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Standardization and Validation of the Multidimensional Observation Scale for Elderly Subjects (MOSES)

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Objective, reliable and valid means of assessing the cognitive and psychosocial functionings of elderly persons are in demand for several reasons. Clinical needs for initial assessment, placement, and treatment monitoring are supplemented by the need for research tools for program evaluation and clinical trials. The set of behavior rating scales called the Multidimensional Observation Scale for Elderly Subjects (MOSES) was developed with these needs in mind. This paper describes the development of the MOSES scale and its rationale and norming on 2,391 residents of hospitals and residential settings. Internal consistency reliabilities in the .8 range and interrater reliabilities from .58 to .97 are reported. Validity correlations with the Zung Depression, Robertson Short Mental Status, Kingston Dementia, and the Physical and Mental Impairment-of-function Evaluation (PAMIE) scales were all satisfactory. The applications and advantages of the use of MOSES are discussed.

DUE to proportional increases in the elderly population, and given demographic predictions that an even greater proportion of the population will fall into this age range, it is expected that there will be an increased need for geriatric living facilities in the future. As demand for nursing home beds and other facilities increases (U.S. Department of Health, Education, and Welfare, 1979), placement will become a greater problem. Existing evidence shows that many individuals are improperly placed (Cape et al., 1977). One way of ameliorating the difficult task of correct placement is the use of a standardized, objective measure of the physical needs and intellectual functioning of elderly residents. Placement is but one example of the uses of such instruments. Monitoring patient progress, program evaluation, and other types of research also require valid and reliable assessment tools.

In the area of psychogeriatrics, several scales have been developed and are being used. Reviews by Raskin and Jarvik (1979) and Lawton and Storandt (1984) discuss the applicability of most of the well-known instruments.

Many of these measures cover only certain aspects of functioning in elderly persons (e.g., mental status scales or depression inventions) or apply to specific elderly populations (e.g., Schwartz, 1983, for elderly persons living at home). Others require the individual's cooperation, a stumbling block when those being studied are uncooperative or physically incapable of responding (Plutchik, 1979). Other scales necessitate professional or trained interviewers, a difficulty in many geriatric care settings (Smith, 1979). The Multidimensional Observation Scale for Elderly Subjects (MOSES) was designed to provide a short yet multidimensional assessment procedure that can be completed by regular staff members without resident cooperation in most geriatric care settings.

MOSES arose from a longitudinal research program that precipitated the development of the London Psychogeriatric Rating Scale (LPRS) (Hersch, Csapo, & Palmer, 1978;

Hersch, Kral, & Palmer, 1978) and that was aimed at improving the validity and utility of such measures. Global ratings of impairment, that are too broad for many purposes, do not discriminate among individuals. Multidimensional scales are preferable in most cases, but brevity is also desirable in the interest of time and efficiency. MOSES provides a short, multidimensional measure with good psychometric properties that are assured in part by the method of its development.

MOSES was developed by empirical factor analyses of earlier instruments to identify the major areas of functioning in elderly persons in light of theoretical concerns. For example, material relevant to depression was added because it became apparent that depression was a major factor (Grauer, 1977). These earlier analyses led to dissatisfaction with the item format, which was revised to be much more specific than any other rating scale in its phrasing of alternatives. Explicit anchors are desirable (Landy & Farr, 1980), and the forced-choice format leads to fewer leniency errors than do other rating methods (Sharon & Bartlett, 1969). The final stages of item analysis emphasized scale homogeneity and discriminant validity (Jackson, 1970).

The final result was the 40-item test (Helmes et al., 1985). This scale assesses five areas of functioning with eight items each: Self-Care Functioning, Disoriented Behavior, Depressed/Anxious Mood, Irritable Behavior, and Withdrawn Behavior. MOSES is reproduced in the Appendix. This paper reports the results of standardizing MOSES with the use of a large sample of institutionalized elderly adults and presents preliminary data on its validity and clinical utility.

METHODS

Participants. — Representative facilities from each of the four major types of institutions handling institutionalized elderly persons in Ontario were asked to participate in the

study. Each geographical region of the province was included in approximate proportion to the population in that area. In total, 7 psychiatric facilities (12 to 140 beds each, median of 61), 22 nursing homes (5 to 126 beds each, median of 54), 9 homes for the aged (8 to 140 beds, median of 60), and 7 continuing-care hospitals (29 to 103 beds, median of 66) agreed to participate. Because participation was voluntary, sampling cannot be considered random. In addition, a higher proportion of participants was sampled from the two types of hospitals than from the nursing homes and homes for the aged. A much higher proportion of psychiatric beds compared to the other settings was obtained, approximately 40% of the psychiatric population versus 4% of the others. As a rule, either all eligible patients within a facility, or all those within a ward or unit, were rated. Ontario homes for the aged have a different administrative structure from that of nursing homes, and they are designed for more independent residents (i.e., those requiring less nursing care).

