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STUDY OF CHANGES IN THE LEVEL OF FUNCTIONING IN CHRONICALLY HOSPITALIZED PSYCHIATRIC PATIENTS AS A RESULT OF THESE PATIENTS PERFORMING TASKS WITH PEERS

by

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A professional paper submitted to the Graduate Faculty
in partial fulfillment of the requirements for the degree

of

MASTER OF NURSING

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August, 1972

ACKNOWLEDGEMENTS

The writer is especially grateful to Miss C. Hazel Sorenson, Associate Professor of Psychiatric Nursing, who gave most generously of her time, effort and patience to assist and support me in this study.

Sincere gratitude is expressed to my graduate committee members: Dr. Laura Walker, Director, School of Nursing; Dr. Del Samson, Head, Department of Sociology; and Miss Virginia Felton, Associate Professor of Nursing.

An expression of thanks is also extended to the people who staff Unit 67 at the Montana State Hospital, Warm Springs, Montana, without whose cooperation this study would not have been possible.

Deepest gratitude is extended to my parents, for all the years of encouragement, guidance and support they have given me in the task of achieving my education.

My loving appreciation is also expressed to my husband, for the encouragement and support he gave me in my final efforts to attain my education.

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ABSTRACT

The purposes of this study were: 1. To investigate the feasibility of assigning hospitalized, chronically ill, psychiatric patients to perform specific tasks with another hospitalized, chronically ill, psychiatric patient, using a group as a method of supervision and support, 2. To measure behavioral changes which occurred as a result of the experience.

An experimental approach was designed in which sixteen patients were selected on the basis of ratings done by two independent raters using the MACC Behavioral Adjustment Scale, Form II. Each of the eight patients receiving the highest total behavioral adjustment score, the care-taker patients, were randomly assigned to one of the eight patients receiving the lowest total behavioral adjustment score, the care-receiver patient. The eight care-taker patients were involved in task oriented group sessions with the investigator, five days a week, during which time they were assigned a task to perform daily with their care-receiver patient. Two raters independently completed the MACC Scale for each of the sixteen patients every week during the five week project period.

The scores obtained from the use of the MACC Scale provided the data for the study. The scale measured four areas of behavior; Mood, Cooperation, Communication and Social Contact. Scores from each of these four areas, as well as the total adjustment score, representing the sum of the scores from the four areas, was analyzed.

The results of this investigation indicated that only the care-taker patient's total adjustment scores revealed improved functioning. When scores from the four behavioral areas were analyzed by t-test the care-taker's scores in all four areas showed a significant difference. Only Mood and Cooperation scores were significantly different for the care-receiver patients. No consistent pattern of variability among the four behavioral areas for either care-takers or care-receivers was established in which there was a gain in one factor without a corresponding gain in the other three factors during the same week. The same degree of progress did not occur for either care-taker or care-receiver patients between each consecutive week of the project, when total adjustment scores were considered. The same degree of progress for Mood and Cooperation scores occurred for both groups of patients between some consecutive weeks of the project.

CHAPTER I

INTRODUCTION

Despite psychiatry's progress and the increased use of therapeutic drugs, the chronic mental hospital population is growing. Current interest in mental health is focused more on intensive research with persons who have acute forms of mental illness. von Mering expresses that many forms of supportive therapy that could be effective in work with long term patients are not in the foreground of psychiatric consciousness and may have remained untried.[1] Another investigator, York, states "We forget the patients on the 'back wards' ... this is the greatest challenge- to determine what can be done for these chronic patients."[2]

The word "chronic" is clinically vague and has a one sided negative prediction. It implies passivity as far as medical action is concerned.[3] The word "chronic" means "...a patient is in a state of apparent unwillingness to give up nonsocial patterns of self-defeat and regressive behavior."[4]

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[1]Otto von Mering. "Beyond the Legend of Chronicity," Psychiatric Nursing, Vol. II, ed. Dorothy Merness (Dubuque, Iowa: Wm. C. Brown Company Publishers, 1969), p. 90.

[2]Milton Greenblatt, M.D., Richard H. York, Ph.D., and Esther Lucile Brown, From Custodial to Therapeutic Patient Care in Mental Hospitals (New York: Russell Sage Foundation, 1955), pp. 324-325.

[3]von Mering, loc. cit.

[4]von Mering, p. 88.

Greenblatt indicates that most cases of mental illness are characterized by progressive desocialization.[5] He proposes four progressive stages of maladjustment: 1) A reduction in interest and initiative. The patient responds to frustrations of instinctive strivings by turning his attention inward and withdrawing. 2) Growing preoccupation with his own mental content. The patient broods about a variety of personal topics and his judgment is impaired. 3) Attempts to deal with deepening tensions. The individual strikes out agressively against those near him and projects his troubles on the outer world via delusions and hallucinations. 4) Further disorganization and deterioration. Here the individual makes a compromise between the demands of his inner self and the frustrations of the outer world which enables him to survive with minimal pain. Here the individual regresses further and becomes unwilling to have his equilibrium disturbed. Clinically this means chronicity.[6]

Investigators who have worked with long term chronically hospitalized psychiatric patients, point out a variety of factors which lead to and perpetuate chronicity and regression. Goodman believes that, "Hospital systems tend to foster regression by following the common practice of concentrating regressed patients in one or more

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[5]Greenblatt, op. cit., p. 106.

[6]Greenblatt, p. 106.

wards.[7] Stanton and Schwartz state, "Patients can and do influence each others behavior."[8] Schwartz indicates that, if depressed, withdrawn patients are housed together, it is highly likely they will reinforce each others withdrawal.[9] von Mering also takes the position that extremely homogenous groupings of patients are likely to reinforce the pathological aspects of behavior that they share.[10] von Mering points out that staff moral on chronic services has suffered because of less chance for job satisfaction in terms of patient progress.[11] "Hospital personnel feel that nothing can be done for these patients."[12] von Mering also states that often personnel caring for chronic patients

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[7]Lillian R. Goodman, "Regression-Some Implications for Nurses in Large Public Psychiatric Hospitals," Psychiatric Nursing, Vol. II, ed. Dorothy Mereness (Dubuque, Iowa: Wm. C. Brown Company Publishers, 1969), p. 22.

[8]Alfred H. Stanton, M.D. and Morris S. Schwartz, Ph.D., The Mental Hospital (New York: Basic Books, Inc., 1954), p. 22.

[9]Morris S. Schwartz, "What is Therapeutic Milieu"," The Patient and The Mental Hospital, eds. Milton Greenblatt, M.D., Daniel J. Levinson, Ph.D., and Richard H. Williams, Ph.D. (Illinois: The Free Press, 1957), p. 140.

[10]von Mering, p. 323.

[11]von Mering, p. 322.

[12]von Mering, p. 325.

compensate for the feeling that nothing is being done medically to get the patient better, by performing many tasks of daily living for the patient.[13] Goodman cites that nurses and aids tend to keep patients regressed because of their need to do for them. The more that is done for patients, the more dependent they become.[14]

In addition to homogenous groupings of patients and staff attitudes, von Mering adds that as time passes, the ward staff becomes more accustomed to judging the patient and his behavior on whether it represents a management problem alone.[15] Greenblatt also comments that well polished wards and quiet patients become the criteria of a "good" ward.[16]

Investigators do point out, that patients can and do influence each others behavior and this can be used as a positive experience.[17] M.S. Schwartz writes,

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[13]von Mering, p. 322.

[14]Goodman, op. cit., p. 23.

[15]von Mering, p. 91.

[16]Greenblatt, p. 322.

[17]Norman A. Polansky, Robert B. White, and Stuart C. Miller, "Determinants of the Role-Image of Patients in a Psychiatric Hospital," The Patient and the Mental Hospital, eds. Milton Greenblatt, M.D., Daniel J. Levinson, Ph.D., and Richard H. Williams, Ph.D. (Illinois: The Free Press, 1957), p. 401.

> ...in living together patients can reinforce each other's hopelessness and despair...or can be sympathetic and supportive of one another. A patient can find among his fellows someone he can help or be helped by...[18]

Manfreda states that morale is often built by what one is able to do for other people. She believes that patients can help each other in various ways. The physically able can assist the less capable with toileting, dressing and walking. Also, patients who possess special abilities in arts and crafts can help others learn.[19]

Polansky also says,

> ...if the role of the patient could be changed from that of a passive, recipient guest to an active participant..., some regressive phenomena would be less likely to occur.[20]

Stanton and Schwartz express that patients should not be thought of as passive objects of treatment, but active participants in it.[21]

Brown points out,

> ...when attendants are cast primarily in the role of assistant recreational and occupational therapists rather than custodial officers...and when patients who exhibit skill in engaging the interest of other patients are thus used,...the amount of recreational activity can be greatly enlarged.[22]

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[18]Schwartz, "What is Therapeutic Milieu?," p. 140.

[19]Marguerite Lucy Manfreda, R.N., M.A., Psychiatric Nursing (Philadelphia: F.A. Davis Company, 1954), p. 113.

[20]Polansky, "Determinants of the Role-Image of Patients in a Psychiatric Hospital," p. 386.

[21]Stanton and Schwartz, p. 23.

[22]Greenblatt, p. 9.

Brown indicates that devices such as games have a wide range of usefulness in mental hospitals where patients are defective in socialization skill.

Maurin states that the psychotic state impairs communication with others and this impairment causes the patient to retire further into his psychotic world. Maurin indicates it is important to overcome this isolation.[23] She comments that therapy groups can provide psychotic patients with that relationship with the external world which will bring these patients out of their isolation with-in themselves.[24]

Glasser also comments on isolation and withdrawal and emphasizes, "We must be involved with other people," one at the very minimum.[25] He goes on to say that,

> Unless a patient becomes actively involved with at least one person in a better way than he is now involved with anyone, he will be unable to fulfill his needs.[26]

The needs Glasser refers to are: 1) the need to love and be loved, 2) the need to feel we are worthwhile to ourselves and to others.[27]

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[23]Judith T. Maurin, "Regressed Patients in Group Therapy," Perspectives in Psychiatric Care, VIII, 3 (1970), 132.

[24]Ibid.

[25]William Glasser, M.D., Reality Therapy (New York: Harper and Row, Publishers, 1965), p. 7.

[26]Ibid., p. 8.

[27]Ibid., p. 9.

The literature indicates that patients should be active participants in their treatment. Various authors believe that: 1) patients can and do influence each others behavior, 2) group processes among patients can be used as positive, growth promoting experiences for these individuals, 3) each person needs to be involved with another individual. Having considered the beliefs of these various authors, the writer of this study thought that an effective method of helping more chronically ill, hospitalized, psychiatric patients become active participants in their ward environment, would be to involve selected patients on a ward, in a task oriented group, whose function was to assign and support each of its members to perform a specific task with another identified patient from the same ward. The author also believed that patients involved in this experience would demonstrate a change in behavior which could be measured.

Wind supports the investigators comments on a change in behavior when he states,

> It is possible to demonstrate that changes in social environment of more severely ill patients can have an immediate effect on their behavior.[28]

Brown and Greenblatt also lend support by stating "Experiments can be constructed for discovering the degree to which changes in situations alter behavior patterns."[29]

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[28]J.K. Wing, "Long-Stay Schizophrenic Patients and Results of Rehabilitation," Psychiatric Hospital Care, ed. Hugh Freeman (London: Bailliere, Tindall and Cassell, 1965), p. 98

[29]Greenblatt, p. 423.

Problem

Previous investigators interested in the problem of helping hospitalized, chronically ill, psychiatric patients loosen their hold on withdrawal and passive acceptance of their ward situation have tried different approaches toward helping these patients become more active participants in their care. Some studies have had patients participate in a group with an assigned staff leader. Other studies involved a staff member working individually with a patient in a one to one relationship. A third approach was to individually supervise a patient who was working directly with another patient.

The results from these studies indicate that, although working with regressed, chronically ill psychotic patients was frustrating and unpredictable, gradually, resistive, isolated patients began to respond and significant alterations in their mode of participation occurred.

Would an approach designed to involve selected patients as participants in a task oriented group, whose function was to assign and support each of its members to perform a specific task with another selected patient, be an effective method of helping more chronically ill, hospitalized, psychiatric patients become active participants in their ward environment, and, if involving these patients in this experience would result in a higher level of functioning for them, is the problem dealt with in this paper.

Purpose

The main purposes of this study were:

1. To investigate the feasibility of assigning a chronically ill, hospitalized patient to perform specific tasks with another chronically ill, hospitalized patient, using a group as a method of supervision and support.

