
Treatment Activity Preferences of Occupational Therapists in Adult Physical Dysfunction Settings

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Key Words: activities • physical disabilities

Objectives. Research has suggested that using an adaptive approach to provide direct training in occupational behaviors is more effective than using a remedial approach to retrain component skills. This survey was done to see whether occupational therapy practice in physical dysfunction reflects that research.

Method. Surveys from a convenience sample of 269 (70.2% response rate) occupational therapy directors in adult physical rehabilitation facilities throughout the United States were analyzed to determine the relative rankings of remedial and adaptive activities by therapists in those settings.

Results. For all facilities combined, the four most frequently used types of activities, in order of frequency, were self-care, upper extremity exercise, functional mobility, and neuromuscular training. Facilities using multiple formal methods to assess client priorities used functional activities more frequently than other facilities.

Conclusion. Occupational therapists in adult physical dysfunction settings are not routinely providing client training in the full spectrum of occupational behaviors.

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This article was accepted for publication July 26, 1994.

Occupational therapists currently use two different types of treatment for adults with physical dysfunction. Therapists using the *remedial approach* train clients in the component skills that are necessary to do functional activities. These skills include muscle strength, visual perception, coordination, and cognitive abilities such as organization. Therapists following the *adaptive approach* train clients in actual functional activities to help them regain function. The adaptive approach seeks to build on the clients' intact skills, whereas the remedial approach seeks to correct clients' deficits (Neistadt, 1990). Previous studies of therapists' choices of treatment activities have shown that in home health and group home settings, therapists used remedial types of treatment, such as sensory integration and rote exercise, more frequently than functional activities, such as community orientation and homemaking (Kunstaetter, 1988; Neistadt, 1986). The current study examined the relative rankings of remedial and adaptive treatment activities by occupational directors in adult rehabilitation hospitals. It also examined (a) the effect of facility type on treatment activity ratings, and (b) the effect of facilities' approaches to client priority assessment on treatment activity rankings.

Literature Review

The frequent use of the remedial approach may be attributed to the influence of the medical model on occupational therapy. This model is based on the paradigm of reductionism. It reduces a person to the sum of various measurable, component parts and assumes that all the parts can be brought together again into an understanding of the whole (Kielhofner, 1978). The goal of therapy under the medical model is to normalize the component parts of a person. The assumption is that remediation of component skills will result in health and restoration of function (Mathiowetz, 1993). Additionally, occupational therapists traditionally have had to document quantifiable restoration of physical function in order to be reimbursed by third-party payers such as Medicare (Kunstaetter, 1988). In that reimbursement climate, most occupational therapists have seen the component skills that are addressed by the remedial approach as more easily quantifiable than the outcomes of functional training (Neistadt, 1986). The health care system is moving toward a greater emphasis on functional outcomes, but many therapists still do not feel confident that functional activities are billable and measurable medical services (Burke & Cassidy, 1991; Fisher & Short-DeGraff, 1993). That is, physical dysfunction occupational therapists remain heavily influenced by the medical model in which most of them practice (Mathiowetz, 1993).

But the historical occupational therapy view of persons is holistic and inconsistent with the reductionist view of a person presented by the medical model (How-

ard, 1991). The focus of occupational therapy throughout its history has been for persons to find fulfillment and wholeness through human activity (Engelhardt, 1977). A refined version of this holistic philosophy is the Model of Human Occupation (Kielhofner & Burke, 1980). Using this frame of reference, the occupational therapist views the person as an open system composed of subsystems that include basic component skills. This system must be considered as a whole, within the context of its history and environment. In line with this frame of reference, Rogers (1982) has described occupational therapy as a process that is geared not toward a person's skill deficits, but toward the abilities a person has left after illness or injury. These combined abilities and their relationship to the environment are analyzed together so the therapist can provide a "just right" challenge (Rogers, 1982, p. 713). Occupational therapy that deals with component parts and fails to treat the whole person is not true to the philosophical base of occupational therapy. The adaptive approach to treatment is more consistent with the holistic philosophy of occupational therapy.

