THE EFFECTS OF OUTSIDE ACTIVITIES ON ELDERLY NURSING HOME RESIDENTS

A THESIS

SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENTS

FOR THE DEGREE OF MASTER OF ARTS

IN THE GRADUATE SCHOOL OF THE

TEXAS WOMAN'S UNIVERSITY

SCHOOL OF OCCUPATIONAL THERAPY

BY

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DENTON, TEXAS

DECEMBER 1981

ACKNOWLEDGEMENTS

This project was made possible by the interest and effort of a number of people. The residents, staff, volunteers, and administration of Good Samaritan Village, Denton, Texas, supported the project by their interest and willingness to participate. Dr. Nancy Griffin, OTR, Dr. Jane Mott, and Cruz Mattei, OTR, gave valuable help and advice. Dr. Barbara Watkins encouraged and graciously shared her professional knowledge. Anita Albritton, R.N., Director of Nursing Service, Good Samaritan Village Health Center, and Beverly Brockett, R.N., gave support, time, and effort. Special thanks are extended to all those who assisted in any way.

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I. INTRODUCTION

Elderly residents participating in activities outside or away from the nursing home have been observed to improve in social functioning, mood, and even physical appearance during the course of the activity or excursion. These observations have led to the idea that regular, frequent outside activities might bring about more permanent positive changes.

Purpose of the Study

The purpose of this study was to investigate the effects of outside activities on the elderly nursing home resident. The experimental group participated in outside activities twice each week. A control group participated in in-house activities twice each week. All subjects were free to participate in regular nursing home activities.

An additional group consisted of residents who refused to participate in the study. A fourth group consisted of those residents who were initially assigned to either the experimental or the control group, but who did not attend at least six of the eight sessions during the course of the study.

The four groups were then compared to determine if outside activities had improved mental, physical, and/or social functioning in daily living in these elderly nursing home residents.

Statement of the Hypotheses

Research reports, as well as personal observations, led to the idea that regular, frequent outside activities will improve functioning in the elderly nursing home resident. The following results were hypothesized.

Compared to those residents who do not regularly leave the nursing home building, residents who participate in regular, frequent outside activities will score lower on the:

1. Mental Disorganization/Confusion sub-scale of the London Psychogeriatric Rating Scale (LPRS).
2. Physical Disability sub-scale of the LPRS.
3. Socially Irritating Behaviors sub-scale of the LPRS.
4. Disengagement sub-scale of the LPRS.
5. Total assessment of the LPRS.

Operational Definitions

For purposes of this study, the following operational definitions applied:

Outside activities were any activities carried on outside the nursing home.

In-house activities were any activities carried on inside the nursing home.

Functional impairment was any physical, mental, or social problem which interferred with an individual's adaptive behavior in the course of daily living. Physical, mental, and social functioning were measured by the London Psychogeriatric Rating Scale (Hersch, Kral, and Palmer, 1978).

Limitations

Not included in this study were those nursing home residents under the age of 62, those who were institutionalized for a limited period of time for such purposes as rehabilitation, respite care, etc., or those residents who were confined to bed because of illness or those whose health might be impaired by the activities.

II. REVIEW OF THE LITERATURE

Nature of the Problem

Traditionally the nursing home has provided custodial care in a protected environment for the elderly person who is no longer able to function in the community (Kahana, 1971). This functional disability may be related to physical, mental, or social problems, including losses of friends or family members who previously provided care. Furthermore, it is recognized that institutional environments exert additional negative influences, often resulting in depersonalization and various other psychological losses. Kahana (1971) discussed the effects of institutionalization as a possible source of sensory deprivation and claimed that when an elderly individual is admitted to an institution, he is no longer a part of the community.

Hellebrandt (1978) stated that not all custodial patients are classifiable as victims of organic brain syndrome, but that confusion and dependency may be attributable to a combination of isolation, sensory deprivation, immobility, muscle weakness, visual, auditory, and dental deficits. She further stated that even those cases of organic brain syndrome which are correctly diagnosed are

often those who receive the least attention from staff, family, and physician.

O'Neil and Calhoun (1975) found a relationship between senile manifestations (intellectual impairment) and overall sensory loss. While they recognized that sensory deficits and senile manifestations might be viewed as concomitants of some central change process, they seemed to stress the importance of sensory input for various functions essential to adaptive behavior. McClain (1978) discussed alterations of the physiological state in aging which result in decreased vigor, physical capacity, and sensory response, but which are not related to illness.

Miller and Barry (1976) described the intellectually impaired as the most deprived group in a nursing home. They stated that those patients who receive the most attention from the staff, the most visitors, and the most outside excursions with family, friends, and volunteers are the intellectually intact, either mobile or wheelchair bound.

The problem seems to be how effectively to augment sensory input in such a way that the elderly, institutionalized, impaired individual can respond and thereby regain a higher level of functional ability. The possibility that increasing outside activities might help to overcome at least some of the negative influences affecting this

population and help these individuals retain their membership in the larger community seemed worthy of investigation.

Background

Considerable research has been done and a variety of approaches have been developed to deal with the problems of improving orientation and function in the mentally impaired institutionalized elderly (Barns, Sack, and Shore, 1973; Letcher, Peterson, and Scarbrough, 1974). All these approaches, including reality orientation, remotivation, and resocialization are in-house activities. Kahana (1971) suggested that if institutions for the aged are to stop serving as dumping grounds, their residents will have to remain closer to the community, literally and figuratively. New strategies must be developed to achieve this. Little research has been done on how to accomplish the task, or on the effects of outside environmental stimulation on the functionally impaired nursing home resident. Miller (1978) stated that the intellectually impaired are the most deprived group regarding any type of outside stimulation, including visitors and excursions.

