The major challenge facing the profession of occupational therapy today is the critical need for research that validates claims made for the therapist's use of occupations. Although the need for such research in gerontology is perhaps no greater than that in other practice areas, we must grasp the opportunity for occupational therapy to play a critical role in the care of America's aging population before it is too late. To delay research while we attempt to claim territorial rights, to be recognized for reimbursement, and to be accorded recognition as primary professionals is to put the cart before the horse. The credibility required to win each of these battles is gained only through exemplary practice, and exemplary practice is largely grounded in research. The need for such research in gerontology is interrupted and well-being is linked with self-reports and with care-giver regarding the patient's ability to perform daily living tasks.

In 1985, the profession of occupational therapy established its priorities for research, identifying six major categories in which research is needed if occupational therapy is to meet its mandate for service. These priorities are not in rank order; they are meant to provide a means of organization for needed research. The purpose of this article is to highlight the research needs of the profession with regard to our nation's senior citizens.

The research priorities were proposed by the Research Development Committee and formally adopted by the boards of both the American Occupational Therapy Association (AOTA) and the American Occupational Therapy Foundation (AOTF). Underlying these priorities is the central hypothesis of the profession. When normal occupation is interrupted and well-being is threatened, therapeutic occupation or activity helps to promote, restore, or maintain health. Success in this effort constitutes the profession's key contribution to society's understanding of the important relationship between health and occupation.

Performance Measurement

Because clinical intervention usually begins with assessment, I will first discuss the research priority of performance measurement. Neither the research process itself nor good clinical practice can succeed without good measurement devices. Occupational therapists have been hindered in their efforts to claim professional rights to practice in certain areas or to receive reimbursement for their services when effectiveness could not be demonstrated. In gerontology, three assessments now under development may help the profession take a giant step forward in this regard. Joan C. Rogers (Rogers & Holm, 1989) has developed an assessment of functional status to determine the actual abilities of elderly persons with Alzheimer disease and other degenerative disorders. Anne Fisher (1990) and colleagues at the University of Illinois, Chicago, have devised the Assessment of Motor and Process Skills and are collecting data to determine its usefulness with elderly persons. This test is an innovative new tool designed to allow the therapist to directly assess the effect of motor and cognitive deficits on the patient's ability to perform daily living tasks.

Carolyn Baum (1991a, 1991b) and Dorothy Edwards at Washington University, St. Louis, have established an unusual pair of tests that show the relationship between the ability of the patient with degenerative brain dysfunction and the perceptions of the caregiver regarding the patient's ability. These tests are known as the Kitchen Task Assessment and the Functional Behavioral Profile, respectively.

Assessments exist of which our profession can be justly proud. Such assessments are well-grounded in occupational therapy theory and test the constructs on which practice is based. Assessments for the practice of gerontology occupational therapy outnumber the availability of comparable instruments in other practice areas. More assessments are needed, however. Many instruments now used by occupational therapists lack established norms for persons over the age of 65 years. The collection of data for the purpose of establishing norms would involve relatively simple, straightforward research that would pay off fairly quickly.

Performance tests are needed that would permit geriatricians in related fields to screen elderly patients in order to refer them more appropriately to occupational therapy. Nurses and physicians must learn the value of functional assessments as the basis for their decisions. Performance testing should be linked with self-reports and with care-
Practitioners in other fields are designing driving assessments for senior citizens. It seems unlikely that these practitioners know more about the complex interactions between the motor, sensory, cognitive, and psychological functions of the older driver than do occupational therapists. If such a test could be developed and appropriately marketed, it would allow for remarkable recognition of the occupational therapy profession.

**Intervention Strategies**

In addition to developing assessments on which to base their services, professionals must establish methods of intervention that yield predictable outcomes. Under what conditions are specific interventions successful? What levels of competence are required by practitioners using an intervention strategy?

Little in the occupational therapy literature speaks to an established basis for selecting intervention strategies. A wealth of suggestions, however, can be made. With a focus on the maintenance of wellness and the prevention of dysfunction, research should examine occupational therapy's role in employee assistance programs, corporate retirement programs, community support groups for patients and families of patients with Parkinson disease, multiple sclerosis, post-cerebrovascular accident, and Alzheimer disease and other degenerative conditions. Members of the "sandwich generation" (i.e., those caring for their parents as well as their own children), too, are deserving of study of the stresses placed on their lives and the possibilities for the creation of a better balance between caregiving, rest, work, and leisure.

Older workers who suffer from illness or trauma are seldom referred for vocational evaluations or programs to help them return to work. Little is known about support mechanisms that would permit them to return to work. When retirement is not desired, is it detrimental? What strategies might be devised to intervene on behalf of older workers to preserve their integrity and to allow them to remain productive and secure in their self-image as a worker?

The environment in which each person functions is unique. The elements within the environment may support or detract from safe, independent function. What kinds of environmental adaptations help to increase functional patterns, decrease falls, and provide additional security? Perhaps occupational therapy should be a pioneer in the field of adaptations to gain support for the use of adaptations that permit greater levels of secure independence in the home. Currently, preventive strategies are nonreimbursable.

The cost of rehabilitation and the policies of some institutions now dictate that most treatment be provided in groups. But treatment of more than one person at a time does not constitute an effective use of the principles of group therapy. Are some group intervention strategies particularly effective with some kinds of patients? Who is qualified to use these strategies? May they be practiced by occupational therapy assistants? Can members of other disciplines collaborate with or substitute for the occupational therapist in employing these strategies? Under what conditions?

Occupational therapists are proud of the philosophy of wanting to see each person function at the highest possible levels of autonomy and independence. What kinds of intervention strategies increase the numbers of patients who can return home safely? What strategies decrease the rate of readmission? Does home health care follow-up by an occupational therapist increase the period of time between health crises?

