Fieldwork Performance, Academic Grades, and Pre-selection Criteria of Occupational Therapy Students

(admission criteria, FWPR, occupational therapy curriculum, professional education, educational outcomes)

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To assess the relationship between pre-selection criteria, academic grades, and fieldwork performance, 45 basic master's occupational therapy students who graduated from New York University between October 1974 and October 1977 were selected. The students' undergraduate and occupational therapy records were reviewed for undergraduate grade point averages (GPA), prerequisites, major, occupational therapy grades, and Field Work Performance Report scores (FWPR). The results indicated that undergraduate GPA and occupational therapy GPA correlated with both psychosocial dysfunction and physical disability FWPR scores. However, a student's participation in a Fieldwork I experience was unrelated to the score received on the FWPR for a Fieldwork II experience. Discussion also focused on the limited usefulness of the FWPR as an evaluative tool since the mean scores were very high and its variability was rather low.

As an emerging profession, occupational therapy has continued to be concerned with the economical use of faculty and students' time in preparing students as practitioners. Occupational therapy educational programs must also be concerned with accepting only the most qualified students. The present number of applicants to both the baccalaureate and basic master's programs is far greater than the academic programs are prepared to educate. Thus the profession must select with care those who will be future peers and leaders. Johnson, Arbes, and Thompson (1) documented that little research has been completed in this area (see also Blaisdell and Gordon, 2). Johnson, Arbes, and Thompson (1) also identified a relationship between academic grades and fieldwork performance. Studies in this area may provide a further clarification of course content, and the determination of whether the knowledge and skills gained and measured through academic study are different from those acquired through participation in fieldwork.

In one of the earliest studies that examined the relationship between academic and fieldwork performance, Englehart (3) found that biology courses in an occupational therapy curriculum correlated with psychiatric fieldwork and combined fieldwork scores. No other significant correlations were reported between academic and fieldwork performance. Since she did not define the courses in each category, it is difficult to interpret her results.

More recently, Ford (4) used baccalaureate student records to examine the relationship between grade point averages of selected college courses and performance on the...
student's physical disability Fieldwork II experience. This was one of the few studies that used the new Fieldwork Performance Report (FWPR). A significant relationship (using chi-squares) between neurology and the physical disability FWPR was found. As Fod points out, her study was limited by using only "letter grade(s), in the selected courses and the internship" (4, p 234). Thus much information regarding the relationship between these two variables may have been lost.

Another question that must be raised in regard to occupational therapy education concerns Fieldwork I. A survey of the literature showed no published research in this area. Given the limited fieldwork placements available in most parts of the country, the question of whether a Fieldwork I experience influences a student's ability to successfully participate in Fieldwork II seemed appropriate.

Educators are also concerned with the importance of early undergraduate education and its relationship to basic professional programs. Anderson and Jantzen (5) reported no significant relationship between liberal arts courses taken during the first two years of baccalaureate study and fieldwork performance for undergraduate students. Thus the question becomes more specific: does the satisfactory completion of prerequisites influence academic grades in professional courses?

Lucchi's (6) survey of 73 recent graduates from 8 basic master's programs found that a "preponderance" of graduates had received their baccalaureate degree "in psychology, followed by biology and education" (6, p 294). However, she did not report any relationship between the undergraduate major and success in a basic master's program. Her study raises a two-part question: In selecting students, should undergraduate major be taken into consideration? In advising undergraduate students who eventually wish to enter a basic master's program in occupational therapy, should one suggest a particular major?

A final area needing investigation was whether there were differences between students who completed their occupational therapy education on a part-time basis and those completing theirs on a full-time basis. No previous research has been conducted relative to this question, which becomes increasingly important as a greater number of students request entry to basic master's programs as part-time students. Eventually, it must be determined whether there will be any difference in an individual's future contribution to the profession and his or her participation in basic professional education as a full-time, as opposed to a part-time, student.

