Occupational Therapy in Transitioning Adolescents to Post-Secondary Activities

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KEY WORDS
• ecological curriculum
• handicapped students
• transition services

OBJECTIVE. The purpose of this study was to examine the perceptions of special education directors on the current role of occupational therapy in high school transition programs for adolescent students with disabilities. Additionally, barriers to providing occupational therapy services and perceptions about new occupational therapy services were examined.

METHOD. A mailed questionnaire was administered to all special education directors in a rural state in the United States. One hundred and four (57.5%) responses were received. Descriptive statistics were generated with an emphasis on percentages to examine current occupational therapy services in high school transition programs and barriers to service delivery.

RESULTS. In this study, occupational therapists provided less than one fifth of transition services in high schools for students with disabilities. They provided more assistive technology consults (30.3%), task or environmental modification (25.8%), and Individualized Education Plan (IEP) and Individualized Transition Plan (ITP) planning (20%) than other providers. Barriers to occupational therapy use included funding, lack of interagency planning, and lack of parent participation. About 35% of special education directors suggested that additional occupational therapy services were needed for adolescents with cognitive disabilities and for job performance and related work skills programming.

CONCLUSION. Occupational therapists in this study provided ancillary services to high school students with disabilities with greater emphasis on technology, task or environmental modification, and IEP or ITP planning, as perceived by special education directors.


Historically, since Public Law 94-142, the Education of All Handicapped Children Act (EHA) (1975), mandated that all children with disabilities receive a free appropriate education that includes special education and related services, occupational therapists have used direct service, monitoring, or consultation models of service delivery in high schools (Dunn, 1988; Spencer, 2001). In accordance with the law, occupational therapists may evaluate, treat, and recommend services for any child between the ages of 3 to 21 years. Yet research findings indicate that occupational therapists provide more services to preschool and elementary students than to middle and high school students (Powell, 1994).

In 1997, Public Law 105-17, the Individuals With Disabilities Education Act (IDEA), mandated that an Individualized Transition Plan (ITP) for every adolescent in special education be included in the Individualized Education Plan (IEP) before the student reaches age 14. Studies indicate that individuals with disabilities have lower rates of high school graduation, employment, postsecondary education, and residential independence when compared to peers without disabilities (Blackorby & Wagner, 1996; Dunn, 1996; Patton, Cronin, & Jairrels, 1997;
Wagner, 1989). Transition services are intended to help students with disabilities prepare for postsecondary activities such as further education, paid employment, community integration, and independent living after high school.

Experts agree that the best way to address transition planning, programming, and service delivery is through interagency cooperation and collaboration with the student, parents, and professionals (Halpern, 1985; Morningstar, 1997; Orentlicher & Michaels, 2000; Spencer, 1989; Spencer, 2001). One example of a collaborative effort to improve high school transition programs is the Kentucky Transition Project (KTP) (Kentucky Transition Collaborative, 1991). The KTP is an interagency collaborative plan to provide inclusive school services, individualized transition planning, and improved quality and access to transition services through state level interagency coordination. In 1999, the Office of Special Education Programs (OSEP) awarded Kentucky funding for Improving Consumers’ Access to Educational Reform Utilizing a Systems Approach (ICARUS), a project to improve learning results for children and youths with disabilities. Outcomes of the project include a handbook on transition practices for students with disabilities and their families, a Kentucky Student Career/Transition Plan, and job-training strategies for students with learning disabilities. Improving transition services has become an important priority for the state of Kentucky, like other largely rural states.

Several members on the multidisciplinary IEP team provide instruction in work, education, community integration, and independent living (Spencer, 1989; Spencer, 2001). Occupational therapists offer a unique role in transition services by providing occupation-based evaluation and intervention. This form of therapy uses functional, real-life tasks, and task analysis to help students develop functional living skills (Broiller, Shepard, & Markley, 1994). Moreover, occupational therapists participate in achieving transition outcomes that involve the student in planning and use relevant school and community environments (Spencer, 2001). Occupational therapists may develop and provide prevocational programs (Chandler, O’Brien, & Weinstein, 1996), facilitate functional living skill development, modify environments, and educate parents and other staff (Project Techlink, 1999).