A total of 2,542 individuals were rated, with 151 of these being under the age of 65. Some cases (309) were rated twice in order to determine the interrater reliability of MOSES. In addition, some facilities agreed to administer a second measure of the experimenter's choice for validation purposes, usually in an entire ward. In 32 cases, the age of the individual being rated was not reported, and these were dropped from analyses involving age. The average age of those rated was 81.3 years ($SD = 8.05$) with an average length of stay within the residence of 41.7 months ($SD = 53.4$). Close to 70% of the sample ($n = 1,719$) were female, and the majority were widowed (57.2%); 22.9% were married, 15.9% were single, and 4% were separated or divorced.

No attempt was made to restrict or select the type of resident. A range of disabilities, from none through more severe psychiatric and physical illnesses was obtained. Additional information on the mental and physical health and medication patterns in the sample is given by Helmes et al. (1986).

Procedure. — After the initial contact, meetings were arranged with administrators and members of the nursing staff at each facility to discuss the procedure to be used. Ratings were completed on all subjects by a member of the nursing staff who was well acquainted with the participants being rated. The nursing staff received a brief introduction to MOSES and basic instruction in its use. No training beyond the instructions provided with the scale was given. For those settings in which rater reliabilities were provided, a second staff member independently rated participants.

All raters had daily contact with the individuals being studied. The majority of raters were nursing assistants, and many were registered nurses. No attempt was made to select raters, as a typical sample was desired. Upon completion of the ratings, the forms were returned for scoring and item analysis.

Interrater reliabilities were assessed using intraclass correlation techniques (Ebel, 1951). Item-total correlations were computed for each item with its own scale and with all other

scales. This procedure was adopted in order to verify the degree of discriminant validity among the different scales (Jackson, 1970).

RESULTS

Interrater reliabilities for the five MOSES scales are given in Table 1; internal consistencies, calculated as coefficient alpha, in Table 2; and correlations among the scales in Table 3.

Interrater reliabilities were generally acceptable. Values across settings for Self-Care were consistently high, whereas values for Depression were consistently low, never above 0.62. Values on the other scales were more variable. By contrast, internal consistency reliabilities were uniformly around 0.8, with Disorientation being somewhat higher.

The correlations among scales suggest a strong relationship between certain scales, particularly Self-Care Functioning and Disorientation (Table 3). To verify the independence of the scales at the item level, an item-factor analysis was undertaken. The results of a component analysis of the data from 1,248 individuals aged 65 and older, who had no omitted items or items using the "5" or "does not apply" option, showed that each item had its highest loading on a component that corresponded to the scoring key. (The highest loadings are given in the Appendix.)

Table 4 contains the means on the final scales and shows a substantial degree of differentiation between the four different settings. Parallel univariate analyses of variance (ANOVAs) were carried out to indicate the scales of interest for discriminating among settings, followed by pairwise t tests if the overall F was significant. All scales showed significant differences among settings. For Self-Care Functioning, $F(3, 2387) = 121.46, p < .0001$, all settings differed from each other at $p < .05$, except for the psychiatric hospitals and nursing homes, which did not differ. All but one pairwise comparison proved significant for the Disoriented Behaviour scale, overall $F(3, 2387) = 43.83, p < .0001$. For this scale, there was no significant difference between the psychiatric and continuing-care hospitals. In the case of Depressed/Anxious Mood, the differences were less dramatic, $F(3, 2387) = 7.53, p < .001$. Psychiatric and continuing-care hospitals did not differ, nor did nursing homes and homes for the aged. There were substantial differences in Irritable Behaviour across settings, $F(3, 2387) = 51.50, p < .0001$. In this case, all settings differed from each other, except for homes for the aged and nursing homes that had similar, nonsignificantly different means. In the case of Withdrawn Behaviour, all settings differed significantly from each other by the post hoc pairwise t tests, overall $F(3, 2387) = 58.24, p < .0001$.

Validation of MOSES. — Several methods of validation of the MOSES scales were adopted, including the prediction of outcome, criterion or convergent validation, and discriminant validation. Validation of a measure against other measures of the same construct is an important procedure. Equally important is a demonstration that a measure does not correlate with measures of different constructs. The methods of item analysis used were intended to highlight this latter feature as much as the homogeneity of the scales.

Table 1. MOSES Interrater Reliability by Setting

Setting	n	MOSES scales				
		Self-Care	Disorientation	Depression	Irritability	Withdrawal
Psychiatric hospitals	174	.98	.83	.62	.71	.78
Nursing homes	54	.94	.79	.54	.71	.71
Homes for the aged	23	.99	.75	.50	.91	.59
Continuing-care hospitals	58	.97	.91	.52	.66	.70
Total	309	.97	.84	.58	.72	.75

Note. Coefficients are intraclass correlations based upon two raters.

Table 2. MOSES Internal Consistency Reliability by Setting

Setting	n	MOSES scales				
		Self-Care	Disorientation	Depression	Irritability	Withdrawal
Psychiatric hospitals	382	.83	.87	.80	.79	.77
Nursing homes	970	.81	.86	.79	.78	.77
Homes for the aged	599	.81	.86	.80	.79	.79
Continuing-care hospitals	440	.79	.88	.81	.80	.78
Total	2391	.82	.87	.80	.79	.78

Note. Figures are coefficient alpha. All residents were 65 years of age or older.

