Survey of Driving Evaluation and Rehabilitation Curricula in Occupational Therapy Programs

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KEY WORDS
- automobile driver evaluation
- automobile driving
- curriculum
- education, professional
- occupational therapy
- rehabilitation

OBJECTIVE. Our purpose in this study was to examine the preclinical curricular content pertaining to driving evaluation and rehabilitation (DE/R) included in professional entry-level occupational therapy programs.

METHOD. An e-mail survey containing questions about the program's structure and extent of course material related to DE/R in the curriculum was sent to directors of all 144 U.S. accredited professional entry-level occupational therapy programs.

RESULTS. Ninety programs responded (62.5% response rate), of which 80 included content related to DE/R in some required courses, and 9 programs offered a required course specifically in DE/R. Approximately 18% of the respondent programs offered electives with DE/R content.

CONCLUSION. Of the respondent professional entry-level occupational therapy programs, few offer a required course specifically devoted to DE/R, but almost all programs integrate DE/R content into required coursework, thus satisfying the Accreditation Council for Occupational Therapy Education standards related to driver rehabilitation.


Occupational therapy practitioners are increasingly being called on to screen and evaluate fitness to drive of people who are potentially at higher risk for accidents (e.g., older drivers) and to conduct driving retraining for people with a wide range of physical or cognitive impairments or disabilities that affect safe driving (AOTA, 2005). Occupational therapy practitioners were identified as the primary professionals most often performing driving evaluations for people with disabilities and older adults in North America (Korner-Bitensky, Bitensky, Sofer, Man-Son-Hing, & Gelin, 2006; Korner-Bitensky, Sofer, Gelin, & Mazer, 1998), and they are recognized by the American Medical Association (AMA) as qualified to perform functional driving evaluations, particularly when certified as driver rehabilitation specialists (Wang, Kosinski, Schwartzberg, & Shanklin, 2003). Given the increase in the number of older drivers in our aging society (>38 million licensed U.S. drivers > age 65) and people with neurological or psychiatric conditions who want to maintain driving (Korner-Bitensky et al., 2006; National Highway Traffic Safety Administration, 2008), driver rehabilitation and training have become an emerging practice area for occupational therapy practitioners (Gourley, 2002). As a result, the profession bears an increasing responsibility to provide education in this area to students enrolled in occupational therapy academic programs so that future clients' needs may effectively be met (Korner-Bitensky et al., 2006). Stav (2008) advocated the importance of providing academic education that equips occupational therapy students with knowledge, skills, and practice in driving evaluation and rehabilitation (DE/R) so that they have the confidence and competence to provide this type of service. The American Occupational Therapy Association (AOTA) has proposed that all occupational therapy practitioners “possess the education and training necessary to address driving and community mobility” (AOTA, 2005, p. 666).
Given the current and growing needs related to driving among older adults and various disability groups in the United States, it is essential that occupational therapy academic programs incorporate DE/R content into the curriculum to better prepare future entry-level occupational therapy practitioners (Stav, Arbesman, & Lieberman, 2008). In fact, one of the accreditation standards for occupational therapy educational programs is to address issues related to driving and driver rehabilitation (Accreditation Council for Occupational Therapy Education [ACOTE] 2009). To date, however, no published data describe the extent to which DE/R is included in occupational therapy curricula in the United States. Thus, in this study, we examined the preclinical curriculum content pertaining to DE/R education included in professional entry-level occupational therapy programs across the United States. Such data may assist occupational therapy educators with becoming more aware of the type and extent of DE/R education provided to occupational therapy students in the United States and offer initial educational guidelines for assessing and restructuring academic curricula to increase students’ exposure to DE/R.

