Evaluating Activities of Daily Living: Directions for the Future

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Key Word: assessment process, occupational therapy

Current assessments of simple activities of daily living (ADL) and more complex, instrumental activities of daily living (IADL) could be improved. These assessments are criticized because there are so many different tests for various diagnostic populations, because they rely on self-report rather than observation, because they are based on such varied conceptual frameworks, because they are often cumbersome and lengthy to administer, and because they often rely on outdated or specific cultural perspectives. Improvement of ADL and IADL assessment lies in making them more contextual and client specific, (i.e., by addressing clients' needs in real-life contexts that consider roles, culture, varying environments, and developmental stage).

O ccupational therapists are concerned with persons' performance in activities necessary for daily life. Our focus is occupation, defined as those purposeful activities or tasks in the areas of self-care, productivity, and leisure, in which humans engage as part of their normal, daily lives (Canadian Association of Occupational Therapists [CAOT], 1991; Christiansen & Baum, 1991). Over the years, a number of psychometric tools have been developed and validated to assess performance in these self-care activities.

The actual term activities of daily living, or ADL, has not always been used in occupational therapy. The first reference to an "assessment of every day activities" was reported by Sheldon in the *Journal of Health and Physical Education* in 1935 (Feinstein, Josephy, & Wells, 1986). Edith Buchwald (1949), a physiotherapist, was the first to publish the term activities of daily living. She used it to refer to an assessment checklist. Since that time, many instruments to evaluate activities of daily living have been developed. It has also become common practice to divide activities of daily living into those that are more simple, called ADL, and those that are more complex, referred to as instrumental activities of daily living (IADL). Some examples of ADLs include bathing, feeding, toileting, and transfers, whereas examples of IADLs include housework, shopping, budgeting, and cooking meals. The purpose of this paper is to review current issues in the evaluation of activities of daily living, to analyze our current evaluation practices, and to offer ideas for change.

Current ADL and IADL Evaluation Issues

When reviewing current evaluation issues, it is helpful to use a classification of the purposes of evaluation tools. Occupational therapists evaluate ADL and IADL abilities of clients for a variety of purposes (Kirshner & Guyatt, 1985; Law & Letts, 1989). A descriptive evaluation of ADL or IADL is an assessment at one point in time, usually meant to compare the client to other clients or to serve as a screening tool to describe clients whose functional performance in ADL or IADL is sufficiently affected to require intervention. Setting client goals and prescribing intervention can also be accomplished with a descriptive evaluation. For example, the Physical Self-Maintenance Scale (Lawton & Brody, 1969) is a short self-report measure that can be used to determine quickly whether a client is unable to perform simple ADLs. The Milwaukee Evaluation of Daily Living Skills (MEDLS) (Leonardelli, 1987) is another example of a descriptive evaluation. Predictive ADL and IADL tools attempt to predict an event or functional status in another situation on the basis of the client's current level of functional performance. For example, discharge to a community environment and successful community living are often predicted on the basis of the level of ADL score on the Barthel Index or
Analysis of Current Evaluation Practices

Numerous ADL evaluations and some IADL evaluations exist, but clinical therapists lack consensus on their use. Rather than simply stating that therapists should change their practice and use standardized ADL and IADL evaluation instruments, we need to examine the meaning of the discrepancy between available instruments and clinical practice. What can we learn from the fact that clinicians are not using these evaluations? What are the current concerns regarding ADL and IADL evaluations?

A first concern is the overabundance of ADL evaluations, often developed and validated for different diagnostic populations. Feinstein et al. (1986), in their review of indexes of functional disability, found at least 43 different instruments constructed over the past 40 years. No wonder it is difficult to choose which might be the best ADL instrument to use in a clinical situation! Although there is an overabundance of ADL evaluations, there is a paucity of evaluations of IADL. IADL evaluations are more complex to develop, and few of these instruments have been developed by occupational therapists.

A second concern is the significant trend to develop self-report instruments completed by the client rather than evaluations based on direct observation of performance. Occupational therapists’ skill or expertise, however, is in assessing clients and drawing inferences based on their direct observation of clients’ performance. Therapists using these self-report evaluations may find that their observations of performance conflict with clients’ self-reports about the same activities. It may not be clear how to deal with these differences. Reports in the literature provide evidence that there are significant differences between ADL and IADL scores reported by an individual and those reported by service providers (Edwards, 1990; Kivela, 1984; Rubenstein, Schairer, Wieland, & Kane, 1984).

A third concern is that ADL and IADL evaluations have often been developed with different conceptual bases, including different items and scaling. Functional performance is defined uniquely in each instrument, and few studies compare different evaluations and their ability to serve any of the three purposes for which evaluation is applicable. ADL has generally been defined as care of self or the basic activities required to get up and going, whereas IADL has been defined as those more complex activities that involve interactions with others and the environment.

Differences in item content have resulted from instruments being developed for specific impairments, not on a disability basis as recommended by the World Health Organization (WHO, 1980). For example, a functional status evaluation by Jette (1980) was developed specifically for persons with arthritis. Some disability-based evaluations are available; two of the better-known ones are the Barthel Index (Mahoney & Barthel, 1965) and the Functional Independence Measure (FIM) (Granger, Hamilton, & Sherwin, 1988).