2. To measure behavioral changes which occurred as a result of the experience.

Hypothesis

When one chronically ill, hospitalized, psychiatric patient is daily involved in a task oriented group whose purpose is to assign and support her to do a task in which she interacts with another selected, chronically ill, hospitalized psychiatric patient from the same ward:

1. Both groups will manifest a higher level of behavioral adjustment.

2. In both groups of patients, a consistent pattern among the four behavioral areas measured will be evident in which there will be a gain in one factor without a corresponding gain in the other three factors during the same week.

3. The same degree of progress will occur in both groups.

Definition of Terms

The following terms are defined in relation to their use in this study:

Care-Taker Patient. The term refers to a patient who was assigned a task to perform daily, on a one to one basis with a care-receiver patient.

Care-Receiver Patient. The patient who was the recipient of care performed by the care-taker patient.

Care Tasks. This term refers to tasks the care-taker patient was assigned to perform each day with the care-receiver patient.

Chronicity. Chronicity is a state of apparent unwillingness to give up non-social patterns of self-defeat and regressive behavior.[30] In this study the term refers to continual hospitalization as a psychiatric patient for a period of five years or longer.

Limitations

1. Observations and ratings of the patients involved in this study were done by people whose bias was not known.

2. The investigator had no control over what the attendants said to the patients involved in this study.

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[30]von Mering, p. 88.

CHAPTER II

REVIEW OF LITERATURE

Investigators have attempted different approaches to the problem of what can be done to help the regressed patient loosen his hold on withdrawal and infantile objects of attachment. Investigators have dealt with this problem believing that when patients cannot be helped to improve sufficiently to be able to leave the hospital at the earliest possible moment, the next thing is to aid these individuals to live as nearly normal lives as possible within the institutional setting.[31]

One approach was to have patients participate in a group with an assigned leader. A project was carried out at the Bedford Veterans Administration Hospital in Massachusetts, to explore and define what aspects of the patient's illness were the result of his hospital social environment and whether, by defining the situation differently, more mature modes of adjustment would be possible.[32]

In this study at Bedford, a variety of group activities were found to compensate for the paucity of ward personnel and impoverished

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[31]Greenblatt, York and Brown, p. 3.

[32]Greenblatt, York and Brown, p. 328.

social environment. The most withdrawn patients were selected for special activities. The investigator had personnel from other areas in the hospital come to the ward to conduct groups. For example, the hospital librarian conducted a news discussion group and a reading group with a small group of patients. Volunteer women from the community came in once a week to organize a writing group, dramatics group and dance class. The hospital's athletic and music instructors spent time on the ward. Several patients with special aptitudes were invited to help. One patient, a capable artist, was able to get mute patients to express themselves in drawings.

Group activities, participation by persons not on the regular staff, and interest of the ward staff in the project stimulated personnel to find more effective ways to help patients. As a result, noisy and hostile patients became more relaxed, and the socially withdrawn became more active.[33]

At Metropolitan State Hospital, near Boston, the former plan of working with a small activity group outside the ward was altered to explore and develop what ever potential for socialization there might have been on the ward itself. A group of student nurses

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[33]Greenblatt, York and Brown, p. 329-334.

provided group activities for three hours each afternoon to a small number of inactive, incontinent or depressed patients on chronic wards. Gradually, resistive isolated patients began to respond. The resocialization process was slow, but the result was a significant increase in socialization and improvement in the environment.[34]

Goodson, who did an extensive amount of work with regressed patients in group therapy states that, an environment presenting over-crowded conditions, limited staff and a minimal number of activities encourages docility and conformity. The "good" patient is rewarded with privilege cards providing limited access to the grounds.[35]

Goodson conducted a group session with ten regressed psychotic patients for a period of one year. This investigator stated that to establish a working agreement with hospitalized psychotic patients, it was important to clarify the purpose of the group and role of the leader repeatedly. This repetition helps to indicate the importance of the individual in the group and combat confusion and anxiety.

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[34]Greenblatt, York and Brown, p. 369-374.

[35]Mary D. Goodson, R.N., M.S., "Group Therapy with Regressed Patients," Perspectives in Psychiatric Care, II, 4 (1964), 23-31.

Goodson also stated that, "Membership in a group tends to satisfy a personal need, but mentally ill patients are contemptuous of themselves and therefore of others and have little expectations of gaining anything from a close relationship."[36] In her group sessions Goodson actively persued productive topics by restating, questioning, and expressing her feelings about what was going on in the group, to help the members see the similarities in their problems and their potential usefulness to each other.

Goodson pointed out that when group therapy sessions are introduced on the ward, staff members should be made to feel they are an important part of the treatment regimen. By doing this, staff cooperation and interest are maintained.[37] Goodson also pointed out that a quiet, pleasant meeting place for the group was an important adjunct to the therapeutic process.[38]

Goodson found that "Work with regressed psychotic patients was frustrating and unpredictable."[39] Goodson found that over a period

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[36]Ibid., p. 27

[37]Ibid., p. 24.

[38]Ibid., p. 25.

[39]Ibid., p. 23.

of one year spent in group meetings twice a week, some of the members were able to express feelings on a superficial level. Others were able to participate by following the conversation with their eyes and smiling or frowning appropriately. The group developed a cohesive quality which could be observed in the group and outside when several members sat together or walked with each other.[40] Goodson concluded that the change in behavior from isolation to participation indicated that the patients self esteem was enhanced by belonging to the group.

Another type of approach, aimed at helping the regressed patient, was to have a staff member work individually on a one to one basis with a patient. Tudor worked with several withdrawn patients, individually over a period of six months. She demonstrated that the process of withdrawal can be systematically observed, evaluated and interrupted. When the process of withdrawal was interrupted, significant alterations in the patients mode of participation occurred.[41]

Cockrill and Bernal engineered an approach to the problem of withdrawal by utilizing the principle of positive reinforcement from behavior theory. They supervised a patient who worked directly with

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[40]Ibid., p. 31.

[41]Gwen E. Tudor, "A Sociopsychiatric Nursing Approach to Intervention in a Problem of Mutual Withdrawal on a Mental Hospital Ward," Perspectives of Psychiatric Care, VIII, 1 (1970), 10-35.

another patient. Basing their approach on operant conditioning principles, they programmed one psychotic patient who was not withdrawn, to produce social reinforcers, contingent on a withdrawn patient's verbal initiations. The experiment lasted for a period of five weeks. Sessions between the two patients were video taped. The study showed that when social reinforcement was made contigent upon the verbal initiation of a withdrawn patient, the withdrawn patient's verbal initiating behavior increased.[42]

Walker reported on a system which was established at Sheppard and Enoch Pratt Hospital near Baltimore, in which patients with privileges escorted those with fewer privileges to various activities elsewhere on the grounds. One patient escort could take from three to six patients. Only men escorted men and women escorted women. Patients who were unable to attend activities because an attendant did not have the time to take them, were able to go. The system helped alleviate man power shortages and assured patients with fewer privileges they would be able to attend all activities their physician approved.[43]

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[42]Velda Kuykendall Cockrill, R.N., M.S. and Martha E. Bernal, Ph.D., "Operant Condition of Verbal Behavior in a Withdrawn Patient by a Patient-Peer," Perspectives in Psychiatric Care, VI, 5 (1968), 230-237.

[43]John B. Walker, "Privileged Patients Act as Escorts," Hospital and Community Psychiatry, XXI, 6 (1970), 194.

In summary the literature suggests that it is possible to help patients loosen their hold on withdrawal and passive acceptance of their ward situation, by designing approaches which change the individual's role from a passive recipient to a more active participant in his care. The process of changing a patient's mode of participation is slow and many times frustrating, but the literature indicates that gradually, resistive, withdrawn patients do respond with significant alterations in their mode of participation.

CHAPTER III

METHODOLOGY OF THE STUDY

Permission to carry out this study on one of the patient wards at a state hospital for psychiatric patients was granted by the hospital administrator and medical and nursing directors of the ward. An experimental method was designed in which a sample population of 23 patients was selected from the total patient population on a locked ward for chronic women patients.

DESCRIPTION OF THE WARD

The reported study was carried out on a locked ward for chronic women patients at a state hospital for psychiatric patients. The ward housed 73 female patients whose average age was 54 years and whose median length of stay was 19.5 years. Of the total population 42 were classified as having functional disorders, 11 were organic and 20 were mentally deficient. One attendant described the ward as the most regressed, "chronic" ward in the hospital.

The ward was divided into two areas. The east side housed the most regressed patients, patients who were non-communicative, chronically agitated and untidy. The majority of these patients were incapable of self care. Many of the patients were restrained by leather straps to protect themselves and others from injury.

Two of the patients from this side were included in the investigator's study. One patient remained on this side because she prefered to sleep here. She was free to go to the west side when

she wanted to. The other patient, a more withdrawn patient, remained on the east side because of periodic spells of regression, during which she would shred her clothes and harm herself.

Patients on the west side were less regressed, in that they were capable of self care. These patients became agitated periodically. Many were prone to escape. Communication between patients on this side was limited to superficial contacts. Periodically there were out-bursts of temper between these patients.

There were no social cliques or subgroups formed on the west side nor the east part of the ward. However, there were three patients who were each helping another patient with some self care routines such as dressing and eating. These companionships were oriented toward maintaining activities of daily living, rather than social companionship.

Patients on the west side were escorted to the hospital dining room for meals. East side patients were fed on the ward. None of the patients on the ward were employed on a job within the hospital. Certain patients on the ward performed routine chores to contribute to ward maintenance. Candy and extra cigarettes provided incentive for patients to do routine ward chores. Periodically groups of patients were escorted by the attendants to hospital activities, movies, church and canteen.

The average age of the attendants on the ward was twenty-five years. There were five to seven attendants assigned to the ward during each shift. Eight months prior to the beginning of the investigator's study the attendants began conducting activity and conversation group sessions. Three to four patients were included in each of these groups which met once a week for thirty minutes. The attendants were conducting five of these group sessions. These groups did not include all the patients on the ward.

Each attendant also had one patient involved in a one to one relationship with her for ten to fifteen minutes, five days a week. There were two attendants classified as Psych Aide III's whose job was to focus primarily on the emotional aspect of the patients' care. Each of these Psych Aide III's had seven patients they conducted one to one relationships with for ten to fifteen minutes each day, five days a week.

Remotivation groups had also been conducted on the ward. However, no remotivation groups were in process at the time of the investigator's study. The last remotivation group had ended three months prior to the investigator's study.

DESCRIPTION OF THE RATING SCALE

The investigator utilized the MACC Behavioral Adjustment Scale, Form II as an instrument to measure the level of behavioral adjustment occurring in the patient sample. The symbols MACC are abreviations

for Motility, Affect, Cooperation, Communication. The MACC Scale was devised by Robert B. Ellsworth, Ph.D. and published by Western Psychological Services of Beverly Hills, California. A copy of this scale is included in Appendix A, Table VI along with permission for its reproduction.

The MACC Scale was designed to assess quickly and accurately the behavioral adjustment of hospitalized, functionally psychotic patients. The MACC Scale provided a method of evaluating how a patient adapted to various ward and off-ward situations found in the hospital community. The scale could be completed by personnel who were most familiar with the patient. This scale offered a way to broaden the assessment of functionally psychotic hospitalized patients and provided a chronological description of patients' responses to hospitalization and treatment efforts.

Three guiding principles functioned as the basis for the development of the scale: 1) Behavioral items sensitive to and reflecting clinical improvement in hospitalized patients, 2) Items clear and understandable to nonprofessional personnel, 3) Items reflecting definable "areas" of behavioral adjustment and resulting in a general assessment of a patient's overall behavioral adjustment level.

The MACC Scale contained four behavioral clusters. They were Mood, Cooperation, Communication, and Social Contact. Each cluster contained four, five point items with a possible score ranging from

four to twenty for each cluster. The total adjustment score, all sixteen items in the scale, had a score range of sixteen to eighty.

Interpretation of the four behavioral factors:

1. Mood: A high score indicated a patient was pleasant, friendly, and easy to get along with. A low score described a bitter, grouchy, complaining individual.

2. Cooperation: A high score characterized a person who did what he was asked to do and went ahead with things expected of him on his own. A low score indicated a person was resistive, uncooperative and one who did not complete tasks.

3. Communication: A high score characterized a patient who talked realistically, was sensible, and grasped what was told him. A low score described a person who was mute or talked nonsense and who neither understood nor responded to much of what was said to him.

