Goal Setting and Functional Outcomes in Rehabilitation

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Occupational therapists recognize that treatment should be relevant to a patient's lifestyle and that outcomes need to be judged in relation to a patient's goals (American Occupational Therapy Association, 1993; Giles & Clark-Wilson, 1993, in press; Humphry, González, & Taylor, 1993; Johnson, 1986; Mattingly & Beer, 1993; Northen, Rust, Nelson, & Warts, 1995; Ottenbacher & Cusick, 1990; Reed & Sanderson, 1992). The importance of patient involvement in occupational therapy goal setting is reflected by its inclusion in the accreditation criteria of the Joint Commission on Accreditation of Healthcare Organizations (1991) and the Commission on Accreditation of Rehabilitation Facilities (1992).

Activities that have meaning for the participant have been shown to be superior to rote exercise on various outcome measures (Heck, 1988; Kircher, 1984; Steinbeck, 1986) and across differing populations (Yoder, Nelson, & Smith, 1989), including those with acquired neurological impairments (Sietsema, Nelson, Mulder, Mervau-Scheidel, & White, 1993). Although research has evaluated the extent to which occupational therapists involve patients in treatment planning (Northen et al., 1995), little research has examined the influence of goal setting on outcome. The current study examined the relationship between the types of goals set by patients and functional outcomes. Specifically, this study compared the functional outcomes of patients with cerebrovascular accidents (CVAs) who made functional, independence-oriented goal statements with those patients who either made more general, less functional goal statements or did not make a goal statement. A functional, independence-focused goal statement is defined here as a statement of the desire to perform a specific activity or to return to the performance of a specific activity or as a direct statement of the desire to be more independent or to return to a prior level of independence. With this definition, the statement “I want to dress myself again” is an example of a functional, independence-focused goal statement, but the statement “I want to use my left arm” is not because it neither identifies a specific activity nor conveys a direct statement of the desire to be independent. It is hypothesized that a functional, independence-focused goal statement on admission to the rehabilitation unit will be associated with better discharge outcomes.

Method

Sample

The sample was selected by retrospective review of the medical records of patients with CVA discharged from the 30-bed rehabilitation unit of an acute care hospital during an 8-month period. All patients had been treated in occupational therapy as part of their inpatient rehabilitation. All patients were functioning independently before onset of the CVA.

To increase sample homogeneity, only those patients...
whose length of stay in rehabilitation was 14 to 28 days and whose date of admission was fewer than 25 days after the date of CVA onset were included in the study. All were evaluated on admission and discharge by staff therapists for functional independence using the Functional Independence Measure (FIM™; Uniform Data System for Medical Rehabilitation, 1993). Hospital policy and procedures for patient confidentiality were followed.

Of the 63 patients meeting study criteria, 13 charts were unavailable. Of the remaining 50 charts, 3 were eliminated from the study because of incomplete data, and 1 was eliminated because the patient was dependent before CVA.

The 46 patient charts included in the study were of 24 men and 22 women. The patients ranged in age from 24 to 87 years (M = 66.8). Twenty-four had left-sided CVAs (right hemiplegia), and 22 had right-sided CVAs (left hemiplegia).

Measure

The FIM provides a standardized method of documenting patient disability and a measurement tool for program outcome assessment (Uniform Data System for Medical Rehabilitation, 1993). The FIM measures six specific functional categories—self-care, sphincter control, mobility, locomotion, communication, and social cognition—and 18 subcategories. The level of assistance needed to perform the activities outlined in the subcategories is measured on a 7-point scale ranging from 1 (total assistance) to 7 (complete functional independence, no helper or device). For this study, 5 of the 18 subcategories specifically relating to occupational therapy were reviewed: grooming, dressing—upper body, dressing—lower body, transfers (toilet), and transfers (tub or shower).

The FIM is both reliable and valid (Dodds, Martin, Stolov, & Deyo, 1993; Heinemann, Linacre, Wright, Hamilton, & Granger, 1994) and has high internal consistency and adequate discriminative capabilities. It is appropriate for use with patients with a range of neurological disorders (Brosseau & Wolfson, 1994; Hall, Hamilton, Gordon, & Zasler, 1993).

On admission, all patients were evaluated by an occupational therapist trained in FIM administration. Patients were reevaluated weekly and given a final FIM score on discharge.

