Measuring Knowledge of School-Based Occupational Therapy

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Key Words: pediatrics • professional practice • school based occupational therapy

Objective. The primary purpose of this study was to develop a measure of Knowledge of Occupational Therapy in School settings (KNOTS) for occupational therapy students. A secondary purpose was to develop a scale of Self-Efficacy in School Settings (SESS) for occupational therapy students.

Method. One hundred forty-five university students enrolled in either occupational therapy classes or education classes completed a questionnaire consisting (in part) of the 60-item KNOTS scale and the SESS scale. Analyses of internal reliability, group comparisons, and correlations were computed on the scores.

Results. The reliabilities of the KNOTS (.85) and SESS (.94) were reasonably high. Occupational therapy students performed significantly better than did education students, and senior occupational therapy students scored significantly higher than did juniors on the KNOTS. SESS scores were positively but not significantly correlated with KNOTS scores.

Conclusion. If further investigation provides additional evidence for the reliability and validity of the KNOTS and SESS, both measures have a number of potential practical applications.


An increasing number of occupational therapists are now practicing in schools (American Occupational Therapy Association [AOTA], 1991–1995), and the need for occupational therapists in such settings is likely to continue (Royeen & Furbish, 1996; Whitworth, 1994). School settings now represent one of the largest areas in which occupational therapists are employed nationally (AOTA, 1996). The new Individuals With Disabilities Education Act of 1997 (Public Law 105–17) may add to the demand for occupational therapy services for school-age children, as individual states and local educational agencies interpret its provisions. However, most public school settings provide only limited supervision and minimal clinical support to occupational therapists (Dunn, 1991; Rainville Cermak & Murray 1996). Given the continued demand for their services and the lack of in-service training, occupational therapists practicing in school settings are likely to rely heavily on university educational programs to adequately prepare them for practice within the school-based specialty area. There is no assurance, however, that such academic programs provide adequate preparation for service delivery in school settings (Crowe & Kanny, 1990; Kanny & Crowe, 1991; Powell, 1994).
Knowledge

Other writings in the field support the assertion that pediatric occupational therapy is a growing area of practice that requires a specialized knowledge base in order to meet the educational needs of students (Chandler, 1995; Jaffe & Epstein, 1992; Powell, 1994; Rapport, 1995; Royeen, 1996). However, in spite of the documented need for school-based occupational therapists, university occupational therapy programs are not required to provide a basic pedagogical or pediatric curriculum for accreditation purposes (AOTA, 1991) nor are pediatric fieldwork affiliations a requirement for most degree programs (AOTA, 1988). It therefore appears possible, even likely, that many occupational therapists who will eventually practice in school environments have not been taught about specific issues relevant to school-based practice. This lack of formal preparation could imply that many occupational therapists who work in schools lack a formal knowledge base and, consequently, are unable to adequately serve the children with whom they will be dealing. A first step in discovering whether such knowledge is lacking is to administer a measure of the relevant knowledge base. However, there is as yet no widely accepted test of knowledge pertaining to occupational therapy in school settings. This article reports on an attempt to develop such a scale.

To determine the extent to which occupational therapy students are prepared for practice in the school-based setting and to compare levels of preparation across universities and schools, it is important to establish a standardized knowledge measure. A limited number of beneficial continuing education programs such as AOTA’s self-study series (Case-Smith, 1998; Royeen, 1991–1992; 1992–1993) and a specialty certification in general pediatrics (AOTA, 1992) have attempted to address this need. However, a means of assessing knowledge specific to school-based occupational therapy intervention but separate from these continuing education courses has not been constructed. The primary purpose of this study was to develop a measure of Knowledge of Occupational Therapy in the School setting (KNOTS) for occupational therapy students.

