Patient and therapist ratings on self-identified rehabilitation goals at admission and discharge: do they agree?

Lauren Tooman
The University of Toledo

Follow this and additional works at: http://utdr.utoledo.edu/graduate-projects
Patient and Therapist Ratings on Self-Identified Rehabilitation Goals at

Admission and Discharge: Do They Agree?

Lauren Tooman

Research Advisor: David L. Nelson, Ph.D., OTR/L

Department of Occupational Therapy

Occupational Therapy Doctorate Program

The University of Toledo Health Science Campus

May 2009
Abstract

Two important aspects of the occupational therapy intervention process are a) patient involvement in goal setting, and b) the therapist’s judgments concerning function. A tool such as the Self-Identified Goals Assessment (SIGA) can be used to help patients specify personally meaningful goals, and to evaluate the level of personally defined success on those goals as well as on overall ability. This study tested the degree of agreement between the patients’ SIGA ratings and two therapists’ ratings at admission and at discharge, and also tested the degree of agreement concerning change scores from admission to discharge. Eighteen males and twenty-four females with various diagnoses from the University of Toledo Coghlin Inpatient Rehabilitation unit participated in this study. The mean age was 69.6 years ($SD = 11.16$). The intraclass correlation coefficient ($ICC$) testing the level of agreement between patients and therapist for overall ability at admission was only .23 (fair agreement). At discharge the $ICC$ for overall ability was .43 (moderate agreement), and the $ICC$ testing the level of agreement between patients and therapists concerning change from admission to discharge was .18 (slight agreement). The levels of agreement for individual goals were also in the ranges indicating poor, slight, fair, or moderate agreement. Therapists tended to see more positive change in patients from admission to discharge than did patients, with correlated $t (41) = -2.80$, $p = .008$. In conclusion, these results suggest that patients’ self-ratings of goals should be considered a separate construct from therapists' judgment of function.
Patient and Therapist Ratings on Self-Identified Goals at Admission and Discharge: Do They Agree?

When setting goals for patients in occupational therapy, therapists need to encourage active patient participation. Better outcomes may be a result of therapist and patient cooperation when setting goals (McAndrew, McDermott, Vitzakovitch, Warunek, & Holm, 1999). The Commission on Accreditation of Rehabilitation Facilities and the Joint Commission on Accreditation of Healthcare Organizations require patient participation in the goal-setting process (Commission for Accreditation of Rehabilitation Facilities, 1997; Joint Commission on Accreditation of Healthcare Organizations, 1997). Therefore, not only can patient driven goal setting improve rehabilitation outcomes, it is mandated by accreditation agencies.

A study by Czar (1987) assessed patient involvement in goal setting. This study involved 27 male inpatients at Veterans’ Administration Medical Center. These patients were admitted for short-term inpatient care in a university-affiliated Veterans Administration Medical Center. One group was assigned \((N = 15)\) to collaborate in goal setting with nurses. Another group \((N = 12)\) had goals that were set for them by the same nurses. Results measured in terms of goal attainment scaling indicated that progress was greater in the group that actively collaborated in goal setting.

An occupational therapy study of goal setting (Neistadt, 1984) involved adults with physical and developmental disabilities in two long-term care facilities. Seventeen adults with physical disabilities in a long-term rehabilitation facility took part in an Independent Living Skills (ILS) program. The ILS program elicited goals that were used by the patient and the therapist to create a personalized contract for each patient prior to starting the program. When the ILS program ended, 58.8% of patients returned to the community and 23.5% were on waiting
lists for community placements. Although there was no control group to deal with potentially confounding variables, Neistadt’s data are supported by the observation that not one of these patients had community discharge plans prior to entering the ILS program.

In a second study by Neistadt (1987), a similar ILS program for adults with developmental disabilities residing in a group home was conducted with a focus on community living skills. Prior to the program, Neistadt (1987) met with each patient to help the patient set treatment goals and objectives. These goals and objectives determined the focus of the individual sessions. Reports that were given verbally from house and workshop staff members, along with written documentation in the patient’s records, showed that these patients demonstrated increased initiative in directing their own care by the conclusion of the program. Once again, it is important to point out that in this study there also was no systematic control for potential confounders.