Occupational therapy philosophy is not the only reason to favor adaptive treatment activities over remedial ones. Research has shown that clients may have difficulty understanding how therapy that uses remedial activities is related to their performance in daily living skills (Jongbloed & Morgan, 1990). Clients understand their disabilities in terms of what has happened to them and their ability to function. Adaptive treatment activities relate directly to the clients' need to function in activities of daily living. Research has also shown that clients perform better during activities that are occupationally embedded than during rote exercise (Sietsema, Nelson, Mulder, Mervau-Scheidel, & White, 1993). Adaptive activities are inherently occupationally embedded in a way that relates directly to clients' function.

Outcome studies have consistently shown that adaptive treatment activities improve clients' functional performance and increase their independence (Cook, Luschen, & Sikes, 1991; Giles & Clark-Wilson, 1988; Giles & Shore, 1988, 1989a, 1989b; Mann & Svorai, 1994; Neistadt, 1987, 1994a; Neistadt & Marques, 1984; Sandler & Harris, 1992; Shillam, Beeman, & Loshin, 1983). In contrast, outcome studies about remedial treatment have not consistently shown this approach to improve clients' functional abilities (Neistadt, 1994b). Most of the existing literature on remedial approaches fails to isolate the effects of treatment from the natural recovery of component skills. An examination of the rehabilitation of clients who had had a stroke revealed no evidence that remedial treatment affected the recovery of motor, sensory, coordination, or visual deficits (Reding & McDowell, 1989). In an overview of types of treatment for perceptual-motor deficits in adults with brain injury, Zoltan (1992) concluded that lack of efficacy research makes the remedial transfer-of-training method of treatment difficult to endorse,

and that there is no evidence that sensory integrative treatment is any more effective than the adaptive approach of functional skills training.

Additionally, recent research in motor learning and cognitive-perceptual retaining has suggested that the adaptive treatment approach may be more effective than the remedial one in facilitating increased competence in occupational behaviors. This research showed that motor and perceptual training is fairly task specific, especially for adults with brain injury (Mathiowetz, 1993; Neistadt, 1992; Sabari, 1991).

In sum, the literature shows that adaptive methods of treatment are consistent with the history of occupational therapy and are more effective than remedial methods for most clients. But is this finding reflected in therapists' choices of treatment activities in clinical settings? In a survey of 101 physical rehabilitation and psychosocial fieldwork centers throughout the United States, Eliason and Gohl-Giese (1979) found that the five most frequently used treatment modalities in physical rehabilitation centers, from highest to lowest frequency, were (a) activities of daily living (ADL), (b) passive range of motion, (c) active range of motion activities and resistive exercise with activity, (d) neuromuscular facilitation and inhibition techniques and homemaking training, and (e) active range of motion without activities and adaptation of tool handles. In a follow-up study with 194 clinics throughout the country, Gohl-Giese and Eliason (1986) found a trend for physical disabilities therapists to use nonactivity physical modalities even more than in their 1979 survey. In a survey of 112 physical and psychosocial treatment settings in predominantly suburban or urban regions in 32 states, Barris, Cordero, and Christiaansen (1986) found that physical disability therapists were using primarily ADL and exercise modalities in treatment. Two retrospective chart audits done in the northeast region of the country—one for 18 community settings for adults with developmental disabilities and one in a home health care agency—found that occupational therapists working in these agencies used remedial more than adaptive treatment activities (Kunstaetter, 1988; Neistadt, 1986).

More recently, in a survey of 75 occupational therapists working in physical rehabilitation settings throughout the United States, Pendleton (1989) found that therapists spent an average of 24.87% of their direct treatment time providing self-care training, 14.19% providing independent living skills training, and 59.75% providing therapeutic exercise, range of motion, and neurodevelopmental techniques. Taylor and Manguno (1991) surveyed 83 fieldwork supervisors and 59 former occupational therapy students from Louisiana State University Medical Center, mainly from the southeastern region of the country. They found the top five ranked treatment activities used by the 29 fieldwork supervisors working in physical dysfunction settings, from highest to lowest, were (a) joint protection and homemaking, (b) self-care, (c) work sim-

plification and prevocational skills, (d) relaxation training and sensory integration, and (e) social skills training. The top five ranked treatment activities used by the 34 former students working in physical dysfunction settings, from highest to lowest, were (a) self-care, (b) work simplification, (c) joint protection, (d) homemaking, and (e) social skills training. Taylor and Manguno's findings, then, suggest a heavier reliance on functional activities by the therapists in their sample than by therapists in the other studies reviewed here. Taylor and Manguno's results could represent a trend toward greater use of functional activities in physical disabilities practice. It is also possible, however, that their sample was not representative of occupational therapy practice nationwide. The research questions of this study were

