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Effects of Emotional Inoculation and Supportive Therapy on Stress Incurred from Nursing Home Placement

Mary B. Carman

EFFECTS OF EMOTIONAL INOCULATION AND SUPPORTIVE THERAPY ON STRESS INCURRED FROM NURSING HOME PLACEMENT

by

Mary B. Carman

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EFFECTS OF EMOTIONAL INOCULATION AND SUPPORTIVE THERAPY ON STRESS INCURRED FROM NURSING HOME PLACEMENT

Mary B. Carman, Ph.D.

The University of North Dakota, 1976

Faculty Advisor: Professor John Tyler

Research indicates that relocation of an elderly person to a nursing home constitutes a major stress to the individual which can be life threatening. The present study was designed to assess the efficacy of two different treatment approaches in attenuating that stress.

Thirty-six elderly persons being placed in nursing homes for the first time were randomly assigned to one of three groups. Subjects in the Emotional Inoculation (EI) Group were seen for three consecutive days in the hospital, prior to entering a nursing home, for purposes of giving them information about the facility and preparing them for some of the stresses they might encounter. Individuals in the Supportive Therapy (ST) Group were seen for three consecutive days during their first week in the nursing home for the purpose of support in working through difficulties they might be experiencing. Subjects assigned to the Control (C) Group received no treatment either previous or subsequent to location in a nursing home.

All subjects were given a battery of tests to assess level of psychological functioning during their first two weeks in the nursing home and again after two months in the home.

The results offered no conclusive evidence regarding the absolute or relative effectiveness of the treatments in modifying the stress

incurred by nursing home placement. The only evidence suggesting treatment effectiveness was the two week post placement staff ratings which indicated that the subjects in the ST group were significantly better adjusted than the C Group subjects.

Additional data suggested that females evidenced more anxiety and depression than males and that those subjects who believed they had a choice in the specific nursing home in which they were placed were less hostile than those who believed they had no choice in facility. Individuals who perceived their stay in the nursing home to be temporary were rated as less hostile than those who believed they would be permanent residents.

This Dissertation submitted by Mary B. Carman in partial fulfillment of the requirements for the Degree of Doctor of Philosophy from the University of North Dakota is hereby approved by the Faculty Advisory Committee under whom the work has been done.

(Chairman)

Alice T. Clark

John A. Wolle

James R. Antles

Joseph Moore

Alice T. Clark
Dean of the Graduate School

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Department Psychology

Degree Doctor of Philosophy

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ABSTRACT

Research indicates that relocation of an elderly person to a nursing home constitutes a major stress to the individual which can be life threatening. The present study was designed to assess the efficacy of two different treatment approaches in attenuating that stress.

Thirty-six elderly persons being placed in nursing homes for the first time were randomly assigned to one of three groups. Subjects in the Emotional Inoculation (EI) Group were seen for three consecutive days in the hospital, prior to entering a nursing home, for purposes of giving them information about the facility and preparing them for some of the stresses they might encounter. Individuals in the Supportive Therapy (ST) Group were seen for three consecutive days during their first week in the nursing home for the purpose of support in working through difficulties they might be experiencing. Subjects assigned to the Control (C) Group received no treatment either previous or subsequent to location in a nursing home.

All subjects were given a battery of tests to assess level of psychological functioning during their first two weeks in the nursing home and again after two months in the home.

The results offered no conclusive evidence regarding the absolute or relative effectiveness of the treatments in modifying the stress incurred by nursing home placement. The only evidence suggesting treatment effectiveness was the two week post placement staff ratings which

indicated that the subjects in the ST Group were significantly better adjusted than the C Group subjects.

Additional data suggested that females evidenced more anxiety and depression than males and that those subjects who believed they had a choice in the specific nursing home in which they were placed were less hostile than those who believed they had no choice in facility. Individuals who perceived their stay in the nursing home to be temporary were rated as less hostile than those who believed they would be permanent residents.

CHAPTER I

INTRODUCTION

The number of elderly people in the United States has rapidly increased over the past several decades. This can probably be attributed to dietary factors, early diagnosis of life-threatening illness, and better general health care attention. Concurrently, the number of nursing homes and long-term care facilities has also increased (Havighurst, 1969). For example, in 1939 there were 1,200 nursing homes and related facilities in this country and by 1974 the number had risen to over 23,000 (Mendelson, 1974). Although there are currently numerous investigations under way to explore alternatives to old age homes, e.g., day care centers (Koff, 1974), intermediate housing (Bronson, 1972), and home care (Morris, 1974), evidence indicates that use of institutional care will continue to increase (Hammerman, 1974). This introductory section will focus on the following aspects of long-term care: types of long-term care facilities for the aged, effects of institutionalization on mortality rates, effects of institutionalization on psychological variables and the negative effects of involuntary relocation and types of intervention.[1]

Types of Long-Term Care Facilities for the Aged

As the number of long-term care facilities increase to accommodate the growing population of aged, questions arise concerning the

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quality of life afforded their residents. In the past, nursing homes were thought of as dumping grounds for the unwanted elderly. Currently these facilities vary greatly in terms of the quality of living they foster, but many provide custodial care only, depriving their residents of autonomy and dignity and maintaining an atmosphere of ritual and boredom (Euster, 1971).

Types of facilities for the aged vary along a continuum based primarily on the degree of medical care provided. "Homes for the aged" and "nursing homes" represent the ends of this continuum with facilities such as V.A. domiciliaries falling midway between these two extremes. The amount of medical care provided increases progressively from care homes to nursing homes, but the environment becomes more restricted and sterile and the individual's freedom and decision making power decrease. The majority of the research relevant to this paper has been done on homes for the aged or nursing homes. Differences in state regulations and licensing practices often lead to confusion in terminology and some of the studies reported in the literature tend to use the terms, homes for the aged and nursing homes, interchangeably. In the present paper, the terms will be distinguished as clarified in this section.

Geld (1964) has defined "homes for the aged" in terms of the following criteria. They are usually nonprofit enterprises sponsored by government, fraternal, or religious bodies. Residency in this type of facility is voluntary and usually permanent. Residents are expected to be socially active and engage in informal and formal social activities. The predominant criterion for adjustment is social integration.

"Nursing homes" have been defined by Solon, Roberts, Krueger, and Baney (1957) as proprietary establishments which provide skilled

nursing care and discharge patients back to the community as soon as possible. Thus, it would appear that facilities for the aged are oriented toward either social integration within a permanent setting (homes for the aged) or short-term care and discharge (nursing homes). In regard to the latter, Solon et al. (1957) found this goal wholly unrealistic. They state that:

> The nursing home becomes for aging individuals either a haven or a symbol of rejection by their familiar world and consequently bears a heavy responsibility. It needs to provide a long term or even permanent home substitute for the individual at one of his most stress-laden times (Solon et al., 1957, p. 58).

Many nursing homes, therefore, often function as homes for the aged (i.e., permanent care facilities) but are unlikely to facilitate social integration within the relatively permanent social setting.

Although nursing homes and homes for the aged serve a similar population, there are important environmental differences between the two types of facilities. Part of these differences may be attributed to differences in the degree of "totality" characterizing each type of facility. Goffman (1961) has defined totality in terms of four major dimensions:

> First, all aspects of life are conducted in the same place and under the same single authority. Second, each phase of the member's daily activity is carried on in the immediate company of a large batch of others, all of whom are treated alike and required to do the same thing together. Third, all phases of the day's activities are tightly scheduled, with one activity leading at a pre-arranged time into the next, the whole sequence of activities being imposed from above by a system of explicit formal rulings and a body of officials. Finally, the various enforced activities are brought together into a single rational plan purportedly designed to fulfill the official aims of the institution (Goffman, 1961, p. 6).

Bennett and Nahemow (1965) examined various institutions for the aged and rated them on a ten point degree of totality scale (Bennett,

1963). Their investigation revealed that nursing homes ranked high in terms of totality with only mental hospitals ranking higher. Homes for the aged were found to rank lower than nursing homes and Veterans' Administration domiciliaries but higher than retirement communities.