Table 3. Correlations Among MOSES Scales

	Self-Care	Disorientation	Depression	Irritability	Withdrawal
Self-Care	—	.64	.13	.31	.53
Disorientation		—	.16	.38	.65
Depression/Anxiety			—	.37	.17
Irritability				—	.38
Withdrawal					—

Note. $n = 2391$.

Table 4. Breakdown of MOSES Scores by Setting

Setting	No. of cases	MOSES scales									
		Self-Care		Disorientation		Depression		Irritability		Withdrawal	
		M	SD	M	SD	M	SD	M	SD	M	SD
Psychiatric hospitals	382	19.4	± 8.27	20.4	± 8.09	14.2	± 5.94	15.2	± 6.04	24.2	± 5.96
Nursing homes	970	19.0	± 7.72	16.8	± 7.89	13.0	± 5.41	11.8	± 4.72	20.4	± 6.39
Homes for the aged	599	18.0	± 7.57	15.4	± 7.87	13.0	± 5.74	11.6	± 4.77	19.0	± 6.96
Continuing-care hospitals	440	26.2	± 6.05	19.6	± 8.22	14.1	± 5.84	13.3	± 5.25	22.1	± 6.29
Total	2391	20.1	8.05	17.5	8.20	13.4	5.69	12.6	5.22	21.0	6.69

Note. All individuals are 65 years of age or older.

The first study attempted to predict outcome in a group of psychogeriatric patients. These data were collected during the developmental phase of MOSES (Helmes et al., 1985). During this study, with the outcome being determined by hospital staff, participants were rated independently by two raters. Table 5 gives follow-up data on 70 of the 71 original psychiatric patients one year after the initial test. The average rating for each resident was used in this case; it is perhaps of most value here, as the sample sizes tended to be rather small.

The univariate ANOVA for Self-Care Functioning was significant, $F(3, 66) = 4.15, p < .01$, with post hoc tests showing that those who had been transferred home were in better condition than those who were dying. This was also the case for Disoriented Behaviour, $F(3, 66) = 3.14, p < .05$. With Depressed/Anxious Mood, $F(3, 66) = 3.33, p < .05$, those who were still in the hospital showed significantly lower scores than those who were transferred to nursing homes. On Irritable Behaviour, $F(3, 66) = 3.83, p < .05$, those who had been transferred home were significantly less

Table 5. One-Year Follow-up Placement Data for 70 Psychiatric Patients

Placement One Year Later:	No. of cases	MOSES scales				
		Self-Care	Disorientation	Depression	Irritability	Withdrawal
Transferred home or to residential care	14	11.0	11.7	14.4	9.4	15.5
Transferred to home for aged or nursing home	12	13.1	15.4	15.5	11.7	19.7
Still at the psychiatric hospital	34	16.1	16.7	11.8	12.4	22.4
Transferred to general hospital (1) or died (9)	10	18.6	19.8	13.4	13.9	23.1

irritable than those who were dying. The same pattern was evident with Withdrawn Behaviour, $F(3, 66) = 7.55, p < .001$, except that in this case the former group was lower than both those who were dying and those who remained in the hospital, although it did not differ from those who were leaving for nursing homes.

In addition, it should be expected that some of the MOSES scales will be associated with the degree of physical impairment of the participant. Accordingly, a linear composite measuring overall physical disability was calculated by summing nursing staff ratings of five areas of physical functioning: paralysis, amputation, vision, hearing, and speech. Each rating was on a 3-point scale. This index was calculated for the total sample of 2,519 cases, including physically disabled individuals under the age of 65. The Self-Care Functioning score correlated at .371, $p < .0001$. Correlations in the settings ranged from .263, $p < .001$, in nursing homes to a high of .430, $p < .001$, in homes for the aged. Similar patterns of significant correlations across all settings were found for two other MOSES scales, Disoriented Behaviour and Withdrawn Behaviour. The correlation in the total sample was .25, $p < .001$, for the former and .24, $p < .001$, for the latter.

An evaluation of the convergent and discriminant properties of MOSES was undertaken for several smaller samples from within the total group. Usually one or two settings were selected for each phase. In each case, members of the ward staff were given a set of written instructions for the additional scales. Circumstances of administration were similar to those described above. The exception was for 35 residents of a psychiatric hospital who were rated by staff members on MOSES and also interviewed by one of the investigators (J. A. Short) on the Zung Depression Status Inventory (Zung, 1972) and the Robertson Short Mental Status Questionnaire (Robertson et al., 1982). Two individuals were too withdrawn and agitated to be interviewed, and one became too agitated to complete the Zung after completing the Robertson. This resulted in 33 sets of data for the Robertson and 32 for the Zung. Only MOSES Depressed/Anxious Mood correlated with the Zung ($r = .49, p < .005$). For the Robertson, Self-Care correlated at .53, and Disorientation correlated at .77 ($p < .001$ for both). Other correlations are given in Table 6.

At a second psychiatric hospital, 140 residents were rated by members of the ward staff on both the LPRS and MOSES. Most correlations (Table 6) were significant, but

for each scale the highest correlation was the one expected theoretically.

