Examination of Selection Criteria for a Program in Occupational Therapy

Barbara W. Posthuma

The purpose of this study was to determine if the results of preselection interviews in combination with preselection academic performance offer better predictions of academic performance in occupational therapy than either of these criteria taken singly. The sample consisted of 48 high school students and 31 university students admitted to the program in occupational therapy at the University of Western Ontario from 1978 to 1980. The results indicated that for university students, previous academic performance alone was the best predictor for their performance in first-year occupational therapy. For high school students, the combination of 5 of the 12 interview items with previous academic performance produced the best predictor of successful academic performance in occupational therapy. This implies that for high school students at least, the interview and previous academic performance should both be considered as important selection criteria.

Over the last decade, prospective university students have shown an increased interest in the areas of health care (1), including the field of occupational therapy (2). With more students making application for the same number of positions in occupational therapy programs, a greater emphasis is placed on the selection process. Presumably, the purpose of this process is to choose the individuals who will succeed academically and subsequently perform well as professionals. The problem is determining the most valid criteria on which to base the selection.

Johnson, Arbes, and Thompson (3) surveyed all American undergraduate occupational therapy programs to identify the various admission procedures. Of the 37 schools that responded, 34 used an interview, 29 used academic performance, and the rest used aptitude or achievement tests, letters of reference, or written application materials. Although this survey indicates that the interview is the selection procedure used most often, it remains a controversial criterion (4).

Contributing to the controversy are the varied opinions as to what exactly is being measured by the interview. Addressing this issue, Chaisson (1) discusses a study by Rockwell, which showed that in an interview process, nonaccepted medical students rated lower on an empathy scale than did accepted students.

Other studies, such as one conducted by occupational therapy faculty at the University of Washington, were designed to use the interview to investigate a student's "appearance, speech, general impressions, most and least impressive characteristics ... areas of greatest strength" (2, p 92). Posthuma (5) and Blaisdell and Gordon (6) emphasized how important it is that therapists be skilled in interpersonal communication, and the latter speculated that the interview makes it possible to assess such skills. Communication skills were also mentioned by Trotter and Fordyce (7), along with "poise and appearance" as characteristics eva-

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Blaisdell and Gordon (6) attempted to develop a mathematical model that could be used to select students for any undergraduate occupational therapy program. From 33 independent variables, these researchers selected 7 objective measures (e.g., previous grades, family history, work history, and social history). However, the researchers still included the personal interview, stating that it was "a critical part of the model" (p 227).

Virtually nothing was found in the literature to indicate that the interview has value as a predictor of academic performance in any of the health professions. Several authors (9-11) noted that the best predictor of undergraduate academic performance is a student's academic performance before admission.

The present study examined the relationship between preselection interview performance and the undergraduate performance of occupational therapy students. The specific objective was to determine if the interview results, when combined with previous academic performance results, improved the prediction of student's performances in the undergraduate occupational therapy program.

**Methodology**

**Subjects**

The sample consisted of 78 females and 1 male, who were admitted to the program in occupational therapy at the University of Western Ontario from 1978 to 1980. An additional 15 subjects were excluded from this study because of incomplete information in their files. Forty-eight subjects entered the program directly from Ontario secondary school grade 13; the remaining 31 had completed one to four years of university work.

**Measures**

An interview rating scale devised by the occupational therapy program of the University of Western Ontario consists of 12 items (see Table 2) and has a total possible score of 120 points. Examples of interview items and their definitions are a) initiative (the ability to be a self-starter) and b) commitment (an informed and positive attitude toward the profession). No established criteria are used for each item. Rather, the interviewers are expected to pose questions to elicit information on which they can evaluate the trait represented by the item. Face validity is suggested. Interrater reliability is addressed by checking the results of the two interview scores. If a discrepancy of ten points or more is evident, the student receives a second interview by another faculty member. The results of this interview are combined with the closest individual results from the first set of interviews to form the student's final score. A strong interrater reliability (N = 90) was established (r = .83, p < .001) for total interview scores.

**Procedure**

The admission of students into the occupational therapy program at the University of Western Ontario is determined on the basis of two selection criteria: a) academic performance at high school or university level and b) interview performance. Academic standards for admission are established by a university admissions committee for both high school and university students. All students who meet these criteria are invited for half-hour interviews, which are conducted by teams consisting of one faculty member and one occupational therapy clinician. The two total interview scores are averaged, and then the averages among applicants are rank ordered. The resulting score determines the order in which students are admitted to the program, regardless of their previous academic averages.

