Occupational Therapy Interventions for Recovery in the Areas of Community Integration and Normative Life Roles for Adults With Serious Mental Illness: A Systematic Review

Robert W. Gibson, Mariana D’Amico, Lynn Jaffe, Marian Arbesman

This systematic review investigated research literature evaluating the effectiveness of occupational therapy interventions focusing on recovery in the areas of community integration and normative life roles for people with serious mental illness. The review included occupation- and activity-based interventions and interventions addressing performance skills and performance patterns, aspects of context and environment, activity demands, and client factors. The results indicated that the evidence of the effectiveness of social skills training is moderate to strong. The evidence for the effectiveness of life skills and instrumental activities of daily living (IADLs) training to improve performance is moderate, as is the evidence for neurocognitive training paired with skills training in the areas of work, social participation, and IADLs. The evidence for client-centered intervention and increased intensity and duration of treatment is limited but positive, and the evidence that providing intervention in the natural context is more beneficial than in the clinic setting is inconclusive.


Focused Question

What is the evidence for the effectiveness of interventions within occupational therapy’s scope of practice designed to create, establish, modify, and maintain performance; prevent disability; and promote health, wellness, and hope in the context of a recovery model in the areas of community integration and normative life roles for adults with serious mental illness?

Objectives

The focused question was designed to systematically investigate the research literature evaluating the effectiveness of interventions within occupational therapy’s scope of practice; the focus was on the recovery model in the areas of community integration and normative life roles for adults with serious mental illness. The systematic review included occupation- and activity-based interventions and interventions addressing performance skills and performance patterns; aspects of the environment; and context, activity demands, and client factors.

Statement of Problem

According to the World Health Organization (WHO; 2001), 1 in 4 people worldwide will be affected by a mental or neurological disorder at some point in their lives. An estimated 450 million people have such conditions worldwide, placing mental disorders among the leading causes of ill health and disability (WHO, 2001). Recent data from the National Institute of Mental Health...
(NIMH; 2010) reported similar prevalence in the United States, and estimates are that 57.7 million have a mental disorder. Serious mental illness is reported to occur in 6% of the U.S. population, and the largest burden of illness occurs in this group.

Occupational therapy practitioners assist people with serious mental illness with integrating into the community and meeting role responsibilities through a process of evaluation and intervention that considers the person, the environment, and their complex interaction (American Occupational Therapy Association [AOTA] President’s Ad Hoc Committee on Mental Health Practice in Occupational Therapy, 2006). For people with serious mental illness, such as schizophrenia, major depression, bipolar disorder, and schizoaffective disorder, developing the skills and obtaining the supports necessary for productive living are important in meeting these goals. Included in community integration and normative life roles are activities of daily living (ADLs), instrumental activities of daily living (IADLs; including life skills training and physical activity), leisure, social participation (including social skills training), work, and education. In this systematic review, we evaluated and synthesized evidence regarding occupational therapy interventions for restoring, modifying, maintaining, and promoting performance and preventing disability in these areas.

Background

The concept of recovery in mental health can be traced to the early 1980s, when personal accounts of consumers living with mental illness were published, describing their ability to live and cope with their mental illness (Deegan, 1988, 1993; Houghton, 1982; Leete, 1989). As described by Anthony (1993), recovery is a deeply personal, unique process of changing one’s attitudes, values, feelings, goals, skills, and/or roles. It is a way of living a satisfying, hopeful, and contributing life, even with limitations caused by the illness. Recovery involves the development of new meaning and purpose in one’s life as one grows beyond the catastrophic effects of mental illness. (p. 15)

The results of longitudinal research (Davidson & McGlashan, 1997; Harding, Zubin, & Strauss, 1987; McGlashan, 1988) have indicated that partial to full recovery has been seen in at least one-quarter and as many as two-thirds of people diagnosed with schizophrenia. According to Davidson and Roe (2007), the two types of recovery are (1) from mental illness, when a person experiences improvement in functioning and symptom levels over time, and (2) within mental illness, in which the person is able to have a meaningful life while continuing to have a mental illness. Both types of recovery have the fundamental components of an individualized, strengths-based, and person-centered process that includes self-discovery; empowerment; holistic, nonlinear peer support; respect; responsibility; and hope (Center for Mental Health Services [CMH], 2004). According to Bond, Salyers, Rollins, Rapp, and Zippel (2004), community integration is the tangible manifestation of a personal recovery experience because it can be viewed by others and it allows for concrete measurement. The acquisition and maintenance of normative life roles serve as an additional manifestation of the personal recovery experience.