To date, there has been little research and publication on transition planning and service delivery in occupational therapy (Broiller et al., 1994; Clark, Mack, & Pennington, 1988). Within this sparse literature on transition services in occupational therapy, barriers to effective transition delivery have been identified. For example, the lack of vocational education programs (Evers, 1996), including minimal vocational preparation and community skills programs, has been named as a barrier (Halpern, 1985). Other barriers include poor interagency collaboration (Halpern), and a lack of adequately prepared leaders (Kochhar-Bryant, 1999). National Information Center for Children and Youth With Disabilities (NICHCY) reported funding, staffing, and transportation as barriers to effective transition delivery (1993). Recently, Orentlicher and Michaels (2000) discussed strategies to overcome barriers in delivering high school transition services.

Historically, special education directors in county or community school districts often influence who provides transition services to help students generalize their learning to new environments or situations (Rainforth & York-Barr, 1997). Special education directors may be familiar with the skills of special education teachers, regular classroom teachers, occupational therapists, and others who want service provision opportunities (Spencer, 2001). This person influences hiring and distribution of funds as these relate to providing services to students in special education. Information about the perceptions of special education directors can be helpful to occupational therapists in this multidisciplinary environment.

Data suggest that there is a substantial number of students with disabilities who are transitioning from school to community life who may benefit from improved skills in independent living that can be uniquely provided by occupational therapists (Powell, 1994). Little is known about occupational therapy’s current involvement in this area and a need exists to begin to better define this area of collaborative practice. Special education directors are in a position to help begin to define occupational therapy involvement. The purpose of this study was to determine special education directors’ perceptions about: (1) current transition service provider utilization with occupational therapy as a member of the multidisciplinary team, (2) barriers to occupational therapy transition service delivery in high school, and (3) new occupational therapy transition services needed for students with disabilities.

Method

Survey research in the form of a mailed questionnaire was used in the study. All directors of special education in a rural state were queried on their perceptions about occupational therapy in high school transition programs and about barriers to services.

Participants

A listing of 181 high school special education directors representing all 176 school districts across Kentucky comprised the target population of special education directors from the
Kentucky Department of Education. Participants were assured of confidentiality by eliminating all identifying information in the reporting of data. The study was approved according to federal guidelines implemented by the Human Subjects Review Committee of the Institutional Review Board at the university. Each participant was assigned a code number to facilitate follow-up reminders. The master coded list was kept in a locked file cabinet and was destroyed after data collection. Surveys and database reports are kept in a locked file cabinet.

**Instrumentation**

A descriptive survey research design was used for conducting this study. A questionnaire was developed using a well-grounded literature review that provided structured questions to examine special education directors’ perceptions of the role of occupational therapy in transition programming. Content and face validity were established from a committee of content experts and a substantial questionnaire revision process. A pilot study was conducted with special educators and faculty in occupational therapy and special education to reveal any problems with scientific logic or methodology with the survey instrument (Bailey, 1997) and examine its ease of completion. The survey instrument was revised based on feedback from pilot study participants and is available from the first author.

The survey consisted of 52 closed-ended and one open-ended item developed for the purpose of this study from a review of the literature. The sections of the questionnaire included: (1) demographics; (2) a checklist of providers, including occupational therapy, who currently provide work, community, independent living, and other services; (3) a checklist of barriers to occupational therapy transition services; and (4) a prospective item in which directors were asked which disability categories of students could benefit from new occupational therapy transition services. The literature and our clinical experience suggested that more than one practitioner often offers a particular service. Consequently, special education directors were asked to indicate all providers that offer a specific service in the second section of the questionnaire.

**Data Collection**

Questionnaires were mailed with a cover letter describing the purpose of the study along with a self-addressed stamped envelope. The participants were asked to respond to the survey within a 2-week period. The follow-up contact mailed 3 weeks after the original mailing was to thank persons who had already responded, and to motivate directors who had not responded by providing another survey.