To begin to establish the validity and internal reliability of the KNOTS instrument as a measure of school-based knowledge, several hypotheses were formulated. First, we predicted that the 20 items from the AOTA test would correlate significantly with the researcher-derived items. A second, related prediction was that the internal reliability of the final scale would be reasonably high. Third, we predicted that occupational therapy students would perform better on the measure than students in the college of education at the same university. Fourth, we expected that occupational therapy students who were seniors would score significantly higher than would those who were juniors on the KNOTS test.

Self-Efficacy

Knowledge is only one factor that might be used to evaluate quality of an educational program and of its students. Bush, Powell, and Herzberg (1993) identified career self-efficacy as another means by which to assess the adequacy of professional occupational therapy preparation and thus the delivery of quality occupational therapy services. Bandura (1986) defined self-efficacy as “people’s judgments of their capabilities to organize and execute courses of action required to attain designated types of performances” (p. 391). He suggested that self-efficacy measures must be specific to a particular situation in order to achieve high levels of predictive validity (Bandura, 1997). Research has shown that such focused measures of self-efficacy are able to predict behavioral outcomes that include academic and other achievements (Jost, Kruglanski, & Nelson, 1998; Tschannen-Moran, Hoy, & Hoy, 1998), career choices (Bandura, 1986; Schunk, 1989), and complex decision making (Bandura & Jourden, 1991). The conceptually related construct of specific self-esteem also has been shown to predict behavioral outcomes and to do so better than the more general construct of global self-esteem (Rosenberg, Schooler, Schoenbach, & Rosenberg, 1995).

Bandura (1986, 1997) proposed that self-efficacy beliefs influence people’s choices of professional and other activities; endeavors that are perceived as likely to be successful are pursued, whereas those that are not are avoided. This theory implies that the extent to which an occupational therapy student feels efficacious or competent in a school-based practice setting may affect such subsequent behavioral outcomes as academic effort and performance, choice of setting in which to practice, and even the decision of whether to remain in the school-based practice area of occupational therapy. Relationships between experiences in schools and perceptions of self-efficacy have previously been found for teachers and teacher education students (Hebert, Lee, & Williamson, 1998; Tschannen-Moran et al., 1998), suggesting that they may be found for occupational therapy students as well.

Because self-efficacy beliefs both can affect career performance and be used as a tool for appraising professional preparation (Bush et al., 1993), an instrument for measuring these beliefs as pertaining to occupational therapy in school-based settings could be helpful for university instructors who advise and counsel students. Accordingly, another purpose of our study was to develop a self-efficacy measure that assesses occupational therapy students’ beliefs regarding their competency on tasks associated with practice within the school environment. We named this instrument the Self-Efficacy in School Settings (SESS) scale.

Several hypotheses followed from the construction of this instrument. First, we expected that the SESS measure would have adequate internal consistency. We also predicted that student scores on the SESS instrument would correlate positively with scores on the KNOTS measure. Finally, we expected that self-efficacy beliefs would be higher for occupational therapy students who were seniors than for juniors, for occupational therapy students who had...
completed their Level I fieldwork than for those who had not (Bush et al., 1993), for those occupational therapy students with experience in school settings than for those without (Crowe & Kanny, 1990), and for occupational therapy students who intended to work in the school setting than for those who did not.

Method
Participants
One hundred forty-five University of New Mexico students volunteered to participate in this study. Included in this sample were 18 students recruited from a junior-level occupational therapy class, 20 recruited from a senior-level occupational therapy class, 58 recruited from special education or dual licensure classes, and 49 recruited from general education classes. One student recruited from a special education class did not identify a program of study other than general education. Overall, 48% of the students were seniors and 30% were juniors; the other students ranged from freshmen to non-degree and graduate students. Their ages ranged from 19 to 58 years (M=30.64 years). Additional characteristics of participants are reported in Table 1. Professional experiences and plans of the occupational therapy students are reported in Table 2.