1. Are remedial treatment activities ranked higher than adaptive or functional ones by occupational therapists in adult physical disability settings?
2. Do the rankings of different treatment activities differ by facility type?
3. Do the rankings of different treatment activities differ by facilities' client priority assessment method?

Method

Subjects

Surveys were sent to a convenience sample of all department directors in the adult physical disability settings listed in the University of New Hampshire Occupational Therapy Department's database of fieldwork sites ($N = 404$). Sixty-five percent of these settings were in the American Occupational Therapy Association's (AOTA) Northeast region, 18% were in the South, 11% were in the West, and 5% were in the Midwest. We surveyed department directors because we thought they would have overviews of standard practice procedures for all therapists in their departments. Subjects were not compensated. Surveys were coded by number, rather than subject or facility name, to protect the confidentiality of respondents.

Instrument

Before being sent out, the survey and cover letter developed specifically for this study were reviewed by five occupational therapists with administrative and survey experience, and were revised according to their feedback. The survey contained 12 questions divided into five sections as follows: (a) Facility—3 questions, (b) Actual Treatment Staff Members (within last month)—2 questions, (c) Client Population (within last month)—2 questions, (d) Clients' Priorities (within last month)—4 questions, and (e) Treatment Activities—1 question requiring ranking of 10 items.

The Facility section asked respondents to identify the type of facility in which they worked (e.g., general

hospital with rehabilitation unit, acute rehabilitation hospital, long-term rehabilitation facility), the number of rehabilitation beds in that facility, and the facility accreditation (Joint Commission for the Accreditation of Healthcare Organizations [JCAHO] or Commission for Accreditation of Rehabilitation Facilities [CARF]). The Treatment Staff Members section asked respondents to describe the number of occupational therapy staff members and their range of years in practice. The Client Population section asked respondents about the ages and conditions of their client populations. The Clients' Priorities section asked whether clients' priorities were assessed as part of the initial evaluation, and, if so, how those priorities were assessed (e.g., informal interview, interest checklist, schedule of typical activities before onset, Occupational Performance History Interview (OPHI), other). Respondents were asked to paraphrase a typical example of a client's priority at admission and to say whether the information clients give about their priorities is detailed enough to suggest specific treatment activities.

The Treatment Activities section of the survey asked respondents to rank 10 types of treatment activities, from 1 to 10, with 1 indicating the activities most frequently used by therapists in that department and 10 indicating the activities least frequently used. The treatment activities listed on the survey were (a) self-care (dressing, bathing, grooming, feeding), (b) homemaking (meal planning and preparation, cleaning, shopping, laundry), (c) community-living skills (budgeting, child care, driving, vocational training), (d) functional mobility (transfers, bed and wheelchair mobility, functional ambulation), (e) cognitive and perceptual retraining (computer, paper and pencil tasks, puzzles), (f) upper extremity exercise (coordination, positive range of motion [PROM], strengthening, Baltimore Therapeutic Equipment [BTE] work simulator¹), (g) neuromuscular training (neurodevelopmental treatment [NDT], sensory integration, balance training), (h) assistive technology, (i) sensory reeducation, and (j) physical agent modalities.

Procedures

Surveys, cover letters, and stamped return envelopes were mailed to all subjects with a request to return completed surveys within 1 month. No follow-up mailing was necessary because the response rate of 70.2% was acceptable (Mann, 1985).