Another study also reported positive findings for active patient participation in the goal setting process (Wressle, Eeg-Olofsson, Marcusson, & Henriksson, 2002). Eighty-eight patients were in the experimental group and 30 patients were in the control group. Interviews were done two to four weeks after patient discharge, and significant differences between the two groups were seen. Patients in the experimental group reported feeling like dynamic patients in the goal setting process. The experimental group also said they were better able to manage day to day occupations after completing rehabilitation when compared to patients in the control group.

One method of goal setting is Goal Attainment Scaling on patient-identified goals (Ottenbacher & Cusick, 1990). Goal attainment scaling provides the outline for the development of program goals that are attainable, measurable, and contextually relevant. Goal attainment scaling gives a quantitative measure of a patient’s progress that can be used to evaluate the
performance of a patient over time. The goal attainment scaling involves steps that include identifying an overall objective and selecting the expected level of performance.

A method that uses semi-structured interviews to help patients identify and quantify their goals is the Canadian Occupational Performance Measure (COPM) (Law, Baptiste, McColl, Opzoomer, Polatajko, & Pollock, 1990; Pollock, 1993; Law, Polatajko, Pollock, McColl, Carswell, Baptiste, 1994). This assessment is designed to improve the client-centered practice of therapists in a variety of settings. The COPM consists of a five-step process that utilizes a semi-structured interview to guide the assessment across three major occupational performance areas: self-care, leisure, and work/productivity (Law et al., 1994). The patient is asked to name occupations in which he or she will need to engage. The patient is then asked to rate all of the named performance tasks by level of importance on a scale from one to ten. The patient judges the five most important tasks, which are then rated on a one to ten scale on level of satisfaction and performance. The overall performance and satisfaction scores are then calculated. The test-retest reliability of the COPM was .63 for satisfaction to .84 for performance (McColl, Paterson, Davies, Doubt, & Law, M, 2000). In a study by McColl and colleagues (McColl et al., 2000), evidence for construct validity was provided by studying the association between the COPM Performance scores and the a) Reintegration to Normal Living Index (RNL) b) and the Life Satisfaction Scale (LSS). The first area is the COPM Performance scores as they relate to Reintegration to Normal Living Index. One significant drawback to the COPM, however, is the duration of assessment. The median duration of the COPM is 30 minutes with a range of 10 to 180 minutes (Law et al., 1994).

The assessment that will be used in this study will be Self-Identified Goals Assessment (SIGA). The SIGA was developed as part of the Melville-Nelson Occupational Therapy
Evaluation System for Subacute Rehabilitation. An advantage of the Self Identified Goals Assessment (SIGA) is that it was found to take a median of only five minutes to administer (Johnson, 2001). In a study done by Melville et al. (2002), a total of 83 goals were identified at the admission evaluation. There were 30 patients in this study. The patients’ mean overall rating of how well they could do all the things they wanted to do was 2.6 ($SD = 2.0$) at admission, and the mean discharge score was 5.9 ($SD = 1.9$). The mean change score from admission to discharge was 3.3 ($SD = 2.6$), $t(29) = 7.1$, $p < .001$. The study confirmed that the SIGA can be useful in transitional care units of hospitals. The SIGA is an effective way to structure a dialogue between patient and practitioner about the patient’s goals and personally defined levels of success.

A previous study by Childers (2002) tested whether there is a positive correlation between patient ratings and therapist ratings on the Self-Identified Goals Assessment. The Childers (2002) study had 33 patients in a subacute transitional care unit, and the Melville-Nelson Self-Identified Goals Assessment was used to obtain patient goals and priorities through interviews. The therapist was also asked to rate the patient’s overall ability and ability to engage in the identified goals within a three-hour time frame after the patient assessment. The therapist rated the overall ability and ability to perform identified goals using the same scale as the patient. A Pearson correlation was used to assess the relationship between the patients’ ratings and the therapists’ ratings on overall ability as well as on specific goals. Low correlations were found ranging from $r = .03$ to $r = .12$. The Childers (2002) study also found that the therapist tended to rate higher than the patient, especially on some of the individual goals.