For those participants who were Anglo-American or Hispanic-American (the only ethnic groups with large enough ns for statistical inference), gender and ethnicity were unrelated, \( \chi^2(1, 122) = .04, p > .05 \). However, of those students who were Anglo-American or Hispanic-American, a significantly higher proportion of the occupational therapists (88%) than of the other participants (64%) reported Anglo-American as their ethnicity, \( \chi^2(1, 121) = 6.75, p < .01 \). A significantly higher proportion of the occupational therapists (95%) than of the other participants (79%) were women, \( \chi^2(1, N = 144) = 4.83, p < .05 \). Thus, the occupational therapists in the sample were more likely than the other students to be both Anglo-American and women.

Instrument
The instrument used in this study was an anonymous questionnaire consisting of three major parts:

1. Demographic characteristics
2. Intent and attitudes, including the SESS scale (for occupational therapy students only)
3. The KNOTS

Questions about demographic characteristics dealt with age, gender, ethnicity, educational program, college class level, college degree status, and prior experience in a school setting.

The intent and attitudes portions of the instrument included four questions designed to assess occupational therapy students’ intentions to pursue pediatric fieldwork, independent study, or school-based practice and two questions designed to assess general attitudes toward occupational therapy’s role in the schools and the quality of the school setting as a work environment. Responses to the first questions about future plans were based on a 4-point Likert scale, with item choices ranging from definitely yes to definitely no. Responses to the attitude items were based on a 5-point Likert scale, with item choices ranging from strongly disagree to strongly agree.

**SESS scale.** The SESS scale included six questions designed to measure perceived competency within the specific occupational therapy school-based practice areas of service delivery, decision making, general assessment and intervention capabilities. All items began with “I feel competent,” and responses were measured on a 5-point Likert scale, with item choices ranging from strongly disagree to strongly agree (see Appendix A).

**KNOTS scale.** The third section of the instrument consisted of 60 multiple-choice questions about knowledge of occupational therapy in school settings. The first 40 items were developed by the researchers on the basis of the content areas established by the National Board for Certification in Occupational Therapy (1996) and by needs assessments conducted by Powell (1994) and Royeen and Furbush (1996). Each item was derived from at least two sources (see Appendix B) and had four multiple-choice alternatives. The last 20 questions were originally published in AOTA’s self-study series, including School-Based Practice for Related Services and Classroom Applications for School-

<table>
<thead>
<tr>
<th>Characteristic</th>
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</tr>
<tr>
<td>Male</td>
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<td>17</td>
</tr>
<tr>
<td>Female</td>
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<td>83</td>
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<td>Hispanic-American</td>
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</tr>
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</tr>
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</tr>
<tr>
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<td>46</td>
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</table>

Table 2

<table>
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<th>Professional Experiences and Plans of Occupational Therapy Students</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
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<td>Completed Level I fieldwork in the school setting</td>
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<td></td>
</tr>
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<td>51</td>
</tr>
<tr>
<td>No</td>
<td>18</td>
<td>49</td>
</tr>
<tr>
<td>Intend to complete general pediatric Level II fieldwork</td>
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<td></td>
</tr>
<tr>
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<td>24</td>
<td>65</td>
</tr>
<tr>
<td>No</td>
<td>13</td>
<td>35</td>
</tr>
<tr>
<td>Intend to complete Level II fieldwork in a school setting</td>
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<td></td>
</tr>
<tr>
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<td>14</td>
<td>38</td>
</tr>
<tr>
<td>No</td>
<td>23</td>
<td>62</td>
</tr>
<tr>
<td>Intend to work in the school setting after graduation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>16</td>
<td>43</td>
</tr>
<tr>
<td>No</td>
<td>21</td>
<td>57</td>
</tr>
</tbody>
</table>
Based Practice (Royeen, 1991–1992, 1992–1993). All 20 items had a minimum of four multiple-choice alternatives. These questions were used with permission of the copyright holders.