The 1965 study by Bennett and Nahemow, which also assessed social adjustment of the elderly in various institutional and noninstitutional settings, found that nursing homes had no criteria for social adjustment. By interviewing residents, staff, and administrators, they determined that residents basically did not know what was expected of them and in three out of four nursing homes in the study the administration had no expectations of the residents. The staff basically expected them to be clean, noncomplaining, and cooperative. Bennett and Nahemow summarized a portion of their results as follows:

> In our society, total institutions at the high end of the continuum, such as mental hospitals and nursing homes, aim to discharge patients into the community. Therefore, they do not develop into self-contained communities even among the geriatric patients who are institutionalized for the remaining years of their lives. Apparently, the combination of high totality and little feeling of permanency or community lends itself to the maintenance of custodialism as an institutional philosophy (Bennett and Nahemow, 1965, p. 75).

Due to the fact that nursing homes often function as permanent care facilities, patients are often confused as to their role within the facility and the responsibility of the facility to them. If the elderly individual expects his stay to be short-term, he expects the facility to primarily provide medical care (similar to a hospital). Rarely, if ever, is he prepared for long-term or permanent residency.

Effects of Institutionalization on Mortality Rates

The change in life style that occurs upon relocation to a long-term care facility is often a dramatic one. The individual incurs a loss of freedom, a change from familiar surroundings (which frequently hold a lifetime of memories), a forced dependency, and too often a dehumanizing stripping of the vast majority of his rights (Euster, 1971). In most facilities even such things as when to get up, when to go to bed, when and what to eat, and when to bathe are no longer under the control of the individual. Seligman (1974) has pointed out the similarity between the conditions imposed upon the resident of an old age facility and what he calls "conditioned helplessness." His research has indicated that organisms which lose all control over their environment may experience complete helplessness and premature death.

> So, if a person or animal is in a marginal physical state, weakened by malnutrition or heart disease, helplessness can push the scales towards death. One of the most vulnerable groups to death by helplessness is the aged. In America growing old is tantamount to losing control. Forced to retire at 65, sent to an old-age home, ignored by relatives, the old person is systematically stripped of control over his life. We kill many of our senior citizens by denying them choices, purpose in life, control over their lives. Many of these deaths are premature and unnecessary (Seligman, 1974, p. 84).

Results consistent with Seligman's hypothesis on the relationship between helplessness and death were reported by Ferrari (1962) in a study on perceived freedom of choice and attitude change in a home for the aged. Out of 55 women admitted to a facility for the aged, 17 had no other alternative. For the other 38 women the facility was one of several possible choices of living arrangements. Ferrari found that eight of the 17 who had no alternative died within four weeks following admis-. sion. By the end of ten weeks, 16 of the 17 were dead while only one

of the 38 who had an alternative died during this period. Since this was only a corollary and not the main emphasis of the study, it is difficult to determine from the data whether or not the 17 women who had no choice were comparable in health (mental and physical) to the other 38 individuals.

Additional studies have continued to document the negative consequences of institutionalization. Lieberman (1961) compared the mortality rates of elderly individuals during their first year of residency in a home for the aged to that of individuals on the waiting list. The death rate for the institutionalized individual was 24.7% compared to 10.4% for those on the waiting list. The study also compared the two groups on age, sex, and physical condition and determined that these factors did not significantly contribute to the difference in mortality between the two groups. However, the results did indicate that the death rate among the younger residents (aged 60-78) was significantly higher than that for older residents (aged 79-100).

The outcome of a different form of institutionalization was investigated by Camargo and Preston (1945). They studied the fate of individuals aged 65 or older who were admitted to mental hospitals for the first time. They found that 47% had died within one year following admission. Their data also revealed an exceedingly high first month mortality rate (16.7%).

Psychological Effects of Institutionalization

Contrary to the findings of the studies reporting only negative consequences of placement in an old age facility, Lieberman, Prock, and Tobin (1968) found both beneficial and detrimental effects of this type

of institutionalization. They compared elderly individuals in three groups: those who had resided in one of two Jewish homes for the aged for one to three years; individuals on the waiting lists for the two homes; and aged individuals residing in the community who would be likely to seek care from these homes if they experienced a crises that warranted it. The subjects were compared on cognitive functioning, body orientation, personality traits, self-image, time perspective, affect, and interpersonal relationships.

The results indicated that the three groups were not significantly different in terms of interpersonal relationships, self-image, or personality traits. Compared with the non-waiting list subjects in the community, the institutionalized subjects were significantly poorer in cognitive functioning, were more preoccupied with their bodies and health needs, evidenced more negative affect, and showed poorer time perspective. However, the subjects on the waiting list also differed significantly, in a negative direction, from the non-waiting list community subjects on each of these variables except cognitive functioning. In addition, they experienced more anxiety than did either the non-waiting list community or institutionalized groups.

Comparisons between subjects on the waiting lists and institutionalized subjects indicated that the institutionalized subjects were psychologically healthier, particularly in terms of lower levels of anxiety and depression, better overall affect, and better interpersonal relationships. Lieberman et al. suggested that this difference may be due to an amelioration of the crises-related reactions encountered during the waiting list period.

In addition to the findings indicating a possible benefit from institutionalization, the results also reflected some negative consequences of institutional living. Compared with the waiting list group, the institutionalized group showed significantly greater impairment in cognitive functioning, more body preoccupation, and lower emotional responsiveness.

In interpreting the results of this study, one must remember that the institutionalized group included only those individuals who had survived the first year. Studies cited in the next section Aldrich & Mendkoff, 1963; Aldrich, 1964) indicate that these people are probably psychologically more healthy, and more adaptable than those who did not survive the first year. The authors also caution that the two Jewish homes involved in the study were of high quality and that the results may not be applicable to homes of lesser quality.

The finding that the preinstitutional period may be exceedingly stressful warrants further consideration. Lieberman et al. (p. 351) concluded that:

> This cross-sectional comparison suggests that institutionalization may best be viewed as a complex process beginning from the point when an aged person seriously considers institutionalization, through a critical phase preceding and perhaps immediately following actual entrance to the institution, to a period of long-term residence in the institution.

An additional study which revealed mixed effects of placement in a home for the aged was carried out by Weinstock and Bennett (1971). They conducted cross-sectional and longitudinal studies comparing the cognitive and social functioning of three populations: "newcomers" to a Jewish home for the aged (residency of less than one year), "old-timers," and those on a waiting list. The results of the cross-

sectional study indicated that for both groups of residents cognitive performance and socialization scores were significantly higher than that of individuals on the waiting list. The longitudinal study, with a one year interval between testings, revealed that "oldtimers" gained slightly in socialization scores but decreased in cognitive functioning. The former waiting list group, who were "newcomers" at the second testing, showed an increase in both socialization scores and cognitive functioning. The former "newcomers," "oldtimers" at the second testing, tended to remain the same in terms of both socialization and cognitive functioning.

The authors concluded that in this particular home for the aged, which they caution is not typical of most homes, the environment was both cognitively and socially stimulating to the "newcomer." However, after the resident adapted to it and became an "oldtimer" it no longer offered the stimulation necessary to completely maintain or increase the resident's mental functioning.

In interpreting the results of the two studies demonstrating mixed effects of institutionalization (Weinstock & Bennett, 1971; Leiberman et al., 1968) it should be emphasized that the facilities were Jewish homes for the aged. In both studies the authors caution that the homes were of very high quality and not typical of most homes for the aged. The environment in these homes may differ so greatly from other long-term care facilities that the results may be applicable only to the particular homes used in the studies.

Negative Effects of Involuntary Relocation

Institutionalization is always preceded by relocation from the home, hospital or other institution to the receiving care facility.