Research on the London Psychogeriatric Rating Scale

The London Psychiatric Rating Scale (LPRS) is a tool developed to provide a valid and reliable means of assessing psychogeriatric patients' levels of functioning, including mental, physical, and interpersonal. Cooperation of the patient is not required (Hersch, Kral, and Palmer, 1978). The scale was developed to overcome the difficulties of administering standard psychometric tests to psychogeriatric patients. The problems include multiplicity of disease in the aged and frequency of behavior disorders which interfere with the ability of many patients to cooperate fully. Because of multiple physical problems, a geriatric rating scale must include physical as well as behavioral measures if it is to be useful for this population.

The LPRS consists of a 36-item questionnaire. (See Appendix A.) The answers are scored 0, 1, or 2. Higher scores reflect a greater degree of disability in the patient's level of functioning. From the 36 answered questions, an overall score as well as scores on four sub-scales known as Mental Disorganization/Confusion (MENT), Physical Disability (PD), Socially Irritating Behavior (SIB), and Disengagement (DIS) are obtained. The scores are expressed as percentages of the highest possible raw score

on a given sub-scale. For greater objectivity, raters are not made aware of which items belong to which sub-scales and the reported scores are not calculated by raters.

The LPRS is used as an initial assessment at the London Psychiatric Hospital in London, Ontario, Canada. It provides a basis for comparison with scores of other patients, and yields a base line for each patient for assessing progress over time. Initial ratings also serve as an aid in patient placement. Patients are reassessed at least every third month. The authors reported that for long-term, continuous assessment, the LPRS proved to be a sensitive measure of change in a patient's condition. The LPRS also indicates the area of functioning in which the change is most manifested (Hersch, et al, 1978).

In another study reported by Hersch, et al (1980) data based on the 36-item LPRS were statistically analyzed in order to select a small number of questions which would predict which psychogeriatric inpatients were likely to be discharged in the following six months. A very brief Prognosis Index (PI) was developed using the five best discriminating items of the LPRS. The content of these indicated that patients who could communicate clearly, made friends and did not threaten others were those most likely to leave the hospital. Predictive accuracy of the index was

assessed for the inpatient populations of a 136-bed psychogeriatric unit at three different points in time, and the index was found to predict correctly whether or not patients would be discharged within six months in 78-85 per cent of all cases.

The LPRS was used by Merskey, et al (1980) in a study to determine whether the degree of intellectual decline in Alzheimer's Disease is paralleled by corresponding quantitative brain changes. The LPRS correlated moderately with the computerized tomographic scan (CT Scan) indication of third ventricular enlargement (r=.73). There was less correlation between the LPRS and EEG disturbance. The EEG was seen to be more sensitive in early diagnosis, whereas the CT Scan indicated changes not showing up until the condition had advanced. The LPRS was found to be a sensitive measure of the behavioral changes occurring as the condition progressed and resulted in increasing loss of the brain tissue.

Significance of the Study

This study, which examined the effects of outside activities on the elderly functionally impaired nursing home resident, should be of interest to all those involved in programming for this population. At a time when

considerable public attention is being directed toward care of the elderly, results of the study could provide the basis for simple, inexpensive innovations in nursing home programming which would enhance the quality of life for institutionalized elderly. As King (1980) pointed out, imagination is necessary not only for empathy but for providing alternative ways of creative caring. New areas of service for the nursing home volunteer could be developed, and possibly job satisfaction of participating staff members might be enhanced.

III. METHODOLOGY

Population

Residents of Good Samaritan Village Health Center, a nonprofit retirement facility nursing home, were the subjects of the experiment. The residents are from a wide range of socioeconomic and educational backgrounds. Approximately 50 per cent are Medicaid recipients. Investigating these socioeconomic variables was not included as a part of this study. Good Samaritan Village is located in Denton, Texas. The Health Center is a skilled nursing facility for 92 residents. Nursing home residents, male or female, who were 62 years of age or older, and who were able to go or be taken outside provided the accessible population from which experimental and control subjects were selected.

Design

The design of the study was a posttest only control group design. Subjects were randomly selected and assigned to either the experimental group (Group 1) or the control group (Group 2). Those randomly selected subjects who refused participation in the study became Group 3. Subjects

who were originally assigned to either experimental or control groups (Group 1 or Group 2) and subsequently were excluded became Group 4. The control groups were utilized in an attempt to control for history, maturation, regression, and the possible Hawthorne effect of altered social structure. An attempt to control for selection and mortality was made by randomizing subjects and volunteers across the experimental group and the original control group (Groups 1 and 2). Reactive effects were minimized by not revealing the specific details of the study to subjects or volunteers.

Instrumentation

The LPRS was used as the measure of the dependent variables. The scale provided a total score which is based on four sub-scale scores corresponding to the following clinical dimensions: Mental Disorganization/Confusion, Physical Disability, Socially Irritating Behaviors, and Disengagement (or lack of involvement). Statistical validity, both concurrent and predictive, has been demonstrated and psychogeriatric norms established in terms of various clinically relevant areas including the following: ward placement; outcome; diagnosis; and the ability of the patient to function in, or benefit from, a particular treatment program. Although the scale was developed for use in a

psychogeriatric unit, the authors suggest its use in a variety of settings such as general hospitals, homes for the aged, rehabilitation centers, or nursing homes (Hersch, et al, 1978).

The completion of a rating does not require the cooperation of the patient. Since numerous mental and physical handicaps render some patients incapable of completing traditionally administered tests, the use of rating scales has been found to be a useful method of assessment which eliminates this problem.

The scale is relatively short, requiring less than 15 minutes to administer. Each test item has only three alternate responses, 0, 1, or 2. Trained psychometrists are not required to complete the scale. Rating can be done by anyone who is familiar with the patient's recent functioning. Raters were instructed to read each item carefully, select the most appropriate response, and write a 0, 1, or 2 on the LPRS answer sheet on the line corresponding to the item. Ratings were based on the one-week period preceding the rating. Raters were asked to rate on the basis of observed behaviors rather than on what subjects may have been capable of doing.