The questionnaire was accompanied by a cover letter indicating that we were interested in discovering what people think and know about the role of occupational therapists in school settings. It stated that participation was anonymous and voluntary and that respondents who chose to participate were free to stop participating at any time. It also indicated that completing the questionnaire should take approximately 30 min to 40 min and that handing it in meant that participants gave their consent for the researchers to look at their responses and analyze them.

Procedure

Validation of the KNOTS scale. The original questionnaire was reviewed by a panel of five experienced school-based occupational therapists and one university occupational therapy instructor to ascertain content and construct validity of the KNOTS scale and clarity of the entire instrument. The KNOTS measure was revised based on the recommendations and feedback provided by the reviewers. Five questions of the original set of 40 developed by the researchers were replaced by other items, and 9 of the original AOTA questions were replaced with other AOTA questions. Other changes included rewriting the questions to word them in the positive direction and to decrease the length of questions and answers, underlining for emphasis, and providing more concrete examples within the multiple-choice items.

Distribution of questionnaires. After the instructors granted permission, the second author, an occupational therapist who works in a school setting, attended each of seven university classes: one that consisted of junior occupational therapy students, one that consisted of senior occupational therapy students, one general education class, and four special education or dual licensure courses. The second author indicated to each class that we were requesting students to fill out a questionnaire in order to learn what people think and know about the role of occupational therapists in school settings, that participation was anonymous and completely voluntary, that they were free to leave at any time, and that the questionnaire would take approximately 30 min to 40 min to complete. The questionnaire and cover letter were then distributed. Although a few potential participants left the room, most of the students in the classes (at least 90%) remained and completed the questionnaire. In one education class, students were permitted to take the questionnaire home; only three students in that class returned it. All of the students attending the occupational therapy classes responded to the instrument.

Statistical Analyses

Data were analyzed with the Statistical Package for the Social Sciences1 for both the mainframe and the PC. Analyses of variance (ANOVARs) and t-tests were used to compare group means; Cronbach’s alpha was used to measure internal reliability; and Pearson’s product moment correlations were used to measure the correlation between two variables.

Results

Attitudes

A single sample t-test against the neutral point of 3.0 indicated that the occupational therapy students clearly agreed with the statement, “I think the public school setting is a good work environment for an occupational therapist” (M = 4.15, SD = 1.03, t[36] = 6.68, p < .001). However, they were undecided about whether “I think that the occupational therapist’s role in the school setting system is clearly delineated” (M = 3.21, SD = 0.82, t[36] = 1.60, p > .05). One-way ANOVAs revealed no significant differences between occupational therapy students who intended to practice in a school setting and those who did not or between junior and senior occupational therapy students on either measure. However, students who had completed their Level I fieldwork experience (M = 3.47, SD = .90) were significantly more likely to believe that the occupational therapist’s role in a school setting is clear compared with those who had not completed their Level I fieldwork (M = 2.86, SD = .66, F[1, 31] = 4.64, p < .05).

KNOTS Scale

Internal reliability. Cronbach’s alpha was computed for all participants for the total KNOTS scale, the 40 author-constructed items, and the 20 AOTA-constructed items. Cronbach’s alpha was .85 for all 60 items, .73 for the author-constructed items, and .81 for the AOTA items, indicating a reasonably high degree of internal consistency. The AOTA items and the author-constructed items were significantly positively correlated (r = .66, p < .01).

Positive correlations with the total KNOTS score were found for 57 of the 60 questions, with 3 items correlating slightly negatively. Careful review of these items indicated that they did have correctly correct answers and that their deletion would not have appreciably increased the reliability coefficient, so these items were included in all subsequent analyses.

Occupational therapy students versus others. A 2 (occupational therapy vs. other majors) X 2 (gender) X 2 ( Anglo ethnicity vs. Hispanic ethnicity) factorial ANOVA on the 60-item KNOTS measure revealed that occupational therapy students scored significantly higher than all other stu-

1SPSS Inc., 233 Wacker Drive, 11th Floor, Chicago, Illinois 60606-6307.
dents. Neither the main effects for gender and ethnicity nor any of the interactions were significant. The comparisons of KNOTS scores are shown in Table 3.

