Stability and Change in Functional Assessment of Patients With Geropsychiatric Disorders

Joan C. Rogers, Margo B. Holm, Gerald Goldstein, Michael McCue, Paul D. Nussbaum

Key Words: rehabilitation, geriatric

Objectives. Functional assessments of patients with geropsychiatric disorders accomplished by self-rating, informant rating, and performance test were compared.

Method. Fifty-eight inpatients with major depression or progressive dementia were evaluated on three occasions over 6 months with informant and patient versions of the Activities of Daily Living Scale of the Older Americans Resources and Services Multidimensional Functional Assessment (OARS-ADL) and with the Performance Assessment of Self-Care Skills (PASS).

Results. Patients’ scores became significantly worse (p < .01) on the informant version of the OARS-ADL and the PASS. Self-ratings with the OARS-ADL did not worsen significantly (p > .05).

Conclusion. Agreement between informant rating and performance test concerning functional status of patients with dementia was good. Elderly patients with depression may experience subtle deterioration that only becomes apparent on performance tests.

This study is a preliminary report that addressed the problem of short-term functional change in elderly patients after hospitalization for a psychiatric illness. We focused on those patients who returned home or to other settings in which they engaged in relatively independent living after discharge. A matter of often crucial concern after hospitalization is whether an elderly patient can return to independent living. A functional assessment is frequently conducted in the hospital to assist in making that determination, but the predictive validity of such assessments with regard to functional capacities in independent living settings is often not well established. That is, performance levels on functional assessments done in the hospital may or may not be comparable to those found in independent living settings after hospitalization.

The most common reasons for acute psychiatric hospitalization of elderly persons are dementia and major depression (Gurland, Dean, Cross, & Golden, 1980). Often a combination of the two disorders is present, but the reason for hospitalization is typically one or the other. Thus, for example, dementia may be found in a person hospitalized for depression, or vice versa. Depression in these persons is likely to be severe, but progressive dementia is typically in its early or middle stages. Thus, after diagnosis and short-term treatment, many patients may return to the community. The ultimate outcome for these patients depends on diagnosis, and persons with progressive dementia will continue to deteriorate despite returning to the community after inpatient treatment. Nevertheless, the determination of capacity for independent living, even within a time frame limited by the nature of the illness, remains an important consideration (Reuben, Su, & Kimpau, 1992).
Although performing assessments after discharge to community living and comparing them with assessments made during hospitalization may assist considerably in establishing actual functional competence, methodological problems persist concerning the varying validities of different forms of assessment. There are three major forms of functional assessment: self-ratings, informant interviews or questionnaires, and performance tests (Crook, Ferris, & Burtus, 1983). Although each type may have its own assets, some patient populations, notably patients with brain damage, show a wide discrepancy between self-ratings of function and objectively determined capacities (Chelune, Heaton, & Lehman, 1986; Goldstein & McCue, 1990). Informant ratings have proven to be more accurate, but ideally one would assume that a performance test, in which persons carry out various activities of daily living (ADLs) under observation by an experienced clinician, would be the preferred functional assessment procedure (Goralnik, Branch, Cummings, & Curb, 1989; Rozzini, Frisoni, Bianchetti, Zanetti, & Trabucchi, 1993). The present study therefore compared the three different assessment methods.

The research presented here is part of a larger study to predict postdischarge functioning on the basis of a number of clinical, functional, and neuropsychological indicators obtained early in the course of hospitalization, but after stabilization on medication and adjustment to the hospital environment. A symposium on the future of geriatric assessment concluded that such assessment was of demonstrable benefit in regard to morbidity, mortality, and rate of reinstitutionalization considerations (Applegate, Deyo, Kramer, & Meehan, 1991). The design of the larger study involved a three-phase evaluation in which patients were assessed while in the hospital, within 2 weeks after discharge, and again 6 months after discharge. Postdischarge assessments were conducted by occupational therapists in the patients' residences. We originally intended to compare patients with dementia, patients with depression, and patients with both disorders, but the sample sizes obtained for follow-up did not provide sufficient power for meaningful statistical comparisons among the diagnostic groups. We therefore make preliminary comments on differences between the diagnostic groups, but restrict the formal statistical analyses to the total sample.