4. Social Contact: A high scorer was one who spent considerable time with friends, talked with and did things with other patients and knew and used the name of personnel and patients. A low score indicated a socially withdrawn person who spent time alone and knew little about those around him.

Cluster Analysis Data: The four items within each cluster were subject to cluster analysis. For a group of items to be labeled a "cluster", the item intercorrelations of the cluster had to be greater within the cluster than with items outside the cluster. The

four items within each cluster of the Scale met this condition.

Validity: Validity was determined by the ability of the scale to differentiate identifiable groups of patients, such as open vs. closed ward patients. Behavioral adjustment scores were found to be highly sensitive to differences between hospitalized mental patients categorized into groups as "well adjusted" or "poorly adjusted".

In further determination of the validity of the MACC Scale, the scores were shown to be significantly related to scores of other instruments designed to measure the adjustment of hospitalized mentally ill patients. The Scale scores were also found to correlate highly in terms of predicting length of hospitalization.

Reliability: It was found that most raters were highly consistent with themselves when re-rating patients on scale items. Agreement between raters, independently rating the same group of patients has been high. Correlation of scale scores ranged from .88 to the .90's.

SELECTION OF THE SAMPLE

Criteria for the population from which the sample for the study was selected were:

1. Diagnosis of funtional psychosis, affect or thought disorder.
2. No known organic brain damage.
3. Hospitalized for a period of five years or longer and having lived on the unit for a period of one year or longer.

4. Psychotherapy less than once every six months.
5. No ECT treatments in the last six weeks.
6. No hospital leave for a period of one year.
7. No work assignments outside of the ward.
8. Age range 30 to 80 years.
9. Able to speak, not deaf and displayed an understanding of words.

The kinds of medications were not considered in the criteria for selection. It was noted that all patients were on some regular medications, tranquilizers, and all patients had orders for PRN medications.

PROCEDURE

The investigator arranged two meetings on the ward, one meeting with the morning shift and the other with the afternoon shift, to explain the method of investigation. It was explained that the investigator was doing an investigation of a treatment method.

A list of the 23 patients who met the criteria set by the investigator was shown to the staff. The investigator explained that 16 patients were to be selected from this sample population of 23. The MACC Scale was shown to the staff and introduced as the instrument that would be used in the selection. The investigator explained that she herself could not rate the patients on the MACC Scale, but would need two attendants who were on the same shift and

regularly assigned to the unit to volunteer to complete the ratings with the MACC Scale.

It was further explained that from the ratings done by the two raters on the 23 patients, eight patients with the highest score and eight patients with the lowest score would be selected to be the patients involved in the reported study. The eight patients receiving the highest scores on the MACC Scale were designated to be care-taker patients. The other eight patients who received the lowest score on the MACC Scale were designated to be care-receiver patients.

The investigator explained she would randomly assign one patient from the care-taker group to one patient from the care-receiver group. The eight patients in the care-taker group were to be involved in a task oriented group which was to meet five days a week, excluding Wednesday and Friday, for a period of one hour or less for each meeting.

The staff was told the purpose of involving the care-taker patients in a group. The purposes of the group meetings were to:

1. Have the group serve as the means of assigning each care-taker patient a task she was to perform with her assigned care-receiver patient.

2. The group would serve as the means of support through involving care-taker patients in discussion of what they did and difficulties they had in carrying out the assigned tasks.

3. The group would function to encourage care-taker patients to take responsibility for devising new tasks they might want to do with their care-receiver patient.

The investigator asked that the two attendants, who volunteered to do the ratings with the MACC Scale on the 23 patients, also rate the sixteen patients chosen from the sample. These ratings would be done each week for a period extending from February 8, 1971 to March 12, 1971.

The role the staff was to assume in connection with this study was explained to them. In addition to the two attendants who were to complete the MACC Scale, the attendants were not responsible that each care-taker patient carry out his assigned task.

Two attendants, working on the same shift, volunteered to independently rate each of the 23 patients in the sample, by using the MACC Scale. These same two attendants also agreed to rate each week of the experimental period, the sixteen patients chosen from this sample.

The MACC Scale could be completed by any trained observer on patients he had observed. To establish the reliability of the two raters and the ratings they completed on each patient, the investigator met with both raters at the same time and reviewed the scale and its directions for use. Then both raters independently completed the MACC Scale on two patients from the sample chosen from the unit. The

investigator met again with both attendants and discussed these sample ratings and clarified any misinterpretations of meanings of items the raters had.

From the ratings done by the two raters on the 23 patients, the investigator selected eight patients with the highest scores and eight patients with the lowest scores. The investigator then randomly assigned one patient from the group which received the highest score to one patient from the group which received the lowest scores.

The random assignment was done by writing the names of the patients in each group on separate slips of paper. The two groups of names were kept in separate containers. The names were alternately drawn from each container, thereby randomly matching a patient from one group to another patient in the other group.

After the eight care-taker and eight care-receiver patients had been selected and randomly paired the investigator again met with the morning and afternoon shifts on the unit as two separate groups. A list of these 16 patients was shown to the staff.

A list of possible activities each care-taker and care-receiver patient could perform together was compiled by the investigator and shown to the staff. With the staff's participation a final list of tasks was devised. These tasks consisted of:

1. Patients accompaning each other to and from the hospital's patient dining room, the food center.

2. Helping another patient change clothes, getting coats and shoes on.

3. Combing each others hair.

4. Looking at books and magazines together.

5. Accompanying each other to activities sponsored by the hospital.

6. Coloring and drawing pictures together.

7. Playing with games available on the unit.

An appropriate time and place to have the patients meet on the ward was also set up with the cooperation of the attendants. This was done to insure that the care-taker group would have a regular place for meeting which was quiet and free of interruptions.

After enlisting the cooperation of the two raters and attendants on the ward, the investigator then approached each designated care-taker patient individually. The staff was helpful in identifying for the investigator the care-taker and care-receiver patients.

First, on an individual basis, the investigator introduced herself to the care-taker patients who had been selected. The investigator told the first two selected patients she had taken the patient's name from a list of patients on the ward. The patient was asked if she would come to a group meeting the next day. The time and place of the meeting was given.

The first two patients refused to come. One patient stated, "No, I don't think so. I'm already in a group and that's enough." The other patient replied, "No, I don't want to," and would not speak further.

The patients who refused were eliminated from the experimental group for whatever reason they gave. When a patient refused, the investigator approached the patient with the next highest score out of the seven remaining patients not included in either of the experimental groups.

The investigator approached the rest of the care-taker patients by either being introduced by a staff member or introducing herself. Hereafter the investigator made a simple direct request of the care-taker patient, saying, "I would like you to come to a group tomorrow." The time and place of the group meeting was given. The investigator also stated she would come to get the patient for the meeting. No care-taker patient gave a negative response to the request.

The investigator approached the eight care-receiver patients, individually, to become familiar with who these patients were. The care-receiver patient was neither informed of the planned study, nor asked to participate in a group. The investigator introduced herself and asked the patient's name. The investigator then commented on what the patient was doing at the time of the interaction. Seven

of the care-receiver patients made no verbal response. One care-receiver patient's verbal response was not understandable.

Before the first group meeting with the care-taker patients, the investigator went to each care-taker patient and told the patient it was time for the meeting. The patient was also told that there were cigarettes and the patient could smoke during the group session. Cigarettes were offered to provide incentive for the patients to come to the meeting.

In the first meeting of the care-taker group, the investigator introduced herself and then had each care-taker patient say her name. Cigarettes were then given to each of the patients. Cigarettes were used in all the group meetings. J.T. Maurin, in her group therapy work with regressed patients, has commented that meeting the patient's oral needs appeared to facilitate their response at a more advanced interpersonal level by encouraging socialization.[44]

During the first meeting, the care-taker patients were told they were a select group. Their purpose was to interact with and perform an assigned task with another patient, the same patient every day. They would meet with the investigator as a group each day, except Wednesday and Friday, for a period of four and a half weeks. The

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[44]Maurin, "Regressed Patients in Group Therapy," p. 134.

patients were told they would meet with the investigator in the same room each day for no more than an hour, depending on how much time they felt they needed. The patients were also told the time they would be meeting and if this time had to be changed, one of the attendants would inform the group.

The purpose of the group was also explained to the care-taker patients. The group meetings were to:

1. Serve as the means of assigning each member the task she was to do with the patient she was seeing daily. The investigator would give the care-taker patients tasks to perform each day with their assigned patient, or the group members were free to volunteer their ideas for tasks they thought might be good to do.

2. Serve as a means of giving support. Each patient was to discuss what she did with her assigned patient the previous day and what problems she was having in doing this task with her assigned patient. The rest of the group members and group leader would offer help and direction to any patient in the group regarding the kind of task she was to do.

In the first group meeting the investigator told each care-taker patient the name of the care-receiver patient she was assigned to do a task with each day. A specific task was also assigned. The investigator repeated her request and then asked each care-taker patient if she would carry out the task with the assigned care-receiver patient.

All eight patients agreed to carry out the task with the care-receiver patient. Each care-taker patient was then asked to repeat her assignment. The patients remembered the task, but not the care-receiver patient with whom they were to interact.

The investigator let each care-taker patient decide if she wanted to introduce herself to her assigned patient, or if she preferred to have the investigator make the introduction with her. Two of the care-taker patients chose to introduce themselves. Six of the patients asked that the investigator make the introduction.

The investigator made a written report of what happened during each meeting held with the group. This report consisted of:

1. Whether or not the care-taker patient completed the assigned task.

2. Comments, suggestions and requests the care-taker patients made to the investigator and to each other about their assigned patients and tasks they were to perform.

The ward report log, in which notations on patient's behavior were made by the staff, and medications reported given to the patients were recorded, was used as an additional source of information on the care-taker and care-receiver patients.

CHAPTER IV

ANALYSIS OF THE DATA

The raters did a total of five ratings for each patient in the study. Rater two was absent the second week of the experimental period. Rater one was absent the fourth week. In order to preserve possible trends in behavior, the missing scores for rater two during the second week and rater one on the fourth week were assumed to be the mean of that rater's scores immediately following and proceeding the absent score.

To reduce the effects of rater bias, the mean average of both raters scores was found. The author of the test used states,

> Usually it has been found that a patient may relate well to one aide, and poorly with a second aide. The first rater rates him high, the second rates him a good deal lower...The use of the same well trained raters for periodic ratings enhances the stability of scores and increases the probability that score changes represent real clinical change in the patient's adjustment.[45]

According to the test used, a total adjustment score change of eight raw score points was needed to reflect an observable clinical change in the behavioral adjustment of the patient.

HYPOTHESIS I. Both groups will manifest a higher level of behavioral adjustment. The total adjustment score for the care-

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[45]Robert B. Ellsworth, The MACC Behavioral Adjustment Scale, 1962. Western Psychological Services, Box 775, Beverly Hills, California, p. 13.

taker group of patients indicated improved functioning. Total adjustment score for the care-receiver group of patients did not indicate improved functioning.

The care-taker's total score on the scale prior to the project was 46.07. The last rating, five weeks later, was 57.25. The total adjustment score for care-taker patients changed a plus 11.18. Two patients showed little or no change (7 points or less). Scores for these two patients gained 7.50 and 2.50 points. Six scores changed eight or more points. See Appendix B, Table VII for the total adjustment score changes for each individual care-taker patient.

The care-receiver's total score on the scale prior to the project was 37.51. The last rating, five weeks later, was 43.82. The total adjustment score for care-receiver patients changed a plus 6.31. Three of the patients showed little or no change (7 points or less). Two of these patients gained 1.50 and 2.50 points. The third patient lost 2.50 points. The care-taker patient who gained 2.50 points was the patient who was assigned to the care-receiver patient who lost 2.50 points. Five of the eight care-receivers scores changed eight or more points. See Appendix B, Table VII for the total adjustment score changes for each individual care-receiver patient.

Figure 1, page 35 graphically represents total adjustment score changes for both groups of patients throughout the entire experimental period.