Results

Of the 404 surveys sent, 290 were returned. Twenty-one surveys were not usable because they were either returned due to wrong address or came from facilities that served only psychosocial or pediatric populations. There

¹Manufactured by Baltimore Therapeutic Equipment, 1201 Bernard Drive, Baltimore, MD 21223.

were 269 usable responses (70.2%). One hundred sixty-four (61%) of the responses were from the Northeast, 52 (19%) were from the South, 38 (14%) were from the West, and 15 (6%) were from the Midwest. Eighty-eight percent of all responding facilities were accredited by the JCAHO, and 49% were accredited by the CARF. Forty-six percent of the occupational therapy departments in these facilities served adolescents (ages 12–17 years), 73% served young adults (ages 18–21 years), 93% served adults (ages 22–25 years), and 96% served older adults (older than 65 years). The order of frequency of diagnostic categories seen, from most to least frequent, was neurology, orthopedics, general medical, hands, cardiopulmonary, oncology, and burns. For mean numbers of rehabilitation beds, registered occupational therapists, certified occupational therapy assistants, occupational therapy aides, and minimal and maximal years of occupational therapy experience, for all of the facilities combined, see Neistadt (1995).

Two hundred sixty-seven respondents identified their facility type. Of these, 51 respondents (19%) worked in general hospitals without rehabilitation units, 109 (41%) worked in general hospitals with rehabilitation units, 42 (16%) worked in acute rehabilitation hospitals, 19 (7%) worked in long-term rehabilitation facilities, 45 (17%) worked in freestanding rehabilitation clinics, and 1 (0.4%) worked in a home health care agency. For mean numbers of rehabilitation beds, registered occupational therapists, certified occupational therapy assistants, occupational therapy aides, and minimal and maximal years of occupational therapy experience, for each of these facility types, see Neistadt (1995).

Are Remedial Treatment Activities Ranked Higher Than Adaptive or Functional Activities by Occupational Therapists in Adult Physical Disability Settings?

Mean rankings of each of the different treatment activities for all facilities combined ($N = 269$) and by region are

shown in Table 1. For all facilities combined, self-care activities ranked first, followed by upper extremity exercise, functional mobility, and neuromuscular training. Homemaking activities ranked fifth; community-living skills activities ranked seventh. These rankings were consistent across regions except for a reversal of the upper extremity exercise and functional mobility rankings in the West. The answer to this research question, then, is not clear. Within the top four ranked activities, two (self-care activities and functional mobility training) clearly address occupational behavior, and two (upper extremity exercise and neuromuscular training) are aimed primarily at remediation of component motor skills.

Do the Rankings of Treatment Activities Differ by Facility Type?

Mean rankings of each of the different treatment activities by facility type are shown in Table 2. Home health care agencies were not included in these tables because there was only one facility in that category. These tables indicate that self-care activities were ranked first for all but the freestanding rehabilitation clinics, which ranked upper extremity exercise first. Upper extremity exercise and functional mobility training were ranked within the top three activities for all facilities. Neuromuscular retraining ranked fourth in all except the acute rehabilitation hospitals, which ranked homemaking activities fourth and neuromuscular retraining fifth. Homemaking ranked fifth in all of the other facility types except general hospitals without rehabilitation units, which ranked physical agent modalities fifth and homemaking seventh. Cognitive and perceptual retraining ranked sixth for all facility types. All facility types ranked community-living skills, assistive technology, and sensory reeducation near the bottom of their lists. Except for general hospitals without rehabilitation units, all facilities also ranked physical agent modalities in the bottom 40% of their lists. Generally speaking, different facility types ranked treatment activities very similarly, with a few exceptions.

Table 1
Mean and Relative Rankings of Treatment Activities for All Regions and by Region

Treatment Activity Category	All Regions Combined ($N = 269$)	Northeast Region ($n = 164$)	South Region ($n = 52$)	West Region ($n = 38$)	Midwest Region ($n = 15$)
Self-care	1.7 (1)	1.9 (1)	1.4 (1)	1.5 (1)	1.4 (1)
UE exercise	2.5 (2)	2.4 (2)	2.7 (2)	2.8 (3)	2.9 (2)
Functional mobility	3.0 (3)	3.1 (3)	3.0 (3)	2.7 (2)	2.6 (3)
Neuromuscular training	4.1 (4)	4.5 (4)	3.2 (4)	3.6 (4)	4.6 (4)
Homemaking	4.4 (5)	4.6 (5)	4.1 (5)	3.8 (5)	4.9 (5)
Cognitive and perceptual training	4.7 (6)	4.9 (6)	4.4 (6)	4.3 (6)	4.9 (5)
Community living skills	6.1 (7)	6.5 (8)	5.8 (7)	5.3 (7)	5.9 (7)
Physical agent modalities	6.5 (8)	6.4 (7)	6.3 (8)	6.74 (10)	7.3 (9)
Sensory reeducation	6.6 (9)	6.6 (9)	6.7 (9)	6.5 (8)	6.8 (8)
Assistive technology	7.3 (10)	7.5 (10)	7.4 (10)	6.72 (9)	6.2 (7)

Note. UE = Upper Extremity, 1 = most frequently used, 10 = least frequently used.