**Data Analysis**

The computer programs Excel Version 7.0 and SPSS Version 10.0 were used to analyze the data. Data are reported in aggregate only. Data on demographics and barriers to service are reported with standard descriptive statistical analysis. However, the purpose of the study required directors to identify current service provider utilization and place occupational therapy in context when multiple providers offer a given service. Because directors were to indicate if more than one provider offered a service, the first phase of data analysis examined frequencies and absolute differences. The emphasis in the second phase of the data analysis was on relative differences among referral to multiple providers. This suggests percentage distribution reporting that is used in this study (Abramson, 1988).

**Results**

**Survey Respondents**

A total of 104 of 181 special education directors completed and returned the survey after the initial and follow-up mailings for a response rate of 57.5%. Demographic data are presented in Table 1. Approximately 38% of survey respondents reported having 16 or more years of experience as a teacher or principal. About 70% of survey respondents had at least 3 years of experience as director of special education, with only a quarter of them having more than 10 years experience. Nearly three quarters (72.1%) of special education directors described their school district as rural and another 16.4% of respondents described their districts as suburban.

To determine the current role of occupational therapy in transition service delivery, special education directors...
were first asked how they obtain occupational therapy transition services. Almost half (45.1%) of the respondents reported that a company, agency, or corporation under contract employs occupational therapists. About a quarter (27.4%) of respondents reported that the occupational therapist is an employee of the school system. About a quarter (24.8%) of occupational therapists were reported to be independent contractors or self-employed. Approximately 3% of respondents indicated that they did not have access to occupational therapy services.

A majority of special education directors (63.5%) indicated that occupational therapists currently provide enough transition services. Almost one quarter of respondents reported that occupational therapists did not currently provide enough transition services. Approximately 10% of directors reported that occupational therapy transition services were not currently provided in their school districts. Nearly 3% of survey respondents did not respond to this survey item.

**Current Service Provider Utilization**

Directors of special education identified all professionals who currently provide transition services in areas of work, community, independent living, and other areas. In this section of the questionnaire, the response format prompted respondents to identify all providers who offer services for each item (i.e., special educators, regular classroom teachers, occupational therapists, job coaches, or others). To place occupational therapy in context, percentage distribution emphasizing relative differences is reported (Abramson, 1988). The information is presented in Table 2. The emphasis in Table 2 is on the “percentage of the pie” each type of provider currently provides.

**Work.** Overall, special education directors perceived that special education teachers and job coaches provide the majority of transition services for work components. Directors reported that special educators and job coaches each provide about one third of the service in job placement, job site analysis, job preparation, job exploration, job assessment, and job performance skills. Directors of special education reported that occupational therapists provide minimal (5% or less) job placement and job exploration services. Directors perceived that occupational therapists offer 8–12% of transition services in visiting job sites, job preparation, job assessment, and job performance skills.

**Community.** Directors indicated that occupational therapists provide only 5–8% of any community-based transition services in Kentucky. Currently, directors reported that occupational therapists provide skill building in transportation, shopping, residential exploration, and communi-

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**Table 2. Service Provider Utilization as Reported by Special Education Directors: Percentages**

