

AIR FORCE



**HUMAN
RESOURCES**

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**STABILITY OF CONSOLIDATED JOB DESCRIPTIONS
BASED ON TASK INVENTORY SURVEY INFORMATION**

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13. ABSTRACT This study was designed to determine the stability of data reported in consolidated job descriptions computed from task inventory survey returns. It was found that the vectors "percent performing" and "percent time spent by total group" are highly stable, even for relatively small samples. Split-half reliability coefficients were generally in the middle and upper 90's.			

ABSTRACT

This study was designed to determine the stability of data reported in consolidated job descriptions computed from task inventory survey returns. It was found that the vectors "percent performing" and "percent time spent by total group" are highly stable, even for relatively small samples. Split-half reliability coefficients were generally in the middle and upper 90's.

STABILITY OF CONSOLIDATED JOB DESCRIPTIONS BASED ON TASK INVENTORY SURVEY INFORMATION

I. INTRODUCTION

A number of studies have been conducted and reported which indicate the consistency of job information collected from individuals at two points in time using task inventory instruments. However, most decisions related to changes in the personnel system have been based upon data from groups rather than from single individuals. For example, a decision might be made to eliminate training in an entry-level course on all tasks which are being performed by fewer than ten percent of first-term airmen. In order to identify such tasks, a consolidated description of work performed by first-term airmen is computed. The first column of data in this description reports the percentage of individuals in the designated group who perform each task listed in the job inventory instrument.

II. STATEMENT OF THE PROBLEM

In many occupational surveys, task inventories are administered only to a sample of the job incumbents working in a career ladder. In some instances these samples include less than 20 or 30 percent of the total population. On occasion, some operating officials have been reluctant to accept the "percent performing" and "percent time spent by total group" values reported in consolidated job descriptions. One often hears comments like "I think we ought to conduct another survey to see if these values hold up." The question to be answered is: "Just how dependable are the values reported in consolidated job descriptions?" This paper proposes to answer this question.

III. APPROACH

Ten previously surveyed career ladders were selected for the study. The cases in each skill level

within each of these ladders were randomly divided into halves. Consolidated job descriptions were computed for each of these half samples, and the "percent performing" and "percent time spent by total group" vectors for each pair of job descriptions were correlated.

IV. RESULTS

Results of the study are reported in Table 1. For the "percent performing" vectors, the split-half correlations ranged from .888 to .997; for the "percent time by total group" vectors, the values ranged from .813 to .996. Even in the smallest sample (91590, $1/2 N = 21$) the two vectors were found to be highly stable (.931 and .890, respectively).

V. DISCUSSION AND CONCLUSIONS

It appears that data reported in consolidated job descriptions are highly stable. Even with relatively small N s, two samples drawn in the same manner yield highly comparable results. Of course, it is important that samples be representative of the populations from which they are drawn. This problem has been addressed in previous studies, and it has been demonstrated that the Air Force method of sampling is essentially free from bias (Mayo, 1969).

REFERENCE

Mayo, C.C. *Three studies of job inventory procedures: Selecting duty categories, interviewing, and sampling.* AFHRL-TR-69-32, AD-700 746. Lackland AFB, Tex.: Personnel Research Division, Air Force Human Resources Laboratory, November 1969.

Table 1. Reliability of "Percent Performing" and "Percent Time Spent by Total Group" Vectors in Consolidated Job Descriptions

Air Force Specialty	1/2 N ^a	R ₁₁ Percent Performing	R ₁₁ Percent Time Spent by Total Group
Helicopter Mechanic			
43130	39	.965	.955
43150	256	.996	.986
43170	81	.961	.828
43190	26	.957	.965
Medical Administrative			
90630	76	.936	.894
90650	347	.985	.969
90670	189	.981	.951
90690	56	.968	.961
Management Engineering			
73331	42	.971	.958
73370	101	.984	.957
73371	180	.994	.973
73391	133	.952	.889
Outside Wire/Antenna			
36150	199	.987	.965
36170	92	.963	.919
36190	22	.958	.895
Electrical Power Production			
54330	70	.953	.952
54350	457	.987	.986
54370	143	.981	.970
Radiology			
90350	180	.997	.996
90370	78	.986	.975
Education and Training			
75132	146	.983	.972
75150	45	.974	.918
75170	30	.960	.935
75172	381	.995	.992
75190	28	.891	.895
Medical Materiel			
91530	63	.888	.813
91550	292	.978	.959
91570	137	.949	.908
91590	21	.931	.890
Preventive Medicine			
90750	113	.979	.955
90770	63	.966	.917
Jet Engine Mechanic			
43230	76	.979	.961
43250	473	.997	.992
43270	241	.985	.968
43290	35	.982	.974

^aThese values indicate the number of cases in each of the two subsamples. Total number of cases entering into computations reported in this table was 9,822.