In addition to the frequent negative consequences of institutionalization, evidence is accumulating which indicates that relocation, particularly involuntary relocation, is extremely stressful and even life-threatening for elderly individuals. This is exemplified in a study by Aldrich and Mendkoff (1963) which assessed the effects of the relocation of elderly individuals residing in a home for the aged and disabled. The home was closed for administrative reasons and residents were transferred to homes which had equal or better facilities. The residents had no choice in relocation and had very little advance notice of the move.

The data from this study revealed that 38% of the elderly died within one year following relocation. This was significantly higher than the expected 23% based on the home's annual death rate for the preceding ten years. Aldrich and Mendkoff also discovered that the increase in mortality was greatest during the first three months after relocation. Of those individuals aged 70 and over who died during the first year following relocation, 57% died within the first three months. The expected and observed mortality for the last nine months were not significantly different. These results are congruent with the post-relocation death rate reported by Camargo and Preston (1945).

Aldrich and Mendkoff also attempted to assess the effects of the resident's personality on adjustment. Using data obtained from the staff and the records they determined each patient's characteristic personality and adjustment prior to the announcement of the home's closing. A comparison of the death rates in each classification revealed that psychotic elderly had the highest mortality rate with 63% of them dying within the first year. Patients who were classified as neurotic or depressed, or

those who denied their physical problems, had a mortality rate three times higher than those patients who showed a satisfactory adjustment, and twice as high as those patients who characteristically were overtly angry and demanding.

In addition, the authors compared each patient's response to the news of the pending relocation with the subsequent mortality rate and found that of 17 people who reacted with overt anger, only one died. Residents who reacted with depression had a high death rate (41%) while those who expressed anxiety but did not withdraw had a better chance of surviving (15% mortality).

Aldrich and Mendkoff concluded that psychological and social factors were of primary importance in the increased mortality rate among elderly individuals following involuntary relocation.

In an attempt to determine if physical condition interacted with emotional state, Aldrich (1964) compared the data from the above study with that of a control group consisting of residents who survived the first year following relocation. These patients were matched for sex, age, and primary physical diagnosis. The data reflecting physical diagnosis for those who survived were nearly identical to that of those who died within the first three months. In addition, Aldrich assessed the psychological factors for those who survived and found that this data confirmed his earlier findings. Among those who were still living one year after relocation the predominant adjustment pattern was either satisfactory or angry. Only a minimal number of the survivors were psychotic.

The overall results of this study indicate that the primary variable effecting the outcome of relocation is psychological rather

than physical. Aldrich suggests that the high mortality rate of the senile psychotic person may be due to the psychotic's limited reality contact which prevents him from understanding the advance notification of the move and in any way preparing for it. Following relocation, he is without familiar environmental cues and cannot adapt.

Miller and Lieberman's study (1965) involving relocation of institutionalized females supports the findings of Aldrich and Mendkoff (1963) concerning the high risk of negative consequences following relocation for elderly individuals who are depressed or tend to deny the situation. Their subjects were 45 women transferred from a home for the aged to another larger facility. The move was necessitated by the closing of the first facility. None of the subjects were physically or mentally impaired at the beginning of the study. Residents were informed of the impending relocation approximately four weeks prior to the move.

The results indicated that 51% of the women showed negative changes, defined as death or serious physical or psychological deterioration, within an 18 week period following the move. Depression was the only variable significantly related to negative outcome but the data suggest that individuals who denied the situation or withdrew had a disproportionate number of negative changes. Contrary to the findings of Aldrich and Mendkoff (1963) results of this study indicated that angry, self-acceptant, or self-preoccupied life styles were not related to outcome.

It is doubtful that the results of the Miller and Lieberman study reflect the stress of relocation per se because of the substantial difference between the homes and the subjects' perception of them. The first home was characterized as protective and permissive with a

hotel-like atmosphere while the second was an extremely large institution (75 buildings) which was highly structured and run in a quasi military fashion. All residents indicated that the change from the first home to the second was unpleasant and painful. Because the study was not explicitly designed to assess the effects of this structural variable, it is difficult to determine what proportion of the negative outcomes were attributable to the difference in facilities.

An additional study which reflects the negative aspects of involuntary relocation was reported by Boureston and Tars (1974). These investigators attempted to determine the effects of relocation on elderly patients in two county medical care facilities. They compared the data obtained from these groups with that of a nonrelocated control group. For one of the relocated groups, the move was defined as "radical" (i.e., to a totally new and larger facility with new staff and a new patient population). The other relocated group's move was termed "moderate" (i.e., to a new building within the confines of the same facility with the same staff and patients). Patients in each group were matched for age, sex, length of hospitalization and primary diagnosis with a similar number in the control group.

The results indicated that the relocated groups suffered a greater number of deaths in the six months preceding and the one year following relocation. The rate was highest for the "radical" group (46%) and differed significantly from their control group (21%). Although the mortality rate of the "moderate" group (37%) exceeded that of their controls (26%), the difference was not statistically significant. The pattern of deaths differed between the two relocated groups with most of the deaths in the "radical" group occurring

during the three months preceding and the three months following relocation. The "moderate" group, on the other hand, showed high death rates in the three months prior to relocation but their highest rate of death occurred seven to nine months after relocation. The increase in death rates preceding the relocation is congruent with the findings reported by Aldrich and Mendkoff (1963) and offers support for their hypothesis that anticipation of relocation can be nearly as stressful as the actual relocation. It also suggests that the degree of change and number of environmental cues altered may be an important variable.

In addition to assessing mortality statistics, Boureston and Tars attempted to determine the psycho-social effects of relocation on the survivors. Interviews and behavioral observations were used to assess self-perceived changes in health, relationships with others, activity, and behavioral complexity.

The results showed that the "radical" relocation group scored more negatively on all measures reflecting a poorer psycho-social adjustment. The researchers concluded that:

> The poorer adjustment of the survivors of the radical relocation group in this study indicate that the destructive effects of environmental change are not limited to higher mortality rates. Effects which are more insidious in nature result in disabling life patterns for those who survive such moves (Boureston & Tars, 1974, p. 509).

In summary, there are numerous variables which may influence the outcome of relocation of the elderly. An investigation to determine the effect of several of these on the adjustment of psychiatric patients relocated to nursing homes was conducted by Stotsky (1967). The variables included nursing home characteristics, staff training and attitudes toward the mentally ill, the patient's history, the

patient's mental and physical status, and caseworker intervention.

Subjects were elderly psychiatric patients transferred from a state mental hospital to nursing homes. The placement was termed successful if the individual was not returned to the mental hospital within six months. Unsuccessful adjustment was defined as a return to a psychiatric ward or death within six months after the transfer. The study found that 80% of the patients were successfully adjusted, 8% returned to the hospital, and 11% died within the first six months in the home. The mortality rate in this study is lower than that reported by Aldrich and Mendkoff (1963).

The results indicated that the patient's mental status was the primary factor influencing adjustment. Those patients who were unsuccessfully adjusted manifested significantly more psychiatric symptoms following relocation than the successfully adjusted patients. The only other significant variable was the attitude of nurses in the homes. Nurses in homes where the majority of the subjects were successfully adjusted were significantly less authoritarian, more benevolent, and less socially restrictive. Nursing home characteristics and casework activity were not significantly related to adjustment.

Evidence that involuntary relocation to a noninstitutional setting is stressful to elderly persons has been offered by Kasteler, Gray, and Carruth (1968). These investigators studied the personal and social adjustment of people aged 55 and over within five years after they were forced to relocate from their homes because of highway construction. They compared the adjustment of these subjects with a matched group of nonrelocated controls. The results indicated that the relocated individuals showed significantly poorer social and personal adjustment.

The previous studies offer evidence that relocation, particularly when it is involuntary, constitutes a serious threat to the elderly and frequently results in physical and/or psychological deterioration or even death. However, many variables appear to interact with the relocation per se. When the move is to a long-term care facility, some of the relevant variables are psychological functioning, physical condition, type of facility to which the relocation occurs, nature of residence prior to relocation, and anticipatory reaction.