<table>
<thead>
<tr>
<th>Transition Component</th>
<th>SpEd</th>
<th>RgEd</th>
<th>OT</th>
<th>JobCo</th>
<th>Other</th>
<th>None</th>
<th>Total %</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Work</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Job Placement</td>
<td>34.0</td>
<td>11.5</td>
<td>5.0</td>
<td>37.4</td>
<td>9.2</td>
<td>2.9</td>
<td>100</td>
</tr>
<tr>
<td>Visit Job Sites</td>
<td>31.2</td>
<td>6.6</td>
<td>8.6</td>
<td>42.4</td>
<td>7.9</td>
<td>3.3</td>
<td>100</td>
</tr>
<tr>
<td>Job Preparation</td>
<td>38.1</td>
<td>17.5</td>
<td>8.9</td>
<td>28.6</td>
<td>5.3</td>
<td>1.6</td>
<td>100</td>
</tr>
<tr>
<td>Job Exploration</td>
<td>38.2</td>
<td>21.0</td>
<td>3.8</td>
<td>29.0</td>
<td>7.0</td>
<td>1.1</td>
<td>100</td>
</tr>
<tr>
<td>Job Assessment</td>
<td>29.3</td>
<td>11.5</td>
<td>7.5</td>
<td>31.6</td>
<td>18.4</td>
<td>1.7</td>
<td>100</td>
</tr>
<tr>
<td>Job Performance</td>
<td>33.1</td>
<td>12.3</td>
<td>11.7</td>
<td>32.5</td>
<td>8.6</td>
<td>1.8</td>
<td>100</td>
</tr>
<tr>
<td><strong>Community</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Transportation</td>
<td>42.9</td>
<td>6.1</td>
<td>5.4</td>
<td>27.2</td>
<td>13.6</td>
<td>4.8</td>
<td>100</td>
</tr>
<tr>
<td>Shopping</td>
<td>58.1</td>
<td>5.4</td>
<td>6.8</td>
<td>16.9</td>
<td>10.1</td>
<td>2.7</td>
<td>100</td>
</tr>
<tr>
<td>Residential Exploration</td>
<td>49.5</td>
<td>3.9</td>
<td>5.8</td>
<td>16.5</td>
<td>10.7</td>
<td>13.6</td>
<td>100</td>
</tr>
<tr>
<td>Community Exploration</td>
<td>53.1</td>
<td>4.1</td>
<td>7.6</td>
<td>22.8</td>
<td>8.3</td>
<td>4.1</td>
<td>100</td>
</tr>
<tr>
<td><strong>Independent Living</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Problem Solving Skills</td>
<td>48.9</td>
<td>23.4</td>
<td>9.0</td>
<td>13.3</td>
<td>4.8</td>
<td>0.5</td>
<td>100</td>
</tr>
<tr>
<td>Decision-Making Skills</td>
<td>49.1</td>
<td>22.2</td>
<td>9.2</td>
<td>14</td>
<td>4.9</td>
<td>0.5</td>
<td>100</td>
</tr>
<tr>
<td>Self-Advocacy Skills</td>
<td>55.3</td>
<td>17</td>
<td>8.1</td>
<td>12.6</td>
<td>6.3</td>
<td>0.6</td>
<td>100</td>
</tr>
<tr>
<td>Meal Preparation</td>
<td>54.5</td>
<td>23.4</td>
<td>12.3</td>
<td>5.2</td>
<td>3.2</td>
<td>1.3</td>
<td>100</td>
</tr>
<tr>
<td>Time Management</td>
<td>55.6</td>
<td>21.2</td>
<td>5.6</td>
<td>12.5</td>
<td>4.4</td>
<td>0.6</td>
<td>100</td>
</tr>
<tr>
<td>Budgeting</td>
<td>57.6</td>
<td>23.8</td>
<td>3.3</td>
<td>9.9</td>
<td>4.6</td>
<td>0.6</td>
<td>100</td>
</tr>
<tr>
<td>Leisure</td>
<td>54.5</td>
<td>18.2</td>
<td>12.3</td>
<td>7.8</td>
<td>5.2</td>
<td>1.9</td>
<td>100</td>
</tr>
<tr>
<td>Exploration</td>
<td>76.9</td>
<td>24.0</td>
<td>18.3</td>
<td>11.5</td>
<td>9.6</td>
<td>1.9</td>
<td>100</td>
</tr>
<tr>
<td>Domestic Skills</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Assistive Technology</td>
<td>34.8</td>
<td>10.1</td>
<td>30.3</td>
<td>3.9</td>
<td>18.5</td>
<td>2.2</td>
<td>100</td>
</tr>
<tr>
<td>Modify Task Environment</td>
<td>38.9</td>
<td>14.1</td>
<td>25.8</td>
<td>10.6</td>
<td>10.1</td>
<td>0.5</td>
<td>100</td>
</tr>
<tr>
<td>IEP or ITP Planning</td>
<td>35.0</td>
<td>22.2</td>
<td>20.0</td>
<td>12.4</td>
<td>10.2</td>
<td>0.4</td>
<td>100</td>
</tr>
<tr>
<td>Staff Education</td>
<td>34.0</td>
<td>13.0</td>
<td>20.0</td>
<td>11.3</td>
<td>20.5</td>
<td>1.1</td>
<td>100</td>
</tr>
</tbody>
</table>