Method

Subjects

Fifty-eight subjects received all or part of the initial in-hospital evaluation; 25 of them completed all three phases of the study. Nine of these subjects had major depression without evidence of dementia, 10 had primary degenerative dementia of the Alzheimer's type, 5 had mixed dementia and depression, and 1 was suspected of having multi-infarct dementia. The subjects ranged in age from 60 to 87 years ($M = 74.94$ years, $SD = 6.76$), and in years of education from 6 to 18 ($M = 10.96$ years, $SD = 2.59$). They were predominantly white (88.2%), female (82.4%), and married or widowed (84.3%).

To be assigned to the group with major depression, the patient had to meet Research Diagnostic Criteria for unipolar, non-delusional major mood disorder (Feighner et al., 1972), on the basis of a Schedule for Affective Disorders and Schizophrenia-Lifetime (SADS-L) interview administered by a qualified clinician (Endicott & Spitzer, 1978). A score of 15 for the first 17 items of the Hamilton Depression Scale (Hamilton, 1960) was also required. The score on the Mini-Mental State Examination (Folstein, Folstein, & McHugh, 1975) had to be 26 or higher, and there could be no clinical evidence of dementia. For admission to the group with dementia, the patient had to meet pertinent criteria in the Diagnostic and Statistical Manual of Mental Disorders (DSM-III-R) (American Psychiatric Association, 1987). The SADS-L interview had to rule out depression and primary degenerative dementia with depression. The score on the Hamilton Depression Scale could not exceed 17, and the score on the Mini-Mental State Examination had to be 25 or less. The mixed subjects met criteria for both disorders.

Many more subjects were entered into the study than were available for the 6-month follow-up. The two major reasons for attrition were that the subject moved to a location too distant to make follow-up feasible or was relocated to a nursing home or other institutional setting at which ADLs were not carried out independently.

Procedure

Instruments. Subjects were administered the Activities of Daily Living Scale from the Older Americans Resources and Services Multidimensional Functional Assessment (OARS-ADL) by a registered occupational therapist (Duke University Center for the Study on Aging, 1978). The scale is divided into physical and instrumental ADL sections. The physical section contains items concerning eating, dressing, personal hygiene, continence, and ability to shop, do housework, and manage medication. Consent to receive the in-home follow-up was also obtained at this point.

The OARS-ADL was administered to available informants during hospitalization and at the subject's residence 2 weeks after discharge and 6 months after discharge. The informants were persons who resided with the subjects and could provide information based on daily contact.
Table 1
Analysis of Variance Results for OARS-ADL and PASS Data for Total Sample

<table>
<thead>
<tr>
<th>Score</th>
<th>Time 1</th>
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<tr>
<td>OARS-ADLS</td>
<td>15.70</td>
<td>0.60</td>
<td>15.50</td>
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<td>OARS-IADLS</td>
<td>12.60</td>
<td>1.75</td>
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<td>OARS-ADLI</td>
<td>15.28</td>
<td>1.57</td>
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<td>PASS-MOB</td>
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<td>PASS-IADL</td>
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<td>31.78</td>
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<td>24.80</td>
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<td>39.83</td>
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Note: Higher scores on the OARS measures reflect relatively better functioning; the reverse is the case for the PASS variables. OARS = Older Americans Resources and Services; PASS = Performance Assessment of Self-Care Skills; OARS-ADLS and OARS-IADL = Physical ADL Self-Ratings and Informant Ratings; OARS-IADLS and OARS-IADLI = Instrumental ADL Self-Ratings and Informant Ratings; PASS-MOB = PASS Mobility Summary Score; PASS-PER = PASS Personal Self-Care Summary Score; PASS-IADL = PASS Instrumental ADL Summary Score.

Two weeks after discharge and 6 months after discharge, subjects were visited at home by a registered occupational therapist who administered the Performance Assessment of Self-Care Skills (PASS) (Rogers, 1987). The PASS is a performance test in which the subject is observed engaging in each of a series of daily living behaviors (see the Appendix). The individual items were scored on a 5-point scale with 1 representing normal performance, 5 representing maximal disability, and intermediate values reflecting progressive degrees of impairment (see Appendix). A reliability study of the PASS indicated agreement between two registered occupational therapists in the mid-90% range. PASS variables were also found to correlate highly with neuropsychological variables (McCue, Rogers, & Goldstein, 1990).

