.9	19.4	88	9.2	6.1
74	26.7	18.2	89	8.5	5.7
75	24.8	16.8	90	7.4	5.1
76	23.7	16.0	91	6.8	4.5
77	22.4	14.8	92	6.2	4.3
78	21.2	14.4	93	5.6	3.9
79	20.1	13.9	94	5.1	3.6
80	19.0	12.5	95	4.2	3.4
81	17.9	12.1	96	3.2	2.5
82	16.8	11.5	97	2.0	1.6
83	15.8	10.8	98	0.9	0.5
84	14.8	10.7	99	0.3	0.2
85	12.4	9.1			

Note. N Whites = 84,126; N Native-Americans = 1,126

Table B-25. USAF Applicants - AFOQT Nav/Tech Comp.: Whites vs. Native-Am

Score	% At or Above Score Whites	Nat-Am	Score	% At or Above Score Whites	Nat-Am
1	100.0	100.0	36	73.5	58.8
2	99.5	99.4	37	71.7	57.6
3	99.2	98.3	38	70.7	56.5
4	98.9	96.7	39	68.9	54.4
5	98.7	96.1	40	68.0	53.6
6	98.3	95.0	41	67.0	52.8
7	98.0	94.0	42	66.0	51.6
8	97.6	93.4	43	65.0	50.5
9	97.1	92.1	44	61.9	47.3
10	96.5	90.8	45	60.9	46.8
11	96.2	90.0	46	59.5	45.9
12	95.6	89.0	47	58.4	45.5
13	94.9	86.9	48	57.4	43.0
14	94.2	85.4	49	56.9	42.7
15	93.6	84.4	50	55.9	41.3
16	92.4	83.0	51	54.9	40.2
17	91.5	81.6	52	53.8	39.3
18	90.6	80.3	53	51.6	37.7
19	89.1	78.4	54	50.5	36.1
20	88.6	77.3	55	49.4	35.6
21	87.7	76.3	56	48.4	34.2
22	86.6	75.0	57	47.3	33.3
23	85.9	74.3	58	46.3	32.5
24	84.7	73.2	59	45.1	31.6
25	84.0	72.3	60	44.1	30.7
26	83.0	71.0	61	43.0	29.6
27	82.3	70.4	62	42.0	28.6
28	81.6	69.5	63	40.9	27.4
29	80.8	68.7	64	38.7	25.5
30	79.3	66.8	65	37.6	24.8
31	77.7	64.6	66	35.0	23.1
32	76.9	63.7	67	34.0	22.3
33	76.1	62.1	68	32.9	21.5
34	75.2	61.7	69	32.0	20.6
35	74.4	60.5	70	31.0	19.7