Subgroups of occupational therapy students. As can be seen in Table 3, a one-way ANOVA indicated that senior occupational therapy students scored significantly higher than junior occupational therapy students on the KNOTS scale, but there were no significant differences between occupational therapy students with prior work experiences in the schools and those without prior work experience or between those occupational therapy students who intended to work in the school setting after graduation and those who did not.

SESS Scale

Internal reliability. Cronbach's alpha for the six-item SESS scale was .94, demonstrating a high degree of internal consistency.

Relationship to KNOTS scale. The SESS scale was correlated positively but not significantly with scores on the KNOTS scale, ($r = .28, p > .05$). Although all of the correlations between specific SESS items and the KNOTS scale were positive, only one of the six items ("I feel competent in my ability to consult with other staff regarding a student's educational needs") was significantly positively correlated with the total KNOTS score ($r = .44, p < .01$).

Class and other variables. Although one-way ANOVA comparisons on the SESS scale did not show significant differences between occupational therapy students based on class level (junior, senior), Level I fieldwork experience (no, yes), prior work experience in the schools (no, yes), or intention to work in the schools after graduation (no, yes), all results were in the predicted direction. Results of these comparisons are reported in Table 4.

Discussion

Given the continued need for occupational therapists in schools, it is welcome news that the occupational therapy students in this study saw the public school setting as a good work environment. Before these students are prepared to work in the schools, however, it is important that their role in the school system is clear, that they have a good knowledge base, and that they have a sense of self-efficacy that they can accomplish their goals in this setting. The fact that only a minority of students believed that the role of an occupational therapist in the schools is clearly delineated suggests that some further clarification of this position may be necessary. Even though students who had completed their Level I fieldwork experience were more likely to believe that their role in the educational setting was clear compared with those who had not done Level I fieldwork, the limited amount of in-service instruction and supervision available to occupational therapists practicing in public schools (Dunn, 1991; Rainville et al., 1996) suggests that this is an area in which further support is needed.

Hypotheses

All of the hypotheses relating to the KNOTS scale were confirmed as well as one of those relating to the SESS scale. As predicted, the 20 items from the AOTA test correlated significantly with the author-constructed items; the internal reliability of the KNOTS scale was reasonably high; occupational therapy students performed significantly better than did education students on the KNOTS scale; and senior occupational therapy students scored significantly higher than juniors on the KNOTS test. As predicted, the internal consistency of the SESS scale was high. Contrary to prediction, the SESS scores were not significantly related to KNOTS scores, occupational therapy student class level, completion of Level I fieldwork, prior experience in a school setting, or intent to work in a public school setting, although all the relationships were in the expected directions.

KNOTS Scale

The results of the present study suggest that the refinement and use of the KNOTS is worth pursuing. Evidence for the validity of the scale comes from several sources. Content validity is reflected in the selection and construction of items from documented sources and in the suggestions of the expert reviewers. Construct validity is evidenced by the

| Table 3 | Comparisons of KNOTS Scores |
|-----------------|-------|-------|-------|-------|
| Participant Characteristic | n | M | SD | F | p |
| Major* | 33 | 39.76 | 5.19 | 57.25 | < .001 |
| Other students | 88 | 27.67 | 7.95 |  |  |
| Year in occupational therapy program* | 33 | 18.18 | 5.46 | 77.44 | < .001 |
| Juniors | 18 | 36.22 | 3.62 | 12.66 | < .001 |
| Seniors | 20 | 41.45 | 5.16 |  |  |
| Completed Level I fieldwork* | 33 | 19.10 | 5.46 | 3.24 | .035 |
| No | 14 | 19.10 | 5.46 | 3.24 | .035 |
| Prior experience working in schools* | 33 | 18.18 | 5.46 | 77.44 | < .001 |
| Yes | 19 | 40.16 | 5.04 | 0.34 | .56 |
| No | 14 | 39.14 | 4.91 |  |  |
| Intention to work in schools* | 33 | 19.10 | 5.46 | 3.24 | .035 |
| Yes | 16 | 40.38 | 5.85 | 1.91 | .16 |
| No | 21 | 38.00 | 4.62 |  |  |