Types of Intervention

Although less attention has been given to types of intervention that may modify the stress incurred by relocated elderly, several investigations have been addressed to this issue. A study by Dominick, Greenblott, and Stotsky (1968) yielded information concerning the value of preparation. These authors attempted to identify some of the variables which were related to successful adjustment of individuals placed in nursing homes from either mental hospitals, general hospitals, or their own homes. One of the findings of this study indicated that successfully adjusted patients had greater foreknowledge about the home than did poorly adjusted patients. This study further revealed that only 24 of the 80 subjects had any knowledge of the home prior to admission. The investigators concluded that it was not common for patients to be adequately prepared, either in terms of visits to the home or by being well briefed prior to admission.

Information specific to the effects of intervention was obtained from a series of studies conducted by the Philadelphia

Geriatric Center when 48 residents of its institution were involuntarily relocated within the facility (reported in four parts by Liebowitz, 1974; Locker & Rublin, 1974; Brody, Kleban, & Moss, 1974; and Patnaik, Lawton, Kleban, & Maxwell, 1974). An awareness of the literature concerning the negative effects of involuntary relocation led the staff to implement a preparatory program for the elderly in an attempt to diminish the stress. The residents were divided into small groups and the pending move and the need for it was explained to them approximately one week prior to the actual move. They had an opportunity to express their concerns both in the groups and individually to their social worker. Family members were apprised of the move and their support and active cooperation was solicited. Residents were provided information concerning their new room and, when appropriate, their new roommates (roommates were kept together if desired and at all possible). Following this, visits to their new rooms were made. Individual attention was given to each resident and, whenever possible, he or she was involved in some decision making. The staff felt patient involvement, if only in minor decisions, was important in decreasing the feeling of helplessness. In addition, the psycho-social support was continued as long as deemed necessary following the move.

In an attempt to assess the effects of the move, the social work staff rated the residents on overall adjustment, attitudes toward the move, and personality variables including depression, aggression, resistance, anger demandingness, neurosis, and anxiety. Ratings were made at five points in time: prior to having knowledge of the move (baseline), immediately after being informed of the pending move, and again at two weeks, four months, and eight months after the move.

The data obtained at the two weeks post-relocation testing indicated that the residents' adjustive functioning had decreased substantially. Four months following relocation the level of adjustment had increased to a point midway between baseline and two weeks post-relocation functioning and by eight months it has returned to baseline.

The measures reflecting the subject's attitude toward the move indicated that it was the most negative prior to the actual move and had improved to a near neutral state within two weeks after the move. Baseline ratings of the personality variables revealed mild to moderate levels of depression, aggression, resistance, anger, demandingness, neurosis, and anxiety. Subsequent to the subjects being informed of the move, the level of all variables, except neurosis, changed significantly in the direction reflecting increased stress with anxiety and depression being affected the most. However, these initial reactions had returned to their baseline levels two weeks after the move.

In spite of the indications of short-term stress generated by the move, there was no evidence of increased mortality (i.e., post-relocation death rates were not significantly different from the Center's annual death rate). For ethical reasons this study did not include a control group (one not receiving advance preparation). However, the authors attribute the lack of increased mortality and the relatively short period of increased stress to the psycho-social intervention offered.

In summary, it seems evident that many variables influence the amount of stress incurred by an elderly person who is placed in a long-term care facility. Factors such as voluntary versus involuntary placement, presence or absence of preparation, degree of environmental change

generated by the relocation, physical and mental health, personality variables, and type of facility all appear to effect adjustment. Although some information has been obtained on the effects of these variables, the role of each has not been well determined. This is partially due to the differences in variables and technique in the studies investigating this area. The studies cited in this paper have varied in terms of the population studied, type of long-term care facility, psychological and physical parameters investigated, measurement techniques, and the criteria for adjustment.

Adjustment is an extremely difficult concept to measure. Too frequently, social scientists view adjustment or mental health in terms of a lesser degree of pathology or a low score on a mental illness scale. The use of these methods as the sole criteria of mental health has been severely criticized (Hacker, Gaitz, & Hacker, 1972; Neugarten, Havighurst, & Tobin, 1961). Hacker et al. (1972) using a sample of elderly patients, found no correlation between the results of the Mental Status Schedule, which measures mental illness, and either the Affect Balance Scale (ABS) or the Life Satisfaction Index - Form B (LSI-B), which measure mental health. They suggest that any evaluation of an individual's mental status should include measures of mental strength and mental weakness. They point out that the ABS and the LSI-B represent a composite of negative and positive feelings and would be valuable in assessing overall mental status.

From the results of the studies cited earlier, it seems evident that some people make an adequate adjustment to facilities for the aged and others do not. Further studies are needed to investigate the variables which facilitate (or hinder) adjustment to these

facilities. The present study was designed to obtain more information on several variables and assess the effects of two types of therapy on the adjustment of elderly relocated from the community to nursing homes. This study had the following purposes:

1. To determine if either of two treatments is effective in decreasing the stress engendered by entering a nursing home. One treatment consists of an emotional inoculation conducted before the individual enters the home and the other consists of short-term supportive therapy during the person's first week in the home.

2. To determine if the amount of choice a person perceives he has in going to a nursing home influences his adjustment.

CHAPTER II

METHOD

Subjects

A total of 58 individuals (36 females, 22 males), ranging in age from 61 to 91 (mean age 76.0 years), who were being transferred from hospitals to nursing homes were asked to serve as subjects. Only five refused to take part in the study.

All subjects were hospitalized for medical reasons in one of four hospitals in Wichita, Kansas. None had a psychiatric diagnosis. Their physical disabilities included broken hips, legs, and arms; diabetes, minor strokes, pulmonary emphysema, cardiac disorders, and urological problems. None of the subjects were diagnosed as terminal. Prior to their admission to the hospital, these individuals lived in their own homes or apartments, or with relatives.

All subjects met the following criteria:

1. They were at least 60 years old;

2. They were coherent, aware of the surroundings, and capable of interacting with their environment. The determination of the subject's qualification for this criterion was made by the attending physician and social service staff;

3. They had at least partial mobility and were capable of feeding and dressing themselves;

4. They had never been residents in a nursing home;

5. They had not visited a nursing home in the previous 12 months.

Nursing Homes

Nine nursing homes in the Wichita, Kansas area were used in the study. All were licensed by the state as Level I (Skilled Care) or Level II (Intermediate Care) nursing homes. The homes were comparable in size ranging from 90 to 150 bed capacity. All facilities were screened to assure that they were homogeneous in degree of totality and all were found to be near the high end of the continuum. The administrator in each nursing home was contacted prior to the study and his or her permission to interact with the subjects was obtained.

Treatments

All subjects were randomly assigned to one of two treatment groups. Emotional-Inoculation or Supportive Therapy, or a no treatment Control Group. (For a more detailed description of each treatment see Appendix A).

Emotional Inoculation Group (EI)

The subjects in this group were seen by a therapist in the hospital on three consecutive days during the week preceding their transfer to a nursing home. The treatment consisted of three, 50 minute sessions.

1. The subject was given accurate information about the nursing home he was about to enter. This included rules and procedures he would encounter in the specific home (e.g., rules concerning smoking,

the limiting of funds in his possession to between $2.00 and $3.00, the inability to leave the premises without obtaining official approval, etc.). Additional information concerned such things as information on chapel services, type of clothing worn, meal times, room facilities, etc. The individual was also shown a colored photograph of the home he was going to enter and its location on a city map. Brochure pictures of the interior of a nursing home and a typical room were also shown to each patient.

2. The experience of entering a nursing home contains many aspects that can be stressful. These were anticipated as fully as possible and discussed with the subject. Examples include losing the decision making power over many routine aspects of life (e.g., when to get up, when to eat, what to eat, etc.); sharing a room with someone else; living with a lot of "old" people, some of whom are very sick; encountering people whose behavior may be quite abnormal; feeling like a stranger; missing the familiar aspects of home and neighbors; and the fear that one might eventually be like some of the people there who have deteriorated physically or mentally.