Method

On the basis of a review of the existing literature (Pellerito, 2006), we designed a short questionnaire (seven closed-ended items and one open-ended item) specifically to examine the type and extent of DE/R content offered in preclinical education curricula of professional entry-level occupational therapy programs in the United States. The closed-ended items offered specific questions about the academic program’s background and the extent of course structure and topics related to DE/R in the curriculum. Questions included whether the curriculum offers courses (required or elective) with content primarily emphasizing DE/R, specific topics covered in relation to DE/R, types of driving-related assessments to which students are exposed, use of a certified driver rehabilitation specialist (CDRS) for instruction in content specific to driving, and whether the academic program has access to a driving rehabilitation program in either a nearby hospital or a rehabilitation center where students observe or obtain hands-on experience during the didactic (nonfieldwork) portion of the curriculum.

Questionnaire content was developed by the authors, who are experienced academicians with a combined 25 yr of teaching experience in occupational therapy; one (Hon Yuen) is a researcher in the area of driving, and the other (Jerry Burik) has taught a course inclusive of DE/R content for 11 yr. The questionnaire was deliberately kept short to encourage responses and posted on Survey Monkey, an online survey Web site engine, which provided a URL for the survey. The survey instrument URL and a cover letter explaining the purpose of the survey were e-mailed to the directors of all 144 accredited professional entry-level occupational therapy programs in the United States.

Two follow-up e-mails with the URL link to the survey were sent to those program directors who did not respond. Data were collected between mid-September 2009 and mid-November 2009. Ninety program directors or their delegated faculty members responded to the online survey, achieving a response rate of 62.5%.

Data were analyzed using descriptive statistical methods as well as cross-tabulation and Fisher’s exact test of association; α was set at the .05 level for statistical significance. Content analysis was performed on responses to the open-ended question and sorted into meaningful categories on the basis of how the program directors or their delegated faculty member responded.

Results

Of the 90 program directors or faculty members who responded to the online survey, 9 (10%) indicated that their curriculum includes a required course with primary emphasis on DE/R. The three main topics taught in the required DE/R courses are factors affecting driving performance (100%), assessment of client factors and performance skills (100%), and legal and ethical considerations (88.9%). The three main categories of driving-related assessments that students were exposed to are cognition–perception (100%), vision (88.9%), and motor skills (88.9%), followed by driving simulation (66.7%) and on-the-road evaluation (44.4%). We should note that of the nine programs offering a required DE/R course, one also included or cross-referenced DE/R information in other required courses.

Of the 81 respondent programs that do not currently offer a required course specific to DE/R, all programs except 1 include content areas or topics related to DE/R in other required courses in their preclinical curriculum. This 1 particular program, however, indicated offering an elective course with DE/R content. Altogether, 16 respondent programs (17.8%) offered elective courses with DE/R content (Table 1).

Forty-five respondent programs (50%) reported using the expertise of a CDRS for teaching a course with content specific to driving. Of the 9 respondent programs offering a required DE/R course, only 2 (22.2%) reported using a CDRS to teach the course. Sixty-nine respondents (76.7%) reported having access to a driving rehabilitation program in either a nearby hospital or a rehabilitation center where students observe or obtain hands-on experience during the didactic (nonfieldwork) portion of the curriculum. Of the 9 respondent programs with a required DE/R course, 6 (66.7%) indicated having access to a driving rehabilitation program in a nearby hospital or rehabilitation center. No association was found between programs with a required DE/R course and the presence of a driving rehab program in a nearby hospital or rehabilitation center or between programs

### Table 1. Type of Course Pertaining to Driving Evaluation and Rehabilitation (DE/R) Included in the Respondent Professional Entry-Level Occupational Therapy Programs

<table>
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<th>Course Type</th>
<th>n (%)</th>
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<tr>
<td>Required course specific to DE/R</td>
<td>9 (10.0)</td>
</tr>
<tr>
<td>Other required course with inclusion of content areas or topics related to DE/R</td>
<td>80 (88.9)</td>
</tr>
<tr>
<td>Elective course with content related to DE/R</td>
<td>16 (17.8)</td>
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having a required DE/R course and the DE/R courses being taught by a CDRS.