Many questions have been raised about pre-selection variables and their relationship to fieldwork performance and academic grades. The purpose of this study was to investigate the relationships between: 1. academic and fieldwork performance; 2. Fieldwork I and Fieldwork II performance; 3. New York University's prerequisite courses and fieldwork performance; 4. undergraduate major fieldwork performance; and 5. differences in performances between full- and part-time students. The study does not evaluate the validity of either the FWPR (cf. 7), nor the use of grades as predictors of success.

Method

Subjects. All basic master's students who entered New York University's occupational therapy program between September 1972 and September 1975, who were evaluated by the FWPRs, and who completed a majority of their occupational therapy courses at NYU, were included in this study. Approximately 55 percent graduated in October 1977, while the others graduated between October 1974 and October 1977. There were 45 women and 6 men in this group. Data analysis by sex revealed male-female differences in their overall undergraduate grade point average. Because of this finding and the small number of men, further data analyses were performed only on the grades and scores of the 45 women. Sixty-nine (69) percent of the students received their undergraduate degree in colleges and universities in New York, New Jersey, or Connecticut. Finally, there were 20 students who majored in the social sciences, 7 in education, 7 in art, 5 in English, 4 in the biological sciences, and 2 in other areas. Table 1 gives additional descriptive information about this group.

Procedure. Undergraduate transcripts of all the subjects were obtained. Each undergraduate course was assigned to one of the following content areas: biology, chemistry, social sciences, English, math, arts, and others. Credits and grades for each course were recorded. GPA in each area of study and overall GPA were computed. Courses in which students received a pass were not included in the GPA. If a student received an "F" in a course and then later made up the course with a passing grade, both grades were included in the GPA. This procedure more accurately portrays an individual's academic ability. Finally, prerequisites for the NYU program were recorded separately.
These included one semester of biology with a lab, one semester of chemistry with a lab, an introductory psychology course, an abnormal psychology course and introductory sociology. In recording the grades in these prerequisites, no distinction was made between courses taken during the individual's undergraduate career or after receiving the baccalaureate degree. Although transcripts were checked carefully, some students may have taken prerequisites that were not recorded in their official files.

Course credits were computed on a semester basis for all completed courses. If an individual's undergraduate institution was on a quarter system, the quarter hours were multiplied by two-thirds. Grades were recorded on a four-point scale and all pluses and minuses were excluded in the GPA. No attempts were made to control for the different number of courses that determined the GPAs in the various content areas. Finally, only those courses recognized by the college or university from which the individual graduated were used in determining the GPAs.

GPAs in NYU's Occupational Therapy curriculum were computed in a similar manner. In general, all students followed the same curriculum and thus took the same courses. However, because of periodic curriculum revisions, some students did not take all of the currently required courses. The most frequent courses not taken were Fieldwork I in psychosocial dysfunction and in physical disabilities. Thus the GPAs in the occupational therapy curriculum were not always based on the same number of courses. Table 2 indicates the name of the courses that made up the occupational therapy overall grade point average (OTGPA); the occupational therapy courses related to psychosocial dysfunction (OTPSYGPA); and the occupational therapy courses related to physical disabilities (OTPDGPA).

The FWPRs were scored according to the American Occupational Therapy Association Scorers Guide, thus excluding item 49. No attempts were made to differentiate the types of setting, that is, inpatient, outpatient, home treatment, or school, within either the psychosocial or physical disabilities fieldwork.

Other demographic data were recorded from the undergraduate transcript, such as date of birth, sex, and undergraduate major. If major was not indicated on the transcript, it was determined by the content area in which the student had the most credits.

Results
Table 3 presents the Pearson product moment correlation coefficients of the various grade point averages (GPA) and the FWPR in psychosocial dysfunction and physical disabilities. Significant correlations were found between undergraduate GPA, OTGPA, OTPDGPA, and OTPSYGPA. The psychosocial FWPR did not correlate with the physical disability FWPR. It was also found that OTGPA as well as OTPDGPA were significantly correlated to both fieldwork experiences.