These components and the goals set forth by the President’s New Freedom Commission on Mental Health (2003) are compatible with the tenets of occupational therapy. The Occupational Therapy Practice Framework: Domain and Process (2nd ed.; AOTA, 2008) has described the domain of occupational therapy as “supporting health and participation in life through engagement in occupation” (p. 628). AOTA further emphasized this focus in its Centennial Vision, in which it declared that occupational therapy should be recognized for “enabling people to improve their physical and mental health, secure well-being, and enjoy higher quality of life through preventing and overcoming obstacles to participation in the activities they value” (AOTA, 2007, p. 613). Elements identified as part of this vision include evidence-based practice and science-fostered innovation in occupational therapy practice. The shift in the mental health community toward a treatment approach based on a recovery model and the legislative goals of the President’s New Freedom Commission has created an opportunity for the profession of occupational therapy to return to and take a larger role in psychosocial rehabilitation and has created a need for research examining occupational therapy’s effectiveness in mental health recovery.

Efforts within AOTA to bring focus to the issue of mental health and occupational therapy have been ongoing for many years. This effort included the appointment of several ad hoc groups to address the issues in mental health facing the profession that were integral to fulfilling the Centennial Vision. The groups’ recommendations, which resulted in a Representative Assembly motion in 2006 (American Occupational Therapy Association President’s Ad Hoc Committee on Mental Health Practice in Occupational Therapy, 2006), were to create and disseminate evidence that supports occupational therapy in mental health and to expand the evidence-based reviews to explore focused questions related to recovery-oriented outcomes in schizophrenia and mood...
disorder. The study described here presents the results of one of two systematic reviews developed through AOTA’s Evidence-Based Literature Review Project. This review was supported by AOTA as part of an academic partnership with the Medical College of Georgia (MCG). Two occupational therapy students participated in the project in partial completion of the requirements for their master’s degree. The other systematic review developed through AOTA’s Evidence-Based Literature Review Project can be found in this issue (Arbesman & Logsdon, 2011).

Method

An advisory group consisting of occupational therapy practitioners, educators (including MCG faculty), researchers with expertise in mental health, AOTA staff, and a consultant to AOTA’s Evidence-Based Literature Review project developed the focused question for the systematic review. The MCG team, with support from AOTA staff and the advisory group, developed a search strategy to include population; inclusion and exclusion criteria; and key search terms based on population, interventions, and outcomes.

The key word search terms for interventions were based on areas of occupation (instrumental activities of daily living [IADLs] and education and work) from the first edition of the Occupational Therapy Practice Framework: Domain and Process (AOTA, 2002). IADLs can be defined as complex activities that support daily life in the home and community and include meal preparation, shopping, home management, and driving and community mobility (AOTA, 2002). Terms from the Framework were also correlated with terms typical of outcomes identified in the mental health literature. To operationalize serious mental illness, the group used the CMH definition (U.S. Department of Health and Human Services, 1999), which requires a person to have at least one 12-mo disorder other than a substance use disorder meeting criteria in the Diagnostic and Statistical Manual of Mental Disorders (4th ed., text rev.; DSM–IV–TR; American Psychiatric Association, 2000) and to have serious impairment (Substance Abuse and Mental Health Services Administration, 1993). Table 1 provides a comprehensive list of the search terms used in the review.