3. The individual's feelings about entering the home were obtained and he was encouraged to ventiliate his feelings with assurances of confidentiality. It was hoped that this preparation and anticipation of the stress-producing factors would act as an "inoculation" and reduce the negative reaction to the situation when the subject actually encountered it.

Supportive Therapy Group (ST)

The subjects in this group received three 50 minute sessions during their first week in the nursing home. The sessions were held

on days 2, 3, and 4 of week one with the day the subject entered the home being counted as day zero.

These therapy sessions were primarily directed at supporting the individual and allowing him to ventilate his feelings about his current situation. It allowed to subject to confide in an individual who was not identified with the nursing home or a member of the subject's family. In addition to offering emotional support to the subject and allowing him to ventilate his feelings on any topic, the therapist also discussed the same material that was discussed with the members of the E-I group. This was done only if the subject failed to bring up the topic after two sessions. For example, the subject might be asked if he found the smoking restrictions to be inconvenient.

Control Group (C)

The members of the C Group were given no treatment either preceding or following their entrance to the nursing home.

Therapists

Four female psychology graduate students from Wichita State University, Wichita, Kansas, served as therapists. They were given specialized training in the following areas.

1. Facts about the elderly: This included facts concerning the physical and mental aspects of aging. In addition, information relevant to the stresses frequently encountered by the aged (e.g., role loss, loss of power, loss of loved ones, and financial insecurity) were emphasized.

2. Listening: A three hour listening workshop dealing with both the verbal and nonverbal aspects of communication was conducted.

3. Treatments: The emotional inoculation and supportive therapy procedures (see Appendix A) were explained in detail. Practice sessions were conducted to help familiarize the therapists with the procedures. Role playing was used extensively to acquaint the therapists with the treatments and to assist them in coping with problems that might arise. (In addition, each treatment was practiced on an elderly patient who was being transferred from a hospital to a nursing home.)

Each psychology student served as therapist for three subjects in both the EI and ST Groups to control for any biasing effect of different therapists.

Testers

Six female undergraduate students at Kansas Newman College, Wichita, Kansas, served as test administrators. They were instructed in the appropriate testing procedure and were cautioned to maintain a neutral attitude toward the patient. However, it was also necessary for them to establish a minimum amount of rapport to insure the patient's cooperation. The testers had no knowledge of the subject's membership in either the treatment or control groups.

Assessment Techniques

The following instruments were used to assess the subject's adjustment (degree of stress) following his admission to the nursing home. Reproductions of each may be found in Appendix B.

Multiple Affect Adjective Check List (MAACL)--Today Form (Zuckerman & Lubin, 1965)

The MAACL consists of a check list of 132 adjectives and requires approximately 5 minutes to complete. It is a self-report instrument and is designed to assess anxiety, depression, and hostility. In discussing the reliability of the instrument, Zuckerman and Lubin (1965) state:

> Subjects' moods vary from day to day and while persons at the extremes, such as chronic depressives, may stay "reliably" depressed, most people in the normal population will fluctuate in mood. A test attempting to measure affects should not be statistically reliable from day to day if it is truly sensitive to these individual fluctuations (p. 17).

These authors report internal reliability coefficients of .79, .92, and .90 for the anxiety, depression, and hostility scales respectively on a subject population of college students.

Adult Nowicki-Strickland Internal-External Locus of Control Scale--Geriatric Form (ANSIE-G) (Nowicki & Duke, 1974)

The ANSIE-G is a 37 item questionnaire which assesses internal-external locus of control among elderly persons. Scores range from 0 to 37 with higher scores reflecting increased externality. Rotter (1966) identified this personality variable and designed an instrument to measure it. He defined external locus of control as a belief held by an individual that reinforcement is not contingent upon his actions, but is rather the result of luck, chance, fate, or powerful others. Internal locus of control is the belief that reinforcement is normally contingent upon one's own behavior. Locus of control is viewed as a continuum and in essence a person who scores high on the internal end believes that what happens to him is generally a result of his own

actions, whereas an individual who scores high on the external end is more likely to interpret events as being controlled by chance or powerful others. Satisfactory reliability and validity has been demonstrated for the ANSIE-G (Duke, Shaheen & Nowicki, 1974).

Affect Balance Scale (ABS)
(Bradburn & Noll, 1969)

The ABS consists of 10 questions regarding the individual's recent experience of 5 positive and 5 negative feelings. It is designed to measure the level of subjective adjustment and overall well-being. (Scores range from -5 to +5). Numerous studies reporting satisfactory validity and reliability coefficients for the ABS are discussed by Bradburn and Noll (1969).

Life Satisfaction Index-Form A
(LSIA) (Neugarten, Havighurst,
& Tobin, 1961)

The LSIA consists of 20 attitude items which require an "agree" or a "disagree" response. It is designed to measure psychological well-being among the elderly population. Scores range from 0 to 20 with 0 representing extremely poor psychological well-being and 20 representing very good psychological well-being.

Life Satisfaction Index-Form B
(LSIB) (Neugarten, Havighurst,
& Robin, 1961)

This scale consists of twelve open-ended questions assessing the subject's sense of social-psychological well-being. Questions are given a score of 0, 1, or 2 with 0 representing negative responses and 2 representing positive responses. One of the questions has no 2 point answer so LSIB scores range from 0 to 23. Reliability and validity

coefficients for both the LSI-A and LSI-B were found to be satisfactory by recent investigators (Neugarten, Havighurst, & Tobin, 1961; Hacker, Gaitz, & Hacker, 1972).

Adjustment Rating Scale

This is a three item rating scale designed to assess adjustment to a nursing home setting, hostility, and depression. It is completed by an outside observer and the score on each question range from 1 to 5 with 1 representing a negative judgment and 5 representing a positive judgment.

Procedure

The names of individuals being transferred to nursing homes were obtained from the Social Service departments of each hospital. Information concerning the patient's age, physical diagnosis, prior residence in a nursing home or related facility, and mental status was also obtained from the Social Service staff. All potential subjects were randomly assigned to one of three groups before any contact was made with them.

Interview

Based on the Social Service information, each individual who appeared suitable for the study was interviewed during the week preceding his transfer to a nursing home. The interview served to further screen the subjects in terms of the relevant criteria and to obtain their cooperation in the study. Each subject was told that the research program was designed to learn more about how people felt about going to a nursing home for the first time and what their

feelings were after they had been there a short while. It was explained that this information might be of help to elderly people in the future who would be going through the same experience that they were currently undergoing. Subjects were given additional information appropriate to the groups to which they had been assigned. For example, those individuals in the EI Group were told that a colleague of the interviewers (i.e., therapist) would be in to talk with them about the nursing home for a short while on the following three days. They were also told the therapist's name. Those in the ST Group were told that a colleague of the interviewer's would be in to visit with them during their second, third, and fourth days in the home to see how they were doing and to discuss any feelings they had about it. The C Group subjects were told that a colleague (the tester) would be in to talk with them and give them some confidential forms to fill out during their first and second weeks in the home and again two months later. Both treatment groups were also told about the testers (referred to as colleagues) and when to expect them. All subjects were assured of confidentiality in all phases of the program.

In addition to providing the subject with a minimal amount of information about the study, information about the following three variables was obtained.

1. The amount of freedom the individual believed he had in going to a nursing home (i.e., no choice, some choice in which home or some choice in going to a home, or complete freedom [i.e., could have remained in the community]).

2. The person's expectations regarding length of stay in the nursing home (short-term, or permanent residency).

3. The individual's feelings about going to a nursing home (i.e., negative--angry, frightened, depressed; neutral, or positive--looking forward to it, happy to be going, etc.).

At the end of the interview preceding relocation to the nursing home each subject was asked to complete the Multiple Affect Adjective Check List (MAACL) and the Affect Balance Scale (ABS).

