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## The Generality of Level of Aspiration in Three Areas of Endeavor

By MARY CATHERINE HAMPTON AND CHARLES F. HANER

A number of studies, Frank (2), Gardner (3) and Gould (4), have been concerned with the generality of level of aspiration. In these investigations the subject's level of aspiration on several tasks was measured and various indicies of generality computed. Correlations of aspiration scores ranged from .04 to .70. The primary considerations involved in selecting the tasks the subject performed in these investigations were that they be relatively independent of each other and provide for reliable measurement. Most of them were motor or speed of reaction tasks as card sorting, throwing quoits, cancellation, and digit symbols. Different response measures were thus necessitated—time, points, number done, etc.

The very divergent results were difficult to explain. Heathers (5), however, was able to account for much of the variability of these earlier studies through investigation of certain experimental variables affecting level of aspiration. She indicated, "The similarity of an individual's aspiration level in two tasks is a function not only of his personality structure, but also of the objective similarity of the two tasks themselves." The units in which the scores are reported and the shape of the learning curve involved in practicing the tasks will appreciably affect the results, she found. With the same score scale and the learning curve the same for the two tasks, she obtained correlations of .79 and .93. With the shape of the learning curve the same but the score units different, the correlation was .67. With both learning curve and score units different, correlations ranged from .35 to .74. Likewise motivation of the subjects and the session at which the tasks were given affected the results. With motivation high, she obtained correlations of .93, motivation low the correlation was .84. Tasks given in the same session correlation was .81, in different sessions .62. Four of the five tasks she used were similar, digit-symbol substitution, letter-code substitution, mental multiplication and addition. Only card-sorting seemed to tap a different area of aspiration.

Two criticisms of these studies of generality of aspiration level occur to us. First, no formal attempt has been made to vary the fields of endeavor in which aspiration is measured. The tasks used are generally quite similar. They appear to be measuring much the

same thing. Directions to the subject have not suggested (1) that different areas of endeavor were being measured, nor (2) what these areas of endeavor were. Hence, the generality of level of aspiration has been largely determined in either the same area of aspiration (motor, for example) or at least if different areas of activity were tapped, this variable was not systematically altered.

Secondly, since most of the studies have used different response measures (time, number right, etc.) analysis has been limited to correlation measures of association. It is quite possible that the correlation of aspiration in different areas may be substantial and yet the level itself could vary from task to task or from one area of endeavor to another. If areas of endeavor were systematically varied and the same scoring scale used in each area, it would be possible to determine if the level varied by analysis using tests of significance.

The present study was conducted to obviate these criticisms. Specifically, the variable of area of endeavor in which aspiration was measured was to be manipulated and the same scoring scale used in all spheres of aspiration in order to determine not only association of aspiration scores, but also to make possible comparisons of actual level of aspiration.

## METHOD

### Subjects

Twenty-four subjects were used. All were college freshmen and sophmores. A second phase of the study necessitated the establishment of their "adjustment". These subjects were selected because their T scores on the MMPI varied within the normal range. The sex ratio was seven male and seventeen female. All were experimentally naive.

### Tasks

Tasks possessing face validity as intellectual, social and motor were employed. The intellectual task consisted of 100 four-alternative multiple-choice analogies, ten on each of the ten trials. The analogies were similar to those frequently found in intelligence tests. In the social sphere, fifty multiple-choice problems purporting to measure social judgement were used, five problems on each of ten trials. The problems were similar to those found in the George Washington Social Intelligence Test. However, they were made quite ambiguous so the subject could not well judge his score. In the motor area conventional card sorting was used. The instructions emphasized that the tasks measured intellectual, social and motor proficiency.

### Procedure

Following Heather's (5) findings, the conditions employed were designed to produce the highest possible correlations between level of aspiration in the different spheres measured.

All tasks were administered at one sitting lasting about two hours. The order of the tasks was counterbalanced. Each task consisted of ten trials. A practice trial was also given before the first estimate on card-sorting. The subjects did not know the number of trials they would have.

The same scale for reporting scores was used for all three tasks, a scale which the subjects were told ranged from ten to fifty points. Subjects were not told what an "average" score or "good" score was or how others had scored on the scale.

The same learning curve was insured by reporting prearranged performance scores to the subjects. Two curves were used, the same for the first and third tasks and a slightly different one for the second task. Both curves had the same general shape, same mean and sigma. Subjects were quizzed after completion of their stint and none reported awareness of the near-identity of the reported performance scores.

Instructions followed Rotter's (8) model designed to insure uniform interpretation and keep the subject's estimate near his actual expected score by penalizing him for both underestimating and overestimating his score. The instructions stressed that the tasks represented the intellectual, social and motor areas of competence.

Subjects were thus unable to actually assess their performance and had to rely on the report given by E. Each subject made eleven estimates of performance on each task, one before the first trial and one after the report of his performance on the preceding trial.