Table 4 presents the Pearson product moment correlation coefficient of the grades in each course in the occupational therapy curriculum and the FWPR in psychosocial dysfunction (PSYFWPR) and in physical disabilities (PDFWPR). From this Table, it is clear that approximately one third of these courses correlated significantly with either PSYFWPR or PDFWPR.

A t-test comparing those students who had Fieldwork I in either psychosocial dysfunction (N = 26) or physical disabilities (N = 28) with those who did not have Fieldwork I experience [psychosocial dysfunction (N = 19); physical disabilities (N = 17)] revealed no significant differences on any of the FWPRs.

Additional t-tests comparing students who had taken biology and chemistry prerequisites with those who did not take these prerequisites showed no differences in OTPSYGPA, OTPDGPA, and OTPGPA. Analysis of data of those who had taken introductory psy-
chology and/or introductory sociology with those who had not had these prerequisites indicated no differences in OTGPA, OTPSYGPA or in PSYFWPR.

Significant differences were found, however, with regard to having ($N = 29$) or not having ($N = 16$) taken an abnormal psychology course ($t = -2.26, df = 17, p < .05$). The mean for those with a prerequisite in abnormal psychology was 203, while those without a prerequisite in abnormal psychology was 191.7.

In examining the relationship between undergraduate major and fieldwork (in the area of psychosocial dysfunction and physical disabilities), the social science majors scored higher on psychosocial Fieldwork II than individuals who majored in any other field, although these differences were not significant.

The only difference found between part-time and full-time students was that full-time students had higher undergraduate GPAs than did part-time students ($t = 2.38, df = 43, p < .05$). The full-time students ($N = 58$) had a mean undergraduate GPA of 3.03 while the part-time students ($N = 7$) had a mean of 2.66.

**Discussion**

The finding that occupational therapy GPA correlated significantly with scores received in both fieldwork experiences was an expected result (cf 8). Occupational therapy basic professional education was on the whole designed to assist students to acquire the knowledge, skills, and attitudes necessary for competent practice in a clinical setting. The first demonstration of such competence occurs in the fieldwork setting. This finding, at least for the basic master's curriculum at NYU, indicated that course work related to the development of those behaviors which are evaluated in the FWPR.

Since these correlations were in the middle range, it is possible that there were some differences in the behaviors evaluated through paper and pencil testing. This allows students to receive feedback based upon two very different evaluation procedures. It was apparent, nevertheless, that the behaviors assessed in fieldwork and in the classroom were derived from a grouping or cluster of behaviors that had many common elements.

The positive correlation between grades in courses directly related to intervention in the area of physical disabilities (OTPDGA) and fieldwork in this area was not surprising. This contrasts with Englehart (3) who found no relationship between biology courses and fieldwork in the area of physical disabilities (i.e., orthopedics, tuberculosis, or pediatrics). The findings of this study and that of Englehart were impossible to compare because, as noted, Englehart did not identify the courses that made up the category of “biology” in her study.

The positive correlation between physical disabilities GPA and scores received at the completion of a fieldwork experience in psychoso-
Table 3
Grade Point Averages and Fieldwork Performance Reports Correlation Coefficients for Female Basic Master’s Students (N = 44)

<table>
<thead>
<tr>
<th>UNDERGPA</th>
<th>OTGPA</th>
<th>OTPSYGPA</th>
<th>OTPDGPA</th>
<th>PSYWPR</th>
<th>PDFWPR</th>
</tr>
</thead>
<tbody>
<tr>
<td>UNDERGPA</td>
<td>—</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>OTGPA</td>
<td>.40*</td>
<td>—</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>OTPSYGPA</td>
<td>.20</td>
<td>.69†</td>
<td>—</td>
<td></td>
<td></td>
</tr>
<tr>
<td>OTPDGPA</td>
<td>.36*</td>
<td>.89†</td>
<td>.44†</td>
<td>—</td>
<td></td>
</tr>
<tr>
<td>PSYWPR†</td>
<td>.31†</td>
<td>.36*</td>
<td>.11</td>
<td>.46†</td>
<td>—</td>
</tr>
<tr>
<td>PDFWPR†</td>
<td>.10</td>
<td>.39*</td>
<td>.41*</td>
<td>.41*</td>
<td>.18</td>
</tr>
</tbody>
</table>