In addition, data at a third psychiatric hospital were collected both on MOSES and the Kingston Dementia Rating Scale (KDRS) (Lawson et al., 1977). The correlations resulting from the ratings on these two scales were significantly positive and highest where expected. The Kingston Scale lacks some of the content areas of MOSES, and four of five scales correlated both with Self-Care Functioning and with Disoriented Behaviour. Details of these validation results are presented in Table 6.

Finally, data were collected on 63 individuals from a psychiatric hospital, 72 individuals from three nursing homes, and 95 individuals from a home for the aged for a total of 230 ratings on both MOSES and a shortened version of the Physical and Mental Impairment-of-function Evaluation (PAMIE) (Gurel et al., 1972). The revised PAMIE contained 48 items: for the factors of Self-Care/Dependent, 12 items; Irritable, 13 items; Mentally Disorganized/Confused, 12 items; Anxious/Depressed, 7 items; and Withdrawn/Apathetic, 5 items. It should be noted that some items were scored on two different scales, and, thus, the total is not 48. The ambulatory items were included with Self-Care/Dependent, as the Gurel et al. (1972) report indicated that these items had fallen on the Self-Care/Dependent factor and were separated arbitrarily for placement reasons. This combination of scales was intended to reproduce the same content areas as those rated by MOSES. Again, results of the correlation analysis supported the theoretical expectations and are summarized in Table 6.

DISCUSSION

In general, MOSES shows satisfactory interrater reliabilities, ranging from a high of .97 for Self-Care Functioning to a low of .58 for Depressed/Anxious Mood. Although values such as the latter are marginally acceptable for clinical use, there are some factors to be considered. First, emotion and mood-related scales generally tend to have lower reliabilities than scales that rate more objective behaviours, such as those of the Disoriented Behaviour or Self-Care Functioning scales. Second, experience has shown that higher reliabilities can be found when staff members know the patients well and when they have more experience with the scales (Helmès et al., 1986). For cases in which high accuracy is required, the use of the sum of ratings by two individuals may be advisable. As experience is gained, and if empirical

Table 6. Correlations of MOSES with Other Psychiatric Rating Scales

Other scales	MOSES scales				
	Self-Care	Disorientation	Depression	Irritability	Withdrawal
Zung Depression (<i>n</i> = 32)	-.077	-.108	.490***	.072	.206
Robertson Mental Status (<i>n</i> = 33)	-.531****	-.774****	.086	.034	-.476**
LPRS ^a (<i>n</i> = 140)					
Physical disability	.92 ^d	.62	-.12	.36	.48
Disengagement	.71	.61	.08	.40	.73 ^d
Social irritating behaviour	.51	.44	.16*	.68 ^d	.46
Confusion	.66	.86 ^d	.11	.40	.59
Total ^c	.84	.78	.05	.53	.65
KDRS ^b (<i>n</i> = 24)					
Orientation	.79****	.95****	.38*	.17	-.19
Emotional lability	.19	.01	.36**	.63****	-.11
Psychomotor control	.80****	.65****	.15	-.04	.01
Communication	.66****	.75****	.12	-.15	-.06
Other items	.75****	.62****	.49*	.35	-.04
Total	.87****	.89****	.43	.25	-.04
PAMIE ^c (<i>n</i> = 230)					
Self-Care Dependent	.91 ^d	.65	.23	.39	.51
Belligerent/Irritable	.25	.25	.27	.77 ^d	.30
Mentally Disorganized/Confused	.49	.81 ^d	.28	.43	.50
Anxious/Depressed	.21	.24	.65 ^d	.46	.31
Withdrawal/Apathetic	.46	.51	.25	.31	.78 ^d

Note. All correlations with the PAMIE scales are significantly greater than zero at $p < .001$ or better.

^aLondon Psychogeriatric Rating Scale.

^bKingston Dementia Rating Scale.

^cPhysical and Mental Impairment-of-function Evaluation.

^dCorrelations expected to be high.

*All correlations with the LPRS scales Physical Disability, Disengagement, Confusion, and Total are significantly greater than zero at $p < .001$.

* $p < .05$, ** $p < .01$, *** $p < .005$, **** $p < .001$.

support is shown, then ratings by a single individual may be used. Internal consistencies are generally satisfactory, averaging approximately 0.80. For eight-item scales this is quite good, especially for raters who are relatively inexperienced in using the scale.

MOSES proved to be quite effective in discriminating among the various settings. The Self-Care Functioning and Disoriented Behaviour scales are of most interest in this regard, as these factors presumably are the major ones affecting placement. Residents of continuing-care facilities scored much higher than residents of the other three settings on both of these scales. Homes for the aged were lowest, and the other two were intermediate. This is as one might expect. Given that residents of homes for the aged are presumably selected on the basis of relatively intact cognitive status, scores for this setting should be, and are, the lowest.

High levels of emotional distress in residents of the psychiatric and continuing-care hospitals were found on the other three MOSES scales. Apparently, the most severely emotionally disturbed individuals are found in psychiatric settings. Nevertheless, the substantial variances suggest that many such individuals are also found in other settings. Additional data related to this issue can be found in Helmes et al. (1986).