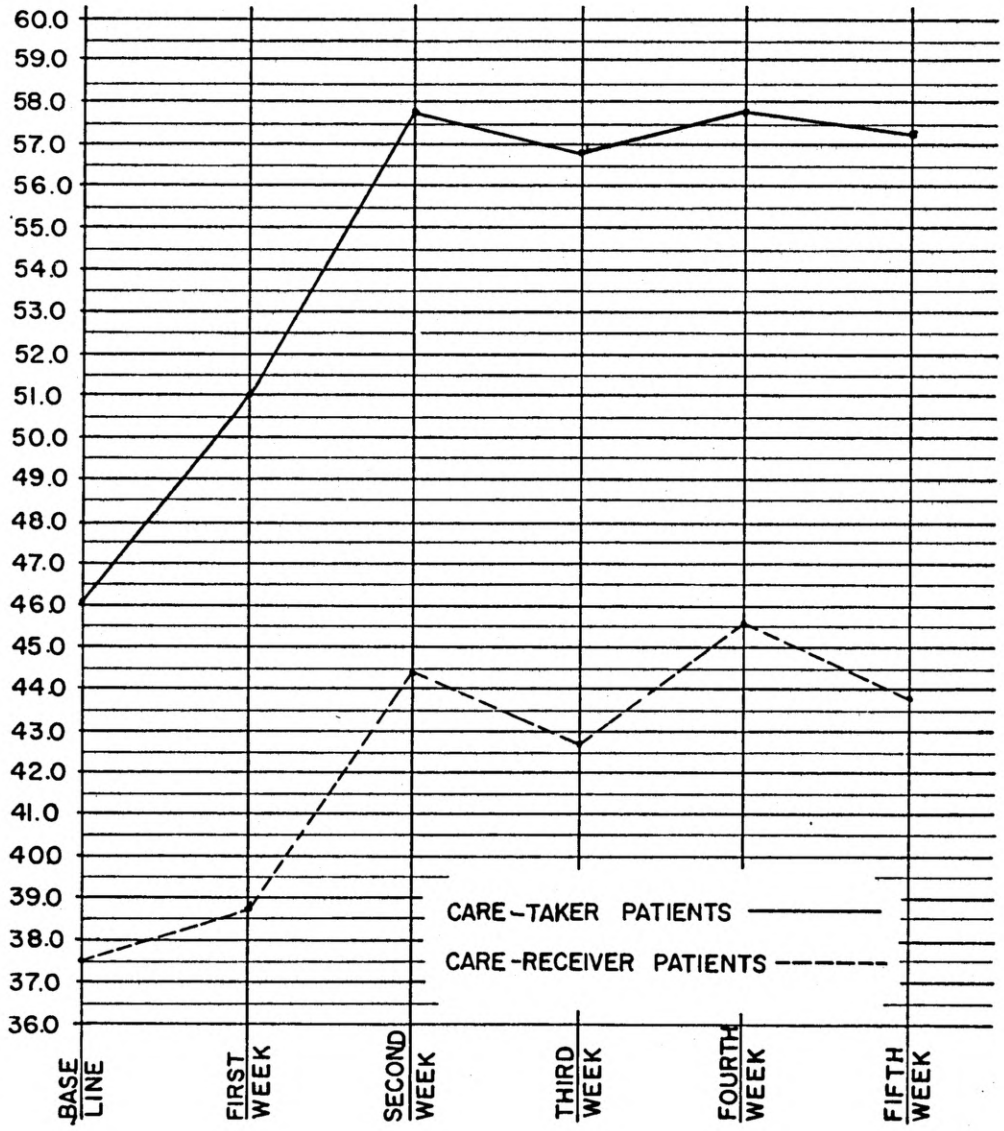


FIGURE 1

TOTAL ADJUSTMENT SCORES FOR CARE-TAKER AND CARE-RECEIVER PATIENTS, FROM BASELINE THROUGHOUT THE ENTIRE PROJECT PERIOD

When comparing the two raters individually for each group of patients, these interesting things were found:

For the care-taker group.

1. Both raters total adjustment scores indicated improved functioning with a behavioral adjustment score change from the baseline period to the fifth week of eight or more points. Rater one indicated a change of 14.25 points. Rater two indicated a change of 8.11 points.

2. Of the six care-taker patients whose scores changed eight or more points, there was agreement between both raters on three of these patients.

3. Of the two care-taker patients whose scores changed seven points or less, there was agreement between both raters on one of the patients.

For the care-receiver group.

1. Rater one's total adjustment scores indicated improved functioning, with a behavioral adjustment score change of 10.00 points. Rater two's total adjustment scores did not indicate improved functioning, with a behavioral adjustment score change of 1.62.

2. Of the five care-receiver patients whose scores changed eight or more points, there was agreement between both raters on two of these patients.

3. Of the three care-receiver patients whose scores changed seven points or less, there was agreement between both raters on all three of these patients.

To facilitate the interpretation of the patients adjustment level, the raw scores were converted into centile scores. This provided an estimate of the patients score when compared to scores of other psychiatrically hospitalized functionally psychotic patients. Figure 2, page 38 graphically represents the centile scores for both groups of patients throughout the entire experimental period. The centile score areas were taken from the profile sheet on the rating scale used in this study.

The care-takers centile scores increased from the below average to the average behavioral adjustment area. The care-taker groups baseline centile score was 16.00. The last centile rating was 38.00.

The care-receivers centile scores increased from the very low to the below average behavioral area. The baseline centile score for the care-receiver group was 7.50. The last centile rating was 12.00.

When the two raters scores were looked at individually for both groups of patients these things were found:

For the care-taker group.

1. Rater one's scores from the baseline period to the last rating progressed from the very low to the below average behavioral adjustment areas.

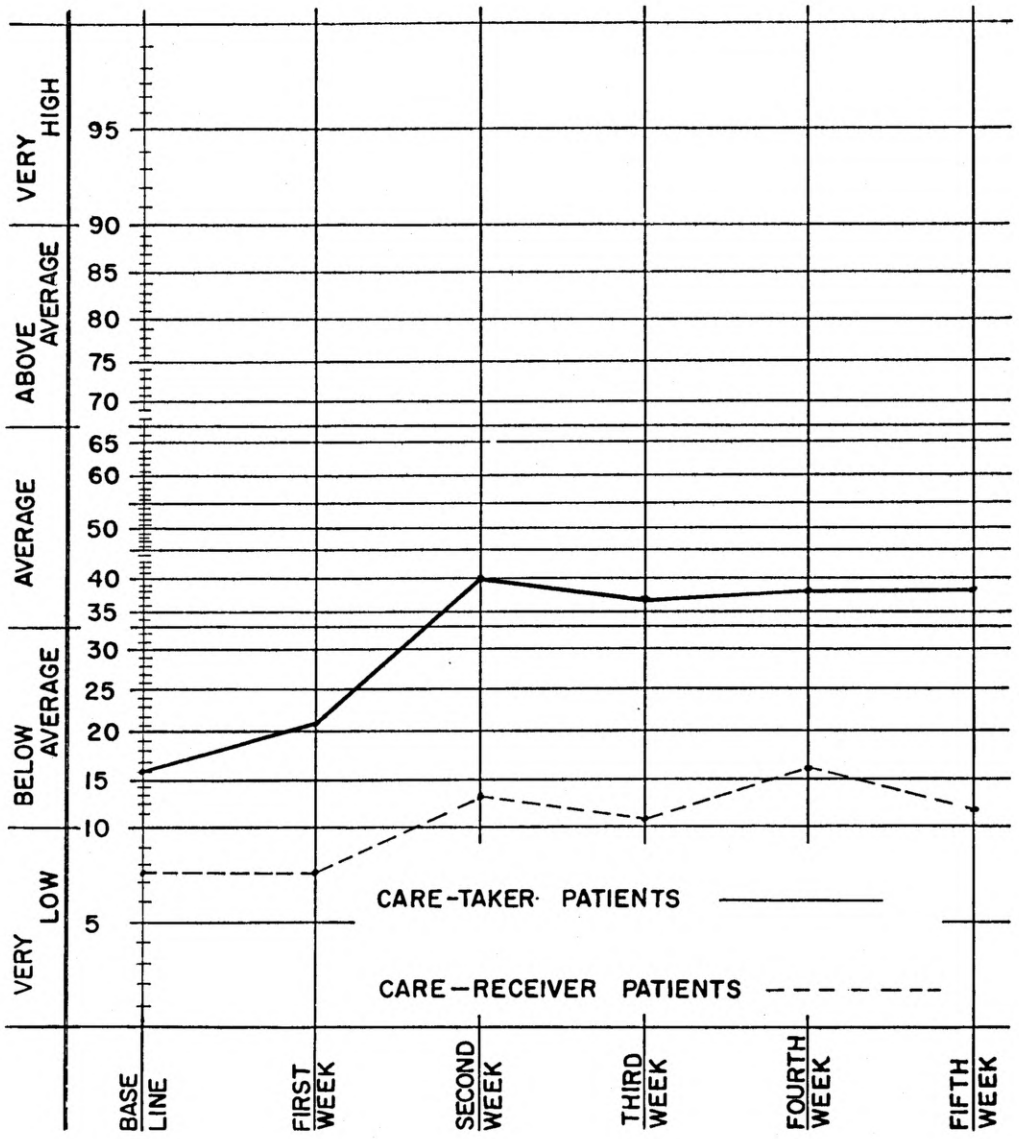


FIGURE 2

CENTILE SCORES FOR CARE-TAKER AND CARE-RECEIVER PATIENTS, FROM BASELINE THROUGHOUT THE ENTIRE PROJECT PERIOD

2. Rater two's scores from the baseline period to the last rating progressed from the below average to the average area. Figure 3, page 40, graphically represents centile scores from rater one and two for the care-taker group over the entire experimental period.

For the care-receiver group.

1. Rater one's scores from baseline to the last rating increased, but stayed within the very low category.

2. Rater two's scores from baseline to the last rating increased, but stayed within the below average category. Figure 4, page 41, graphically represents centile scores from rater one and two for the care-receiver group over the entire experimental period.

Although rater one and rater two rated both groups of patients differently. Both raters remained consistent in their ratings, i.e., rater one consistently rated higher than rater two for both groups of patients.

STATISTICAL COMPUTATIONS OF THE DATA

Data from the four behavioral adjustment areas on the MACC Behavioral Adjustment Scale: Mood, Cooperation, Communication, and Social Contact, was statistically analyzed by computer at the Computer Center of Montana State University, Bozeman, Montana. The t-test computation was used to determine the probability by chance alone that both groups of patients would manifest a higher

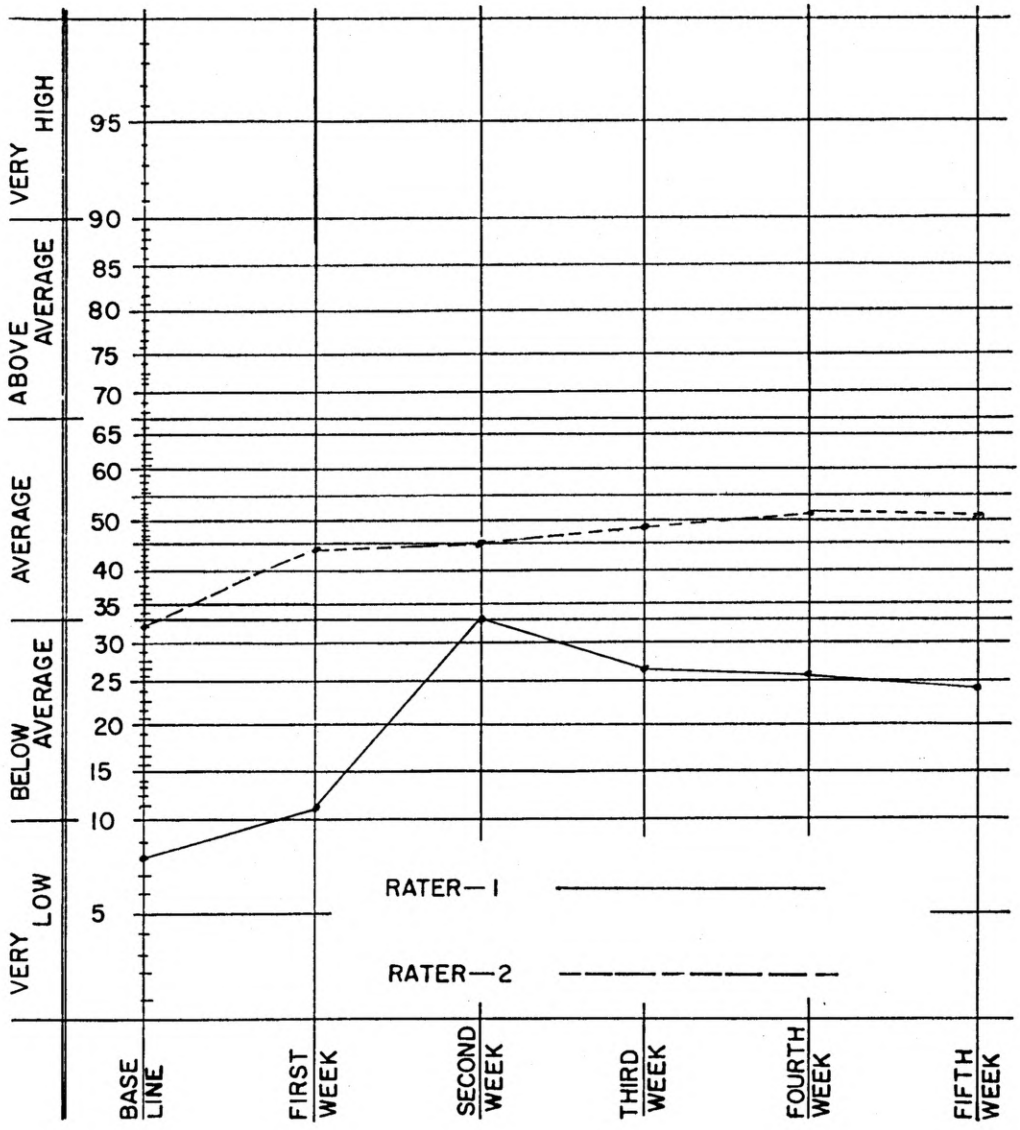


FIGURE 3

CENTILE SCORES FROM RATER ONE AND TWO SEPARATELY, FOR THE CARE-TAKER PATIENTS, FROM BASELINE THROUGHOUT THE ENTIRE PROJECT