Note. KNOTS = Knowledge of Occupational Therapy in School Settings.
*Results from 2 x 2 x 2 analysis of variance (ANOVA) of all students.

Table 4 Mean SESS Scores of Occupational Therapy Students

<table>
<thead>
<tr>
<th>Participant Characteristic</th>
<th>n</th>
<th>M</th>
<th>SD</th>
<th>F</th>
<th>p</th>
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</thead>
<tbody>
<tr>
<td>Year in occupational therapy program</td>
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<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Junior</td>
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<td>17.33</td>
<td>5.79</td>
<td>1.97</td>
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<td>5.78</td>
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<td>5.08</td>
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Note. SESS = Self-Efficacy in School Settings.
significantly higher scores on the scale for occupational therapy students than for students in other classes and by the significantly higher scores for occupational therapy seniors than for occupational therapy juniors. The significant correlations of the author-constructed items with the items used by the AOTA as practice questions for future test-taking support criterion-referenced validity. Whereas internal reliability of the KNOTS as measured by internal consistency is reasonably high, there is as yet no knowledge of the test–retest reliability of the KNOTS scale.

Further exploration of the validity and reliability of the KNOTS could involve replication and item analysis with a larger sample, comparison of occupational therapists working in school settings with other professionals or other occupational therapists in different practice areas, comparisons of more and less experienced occupational therapists, and assessment of the test–retest reliability of the measure.

One characteristic about the scale must be kept in mind: Because this is an instrument to measure accurate and current factual knowledge, not only general principles, it will require constant revision and updating. For example, items that refer to school settings as the single largest employer of occupational therapists may need to be altered because the practice patterns and tools for categorizing and measuring employment trends of occupational therapists may have changed. More recent data suggest that perhaps nursing homes and nursing care facilities now employ more AOTA members (AOTA, 1996). It may also be the case that particular institutions choosing to use the scale will need to add or substitute items that reflect state and local laws and practices. Further refinement of the instrument could include revision of specific items to improve clarity and deletion of items that do not increase internal reliability.

The eventual uses of the KNOTS include formal assessment of individual knowledge and performance for both students and practicing occupational therapists, program assessment to evaluate and improve curricula, and self-assessment for persons who want to evaluate their own knowledge in the area before pursuing a career as an occupational therapist practicing in a school.

**SESS Scale**

The evidence for the validity of the SESS is weaker than the evidence for the validity of the KNOTS, probably because of the reduced sample size. Only occupational therapy students took the SESS because it was specifically focused on self-efficacy in practicing occupational therapy in the schools, thus reducing the power of the statistical analyses (Harris, 1998). Although SESS scores were positively correlated with KNOTS scores, and although groups of occupational therapy students differed in the predicted directions, none of these relationships was significant. The very high internal consistency indicates that it is a unidimensional scale, but its test–retest reliability has yet to be determined. It is possible that this high internal consistency is an indication of response bias rather than criterion-referenced validity. Further research with a larger sample will be necessary to establish whether the SESS is indeed valid as a measure of self-efficacy in the practice of occupational therapy within a school-based setting. Previous research showing that teachers' and education students' self-efficacy beliefs are related to experiences in schools (Hebert et al., 1998; Tschannen-Moran et al., 1998) suggests that such investigations are worth pursuing.