With a moderately heterogeneous population, the degree of global disability and impairment across a wide-ranging

group of individuals will be reflected in a global factor. It is fairly clear that only certain MOSES scales share a degree of commonality and that the reliable variance of each scale exceeds the common variance. One reason for the commonality of the cluster of Self-Care Functioning, Disoriented Behaviour, and Withdrawn Behaviour could be that, as the degree of confusion and mental deterioration increases, elderly individuals increasingly lose their self-care skills. Concomitantly, and perhaps with a heightened awareness of their mental disabilities, they may withdraw from social interactions with others. It is also clear that high levels of physical disability are related to increasing withdrawal and social isolation. Yet these factors alone may or may not develop with changes in mood, either toward depression or irritability.

There is substantial evidence for the validity of the constructs assessed by MOSES. All of the MOSES scales showed highly significant correlations with theoretically related scales. In addition to showing these convergent properties, it also showed discriminant validity in its lack of substantial correlations with scales that were not theoretically relevant. This latter facet of a test is one rarely evaluated in any geriatric assessment instrument.

MOSES offers several specific advantages over its predecessor, the LPRS, and most other scales in the area. At the expense of four additional items over its predecessor, it

offers an additional area of content, Depressed/Anxious Mood. All dimensions are more precisely defined, especially that of Irritable Behaviour, which focuses more on the affect of the resident than on obnoxious behaviour. The item format of MOSES is also more specific than other scales in its instructions to the rater and in the clarity of its items. The four-point ratings provide for more variance than scales that use two- or three-point ratings, and provisions are made for patients whose condition makes the use of certain items questionable.

In balance, MOSES shows substantial promise as an assessment tool for institutionalized elderly residents. It is relatively short, easily administered by relatively untrained staff, and it assesses the physical, cognitive, and emotional functioning of elderly persons. It has demonstrated generally satisfactory psychometric properties, although interrater reliabilities of the emotional and mood-related scales are somewhat low for some clinical purposes. Sufficient validity data are available to warrant its use for research in the areas of evaluation and drug trials. Other research and program evaluation applications may also be appropriate. Clinically, monitoring of patient progress is possible, as MOSES has been shown to be sensitive to change over time (Dillane & Longley, 1982). Some clinical applications may require the use of two raters to obtain sufficient rater reliability, but this may be a factor of a staff member's experience in conducting the ratings. MOSES could be adapted to function in a systematic assessment system, such as that described by Schnelle and Traugher (1983). Certainly, the use of local norms is recommended, although some applications may warrant the direct interpretation of raw scores, as these are tied explicitly to the frequency of occurrence of the rated behaviours.

The selection of instruments to be used with elderly persons is subject to many considerations (Lawton & Storandt, 1984). MOSES was developed to provide reliable, valid staff ratings of the major areas of clinical concern to health-care staff and researchers. It appears to have achieved these ends.

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APPENDIX

MOSES Items

PLEASE BE SURE TO ANSWER EVERY QUESTION.

FOR EACH QUESTION CHOOSE THE ALTERNATIVE THAT BEST DESCRIBES THE RESIDENT'S BEHAVIOUR DURING THE DAYTIME IN THE PAST WEEK. EXAMPLES ARE FREQUENTLY GIVEN TO HELP YOU MAKE YOUR DECISIONS.

MARK YOUR ANSWERS ONLY ON THE ACCOMPANYING ANSWER FORM.

I 1. DRESSING

771

On most days in the past week, the resident:

1. Initiated and completed dressing without staff supervision
2. Dressed with only minor supervision
(for example, had his clothes laid out or had to be reminded to dress)
3. Partly dressed himself, but needed frequent staff assistance
4. Was either totally dressed by staff or remained in bedclothes

I 2. BATHING (Include baths and showers)

635

When bathing in the past week, the resident:

1. Prepared and completed his own bathing without staff supervision
2. Bathed himself with only minor supervision
(for example, had towels and soap set out or water run, or needed urging to get started)
3. Partly bathed himself, but needed frequent staff assistance
(for example, needed physical aid getting in and out of the tub, whirlpool or shower, or needed parts of his body washed or towel-dried)
4. Was totally bathed by staff
(Include bed baths, unless given only for practice purposes by students.)

I 3. GROOMING (Include care of hair, nails, teeth, and shaving. Do not include dressing or bathing.)

643

In the past week, the resident:

1. Completed all aspects of grooming without staff supervision
2. Looked after certain aspects of grooming independently, but needed staff supervision or assistance with other aspects
3. Helped with parts of his grooming, but needed frequent staff assistance with all aspects of his grooming
4. Was totally groomed by staff

I 4. INCONTINENCE (Of either urine or feces)

526

In the past week, how often was the resident incontinent?

1. Not at all
2. Only during the night
3. Occasionally during the daytime
4. Frequently during the daytime
(more than once a day)

I 5. USING THE TOILET

857

Most of the times that he did use the toilet in the past week, the resident:

1. Initiated going to and properly used the toilet without staff supervision

2. Used the toilet himself with only minor supervision

(for example, had to be reminded to go or reminded to wipe, or occasionally made a mess on the floor)

3. Helped with his toileting, but needed frequent staff assistance

(for example, needed help in taking down pants, wiping, getting on and off the toilet)

4. Was totally toileted by staff

(had to be lifted on and off the toilet. Include use of bed pans, and staff-attended catheters or colostomies.)

