International Encyclopedia of Rehabilitation

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This publication of the Center for International Rehabilitation Research Information and Exchange is supported by funds received from the National Institute on Disability and Rehabilitation Research of the U.S. Department of Education under grant number H133A050008. The opinions contained in this publication are those of the authors and do not necessarily reflect those of CIRRIE or the Department of Education.

Activities of Daily Living

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Defining Activities of Daily Living

Activities of Daily Living (ADL) is used in rehabilitation as an umbrella term relating to self care, comprising those activities or tasks that people undertake routinely in their every day life. The activities can be subdivided into personal care or Basic ADL (BADL) and domestic and community activities - Instrumental ADL (IADL).

Specifically, James, (2008) suggests that BADL "is typically restricted to activities involving functional mobility (ambulation, wheelchair mobility, bed mobility and transfers) and personal care (feeding, hygiene, toileting, bathing and dressing)" (p.539). Whilst an early definition of IADL comes from Katz, (1983) who stated that "…instrumental activities of daily living functions are concerned with a person's ability to cope with her/his environment in terms of such adaptive tasks as shopping, cooking, housekeeping, laundry, use of transportation, managing money, managing medication and the use of the telephone" (p.723).

Historical Development of the Concept of Activities of Daily Living

The first reference to activities of daily living was reported by Sheldon in the Journal of Health and Physical Education in 1935 (Feinstein et al. 1986). When reviewing ADL assessment Law, (1993) suggested that Edith Buchwald a physiotherapist, was the first to use the term "activities of daily living" for an assessment checklist in 1949. Katz (1983) reported that sophisticated studies were produced from the United States Commission on Chronic Illness in 1949, which were concerned with the constructs and theoretical base of activities of daily living. However Katz cited M Powell Lawton as being the first researcher to clarify the theoretical framework for function, by suggesting a behavioural model in which function was viewed as a hierarchy of domains. In 1969 Lawton and Brody (1969) were the first authors to describe two levels of activities of daily living, and introduced the term Instrumental Activities of Daily Living (IADL) to encompass more complex tasks involved with domestic and community participation. The term comes from the field of psychology, "designating a behaviour performed as a means to the achievement of a more distal goal" (M. Powell Lawton, 1997, personal communication). Lawton and Brody also described a "schema of confidence into which these behaviours fit …varying in degrees of complexity required for functioning in a variety of tasks" (p.179). They suggested that the lowest level is life self-maintenance followed by physical self-maintenance such as personal ADL, instrumental self-maintenance and finally social behaviour. In 1971 Lawton specifically defined IADL as comprising use of the telephone, shopping, food preparation, housekeeping, laundry, transportation use, medication management and handling finances. IADL is usually the area where those with dysfunction due to ageing or illness, first begin to have problems with independence, however it is also possible to delegate these activities to others.

When reviewing the Medline data base it was found that the term ADL was first used as a subject heading or indexing term in 1968 (*Index Medicus*). Prior to this date the

construct was indexed as *Rehabilitation related to self care*. This historical context is interesting when considering that the early assessment tools used to evaluate both overall functional status and ADL performance were also published around this time. Examples of these tools are PULSES published in 1957 (Moskowitz and McCann, 1957), the Katz Index of ADL (Katz et al. 1963), the Barthel Index (Mahoney & Barthel, 1965), the Kenny Self-Care Evaluation (Schoening et al. 1965) and the Self-maintaining and Instrumental ADL tools (Lawton and Brody 1969).

Current Activities of Daily Living Assessment Tools

More recently new tools have been developed, such as the Functional Independence Measure (FIM™) (Uniform Data Systems 1999), the Assessment of Motor and Process Skills (AMPS) (Fisher 1995), the Canadian Occupational Performance Measure (COPM) (Law et al. 1998), and the Assessment of Living Skills and Resources (ALSAR) (Williams et al. 1991). In addition two new tools have recently been published which are based on the International Classification of Functioning Disability and Health (ICF) (World Health Organization, 2001), these are the AusTOMs (Australian Therapy Outcome Measures)(Unsworth and Duncombe 2007) and the Personal Care Participation and Resource Tool (PC-PART) (Darzins 2004), the latter tool is designed to assess the participation component of the ICF. There are several useful resources available which review and provide detailed outlines of assessment tools (see for example: Asher 2007; Kane and Kane 2000; Law et al. 2005; McDowell and Newell 2006).

International Classification of Functioning Disability and Health (ICF) and Activities of Daily Living

The ICF was developed by the World Health Organisation to provide a comprehensive framework of definitions and structures for rehabilitation. The ICF views a health condition or disease as the interaction of body function and structures, activities and participation, which are in turn impacted on by social and environmental factors. The importance of participation as an outcome is also highlighted (World Health Organization 2001). Dysfunctions in ADL and IADL are considered to be activity limitations within the ICF framework, these dysfunctions can in turn lead to participation restriction. Rehabilitation interventions aim to overcome activity limitation and thus prevent participation restriction in the areas of education, work, play leisure and social activities. Participation must however, be considered in relation to the client's skills, abilities and the overall environmental context. The PC-PART has been specifically developed as an assessment tool using the ICF theoretical construct to comprehensively assess personal care (BADL) participation (Darzins 2004).