Table 2
Mean and Relative Rankings of Treatment Activities for All Facilities and by Facility

Treatment Activity Category	All Facilities Combined (N=269)	General Hospital, No Rehabilitation Unit (n=51)	General Hospital With Rehabilitation Unit (n=109)	Acute Rehabilitation Hospital (n=42)	Long-term Rehabilitation Facility (n=19)	Freestanding Rehabilitation Clinic (n=45)
Self-care	1.7 (1)	1.9 (1)	1.3 (1)	1.3 (1)	1.8 (1)	2.8 (2)
UE exercise	2.5 (2)	2.0 (2)	2.8 (2)	3.1 (3)	2.4 (2)	2.2 (1)
Functional mobility	3.0 (3)	3.4 (3)	2.9 (3)	2.4 (2)	2.9 (3)	3.7 (3)
Neuromuscular training	4.1 (4)	4.4 (4)	4.1 (4)	3.8 (5)	4.1 (4)	3.9 (4)
Homemaking	4.4 (5)	5.6 (7)	4.5 (5)	3.6 (4)	4.7 (5)	4.1 (5)
Cognitive and perceptual training	4.7 (6)	5.2 (6)	4.6 (6)	4.4 (6)	5.2 (6)	4.5 (6)
Community living skills	6.1 (7)	7.5 (10)	6.3 (7)	5.4 (7)	6.6 (8)	5.2 (7)
Physical agent modalities	6.5 (8)	4.7 (5)	7.2 (9)	7.6 (10)	7.2 (9)	5.2 (7)
Sensory reeducation	6.6 (9)	6.2 (8)	7.0 (8)	6.9 (8)	7.2 (9)	5.7 (8)
Assistive technology	7.3 (10)	6.7 (9)	7.7 (10)	7.4 (9)	6.3 (7)	7.0 (9)

Note. UE=Upper Extremity; 1=most frequently used, 10=least frequently used.

Do the Rankings of Treatment Activities Differ by Client Priority Assessment Method?

Although 99% of the facilities in this sample reported assessing clients' priorities on admission, 153 (57%) used only informal interview to obtain this information. The relative ranking of treatment activities for this group was identical to the order listed in Table 1 for the Northeast region.

Only six (2%) of the facilities in this sample used all three of the formal client priority assessment methods listed on the survey: interest checklist, schedule of typical activities before onset, and OPHI. The ranking of treatment activities for this small group is shown in Table 3. This ranking is markedly different from the rankings listed in Tables 1 and 2. In this group of six, homemaking activities were ranked third and community-living skills were ranked sixth—the highest rankings these occupational behavior activities received.

Discussion

The ranking of treatment activities found in this study for all adult physical dysfunction facilities is very similar to

the ranking found by Eliason and Gohl-Giese (1979). In both rankings, self-care ranked first, upper exercise like active and passive range of motion ranked second, and neuromuscular training ranked fourth. Eliason and Gohl-Giese also found that homemaking ranked fourth, whereas in the present study, homemaking ranked fifth. The drop in the ranking of homemaking from 1979 to the present is consistent with Gohl-Giese and Eliason's findings in 1986 that occupational therapists in physical dysfunction settings were moving toward greater use of nonactivity physical modalities. The wording of the two surveys might also explain this difference. Functional mobility training was not a choice in Eliason and Gohl-Giese's (1979) study, and they used ADL rather than self-care. It is possible that respondents to the 1979 study saw functional mobility as part of ADL, and that breaking functional mobility out as a separate category artificially lowered the ranking of homemaking in the present study.