**Self-Efficacy and Knowledge**

The lack of a significant correlation between the measures of knowledge and self-efficacy makes it impossible to come to any definite conclusions about the relationship between self-efficacy and performance in a school-based occupational therapy setting. However, it is logical to assume that self-efficacy and knowledge will be positively associated in occupational therapy settings (Bush et al., 1993), as they are in other contexts (Bandura, 1997).

**Practical Applications**

If further investigation provides additional evidence for the reliability and validity of these scales, both the KNOTS and the SESS have a number of potential practical applications. Schools and school districts might wish to use these scales as pre-employment screening devices for occupational therapists who have little or no school-based practice experience and as tools for assessing continuing education needs of those therapists currently practicing in the schools. Universities might find them helpful both to assess student preparedness for practice and to evaluate needs for curriculum development. For example, the KNOTS might be useful to an academic program in the process of developing a specialty certification in school-based practice. These tests might also be of assistance in advising and counseling students into specialty areas. Finally, individual occupational therapy students and practicing clinicians might wish to assess their own knowledge and self-efficacy in the area of school-based practice, to explore future career paths and options, or to seek out continuing education and mastery experiences.

**Appendix A**

**The SESS Scale**

For each item, please give your opinions using the following scale:

1 = strongly disagree, 2 = disagree, 3 = not sure, 4 = agree, 5 = strongly agree.

1. I feel competent in my ability to make decisions regarding the delivery of occupational therapy services to students in the school setting.
2. I feel competent in my ability to complete general assessment of students within the school setting.
3. I feel competent in my ability to accurately utilize and interpret standardized tests used in the school setting.
4. I feel competent in my ability to consult with other staff regarding a student’s educational needs.
5. I feel competent in my ability to write educationally relevant goals and objectives.
6. I feel competent in my overall ability to provide intervention to students within the school setting.

Appendix B
Sample Items for the KNOTS Scale

1. Which one of the following statements is not true with respect to the practice of school-based occupational therapy?
   a. A school-based practice performance area includes play and leisure.
   b. Data from standardized tests are the best source of information for a school-based assessment. (Correct response)
   c. Based on surveys, standardized tests appear to be the most common assessment tools used by school-based occupational therapists.
   d. Classroom observation and teacher interviews are vital sources of school-based assessment information.

2. A school-based therapist using a functional approach to service delivery would
   a. direct intervention at the underlying physical cause of dysfunction.
   b. focus on the next skill in the developmental sequence.
   c. focus on “fixing” a deficit.
   d. focus on promoting the skills necessary to be successful in the student’s particular environment. (Correct response)

3. It is most appropriate for a therapist to discuss discharge from school-based occupational therapy intervention at an individualized educational program meeting when
   a. the student is performing well in the classroom. (Correct response)
   b. standardized test scores show reasonable improvement.
   c. criterion-referenced tests demonstrate adequate skill development.
   d. the parent reports the student is doing well at home.

4. Based on a review of the limited research to date, there is evidence to support the contention that one of the following variables is significantly associated with handwriting performance. Which one is it?
   a. Visual-motor integration (Correct response)
   b. Color perception
   c. Visual perception
   d. Gross motor skills

5. An occupational therapist using an educational model perspective
   a. bases evaluation of progress on a student’s underlying neuromuscular skill.
   b. focuses treatment on specific skills needed for adaptation and performance. (Correct response)
   c. focuses treatment on the child’s lack of physical function.
   d. establishes goals and objectives with respect to specific motor function such as range of motion or muscle power.

6. A child in high school with significant dysgraphia would probably benefit most from
   a. direct intervention for handwriting practice.
   b. multisensory teaching practices.
   c. bypass methodologies such as computer access. (Correct response)
   d. visual-perceptual intervention strategies.

Note. A copy of the complete KNOTS can be obtained by writing to Mary B. Harris, College of Education, University of New Mexico, Albuquerque, New Mexico 87131; mharris@unm.edu.

References
Occupational Therapy Association.