Articles included in the review met the following criteria: published in an English-language, peer-reviewed journal; involved participants with a diagnosis of severe mental illness ages 18–65; and used interventions within the scope of occupational therapy practice. AOTA uses a grading system for levels of evidence based on standards from evidence-based medicine. This system standardizes and ranks the value of scientific evidence for biomedical practice using the grading criteria in Table 2. Only studies determined to be Level I, Level II, or Level III evidence were included. Studies were excluded if they were published before 1990, were Level IV or V evidence, used purely qualitative methods, were not peer reviewed, were limited to geriatric or pediatric populations, or used interventions outside the scope of occupational therapy practice. Databases searched included CINAHL, Medline, PsycInfo, HealthStar, Alternative Medicine, Social Work Abstracts, Cochrane Central Register of Controlled Trials and Database of Systemic Reviews, Database of Abstracts of Effects, ACP Journal Club, and OTseeker.

The search of the databases was completed by a medical librarian with experience in evidence-based literature review, using a filter based on one developed by McMaster University (www.henryfordconnect.com/sladen.cfm?id=286). Abstracts were sought for all citations from this review. All abstracts were downloaded into Zotero (www.Zotero.org), a free, Web-based citation manager extension of Mozilla Firefox that was used to manage all abstracts and articles.

Results

All 1,964 abstracts identified by the search process were reviewed by at least three people working on the project, using the inclusion and exclusion criteria described earlier. One hundred one articles were acquired and assigned to individual reviewers. After further review, some of the articles were found not to meet the inclusion criteria and were not included in the final review. Additional articles were identified from reviews of reference lists and hand searches. The remaining 52 articles that met all inclusion criteria were analyzed and critically appraised and summarized in an evidence table. A Critically Appraised Topic (CAT) further summarized and synthesized the information, and both the evidence table and CAT were submitted to AOTA staff and the project consultant for review. Of the articles included in the review, 31 were Level I studies, 13 were Level II studies, and 8 were Level III studies. Selected studies identified by the review are summarized in Supplemental Table 1, available online at www.ajot.ajotpress.net (navigate to this article, and click on “supplemental materials”). The evidence related to community integration and normative life roles is presented according to the following themes: social participation (including social skills training); IADLs (including life skills training and physical activity); work
and education; neurocognitive training; intensity and duration of intervention; client-centered intervention; and context and environment of intervention.

**Social Participation (Including Social Skills Training)**

Several studies addressed social participation and social skills training, and moderate to strong support was found for intervention in these areas. Many studies identified improved social skills after training in specific interpersonal skills (e.g., assertiveness training) and communication skills. Most Level I studies conducted assessment immediately after training and intervention and found that clients demonstrated increases in measured skills, including social skills (Anzai et al., 2002; Buchain, Vizzotto, Henna Neto, & Elks, 2003; Dilk & Bond, 1996; Granholm et al., 2005; Kopelowicz, Zarate, Smith, Mintz, & Liberman, 2003; Kurtz et al., 2007; Liberman et al., 1998; Marder et al., 1996; McGurk, Mueser, Feldman, Wolfe, & Pascaris, 2007).

One meta-analysis found that skills training was moderately to strongly effective in teaching inpatients interpersonal and assertiveness skills and reducing psychiatric symptoms (Dilk & Bond, 1996). A Level I randomized controlled trial (RCT) by Marder et al. (1996) addressed the effectiveness of social skills training specific to social interactions and communication or group therapy to support the development of social adjustment in participants with schizophrenia. This RCT found some effect for skills training on roles, social and leisure activities, and personal well-being. Granholm et al. (2005) compared usual treatment with usual treatment plus cognitive behavioral social skills training and found that the combined treatment group performed social functional activities more frequently than the usual treatment but showed no significant improvement when performing everyday functional activities.