For this student, each student's two total interview scores were averaged and the two scores on each of the 12 items were averaged. Only these 13 averaged scores were used throughout the study.

**Statistical Analysis**

Because different academic admission criteria are set by the admissions committee for university students and for high school students, previous academic performance (PAP) cannot be considered to be comparable. Therefore, for the purposes of analysis and comparison, two separate sample populations were established. One sample population consisted of students admitted directly from high school and the other of students admitted following some university education.

Selected Pearson correlation coefficients were computed among interview totals, interview items, most recent previous academic grades, and the student's academic performance in each of the first three years in the occupational therapy program (OT I, II, III).

Forward stepwise multiple regression analyses were also undertaken to determine the proportion of variance in OT I that could be accounted for by interview scores and PAP.
Results

Means and standard deviations of PAP and interview scores for both the high school students and university students are shown in Table 1. As expected, the means are quite high and the range is narrow for both samples on both variables. Students with low academic grades are not invited for interviews. Students with low interview scores are not offered a place in the program.

High School Students

For high school students, the selected correlation coefficients between PAP, interview total, interview item scores, and OT I are shown in Table 2. Of the several correlations that were significant, none were very strong; they ranged from $r = .26$ to $r = .40$ (PAP and problem solving). The correlation between PAP and OT I was significant but weak ($r = .33, p < .05$) as was the correlation between problem solving and OT I ($r = .35, p < .01$). A very low and insignificant correlation ($r = .16$) existed between total interview and OT I.

Correlation coefficients among OT I, II, and III provided a yardstick against which to compare the results of a multiple regression analysis. As the results in Table 2 demonstrate, these correlations were moderately strong and consistent with expectations.

A forward stepwise multiple regression analysis was performed, with PAP and total interview scores as independent variables and OT I as the dependent variable. The addition of total interview to PAP changed the multiple correlation coefficient ($R$) only slightly, and both items together accounted for only 11% ($R^2$) of the variance in OT I performance.

When individual interview items and PAP were entered as the independent variables in multiple regression analysis, a combination of five interview items and PAP did substantially improve the prediction of OT I (see Table 3). Problem solving entered first, followed by three other interview items, PAP, and sensitivity. These factors accounted for 50% of the variability in OT I and surpassed the simple correlations among OT I, II, and III (see Table 2). $R$ was only slightly less when adjusted for the number of predictors and observations (adjusted $R = .66$ for 6 predictors). As can be seen from the beta weights in Table 3, the best relative predictors of OT I were problem solving, adaptability, and commitment. The latter two acquire negative beta weights in the multiple regression analysis.

University Students

For university students, selected Pearson correlation coefficients between PAP, interview scores, and OT I are shown in Table 4. Some significant correlations existed, but again they were not very strong, ranging from $r = .32 (p < .05)$ to $r = .47 (p < .01)$. This latter and highly significant correlation was between PAP and OT I. The second strongest correlation was between self-confidence and OT I ($r = .43, p < .01$). Negative correlations resulted between most interview item scores and OT I, although many were very weak and only three were significant. The correlation between the total interview score and OT I did not approach significance.

Pearson correlation coefficients for OT I, II, and III are shown in Table 4 and are of approximately the same order as those observed for high school students.

### Table 1

Means and Standard Deviations of PAP and Interview Scores

<table>
<thead>
<tr>
<th>Selection criteria</th>
<th>Mean</th>
<th>SD</th>
<th>N</th>
<th>Range</th>
<th>Selection criteria</th>
<th>Mean</th>
<th>SD</th>
<th>N</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>PAP interview</td>
<td>82.2</td>
<td>3.4</td>
<td>51</td>
<td>70–93</td>
<td>PAP interview</td>
<td>75.1</td>
<td>4.1</td>
<td>33</td>
<td>65–82</td>
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<tr>
<td>University Students</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>University Students</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

PAP, previous academic performance.