I 6. PHYSICAL MOBILITY

747

On most days in the past week, when getting around inside the building, the resident:

1. Walked without any assistance
2. Moved independently with mechanical assistance
(for example, walked alone with a cane or walker or crutches, or propelled himself in a wheelchair)
3. Walked with the physical assistance of staff
4. Remained bedfast or chairfast
(chairfast refers to residents who were moved from bed to a chair during the daytime, but otherwise were quite immobile.)

I 7. GETTING IN AND OUT OF BED

849

On most days in the past week, the resident:

1. Got in and out of bed without any type of physical assistance
2. Got in and out of bed independently of staff, but with the help of some equipment
(for example, using a trapeze or sliding board by himself)
3. Got in and out of bed with the physical assistance of staff
4. Remained in bed all day

I 8. USE OF RESTRAINTS (For example, bed rails, soft ties, or Geri-chairs.)

602

How often during the daytime in the past week were restraints used with this resident?

1. Not at all
2. Seldom
(on one to three days for only short periods of time)
3. At times
(either on more than three days for only short periods of time, or on one to three days for most of the day)
4. Often
(on more than three days for most of the day)

II 9. UNDERSTANDING COMMUNICATION (*Either speaking, writing or gesturing*)

621

Most of the times that you communicated with resident in the past week, he:

1. Understood clearly
2. Understood only brief communications (*such as short sentences or gestures*)
3. Understood brief communications only if they were repeated
4. Did not understand any communications

II 10. TALKING

670

Most of the times that the resident spoke during the past week, his speech:

1. Was coherent and logical
2. Began logically, but he wandered off the topic while talking
3. Sounded coherent, but his conversation was irrelevant
(*for example, his speech was unrelated to the question being asked or the event taking place*)
4. Made very little sense
(*for example, word jumbles or meaningless phrases or meaningless noises*)
5. Question does not apply — the resident did not speak in the past week

II 11. FINDING WAY AROUND INSIDE (*For example, ability to find his room, the washroom, the dining room*)

657

How often during the daytime in the past week did the resident become disoriented (confused) in finding his way around the inside of his residence?

1. Not at all
2. Seldom
(*only one to three times during the week*)
3. At times
(*either once or twice a day on more than three days, or several times a day on one to three days*)
4. Often
(*several times a day on more than three days*)
5. Question does not apply — resident never moved around inside the building without assistance from the staff

II 12. RECOGNIZING STAFF

780

On most days in the past week, the resident:

1. Recognized several members of the staff by name or by exact role
(*for example, Doctor or Nurse or Physio-therapist*)
2. Recognized one or two members of the staff by name or by exact role
3. Could tell members of the staff apart from residents or visitors, but didn't know the name or exact role of any staff member
4. Could not tell members of the staff apart from residents or visitors

II 13. AWARENESS OF PLACE

857

During the past week, the resident:

1. Knew exactly where he was living
(*knew the institution's name and the city or town where it is located*)
2. Knew the type of place he was living in, but was confused about its name or location

3. Sometimes seemed to understand the type of place he was living in, but at other times was confused about this

4. Was confused about the type of place he was living in

(*for example, thought he was living at home or somewhere else*)

5. This information could not be obtained — the resident did not communicate appropriately

II 14. AWARENESS OF TIME

854

Consider whether on most days in the past week the resident was aware of (a) the year (*within 1*), (b) the season, and (c) the approximate time of day (*for example, whether it was morning or after lunch or after supper*)?

1. He was aware of all three
(*year, season, and time of day*)
2. He was aware of two of the three
3. He was aware of one of the three
4. He was confused about all three
5. This information could not be obtained — the resident did not communicate appropriately

II 15. MEMORY FOR RECENT EVENTS (*Day to day events such as recreation, meals, visits occurring within the past week*)

846

During the past week the resident:

1. Could remember most recent events clearly
2. Could remember most recent events, but in a vague way
3. Could remember some recent events, but completely forgot others
4. Seemed to forget most events a few minutes after they occurred
5. This information could not be obtained — the resident did not communicate appropriately

II 16. MEMORY FOR IMPORTANT PAST EVENTS (*For example, his year of birth, his past occupation, names of members of his family and whether they are still living*)

796

During the past week, the resident:

1. Could easily remember many past events correctly
2. Could remember many past events correctly, but with some effort
3. Could remember some past events, but forgot others
4. Was confused about most events in his past life
5. This information could not be obtained — the resident did not communicate appropriately

III 17. LOOKING SAD AND DEPRESSED (*For example, looking gloomy, unhappy, mournful. Do not include looking bored, indifferent, worried or anxious.*)

742

How often during the past week did the resident look sad and depressed?