Several studies specifically compared groups differentiated by medication alone and medication and training

---

**Table 1. Search Terms for Systematic Review on Occupational Therapy Interventions for Paid and Unpaid Employment and Education for Adults With Serious Mental Illness**

<table>
<thead>
<tr>
<th>Category</th>
<th>Key Search Terms</th>
</tr>
</thead>
<tbody>
<tr>
<td>Patient–client</td>
<td>Serious mental illness, chronic mental illness, serious and persistent mental illness, severe mental illness, psychosis, psychotic disorder, schizophrenia, mood disorder</td>
</tr>
<tr>
<td>Population</td>
<td>Child care (parenting, parents, childrearing, parent child relations), meal preparation (menu planning, cooking, food related skills, meal planning), home management (housekeeping, household management, laundry skills, ironing, repair, cleaning, gardening/yard work), shopping (grocery shopping, clothes shopping), time management (activity diary, individual time use, time, time factor, routines), safety (home safety, prevention, safety risks), education exploration (learning, career counseling, nonprofessional education), volunteer exploration (volunteerism, social participation, voluntary workers), retirement exploration (retiree), work exploration (occupation, vocation, job, employment, work), identifying an area of interest in work/education employment seeking (interest inventories, interests, personality traits, vocational interests, self evaluation, career planning, vocational aptitude), employment seeking (interviewing, vocational rehabilitation, resume writing, employability, job search, assistance, sheltered workshops, employment, unemployment); job performance (work performance, employee attitude, work ethic, schedules, work tolerance, occupational stress, work environment, work habits, routines, relationships, compliance with rules/policies)</td>
</tr>
<tr>
<td>Intervention</td>
<td>Communication interaction in relation to employment volunteer, home management, child care (interpersonal relations, verbal/nonverbal processing abilities, communication counseling, listening skills, conversational skills, social communication, communicative skills); simulated/practice in employment, volunteer, home management, child care (psychodrama, social stories, simulation, modeling, coaching); decision making (decision making skills, problem solving, problem solving skills, thinking skills); activity groups in volunteer, home management, child care (programming, group counseling, group work, occupational therapy groups); skill training (living skills training, social skills training, community living skills training, self management, functional adaptation skills training, psychosocial intervention, everyday living skills training, daily living skills); psychosocial clubs (Fountain House, club house); assertive community treatment; psychosocial rehabilitation; psychiatric rehabilitation</td>
</tr>
<tr>
<td>Comparison</td>
<td>N/A</td>
</tr>
<tr>
<td>Outcomes</td>
<td>N/A</td>
</tr>
</tbody>
</table>

Note. N/A = not applicable.
or therapy. Glynn et al. (2002) found that clinic-based plus in vivo skills training with medication produced quicker and significantly higher levels of instrumental functioning and symptom management than clinic-based skills training alone. Buchain et al. (2003) compared a control group of clients who had medication alone with a group who had medication and occupational therapy and found that clients with treatment-resistant schizophrenia exhibited better interactions with occupational therapy and medication than with medication alone over seven monthly assessment periods. Using a similar method, Grawe, Falloon, Widen, and Skogvoll (2006) compared an integrated psychosocial approach (IT) with a standard treatment approach (ST). They found that the IT group was superior to the ST group in reducing negative symptoms and minor psychotic episodes and in stabilizing positive symptoms, but the intervention did not reduce hospital admissions or major psychotic recurrences. More IT patients than ST patients had better 2-yr outcomes, according to a composite index based on the absence of hospital admission, a major or minor psychotic episode, persistent psychotic symptoms, a suicide attempt, or poor compliance with treatment.

IADLs (Including Life Skills Training and Physical Activity)

Many studies have addressed some elements of IADLs in people with chronic mental illness, such as health management and maintenance, and community mobility under the guise of community reintegration, but few studies have used IADL performance as an outcome measure. Those studies that did address IADL issues primarily used self-report questionnaires or checklists as the outcome measures as opposed to task observation, so the conclusions, although in many cases encouraging for the practice of occupational therapy, remain limited.