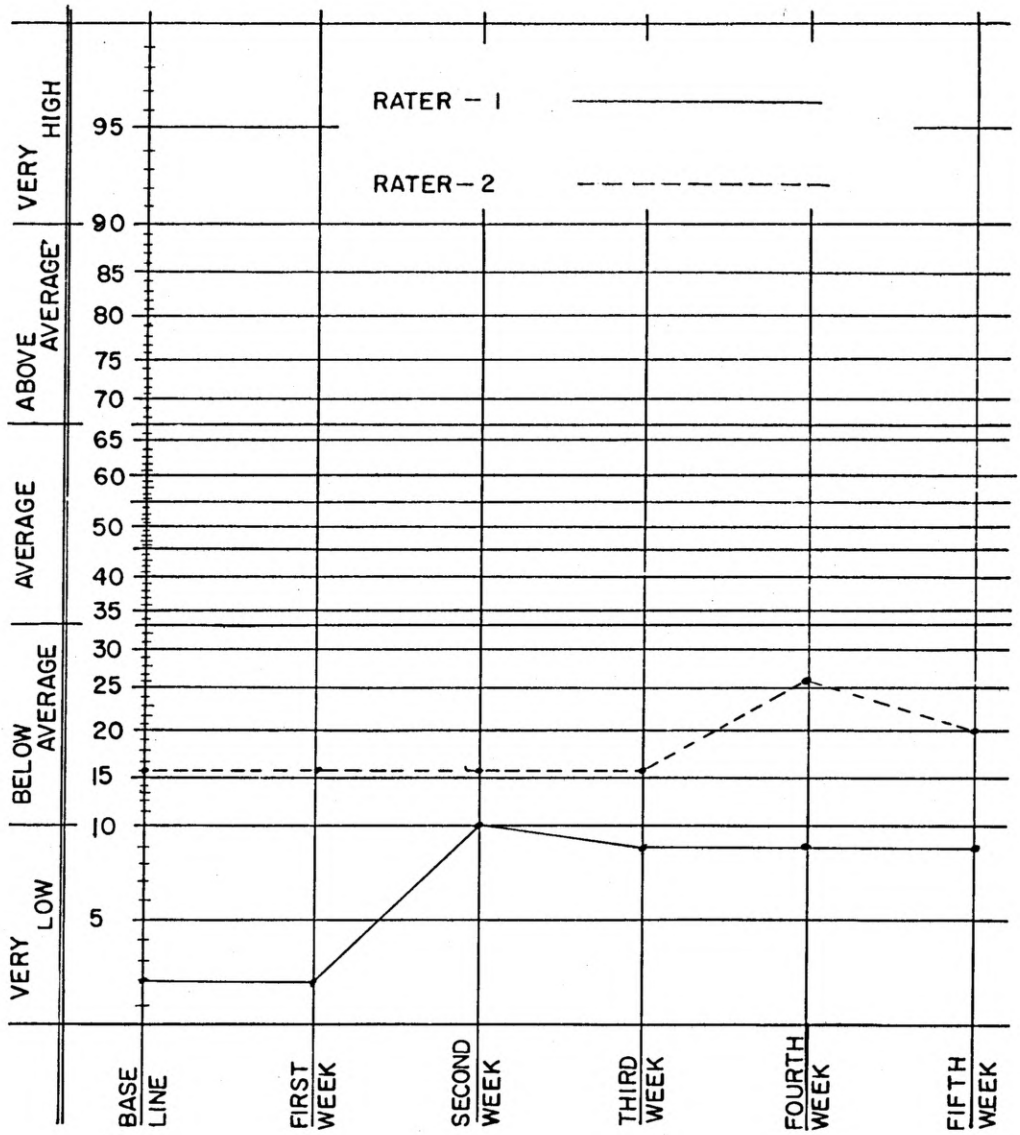


FIGURE 4

CENTILE SCORES FROM RATER ONE AND TWO SEPARATELY, FOR THE CARE-RECEIVER PATIENTS, FROM BASELINE THROUGHOUT THE ENTIRE PROJECT

level of behavioral adjustment in the four behavioral areas over the five week experimental period?

The level of significance was determined at the .05 level. T-score equal to 1.697 designated the .05 level of significance when ratings for rater one and rater two were combined.

The statistical findings were described in reference to the four factors for the two groups of patients.

For the care-taker group:

1. A t-test comparison on Mood of the baseline score with the score on the fifth week was significant beyond the .05 level.

2. A t-test comparison on Cooperation of the baseline score with the score on the fifth week was significant beyond the .05 level.

3. A t-test comparison on Communication of the baseline score with the score on the fifth week was significant beyond the .05 level.

4. A t-test comparison on Social Contact of the baseline score with the score on the fifth week was significant beyond the .05 level.

For the care-receiver group:

1. A t-test comparison on Mood of the baseline score with the score on the fifth week was significant beyond the .05 level.

2. A t-test comparison on Cooperation of the baseline score with the score on the fifth week was significant beyond the .05 level.

3. A t-test comparison on Communication of the baseline score with the score on the fifth week was not significant at the .05 level.

4. A t-test comparison on Social Contact of the baseline score with the score on the fifth week was not significant at the .05 level.

See Appendix C, Table VIII for t-test analysis of scores on the four factors, when ratings from both raters were combined.

A t-test comparison was also made for the two groups of patients for each rater separately. A one tailed t-score equal to 1.761 designated the .05 level of significance when ratings for rater one and two were not combined.

For the care-taker group:

1. Rater one and two agreed that a t-test comparison on Communication of the baseline score with the score on the fifth week was significant beyond the .05 level.

For the care-receiver group:

1. Rater one and two agreed that a t-test comparison on Communication was not sigificant at the .05 level. See Appendix C, Table IX for t-test analysis of scores on the four factors when ratings from both raters were separated.

Although rater two consistently rated higher than rater one, more significant changes at the .05 level were evident for rater one than rater two. This fact points out one of the limitations of this study, i.e., the observations done were made by people whose bias was not known.

HYPOTHESIS II. In both groups of patients a consistent pattern among the four behavioral factors measured will be evident in which there will be a gain in one factor without a corresponding gain in the other factors during the same week.

Figure 5, page 45, graphically represents the mean averages for the care-taker patient group, both raters combined on the four factors; Mood, Cooperation, Communication and Social Contact, for the baseline and entire experimental period.

No consistent pattern for the care-taker group was established in which there was a gain in one factor without a gain in the other three factors during the same week, but there were these variations:

1. The t-test comparison on each factor was made between scores for each week of the experimental period to determine which score changes were signficant. A t-test comparison of week one with week two on the factors Cooperation and Social Contact was significant beyond the .05 level. These were the only significant score changes made between consecutive weeks in all of the four factors measured.

The written report made by the investigator of what happened during each group meeting held with the care-taker patients was compared with the ratings completed by the two raters, between weeks one and two of the project. The investigator noted the following incidents between weeks one and two in the report she kept.

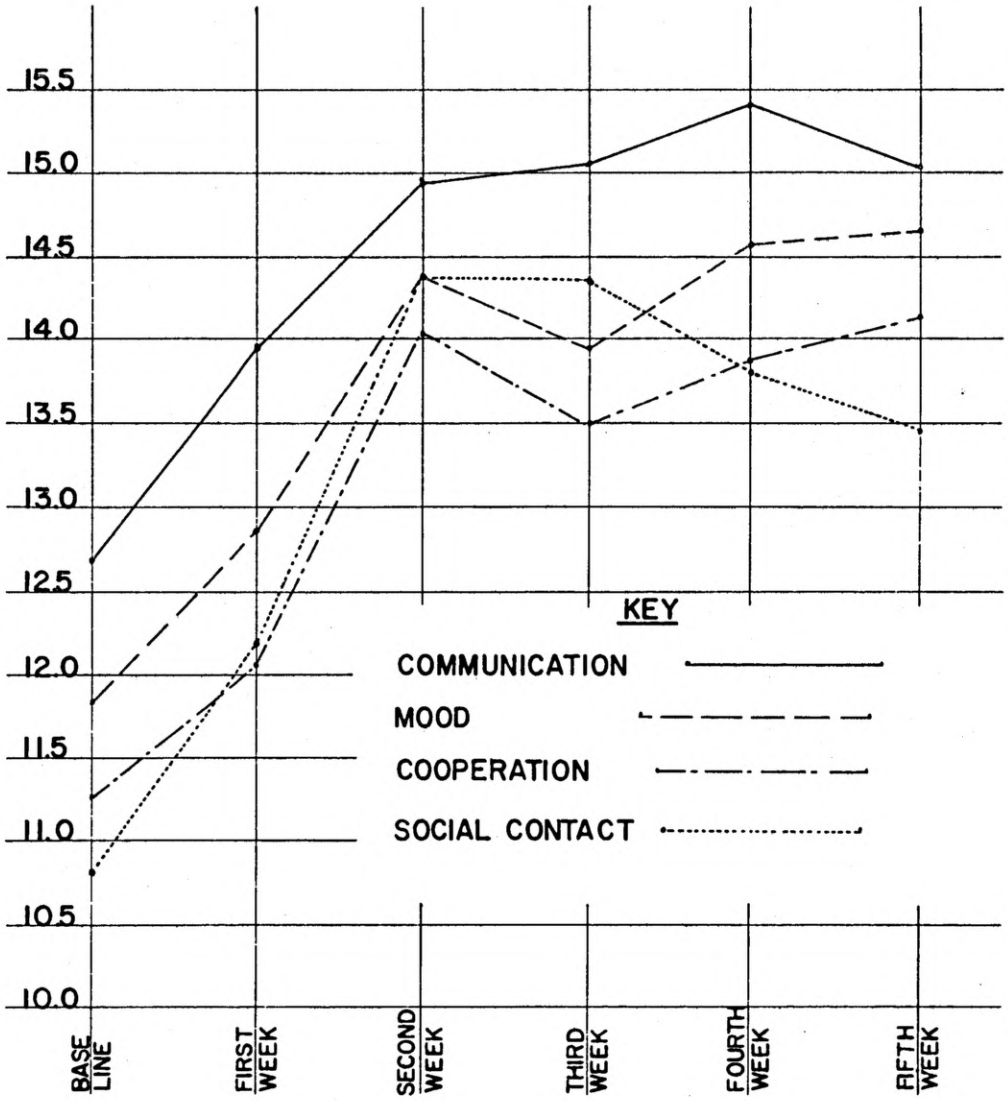


FIGURE 5

MOOD, COOPERATION, COMMUNICATION, AND SOCIAL CONTACT SCORES FOR CARE-TAKER PATIENTS FROM BASELINE THROUGHOUT THE ENTIRE PROJECT PERIOD

a. For the first three meetings the investigator had to seek each patient out before the group meeting, remind them of the group meeting and ask if they wanted a cigarette. By the second week all but two patients indicated they were ready to come to the group meeting when they saw the investigator in the hall. Some patients would approach the investigator saying, "Is it time for our group?" Others would get up from a chair, bed or leave a patient work task and come to the room where the meetings were held.

b. Six of the eight care-taker patients reported doing their tasks or attempting to carry the task out.

c. One incident that occurred the second week might indicate the good cooperation the investigator thought she received from the care-taker group. The investigator suggested she would arrange to bring a record player for any patient in the care-taker group who wanted to listen to records with their care-receiver patient. There was no record player available in the hospital the evening the investigator was scheduled to bring it for the groups use. When the investigator went to the unit to explain to the patients what happened to the record player, five of the eight care-taker patients were waiting, four of these patients had brought their care-receiver patient. The investigator found that these patients had made a choice between going to a snack party or coming to listen to records with their care-receiver patients.