### RESULTS

Two methods of testing the generality of aspiration level in the three areas of endeavor were used, (a) correlations of various aspiration scores on the different tasks and (b) tests of significance of various aspiration measures in the three spheres of activity tested.

Correlations were run on three aspiration measures. the initial estimates, the mean predicted or estimated scores and the mean D scores or difference between the report of the preceding trial and the subject's estimate of performance on the forthcoming trial. These correlations are presented in Table 1.

**Table 1**  
Correlation of Mean Aspiration Scores, D Scores, and Initial Estimates on Three Aspiration Measures

<i>Tasks</i>	<i>Mean Level of Aspiration</i>	<i>D Scores</i>	<i>Initial Estimates</i>
Intellectual-Social	.838**	.852**	.480*
Intellectual-Motor	.534**	.522**	.040
Social-Motor	.334	.360	.246

Scores on all tasks were reported and estimates made in comparable units, the learning curves for the tasks were nearly identical and the task sequence counterbalanced, therefore comparison of the mean aspiration scores on the various tasks is possible and provides further evidence of the generality of level of aspiration. Significant differences in the means of the tasks would suggest different levels of aspiration in the various areas. Table 2 shows mean aspiration scores, D score and initial estimates.

**Table 2**  
Mean Aspiration Scores, D Scores and Initial Estimates on Three Aspiration Measures

<i>Tasks</i>	<i>Mean Aspiration Scores</i>	<i>D Scores</i>	<i>Initial Estimates</i>
Intellectual	30.41	-.62	30.40
Social	30.92	-.08	30.30
Motor	31.32	.32	27.00

Conventional "t" tests appropriate to the experimental design were run and results are shown in Table 3.

**Table 3**  
Tests of Significance ("t" tests) of Differences between Mean Aspiration Level and D Scores in Three Areas of Endeavor

<i>Task</i>	<i>Mean Aspiration Scores</i>	<i>D Scores</i>
Intellectual-Social	2.16*	1.59
Intellectual-Motor	2.65*	1.67
Social-Motor	1.36	.63

\*\*Significant at the 1% level.

\*Significant at the 5% level.

## DISCUSSION

Examination of Table 1 reveals that most of the correlation of the aspiration scores and D scores are significantly above zero. The correlation of the initial estimates are quite low. It is apparent that the correlation between intellectual and social tasks are higher than between social and motor or intellectual and motor. These correlations imply some relationship between aspiration in the three fields. However, it should be remembered that the experimental cards were stacked in favor of high generality by using similar score scales and learning curves and doing the testing in one session. Even so, the accuracy of predicting aspiration level in one sphere from another with correlation of such magnitude would be low.

It is also apparent that while some relationship between aspiration level may exist, the overall level of such aspiration may be quite different in various areas of endeavor. The "t" values in Table 3 seem to indicate this. For this college group aspiration in the intellectual area appears to be lower than in the social or motor spheres and the D scores for the motor and social areas are predominantly positive (higher than the preceding performance score). Further analysis revealed a number of significant differences between the percent of plus, minus and zero D scores between the tasks in the motor, social and intellectual areas.

To the authors these findings suggest the need for caution in dealing with level of aspiration and especially in comparing aspiration level of population sub-groups with the general population.

First, most studies of aspiration level have used motor tasks because they are objectively measurable and quite reliable, easily understood and can be performed by most anyone. It is observed in this investigation, however, that the correlations of the motor task with the social and intellectual tasks are considerably lower than the correlations of social and intellectual tasks. For example, only about ten per cent of the variance of the social or motor aspiration measure is predictable from the other.

Secondly, many studies have compared various population sub-groups with control groups to determine if these groups have higher or lower aspiration levels than the general population. Bowman (1), Kyle (6) and Miller (7) for example, have concluded that schizophrenic patients have higher aspiration levels than control groups of normals. These conclusions were based on such tasks as rolling a ball down a notched runway or rolling a ball into numbered holes in a target. In such studies the instructions have been uniformly vague as to what was being measured. The authors have been properly cautious concerning the possibility of generalizing from a sample, but have paid little attention to

the problem of generalizing from this particular measure of aspiration. It is quite possible that the schizophrenic subjects were higher on a level of aspiration rather than *the* level of aspiration. One wonders how the schizophrenic patients would have compared had the task been labeled as a motor task. Or more importantly, how would they have compared with the control group in reference to aspiration in social or intellectual areas? Or even, how does the schizophrenic compare in aspiration in social, motor and intellectual areas?

A somewhat different approach to the study of aspiration level is suggested. First, it is suggested that the area of endeavor be specified and that the tasks possess face validity. Secondly, that several different areas be tapped rather than just one, especially when comparing population sub-groups. Thirdly, that if several spheres of aspiration are measured that uniform scoring methods be used to make possible comparison of actual level of aspiration, not mere association of aspiration level. It is felt that patterns of aspiration level in different areas for different groups might be found which might give a clue as to dynamics as well as serving as a possible diagnostic tool.

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