A study conducted by Himmelein (2004) also tested the level of agreement between patient-perceived ratings on the SIGA and ratings given by the therapist. Level of overall
agreement on ability was poor, with an ICC less than 0. ICC’s on the five goals ranged from -.16 to .38 (from poor to fair). Childers (2002) and Himmelein (2004) found that therapists tended to rate overall goals higher than the patient. Himmelein also tested whether patient identified goals are reflected in therapist identified goals. This study found that therapist-identified goals matched patient-identified goals only 32% of the time.

In summary, both studies by Childers (2002) and Himmelein (2004) have found low levels of agreement between patients’ and therapists’ ratings of patient’s self-identified goals. The current study is designed to further this line of research by comparing the self-identified goal ratings of the patient to the therapist’s goal ratings at both admission and discharge. The current study will be replicating Childers (2002) and Himmelein (2004), but will consider not only admission scores but also discharge scores. The main hypotheses that will be tested in this study are:

- There is agreement between the patients’ Self-Identified Goals Assessment rating of overall ability and therapists’ rating at admission.
- There is agreement between patients’ Self-Identified Goals Assessment rating of overall ability and therapists’ rating at discharge.
- There is agreement between patients’ and therapists’ ratings of overall ability change score from admission to discharge.

Secondary hypotheses will test the levels of agreement between patients’ and therapists’ ratings on each individual goal at admission, at discharge, and as a change score from admission to discharge. Also, the study will compare the therapist and patient ratings to see if one rating is higher than the other at admission, at discharge, and as a change score. Another outcome of this study includes examination of the responsiveness of the SIGA for registering change over time.
Method

Participants

The participants for this study included 42 patients from the Coghlin inpatient rehabilitation care unit of The University of Toledo Medical Center. The patients met the following inclusion criteria: they must have been at least fifty years of age, they must have been cognitively able and willing to answer questions on the SIGA at admission and discharge (as judged by the occupational therapists), and they must have been admitted to inpatient rehabilitation at the participating facility with a referral for occupational therapy.

Of the 42 patients, 18 were male and 24 were female. The mean age of the patients was 69.59 years ($SD = 11.6$). The patient’s average length of stay in the Coghlin inpatient rehabilitation hospital was 9.5 days ($SD = 7.26$). The admitting diagnoses were: cerebrovascular accident (5), L3-L4 laminectomy with fusion (3), knee arthroscopy (1), hip fracture (5), total hip replacement (5), total knee replacement (7), fall (2), below the knee amputation (1), multiple fractures (1), femur fracture (1), SAH falls (1), septic hip (2), multiple sclerosis (1), debility (3), Parkinson’s (1), peripheral neuropathy (1), patellar fracture (1), and spinal cord injury status post fall (1). See Table 1 for other characteristics of patients, including housing and co-habitant status. One patient was unavailable for testing at discharge, so the sample size for discharge and gain scores is 41, not 42.

Instrument

Modeled after the Canadian Occupational Performance Measure (COPM) (Law, et al., 1990), the Melville-Nelson Self-Identified Goals Assessment (SIGA) (Melville, Baltic, Bettcher, & Nelson, 2002) was designed as an assessment of patient-identified goals in sub-acute rehabilitation. The SIGA is an assessment that is used to elicit goals, as well as to rate the
performance ability on the goals. The first step of the SIGA is for the therapist to ask the patient for information about his or her home situation, prior functioning, work interests, and common routines. The next step is for the therapist to use semi-structured interview techniques to help the patient identify one to four goals. The therapist ensures that the patient states actual personal goals rather than stating therapist-mandated goals. After identifying one to four goals, the patient is shown a scale. The scale is numbered from zero to ten. A rating of zero is a goal that is identified as one that cannot be done, and a rating of ten is a goal that is identified as one that can be done. The patient is asked to rate how well he or she is able to do all of the things he or she wants to do and needs to do. This is considered the overall score. Finally, the patient is asked to rate each individual goal on the same 0-10 scale.