In order to increase the reliability of the LPRS ratings for this study, each subject was rated by two staff members

independently, and the average of the two ratings was used for the computation of the subject's scores. Raters were two registered nurses who were familiar with the subjects. Although both were aware of the project, neither was informed which residents were in the experimental group and which were in the control groups. Raters did not score scales or otherwise participate in the project.

Procedure

The project was discussed with the Training and Volunteer Coordinator, who also coordinates student activities at Good Samaritan Village. Approval for the project was obtained. (See Appendix B.) Application was then made to the Human Subjects Review Committee, Texas Woman's University, who also approved the project. (See Appendix C.)

A list was compiled of all residents who met the criteria for participation in the study described previously. Using a table of random numbers, 42 residents were selected as potential participants. Each resident selected was then told that this was to be a project to study the effects of outside activities on nursing home residents, and asked to sign a consent form stating that they would be willing to participate. (See Appendix D.) All the residents who were approached, including the confused residents, were able

to indicate clearly whether or not they were willing to participate, and all who were willing signed the consent form, with a witness also signing. The medical director of the facility was then asked to approve the subjects selected by also signing the form. These forms were placed on file with the Human Subjects Review Committee. (See Appendix E.) Approval for the project was then obtained from the Provost of the Graduate School. (See Appendix F.)

Of the 42 potential subjects, 18 of those who agreed to participate were randomly assigned to the experimental group (Group 1), 17 were randomly assigned to the control group (Group 2), and 7 declined to participate. This latter group were subsequently rated and treated as a separate control group (Group 3), with no treatment being administered.

Experimental subjects (Group 1) were then randomly assigned to four sub-groups. Two sub-groups contained 4 subjects, and two sub-groups contained 5 subjects each. Each sub-group also contained two randomly assigned volunteers. These sub-groups participated in outside activities, which they helped to plan, for a five-week period during July and August, 1981.

Control subjects (Group 2) were also assigned to four sub-groups, with three sub-groups containing 4 subjects each,

and one sub-group containing 5 subjects. Each sub-group also contained two volunteers who were randomly assigned. These subjects participated in in-house activities, which they also helped to plan, for the same five-week period during July and August, 1981.

Volunteers were selected from facility staff members and community volunteers registered at the facility, who agreed to help with the study. Of a total of nine volunteers, seven were randomly assigned to both an experimental sub-group and a control sub-group. One was assigned only to an experimental sub-group and one to a control sub-group. Before random assignments were made, volunteers were informed that this was to be a project to study the effects of outside activities on nursing home residents, but were given no further details of the study, except that the requirement would be that they would spend at least a half hour twice each week for a four-week period, and they would be working with a small group of residents, and another volunteer.

Volunteers who were randomly assigned to experimental sub-groups were checked for current drivers' licenses and automobile liability insurance as required by the state of Texas. They were provided verbal and written instructions. (See Appendix G.) Outside activities consisted of such

things as an automobile tour of a residential area of the city, a nature walk, outside planning and discussion meetings, outdoor breakfasts and lunches, among others. Activities were planned by each sub-group. Each activity lasted from one-half to one and one-half hours.

Control sub-groups and volunteers also were required to spend from one-half to one and one-half hours together twice each week for the four-week period. Volunteers were provided verbal and written instructions. (See Appendix G.) Sub-groups planned their activities together. Although control subjects, as part of their usual routine, went out of the facility for various reasons, such as doctor appointments, they did not routinely participate in outside activities during the experimental period. Among the activities planned by the control sub-groups were luncheons, breakfasts, quiet group discussions, planning meetings, and attending recreational and entertainment events together.

Usual nursing home activities open to all residents continued and were available to both experimental and control subjects. No other unusual socializing or orienting experiences were provided. Attendance records were maintained on both experimental and control subjects, and, as had been planned, those who participated fewer than six times of a possible eight were not included as members

of their original experimental or control group. (See Appendix H.) At the end of the study, they were also rated and considered to be a third control group (Group 4).

At the end of the four-week period, it was determined that one additional week was needed because two of the sub-groups had been unable to conduct all eight sub-group activities, and needed an additional week to accomplish this. This was due in one case to illness of both volunteers, and in the other to illness of group members. The originally planned four-week period was consequently extended to five weeks.

Data Collection and Analysis

At the end of the five-week period, all the subjects were rated independently by the two R.N. observers. Ratings were done within one week of the end of the project and on the same day. The average of these two ratings became the score on each sub-scale for each individual. (See Appendix I.) Using the DEC System 20 Computer Interactive Statistical Program Ngroup, Analysis of Variance, the four groups were compared to determine the effectiveness of the experimental treatment by testing the null hypotheses. Sub-scale scores in each of the four areas were compared: Mental Disorganization/Confusion; Physical Disability; Socially Irritating

Behaviors; and Disengagement. Total scores (Overall Functioning) of the four groups were also compared.

Finally, to determine agreement between raters, Pearson's r was computed, using the DEC System 20 Computer Interactive Statistical Program, Regres. Ratings from the two observers on each sub-scale and on the total scores for each group were used.

IV. RESULTS

The Analysis of Variance on the scores of the four groups for the sub-scale Mental Disorganization/Confusion indicated no significant differences, as shown in Tables 1 and 2.

TABLE 1

MENTAL DISORGANIZATION/CONFUSION

GROUP MEANS

Group	n	Mean	SD
1	14	27.06	22.22
2	11	34.62	24.54
3	7	20.06	14.47
4	10	33.08	19.92

TABLE 2

MENTAL DISORGANIZATION/CONFUSION

SUMMARY OF ANALYSIS OF VARIANCE

Source	S.S.	D.F.	M.S.	F	Fpro
Groups	1121.98	3	373.99	0.82	.489
Error	17263.68	38	454.31		
Total	18385.67				

On the scores of the Physical Disability sub-scale, the Analysis of Variance indicated a significant difference. (See Tables 3 and 4.)