*p < .01; † p < .001; ‡ p < .05; § N = 44

Key:
UNDERGPA: Undergraduate Grade Point Average
OTGPA: Occupational Therapy Grade Point Average
OTPSYGPA: Occupational Therapy GPA related to Psychosocial Dysfunction
OTPDGPA: Occupational Therapy GPA related to Physical Disabilities
PSYWPR: Fieldwork Performance Reports in Psychosocial Dysfunction
PDFWPR: Fieldwork Performance Reports in Physical Disabilities

Psychosocial dysfunction was somewhat surprising. Englehart reported the same finding but formulated no hypothesis. In this study it appears that physical disabilities GPAs discriminate between students more finely than the GPAs in the courses specifically related to psychosocial dysfunction. The distribution of grades in psychosocial dysfunction courses tended to cluster at the higher end of the continuum. The criteria used for determining grades in physical disabilities courses tend to be more objective than the criteria used in courses related to psychosocial dysfunction.

Also, there were 11 physical disabilities courses and 6 psychosocial dysfunction courses. More objective evaluation procedures may identify the differences between excellent, good, and poor neophyte therapists far better than less objective evaluation procedures. If such is the case, a student’s GPA in the physical disabilities courses may well be an indication of the individual’s ability to perform in all fieldwork settings.

Table 3 shows that the GPA of students in courses related to psychosocial dysfunction correlates positively with scores received on the FWPRs in the area of physical disabilities, but does not correlate with the FWPRs in the area of psychosocial dysfunction.

This finding was not expected and was difficult to interpret. It was possible that courses related to psychosocial dysfunction simply have no relationship to the student’s performance in a psychosocial dysfunction fieldwork experience. On the other hand, the grade point average in psychosocial dysfunction fieldwork courses may be closely related to a student’s ability to deal with the psychosocial aspects of physical disabilities.

This study found that the mean score in FWPRs in the area of psychosocial dysfunction was 199 out of a possible score of 212 (SD = 13.499). Thus, there was little discrimination relative to students’ performance. With such small variability, it is, at present, difficult to make any knowledgeable use of a FWPR score in psychosocial dysfunction as a criterion for assessment of psychosocial dysfunction courses.

As is apparent in Table 3, undergraduate grade point average (UNDERGPA) correlated positively with grade point average in the basic master’s occupational therapy program (OTGPA). This was an expected finding. That UNDERGPA correlated positively with OTPDGPA and not OTPSYGPA may be explained due to the finer discrimination available in the courses related to physical disabilities than in occupational therapy courses in the area of psychosocial dysfunction.

Table 4 indicates that many individual courses in the occupational therapy curriculum at NYU correlate significantly with both the psychosocial dysfunction fieldwork (PSYWPR) and the physical disabilities fieldwork (PDFWPR). One pattern easily seen was that courses in the psychosocial dysfunction area correlated with PDFWPR but not with PSYWPR. The other significant correlations were derived from those physical disabilities courses that lend themselves to objective evaluations and thus were able to discriminate among students. These courses correlated with both PSYWPR and PDFWPR. The only other study that had investigated individual occupational therapy courses and the FWPR was Ford’s recent study (4). Among transfer students she found that only anatomy correlated significantly with a physical disabilities fieldwork. This was in contrast to our findings, since we found anatomy to correlate significantly with PSYWPR, but not with PDFWPR. Ford (4) also found that neurology was related to physical disabilities fieldwork but this was true only using a chi-square analysis. Thus, it was not comparable to
Table 4
Correlation Coefficients of Occupational Therapy Courses and Fieldwork Performance Reports for Female Basic Master's Students

