

**UNCLASSIFIED**

---

---

**AD 269 490**

*Reproduced  
by the*

**ARMED SERVICES TECHNICAL INFORMATION AGENCY  
ARLINGTON HALL STATION  
ARLINGTON 12, VIRGINIA**



---

---

**UNCLASSIFIED**

NOTICE: When government or other drawings, specifications or other data are used for any purpose other than in connection with a definitely related government procurement operation, the U. S. Government thereby incurs no responsibility, nor any obligation whatsoever; and the fact that the Government may have formulated, furnished, or in any way supplied the said drawings, specifications, or other data is not to be regarded by implication or otherwise as in any manner licensing the holder or any other person or corporation, or conveying any rights or permission to manufacture, use or sell any patented invention that may in any way be related thereto.

269 490

ACTIA  
COLLECTED BY ASTIA  
AS A BOND.

U. S. NAVAL SCHOOL OF AVIATION MEDICINE  
U. S. NAVAL AVIATION MEDICAL CENTER  
PENSACOLA, FLORIDA

PEER RATINGS: A NOTE ON THE UNRATED CASES

SPECIAL REPORT No. 61-11

by

Lieutenant (jg) Richard E. Doll, MSC, USNR

XEROX  
62-1-6

Approved by

Captain Ashton Graybiel, MC, USN  
Director of Research

Released by

Captain Clifford P. Phoebus, MC, USN  
Commanding Officer

ASTIA  
RECEIVED  
JAN 22 1962  
TIPDR  
A

24 October 1961

Opinions or conclusions contained in this report are those of the author. They are not to be construed as necessarily reflecting the view or the endorsement of the Navy Department. Reference may be made to this report in the same way as to published articles noting author, title, source, date, and report number.

## SUMMARY PAGE

### THE PROBLEM

Most peer rating formats require the rater to nominate a specified number of his group members to the top and to the bottom positions in the group in terms of some particular trait or ability. When these nominations are pooled, there are frequently members of the group who are not named as either high or low (unrated group). The usual procedure has been to assign an average (i.e. mean) score to such individuals. However, it seems possible that, for the prediction of many criteria, the fact that a man was unrated might indicate something quite different from "averageness."

Peer ratings of leadership potential have been shown to correlate with subsequent success in the Naval Air Training Program. This study investigates the assumption of the "averageness" of this unrated group by comparing their later success with that of men who received the average score because of having received equal numbers of high and low nominations (rated group), and with that of men who received scores at levels other than average.

### FINDINGS

The results indicate that the unrated group are not inferior to those men who were rated average, nor to the average of the total group in performance on the criterion used here.

## INTRODUCTION

Peer ratings or buddy ratings, i. e., evaluations of the members of a group by one or more other members of that group, have proved to be useful instruments. Although usually made by untrained and relatively unsophisticated observers, such ratings have been shown to be good predictors of success or failure in several areas of endeavor. Studies have indicated that such ratings have substantial validity in predicting flight failure (1), officer efficiency (7), military grades in Officer Candidate School (6), leadership performance in combat (5), on-the-job performance (3), and scholastic performance (4).

One of the most common peer rating formats requires that each member of a group nominate specified numbers of the top and bottom members of the group in terms of a certain trait or ability. Since agreement between raters is usually quite high (2), there often exists a number of individuals who are not nominated either high or low by the other members of the group. The general procedure is to assign these people a score equal to the average (i. e. mean) score. The question arises, however, as to whether those people not nominated are really "average" in relation to the criterion of performance, or are instead unique in the light of having not been mentioned at all.

Such peer ratings are among measures used in the Naval Air Training Program to appraise the potential of individual cadets. During the eighth week of training each man in a class of cadets is asked to name the three most promising prospective officers and the three least promising in his class. It has been shown (1) that these ratings typically have a bi-serial correlation of about .35 with subsequent failure to complete the training program and that, when combined with other measures, they have considerable administrative usefulness.

This study compares the training success of cadets who received an average peer rating score as a result of not being nominated either high or low (unrated group), those who received the average score because of having received equal numbers of high and low nominations (rated group), and those who received scores at levels other than average.

## ANALYSIS AND RESULTS

The peer ratings and completion records of 1385 cadets who were in the Naval Air Training Program during 1958 were divided into six groups as shown in Table I.

Table I

## Percentages Completing Training at Various Peer Rating Score Levels

Peer Rating Score*	N	% Completing
60 or more	163	81
51 - 59	486	73
50 - unrated	79	67
50 - rated	57	60
40 - 49	425	60
39 or less	175	36
Total	1385	64

\*Standard scores, mean = 50, S.D. = 10

The difference in the percentages of rated and unrated men with scores of 50 who completed training is not statistically significant\*. However, the results indicate there may be a tendency for men who had compensating low and high ratings (rated group) to be more like those men who had a slight preponderance of low ratings (scores 40-49) than like those who had a slight preponderance of high ratings (scores 51-59). However, the difference is not sufficient to be administratively useful. Only the lowest group (score of 39 or less) has a sufficiently low completion rate as to make their early elimination from training a profitable administrative action.

The data available here do not support the notion that the unrated cases are as a group inferior in their training potential. Rather their completion rate is at least equal to the average of the total group.

-----  
\* Chi-square test for significance.

## REFERENCES

1. Berkshire, J.R., and Nelson, P.D., Leadership peer ratings related to subsequent proficiency in training and in the fleet. Special Report 58-20. Pensacola, Fla.: Naval School of Aviation Medicine, 1958.
2. Research planning conference on objective measurement of motivation and temperament. Conference Report 51-3. San Antonio, Tex.: Human Resources Research Center, Lackland Air Force Base, 1951.
3. Fuchs, E.R., Woods, I.A., and Harper, B.P., Prediction of job success in eight career ladders. Personnel Research Branch Report No. 997. Washington, D.C.: The Adjutant General's Office, 1953.
4. Johnson, E.E., Student ratings of popularity and scholastic ability of their peers and scholastic performance of those peers. J. soc. Psychol., 47: 127-132, 1958.
5. Lindzey, G., and Borgatta, E.F., Sociometric measurement. In Lindzey, G. (Ed.) Handbook of Social Psychology, Vol. 1. Theory and Method. Cambridge, Mass.: Addison-Wesley Publishing Co., Inc., 1954, 405-448.
6. Suci, G.J., and Vallance, T.R., An analysis of peer ratings: II. Their validity as predictors of military aptitude and other measures in the Naval Officer Candidate School. Technical Bulletin No. 54-10. Washington, D.C.: Bureau of Naval Personnel, 1954.
7. Wherry, R.J., and Fryer, D.H., Buddy Ratings: Popularity contest or leadership criteria? Personn. Psychol., 2: 147-159.