Fifty-three respondent programs (58.9%) chose to use the survey’s open-ended question to describe how they effectively address DE/R in their curricula. Respondents indicated that their students receive hands-on experience in driving assessment and training during dedicated course laboratory time, including behind-the-wheel operation of adapted vehicles, field trips to local rehabilitation centers or hospitals with a driving rehabilitation program and vendors that install and provide adaptive driving services, and Level 1 fieldwork experiences supervised by a CDRS or a registered occupational therapist with expertise in DE/R.

The primary focus and content of required courses used to incorporate DE/R includes developmental disabilities, adult physical and neurological rehabilitation, older adults or geriatrics, assistive technology and environmental adaptation, community mobility, and legal and ethical issues. In addition to the three main topics mentioned previously, some programs reported including content related to state rules and regulations, psychosocial issues of aging related to driving and cessation, planning for driving retirement, alternatives to driving, and advocacy to build walkable communities. Creative methods of incorporating DE/R education into existing curricula include (1) a capstone project that requires students to develop a driving rehabilitation program for a local hospital and increase local public agencies’ awareness and expansion of services for older adults and people with disabilities and (2) offering research projects on the topics related to driving. Several program directors stated that they were in the process of updating their current curriculum to include more education on DE/R.

Survey respondents indicated that the DE/R content included in their curricula was primarily developed from the AOTA’s academic education module on driving rehabilitation; a textbook, Driver Rehabilitation and Community Mobility: Principles and Practice (Pellerito, 2006); and the document Assessment of Driving-Related Skills, developed by the AMA in cooperation with the National Highway Traffic Safety Administration (Wang et al., 2003). Nine program directors also mentioned that their students participate in CarFit programs (the purpose of which is to educate older adults about driver–vehicle fit and vehicle safety features use; Stav, 2008), and one respondent reported requiring that all of the program’s students participate in formalized training to become CarFit technicians. Two respondents reported having their own driving assessment and rehabilitation clinic but not offering a required course in DE/R.

Discussion

Results indicated that most U.S. professional entry-level occupational therapy programs that responded to the study do prepare their students with basic, essential, and necessary skills and knowledge in the area of DE/R and community mobility and that these programs are in compliance with the ACOTE standards related to driver rehabilitation. These academic programs strive to provide beginner-level exposure to the area of DE/R as well as opportunities for students to learn about DE/R in the classroom, through special projects or clinic visitations, or during Level 1 fieldwork experiences that include didactic and experiential learning. Academic programs with access to driving rehabilitation programs in nearby hospitals or rehabilitation centers certainly take advantage of this resource by providing students with experiential learning related to DE/R.

These findings are encouraging because students graduating from their respective programs are equipped with at least some coursework or clinical experience related to DE/R. These skills should create a foundation for acquiring further exposure and competence through continuing education and initiatives from graduates to become CDRSs, driving and community mobility specialists by acquiring the AOTA Specialty Certification in Driving and Community Mobility, or assistive technology practitioners.

Although it is certainly understandable that not all occupational therapists will specialize in DE/R and that it is not possible for every program to devote a course specific to DE/R, such content must be included in curricula to address the ACOTE standards and to prepare students to meet the community mobility needs of the growing number of older adults and people with disabilities. Some of the challenges encountered by educators may include an already crowded curriculum and limited resources (time and faculty expertise). Further research is needed to establish the best means of incorporating DE/R into occupational therapy academic curricula.

Limitations

One of the limitations of this study is that we do not know whether the professional entry-level occupational therapy programs that did not respond actually offer content related to DE/R in accordance with ACOTE standards. Given that this study focused only on professional entry-level occupational therapy programs, future studies should explore the extent to which DE/R content is included in occupational therapy assistant educational programs.

Detailed information regarding the scope of DE/R experience in clinical settings was not available. Moreover, the study’s results do not allow determination of the details and quality of course content or of the depth and breadth of exposure and training in DE/R. Because the survey did not include U.S.-trained occupational therapists’ perceptions of their academic preparedness regarding DE/R, we suggest that further studies examine those perceptions.

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References


*American Journal of Occupational Therapy, 60,* 428–434.