<table>
<thead>
<tr>
<th>Courses</th>
<th>PSYWPR (N)</th>
<th>PDFWPR (N)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adult Socialization</td>
<td>-0.07</td>
<td>0.25</td>
</tr>
<tr>
<td>Modern Psychiatry</td>
<td>0.14</td>
<td>0.28*</td>
</tr>
<tr>
<td>Activity Group Process I</td>
<td>0.17</td>
<td>0.17</td>
</tr>
<tr>
<td>Activity Group Process II</td>
<td>0.01</td>
<td>0.31*</td>
</tr>
<tr>
<td>Occupational Therapy for Psychosocial Dysfunction</td>
<td>0.14</td>
<td>0.33*</td>
</tr>
<tr>
<td>Biopsychosocial Maturation</td>
<td>0.05</td>
<td>0.16</td>
</tr>
<tr>
<td>Interpretation in Occupational Therapy</td>
<td>-0.09</td>
<td>0.06</td>
</tr>
<tr>
<td>Practicing Occupational Therapist</td>
<td>-0.15</td>
<td>0.19</td>
</tr>
<tr>
<td>Skilled Activities I</td>
<td>0.19</td>
<td>0.29*</td>
</tr>
<tr>
<td>Skilled Activities II</td>
<td>0.06</td>
<td>0.08</td>
</tr>
<tr>
<td>Vocational Explorations</td>
<td>0.00</td>
<td>0.01</td>
</tr>
<tr>
<td>Research in Rehabilitation Education</td>
<td>-0.02</td>
<td>0.08</td>
</tr>
<tr>
<td>Advanced Theory in Occupational Therapy</td>
<td>0.21</td>
<td>0.35</td>
</tr>
<tr>
<td>Anatomy</td>
<td>-0.31*</td>
<td>0.01</td>
</tr>
<tr>
<td>Physiology</td>
<td>0.23</td>
<td>0.12</td>
</tr>
<tr>
<td>Occupational Therapy Evaluative Techniques</td>
<td>0.35*</td>
<td>0.37*</td>
</tr>
<tr>
<td>Neuromuscular Facilitation</td>
<td>0.14</td>
<td>0.24</td>
</tr>
<tr>
<td>Kinesiology</td>
<td>-0.05</td>
<td>0.03</td>
</tr>
<tr>
<td>Medical and Surgical Conditions</td>
<td>-0.39*</td>
<td>0.29</td>
</tr>
<tr>
<td>Orthopedic and Neuromuscular Conditions</td>
<td>0.43*</td>
<td>0.20</td>
</tr>
<tr>
<td>Occupational Therapy for Physically Handicapped I</td>
<td>0.10</td>
<td>0.20</td>
</tr>
<tr>
<td>Occupational Therapy for Physically Handicapped II</td>
<td>0.37*</td>
<td>0.33*</td>
</tr>
<tr>
<td>Functional Aids and Adaptive Equipment</td>
<td>0.32*</td>
<td>0.34*</td>
</tr>
</tbody>
</table>

* p < .05; † p < .01

our study. The large discrepancy between our results and those of Ford (4) underscore the importance of additional research with larger samples to discover the relationships between occupational therapy courses and fieldwork performance. Research in this area and the identification of the relationship between occupational therapy courses and fieldwork performance will enable better planning of curricula in occupational therapy.

In examining the relationship between Fieldwork I and Fieldwork II, scores received in Fieldwork II, in either psychosocial dysfunction or physical disabilities, were unrelated to whether a student did or did not participate in a Fieldwork I experience. At face value, this finding indicates that Fieldwork I experiences did not affect a student's ability to function in a Fieldwork II placement. It was possible, however, that students who were not involved in Fieldwork I experiences may have had more difficulty initially in adjusting to and participating in Fieldwork II. A significant amount of learning time may have been lost because of the students' need to orient themselves to the Fieldwork II setting. Study of the learning process in Fieldwork II of students who did not have a Fieldwork I experience as compared to students who did have such an experience may be of assistance in determining the merits and function of a Fieldwork I experience.