Tungpunkom and Nicol (2008) conducted a systematic review comparing the effectiveness of life skills programs with that of standard care or other comparable programs’ therapies. Elements of life skills programs include training in managing money, organizing and running a home, domestic skills and personal self-care, and related interpersonal skills. Dilk and Bond (1996) completed a meta-analysis of 68 studies of skills training to establish its effectiveness as an intervention for people with chronic mental illness. Training programs using either behavioral or cognitive–behavioral approaches taught general interpersonal, assertiveness, prevocational, ADL, microinterpersonal, dating, affective management, and cognitive skills. Regardless of approach, skills training demonstrated a positive, moderate effect across studies and was found to be moderately to strongly effective in teaching inpatients interpersonal and assertiveness skills and reducing psychiatric symptoms. Outcome measures addressed in these studies included skill acquisition, symptom reduction, personal adjustment, hospitalization, and vocational readiness. These reviews highlighted the dearth of validated measurement tools used consistently across studies, including the lack of functional assessments.

Several studies evaluated a community reentry treatment program based on the Social and Independent Living Skills Modules developed at the University of California, Los Angeles, and modified for use in the rapid turnover, “crisis” operations of a typical acute psychiatric inpatient facility. These studies sometimes used “traditional occupational therapy,” referring to craft or recreational groups, as a control group. The skills training program showed evidence of improvement, especially in areas directly related to those skills addressed, such as skills to allow clients to reenter the community and actively follow through with their own care (Kopelowicz, Wallace, & Zarate, 1998; Liberman et al., 1998). Another study compared people who received skills training with health care management with people who received only health care management training. Health care management training was found to be beneficial for both groups regarding keeping medical appointments and taking medication; however, the enhanced group was determined to have participated more and lived more successfully in the community (Bartels et al., 2004).

Several studies with Level I evidence comparing the results of skills training specific to self-management, medication management, and community living expectations with results of a comparison program found that participants receiving skills training integrated more quickly and more successfully into the community over a maximum 2-yr period (Anzai et al., 2002; Chan, Lee, & Chan, 2007; Glynn et al., 2002; Granholm et al., 2005; Grawe et al., 2006; Kopelowicz et al., 1998, 2003; Liberman et al., 1998; Moriana, Alarcon, & Herruzo, 2006). Two recent Level III studies (Cook et al., 2010; Starino, et al., 2010) examined the effectiveness of peer-led Wellness Recovery Action Planning (WRAP) groups in improving self-management, skills, recovery orientation, and hope in adults with severe mental illness. Both studies found that hope and recovery orientation improved significantly from pretest to posttest. Participants in the Cook and colleagues study reported significant improvements in using wellness tools in their daily routines, having a plan for dealing with...
symptoms, having a social support network, and taking responsibility for their own wellness.

Other studies have demonstrated that active engagement, whether in skills training per se or other forms of experiential involvement, including exercise groups, produces more functional results in clients. Two systematic reviews and a Level II nonrandomized trial (Dunn, Trivedi, Kampert, Clark, & Chambliss, 2005; Dunn, Trivedi, & O’Neal, 2001; Hutchinson, Skrinar, & Cross, 1999) found that exercise reduced symptoms of depression, improved self-esteem, and increased participation in performance and satisfaction of ADLs. The authors reported that further research is needed to determine the dose–response effect of exercise on people with serious mental illness. Marder et al. (1996) addressed the effectiveness of social skills training versus group therapy in supporting the development of social adjustment in participants with schizophrenia in a Level I RCT and found some effect of skills training on roles, social and leisure activities, and personal well-being.

Work and Education

The companion systematic review in this issue by Arbesman and Logsdon (2011) examines the effectiveness of occupational therapy interventions for employment and education for adults with serious mental illness and provides a thorough assessment of the literature supporting educational opportunities and programs for people in this population.

Neurocognitive Training

Several Level I RCTs integrating cognitive–behavioral intervention and neurocognitive training with skills training demonstrated improved performance outcomes on social functioning and cognitive performance and reduced positive symptoms (Granholm et al., 2005; Kurtz, 2007; McGurk et al., 2007). Granholm et al. (2005) compared usual treatment with usual treatment plus cognitive–behavioral social skills training and found that the combined treatment group performed social function activities more frequently than the usual treatment but showed no significant improvement when the group performed everyday functional activities. Kurtz and colleagues (2007) compared computer training with computer-assisted cognitive remediation with explicit training. They found an improvement in neurocognitive domains of working memory, verbal episodic memory, spatial episodic memory, processing speed, and reasoning and executive function in both groups without significant difference evident between groups. However, the Time × Group interaction was significant for working memory, suggesting an advantage for cognitive remediation training on this specific neurocognitive domain. McGurk, Mueser et al. (2007) compared a cognitive training program plus SE to SE alone. At 2–3 yr follow-up, participants in the cognitive training program plus SE were more likely to work and worked more hours than those in the SE program alone.