*Note:* Relative differences emphasized using percentage distribution reporting. SpEd = special education, RgEd = regular education, OT = occupational therapy, JobCo = job coach, Other = physical therapy, speech therapy, related disciplines, IEP = Individualized Education Plan, ITP = Individualized Transition Plan.
ty exploration. The majority of persons providing community transition components are special education teachers and job coaches according to special education directors. Directors reported that instruction in community transportation, shopping, residential exploration, and community exploration instruction was provided by special education.

**Independent Living.** Special educators provide a majority of and regular education teachers provide close to one fourth of independent living skills instruction according to special education directors (see Table 2). Directors reported that special education teachers provide substantial instruction ranging from problem solving (48.9%) to domestic skills (76.9%). Special education directors perceived that occupational therapists provide 12–18% of leisure exploration, meal preparation, and domestic skills evaluation. Occupational therapists provide problem solving skills and decision-making skills training approximately 10% of the time compared to nearly 50% by special education teachers according to the directors. Self-advocacy skills, time management, and budgeting are currently provided by occupational therapists on a limited basis as reported by the directors.

**Other.** Directors of special education reported that occupational therapists provide relatively more service in assistive technology consultation (30.3%), task or environment modification (25.8%), IEP planning (20.0%), and staff education (20.0%) when compared to other service providers. Special education teachers provided these adjunctive transition services over one third of the time according to special education directors.

**Barriers to Occupational Therapy Transition Services**

In this section, the special education directors were given a list of barriers to transition planning and service delivery of occupational therapy. Directors specified their perceptions about which barriers exist in their districts (see Table 3). Lack of interagency planning and funding were reported as barriers by over 40% of special education directors. Lack of parent participation, lack of qualified personnel, inconsistent transition practices, and transportation were other barriers reported by directors. Less than 10% of special education directors felt that access or support from related services was a barrier to transition planning.

Special education directors cited barriers specific to occupational therapy transition service delivery. Nearly one third of directors felt there was a lack of demand from parents and teachers for occupational therapy involvement. Directors indicated that the role of occupational therapy is not understood and gave other miscellaneous responses such as special education is responsible for transition planning and that occupational therapy is low priority.

**New Occupational Therapy Transition Services**

The need for new occupational therapy transition service was perceived to vary by disability categories in school districts. Information regarding needed services was summarized by disability categories of cognitive disabilities, physical disabilities, communication or behavior disorders, and sensory impairments. Special education directors were asked to propose how they would allocate new occupational therapy services (100%) among these four disability categories.

**Students with cognitive disabilities.** For the purpose of this study, students classified with cognitive disabilities were categorized as functional mental disabilities (FMD), mild mental disabilities (MMD), learning disabilities (LD), and traumatic brain injury (TBI). Overall, special education directors suggested that approximately 40% of new occupational therapy services be directed toward adolescents with cognitive disabilities. This was uniform across categories of work, community, and independent living skills programming.

**Students with physical disabilities.** Physical disabilities included multiple disabilities (MD), physical disability (PD), and other health impairments (OHI). Across categories of work, community, and independent living, special education directors suggested that 22–24% of new occupational therapy services be directed toward adolescents with physical disabilities who need transition services.

**Students with communication or behavioral disabilities.** Communication or behavior disorders included emotional behavior disability (EBD), speech and language disability (SP/L), and autism. Across categories, directors suggested that 20–22% of new occupational therapy services are needed for students with communication or behavioral disabilities.
Students with sensory impairments. Sensory impairments included hearing impairment, visual impairment, and deaf or blindness. Needed occupational therapy services for sensory impairments are approximately 16–18% of the total.