TABLE 3

PHYSICAL DISABILITY

GROUP MEANS

Group	n	Mean	SD
1	14	47.22	20.03
2	11	48.24	18.56
3	7	20.24	12.49
4	10	53.87	23.41

TABLE 4

PHYSICAL DISABILITY

SUMMARY OF ANALYSIS OF VARIANCE

Source	S.S.	D.F.	M.S.	F	Fpro
Groups	5254.48	3	1751.49	4.58	.008
Error	14531.03	38	382.40		
Total	19785.51				

The Newman-Keuls Multiple Comparison was applied to determine the source of the difference. Group 3 (the group who declined to participate in the study) rated significantly lower than the other three groups, indicating a higher level of function.

The Analysis of Variance on the scores of the groups for the sub-scale Socially Irritating Behaviors indicated no significant differences as shown in Tables 5 and 6.

TABLE 5

SOCIALLY IRRITATING BEHAVIORS

GROUP MEANS

Group	n	Mean	SD
1	14	9.38	20.84
2	11	16.31	20.82
3	7	3.57	4.92
4	10	16.56	17.43

TABLE 6

SOCIALLY IRRITATING BEHAVIORS

SUMMARY OF ANALYSIS OF VARIANCE

Source	S.S.	D.F.	M.S.	F	Fpro
Groups	1005.85	3	335.28	0.99	.408
Error	12861.17	38	338.45		
Total	13867.02				

On the Disengagement sub-scale scores, no significant differences were found, as indicated in Tables 7 and 8.

TABLE 7

DISENGAGEMENT

GROUP MEANS

Group	n	Mean	SD
1	14	54.32	20.84
2	11	63.64	23.36
3	7	55.36	17.30
4	10	64.59	19.07

TABLE 8

DISENGAGEMENT

SUMMARY OF ANALYSIS OF VARIANCE

Source	S.S.	D.F.	M.S.	F	Fpro
Groups	941.52	3	313.84	0.74	.536
Error	16167.42	38	425.46		
Total	17108.94				

Also, no significant differences were found among the groups on Overall Function (Total scores on LPRS), as indicated in Tables 9 and 10.

TABLE 9

OVERALL FUNCTION

GROUP MEANS

Group	n	Mean	SD
1	14	32.74	19.09
2	11	38.39	19.63
3	7	22.29	8.02
4	10	39.73	15.88

TABLE 10

OVERALL FUNCTION

SUMMARY OF ANALYSIS OF VARIANCE

Source	S.S.	D.F.	M.S.	F	Fpro
Groups	1521.17	3	507.06	1.71	.181
Error	11244.98	38	295.92		
Total	12766.14				

Although slight differences in the means of the groups were obtained, each of the five null hypotheses must be accepted.

Correlations between raters proved to be moderate to high on all sub-scales for all groups except Group 3. The highest correlation for this group was on the sub-scale, Physical Disability, ($r=.929$, $p<.003$). The only other significant correlation for this group was on Overall Function ($r=.764$, $p<.046$). Results of interrater reliability are summarized in Table 11.

TABLE 11

INTERRATER RELIABILITY ON LPRS

Group	MENT		PD		SI		DIS		OF	
	r=	p <	r=	p <	r=	p <	r=	p <	r=	p <
1	.836	.001	.835	.001	.953	.001	.705	.001	.888	.001
2	.818	.002	.743	.009	.948	.001	.922	.001	.931	.001
3	.692	.085	.929	.003	.132	.777	.653	.112	.764	.046
4	.954	.001	.872	.001	.917	.001	.629	.051	.906	.001

MENT - Mental Disorganization/Confusion

PD - Physical Disability

SI - Socially Irritating Behaviors

DIS - Disengagement

OF - Overall Function

V. DISCUSSION

Several facts may account for the inconclusive results of this study. Sample size was small, resulting in small experimental and control groups. The duration of the study may have been too short to bring about observable changes in functioning. In some cases, intervals between group meetings may have been too long. Personalities of volunteers, their abilities to motivate and facilitate or lead a group, even varying academic backgrounds may have affected the outcome. No attempt was made to investigate these variables. More closely defined timing for group sessions might have proved more effective. Utilization of the same two days each week, same hour each meeting day, and a set length of time for each session might have been helpful. More frequent meetings, three or more each week, might have been more effective.

Other questions are raised by the study. It is interesting to note that Group 3, who scored significantly lower on the Physical Disability sub-scale, indicating a higher level of physical functioning, also scored lower on the Mental Disorganization/Confusion sub-scale, and may, as Miller (1976) suggested, be the individuals receiving

the most attention from staff, relatives, and friends. They may have not felt the need for the additional stimulation of participating in this project. In refusing, many of this group explained that they feared that they would not be able to complete the project, or they did not want to commit themselves for a four-week period of time. This would seem to indicate a tendency toward disengagement, although the mean for this group on the Disengagement sub-scale was only slightly above that of Group 1, who scored lowest. It most likely indicated a higher degree of independence and a greater ability of these residents to meet their own needs.

The fact that rater agreement for this group was low may indicate that observations were based on situational events that were not indicative of usual behavior. It is also possible that because of the higher general functioning of this group, observers had less opportunity or reason for observing their behavior as closely as they did the behavior of individuals making up the other groups.

It is also interesting to consider Group 4, those who were excluded from Groups 1 and 2. Although their scores were not statistically different, means for this group were highest, indicating lowest levels of function, in all sub-scales except Mental Disorganization/Confusion,

on which only Group 2 scored higher. This may partially explain why they missed more than two sessions, causing them to be excluded. Three of the six subjects excluded from Group 2 missed more than two sessions because of illness or hospitalization. Only one of the four subjects who were excluded from Group 1 missed more than two sessions because of illness.

Interesting observations were made during the course of the study. All volunteers reported positive effects within both the experimental and control sub-groups (Groups 1 and 2). They reported the beginnings of recognition of other sub-group members even among the most severely mentally disorganized subjects. One sub-group volunteer from Group 1 reported that some of the more physically able members of the sub-group expressed an interest in more complex outings but felt it would be too hard on those who were more physically disabled. Some of the simplest outside activities seemed to bring the most pleasure. This was also true of in-house activities. Meals together, away from their usual eating place, seemed to be the most popular activity for both outside and in-house groups.

