The Effects of Collaborative Goal-Focused Occupational Therapy on Self-Care Skills: A Pilot Study

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OBJECTIVE. This pilot study examined collaborative, goal-focused therapy to determine its effects on performance of self-care activities, including eating, grooming, bathing, upper body dressing, lower-body dressing, and toileting.

METHOD. Thirty-one patients at a rehabilitation hospital, divided between control and experimental groups, comprised the sample. Participants’ performances on self-care activities were measured using the Functional Independence Measure (FIM) at admission to therapy and again at a 2-week follow-up. Attainment of goals was not emphasized in the control group. In the experimental group, new goals and achievement of previously set goals were regularly discussed and documented. Comparisons were made between 2-week FIM scores of the control and experimental groups, and data were analyzed by the Mann-Whitney U test.

RESULTS. The experimental group demonstrated greater gains on FIM scores when compared to the control group on all self-care activities, but only upper-body dressing met levels of statistical significance.

CONCLUSION. Findings support the efficacy of collaborative, goal-focused occupational therapy in the treatment of deficits in upper-body dressing, but did not support this approach with toileting, eating, grooming, bathing, and lower-body dressing. Further study, with a larger sample, is recommended.

that collaboration was justified due to its efficacy, citing studies on desensitization training and the placebo effect. Such collaboration prepared clients for therapy and affected clients’ expectancy of benefits, as well as belief and confidence in therapy. Peloquin’s literature review provides important evidence supporting the effectiveness of collaborative therapy to facilitate awareness, compliance, and ability to apply occupational therapy to life situations.

Mew and Fossey (1996) wrote that a client-centered, collaborative approach is imperative in occupational therapy because it helps therapists develop rapport with clients, yields understanding of clients’ perspectives, and facilitates meaningful therapy. Three related themes central to effective, client-centered therapy were identified: collaboration to define problems and negotiate therapy goals during assessment, acknowledgment of the client’s feelings, and understanding of the client. These criteria, which go far beyond asking a client for his or her goals, help define essential elements of collaboration.

Ponte-Allan and Giles (1999) examined the relationship between functional outcomes of patients with cerebrovascular accidents and their stated goals. They found that patients who stated goals that were functional and independence-focused had significantly higher outcomes than patients whose goal-statements did not center on independent functioning. This pilot study provides evidence for the impact of clients’ goals on therapy outcomes.

McAndrew, McDermott, Vitzakovich, Warunek, and Holm (1999) investigated the perceptions of therapists and patients regarding the collaborative nature of the goal-setting process in occupational therapy. Using a 5-point Likert scale, they found that patients were positive about therapists soliciting their input into goals and inclusion of important activities in formulation of goals. Patients were more neutral about therapists’ discussion of relevant roles, daily routines, interests, discharge and home issues, and interests and hobbies in goal-setting. The researchers concluded that therapists and patients perceive some areas of collaborative, goal-focused therapy differently. This study underscores the importance of attending to the substance of collaboration as well as to the process of collaboration. While therapists may believe they have discharged an obligation to collaborate by asking for goals during the initial evaluation, patients seem to want more substantive and ongoing discussions of issues they find important.

The current pilot study examined the impact of collaborative, goal-directed therapy on eating, grooming, upper-body dressing, lower-body dressing, bathing, and toileting, as defined by the Uniform Data System for Medical Rehabilitation (UDS) (1999). Two research questions were explored through a quasi-experimental research design:
1. Will therapy that includes daily recording and communication of goals with a therapist improve self-care outcomes to a greater extent than occupational therapy that does not focus on goals in this manner?
2. Will all self-care areas be affected in a similar way by goal-focused therapy?

**Method**

**Study Design**

This pilot study used a quasi-experimental design to identify possible differences in outcomes of two convenience samples of patients receiving different occupational therapy treatments. The independent variable was the method and frequency of discussing therapy goals, and the dependent variables were changes in patients’ levels of independence in six self-care areas, as represented by scores on the Functional Independence Measure (FIM).