Treatment

Following the interview the therapy sessions were begun when appropriate. Those subjects in the E-I Group received therapy before their admission to the nursing home while those in the ST Group received therapy after they entered the nursing home. The C Group subjects received no therapy.

Assessment

The following procedures were carried out with subjects in all three groups. All questionnaires were typed in large print to facilitate the subject's reading of them. Subjects who found it difficult to read because of eye problems were read all portions of the questionnaires.

1. The Multiple Affect Adjective Check List (MAACL) and the Affect Balance Scale (ABS) were administered prior to any treatment (during the interview).

2. On day 6 following admission to the nursing home, the MAACL and the Adult Nowicki-Strickland Internal-External Locus of Control Scale - Geriatric Form (ANSIE-G) were administered.

3. On day 10 the MAACL was repeated, the ABS and the Life Satisfaction Index-Form B (LSI-B) were administered.

4. On day 14 the MAACL was repeated. The Life Satisfaction Index-Form A (LSI-A) was also administered. In addition, two of the nursing home staff who had the most contact with the subjects were asked to fill out a rating form assessing the subjects' adjustment.

5. All measures were repeated after the subject had resided in the home for two months.

CHAPTER III

RESULTS

Pretreatment data were obtained on 53 subjects. No post-treatment data were available for 17 of these subjects. Two patients in each of the treatment groups and one in the Control Group returned home or resided with relatives instead of going to a nursing home. One subject in each of the treatment groups returned home five days after entering the nursing home. In two cases (one in the EI Group and one in the ST Group), relatives interferred with the treatment and demanded that the subject not participate. Three individuals, one in each group, refused to participate in the testing following their entry into the nursing home. One subject in the EI Group went to a small private care home which was not suitable for inclusion in this study. One person assigned to the EI Group died in the hospital prior to treatment. One subject in the EI Group and one in the ST Group died in the nursing home before Day 6 data were obtained, and one Control Group subject became incoherent during his first week in the nursing home (prior to Day 6 testing). These 17 individuals were dropped from the study. The data, therefore, are based on 36 subjects: 12 in each group. Twenty-four subjects were female and 12 were male (EI Group: 3 males, 9 females; ST Group: 5 males, 7 females; C Group: 4 males, 8 females).

Females ranged in age from 61 to 91 with a mean age of 76.9 years; males ranged from 62 to 90 years of age with a mean age of

76.1 years. The mean age of the EI Group subjects was 75.0 years, the mean for the ST Group subjects was 77.3, and the mean for the C Group was 77.8.

The results of this study are divided into four sections. The first two sections contain the data relevant to the two treatment effects (EI and ST). The initial section contains the data obtained during the first two weeks following relocation while the second section is concerned with the two month follow-up data. The third section contains the data on the situational variables (choice in going to the nursing home and expected length of stay) and the sex variable. Effects of the situational variables on the psychological well being of the Ss are examined. In the fourth section the results pertinent to Internal-External Locus of Control are presented.

Treatment Effects

Initial data on all dependent variables were obtained for pretreatment and for Days 6, 10, and 14 on all 36 subjects (12 Ss for each group). To assess pretreatment differences between groups, four one-way analyses of variance tests (ANOVA) (Hays, 1963) were performed on the pretreatment MAACL scores of anxiety, depression, and hostility and the pretreatment ABS scores. For computational purposes, a constant of +10 was added to each ABS score, yielding a scale of +5 to +15. Results of none of the ANOVA's were significant indicating that the groups did not differ significantly on these variables prior to treatment (the .05 level for significance was adopted for all analyses). The results of these and all other ANOVA's are presented in Table 1. Pretreatment MAACL means and standard deviations can be found in the pretreatment

TABLE 1

ANALYSES OF VARIANCE FOR MAACL, ABS, LSI-A, LSI-B, ANSIE-G, ADJUSTMENT RATING, DEPRESSION RATING, AND HOSTILITY RATING

Analysis Identification	MS_b	MS_w	F	df	Significance
Pretreatment Analyses					
MAACL Anxiety	17.33	13.82	1.25	2, 33	>.05
MAACL Depression	13.87	40.63	0.34	2, 33	>.05
MAACL Hostility	15.03	20.41	0.74	2, 33	>.05
ABS	5.58	4.99	1.12	2, 33	>.05
Posttreatment Analyses					
MAACL Anxiety by Days					
Groups	67.61	19.57	3.45	2, 33	=.04[a]
Days	1.51	6.64	0.23	2, 66	>.05
Groups by Days	1.68	6.64	0.25	4, 66	>.05
MAACL Depression by Days					
Groups	125.94	46.08	2.73	2, 33	>.05
Days	8.40	13.19	0.63	2, 66	>.05
Groups by Days	6.48	13.19	0.49	4, 66	>.05
MAACL Hostility by Days					
Groups	60.90	25.00	2.44	2, 33	>.05
Days	4.34	4.28	1.01	2, 66	>.05
Groups by Days	2.30	4.28	0.54	4, 66	>.05
ABS	2.33	4.61	0.51	2, 33	>.05
LSI-A	23.44	10.10	2.32	2, 33	>.05
LSI-B	22.75	17.80	1.28	2, 33	>.05
ANSIE-G	2.53	14.32	0.18	2, 33	>.05
Adjustment Rating	2.63	0.46	5.74	2, 33	<.01[a]
Depression Rating	1.80	1.27	1.41	2, 33	>.05
Hostility Rating	0.88	0.49	1.78	2, 33	>.05
Two-Month Analyses					
MAACL Anxiety	7.36	6.37	1.15	2, 21	>.05
MAACL Depression	14.87	26.90	0.55	2, 21	>.05
MAACL Hostility	0.44	12.72	0.03	2, 21	>.05
ABS	3.11	1.61	1.94	2, 21	>.05
LSI-A	1.25	8.42	0.15	2, 21	>.05
LSI-B	16.11	12.28	1.31	2, 21	>.05
ANSIE-G	5.00	20.35	0.25	2, 21	>.05

TABLE 1--Continued

Analysis Identification	MS_b	MS_w	F	df	Significance
Adjustment Rating	1.13	0.65	1.74	2, 21	>.05
Depression Rating	0.48	1.69	0.28	2, 21	>.05
Hostility Rating	1.09	0.54	2.01	2, 21	>.05
Analyses of Change Between Initial Post-treatment Testing and 2-Month Testing					
MAACL Anxiety by Days					
Groups	8.27	10.89	0.76	2, 21	>.05
Days	1.92	8.15	0.24	1, 21	>.05
Groups by Days	10.79	8.15	1.32	2, 21	>.05
MAACL Depression by Days					
Groups	22.25	29.24	0.76	2, 21	>.05
Days	9.53	25.82	0.37	1, 21	>.05
Groups by Days	28.89	25.82	1.12	2, 21	>.05
MAACL Hostility by Days					
Groups	2.06	18.12	0.11	2, 21	>.05
Days	3.57	5.32	0.67	1, 21	>.05
Groups by Days	2.50	5.32	0.47	2, 21	>.05
ABS by Days					
Groups	0.64	3.10	0.21	2, 21	>.05
Days	0.89	3.25	0.27	1, 21	>.05
Groups by Days	3.59	3.25	1.10	2, 21	>.05
LSI-A by Days					
Groups	11.06	10.80	1.02	2, 21	>.05
Days	0.67	4.01	0.17	1, 21	>.05
Groups by Days	3.06	4.01	0.76	2, 21	>.05
LSI-B by Days					
Groups	30.23	19.79	1.53	2, 21	>.05
Days	2.10	6.96	0.30	1, 21	>.05
Groups by Days	8.89	6.96	1.28	2, 21	>.05
ANSIE-G					
Groups	3.08	13.34	0.23	2, 21	>.05
Days	1.26	10.19	0.21	1, 21	>.05
Groups by Days	3.51	10.19	0.34	2, 21	>.05
Adjustment Ratings					
Groups	2.75	0.80	3.46	2, 21	=.05[a]
Days	1.02	0.24	4.30	1, 21	=.053[a]
Groups by Days	0.47	0.24	1.96	2, 21	>.05

TABLE 1--Continued

Analysis Identification	MS_b	MW_w	F	df	Significance
Depression Rating					
Groups	0.28	1.19	0.24	2, 21	>.05
Days	7.68	1.12	6.88	1, 21	=.016[a]
Groups by Days	0.40	1.12	0.36	2, 21	>.05
Hostility Rating					
Groups	1.30	0.50	2.65	2, 21	>.05
Days	1.59	0.37	4.24	1, 21	=.052[a]
Groups by Days	0.13	0.37	0.35	2, 21	>.05

[a]Significant at <.05 level.

columns in Tables 2, 3, and 4. Pretreatment ABS means and standard deviations are presented in the first column of Table 5. The raw data from all dependent measures are presented in Appendix C.