All the volunteers who were staff members expressed pleasure in getting to know their small groups of individual residents on a more meaningful level than that of

their usual day to day interactions, which are often perfunctory and without depth. They reported also enjoying watching residents develop a sense of belonging to their group and deepening their relationships with the other group members. One fact became apparent: the small group meetings, whether inside or outside, were very important to those who participated, both subjects and volunteers. Several residents requested the continuation of their meetings on a weekly basis.

Further research should help to answer some of the questions raised by this study. It seems likely that innovative new programming could be the result. Dividing large numbers of residents into small family-sized groups could help to overcome many of the negative effects of institutionalization and contribute to a home-like atmosphere whether activities occurred inside or outside. Volunteers could be encouraged to participate in this way. Perhaps staff members who wanted to participate might be allowed time during their work schedules several days a week. This type of program could enhance the sense of belonging for the resident and might also provide additional job satisfaction for the staff member.

APPENDIX A

RATIONALE

The London Psychogeriatric Rating Scale (L.P.R.S.) was developed with the following objective in mind:

> To provide a valid and reliable means of assessing psychogeriatric patients' levels of functioning (including mental, physical, and interpersonal) which does not require the co-operation of the patient.

Such an assessment tool is valuable in terms of patient placement and treatment planning, particularly when more than one placement setting or treatment modality is available. Furthermore, this type of scale can be used for the assessment of change in a patient's status as a function of time, to monitor his/her progress (or decline) at regular intervals, and for program evaluation.

SPECIFIC FEATURES OF THE L.P.R.S.

1. The scale provides a Total score (or overall assessment of the patient) which is based on four subscale scores corresponding to the following clinical dimensions:

    A) Mental Disorganization/Confusion

    B) Physical Disability

C) Socially Irritating Behavior

D) Disengagement (or lack of involvement)

2. The completion of a rating does not require the co-operation (or the physical presence) of the patient. In a psychogeriatric population, numerous mental and physical handicaps render many patients incapable of completing standard traditionally administered psychological tests. The use of rating scales has been found to be a useful method of assessment which eliminates this problem (provided their validity can be established).

3. a) Trained psychometrists are not needed to complete the scale. Rating can be done by anyone who is familiar with the patient's recent functioning.

   b) The scale is relatively short. The ratings can be completed in less than 15 minutes, and each item has only three alternate responses (0, 1, or 2). The scale can be used in large settings on a large number of patients in a minimum of time (enabling the re-assessment of patients at relatively frequent regular intervals) without having to hire additional personnel; i.e., periodic ratings could be completed by the ward

staff as part of their regular duties. In addition, this would tend to support the "team treatment" approach as ratings would provide one means for the patient assessment contributions of the ward staff to be reported in a structured and quantifiable manner.

4. Concurrent and/or predictive validity of the L.P.R.S. has been demonstrated on the Psychogeriatric Unit of the London Psychiatric Hospital in terms of:

    A) Ward placement

    B) Long-term and short-term prognosis

    C) Dementia versus Non-dementia diagnosis

    D) Benefit from group psychotherapy

5. Statistical evaluation of inter-rater reliability, internal consistency, and factorial structure of the scale have been completed in the above setting with satisfactory results, which have been reported.

ADMINISTRATION OF THE L.P.R.S.

Completion of the L.P.R.S. for a given patient is quite simple. Raters are instructed to read each of the items carefully, select the most appropriate response and write a 0, 1, or 2 on the L.P.R.S. "Answer Sheet" on the line corresponding to the item. Ratings of a patient's behavior should be based on the one-week period preceding the rating.

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If for some reason the rater thinks that the previous week presents an atypical picture of the patient's condition (due to acute illness, etcetera), this should be noted in the "Comments" section of the answer sheet. Further qualifying statements with regard to a patient's rating may also be included in this section.

As far as possible, ratings should be made on the basis of what the patient has been observed doing (regardless of the treatment) rather than of what he is expected to do or is capable of doing.

The accuracy (i.e., validity and reliability) of a rating will depend on the rater's careful completion of the questionnaire. Although no special testing skills are required, the raters should be quite familiar with the patients they are expected to rate, and (preferably) have regular day to day contact with them.

All items must be answered in order to complete a rating. In each case a higher score represents a greater degree of disability.

Although the scale was standardized on a psychogeriatric patient sample from a psychiatric hospital, it may also be used to evaluate elderly persons who reside in other types of settings. In the latter case, the words "elderly person"

or "resident" may be substituted where the term "patient" appears. Likewise, the words "floor" or "wing", "home" or "residence" may be substituted for the terms "ward" and "hospital" where these are more appropriate.

In order to increase the reliability (accuracy) of L.P.R.S. ratings, each patient should be rated by two staff members independently and the average of the two ratings used for the computation of the patient's scores. Such a procedure not only allows for two observations on a given patient, but also allows the calculation of a disagreement coefficient (an index of the raters' agreement on the given patient's assessment). This will be discussed further in the section on scoring the L.P.R.S.

SCORING INSTRUCTIONS FOR THE L.P.R.S.

The L.P.R.S. may be scored either by hand or by computer. In either case the L.P.R.S. yields five scores, consisting of a total score based on the first 36 items, a Mental Disorganization/Confusion score (13 items), a Physical Disability score (9 items), a Socially Irritating Behavior score (8 items), and a Disengagement score (6 items). In each case, L.P.R.S. scores are reported as percentage scores, i.e., the percentage of the maximum score possible (i.e., two times the number of items) on

the respective subscale. Thus, for hand-scoring, the following formulae should be used:

1. Total score = the sum of the thirty-six responses recorded on the answer sheet times 100/72.
2. the Mental Disorganization/Confusion subscale score = (the sum of the answers to questions #3, 7, 11, 19, 20, 24, 25, 28, 29, 31, 33, 34, and 36) times 100/26.
3. the Physical Disability subscale score = (the sum of the answers to questions #1, 5, 9, 13, 15, 16, 23, 26, and 32) times 100/18.
4. the Socially Irritating Behavior subscale score = (the sum of the answers to questions #4, 8, 12, 18, 21, 27, 30, and 35) times 100/16.
5. the Disengagement subscale score = (the sum of the answers to questions #2, 6, 10, 14, 17, and 22) times 100/12.