Procedure and Data Analysis

The sample was divided into two groups: patients with functional, independence-related goal statements and patients without such statements. The two authors independently categorized patient goal statements as functional or nonfunctional. In cases of disagreement, the authors discussed the ratings. If agreement could not be reached, these charts were placed in the nonfunctional category. Each patient’s sum total FIM score for all five subcategories was calculated on both admission and discharge evaluations. Sum totals could range from 5 to 35. An independent t test was applied to the total admission FIM scores to determine whether a significant difference in functional levels existed between the two groups on admission. A second independent t test was applied, using total FIM scores at discharge, to determine whether a significant difference in functional levels between the two groups occurred at discharge evaluation. In addition, independent t tests were applied to age, onset to admission, and length of stay, and chi-square analysis was applied to gender and side of lesion to determine equivalency between the two groups on these variables. Finally, descriptive statistics of means and standard deviations were applied to the demographic information. Data analysis was performed with Finesse statistical software (Bolding, 1985).

Results

There were 23 patients in each group (functional goal group, nonfunctional goal group). A summary of the results is provided in Table 1. No between-group differences were found in age, gender, and side of lesion. The time from onset to admission was marginally greater for the nonfunctional goal group (M = 8.30, SD = 4.58) compared with the functional goal group (M = 7.74, SD = 4.37); however, this was not significant, t (46) = 4283, p = .3353. The nonfunctional goal group participants had a longer average length of stay on the rehabilitation unit (M = 20.61, SD = 4.31) than did the functional goal group (M = 18.57, SD = 3.79), and this difference was significant, t (46) = 1.7070, p = .0474.

There was no significant difference between admission FIM scores for the nonfunctional goal group (M = 16.87, SD = 3.29) and the functional goal group (M = 16.57, SD = 3.70), t (46) = .2945, p = .3849. Discharge FIM scores for the functional goal group (M = 25.00, SD = 4.56) were significantly higher than for the nonfunctional goal group (M = 22.91, SD = 3.23), t (46) = −1.7900, p = .0402.

Discussion

Patients who made a functional, independence-focused goal statement on admission to the rehabilitation unit had significantly higher functional outcomes (as measured by the occupational therapy–related FIM scores) than those patients who did not make a functional, independence-focused goal statement. In addition, those patients who did not make a functional, independence-focused goal statement had significantly longer lengths of stay on the rehabilitation unit.

There are several possible ways to account for these results. Because the study was retrospective, clinicians and patients could not have been influenced by the study itself. A possible interpretation of the results is that persons who

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1FIM is a trademark of the Uniform Data System for Medical Rehabilitation, a division of UB Foundation Activities, Inc.
make functional statements are more cognitively intact than those who do not make such statements. Cognitive functioning is a predictor of functional impairment (Tatemichi, Desmond, Stern, Sano, & Bagiella, 1994). Poor performance on the mini-mental status examination at 1 week has been shown to predict disability 3 months after a stroke (Tatemichi et al., 1992). In addition, presence of cognitive impairment at 3 months is significantly correlated with requiring attendant care or nursing home placement at discharge, even controlling for the effects of age and physical functioning (Tatemichi et al., 1994). Sisson (1995) found a correlation between cognitive ability and functional ability in patients with stroke. No tests of cognitive functioning were included in the study reported here. However, the results do not support a direct association between higher cognitive functioning and functional goal statements because admission FIM scores were equivalent between the two groups. If cognitive status directly correlated with functional level, then those patients with functional goal statements should have had higher functional levels on admission as well as at discharge, and this was not the case.

It is also possible that functional goal statements and improved functional outcome are associated with a third unknown factor such as “self-efficacy” or “locus of control” (Gage, 1992). Patients who believe that they control their own health status may possibly make more functionally oriented goal statements and may be more active participants in therapy. Future studies should include measures of these variables.

Yet another interpretation may be related to the meaning of the therapeutic activities to the patient. It is possible that patients who have practical goals may recognize the relevance of occupational therapy to their recovery and may be more motivated to participate. This explanation is consistent with the philosophy of occupational therapy (Hopkins, 1993). A patient who makes a functional, independence-focused goal statement may perceive the treatment activities as more meaningful and, therefore, work harder to attain those goals, thus achieving higher functional outcomes.

Although methodologically limited by its small size and retrospective design, this study represents an initial attempt to link goal statements and actual clinical outcome in occupational therapy. The role of goal setting in facilitating improved outcome requires further study.

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References