If, in future studies, there continue to be no differences on FWPRs between those who have had a Fieldwork I experience and those who have not had this experience, then perhaps Fieldwork I experiences should be deleted from basic master's curricula. Fieldwork I placements are expensive in terms of faculty time, add an extra burden for supervisors in fieldwork settings, and demand considerable time and energy on the part of the student. Deletion of Fieldwork I is not compatible either with the Essentials for an Accredited Program in Occupational Therapy or with the current philosophy in higher education. However, educators must look at reality and not be guided by past practices.

This study also attempted to determine the effects of having or not having prerequisites on occupational therapy grades and fieldwork scores. With the limitation noted earlier regarding prerequisites, the data gathered from this research project indicated that completing prerequisites had no influence either on grades in course work or performance in Fieldwork II experiences. The exception was that a course in abnormal psychology differentiated between students' scores on the FWPR in psychosocial dysfunction.

Basic master's programs require, in general, a number of prerequisites. Taking prerequisite courses is expensive for students and may delay entrance into a basic master's program if prerequisites are not a part of a student's undergraduate course of study. If successful completion of prerequisites had little influence on a student's GPA in an occupational therapy program or scores on the FWPR, it is questionable whether prerequisites were necessary for basic master's students. Anderson and Jantzen's study (5) indicated that there was no significant relationship between selected
liberal arts courses taken by baccalaureate students with a major in occupational therapy and fieldwork performance. This study essentially arrived at the same conclusion.

Students with a social science major as undergraduates received higher scores on their FWPR in psychosocial dysfunction than students with undergraduate majors in other areas. However, the difference was not significant. Therefore one can only speculate with regard to this finding. One hypothesis is that individuals who are, as undergraduates, attracted to the social sciences have inherent or learned skills that enhance their ability to assist psychiatric patients to function at their highest possible level.

Nearly one-half of the students included in this study majored in social sciences at the baccalaureate level. This finding is somewhat congruent with Lucci's report that a "preponderance" of basic master's graduates received their baccalaureate degree in psychology (6). In our study, however, "social science" majors included psychology, sociology, economics, anthropology, politics, social work, and history.

Finally, no difference was found between the occupational therapy GPAs of students who participated in the basic master's program on a part-time basis as compared to a full-time basis. However, students who participated in the program full-time had a higher undergraduate GPA than students who participated in the program part-time. One question raised for future study is whether or not students with a low undergraduate GPA elect to participate in a basic master's course of study on a part-time basis because they feel they are not able to successfully complete the program as full-time students. Two other related questions are: 1. do students in a basic master's course of study on a part-time basis contribute more or less to the profession than students who participate on a full-time basis? 2. do part-time or full-time students eventually have a greater commitment to the profession? Future research is needed to answer these questions.

The above results concerning prerequisites, undergraduate major, and whether students wish to pursue their studies on a part-time or a full-time basis all concern "pre-selection" criteria. This information and undergraduate GPA are available before an individual is accepted into an occupational therapy program. Thus, further research should determine their importance in predicting the successful completion of occupational therapy education.

Since the data for this study were gathered from only one occupational therapy program, a word of caution regarding the generalizability of the results is in order. It was quite possible that the students at New York University were quite homogeneous with regard to background experiences and age. This may have affected the results in unknown ways. Further, although course content should be similar throughout all occupational therapy programs, there is no way to be certain that this is true. Therefore, future research utilizing either a national sample or many regional samples is necessary before firm conclusions can be made.

**Summary**

The purpose of this study was to gather information about the relationship between pre-selection criteria, baccalaureate grades, grades in a basic master's program in occupational therapy, and scores on FWPRs.

The major findings of this study were: Occupational Therapy GPA correlated significantly with FWPR scores in all areas; whether a student participated in a Fieldwork I experience was unrelated to the scores received on the FWPR in the related area; with the exception of a course in abnormal psychology, completing prerequisites was unrelated to grades in academic courses in occupational therapy or Fieldwork II experiences; and the FWPR was limited in its usefulness as an evaluative tool since the mean scores were high and the variability was rather low. Thus it appeared that the FWPR did not differentiate among clinical students in terms of their actual ability.

**Acknowledgment**

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**REFERENCES**