Most evaluations use ordinal scales, which have an inherent problem of lack of comparability because the distance between scores on each item is not equal (Mebius, Morris, & Grip, 1989). Problems also arise when scores are totalled and clients are compared on the basis of totals. For example, if there are 10 items on an ADL evaluation tool exists and a number of new instruments constructed over the past 40 years. No wonder it is difficult to choose which might be the best ADL instrument to use in a clinical situation! Although there is an overabundance of ADL evaluations, there is a paucity of evaluations of IADL. IADL evaluations are more complex to develop, and few of these instruments have been developed by occupational therapists.

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scale that is scored on a 4-point rating scale, one client could score 2 on each item for a total score of 20; another client could score 4 on three items, 3 on one item, and 1 on five items and also achieve a score of 20. Thus two persons could receive the same total score although their functional profiles, which have important implications for occupational therapy, are quite different.

The Barthel Index and the FIM are examples of a global ordinal scales that are difficult to interpret but are being used to make decisions about therapy effectiveness and resource allocation. Therapists need to be careful about the use of such global evaluations to assess the effectiveness of occupational therapy programs.

A fourth concern is the administration of ADL and IADL evaluations. Many evaluations are long and cumbersome, particularly if the whole assessment must be administered. Other evaluations, such as the Index of ADL (Katz, Ford, Moskowitz, & Jaffe, 1963), are too short, give little information, and are not responsive to small changes in client function.

A fifth concern is the philosophical or ethical viewpoint of these instruments. Current ADL and IADL scales reflect mainstream North American values of independence and individual rights. An illustration of this viewpoint is the common practice of allotting lower scores if technical aids are used to accomplish a daily living activity. The construction and scoring of these evaluations do not reflect different cultures living in North America, nor do they reflect that a person could be independent in directing his or her own care (e.g., attendant care). Many ADL and IADL scales reflect the philosophy of the medical model, in which problems are ameliorated by changing the person.

Over the past two decades, an alternative philosophy has emerged, largely from those within the independent living movement and from those who look at health from a more social and political perspective (Hahn, 1984; Illich, Zola, McKnight, Caplan, & Shaiken, 1977). It is the contention of this movement that problems in functioning or independence are caused not by a person but by the interaction of the person with his or her environment. Therefore, function should be assessed by what changes in the environment are required to facilitate independence. “Perhaps occupational therapists over-value the concept of independence and work to achieve levels of function that are too costly in terms of the energy that must be expended” (Gillette, 1991, p. 661).

Finally, the most important limitation of current ADL and IADL evaluations is that they are not contextual. The same items are administered to all clients; therefore, the client’s perspective, values, and effort are not considered. ADL and IADL evaluation instruments tend to score performance and emphasize quantity rather than quality of function. Few instruments consider client satisfaction; an exception is the Satisfaction with Performance Scaled Questionnaire (Yerxa, Burnett-Beaulieu, Stocking, & Azen, 1988). With most evaluations, clients’ culture, roles, developmental stage, and the environment in which they live are not considered. Occupational therapists also do not routinely consider balance in occupational performance over a day or across a person’s life-style. As a result of these deficiencies, our ADL and IADL evaluations do not recognize differences in the values and goals that can often occur between the therapist and the client. For example, a client may not be motivated to or need to perform IADL skills. Rather, he or she may be more interested in regaining a leisure skill that has important meaning for daily life.

A critique of all ADL and IADL evaluations here would be too lengthy, but the general consensus of various reviews (Feinstein et al., 1986; Fisher, 1990; Law & Letts, 1989) is that better methods of development and validation are required.

What Should We Be Evaluating?

There is little need for more of the same type of ADL or IADL tools. Rather, our challenge is to investigate, develop, and test innovative approaches to evaluations. A number of principles will be helpful in the future development of ADL and IADL evaluation practices.

Occupational therapy tests of ADL and IADL can be contextual and client-specific. Assessments and the assessment process can focus on daily living skills identified by the client. Using this approach, therapists would listen to the client, to what the client needs to do, wants to do, or is expected to do (Law et al., 1990). Inclusion of client preferences in the evaluation process has three advantages: client goals become clear, intervention is directed at those activities most meaningful to the client, and therapeutic effectiveness may be enhanced when therapy is directed at these specific activities (Feinstein et al., 1986).

The goal in occupational therapy programs to improve functional performance in ADL and IADL is more than simply self-independence, that is, independence in activities done by the person. Rather, the goal can be self-reliance and the ability to perform or direct the performance of those activities that the client needs to do. Self-reliance can be achieved by changing performance in the client or by changing the environment to enhance performance. As well as focusing the evaluation on specific client-identified ADL and IADL activities, therapists can also focus on important environmental factors that influence performance and satisfaction with daily activities. These factors may be in the physical, social, cultural, economic, or institutional environment.