2. According to the ratings done by the two raters, in the third week Communication increased and Mood, Cooperation and Social Contact decreased. In the fifth week, Communication and Social Contact decreased as Mood and Cooperation increased. It was interesting that Mood and Communication were opposite in their increase and decrease.

When the notes made by the investigator during the third week of the project were compared to the ratings made by the two raters for the third week the following was noted:

a. Four of the eight patients would speak up spontaneously to tell the investigator about the task they had completed with their care-receiver patient. Previously the patients would have to be asked about the task they were to have done with their care-receiver patient.

b. At the end of the third week three of the eight patients were doing extra tasks with their care-receiver patients. This fact did not correspond with the decrease in Mood, Cooperation and Social Contact on the ratings.

During the third week of the project the notes in the ward log kept by the attendants were compared to the ratings made by the two raters and the investigators written report.

a. The behavior of four of the eight care-taker patients was commented on. These behaviors were, "staring at ceiling", "upset", "acting bizarre", "loud". Three of these four patients were given PRN tranquilizers.

b. One patient was placed in the quiet room for acting "bizarre". The investigator's notes recorded that when this same patient saw the investigator on the ward, she asked the investigator if she could come to the group meeting. The patient was allowed to come to the meeting and did not return to the quiet room.

In relation to the ratings received from the two raters for the fifth week, in which Communication and Social Contact decreased as Mood and Cooperation increased, these things were noted:

a. The ratings completed after the fifth week were done at the same time Warm Springs State Hospital employees were on strike. The last ratings were also received four days later than scheduled.

b. The investigator's written report showed: 1) Three of the eight care-taker patients did not come to the last two group meetings. 2) Two patients began to hallucinate in the group meetings.

c. The attendant's ward log recorded: 1) One care-taker patient ran away from the patient's cafeteria. This was one of the same patients who hallucinated in the group meeting the fifth week. For two days the same patient was also reported "disturbed" and "upset". PRN tranquilizers were given to this patient three times during the fifth week. 2) Another care-taker patient was reported as "appears upset, hitting self". This patient received no PRN medication.

Findings in the attendants ward log did not seem to correlate well with the increase in Mood and Cooperation reported by the two raters.

Figure 6, page 50, graphically represents the mean averages for the care-receiver patient group, both raters combined, on the four factors for the baseline and entire experimental period. No pattern for the care-receiver group was established in which there was a gain in one factor without a gain in the other three factors during the same week, but there were these variations:

1. The t-test comparison on each factor was made between scores for each week of the experimental period to determine which score change was significant. A t-test comparison of week one with week two on the factors Cooperation and Social Contact was significant beyond the .05 level. These were the only significant score changes made between consecutive weeks in all of the four behavioral factors measured. This same phenomenon also occurred for the care-taker group.

A comparison between the attendant's log and ratings from the two raters were made between the first and second weeks of the experimental period. In the attendant's log one care-receiver patient was reported not being able to sleep and given a PRN medication.

2. From the ratings done by the two raters; the third week Communication increased and Mood, Cooperation and Social Contact decreased. This same phenomenon also took place for the care-taker group during the third week. In the fifth week Mood increased and Communication, Cooperation and Social Contact decreased. It was

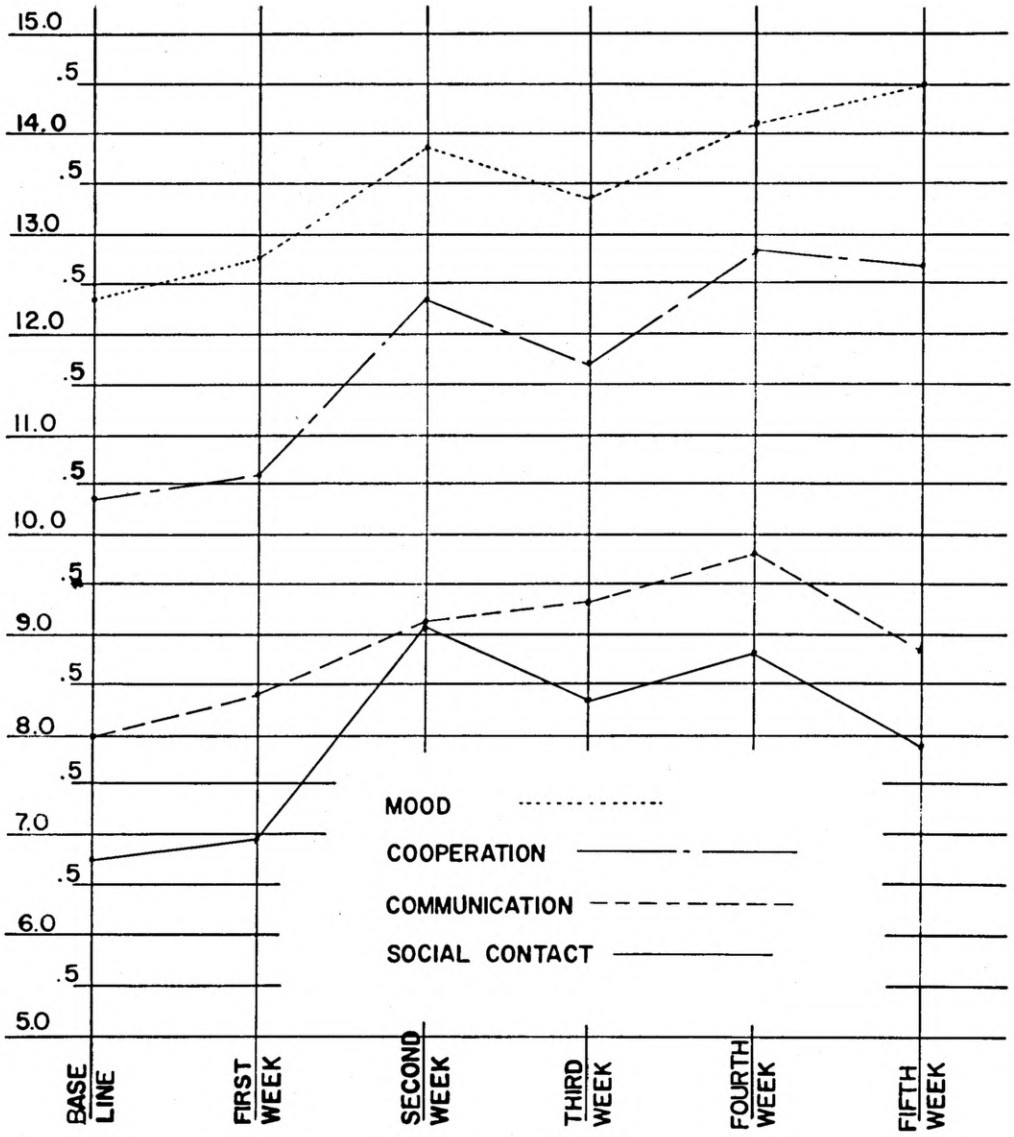


FIGURE 6

MOOD, COOPERATION, COMMUNICATION, AND SOCIAL CONTACT SCORES FOR CARE-RECEIVER PATIENTS FROM BASELINE THROUGHOUT THE ENTIRE PROJECT PERIOD

interesting that Mood and Communication were opposite in their increase and decrease for the care-receiver group just as they had been for the care-taker group.

During the third week these things were noted in the attendant's log in comparison to ratings received from the two raters:

a. One care-receiver patient was reported being restless and given a PRN tranquilizer.

b. One care-receiver patient started working in the patient's cafeteria and refused to go to work the same week.

c. One care-receiver patient began to "verbalize" more than she had done before.

The fifth week, no care-receiver patient was mentioned in the ward log.

HYPOTHESIS III. The same degree of progress will occur in both groups.

A comparison of both groups on the percent of increase or decrease of total adjustment scores between each week of the experimental period determined if both groups made the same degree of progress. The same degree of progress was not evident for both groups of patients when total adjustment scores were considered. Table I, page 52 shows the percent of increase or decrease of total scores for both groups of patients between each week of the experimental period.

Although the same degree of progress was not evident for both groups of patients, these variations were noted:

TABLE I

PERCENT OF INCREASE OR DECREASE IN TOTAL ADJUSTMENT SCORES FOR CARE-TAKER AND CARE-RECEIVER PATIENTS BETWEEN EACH WEEK OF THE PROJECT PERIOD

	Score for each week	Points lost or gained each week	Percent of score increase or decrease each week
	(1)	(2)	(3)
Baseline			
Care-takers	46.07		
Care-receivers	37.51		
Week 1			
Care-takers	51.00	4.93	10%
Care-receivers	38.69	1.18	3%
Week 2			
Care-takers	57.79	6.79	13%
Care-receivers	44.45	5.76	14%
Week 3			
Care-takers	56.82	-.97	-2%
Care-receivers	42.69	-1.76	-4%
Week 4			
Care-takers	57.70	.88	2%
Care-receivers	45.54	2.85	7%
Week 5			
Care-takers	57.25	-.45	-1%
Care-receivers	43.82	-1.72	-4%

1. The second week, the care-receivers score increased one percent over the care-takers.

2. The fourth week, the care-receivers score increased five percent over the care-takers score.

3. Although both groups of patients did not make the same degree of progress, the total scores for both groups of patients varied throughout each week of the project in a direct relationship to each other, i.e., as scores for one group increased, scores for the other group also increased and vice versa. See column 3, Table I.

Scores for both groups of patients in the four behavioral adjustment areas were also reviewed to determine if the same degree of progress would occur in both groups of patients. A comparison of both groups on the percent of increase or decrease of scores in each of the four behavioral areas, was made between each week of the experimental period.

Mood. The same degree of progress did occur for both groups of patients during the third and fourth week of the project. The third week Mood scores dropped three percent. The fourth week Mood scores increased five percent for both groups.

Table II, page 54 shows the percent of increase or decrease of Mood scores for both groups between each week.

For the care-receiver group, it was interesting that of the four factors measured, the percent of change in Mood scores:

TABLE II

PERCENT OF INCREASE OR DECREASE IN MOOD SCORES
FOR CARE-TAKER AND CARE-RECEIVER PATIENTS
BETWEEN EACH WEEK OF THE PROJECT PERIOD

	Score for each week	Points lost or gained each week	Percent of score increase or decrease each week
	(1)	(2)	(3)
Baseline			
Care-takers	11.81		
Care-receivers	12.38		
Week 1			
Care-takers	12.81	1.00	8%
Care-receivers	12.75	.37	3%
Week 2			
Care-takers	14.38	1.57	12%
Care-receivers	13.84	1.09	9%
Week 3			
Care-takers	13.94	-.44	-3%
Care-receivers	13.38	-.46	-3%
Week 4			
Care-takers	14.59	.65	5%
Care-receivers	14.09	.71	5%
Week 5			
Care-takers	14.63	.04	.3%
Care-receivers	14.50	.41	3%

1. Was the only score the care-receivers obtained that increased over the care-taker score in the fifth week.

2. Was the only score for the care-receivers in the fifth week that did not show a decrease in percent of change. See Column 3, Table II. It was also noted that among the four factors the Mood score for the care-receivers was the only score that was initially higher at the baseline than the Mood score for the care-taker group. See Column 1, Table II.

It was noticed that the Mood scores for both groups of patients varied throughout each week of the project in a direct relationship to each other. See Column 3, Table II.

Cooperation. The same degree of progress did occur in Cooperation scores for both groups of patients during the second week of the project. The second week, scores for both groups increased 17 percent. Table III, page 56 shows the percent of increase or decrease of Cooperation scores for both groups between each week of the project period.

It was also noticed:

1. The fourth week, the care-receivers score increased seven percent over the care-takers score.

2. Cooperation scores did not vary throughout each week of the project in a direct relationship to each other. The fifth week the care-takers score increased while the care-receivers score decreased. See Column 3, Table III.