The findings of this study are also consistent with Barris, Cordero, and Christiaansen's (1986) finding that physical disability therapists were using primarily ADL and exercise modalities in treatment, and with Pendleton's (1989) findings that training in community-living skills is not a high-frequency occupational therapy treatment in adult physical rehabilitation settings. This study did not, however, find the clear-cut dominance of remedial over adaptive or functional treatment activities found by Kunstaetter (1988) and Neistadt (1986) in their retrospective chart audits of community settings for adults with developmental disabilities and home health care, respectively. This difference might simply be a reflection of the different settings and sample sizes surveyed by these three studies. The lack of clear dominance of remedial over functional activity use in this study might also indicate that occupational therapy practice is shifting back toward functional treatment activities, after a peak of remedial activities in the late 1980s. This change could be a response to the increasing demands of third-party payers' for functional outcomes in rehabilitation (Fisher &

Table 3
Ranking of Treatment Activities for Facilities Using a Combination of Interest Checklists, Schedules of Typical Activities Before Onset, and Occupational Performance History Interview to Assess Clients' Priorities (n=6)

Treatment Activity	Mean Ranking
Self-care	1.0
Functional mobility	2.2
Homemaking	2.8
Neuromuscular training	3.3
Upper extremity exercise	4.0
Community living skills	4.7
Cognitive and perceptual retraining	5.2
Assistive technology	6.2
Sensory reeducation	7.2
Physical agent modalities	7.3

Note. 1=most frequently used, 10=least frequently used.

Short-DeGraff, 1993; Howard, 1991). Both the present study and Pendleton's (1989) indicate that this movement toward functional activities does not yet embrace community-living skills activities.

The present study reinforces the trend toward greater functional activity use in occupational therapy treatment found by Taylor and Manguno (1991), although their study showed a stronger trend than this one does. In their study, all of the activities in the top five for former students were functional, and only one of the activities in the top five for fieldwork supervisors, sensory integration, was remedial; in this study two activities for remediation of component motor skills were included in the top five. Due to its relatively small size and restricted geographic locale, the sample in the Taylor and Manguno (1991) study might not be as representative of occupational therapy practice in the United States as the larger, nationwide sample in the current study. Additionally, because no information is given about the diagnostic groups seen by the therapists in the Taylor and Manguno study, it is not possible to know whether this sample was comparable to the current one in terms of types of clients treated. Differences in the client diagnostic mix between the two studies might account for the activity ranking discrepancies. The former students sample in the Taylor and Manguno study also represent a particular educational preparation. Differences in the survey formats of the two studies might have accounted for their differing results as well. Taylor and Manguno asked subjects about the relative frequency of 67 different treatment activities whereas the current study asked subjects to rank 10 different categories of activities. Some of the activities listed in the top five lists for the former study (joint protection, work simplification) could be included in self-care training. If all of the 67 activities in the Taylor and Manguno study were listed in order of frequency, the relative order of categories of treatment activities might well be similar to the ranking in the current study.

The differences in relative rankings of treatment activity types found between the different types of facilities in this study probably reflect differences in length of stay and equipment between those different facilities. For example, homemaking may have been ranked lower in general hospitals without rehabilitation units than in other facilities because clients in general hospitals may not be in the hospital long enough or feel well enough to engage in homemaking training. Self-care may have been rated lower in freestanding rehabilitation clinics than in other facilities because clients in freestanding clinics are outpatients who have already achieved self-care independence. Comments from some respondents also indicated that freestanding rehabilitation clinics did not always have the equipment (e.g., showers or private bathrooms) to do self-care training.

The heavier use of functional activities in those six facilities that use several formal methods of client priority

assessment is interesting. Given the small size of this group, this finding may simply reflect a skewed sample. This finding might also imply that treatment activity choices are different in milieus that carefully assess clients' priorities for two possible reasons. One reason is that therapists using formal methods to assess clients' priorities may be more in tune with the holistic philosophy of occupational therapy. Holistically oriented therapists who, like Rogers (1982), focus on clients' abilities instead of their deficits might be more likely to chose functional activities as a medium to help clients work on using their remaining abilities to their best advantage. The second reason for more functional activity use in these six facilities might be that clients helping to identify their priorities in a structured way may place functional activities high on their lists and indicate preferences for occupationally embedded treatment activities that are directly related to those priorities. Functional treatment activity choices in these six settings, then, could be driven by both therapist philosophies and clients' stated preferences.