McGurk, Twamley, et al. (2007) conducted a meta-analysis to evaluate the effects of cognitive remediation for improving cognitive performance, symptoms, and psychosocial function in schizophrenia. After examining 26 RCTs with 1,151 patients, they found that the results indicated significant improvements for all outcomes; stronger effect sizes were found for combined cognitive and psychiatric rehabilitation than for cognitive remediation alone.

Intensity and Duration of Intervention

Few studies addressed the relationship between duration or intensity and behavioral change; however, evidence has suggested greater benefits for longer intervention, more intensive intervention, or both (Dunn et al., 2001; Glynn et al., 2002; Grawe et al., 2006). Two other studies, one Level II (Moriana et al., 2006) and one Level I (Duncombe, 2004), reported inconclusive results for intensity and duration. Although the results of many studies presented in this review were positive, the outcomes were studied for short periods of time, and few studies measured long-term behavior changes. For studies examining long-term gains, research has demonstrated that unsupported skills tended to diminish over time (Anzai et al., 2002; Kopelowicz et al., 2003).

Client-Centered Intervention

Several studies evaluated the effectiveness of providing client-centered interventions tailored to a program participant’s specific needs. Phelan, Lee, Howe, and Walter (2006) conducted a pilot pretest–posttest study with 19 parents with mental illness. This Level III study provided 6 once-weekly clinic-based group sessions once per wk that focused on positive parenting skills, understanding children’s behavior, building relationships, and managing misbehavior. The group sessions were followed by 4 home visits once per wk to facilitate implementation strategies and develop a family safety plan, if appropriate. Results demonstrated that parents’ perceptions and management skills of children’s behaviors improved. Frank et al. (2005) compared interpersonal and social rhythm therapy (IPSRT) with intensive clinical management (ICM) for people with acute episodes of bipolar I disorder in a Level I RCT. IPSRT, which stresses the importance of
maintaining daily routines and identifying potential rhythm disruptors, resulted in longer survival without a new affective disorder, and participants had higher regularity of social rhythms at the end of acute treatment than those receiving ICM.

Ekund (2001) conducted a Level III pretest–posttest study of mental health clients’ perceptions of roles. The 20 participants identified the following occupational roles as most valued: home maintainer, family member, hobbyist, and friend. The number of valued roles per person increased significantly from admission to discharge and follow-up. Five of eight valued roles—friend, hobbyist, worker, family member, and caregiver—showed associations with quality of life, and the relationship of friend to quality of life was the most consistent over the three measurement points. No association was found between occupational roles and a general measure of mental health.

Schindler (2005) conducted a Level II non-RCT with a forensic population of men with schizophrenia that examined whether participants in individualized intervention based on the Role Development Program, compared with participants in a multidepartmental activity program, would demonstrate improved tasks and interpersonal skills and social roles. Participants in the Role Development Program group demonstrated significantly greater improvement in task skills, interpersonal skills, and role performance. This study provides support that people with multiple disabling factors, such as a long psychiatric history, legal charges, and low levels of education can develop skills and roles when provided comprehensive meaningful rehabilitation. Brown, Goetz, Van Sciver, Sullivan, and Hamera (2006) conducted a Level II non-RCT with people co-occurring obesity and psychiatric disabilities. They found that participants lost weight in a program emphasizing occupation-based, cognitive–behavioral methods in a psychiatric rehabilitation program.