TABLE III

PERCENT OF INCREASE OR DECREASE IN COOPERATION SCORES
FOR CARE-TAKER AND CARE-RECEIVER PATIENTS
BETWEEN EACH WEEK OF THE PROJECT PERIOD

	Score for each week	Points lost or gained each week	Percent of score increase or decrease each week
	(1)	(2)	(3)
Baseline			
Care-takers	11.25		
Care-receivers	10.38		
Week 1			
Care-takers	12.06	.81	7%
Care-receivers	10.56	.18	2%
Week 2			
Care-takers	14.06	2.00	17%
Care-receivers	12.38	1.82	17%
Week 3			
Care-takers	13.50	-.56	-3%
Care-receivers	11.69	-.69	-6%
Week 4			
Care-takers	13.88	.38	3%
Care-receivers	12.81	1.12	10%
Week 5			
Care-takers	14.13	.25	2%
Care-receivers	12.69	-.12	-1%

Communication. The same degree of progress did not occur for both groups of patients in Communication. Table IV, page 58 shows the percent of increase or decrease of Communication scores for both groups between each consecutive week of the experimental period.

Although there was not the same degree of progress, a comparison of both groups on the percent of increase or decrease of Communication scores showed:

1. The second and third week, the care-receivers score increased one percent over the care-takers score.

2. The fourth week, the care-receivers score increased four percent over the care-takers score.

3. Communication scores for both groups of patients varied throughout each week of the project in a direct relationship to each other. See Column 3, Table IV, page 58.

It was interesting that of the four factors measured, Communication scores for the care-taker patients remained the highest scores among both patient groups throughout the project. See Figure 5, page 45 and Figure 6, page 50.

Social Contact. The same degree of progress did not occur for both groups of patients in Social Contact. Table V, page 59 shows the percent of increase or decrease of Social Contact scores for both groups between each consecutive week of the experimental period.

TABLE IV

PERCENT OF INCREASE OR DECREASE IN COMMUNICATION SCORES FOR CARE-TAKER AND CARE-RECEIVER PATIENTS BETWEEN EACH WEEK OF THE PROJECT PERIOD

	Score for each week	Points lost or gained each week	Percent of score increase or decrease each week
	(1)	(2)	(3)
Baseline			
Care-takers	12.69		
Care-receivers	8.00		
Week 1			
Care-takers	13.94	1.25	10%
Care-receivers	8.44	.44	6%
Week 2			
Care-takers	14.97	1.03	7%
Care-receivers	9.13	.69	8%
Week 3			
Care-takers	15.06	.09	1%
Care-receivers	9.31	.18	2%
Week 4			
Care-takers	15.41	.35	2%
Care-receivers	9.85	.54	6%
Week 5			
Care-takers	15.06	-.35	-2%
Care-receivers	8.81	-1.04	-11%

TABLE V

PERCENT OF INCREASE OR DECREASE IN SOCIAL CONTACT SCORES FOR CARE-TAKER AND CARE-RECEIVER PATIENTS BETWEEN EACH WEEK OF THE PROJECT PERIOD

	Score for each week	Points lost or gained each week	Percent of score increase or decrease each week
	(1)	(2)	(3)
Baseline			
Care-takers	10.81		
Care-receivers	6.75		
Week 1			
Care-takers	12.19	1.38	13%
Care-receivers	6.94	.19	3%
Week 2			
Care-takers	14.38	2.19	18%
Care-receivers	9.10	2.16	31%
Week 3			
Care-takers	14.31	-.07	-.5%
Care-receivers	8.31	-.79	-9%
Week 4			
Care-takers	13.82	-.49	-3%
Care-receivers	8.79	.48	6%
Week 5			
Care-takers	13.44	-.38	-3%
Care-receivers	7.88	-.91	-10%

Although there was not the same degree of progress, a comparison of both groups on the percent of increase or decrease of Social Contact scores showed:

1. The second week, the care-receivers score increased 13 percent over the care-takers score.

2. The fourth week, the care-receivers score increased nine percent over the care-takers score.

3. The same direction of change was not evident for both patient groups in each week of the project on Social Contact scores. The fourth week, the care-takers score dropped while the care-receivers score increased. See Column 3, Table V.

The investigator found it interesting, when the percent of change between weeks in all four areas was added from the baseline to the fourth week, the care-receivers had gained over the care-takers in Communication and Social Contact. Percent of change over the first four weeks of the project on Communication was 22 percent for the care-receivers compared to 20 percent for care-takers. Likewise, percent of change on Social Contact scores was 31 percent for care-receivers compared to 27 percent for care-takers. T-test analysis also verified that significant score changes between the baseline and fourth week occurred, indicating a higher level of behavioral adjustment for the care-receiver group on Communication and Social Contact for this period. T-test analysis between baseline and fifth week indicated no significant change.

Communication and Social Contact ratings for the care-taker group decreased the fifth week, however, Communication and Social Contact scores showed a greater percent of decrease for the care-receiver than the care-taker patients. The investigator assumed that the behavior of the care-taker patients had an effect on the behavior of the care-receivers. The care-takers behavior during the fifth week was noted in the investigators written report and the attendants ward log. See pages 48 and 49. The fifth week, three care-taker patients did not come and two hallucinated during the group sessions. More PRN medications were given to care-takers the fifth week than any other week of the group meetings. No care-receiver patient was mentioned in the ward log the fifth week.

CHAPTER V

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

Summary

The main purposes of this study were: 1. To investigate the feasibility of assigning a chronically ill, hospitalized psychiatric patient to perform specific tasks with another chronically ill, hospitalized patient, using a group as a method of supervision and support, and, 2. To measure behavioral changes which occurred as a result of the experience.

It was hypothesized that when one chronically ill, hospitalized, psychiatric patient is daily involved in a task oriented group whose purpose is to assign and support her to do a task in which she interacts with another selected chronically ill, hospitalized patient:

1. Both groups will manifest a higher level of behavioral adjustment.

2. In both groups of patients, a consistent pattern among the four behavioral areas measured will be evident in which there will be a gain in one factor without a corresponding gain in the other three factors during the same week.

3. The same degree of progress will occur in both groups.

The selection of the population was determined on criteria set by the investigator. Twenty-three functionally psychotic patients, on a locked ward for chronic women patients at a state hospital for psychiatric patients, met the criteria for the population from which

the subjects were selected. The subjects in the study were sixteen patients selected from this population from ratings done by two independent raters using the MACC Behavioral Adjustment Scale. This scale, devised by Robert B. Ellsworth, was designed to assess the behavioral adjustment of hospitalized functionally psychotic patients to their social environment.

The sixteen patients were selected on the basis of their total adjustment scores on the MACC Scale. The total adjustment scores consisted of the combined scores from the behavioral areas of Mood, Cooperation, Communication and Social Contact. Each of the eight patients receiving the highest total score, the care-taker patients, were randomly assigned to one of the eight patients receiving the lowest total score, the care-receiver patient. The eight care-taker patients were involved in task oriented group sessions five days a week, with the investigator, during which time they were assigned a task to perform daily with their care-receiver patient.

Two raters independently completed the MACC Scale for each of the sixteen patients every week during the five week project period. The scores obtained from the use of the MACC Scale provided the data for the study.

Conclusions

The findings presented in the previous chapter reveal that when total adjustment scores were considered over the entire project period,

only the care-taker group's scores indicated improved functioning. When the centile scores were considered, it was found that both groups manifested a higher level of behavioral adjustment. Scores from each of the four behavioral areas were analyzed by t-test computation. For the care-taker group, scores in all four areas showed a significant difference. Only score changes in Mood and Cooperation were significantly different for the care-receiver group. Throughout the project it was noticed that Mood and Cooperation scores were higher than Communication and Social Contact scores for the care-receiver group.

When ratings from both raters were analyzed independently, each rater remained consistent with her own ratings, however, discrepancies were noted between the two raters. This fact points out one of the limitations of the study, in that the observations were made by people whose bias was not known.

No consistent pattern of variability among the four behavioral areas for either group was established, in which there was a gain in one factor without a corresponding gain in the other factors during the same week, however, these variations were found:

1. When a t-test analysis was made on each factor, to determine which score changes were significant from one week to the next, it was noticed that for both groups, the only significant score changes made between weeks occurred between week one and two on the factors

Cooperation and Social Contact. The investigator attributes the significant changes in these scores to a Hawthorne effect.

2. It was noticed that for both groups during the third and fifth week, Communication scores varied in an opposite direction from Mood scores. Communication scores for both groups during the third week increased, while Mood scores decreased. The fifth week Communication scores decreased,,while Mood scores increased. The investigator believes the inverse relationship of Mood and Communication may indicate an area for further study in that when an individual's mood is elevated his communication patterns generally also increase.

The same degree of progress between each consecutive week of the project for both groups of patients was not evident when total adjustment scores were considered. When scores in each of the four behavioral areas were considered, the same degree of progress for Mood and Cooperation scores between some consecutive weeks occurred for both groups of patients. Mood scores showed the same degree of progress for both groups the third and fourth week. It was interesting that for the care-receiver group, Mood scores were the only scores, in the fifth week that increased over the care-takers score, and were the only scores for the care-receivers that did not show a decrease in the percent of change the fifth week. It was also noticed that among the four factors measured, the Mood scores for the care-receivers were the only scores that were initially higher

at the baseline than any other scores between the two groups. Both groups made the same degree of progress in Cooperation scores during the second week.

Both groups did not show the same degree of progress for Communication and Social Contact scores. It was interesting that of the four factors measured, Communication scores for the care-taker group remained the highest scores among both patient groups throughout the project. The data also showed that in total scores and scores in the four behavioral areas, some weeks the care-receiver's score increased in percent of change over the care-taker's score.

Recommendations

Although no consistent pattern was found among the four factors in which there was a gain in one factor without a corresponding gain in the other three factors, further study might be productive on the inverse relationship of Mood and Communication found during the third and fifth weeks of the project.

A possible further study might be conducted in which patients would be selected on the basis of scores received on one of the four factors, rather than the total adjustment score. Only significant score changes in Mood and Cooperation occurred for the care-receiver group over the five week project. Mood and Cooperation scores also represented the highest scores care-receiver patients received in the four factors measured throughout the project. The

care-receivers who received the lowest total adjustment score in comparison to the care-takers, received a higher score in Mood at the baseline and attained a greater percent of change in Mood scores the fifth week than the care-takers did.

The care-taker group obtained better Communication and Social Contact scores than the care-receiver group did. Score changes in Communication and Social Contact over the project period were significant for care-takers but not care-receivers. Communication scores for the care-takers remained the highest scores among both patient groups throughout the project.

A study of this type should be done over a longer period of time than five weeks. Significant score changes in Communication and Social Contact were made by the care-receiver group from the baseline to the fourth week of the project. Care-receivers also increased over the care-takers in the percent of change in these two behavioral areas between the baseline and fourth week.

In a study of this type more attention should be paid to methods of reducing the amount of rater discrepancy. This could be done by:

1. Employing the observations of more than two raters.

2. Specifying a time during the designated day of the week for raters to rate patients. Patients could be rated on every shift of the designated day to determine whether or not rater discrepancy reflects the time or situation in which a rating is done.

3. Selecting raters of approximately the same level of sophistication by considering: a. length of time and amount of contact a rater has had with the patients, b. education of the rater.

APPENDIX A

TABLE VI

THE MACC BEHAVIORAL ADJUSTMENT SCALE, FORM II,
AN OBJECTIVE APPROACH TO THE EVALUATION OF
BEHAVIORAL ADJUSTMENTS

The MACC Behavioral Adjustment Scale

FORM II

An Objective Approach

to the

Evaluation of Behavioral Adjustments

By

ROBERT B. ELLSWORTH, Ph. D.

Published by

WPS
WESTERN PSYCHOLOGICAL SERVICES
PUBLISHERS AND DISTRIBUTORS
12031 WILSHIRE BOULEVARD
LOS ANGELES, CALIFORNIA 90025
A DIVISION OF MANSON WESTERN CORPORATION

Date:	Place:	Ward No.	Activity Rated	M F
Patient's Name:			Rater's Name:	
Total Adjustment Score		Centile Score		
Remarks: (for example, relatively low or high areas of behavior, etc.)				
Evaluation: CLINICIAN OR RATER:				

IMPORTANT: **To all raters:** Be sure to familiarize yourself with the **Directions For Rating** found on page four of this Scale, before you begin to make your ratings.