Specific services. Directors perceived skill development in job assessment, job performance, and other work skill areas as important. Other areas where occupational therapy might provide service were assistive technology consultation, modification of the task environment, and IEP or ITP planning.

Discussion

In this study, a questionnaire was administered to all special education directors in a rural state to examine their perceptions of the current role of occupational therapy, barriers to providing service, and new services that are needed. Limitations related to survey research should be considered. Specifically, in this study, special education directors may not report a need because they would then have established an obligation to provide service. Alternately, they may see that the need is met by means of traditional special education instruction and not that services could be enhanced by occupation-based services. The questionnaire was developed from the literature specifically for this study using widely accepted survey development procedures (Borg & Gall, 1983). However, reliability testing was not performed.

Over 60% of special education directors think that occupational therapists provide enough transition services at the high school level. Occupational therapists were identified by special education directors as service providers less than one fifth of the time in context of all service providers. These findings are similar to Project Techlink (1999) that suggests that the occupational therapy role in high school transition services is relatively small. Survey results by Clark et al. (1988) also indicate that occupational therapy had little involvement in high school transition programs. Special educators, regular classroom teachers, and job coaches provide most services. Currently, occupational therapy provides a larger percentage of transition services in assistive technology (30.0%), task or environment modification (25.8%), and IEP or ITP planning (20.0%) according to special education directors. Other areas where directors report that occupational therapists currently provide greater input with adolescents are domestic skills evaluation (18.3%), leisure exploration (12.3%), meal preparation (12.3%), job performance skills (11.7%), and problem solving and decision-making skills.

Barriers to occupational therapy transition services reported in this study are similar to those reported by Blalock (1996), Everson (1990), Kochhar-Bryant (1999), NICHCY (1993), and Wehman (1990). Access to qualified services providers is perceived as a barrier by 30.8% of respondents in this survey. Interestingly, just over a quarter of the respondents reported that occupational therapists were employees of the school system, whereas about 75% of the respondents reported that occupational therapists were employed by means of a contract with the school district or were self-employed. This status as “other than employee” may influence how occupational therapists are viewed and utilized as providers. They may be seen as consultants to be accessed only when employees cannot provide services or they may be seen as a higher cost provider. Either of these examples may decrease referrals to occupational therapy.

Nearly one quarter of special education directors indicated that new occupational therapy services are needed. Special education directors suggest that new services for adolescents transitioning to adult roles be directed toward students with cognitive disabilities, with secondary emphasis on those with physical disabilities and communication or behavioral disabilities. Particular areas where directors perceived occupational therapy services may be needed include job assessment, job performance, and other work skill areas. Assistive technology consults, modification of the task environment, and IEP or ITP planning are also described as needed by directors. These perceptions about new occupational therapy services suggest the need to explore expansion of current services and specific, targeted development of new services.

Occupational therapists and other providers can use this survey method to replicate the study in their own states. Advantages include establishing dialogue with special education directors who are in position to influence referral to occupational therapists. Findings encourage occupational therapists to target their efforts toward providing specific services that are valued and needed. Additionally, occupational therapists may be well-served to distinguish their services as a unique, occupation-based intervention and explain this intervention to others. Development of guidelines on “when to refer” to occupational therapy and distributing these to other providers may be helpful. Input from administrators can help avoid duplication of service and begin exploration of other service delivery options.

Survey results can be used for greater interagency planning and to help secure funding. Transition services for adolescents may begin through high school special education services; however, greater use of adult rehabilitation models to provide occupation-based services may provide long-term benefits for this population. Future research is needed on transition planning and service delivery in occupational therapy (Broiller et al., 1994; Clark et al., 1988).
Specifically, strategies to promote more occupational therapy in high school transition should be studied (Orentlicher & Michaels, 2000). The effectiveness of team meetings, community instruction, and multidisciplinary planning can be studied. Block scheduling, designating occupational therapy staff to uniquely work with secondary students, and greater collaboration with parents and guardians to improve student performance can also be studied.

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References