Perhaps occupational therapists overvalue the concept of independence and work to achieve levels of function that are too costly in terms of the energy that must be expended. When is assistance with personal care preferable to independence in activities of daily living? What social, economic, and physical elements should be considered to make this decision? A related issue involves the use of neurophysiological techniques with the aging nervous system. Which is more effective—time spent to enhance the components of function or time spent developing occupational performance?

**Occupational Therapy Effectiveness**

Whereas academicians and scholars have a penchant for developing and refining theory and exploring new research methods, practitioners are more interested in knowing how effective their treatment has been. They focus on the outcome of therapy, and both reimbursement and legislative advances depend on the outcomes of research. For this reason, AOTF and AOTA give high priority to the funding of studies that yield evidence of the effectiveness of a particular intervention. Two current studies that are being funded through the Gerontology Research Symposium give evidence of this kind of research:

"The Effect of Added Purposefulness on the Quality of a Therapeutic Exercise in Elderly Hemiplegics," a study directed by Dr. David Nelson; and "Environmental Adaptation for Chronically Disabled Community Elderly: A Proposed Experimental Study," directed by Drs. Ruth Levine and Laura Gitlin.

Consistent with the theories of the field, research on the effectiveness of occupational therapy examines the effect of occupation on health and function. In research focusing on nursing home residents, for example, several questions might be studied. Is occupation effective in decreasing the need for restraints? Does the stimulation that comes through occupational tasks help to maintain levels of cognitive function? Does occupation decrease the rate of cognitive or physical deterioration? Is occupation more or less effective than exercise groups in increasing participation, in slowing physical deterioration while maintaining flexibility and mobility, or in coping with depression?

Occupational therapists often work with elderly persons whose functional health is impaired by one or more chronic conditions. How effective is occupational therapy in assisting persons to remain functional in the face of increasingly severe diabetes, osteoarthritis, incontinence, and Parkinson disease?

As the population of the country ages and resources for care fail to expand at a corresponding rate, ethical dilemmas arise. Persons with irreversible cognitive degeneration may be viewed as less deserving of resources than others who maintain more "normal" behav-
ior. How much do persons at varying stages of cognitive impairment benefit from occupational therapy? Studies of persons with specific conditions could identify the examination of subjects with no cognitive impairment versus subjects with various degrees of impairment to determine where the greatest benefits of therapy lie.

Finally, the issue of locus of control could be studied. In some cultures and ethnic groups, decreased functional ability frequently leads to depression, which is often disabling. Research could examine whether activities could be used to increase one's locus of control, thus decreasing or preventing the depression that follows functional loss.

**Theory Development**

Periodically, the profession's theories and frames of reference are scrutinized. Each of these, in some regard, provides the basis for occupational therapy service with the elderly. Some theories of aging suggest interventions that may be relevant to our practice. Research should be undertaken to examine the similarities and differences between constructs derived from occupational therapy theory and those of the three major foci in gerontology: activity theory, continuity theory, and integrative theory. Implications for assessment, intervention strategies, and health and occupation are sure to be found.

**Research Methods**

The development of research methodologies is the most neglected of the six research priorities because it is difficult; it requires considerable risk taking in the scientific community, and it is seldom undertaken by scholars dependent on outside funding for their research. Nonetheless, the problems that occupational therapy addresses require innovative approaches to research. Although countless research questions in the field can be addressed through the traditional quantitative designs, others require a radical departure. Qualitative and ethnographic procedures are often more appropriate to the questions facing occupational therapy practitioners. If function is both constrained and supported by the environment, then it should be studied in the context of the person's environment, with research addressing the social, physical, economic, and psychological elements of that environment. Studies of caregivers and their functions when caring for elderly family members are examples of needed research. Hasselkus (1989) was one of the first occupational therapy pioneers in this area.

An examination of the potential links between qualitative and quantitative methods must be undertaken. This and other exciting developments are being studied by the staff of the Center for Research Tradition in Measurement in Occupational Therapy at the University of Illinois, one of the first of such centers devoted to occupational therapy.

**Health and Occupation**

The basic science that underlies the practice of occupational therapy addresses the broad issue of the relationship between health and occupation. In this sense, research supported by occupational therapy holds promise for society at large, not just for those persons in need of the therapeutic use of occupation. All persons use occupations to satisfy others' needs, to meet their own needs, and to contribute to society at large. Researchers can make a great contribution by examining the role of occupation in a society that values work and productivity as well as opportunities for play and refreshment through leisure activity.

With regard to the health and occupation of the elderly, studies are needed regarding the roles of older workers. Is good health best maintained by continued employment? By retirement? By altered work conditions? How individual a decision must this be?

As the concept of life-care communities grows, a broader range of such facilities is developing. These communities, previously limited to white-collar workers and members of the upper middle class, will begin to accommodate a wider group of workers for whom leisure and occupation have various meanings. In what ways should these workers' needs be met by the communities in which they choose to spend their remaining years? Related to these questions are the issues of culture and ethnicity. With the occupational therapist's commitment to doing, has the profession overlooked the importance of being? Being has a much stronger value in some subcultures, whereas doing and productivity remain the most powerful elements for other members of society. What are the occupational implications of these two perspectives for the maintenance of the health of each person, of society, and of the economy?

**Conclusion**

Dare we be the profession to address the challenges suggested by the research questions? Aging is now recognized as the long-term health care problem of the world. The research challenges faced by occupational therapy may appear formidable, but what other profession is better prepared to lead the way to a healthier, more productive, and functional lifestyle for our elders?

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