**Participants**

Thirty-one individuals met the following criteria for the pilot study: (a) length of stay anticipated to be at least 2 weeks at the facility where the research was conducted; and (b) a score on admission of 25 or less in the six areas of self-care on the FIM (Uniform Data System for Medical Rehabilitation [UDS], 1999), indicating the need for assistance to complete performance areas. Individuals were excluded from the pilot study if they scored lower than 24 on the Mini-Mental Status Examination (MMSE), indicating cognitive impairment (Folstein, Folstein, & McHugh, 1975) that could interfere with comprehension of the goal-setting process. Appropriate procedures to protect participants’ rights were followed and informed consent was obtained before assignment to groups.

Participants included 4 males and 27 females, ranging in age from 56 to 93 years old. Participants were being treated for neurological, cardiopulmonary, and orthopedic deficits, back injury, and debilitation. After meeting inclusion criteria, assignment to groups was done by convenience, based on room-assignment on the rehabilitation unit, resulting in an equal chance of being placed into either group. From this convenience sample, 16 participants were assigned to the control group and 15 to the experimental group. Block randomization was used to assure a similar distribution of diagnoses in each group. The study intervention began within 24 hours following the assignment of participants.

**Instruments**

Instruments used were the FIM (UDS, 1999) and the MMSE (Folstein et al., 1975). The MMSE was used as a screen for inclusion/exclusion in the pilot study. The FIM is a widely used method of assessing daily living activities in rehabilitation medicine, and consists of 13 motor and 5 cognitive items that are individually scored from 1 (complete dependence) to 7 (complete independence) (Adler, 2001). Ottenbacher, Hsu, Granger, and Fiedler (1996) found the FIM to be reliable “across a variety of patient populations, settings, and clinicians.” They noted that reliability of the FIM is highest for items in the motor domain, such as those assessed in this pilot study. In their meta-analysis of 11 studies, the median for interrater reliability was .95.

**Procedure**

For the purposes of this pilot study, eating, grooming, bathing, upper-body dressing, lower-body dressing, and toileting were measured. FIM scores were recorded during admission and again after 2 weeks of occupational therapy. All occupational therapists and occupational therapy assistants who administered the FIM met UDS standards and had completed FIM certification.
before rating participants. The principal investigator conducted the MMSE with potential participants and determined scores.

Participants took part in the pilot study during their initial 2 weeks at the facility. Both the control and experimental groups received therapy from registered occupational therapists and certified occupational therapy assistants to improve deficits in self-care performance areas. In both groups, participants received physical therapy and occupational therapy. Participants received at least 1 hr 30 min, but no more than 2 hrs 15 min, of occupational therapy per day. Treatment sessions were 45 minutes in length. Therapy incorporated both individual and group treatment sessions appropriate to participants' needs.

Therapists involved in the pilot study were informed of the study's purpose and asked to discuss procedures only with the principal investigator. Therapists collecting data were unaware of expectations and projected outcomes as well as the treatment assignment of the participants. Initial FIM scores and follow-up FIM scores were recorded on separate data sheets to reduce rater bias.

Participants in the experimental group were supplied with a goal notebook. These participants engaged in daily discussions and written documentation of goals collaboratively with their therapists. The notebooks allowed for enhanced discussion between participants and therapists as well as a reminder of goals. Standardized formats were used to state goals in this group. Each goal contained a subject (the participant), an observable action verb, a functional performance, a condition under which the performance was to be met, and the criteria required to complete the performance measure (such as time, accuracy, distance, speed, or quality of movement). An example goal statement was provided for each therapist as a reference. The principal investigator continuously tracked goal statements to ensure therapists were following protocols.

Participants in the control group established goals with their therapists during the initial evaluation; however, during daily therapy, goals were not emphasized or specifically reviewed. The control group did not have goal notebooks, and all related communication between occupational therapists and participants was verbal. Participants were urged to do their best with self-care tasks without specific reference to goals.