Overall, this study shows a trend toward greater use of functional treatment activities by occupational therapists working in adult physical rehabilitation settings. This trend moves occupational therapy back toward its philosophical roots and away from the reductionist models that predominated in occupational therapy physical dysfunction practice in the 1970s (Mathiowetz, 1993). This trend also moves practice in a direction supported by treatment outcome, motor learning, and cognitive-perceptual research. Although this trend is encouraging, it needs to go further. According to this survey, homemaking and community-living skills training are not done as frequently as upper extremity exercise, suggesting that occupational therapists are not doing enough to optimally prepare their adult rehabilitation clients for successful community reintegration.

Conclusion

This study suggests that occupational therapists are increasingly using functional activities in treatment with adult rehabilitation clients. However, some functional activities, like community-living skills, are still not used as frequently as remedial activities like upper extremity exercise. In the face of shortening hospital stays, occupational therapists need to reorder their treatment activity priorities to emphasize client training in the full spectrum of occupational behaviors in order to prepare clients for safe discharges back to their communities.

In the past two decades, occupational therapists in physical rehabilitation have compromised their values on activity to meet the expectations for remediation in a health care system oriented toward the medical model. Now the health care system in the United States is shifting its focus to function, which is congruent with occupation-

al therapy values. Occupational therapists need to take advantage of this shift by using functional activities training in their practice. ▲

Acknowledgments

We thank Brigit Britton, OTR/L, Maureen Freda, MS, OTR/L, Alexis Henry, ScD, OTR/L, Alice Seidel, EdD, OTR/L, and Denise Wilhelm, OTR/L, for their feedback and assistance in the early stages of this project.

This study was partially funded with a grant from the Center for Health Promotion and Research, School of Health and Human Services, University of New Hampshire.