THE LONDON PSYCHOGERIATRIC RATING SCALE

FORM A

Edwin L. Hersch, M.A.

INSTRUCTIONS

Your rating of the patient's behavior should be based on the one-week period preceding the rating. If for some reason you think that this particular week presents an atypical picture of the patient's condition (due to an acute illness, etc.) this should be noted in the comments section of the answer sheet. Wherever applicable, make your ratings on the basis of what the patient is actually doing (regardless of the treatment) rather than of what you estimate he is capable of doing.

Be sure to read each question carefully and to answer each of the 36 items of the questionnaire. In each case a higher score will indicate greater disability.

PLEASE DO NOT PUT ANY MARKS ON THIS QUESTIONNAIRE

Separate answer sheets are provided

This scale was standardized on a psychogeriatric patient sample in a psychiatric hospital. However, the scale may also be used to evaluate elderly persons who reside in other settings as well. In the latter case, the words "person" or "resident" may be substituted wherever the term "patient" appears and "family member" for "staff". Likewise, the words "floor" or "wing", "home" or "residence" may be substituted for the terms "ward" and "hospital" where these are more appropriate.

Special thanks to Lucy Carriere, M.A., who worked on the scale in the initial stage.

1. The patient will fall from his bed or chair unless protected by side rails or soft ties (day or night):

   0 - never
   1 - occasionally
   2 - frequently

2. The patient helps staff on the ward:

   0 - frequently
   1 - occasionally
   2 - never

3. The patient understands what you communicate to him/her (you may use speaking, writing or gesturing):

   0 - almost always
   1 - sometimes
   2 - almost never

4. The patient engages in behavior which is objectionable to others (e.g., loud or constant talking, pilfering, soiling furniture, interfering in others' affairs):

   0 - never
   1 - occasionally
   2 - frequently

5. Close supervision is necessary to protect the patient (due to feebleness).

   0 - never
   1 - occasionally
   2 - frequently

6. The patient keeps him/herself occupied in constructive (or useful) activities (works, reads, plays games, has hobbies, etc.):

   0 - frequently
   1 - occasionally
   2 - never

7. The patient communicates in any manner (by speaking, writing, or gesturing) well enough to make him/herself easily understood:

   0 - almost always
   1 - sometimes
   2 - almost never

8. The patient engages in repetitive vocal sounds (e.g., yelling, moaning, talking, etc.) which are directed to no one in particular.

   0 - never
   1 - occasionally
   2 - frequently

9. When bathing or dressing, the patient requires:

   0 - no assistance with either of the above
   1 - assistance with one of the above
   2 - assistance with both of the above

10. The patient has established a good relationship with:

    0 - more than one patient
    1 - one patient
    2 - no other patients

11. The patient responds, (in any manner) to his/her own name:

    0 - always
    1 - sometimes
    2 - never

12. The patient threatens to harm others:

    0 - never
    1 - occasionally
    2 - frequently

13. With regard to walking, the patient:

    0 - has no difficulty
    1 - needs some assistance (e.g., needs cane, crutches, or someone by his/her side)
    2 - is unable to walk

14. The patient, without being asked, helps other patients:

    0 - frequently
    1 - occasionally
    2 - never

15. The patient is incontinent of urine and/or feces (day or night):

    0 - almost never (less than once per week)
    1 - sometimes (once or twice per week)
    2 - almost always (three times per week or more often)

16. When eating, the patient requires:

    0 - no assistance (feeds himself)
    1 - some assistance
    2 - considerable assistance (spoon feeding, etc.)

17. The patient has a regular activity schedule:

    0 - away from the ward (or both on and off the ward)
    1 - on the ward only
    2 - no regular schedule

18. The patient is destructive of materials around him (e.g., breaks furniture, tears up magazines, sheets, clothes, etc.):

    0 - never
    1 - occasionally
    2 - frequently

19. The patient is confused (e.g., unable to find his way around the ward, loses his possessions, etc.):

    0 - almost never
    1 - sometimes
    2 - almost always

20. *The patient knows the names of:

    0 - more than one staff member
    1 - only one staff member
    2 - no staff members

21. The patient engages in apparently useless repetitive movements (e.g., pacing, rocking, wringing of hands, making random movements, etc.):

    0 - never
    1 - occasionally
    2 - frequently

22. The patient makes use of off-ward privileges:

    0 - frequently
    1 - occasionally
    2 - never

23. If not helped by others, the patient's appearance is disorderly:

    0 - never
    1 - occasionally
    2 - frequently

24. If the patient were allowed outdoors without supervision, he/she would be able to protect him/herself from the weather or from getting lost:

    0 - almost always
    1 - sometimes
    2 - almost never

* Score 1 for this item if it cannot otherwise be scored due to aphasia or muteness.

25. The patient's sleep pattern at night is:

0 - never awake
1 - occasionally awake
2 - frequently awake

26. The patient's diet consists of:

0 - regular solid meals
1 - chopped food
2 - pureed food

27. The patient co-operates with staff:

0 - almost always
1 - sometimes
2 - almost never

28. *The patient makes sense when he/she talks:

0 - almost always
1 - sometimes
2 - almost never

29. The patient knows where he/she is:

0 - always
1 - sometimes
2 - never

30. The patient takes his/her clothes off at the wrong time or place:

0 - never
1 - occasionally
2 - frequently

31. The patient seems very restless:

0 - almost never
1 - sometimes
2 - almost always

* Score 1 for this item if it cannot otherwise be scored due to aphasia or muteness.

