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RESEARCH MEMORANDUM 63-5

Data Collection for Sampling
1961-1962 AFQT Scores

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6 DATA COLLECTION FOR SAMPLING OF 1961-1962 APQT SCORES.

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11 April 1963

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DATA COLLECTION FOR SAMPLING OF 1961-1962 AFQT SCORES

PURPOSE

Periodic studies of operational AFQT scores--trends in score distributions and relationships to other significant variables--are essential to continuing evaluations of AFQT and to the solution of the problems of management. Routine statistical reports available to the U. S. Army Personnel Research Office are designed for specific operational needs and do not provide AFQT data in the forms required for specific research problems.

The objective of the present project is to develop input test distributions which will meet research needs. Under this project, procedures were set up to obtain a systematic flow of operational data on (1) Selective Service registrants who were preinductees, (2) on Selective Service registrants who were volunteers for immediate induction, and on (3) applicants for enlistment in the Army. The data were obtained on a monthly basis for men administered AFQT 7A-8A during the 12-month period beginning 15 March 1961 and ending 14 March 1962.

The present Research Memorandum describes the procedures used to obtain the data, the initial processing of the data, the method used in selecting cases for the body of data to be made available for subsequent research studies, the number of cases so selected, and the form in which those data are being organized.

DATA COLLECTION PROCEDURES AT APES

A letter dated 13 March 1961, sent to all APES, provided for data to be prepared, organized, and transmitted to APRO as follows:

On the 15th of each month, the completed AFQT 7A and AFQT 8A answer sheets for men examined on dates beginning with the 15th of the previous month and ending with the 14th of the current month were grouped according to the following three types of procurement source:

Selective Service registrants--preinductees (P)

Selective Service registrants--volunteers for immediate induction (V)

Non-prior service male applicants for enlistment in the Army (A)

A 10-percent sampling was made of all answer sheets in each of the three groups. Years of education was entered before the papers were shipped to APRO. The P and V samples were drawn by selecting completed

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answer sheets of all P's and all V's whose Selective Service registration numbers ended in 2. Of the A's, answer sheets were drawn of A's whose local processing numbers ended in 2.

This monthly procedure was followed by the AFES during the 12-month period beginning 15 April 1961 and ending 15 March 1962. Table 1 shows for each group the total number of answer sheets received in AFRO on each shipment date.

Table 1

TOTAL NUMBER OF AFQT 7-8 ANSWER SHEETS SUBMITTED BY THE AFES
(by date of transmittal)

Date of Transmittal ^a	Samples		
	P	V	A
15 April 1961	775	80	2050
15 May 1961	320	75	1289
15 June 1961	436	194	1821
15 July 1961	527	115	1783
15 Aug 1961	1222	283	2066
15 Sep 1961	3786	264	1718
15 Oct 1961	6019	436	1490
15 Nov 1961	6061	249	1128
15 Dec 1961	6743	270	1032
15 Jan 1962	3888	97	1172
15 Feb 1962	4291	278	1500
15 Mar 1962	2802	250	1414
Total	36,870	2591	18,463

^aShipment of 15 April 1961 covered tests administered 15 March 1961 to 14 April 1961; other shipments followed this pattern so that the shipment of 15 March 1962 covered tests administered 15 February 1962 to 14 March 1962.

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RANDOM SELECTION OF CASES BY APRO

The comparatively heavy flow of P's and A's led to the decision to draw, for processing, 20-percent samples of each month's answer sheets submitted by the AFES in each of these two groups. Thus, for the P, V, and A groups, the data to be processed, organized, and made available for analysis under subsequent projects represent the following percentages of total inputs for the 12 month period:

Sample P. 2 percent of the preinductees

Sample V. 10 percent of the volunteers for immediate induction

Sample A. 2 percent of the applicants for enlistment

Table 2 shows for each group, by month of examination, the number of cases selected for processing. Table 3 shows the 12-month totals of cases selected for processing, by Army Area.

Table 2

SIZE OF P, V, AND A SAMPLES SELECTED FOR PROCESSING
(by month of examination)

Month Designation	P	Samples V	A
16-31 March 1961	104	61	134
April 1961	66	78	317
May 1961	43	40	235
June 1961	133	237	239
July 1961	43	230	188
August 1961	571	226	294
September 1961	942	414	296
October 1961	1376	275	273
November 1961	1354	262	217
December 1961	860	178	182
January 1962	919	254	320
February 1962	542	230	254
1-15 March 1962	168	89	123
Total	7121	2574	3072

Table 3

SIZE OF P, V, AND A SAMPLES SELECTED FOR PROCESSING^a
(by Army Area)

Army Area	Samples		
	P	V	A
1	1398	480	581
2	1275	314	1031
3	956	594	344
4	885	205	274
5	1706	554	555
6	901	427	287
Total	7121	2574	3072

^aTotal N's for March 1961 - March 1962.

ORGANIZATION OF DATA

Data for samples P, V, and A (total sample and separately, by month, as shown in Tables 2 and 3) are being processed and recorded on rosters (Statistical Plan, Phase I).

1. AFQT 7A-8A answer sheets are being re-scored for total rights, total wrongs, and total raw and percentile scores.

2. Answer sheets are being scored for subtest raw and Army Standard scores (VE, AR, TF, SR).

3. Separately, by month of testing, rosters for each sample are prepared, showing for each man^{1/}:

- a. Code for installation
- b. Form of AFQT taken
- c. Man number
- d. Sum of total rights on four subtests
- e. Total AFQT rights as recorded by AFES

^{1/} Scanning of answer sheets received during the early months of data collection showed that cases for stand-by categorization and for terminal screening of Category V EM were too spotty to justify organization for statistical treatment.

- f. Total rights for each subtest, separately
- g. Amount and direction of error on total AFQT rights (d vs e)
- h. Sum of total wrongs on four subtests
- i. Total AFQT wrongs as recorded by AFES
- j. Total wrongs for each subtest, separately
- k. Amount and direction of error on total AFQT wrongs (h vs i)
- l. Rights minus one-third wrongs for total AFQT
- m. Rights minus one-third wrongs for each subtest, separately
- n. Total AFQT percentile score as recorded by AFES
- o. Total AFQT percentile score as computed in AFRO
- p. Amount and direction of error in AFQT percentile score (n vs o)
- q. Years of education completed
- r. Code for month of examination

4. All data recorded on the rosters are being key-punched, with the exception of scores recorded at the AFES and the errors made in the AFES computation of those scores (items e, g, i, k, n, and p listed in paragraph 3).

5. Statistical analysis and reporting of findings therefrom will be accomplished under a later project.