**Context and Environment of Intervention**

Reviewing the literature in relation to context of intervention yielded mixed results. Skills training with role playing was shown to be better than interventions that involved only discussion. This pattern was demonstrated in two RCTs (Glynn et al., 2002; Marder et al., 1996) and one Level III study (Schindler, 1999). Several studies identified experiential participation in occupations related to self-management, home management, cooking, and community integration tasks related to obtaining education and work, managing money, and maintaining healthier behaviors. Improvement was noted in these occupation-based programs, but no difference was found in the outcomes of performance skills, whether in a clinical setting or in a natural setting (Bartels et al., 2004; Bickes, DeLoache, Dicer, & Miller, 2001; Duncombe, 2004; Granholm et al., 2005; Phelan et al., 2006; Schindler, 1999).

The studies included in this review have several limitations. Some had small sample sizes and may have incorporated a limited follow-up period. In several studies, the participant dropout rate was high and may not have been documented. In some studies, the intervention and comparison groups varied with respect to intensity of intervention, and other studies lacked a control group. In addition, some studies were conducted in other countries, and those interventions may be somewhat different from those used in the United States.

**Discussion and Implications for Practice, Research, and Education**

Direct evidence for the effectiveness of interventions to improve recovery is, in general, limited. Evidence can be found indirectly, however, by examining the components of recovery. This systematic review has evaluated interventions within the scope of occupational therapy to improve performance in components of community integration and the acquisition of normative life roles for people with serious mental illness. The results indicated moderate to strong evidence for the effectiveness of social skills training and for supported employment using individual placement and support to result in competitive employment. The evidence for the effectiveness of life skills and IADL training and supported education to improve performance is moderate, as is the evidence for neurocognitive training paired with skills training in the areas of work, social participation, and IADLs. The evidence is limited but positive for client-centered intervention and increased intensity and duration of treatment. The evidence that providing intervention in the natural context is more beneficial than in the clinic setting is inconclusive.

The results of this systematic review provide the best available evidence to guide client-centered intervention. The information presented here can be used for both individual intervention plans and the development of new programs. Depending on the setting in which one works, the program may be developed solely by the occupational therapy practitioner or in collaboration with partners from other disciplines. These systematic review results can also be an important part of discussions with multiple audiences and are useful in helping occupational therapy practitioners make evidence-based decisions.
practitioners clearly articulate the focus of up-to-date psychiatric practice, avoiding outdated descriptions of occupational therapy. Including evidence for practice is useful when one is communicating with clients and their families; other mental health providers; local, state, and national governmental agencies; and payers or advocacy groups. The evidence can also be a centerpiece of conversations with other occupational therapy practitioners. These discussions can be informal (e.g., when one is discussing an individual client) or more formal (e.g., in a journal club or departmental meeting).

The results of this systematic review indicate that more research in the area of recovery is needed. Well-designed research would assess behavioral change within the context of the recovery model using broadly accepted assessments and include long-term outcomes of client-centered and occupation-based interventions. This type of research is best achieved through the development of a cooperative network of academic, clinical, and professional staff to develop, design, and seek grant funding for multisite efficacy studies.

Academic programs increasingly focus on evidence-based practice, and it is important that mental health curricula incorporate the most up-to-date information on best practice. In addition, students need to learn to distinguish between available evidence and areas in which evidence is lacking. The evidence for mental health practice can also be highlighted in evidence-based practice and research classes, and journal clubs should include articles that are specific to mental health practice. Developing an evidence-based mental health curriculum and increasing the emphasis on mental health throughout the academic program are the first steps to increasing the number and quality of people interested in this important area of practice. ▲

Acknowledgments

We thank Margarita Ortiz Serrano; Rebecca Sisson; Tom Pirrung, Larry Davidson, Paolo Del Vecchio, Kristine Haerdl, Christine Peters, Deborah Pitts, Victoria Schindler, Virginia Stoffel, Marian Scheinholtz, and Deborah Lieberman.

References


* indicates studies that were reviewed for this article.


Substance Abuse and Mental Health Services Administration. (1993). Final notice [Final definitions for (1) children with a serious emotional disturbance, and (2) adults with a serious mental illness]. *Federal Register, 58*, 29422–29425.