1. Not at all
2. Seldom
(*on one to three days for only short periods of time*)

3. At times
(either on more than three days for only short periods of time, or on one to three days for most of the day)
4. Often
(on more than three days for most of the day)
5. Could not tell — the resident has some facial paralysis or physical problem (for example, Parkinsonism) which gives his face a gloomy look

III 18. REPORTING SADNESS AND DEPRESSION (Talking about being sad or depressed or wanting to be somewhere else. Do not include complaints about his care. Also do not include talking about being worried.)

825

How often during the past week did the resident say (or write) something to indicate that he was sad or depressed?

1. Not at all
2. Seldom
(only one to three times during the week)
3. At times
(either once or twice a day on more than three days, or several times a day on one to three days)
4. Often
(several times a day on more than three days. Also include here any resident who specifically said he wanted to be dead.)
5. Question does not apply — the resident did not speak (or write) in the past week.

III 19. SOUNDING SAD AND DEPRESSED (Using a tone of voice when speaking that suggests sadness or depression, or making sad noises like moans or sighs. Do not include sounding angry or worried or in acute pain.)

829

How often during the past week did the resident sound sad and depressed?

1. Not at all
2. Seldom
(on one to three days for only short periods of time)
3. At times
(either on more than three days for only short periods of time, or on one to three days for most of the day)
4. Often
(on more than three days for most of the day)
5. Question does not apply — the resident did not speak or make any sounds in the past week

III 20. LOOKING WORRIED AND ANXIOUS (Do not include looking sad or depressed.)

765

How often during the past week did the resident look worried, tense and anxious?

1. Not at all
2. Seldom
(on one to three days for only short periods of time)
3. At times
(either on more than three days for only short periods of time, or on one to three days for most of the day)
4. Often
(on more than three days for most of the day)

III 21. REPORTING WORRY AND ANXIETY (Talking about being worried about certain things. Do not include talking about being unhappy.)

784

How often during the past week did the resident say (or write) something to indicate that he was worried or anxious about something?

1. Not at all
2. Seldom
(only one to three times during the week)
3. At times
(either once or twice a day on more than three days, or several times a day on one to three days)
4. Often
(several times a day on more than three days)
5. Question does not apply — the resident did not speak (or write) in the past week

III 22. CRYING (Do not include moaning or sighing or yelling.)

532

How often during the past week did the resident cry?

1. Not at all
2. Seldom
(on one to three days for only short periods of time)
3. At times
(either on more than three days for only short periods of time, or on one to three days for long periods of time)
4. Often
(on more than three days for long periods of time)

III 23. PESSIMISM ABOUT THE FUTURE (Talking about the future being hopeless or unbearable, or about how things will not improve)

677

How often during the past week did the resident say (or write) something to indicate that he felt pessimistic about his future?

1. Not at all
2. Seldom
(only one to three times during the week)
3. At times
(either once or twice a day on more than three days, or several times a day on one to three days)
4. Often
(several times a day on more than three days)
5. Question does not apply — the resident did not speak (or write) in the past week

III 24. SELF CONCERN

658

How often during the past week did the resident have trouble concentrating on events happening to him or around him because he was so upset or concerned about his troubles?

1. Not at all
2. Seldom
(only one to three times during the week)
3. At times
(either once or twice a day on more than three days, or several times a day on one to three days)
4. Often
(several times a day on more than three days)

IV 25. CO-OPERATION WITH NURSING CARE
587 *(Co-operation with feeding, bathing, grooming and medication)*

On most days in the past week, when interacting with nurses and orderlies the resident:

1. Actively co-operated in his own care
(attempted to help and participate when possible)
2. Passively co-operated in his own care
(quietly allowed himself to be cared for)
3. Resisted care attempts in a minor way
(would give an initial argument or whine or physical resistance, but quickly gave in)
4. Resisted care attempts in a major way
(getting him to co-operate was a real chore)

IV 26. FOLLOWING STAFF REQUESTS AND
687 INSTRUCTIONS

Most of the requests or instructions made by the staff of the resident in the past week:

1. Were followed without resistance or resentment
2. Were followed without resistance but with quiet resentment
(for example, were responded to with quiet muttering or nasty looks)
3. Were responded to with an argument or physical resistance before being complied with
4. Were responded to with resistance and finally had to be physically enforced by the staff
5. Were not understood by the resident
(Include residents who were so mentally or physically disabled that staff never gave them even simple instructions.)

IV 27. IRRITABILITY

683 How often during the past week was the resident irritable and grouchy?

1. Not at all
2. Seldom
(on one to three days for only short periods of time)
3. At times
(either on more than three days for only short periods of time, or on one to three days for most of the day)
4. Often
(on more than three days for most of the day)

IV 28. REACTIONS TO FRUSTRATION *(Reacting with abuse or whining when his requests were denied or when he had to wait for something.)*
754

During the past week when the resident experienced frustrations, how often did he lose his temper?

1. Not at all
2. Seldom
(only one to three times during the week)
3. At times
(either once or twice a day on more than three days, or several times a day on one to three days)
4. Often
(several times a day on more than three days)

IV 29. VERBAL ABUSE OF STAFF *(Include yelling at, swearing at, cursing, threatening.)*
815

How often during the past week did the resident verbally abuse staff members?