Treatment of data: Initial data reduction was accomplished by combining the individual items of both the OARS-ADL and the PASS items into summary scores. The OARS-ADL was categorized into physical and instrumental ADL summary scores, as indicated above. In the case of the PASS, mobility, personal self-care, and instrumental ADL summary scores were computed that consisted of the sums of individual scores for items listed in each category in the Appendix.

Descriptive statistical data were obtained for demographic variables and the summary scores. The statistical test used was repeated measures analysis of variance. An analysis was accomplished for each of the summary scores across testing occasions.

Results

Total Sample

The major finding appeared to be that, whereas the patients themselves reported no significant change over testing occasions, both the informants and the performance test produced statistically significant changes for the worse (see Table 1). The only exception is in the case of the PASS summary score for personal self-care, for which a statistically significant change was not found.

Preliminary Subgroup Analysis

Because of the small sample sizes of the subgroups included in the main study, the following analysis should be considered as tentative and preliminary. Nevertheless, these results may aid in clarifying the major findings. Nine of the subjects in the sample had major depression with no evidence of dementia. The remaining patients had dementia, mixed with depression in 5 of the 16 cases. In the case of the self-ratings, there were no prominent changes in either of the subgroups with dementia or...
depression (see Table 2). However, in the case of the informant ratings, there was stability in the subgroup with depression, but substantial evidence of deterioration in the subgroup with dementia. With regard to the PASS, there was evidence of varying degrees of change for the worse in both subgroups. However, it was of relatively greater magnitude in the case of the group with dementia.

Discussion

This preliminary study of functional assessment in geriatric patients suggests several points. First, there appears to be a reasonable degree of agreement between informants’ reports and actual observation of ADL-relevant behaviors through the use of a performance test. That is, when statistically significant changes were found over occasions by informants, they were also found on corresponding performance test variables.

Second, in the analyses accomplished for the total sample, self-ratings by patients did not change substantially over testing occasions. Patients reported over three testing occasions that they were functioning as well at the third occasion as they were at the first, more than 6 months before. In general, the patients’ ratings indicated higher levels of function than were reported by informants, with the discrepancy widening over occasions.

These discrepancies were clarified by dividing the sample into patients with depression and dementia. Although the small sample sizes precluded formal statistical analysis, the findings nevertheless seemed sufficiently suggestive to merit further investigation. On self-ratings, neither the patients with depression nor the patients with dementia reported any substantial change. However, on the informant ratings, the patients with depression were stable, whereas the patients with dementia demonstrated deterioration. On the PASS, both subgroups showed some deterioration, but it was relatively greater among the dementia subgroup. This combination of findings suggests that informants and elderly patients with depression agree with each other regarding change in functional status. However, patients and informants may not be able to detect more subtle changes in function revealed by the PASS.

In the case of patients with progressive dementia, informant ratings of change were more consistent with the PASS: both reflected substantial deterioration. It appears that data from informants and the performance test corroborate similar patterns of functional change in patients with dementia.

From a clinical standpoint, these results tend to support the finding that patients with progressive dementia frequently lack awareness of their cognitive deficits. This phenomenon has been demonstrated directly in the area of memory (Kazisniak, 1987) but may actually encompass a wider range of behavioral and functional abilities. It is also suggested that informants who have daily contact with patients with depression and dementia can provide reliable information concerning presence or absence of change in function, although this capacity may be at its best for patients with dementia. Thus, serial functional assessment using informants and performance testing may be a useful clinical tool for planning and modifying patient care and management.

Acknowledgments

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Appendix

Performance Assessment of Self-Care Skills

**Mobility**
- More from prone to supine position and rise from bed
- Sit and rise from a chair
- Lift 3-lb object from floor
- Ascend and descend stairs
- Enter a doorway by using a key
- Locate eating, sleeping, and toileting areas

**Personal Self-Care**
- Feed self
- Select appropriate clothing
- Don clothing
- Brush teeth
- Groom hair
- Groom fingernails and toenails
- Bathe self

**Instrumental Activities of Daily Living**
- Wash dishes
- Make a bed
- Wash clothing
- Clean a floor with an electric broom
- Verbalize appropriate response to danger
- Use telephone to obtain information
- Sew on a button
- Simulate shopping by selecting and purchasing gloves
- Balance a checkbook after writing a check
- Prepare an envelope for mailing the check
- Cook pudding on a range
- Demonstrate management of medications

References


in geriatric psychopharmacology. New Canaan, CT: Mark Prowley.


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