### Table 2

High School Students: Correlations Between Interview Total, Item Scores, PAP, and OT I, II, and III

| PAP   | OT I | OT II | OT III | Total | Maturity | Adaptability | Self-Confidence | Sensitivity | Initiative | Creativity | Leadership | Commitment | Social Awareness | Articulateness | Nonjudgmental | Problem Solving |
|-------|------|-------|--------|-------|----------|--------------|----------------|-------------|------------|------------|------------|-------------|-------------|------------------|----------------|---------------|-----------------|
| 1.00  | 0.33 | .65†  | .63†   | .22   | .19      | .28*         | .19            | .11         | .12        | .14        | .12         | .34†        | .18          | .09              | .21            | .35†          | .40†            |
| OT I  | 1.00 |       | .63†   | .16   | .06      | .00          | .26*           | .14         | .20        | .09        | .15         | .00         | .18          | .21              | .03            | .35†          |                 |
| OT II | 1.00 |       |        | .14   | .20      | .09          |                | .15         |            |            |            |            |             |                  |                |               |                 |

PAP, previous academic performance; OT I, II, and III, the first three years, respectively, in occupational therapy. $n = 49$. * < .05. † < .01.
A forward stepwise multiple regression analysis was performed, entering total interview scores and PAP as the independent variables. The addition of the total interview score to PAP did not add significantly to \( R \), changing it from .46 to .49. Thus, only 24% of the variance in \( OT\ I \) could be accounted for by these two variables.

With the 12 interview items and PAP as independent variables, PAP entered first, followed by self-confidence, with its simple negative correlation (see Table 5). The remainder of the variables did not add significantly to these two. The adjusted \( R \) changed from .46 to .57, accounting for 33% of the variability in \( OT\ I \). This change in \( R \) was smaller than the change noted in high school students and did not surpass the moderate correlations between \( OT\ I, II, \) and \( III \). The adjusted \( R \) was .53 for these two predictors. As can be seen from the beta weights, PAP was the better predictor. The beta weight for self-confidence remained negative, as was its simple correlation with \( OT\ I \).

### Discussion

The results of this study point to some components of the interview as being beneficial tools in the selection of prospective occupational therapy students, particularly those students entering the program directly from high school.

For high school students, none of the variables (interview items, interview total, PAP) considered singly, nor the latter two in combination, could be described as good predictors of \( OT\ I \) performance. However, the combination of five interview items (problem solving, adaptability, commitment, self-confidence, and sensitivity) in addition to significantly improved prediction to the point of surpassing correlations among \( OT\ I, II, \) and \( III \). Forty-three percent (adjusted \( R^2 \)) of the variability in \( OT\ I \) could be accounted for by this combination. This suggests that for high school students, rather than considering previous grades singly or in combination with total interview scores, individual interview items should be looked at more closely in combination with PAP. Of the above identified interview items, problem solving appears to be a trait that would facilitate academic performance in a university setting. Therefore, it is logical for problem solving to be a strong positive predictor. The other two strong predictors, adaptability and commitment, are negative. Although committed individuals would be expected to apply themselves to their studies, the possibility must be considered that the degree of commitment can easily be disguised in an interview and can also change dramatically after an individual has entered the program. Adaptability, although a desirable trait in a clinician, may not be a prerequisite for academic success. In contrast, imposing structure and limiting the degree of change in one’s environment are perhaps traits that are more conducive to better study habits and academic achievement.

A further point to be considered with this sample is that high schools and school boards tend to vary in their academic standards; hence PAP records may not be reliable or comparable across schools. This may be reflected in the weak correlation between PAP and \( OT\ I \) for high school students.

For university students, it ap-

### Table 3
Regression of \( OT\ I \) Performance on Interview Item Scores and PAP for High School Students

<table>
<thead>
<tr>
<th>Variable Entered</th>
<th>( F )</th>
<th>Multiple ( R )</th>
<th>( R^2 )</th>
<th>Beta Weights</th>
</tr>
</thead>
<tbody>
<tr>
<td>Problem solving</td>
<td>6.5*</td>
<td>.35</td>
<td>.12</td>
<td>.69*</td>
</tr>
<tr>
<td>Adaptability</td>
<td>9.1†</td>
<td>.52</td>
<td>.27</td>
<td>-.11†</td>
</tr>
<tr>
<td>Commitment</td>
<td>3.1†</td>
<td>.56</td>
<td>.31</td>
<td>-.15†</td>
</tr>
<tr>
<td>Self-confidence</td>
<td>3.7†</td>
<td>.81</td>
<td>.37</td>
<td>.33*</td>
</tr>
<tr>
<td>PAP</td>
<td>5.2*</td>
<td>.66</td>
<td>.44</td>
<td>.35†</td>
</tr>
<tr>
<td>Sensitivity</td>
<td>5.6*</td>
<td>.71</td>
<td>.50</td>
<td>.40*</td>
</tr>
</tbody>
</table>

PAP, previous academic performance. \( N = 48 \). Further entries adding \( R^2 \) change of less than .05 are not included. * \( p < .05 \). † \( p < .01 \).