Occupational therapists are experts in occupation, that is, how a client accomplishes chosen daily living activities, in context. The activities that clients do are influenced by their roles, culture, environments, and developmental stage. Occupational therapists are experts in
observation of client activities, activity analysis, and adaptation. What therapists should be evaluating in ADL and IADL assessment, therefore, is observation of performance or the direction of performance of daily activities in a real-life context. For example, an assessment of a child’s ability to dress could be completed at the child’s home or when a child is going swimming rather than in an artificial treatment environment. In this way, our assessments would be tailored to a client’s occupation and occupational performance, not simply a checklist of ADL or IADL activities.

Therapists may also evaluate client satisfaction with ADL and IADL activities and client perception of performance. The evaluation of self-perception and satisfaction can help to establish goals for therapy and put the client’s meaning of these activities in perspective. The primary outcome of occupational therapy in ADL and IADL would then be the occupational performance of tasks of daily living rather than performance components. To apply this framework to a client with a hand injury, the primary outcome of therapy would be operating machinery at work rather than improved strength and range of movement. Occupational performance should be linked with performance components, but only as a means of explaining the intervention process, not as a substitute outcome. Additionally, it is important to assess overall balance and patterns of occupational performance, including daily activity patterns and community participation.

How Can We Evaluate ADL and IADL?

Innovative methods of evaluating ADL and IADL will reflect a change of philosophy to a more client-centered approach. Therapists will be aware of what the client can do and how to enhance that, not what the client cannot do. Both quantity and quality of performance will be assessed. Traditional psychometrics may be useful in some evaluation contexts, but new assessment methods are required (A. G. Fisher, in press; W. P. Fisher, in press; Spencer, Krefting, & Mattingly, in press).

ADL and IADL can be evaluated by starting with activities that are identified by the clients as important to them. In this way, therapists will consider client roles, environment, developmental stage, and culture. It is not suggested that all our current ADL and IADL measures be discarded, but that therapists examine when they are appropriate to use.

The examination of the ability of current and new ADL and IADL evaluations to fulfill the purposes for which therapists want to use them is important. For example, in measuring change over time or the effectiveness of clinical interventions, it is necessary to develop consensus about what is clinically important change, as defined by both the client and the therapist. An important focus in occupational therapy assessment should be on the development of methods to measure more complex or instrumental ADL skills.

It is unlikely that one overall ADL or IADL instrument will achieve all purposes in occupational therapy. However, increased consensus about evaluation approaches and the instruments in use is required, along with criteria for judging instruments. The development of these criteria can be enhanced and driven by occupational therapist associations and research foundations. For example, in Canada, guidelines for the client-centered practice of occupational therapy promoted by the professional association have been published since 1983, and have had a major effect on occupational therapy practice in that country (CAOT, 1991).

Therapists should not always look for changes in the client. Occupational therapists can lead in the development of better ways of assessing the environment and what can be changed within it to facilitate client self-reliance and purposeful occupation in the areas of ADL and IADL. In doing so, therapists will be expanding their notion of ADL and IADL to include assessment of the environment. Although the assessment of the physical environment may well be quantitative, assessment of other environmental factors (e.g., culture, society, economy) may be accomplished best through qualitative assessment, in which the limits of assessment are recognized, our biases as raters are acknowledged, and constructs that can be judged qualitatively are identified.

It is important that scoring systems for ADL and IADL instruments not penalize clients for the use of aids or assistants. Methods to score assessments for those who direct but do not perform care should be included. Therapists could also benefit from methods to assess client effort in accomplishing ADL skills. Examples of innovation or how different methods could be used to change or develop instruments might include the following:

- Testing of current assessments for reliability and validity after they are divided into smaller, more manageable parts. For example, parts of the OARS, MEDLS, or Klein-Bell ADL Scale could be validated so that only a small portion of the assessment need be used. In that way, a therapist could directly observe those activities that were identified as important by the client.
- Investigation and use of new methodologies, such as Rasch measurement and individualized measures (A.G. Fisher, in press; W. P. Fisher, in press; Pollock, in press), to develop assessments of ADL and IADL.
- Investigation of the use of different rating scales in current ADL instruments. For example, the use of scales of transitions may be more responsive to clinically important changes in functional performance (Feinstein et al., 1986). A transition scale includes comparisons such as much better, some-
what better, same, somewhat worse, and much worse, rather than single states such as excellent, good, fair, or poor.

Conclusion

There are major limitations to our current ADL and IADL evaluations. This paper outlines a number of ideas for change, ideas that may help to ensure that the occupational therapy assessment process is purposeful, meaningful for both client and therapist, directed by the client, and contextual. These are the challenges that occupational therapy faces as therapists seek to improve assessments of daily living activities.

Acknowledgments

This manuscript is based on a paper presented at the Symposium on Measurement and Assessment: Directions for Research in Occupational Therapy at the University of Illinois at Chicago, October 16-18, 1991. The symposium was jointly sponsored by the American Occupational Therapy Association, the American Occupational Therapy Foundation, and the Occupational Therapy Center for Research and Measurement at the University of Illinois at Chicago.

References