Occupational Therapy and Activities of Daily Living

A succinct definition of occupational therapy comes from Law et al (2005) who state that " Occupational therapists work with persons, groups and organizations that are experiencing difficulties in performing the occupations of life (i.e. self-care, work voluntary activities, play, leisure)" (p. 1). From this definition it can be seen that a large component of occupational therapy practice is to provide interventions to overcome ADL and IADL deficits. These interventions are developed following thorough assessment and consultation with the client, with goals being set for activities which the client wishes, or needs, to do. The Occupational Therapy Practice

Framework describes the intervention approaches as: create/promote, prevent, maintain, modify/adapt and establish/restore (American Occupational Therapy Association 2008). As suggested by James, (2008), for the field of ADL and IADL intervention, "modify/adapt and establish/restore are the most commonly used in practice" (p. 566). Assessment tools have been specifically developed for use by occupational therapists for ADL and IADL evaluation, these include Assessment, of Motor and Process Skills (AMPS) (Fisher 1995), Canadian Occupational Performance Measure (COPM) (Law et al. 1998), and the AusTOMs (Unsworth and Duncombe 2007). The COPM differs from the other assessment tools as it is based on a semi-structured interview, with the client and the therapist prioritising goals and evaluating performance and satisfaction. The COPM may be employed in conjunction with other assessment tools used by the whole rehabilitation team, such as the Functional Independence Measure (FIM™) (Uniform Data Systems 1999). The FIM™ is a minimum data set for personal care, sphincter control, mobility, locomotion and social cognition and communication. Another tool for use by the rehabilitation team is the Assessment of Living Skills and Resources (ALSAR) (Williams et al. 1991) which was developed as an assessment tool for IADL. The rehabilitation team works to facilitate independence in ADL and IADL by overcoming activity limitations and thus preventing participation restriction.

Reasons for evaluating Activities of Daily Living

A typical rehabilitation team aims to achieve maximal increase in function and participation in every day life for the patient or client. Functional assessment is the method used to document these outcomes, with activities of daily living scales being the most frequently used tools. ADL evaluations can be used to:

- Provide an overview of functional status
- Determine activity limitations
- Establish a baseline for treatment
- Provide a guide for intervention planning
- Provide a guide for reporting and data management
- Evaluate intervention programs and monitor progress
- Plan for the future and for discharge
- Measure outcomes of rehabilitation
- Provide data for Evidence Based Practice

How do we select a tool to use?

A review of current functional assessment methods yields numerous tools, some of which are standardised and some are checklists. It is important that the assessment tool selected has supporting research reporting on standardisation (Eakin 1989, Fricke 1993, Law 1987). In selecting an instrument, a set of basic principles to use as a guide is necessary (see for example, Fricke 1993, Law 1987, Law 2005, Polgar 2008). The following brief guideline, adapted from Wade, (1992) is useful:

- Is the tool relevant? Does it measure the aspects which we wish to assess? Is it relevant for the particular population eg. diagnosis, age group etc

- Is the tool a valid measure of what I wish to assess? The validity of a tool is evidence that it measures what it is supposed to measure. For any tool there

- What is the tool's reliability? This refers to the consistency of the results obtained when using an assessment tool. A highly reliable tool will provide the same results when used on the same subject by different observers. Reliability is dependent upon having clear operational definitions.
  Two main types of reliability are relevant:
  - Intra-rater reliability
  - Inter-rater reliability

- Is the tool sensitive enough to detect the change/difference expected? This refers to the ability of the tool to detect genuine changes in the client's ability. This depends on the scale used - some tools have a 4 point scale and some are 2 point - independent/dependent. A 2 point scale naturally has high tester reliability, but is not as sensitive to change. The FIMTM (Uniform Data Systems, 1999) has a 7 point scale. This scale is sensitive to change and research shows that the FIMTM has demonstrated reliability.

- Is the tool simple enough to be used? Is training required? Is it quick to use? It has been suggested that long complicated tools are not "user friendly" and compliance by staff will not be strong (Fricke 1993; Eakin, 1989).

- Are there clear operational definitions? These are the instructions given to the tester about exactly what has to be observed and the precise procedure to follow in order to measure what is observed. Clear operational definitions are crucial for reliability, accuracy and consistency.

- Can the results be communicated to others? Is it a well known tool, so that others will understand what the results actually mean?

- Is there a better assessment tool available?

Conclusion

This paper has provided an overview of Activities of Daily Living within a current and historical context. The International Classification of Functioning Disability and Health (ICF) has been used as a framework for discussing the concept of Activities of Daily Living and the associated assessment methods. The role of occupational therapy has been highlighted within the field of assessment and treatment of Activities of Daily Living. Finally, guidelines for selecting an appropriate assessment tool have been provided.

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