### Table 4
University Students: Correlations Between Interview Total, Item Scores, PAP, and \( OT\ I, II, \) and \( III \)

<table>
<thead>
<tr>
<th>PAP</th>
<th>( I )</th>
<th>( OT\ II )</th>
<th>( III )</th>
<th>Matuity</th>
<th>Adaptability</th>
<th>Self-Confidence</th>
<th>Sensitivity</th>
<th>Initiative</th>
<th>Creativity</th>
<th>Leadership</th>
<th>Commitment</th>
<th>Social Awareness</th>
<th>Articulation</th>
<th>Non-Judgmental</th>
<th>Problem Solving</th>
</tr>
</thead>
<tbody>
<tr>
<td>PAP</td>
<td>1.00</td>
<td>.47†</td>
<td>.18</td>
<td>.32*</td>
<td>.23</td>
<td>-.03</td>
<td>-.01</td>
<td>.22</td>
<td>.11</td>
<td>-.06</td>
<td>.19</td>
<td>-.13</td>
<td>.23</td>
<td>-.06</td>
<td>.20</td>
</tr>
<tr>
<td>OT I</td>
<td>1.00</td>
<td>.63†</td>
<td>.35</td>
<td>.32*</td>
<td>.23</td>
<td>-.03</td>
<td>-.01</td>
<td>.22</td>
<td>.11</td>
<td>-.06</td>
<td>.19</td>
<td>-.13</td>
<td>.23</td>
<td>-.06</td>
<td>.20</td>
</tr>
<tr>
<td>OT II</td>
<td>1.00</td>
<td>.75†</td>
<td>.18</td>
<td>.32*</td>
<td>.23</td>
<td>-.03</td>
<td>-.01</td>
<td>.22</td>
<td>.11</td>
<td>-.06</td>
<td>.19</td>
<td>-.13</td>
<td>.23</td>
<td>-.06</td>
<td>.20</td>
</tr>
</tbody>
</table>

PAP, previous academic performance. \( N = 30 \). * \( p < .05 \). † \( p < .01 \).
It is interesting and perhaps surprising to find a few negative, but significant, simple correlations between OT I and self-confidence. Those who appear very self-assured do not apply themselves to their academic abilities. Those who have already demonstrated strong performance in their high school academic standards, interviews appear to play an important role in equalizing discrepancies.

**Conclusion**

This study indicates that in conjunction with evaluating an applicant's previous academic performance, an attempt should be made to structure an interview process that focuses on assessing, more specifically, problem solving, adaptability, commitment, self-confidence, and sensitivity. This appears to be particularly important in the screening of high school student applicants.

It is recommended that a study be conducted on students who meet the academic admission criteria, experience the interview and then are randomly accepted into the program. This selection procedure would result in a more heterogeneous sample and might demonstrate strongly the usefulness of the interview as a screening device.

Finally, interview results may plan an even more viable role as a predictor of clinical performance. As tools for measuring students' clinical performance become more sophisticated, the relationship between a student's interview scores and his or her clinical performance should be examined.

**ACKNOWLEDGMENTS**

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**REFERENCES**


**Table 5**

Regression of OT I Performance on Interview Item Scores and PAP for University Students

<table>
<thead>
<tr>
<th>Variable Entered</th>
<th>F</th>
<th>Multiple R</th>
<th>R²</th>
<th>Beta Weights</th>
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</thead>
<tbody>
<tr>
<td>PAP</td>
<td>6.20†</td>
<td>.46</td>
<td>.22</td>
<td>.43†</td>
</tr>
<tr>
<td>Self-confidence</td>
<td>4.9*</td>
<td>.57</td>
<td>.33</td>
<td>-34*</td>
</tr>
</tbody>
</table>

PAP, previous academic performance. N = 31. Further entries adding R² change of .05 or less are not included. *< .05. † < .01.