References

- Barris, R., Cordero, J., & Christiaansen, R. (1986). Occupational therapists' use of media. *American Journal of Occupational Therapy, 40*, 679-684.
- Burke, J. P., & Cassidy, J. C. (1991). The Issue Is—Disparity between reimbursement-driven practice and humanistic values of occupational therapy. *American Journal of Occupational Therapy, 45*, 173-176.
- Cook, E. A., Luschen, L., & Sikes, S. (1991). Case Report—Dressing training for an elderly woman with cognitive and perceptual impairments. *American Journal of Occupational Therapy, 45*, 652-654.
- Eliason, M. L., & Gohl-Giese, A. (1979). A question of professional boundaries: Implications for educational programs. *American Journal of Occupational Therapy, 33*, 175-179.
- Engelhardt, H. T. (1977). Defining occupational therapy: The meaning of therapy and the virtues of occupation. *American Journal of Occupational Therapy, 31*, 666-672.
- Fisher, A. G., & Short-DeGraff, M. (1993). Nationally Speaking—Improving functional assessment in occupational therapy: Recommendations and philosophy for change. *American Journal of Occupational Therapy, 47*, 199-202.
- Giles, G. M., & Clark-Wilson, J. (1988). The use of behavioral techniques in functional skills training after severe brain injury. *American Journal of Occupational Therapy, 42*, 658-665.
- Giles, G., & Shore, M. (1988). The role of the transitional living center in rehabilitation after brain injury. *Cognitive Rehabilitation, 6*, 26-31.
- Giles, G. M. & Shore, M. (1989a). A rapid method for teaching severely brain injured adults how to wash and dress. *Archives of Physical Medicine and Rehabilitation, 70*, 156-158.
- Giles, G., & Shore, M. (1989b). Brief or New—The effectiveness of an electronic memory aid for a memory-impaired adult of normal intelligence. *American Journal of Occupational Therapy, 43*, 409-411.
- Gohl-Giese, A., & Eliason, M. L. (1986). Changes in the frequency of use of occupational therapy modalities from 1978 to 1985: Educational implications. In *Occupational Therapy Education: Target 2000: Proceedings* (p. 149). Rockville, MD: American Occupational Therapy Association.
- Howard, B. S. (1991). How high do we jump? The effect of reimbursement on occupational therapy. *American Journal of Occupational Therapy, 45*, 875-881.
- Jongbloed, L., & Morgan, D. (1990). Stroke clients' perceptions of disability and treatment. *Occupational Therapy in Health Care, 7*(1), 115-125.
- Kielhofner, G. (1978). General systems theory: Implications for theory and action in occupational therapy. *American Journal of Occupational Therapy, 31*, 637-645.
- Kielhofner, G., & Burke, J. P. (1980). A model of human occupation, part I. Conceptual framework and context. *American Journal of Occupational Therapy, 34*, 572-581.
- Kunstaetter, D. (1988). Occupational therapy treatment in home health care. *American Journal of Occupational Therapy, 42*, 513-519.
- Mann, W. C. (1985). Survey methods. *American Journal of Occupational Therapy, 39*, 640-648.
- Mann, W. C., & Svorai, S. B. (1994). COMPETE: A model for vocational evaluation, training, employment, and community for integration for persons with cognitive impairments. *American Journal of Occupational Therapy, 48*, 446-451.
- Mathiowetz, V. (1993). Role of physical performance component evaluations in occupational therapy functional assessment. *American Journal of Occupational Therapy, 47*, 225-230.
- Neistadt, M. E. (1986). Occupational therapy treatment goals for adults with developmental disabilities. *American Journal of Occupational Therapy, 40*, 672-678.
- Neistadt, M. E. (1987). An occupational therapy program for adults with developmental disabilities. *American Journal of Occupational Therapy, 41*, 433-438.
- Neistadt, M. E. (1990). A critical analysis of occupational therapy approaches for perceptual deficits in adults with brain injury. *American Journal of Occupational Therapy, 44*, 299-304.
- Neistadt, M. E. (1992). Occupational therapy treatments for constructional deficits. *American Journal of Occupational Therapy, 46*, 141-148.
- Neistadt, M. E. (1994a). A meal preparation treatment protocol for adults with brain injury. *American Journal of Occupational Therapy, 48*, 431-438.
- Neistadt, M. E. (1994b). Perceptual retraining for adults with diffuse brain injury. *American Journal of Occupational Therapy, 48*, 225-234.
- Neistadt, M. E. (1995). Methods of assessing clients' priorities: A survey of adult physical dysfunction settings. *American Journal of Occupational Therapy, 49*, 428-436.
- Neistadt, M. E., & Marques, K. (1984). An independent living skills training program. *American Journal of Occupational Therapy, 38*, 671-676.
- Pendleton, H. M. (1989). Occupational therapists' current use of independent living skills training for adult inpatients who are physically disabled. *Occupational Therapy in Health Care, 6*, 93-108.
- Reding, M. J., & McDowell, F. H. (1989). Focused stroke rehabilitation programs improve outcome. *Archives of Neurology, 46*, 700-701.
- Rogers, J. C. (1982). The spirit of independence: The evolution of a philosophy. *American Journal of Occupational Therapy, 36*, 709-715.
- Sabari, J. S. (1991). Motor learning concepts applied to activity-based intervention with adults with hemiplegia. *American Journal of Occupational Therapy, 45*, 523-530.
- Sandler, A. B., & Harris, J. L. (1992). Case report—Use of external memory aids with a head-injured patient. *American Journal of Occupational Therapy, 46*, 163-166.
- Shillam, L. L., Beeman, C., & Loshin, P. M. (1983). Effect of occupational therapy intervention on bathing independence of disabled persons. *American Journal of Occupational Therapy, 37*, 744-748.
- Sietsema, J. M., Nelson, D. M., Mulder, R. M., Mervau-Scheidel, D., & White, B. E. (1993). The use of a game to promote arm reach in persons with traumatic brain injury. *American Journal of Occupational Therapy, 47*, 19-24.
- Taylor, E., & Manguno, J. (1991). Use of treatment activities in occupational therapy. *American Journal of Occupational Therapy, 45*, 317-322.
- Zoltan, B. (1992). Visual, visual-perceptual, and perceptual-motor deficits in brain-injured adults. *Physical Medicine and Rehabilitation Clinics of North America, 3*, 337-354.