32. The patient requires safety supervision (for careless smoking, objects in mouth, self-injury, pulling catheter, etc.):

    0 - never
    1 - sometimes
    2 - always

33. *When talking, the patient wanders off the subject:

    0 - almost never
    1 - sometimes
    2 - almost always

34. The patient has trouble remembering things:

    0 - never
    1 - occasionally
    2 - frequently

35. The patient talks out loud to himself/herself:

    0 - never
    1 - occasionally
    2 - frequently

36. When trying to get the patient's attention, he/she acts as if he/she is in a dream world:

    0 - never
    1 - occasionally
    2 - frequently

* Score 1 for this item if it cannot otherwise be scored due to aphasia or muteness.

LONDON PSYCHOGERIATRIC RATING SCALE
ANSWER SHEET
FORM A

Place of Rating _____ Ward or Unit _____

Rater _____ Date _____

Subject Number _____ Age _____ Sex _____

Marital Status _____ Time Since Admission of Facility:

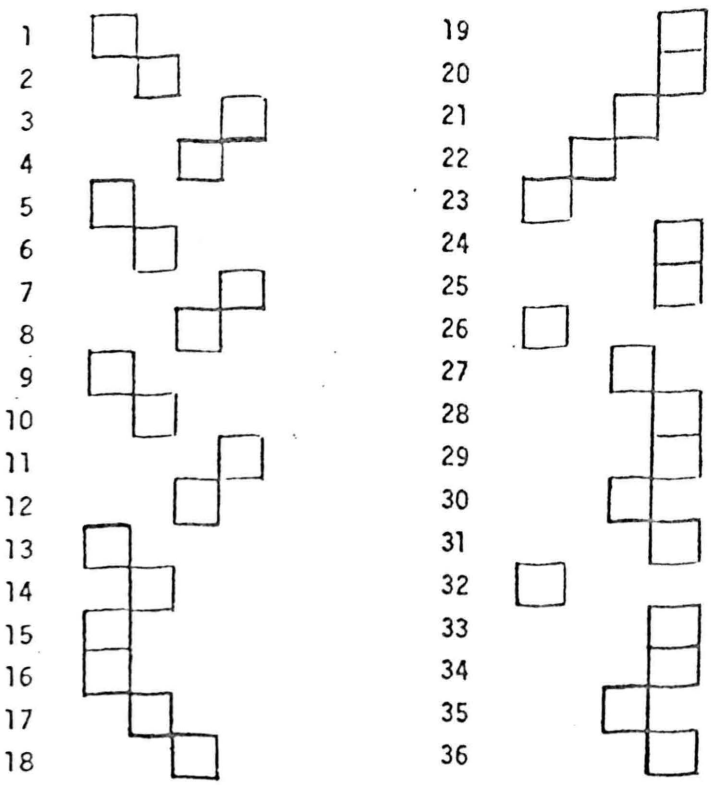
Number of Previous Admissions: _____ (in months)

_____ Diagnosis _____

(ICDA - 8 Code)

INSTRUCTIONS

Mark each item with a 0, 1, or 2 in the box provided opposite the item number. Please answer all items and do not leave any blanks.



COMMENTS:

APPENDIX B

June 8, 1981

To Whom It May Concern:

JoAnn Newman has discussed her project of investigating the effects of outside activities on our health center residents with me at length. She has my permission to conduct this study at Good Samaritan Village.

Margaret L. Brown

Margaret Brown

Training & Volunteer Coord.

APPENDIX C

TEXAS WOMAN'S UNIVERSITY
Box 23717 TWU Station
Denton, Texas 76204

HUMAN SUBJECTS REVIEW COMMITTEE

Name of Investigator: Jo Ann Newman Center: Denton

Address: 1320 Cromwell Date: June 24, 1981

Denton, Texas 76201

Dear Ms. Newman:

Your study entitled The Effects of Outside Activities on Elderly Nursing Home Residents

has been reviewed by a committee of the Human Subjects Review Committee and it appears to meet our requirements in regard to protection of the individual's rights.

Please be reminded that both the University and the Department of Health, Education, and Welfare regulations typically require that signatures indicating informed consent be obtained from all human subjects in your studies. These are to be filed with the Human Subjects Review Committee. Any exception to this requirement is noted below. Furthermore, according to DHEW regulations, another review by the Committee is required if your project changes.

Any special provisions pertaining to your study are noted below:

_____ Add to informed consent form: No medical service or compensation is provided to subjects by the University as a result of injury from participation in research.

_____ Add to informed consent form: I UNDERSTAND THAT THE RETURN OF MY QUESTIONNAIRE CONSTITUTES MY INFORMED CONSENT TO ACT AS A SUBJECT IN THIS RESEARCH.

_____ The filing of signatures of subjects with the Human Subjects Review Committee is not required.

_____ Other:

__XX__ No special provisions apply.

cc: Graduate School
Project Director
Director of School or
Chairman of Department

Sincerely,

Marilyn Hinson

Chairman, Human Subjects
Review Committee

at Denton

APPENDIX D

CONSENT FORM

Title of Study: The Effects of Outside Activities on Elderly Nursing Home Residents.

Consent to Act as a Subject for Research:

I understand that I am participating in an experiment to study the effects of outside activities on nursing home residents. I understand that I may be requestioned to participate in outside planned activities as a member of a small group. I have received an oral description of this study, including a fair explanation of the procedures and their purposes, any associated discomforts or risks, and a description of the possible benefits. An offer has been made to me to answer all questions about the study. I understand that my name will not be used in any release of the data and that I am free to withdraw at any time. I further understand that no medical service or compensation will be provided to subjects by Texas Woman's University or Good Samaritan Village as a result of injury from participation in the research.

Signature	Date	Witness	Date

I agree that the above named resident is able to participate in this project.

Medical Director	Date	Witness	Date

I have fully informed and explained to the above named resident a description of the listed elements of informed consent.