The SIGA has been studied for construct validity, convergent validity, and content validity. The SIGA was found effective in helping most patients identify personally meaningful goals in a study of skilled nursing patients (Melville, et al., 2002). The SIGA, according to Johnson (2001), was found to have statistically significant correlations with the COPM (Law et al., 1990).

Procedure

The study included two occupational therapists. The female therapist had 8 years of clinical experience, the male 24. Both occupational therapists were employed full time at the Coghlin inpatient rehabilitation unit located within the University Medical Center in Toledo, Ohio. When an appropriate candidate who fit the inclusion criteria for the study was admitted, the participating occupational therapist contacted the student investigator (SI). The SI was a graduate student in occupational therapy. The SI contacted the patient within three days of admission to the Coghlin inpatient rehabilitation hospital, and asked the patient for informed consent. After the informed consent was obtained, the SI administered the SIGA. The SI
recorded the patient’s SIGA goals on a data collection form. The data collection form recorded the patient’s score of overall ability, and the patients score of ability on specific self-identified goals. The patient’s SIGA was filed in a secure filing system that could not be accessed by the participating therapists. The next step was for the therapist who evaluated the patient to rate the patient’s overall ability and the patient’s ability to perform each of the identified goals on the same 0-10 scale used by the patient. The therapists did not have access to the patient’s ability ratings; therefore the therapists’ ratings were independent of the patients’. Once the SIGA was completed upon admission, the SI gathered information from the medical charts on age, gender, diagnosis, and occupational therapy goals. All information obtained throughout this study was kept in the SI’s secure locker.

Within three days of a patient’s discharge, the SI was contacted by the occupational therapists. Again, the SI asked the patient to rate his or her overall ability, as well as his or her ability on each of the self-identified goals. The participating occupational therapist then rate the patient’s overall ability and ability on each of his or her self-identified goals at the time of discharge. As with admission scores, once again the patients and the therapists did not know the others’ scores.

*Plan for Data Analysis*

In order to compare the quantitative SIGA ratings of the patient and therapist, a series of intraclass correlation coefficients were conducted. The first *ICC* reflected the degree of agreement concerning overall ability to do things that are needed or wanted at admission. Next, an *ICC* was done to determine the degree of agreement on overall ability at discharge. Another *ICC* was done to assess the degree of agreement on the change scores on overall ability from admission to discharge. Additional *ICC’s* were done to test the degree of agreement on ratings
of each individual goal at admission, at discharge, and as a change score from admission to discharge. The six categories for judging ICC level of agreement recommended by Eliasziw, Young, Woodbury, & Fryday-Field (1994) were used.

Correlated t-tests were conducted to determine whether therapists or patients might have given higher scores. These tests were done on the admission, discharge, and change scores of overall ability.

Results

Table 2 shows the level of agreement between patients and therapists in regards to the patients’ ability level, as recorded on the SIGA. The level of agreement between patients and therapists concerning the patient’s overall level of ability was fair, with an ICC of .23. The ICC for overall ability at discharge was .43 (moderate agreement). The ICC for agreement on the change score from admission to discharge on overall ability was .18, which is a slight level of agreement. The main hypotheses were not supported, because all ICC scores are below substantial.

The secondary hypotheses to test the levels of agreement on individual goals also resulted in relatively low ICCs. At admission, ICCs for the first three goals ranged from .13 to .34. At discharge they ranged from .25 to .48. And, finally, ICCs for change scores ranged from -.04 to .30. ICCs could not be completed on the fourth goal due to a small sample size, N =8.

Comparing the magnitudes of patient's overall ratings to therapist's overall ratings yielded interesting results. There were no statistically significant differences between therapists' and patients' ratings at admission [correlated t (41) = -1.83, \( p = .08 \)] or at discharge [correlated t (40) = .98, \( p = .33 \)]. However, therapists reported significantly more positive change from admission to discharge than patients rating their own changes [correlated t (40) = - 2.80, \( p = \)
As can be seen in Table 2, therapists reported that patients had made a mean of 3.5 units of positive change from admission to discharge ($SD = 2.0$), whereas patients reported only 2.3 units of positive change ($SD = 2.3$). Both patients' ratings and therapists' ratings confirmed the responsiveness of the SIGA, in that scores increased substantially.