To assess treatment effects, three two-way ANOVA's with one repeated measure, days, (Hays, 1963) were performed on the post-treatment (Days 6, 10, and 14) MAACL scores.

A comparison of groups across days on the MAACL anxiety scores indicated significant differences between groups ($F = 3.45$, $df = 2, 33$, $p < .05$). The F values for Days and Interaction were not significant. The data for mean anxiety scores and standard deviations for each group across days are presented in Table 2. Internal comparisons were made with the nondirectional "t" statistic (Hays, 1963). The difference in anxiety scores between the EI and ST Groups was significant ($t = 3.87$, $df = 34$, $p < .001$) indicating the ST subjects evidenced less anxiety than the EI Group subjects. The C Group also scored significantly lower on the anxiety scale than did the EI Group ($t = 2.08$, df = 34,

TABLE 2

MEANS AND STANDARD DEVIATIONS (S.D.) FOR MAACL ANXIETY SCORES FOR GROUPS EI, ST, AND C FROM PRETREATMENT THROUGH DAY 14

Group	Pretreatment Mean	Pretreatment S.D.	Day 6 Mean	Day 6 S.D.	Day 10 Mean	Day 10 S.D.	Day 14 Mean	Day 14 S.D.
EI	10.58	3.32	10.50	2.39	10.17	2.59	9.75	3.08
ST	8.25	4.31	7.75	4.18	6.83	2.40	7.67	3.55
Control	9.92	3.45	8.50	3.90	8.58	3.50	8.41	3.65

$p < .05$). There was no significant difference in scores between the ST and C Groups ($t = 1.24$, $df = 34$, $p > .05$).

Inspection of Table 2 suggests that the above differences were due to the fact that there was only a slight decrease in anxiety for the EI Group from pretreatment testing to Day 10 in contrast to a much greater reduction in anxiety for both the ST Group and C Group from pretreatment to Day 10.

The ANOVA comparing groups across Days 6, 10, and 14 on the MAACL scores for depression did not yield a significant F for Groups, Days, or Interaction. The means and standard deviations are presented in Table 3. Inspection of Table 3 indicates that, as with the anxiety scores, the depression scores for the EI Group remained relatively constant while those for Groups ST and C gradually decreased from pretreatment to Day 10. On Day 14 the EI Group scores decreased slightly while the ST and C Groups showed a slight increase.

An ANOVA comparing groups EI, ST and C across Days 6, 10, and 14 on the MAACL scores for hostility indicated that the groups did not

TABLE 3

MEANS AND STANDARD DEVIATIONS (S.D.) FOR MAACL DEPRESSION SCORES FOR GROUPS EI, ST, AND C FROM PRETREATMENT THROUGH DAY 14

Group	Pretreatment Mean	S.D.	Day 6 Mean	S.D.	Day 10 Mean	S.D.	Day 14 Mean	S.D.
EI	20.50	5.47	20.25	4.37	20.58	3.89	19.91	4.36
ST	18.42	6.96	17.50	5.63	16.00	5.14	18.17	3.95
C	19.92	6.50	17.08	5.92	16.08	4.93	17.33	5.58

significantly differ. The F's for Days and Interaction were also not significant. The means and standard deviations for each group across days are presented in Table 4.

TABLE 4

MEANS AND STANDARD DEVIATIONS (S.D.) FOR MAACL HOSTILITY SCORES FOR GROUPS EI, ST, AND C FROM PRETREATMENT THROUGH DAY 14

Group	Pretreatment Mean	S.D.	Day 6 Mean	S.D.	Day 10 Mean	S.D.	Day 14 Mean	S.D.
EI	8.00	3.93	8.33	2.71	9.00	3.49	8.42	3.31
ST	5.92	4.23	7.00	3.16	7.33	2.61	8.33	3.93
C	7.67	5.28	5.75	3.72	5.83	3.56	6.42	3.92

A one-way ANOVA was used to assess differences among groups on the Affect Balance Scale (ABS)--Day 10. The F value obtained was not significant, indicating that individuals did not differ significantly on the Day 10 ABS as a function of group membership. The group means and standard deviations for the ABS are presented in Table 5.

One-way ANOVA's were also used to assess group differences on the Life Satisfaction Index--Form A (LSI-A) and the Life Satisfaction Index--Form B (LSI-B). The results indicated that the groups did not differ significantly on any of these measures. Group means and standard deviations for these variables are presented in Table 5.

TABLE 5

MEANS AND STANDARD DEVIATIONS (S.D.) FOR GROUPS EI, ST, AND C ON PRE-ABS, DAY 10 ABS, DAY 10 LSI-A, AND DAY 10 LSI-B

Group	Pre-ABS Mean	Pre-ABS S.D.	Day 10 ABS Mean	Day 10 ABS S.D.	Day 10 LSI-A Mean	Day 10 LSI-A S.D.	Day 14 LSI-B Mean	Day 14 LSI-B S.D.
EI	8.92	1.31	9.25	1.29	5.75	1.55	7.92	3.75
ST	10.25	3.02	9.08	1.62	8.25	3.65	10.42	4.54
C	9.83	2.03	9.92	3.09	8.08	3.83	10.17	4.32

Three one-way ANOVA's were used to assess differences among groups on the Day 14 staff ratings of general adjustment, depression, and hostility. These analyses indicated that the groups differed significantly on the general adjustment rating ($F = 5.74$, $df = 2, 33$, $p < .01$). They did not differ significantly on the ratings of depression or hostility. The nondirectional "t" statistic was used to make multiple internal comparisons on the general adjustment data. The results indicated that the subjects in the ST Group obtained significantly higher adjustment ratings (reflecting better adjustment) than the subjects in the C Group ($t = 3.86$, $df = 22$, $p < .001$). The EI Group subjects were also rated as better adjusted than the C Group subjects but the difference was not significant ($t = 0.87$, $df = 22$,

$p > .05$). A comparison between the EI and ST Groups revealed that the ST Group subjects were rated significantly higher on adjustment than the EI Group ($t = 2.56$, $df = 22$, $p < .02$). Group means and standard deviations for the staff ratings of adjustment, depression, and hostility are presented in Table 6.

TABLE 6

GROUP MEANS AND STANDARD DEVIATIONS (S.D.) FOR THE DAY 14 NURSING HOME STAFF RATINGS ON ADJUSTMENT, DEPRESSION, AND HOSTILITY

Group	Adjustment Rating	Depression Rating	Hostility Rating
EI			
Mean	4.33	3.75	4.42
S.D.	0.83	1.22	0.95
ST			
Mean	4.96	4.50	4.96
S.D.	0.14	0.91	0.14
C			
Mean	4.04	3.96	4.67
S.D.	0.81	1.23	0.75

Two Month Follow-Up

During the interim between the Day 14 testing and the two-month follow-up testing, 12 subjects were eliminated from the study (6 in the EI Group, 3 in the ST Group, and 3 in the C Group) reducing the total number of subjects to 24. Of the EI Group subjects who were dropped from the study, 3 returned to the community after one month in the nursing home, one died during her sixth week in the home, one became totally nonresponsive, and one refused to cooperate with the two-month testing saying, "thinking about how I feel makes me sick." All three of the ST Group subjects dropped from the study had returned to

the community prior to the two-month follow-up. One member of the C Group died after 7 weeks in the facility and two others returned to the community after 5 to 7 weeks residency in the home. Further examination of the data revealed that all 8 of the subjects who returned to the community were female, one male and one female died, one male became nonresponsive, and one female refused to cooperate on the two-month testing.