Signed	Date	Witness	Date

APPENDIX E

TEXAS WOMAN'S UNIVERSITY
BOX 23717, TWU STATION
DENTON, TEXAS 76204

HUMAN SUBJECTS REVIEW COMMITTEE

July 14, 1981
Date

TO: Project Director

Director of School or
Chairman of Department

This is to inform you that, as of this date, Jo Ann Newman has placed on file with the Human Subjects Review Committee the signatures of the subjects who participated in his/her research. The signatures constitute evidence of informed consent of each subject.

Marilyn Hinson
Chairman, Human Subjects Review Committee

cc: Investigator
Graduate School

APPENDIX F

TEXAS WOMAN'S UNIVERSITY

DENTON, TEXAS 76204

THE GRADUATE SCHOOL

July 20, 1981

Ms. Jo Ann Bullard Newman
1320 Cromwell
Denton, Texas 76201

Dear Ms. Newman:

I have received and approved the Prospectus for your research project. Best wishes to you in the research and writing of your project.

Sincerely yours,

Robert S. Pawlowski
Provost

RP:dl

cc Dr. Nancy Griffin
Mrs. Ruth Pershing
Graduate Office

APPENDIX G

INSIDE VOLUNTEERS

Thank you for participating in this study. It will last four weeks and will require your presence twice each week for at least one half hour each time. Please make every effort to be there each time during the four weeks of the project. You will be working each time with another volunteer and the same small group of residents for the full period. You may meet on the same two days of the week or you may vary your days. This is to be worked out with your co-volunteer. Please abide by the following guidelines:

1. Arrive in time to gather your group together.

2. Please coordinate your place of meeting with the activity department in conjunction with the ongoing activity program.

3. Inside activities may consist of a group discussion, parties (just for your group), current events discussion, or attending planned activities together as a group. Use your imagination. Activity calendar is available in Rehab Office.

4. Never leave your group unattended. If help is needed, send one volunteer for help while the other stays with the group.

5. Please record attendance of both residents and volunteers each time as absences will affect the study.

6. Talk to the residents and try to get acquainted with them. This will enrich the experience for both of you.

7. Refreshments may be a part of your group activities, but please check with the Rehab Office so that dietary restrictions may be complied with.

8. Enjoy the experience, and try to make it an enjoyable experience for your group.

OUTSIDE VOLUNTEERS

Thank you for participating in this study. It will last four weeks and will consist of two outings each week, each to last at least one half hour. Please make every effort to be there each time during the four weeks of the project. You will be working each time with another volunteer and the same small group of residents for the full period. You may meet on the same two days of the week or you may vary your days. This is to be worked out with your co-volunteer. Please abide by the following guidelines:

1. Arrive in time to gather your group together.

2. It will be helpful to plan your outing with your co-volunteer at least the week prior to the outing, or you may want to discuss this with your group of residents and decide together.

3. Outings may be walks or wheelchair rides on the grounds, picnics, trips to an ice cream parlor, shopping, etc. Use your imagination.

4. If you need transportation, this should be discussed with the activity department at least one week prior to the trip.

5. Never leave your group unattended. Should help be needed, send one volunteer for help while the other stays with the group.

6. Please record attendance of both residents and volunteers each time as absences will affect the study.

7. Talk to the residents and strive to make this a pleasurable time for them.

8. Small things may make the difference in residents' attitudes. Do they have needed sunglasses, scarves, sweaters, etc.?

APPENDIX H

ATTENDANCE CHECKLIST

Group _____ Volunteers_____, _____

Residents	Week 1		Week 2		Week 3		Week 4	
Volunteers								

APPENDIX I

TABLE OF CALCULATED SCORES

Group	Subject	PD	DIS	SIB	MENT	Total
1	1	66.67	75	31.25	69.23	61.11
Outside	2	25	41.67	0	9.62	16.67
	3	33.33	25	3.13	19.23	20.14
	4	38.89	62.50	3.13	9.62	24.31
	5	55.56	43.84	0	25	30.56
	6	36.11	50.00	0	11.54	21.53
	7	8.34	25	0	5.77	8.33
	8	77.78	91.67	3.13	55.77	55.56
	9	38.89	45.85	0	11.54	21.53
	10	66.67	54.17	0	17.31	31.95
	11	75	87.50	75	69.23	75
	12	58.34	70.84	15.63	38.46	43.75
	13	38.89	50	0	23.08	26.39
	14	41.67	37.50	0	13.46	21.53
2	1	66.67	87.50	28.13	78.85	65.97
In-house	2	19.45	25.	0	15.39	14.58
	3	36.12	58.34	0	15.38	24.31
	4	41.67	54.17	3.13	17.31	26.39
	5	55.56	75.	37.50	53.85	54.17
	6	41.67	45.83	9.37	17.31	26.39
	7	22.22	37.50	0	13.46	16.67
	8	75	91.67	3.13	40.39	49.31
	9	52.78	91.67	37.50	59.62	58.34
	10	72.23	83.34	40.63	59.62	62.50
	11	47.22	50	0	9.62	23.61
3	1	16.67	83.34	6.25	21.16	27.08
Refusal	2	11.12	41.67	0	5.77	11.81
	3	11.12	37.50	0	1.93	9.72
	4	16.67	41.67	12.50	42.31	28.92
	5	16.67	50	6.25	28.85	24.31
	6	47.22	62.50	0	11.54	26.39
	7	22.22	70.83	0	28.85	27.78
4	1	83.33	87.50	25	67.31	65.28
Excluded	2	88.89	75.	25	26.92	50
from	3	44.45	33.34	12.50	7.69	22.22
Original	4	55.56	75	50	26.92	45.83
Groups	5	63.89	79.17	37.50	61.54	59.75
	6	74.80	87.50	0	25	42.36
	7	25	41.67	0	13.49	18.06
	8	22.22	58.34	3.13	34.62	28.47
	9	41.67	58.34	0	19.23	27.09
	10	38.89	50	12.50	48.08	38.20

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