**Discussion**

This study found that patients and therapists were not in substantial agreement concerning the patients’ overall level of ability. The therapist's and patient’s ratings of ability at admission and discharge should be considered separate constructs. The idea that either the therapist’s or the patient’s judgments is right or wrong is rejected; the ratings should be viewed as separate constructs. Previous studies, such as Himmelein (2004), also found that the level of patient and therapist agreement concerning the patient’s level of ability was low, with an ICC less than 0. ICC’s on the five goals ranged from -.16 to .38 (from poor to fair). In addition, Childers (2002) found that there were no significant correlations between how patients rated their ability to perform self-identified goals and how their occupational therapists rated those same abilities. Himmelein (2004), Childers (2002), and the current study included ten therapists, and all showed low levels of agreement with the patient’s self ratings.

These findings are consistent with a patient self-report study by Slevin et al. (1988), who found that physicians often did not agree with their patients’ ratings of health status. Berkowitz, Du, Kazis, and Lewis (1995) also found no significant correlations between physician and patient ratings using the SF-36. In contrast, a study by Santos-Eggimann et al. (1999) found substantial correlations between the reports of professional caregivers and patients.

It appears that by discharge, there may be a somewhat higher level of agreement between the patient and therapist; the ICC overall ability score at discharge was .43 versus the admission
ICC of .23. This increase in the level of agreement on overall ability between the therapist and patient may have several explanations. One reason might be that the patient and the therapist have come a little closer (yet not very close) to a meeting of the minds through working together. Another explanation may be that the patient is better at judging ability at discharge, after having more experiences in trying to do daily occupations. A possible explanation for the low agreement at admission might be that the patients were thinking of themselves prior to being hospitalized and were comparing themselves to their lives prior to illness or injury. In contrast, therapists might have been rating the patients based on their experiences with other patients. For example, a woman who has had a total hip arthroplasty might not be aware of the full extent of her disability at admission, prior to her attempting daily occupations. The therapist, on the other hand, has seen many patients with similar impairments and disabilities in the past.

Another possible explanation for the results is that the SIGA is not valid; however, previous studies have shown that the SIGA often correlates well with other self-reports of function (Johnson, 2001). All studies, including this one, have shown that the SIGA has validity in terms of sensitivity/responsiveness. My interpretation of the data is that therapist's and patient's ratings on patient-identified goals are simply different variables, with neither being more correct than the other.

The finding that therapists perceived significantly more overall patient progress from admission to discharge than did patients is provocative. Is this a chance finding limited to these patients and these therapists, or can this result be replicated? One of the strengths of this study is that discharge and gain scores were studied, not only admission scores as in prior research. If this result can be replicated, it might indicate that a) therapists have a tendency to overestimate
positive change, or b) patients have a tendency to underestimate the improvement made in rehabilitation.

A limitation of the study is that it involved only two therapists. To make the study more generalizable, several more therapists could have been used. Another limiting factor is that the patients in the study were chosen by the occupational therapist based on whether they had the cognitive ability to answer the questions. Although the sample size for this study ($N = 42$) was larger than previous studies Himmelein (2004) ($N = 20$), and Childers (2002) ($N = 33$), it is still a relatively small pool of patients.

Recommendations for future research include having more facilities from which to draw the sample. It would be interesting to see if the level of agreement between the therapist and the patient would be any different in an outpatient rehabilitation clinic, rather than the inpatient rehabilitation clinic that was used in this study. Also, future research could include more than two occupational therapists. Another aspect for research could be to examine language barriers between therapists’ expression of goals and patients' identification of goals.
References


Table 1

Characteristics of Patients ($N = 42$)