1. Not at all
2. Sometimes
3. Frequently *(at least once a day on more than three days)* when asked to do something he didn't want to do
4. Frequently *(at least once a day on more than three days)* with no apparent provocation or cause
5. Question does not apply — the resident did not speak or make any sounds in the past week

IV 30. VERBAL ABUSE OF OTHER RESIDENTS *(Include yelling at, swearing at, cursing, threatening.)*
798

How often during the past week did the resident verbally abuse other residents?

1. Not at all
2. Sometimes
3. Frequently *(at least once a day on more than three days)* when they interfered with him
4. Frequently *(at least once a day on more than three days)* with no apparent provocation or cause
5. Question does not apply — the resident either did not speak or had no access to other residents

IV 31. PHYSICAL ABUSE OF OTHERS *(Hitting or shoving other residents or staff)*
661

How often during the past week did the resident physically strike anyone?

1. Not at all
2. On one occasion, after being provoked
3. On one occasion, without apparent cause or provocation
4. More than once
(Include residents who actually had to be put in restraints to keep them from striking others)
5. Question does not apply — the resident is physically incapable of striking someone

IV 32. PROVOKING ARGUMENTS WITH OTHER
691 RESIDENTS

How often during the past week did the resident start or provoke an argument with another resident?

1. Not at all
2. Seldom
(only one to three times during the week)
3. At times
(either once or twice a day on more than three days, or several times a day on one to three days)
4. Often
(several times a day on more than three days)
5. Question does not apply — the resident had no access to other residents

V 33. PREFERRING SOLITUDE *(Keeping to himself)*
647

When not receiving physical care in the past week, did the resident seem to prefer being left alone?

1. No. He always enjoyed company when it was available
2. He seemed indifferent about whether he had company or was left alone

3. At least some of the time he actively discouraged company
4. Most of the time he actively discouraged company

V 34. INITIATING SOCIAL CONTACTS (*By speaking or gesturing or smiling first, or by approaching*)

773

In the past week, the resident:

1. Frequently (*several times a day on more than three days*) initiated social contacts with both staff members and other residents
2. Frequently (*several times a day on more than three days*) initiated social contacts with either staff or other residents, but not both
3. Sometimes initiated social contacts with either staff or other residents
4. Never initiated social contacts with either staff or other residents

V 35. RESPONDING TO SOCIAL CONTACTS (*Do not consider simply following instructions or looking at the person as responding to social contacts.*)

759

How often during the past week did the resident respond to social contacts made by other people?

1. Most of the time, and tried to keep the contact going
(*for example, by continuing the conversation or holding on to the person*)
2. Most of the time, but only briefly
(*for example, simply answered the question or nodded or smiled but made no effort to keep the contact going*)
3. Only some of the time
(*under half of the time that others tried to make contact*)
4. Not at all

V 36. FRIENDSHIPS WITH OTHER RESIDENTS

591

In the past week the resident:

1. Was close friends with more than one other resident
(*this implies a real relationship*)
2. Was close friends with only one other resident
3. Established a casual friendship with at least one other resident
(*for example, tagged along with for a while, but no real bond*)
4. Did not have any type of friendship with another resident
5. Question does not apply — the resident had no access to other residents

V 37. INTEREST IN DAY-TO-DAY EVENTS (*For example, watching or listening and reacting to things going on around him*)

687

In the past week, how often did the resident pay active attention to the things happening around him?

1. Often
(*on more than three days for most of the day*)
2. At times
(*either on more than three days for only short periods of time, or on one to three days for most of the day*)

3. Seldom
(*on one to three days for only short periods of time*)
4. Not at all

V 38. INTEREST IN OUTSIDE EVENTS (*For example, taking an interest in the activities of his family and absent friends, or news or sports*)

584

In the past week, how often did the resident seem to take any interest in events happening outside of his residence?

1. Daily
2. Some days
3. Rarely
(*for example, he might show mild interest in his family, but only to be concerned about future visits*)
4. Not at all

V 39. KEEPING OCCUPIED (*On his own, by reading, actively watching the T.V. or listening to radio, at hobbies, chatting with others, going for walks. Do not include organized recreational activities.*)

591

How often during the past week did the resident keep himself occupied on his own?

1. Often
(*on more than three days for most of the day*)
2. At times
(*either on more than three days for only short periods of time, or on one to three days for most of the day*)
3. Seldom
(*on one to three days for only short periods of time*)
4. Not at all

V 40. HELPING OTHER RESIDENTS (*Include any kind of help that seems to reflect concern for the other person; for example, physically helping them or comforting or entertaining them.*)

633

How often during the past week did the resident volunteer to help other residents?

1. Often
(*several times a day on more than three days*)
2. At times
(*either once or twice a day on more than three days, or several times a day on one to three days*)
3. Seldom
(*only one to three times during the week*)
4. Not at all
5. Question does not apply — the resident was either physically immobile (*needed staff assistance to move around inside*) or was kept in restraints on most days

Note. The Roman numeral preceding each item number gives the component (from I to V) on which the item loaded following a varimax rotation of the first five principal components. The three-digit figure is the actual loading.