1. Is he pleasant, never seems to be irritable or grouchy?

1	2	3	4	5
Usually very grouchy	Most often irritable	Sometimes pleasant	Most frequent pleasant	Always pleasant

2. Does he generally cooperate, "go along" with things asked of him?

1	2	3	4	5
Almost never cooperates	Most frequently resistive	Resistive rather often	Goes along with requests most of the time	Always does what is asked

3. Does he take part in sensible "back and forth" conversation, listening as well as talking to you, not just short answers to your questions, but a "give and take" conversation?

1	2	3	4	5
Never back and forth conversation	Occasional back and forth conversation	Fairly often "give and take" conversation	Usually good "back and forth" talk	Almost always listens and talks realistically

4. How many FRIENDS does he have (patients he talks to, spends time with, AND who want to be with him?

1	2	3	4	5
No friends, very hostile to others or always by himself.	Shows interest when approached by other patients but rarely talks with them	Usually tries to be around other patients but is passive socially	Has one or two friends with whom he spends some time	Spends considerable time with other friends

5. Is he sullen?

1	2	3	4	5
Always sullen	Most often sullen	Sometimes sullen	Rarely sullen	Always pleasant

6. Does he seem resistive?

1	2	3	4	5
Very resistive	Most often resistive	Sometimes resistive	Rarely resistive	Never resistive

7. If asked a question, does he respond in such a way that he is understood, using words that are understandable?

1	2	3	4	5
Mute or talks "jibberish"	Answers make little sense	Response often sensible	Usually sensible	Almost always sensible

8. Does he easily enter into "give and take" conversation with other PATIENTS?

1	2	3	4	5
Rarely says anything to others, even when approached	Talks with others but only when approached	Talks willingly to other patients but depends on them to "keep the conversation going"	Enters easily into conversation, keeps his end of the conversation going	Talks with many different patients often stimulates conversation with other patients

9. Is he bitter?

1	2	3	4	5
Always bitter	Usually bitter	Sometimes bitter	Rarely bitter	Never bitter

10. In the things that are expected of him to do, does he go ahead and do them on his own without having to be told how and when to do it, or must he be directed and encouraged to do them?

1	2	3	4	5
No initiative	Occasionally acts "on his own"	Fairly often goes ahead "on his own"	Usually shows initiative	Almost always goes ahead "on his own"

11. Does he seem accessible, easy to "get through" to, able to understand you when you talk to him?

1	2	3	4	5
Like talking to a "brick wall"	Occasionally "get through"	Often accessible	Almost always accessible	Very easy to "get through" to him

12. Does he spend his time alone?

1	2	3	4	5
Always alone, pays no attention to others	Always alone but is alert and aware of others about him, rarely participates in activity	Reluctant but can be drawn into activity when approached	Usually will take part in activity when invited to do so	Often doing things with other patients

13. Is he angry and hostile?

1	2	3	4	5
Always angry	Usually angry	Sometime friendly	Usually friendly	Almost always friendly

14. In tasks assigned to him, can he "stay with" the task without frequent redirection, without becoming preoccupied and "lost"?

1	2	3	4	5
Almost always becomes preoccupied quickly	Rarely "stays with" tasks	Continues tasks fairly long	Usually "stays with" it	Almost always completes tasks

15. Does he quickly grasp and understand what is told him, without having to explain things three or four times, not just passively listening, or paying attention, but grasping easily what you want?

1	2	3	4	5
Never really comprehends	Understands some after long explanations	Gets most of it with 1 or 2 explanations	Usually picks it up fairly easily	Grasps right away what is told him

16. Is he well informed about OTHERS ON THE WARD?

1	2	3	4	5
Shows no evidence of knowing any patients by name	Sometimes knows to whom you are referring when you use a patient's name	Usually knows to whom you are referring when you use another patient's name	Knows and usually calls by name most of the personnel	Knows and usually calls by name most of the personnel and patients

SCORING*								
Mood		Cooperation		Communication		Social Contact		TOTAL ADJUSTMENT
1.		2.		3.		4.		(Add the sums of
5.		6.		7.		8.		Mood, Cooperation,
9.		10.		11.		12.		Communication and
13.		14.		15.		16.		Social Contact.)
SUM		+		+		+	=	

*To obtain the patient's profile, transfer the summed scores for Mood, Cooperation, Communication, Social Contact, and Total Adjustment to the Profile Summary on Page 4.

DIRECTIONS FOR RATING

1. For each item, circle the number which most **characteristically** describes the patient's behavior.
2. Rate only patients you know through personal observations or contact.
3. Be objective in your ratings. Rate the patient as you saw him or her behave, not as you wish or think the patient should behave. Do not let your personal feelings about the patient bias your ratings.
4. Do not give the same rating tor all items; use your best judgment on **each** item. A patient may be rated very low on one item even though he may show a high level of adjustment on most items.
5. Rate quickly and do not hesitate to give extreme ratings if your observations point to such ratings.
6. Practice rating several patients, then discuss your ratings with one skilled in using this scale. Rate the same patients on two different occasions to improve the reliability of your ratings.

DIRECTIONS FOR SCORING

1. Record the rating for each item on the bottom of page 3.
2. Sum the scores for each behavior area and plot the summed scores on the profile sheet under the headings Mood, Cooperation, Communication, Social Contact.
3. Sum the 4 behavioral area scores to obtain the Total Adjustment Raw Score.
4. Convert the Total Adjustment Raw Score into a Centile Score on the Profile Sheet. The Centile Score is then used in reports of patient adjustment level, progress, etc.

PROFILE SUMMARY

PATIENTS' RELATIVE STANDING	Mood	Cooperation	Communication	Social Contact	Total Adjustment	Centile Score
VERY HIGH	—20—	—20—	—20—	—19—	—80—	
					—79—	
				—20—	—78—	
		—20—			—77—	95
					—76—	
					—75—	90
ABOVE AVERAGE	—19—	—19—	—19—	—18—	—74—	
					—73—	
					—72—	85
					—71—	80
			—18—	—17—	—70—	
	—18—	—18—			—69—	75
				—16—	—68—	70
					—67—	67
AVERAGE	—17—	—17—	—17—	—15—	—66—	65
					—65—	
	—16—		—16—	—14—	—64—	60
		—16—			—63—	
				—13—	—62—	55
			—15—	—12—	—61—	50
		—15—			—60—	45
	—15—		—14—	—11—	—59—	
					—58—	40
		—14—		—10—	—57—	
BELOW AVERAGE	—14—		—13—		—56—	35
		—13—		—9—	—55—	33
	—13—		—12—	—8—	—54—	30
		—12—	—11—		—53—	
					—52—	25
	—12—		—10—	—7—	—51—	
		—11—			—49-50—	20
VERY LOW	—11—	—10—	—9—	—6—	—48—	
			—8—		—46-47—	
	—10—			—5—	—45—	15
	—9—	—9—	—7—		—43-44—	
	—8—	—8—	—6—		—41-42—	
	—7—	—7—	—5—	—4—	—40—	10
	—4-6—	—4-6—	—4—		—39—	
					—38—	
					—37—	
					—36—	
					—35—	5
					—34—	
					—33—	
					—27-32—	
					—16-26—	

Kathleen M. Tibesar
School of Nursing
Montana State University
Bozeman, Montana 59715

June 21, 1971

Dr. Robert B. Ellsworth, Ph.D.
Western Psychological Services
Box 775
Beverly Hills, California

Dear Dr. Ellsworth:

I am a graduate student of Montana State University, School of Nursing. In order to fulfill my academic requirements for a Masters of Nursing degree, I designed and carried out a small experimental study. In this study, I utilized the MACC Behavioral Adjustment Scale, Form II, as one method of gathering data.

I would like to request permission to reproduce this scale in order that I may include it in the Appendix of my report.

Thankyou for your time and consideration.

Sincerely,

Kathleen M. Tibesar

Kathleen M. Tibesar

6/29/71

Dear Miss Tibesar:

Authorization to reproduce the MACC Behavioral Adjustment Scale, Form II for the above purpose only is hereby given.

Western Psychological Services

Ira R. Manson

Ira R. Manson, President

APPENDIX B

TABLE VII

TOTAL ADJUSTMENT SCORE CHANGE FOR EACH INDIVIDUAL PATIENT BETWEEN BASELINE AND FIFTH WEEK OF THE PROJECT

Patient	Baseline	Fifth Week	Score Change
Care-taker Group			
1	46.50	64.00	17.50
2	45.00	53.50	18.50
3	46.50	57.00	10.50
4	47.00	55.50	8.50
5	41.50	49.00	7.50
6	49.50	52.00	2.50
7	42.00	64.50	22.50
8	54.50	62.50	17.00
Care-receiver Group			
1	36.50	47.00	10.50
2	40.50	42.00	1.50
3	42.50	45.00	2.50
4	36.50	45.00	8.50
5	27.50	41.00	14.50
6	37.50	35.00	-2.50
7	41.50	49.00	8.50
8	37.50	47.00	9.50

APPENDIX C

TABLE VIII

T-TEST COMPARING BASELINE SCORES WITH THE FIFTH WEEK SCORES ON THE FOUR BEHAVIORAL ADJUSTMENT AREAS FOR CARE-TAKER AND CARE-RECEIVER PATIENTS WHEN RATINGS FROM BOTH RATERS WERE COMBINED

	Mean	S.D.	T-test
Care-taker Group			
Mood			
Baseline	11.81	3.75	2.75532*
Fifth Week	14.63	1.65	
Cooperation			
Baseline	11.25	4.09	2.31327*
Fifth Week	14.13	2.85	
Communication			
Baseline	12.69	2.78	2.74927*
Fifth Week	15.06	2.05	
Social Contact			
Baseline	10.81	4.39	1.95689*
Fifth Week	13.44	3.10	
Care-receiver Group			
Mood			
Baseline	12.38	3.31	2.20950*
Fifth Week	14.50	1.94	
Cooperation			
Baseline	10.38	3.67	2.07549*
Fifth Week	12.69	2.52	
Communication			
Baseline	8.00	2.89	.84277
Fifth Week	8.81	2.53	
Social Contact			
Baseline	6.75	2.82	1.32999
Fifth Week	7.88	1.90	

*Significance → .05 level. T-score = 1.697

TABLE IX

T-TEST COMPARING BASELINE SCORES WITH THE FIFTH WEEK SCORES ON THE FOUR BEHAVIORAL ADJUSTMENT AREAS FOR CARE-TAKER AND CARE-RECEIVER PATIENTS WHEN RATINGS FROM BOTH RATERS WERE SEPARATED

Care-taker Group		Mean	S.D.	T-test
Mood				
Rater 1				
	Baseline	9.75	3.83	3.15681*
	Fifth Week	14.38	1.58	
Rater 2				
	Baseline	13.88	2.20	1.01806
	Fifth Week	14.88	1.69	
Cooperation				
Rater 1				
	Baseline	8.50	2.12	3.35143*
	Fifth Week	12.13	2.20	
Rater 2				
	Baseline	14.00	3.71	1.45307
	Fifth Week	16.13	1.83	
Communication				
Rater 1				
	Baseline	11.25	2.82	2.22803*
	Fifth Week	14.00	2.06	
Rater 2				
	Baseline	14.13	1.83	2.47624*
	Fifth Week	16.13	1.36	
Social Contact				
Rater 1				
	Baseline	8.50	3.46	2.08501*
	Fifth Week	11.75	2.73	
Rater 2				
	Baseline	13.13	3.98	1.20690
	Fifth Week	15.13	2.47	

*Significance => .05 level. T-score = 1.761

TABLE IX (con't)

Care-receiver Group		Mean	S.D.	T-test
Mood				
Rater 1				
	Baseline	10.38	3.24	2.93119*
	Fifth Week	14.13	1.62	
Rater 2				
	Baseline	14.38	1.87	.49710
	Fifth Week	14.88	2.15	
Cooperation				
Rater 1				
	Baseline	7.50	2.40	2.96587*
	Fifth Week	10.88	2.15	
Rater 2				
	Baseline	13.25	2.17	1.42134
	Fifth Week	14.50	1.22	
Communication				
Rater 1				
	Baseline	5.75	2.17	1.25869
	Fifth Week	7.13	2.20	
Rater 2				
	Baseline	10.25	1.39	.34555
	Fifth Week	10.50	1.50	
Social Contact				
Rater 1				
	Baseline	5.00	1.22	2.35339*
	Fifth Week	6.50	1.32	
Rater 2				
	Baseline	8.50	2.87	.67293
	Fifth Week	9.25	1.30	

*Significance => .05 level. T-score = 1.761

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