Analysis

The statistical test used for analyzing the data was the Mann-Whitney U test. The Mann-Whitney U test was designed to test the difference between two groups of different size, with unpaired scores (Portney & Watkins, 1993). The minimal level, chosen preceding data collection, to test for statistical significance was an alpha level of .05.

Results

A quantitative analysis was performed from data gathered on 31 patients who participated in the study at an inpatient rehabilitation hospital. The data were statistically analyzed to determine if there was a correlation between collaborative, goal-focused therapy and the achievement of desired outcomes in self-care activities, as measured by an increased FIM score. Six dependent variables were compared based on participants' functional levels at admission and two weeks following admission.

The six dependent self-care variables were eating, grooming, upper-body dressing, lower-body dressing, bathing, and toileting. Since non-parametric tests are being conducted to determine if differences exist between the two groups, comparisons of medians are performed rather than comparisons of means. Medians in both groups reflected a gain in FIM self-care scores between admission and 2-week follow-up, demonstrating improved task performance. The experimental group demonstrated greater median gains in grooming, upper-body dressing, lower-body dressing, and toileting. The two groups had equal median gains in eating and bathing (see Figure 1). The difference in the performance of upper-body dressing between the control group and experimental group was significant with \( p = .019 \). There was, however, no statistically significant difference between groups for the other five dependent variables of eating, grooming, lower-body dressing, toileting, and bathing.

Discussion

This pilot study compared the outcomes of a collaborative goal-focused occupational therapy treatment group to a control group. The findings of the study provide statistically significant support for the efficacy of the experimental approach in treatment of deficits in upper-body dressing. This approach was also advantageous for the skills of grooming, lower-body dressing, and toileting, but differences were not statistically significant. No advantage was found in either approach to treating deficits in eating and bathing.

Why would collaborative, goal-focused therapy affect one area of self-care, but not others? Although further research is necessary to address this question, a possibility can be suggested. Self-care activities, generally, are not affected uniformly by trauma or disease. For example, FIM scores for eating and grooming may be high at both admission and discharge for an individual following hip-replacement surgery. Since these performance areas were unimpaired, and not a focus of therapy, no change in status would be expected, and differences in approaches to therapy would be irrelevant.

Occupational therapists are ethically compelled to collaborate with clients. A growing body of occupational therapy literature suggests multiple benefits of a collaborative approach to therapy. Although constraints on therapists' time limited this pilot study to a relatively small sample, the study suggests that collaborative, goal-focused occupational therapy may be advantageous in the treatment of self-care skills. A study with a larger sample is needed to test this further.

Limitations

The limitations of this pilot study are as follows:

- Attention was not given to specific treatment protocols; therefore, treatment activity may have varied significantly

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between therapists and as a result between groups.

- Although the small sample of this pilot study was adequate to identify one significant difference in self-care performance between the control and experimental groups, further research, with a greater number of participants over longer duration, is recommended in order to detect other differences that may exist.

- The pilot study used the FIM to determine overall findings of participants' functional levels after a 2-week period. This type of assessment rating may not have been sensitive to the needs and actual functional levels of participants following a 2-week period. A participant could experience gains that were not substantial enough to increase the FIM score. Using a different rating scale or assessment that is more sensitive to the functional level of participants may be a better measure of success with participant/therapist interaction and goal achievement.

### Conclusion

In this pilot study, participants receiving collaborative, goal-focused therapy demonstrated significantly better performance in one self-care skill, upper-body dressing, when compared to a control group. Other self-care skills also showed greater improvement with collaborative, goal-focused therapy over the control group, but did not reach a level of statistical significance. Further research is indicated for greater understanding of the relationship between collaborative, goal-focused therapy and performance of community mobility, meal preparation, shopping, and social participation.

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Figure 1. Participants' gains in self-care scores on the FIM between measurements at admission and 2-week follow-up.

*Note.* The heavy horizontal bar represents the median change. The box represents the middle 50% of the change data. The dashed lines represent the range of the data within 1.5 times the interquartile range. The stand-alone bar represents possible outliers.
References


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