<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>69.6</td>
<td>11.2</td>
</tr>
<tr>
<td>Male</td>
<td>18</td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>24</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Housing</th>
<th>N</th>
<th>Co-Habitants</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 story home</td>
<td>12</td>
<td>Spouse</td>
<td>26</td>
</tr>
<tr>
<td>2 story home</td>
<td>19</td>
<td>Spouse + Child</td>
<td>1</td>
</tr>
<tr>
<td>3 story home</td>
<td>2</td>
<td>Child</td>
<td>4</td>
</tr>
<tr>
<td>Apartment</td>
<td>3</td>
<td>Alone</td>
<td>6</td>
</tr>
<tr>
<td>Mobile home</td>
<td>3</td>
<td>Significant Other</td>
<td>1</td>
</tr>
<tr>
<td>Assisted Living</td>
<td>1</td>
<td>Assisted Living</td>
<td>1</td>
</tr>
<tr>
<td>Retirement Ctr.</td>
<td>1</td>
<td>Parents</td>
<td>1</td>
</tr>
<tr>
<td>Condominium</td>
<td>1</td>
<td>Friend</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Retirement Ctr.</td>
<td>1</td>
</tr>
</tbody>
</table>
Table 2

Degree of Agreement between Patients and Therapists’ SIGA Scores of Ability

<table>
<thead>
<tr>
<th>Patient</th>
<th>OTR</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
<td>M</td>
<td>SD</td>
<td>M</td>
<td>SD</td>
<td>ICC</td>
<td></td>
</tr>
<tr>
<td>Overall</td>
<td>42</td>
<td>3.1</td>
<td>2.8</td>
<td>2.3</td>
<td>1.4</td>
<td>0.23</td>
<td></td>
</tr>
<tr>
<td>Admission</td>
<td>Goal 1</td>
<td>42</td>
<td>2.7</td>
<td>2.9</td>
<td>3.0</td>
<td>5.2</td>
<td>0.13</td>
</tr>
<tr>
<td></td>
<td>Goal 2</td>
<td>39</td>
<td>2.4</td>
<td>2.6</td>
<td>2.2</td>
<td>2.2</td>
<td>0.34</td>
</tr>
<tr>
<td></td>
<td>Goal 3</td>
<td>27</td>
<td>2.9</td>
<td>3.3</td>
<td>2.1</td>
<td>2.1</td>
<td>0.07</td>
</tr>
<tr>
<td></td>
<td>Goal 4</td>
<td>8</td>
<td>2.4</td>
<td>2.9</td>
<td>1.0</td>
<td>1.3</td>
<td>--</td>
</tr>
<tr>
<td>Discharge</td>
<td>Goal 1</td>
<td>41</td>
<td>5.4</td>
<td>2.8</td>
<td>5.8</td>
<td>2.3</td>
<td>0.43</td>
</tr>
<tr>
<td></td>
<td>Goal 2</td>
<td>38</td>
<td>4.6</td>
<td>3.1</td>
<td>5.4</td>
<td>3.2</td>
<td>0.48</td>
</tr>
<tr>
<td></td>
<td>Goal 3</td>
<td>28</td>
<td>5.1</td>
<td>3.2</td>
<td>5.9</td>
<td>3.2</td>
<td>0.25</td>
</tr>
<tr>
<td></td>
<td>Goal 4</td>
<td>8</td>
<td>4.8</td>
<td>3.5</td>
<td>4.5</td>
<td>3.5</td>
<td>--</td>
</tr>
<tr>
<td>Overall Gain</td>
<td>Goal 1</td>
<td>41</td>
<td>2.3</td>
<td>2.3</td>
<td>3.5</td>
<td>2.0</td>
<td>0.18</td>
</tr>
<tr>
<td></td>
<td>Goal 2</td>
<td>38</td>
<td>2.0</td>
<td>2.6</td>
<td>2.5</td>
<td>5.1</td>
<td>-0.04</td>
</tr>
<tr>
<td></td>
<td>Goal 3</td>
<td>28</td>
<td>2.3</td>
<td>2.8</td>
<td>3.3</td>
<td>2.5</td>
<td>0.03</td>
</tr>
<tr>
<td></td>
<td>Goal 3</td>
<td>28</td>
<td>2.1</td>
<td>3.0</td>
<td>3.6</td>
<td>2.6</td>
<td>0.28</td>
</tr>
</tbody>
</table>