To test for differences between groups on the two-month follow-up data a one-way ANOVA was performed on each of the following measures: 2-month MAACL scores of Anxiety, Depression, and Hostility; 2-month ABS scores; 2-month LSI-A scores; 2-month LSI-B scores; 2-month ANSIE-G scores, 2-month adjustment ratings; 2-month depression ratings; and 2-month hostility ratings. None of the *F* values obtained from these analyses were significant, indicating that individuals did not differ on these variables as a function of group membership.

Two-way ANOVA's with one repeated measure, days, were performed on the MAACL, ABS, LSI-A, LSI-B and ANSIE-G data to determine if subjects differed on any of the measures from the first post-treatment testing to the two-month assessment. These comparisons were made using the data from only those subjects who were included in the two-month follow-up. The analysis utilized a weighted means procedure for unequal Ns (Winer, 1971).

The ANOVA's for the MAACL anxiety, depression, and hostility scores yielded no significant *F* values for Groups, Days, or Interaction. Group means and standard deviations for the MAACL scores for anxiety, depression, and hostility are presented in Table 7.

TABLE 7

GROUP MEANS AND STANDARD DEVIATIONS (S.D.) FOR THE DAY 6 AND TWO-MONTH MAACL SCORES OF ANXIETY, DEPRESSION, AND HOSTILITY

Group	Anxiety		Depression		Hostility	
	Day 6	2 Month	Day 6	2 Month	Day 6	2 Month
EI						
Mean	10.33	9.00	20.83	19.33	8.33	8.00
S.D.	2.42	1.10	5.35	4.23	1.75	2.76
ST						
Mean	8.00	8.44	16.44	17.78	7.11	7.77
S.D.	4.30	1.81	5.43	6.12	3.62	3.15
C						
Mean	8.11	10.22	16.44	20.33	6.89	8.22
S.D.	3.33	3.56	5.43	4.69	3.62	4.32

Table 8 presents the group means and standard deviations for the preliminary data and the two-month data on the ABS, LSI-A, LSI-B, and

TABLE 8

GROUP MEANS AND STANDARD DEVIATIONS (S.D.) FOR PRELIMINARY AND TWO-MONTH DATA ON THE ABS, LSI-A, LSI-B, AND ANSIE-G

Group	ABS		LSI-A		LSI-B		ANSIE-G	
	Day 10	2 Month	Day 10	2 Month	Day 14	2 Month	Day 6	2 Month
EI (n=6)								
Mean	9.33	9.50	6.00	7.17	7.17	7.67	16.83	15.33
S.D.	0.51	1.38	1.55	1.17	2.64	2.81	2.14	2.86
ST (n=9)								
Mean	9.11	9.67	7.44	7.67	10.11	10.44	16.11	16.00
S.D.	1.83	1.11	2.79	3.43	3.72	3.47	3.82	5.85
C								
Mean	9.77	8.56	8.67	8.00	10.55	8.44	14.89	15.33
S.D.	2.99	1.33	2.74	3.08	4.55	3.90	3.62	3.74

ANSIE-G variables. The ANOVA's for these four variables indicated there were no significant Group, Days, or Interaction effects.

Data from the nursing home staff ratings are presented in Table 9. A two-way ANOVA with days repeated was performed on each of the measures of adjustment, depression, and hostility. Again, the weighted means procedure (Winer, 1971) for unequal Ns was followed.

TABLE 9

GROUP MEANS AND STANDARD DEVIATIONS (S.D.) FOR DAY 14 AND TWO-MONTH NURSING HOME STAFF RATINGS ON ADJUSTMENT, DEPRESSION, AND HOSTILITY[a]

Group	Adjustment Rating		Depression Rating		Hostility Rating	
	Day 14	2 Month	Day 14	2 Month	Day 14	2 Month
EI (n=6)						
Mean	4.67	4.00	4.67	3.50	4.75	4.25
S.D.	0.06	0.63	0.41	1.14	0.42	0.69
ST (n=9)						
Mean	4.94	4.67	4.44	3.94	4.94	4.78
S.D.	0.17	0.56	1.04	1.33	0.17	0.36
C (n=9)						
Mean	4.00	4.05	4.33	3.56	4.56	4.11
S.D.	0.87	1.07	0.66	1.36	0.85	0.99

[a]Data include only those scores from subjects on whom both Day 14 and two-month data were obtained.

The ANOVA for the general adjustment data yielded a significant Groups effect ($F = 3.45$, $df = 2, 21$, $p < .05$), a nearly significant Days effect ($F = 4.22$, $df = 1, 21$, $p = .053$), and a nonsignificant interaction effect ($F = 1.96$, $df = 2, 21$, $p > .05$).

Internal comparisons for the Groups effect were made with the nondirectional t statistic. These analyses indicated that the ST Group was rated as significantly better adjusted than both the C Group (t = 3.18, df = 34, p <.01) and the EI Group (t = 2.33, df = 28, p <.05). The EI and C Groups did not differ significantly (t = .968, df = 28, p >.05). The F ratio for the Days effect was significant at the .053 level and inspection of Table 9 indicates that the two-month adjustment ratings were lower than the Day 14 ratings.

The ANOVA for the depression rating data yielded a significant Days effect (F = 6.88, df = 1, 21, p <.02). Inspection of Table 9 indicates that the two-month ratings were lower than the Day 14 ratings. The F value for the Groups and Interaction were nonsignificant.

The ANOVA for the hostility rating data also yielded a nearly significant Days effect (F = 4.24, df = 1, 21, p = .052). Inspection of Table 9 indicates that the subjects were rated as being more hostile at the two-month rating than at the Day 14 rating. The Groups effect and Interaction effect were not significant.

Situational and Sex Variables

One purpose of this study was to investigate the effect on nursing home adjustment of amount of perceived choice in going to a nursing home. Degree of perceived choice was divided into the following three categories.

1. No choice--the subject believed he had no choice in going to a nursing home and no choice in home.

2. Partial choice--the subject believed he had no choice in going to a nursing home but felt he had a choice in specifying the nursing facility.

3. Complete choice--the subject believed he made the decision to go to a nursing home and he specified which home (i.e., could have remained in the community).

The data indicate that no subjects were in the complete choice category (#3). All 36 subjects believed they had no choice in "going" to a nursing home (i.e., their physicians and/or families had made that decision). However, 12 subjects, 3 in the EI Group, 4 in the ST Group, and 5 in the C Group, believed they were able to decide on the specific home. Therefore, there were 24 subjects in category #1, no choice, and 12 subjects in category #2, partial choice.

To determine which dependent variables might be influenced by perceived degree of choice, a point biserial correlation coefficient, r_{pb}, (McNemar, 1969), was calculated for the subjects in each group comparing degree of choice with all other variables. Significance was assessed by the t-test for the significance of $\underline{r}$ (McNemar, 1969). Examination of r_{pb} matrices generated for the individual groups (EI, ST and C) revealed that the groups differed with respect to the number of variables correlated with perceived degree of choice (matrices are presented in Appendix D). Those correlations which were significant are presented in Table 10. Mean values for individuals in the no choice category (#1) and partial choice category (#2) are also presented.

Inspection of Table 10 reveals that those members of the EI Group who believed that they had no choice in going to a nursing home and no choice as to which specific home, evidenced more anxiety, depression, and hostility (as measured by the MAACL) than did those subjects who believed that they had a choice in the home. Members of the C Group who believed they had a choice of home scored lower on the MAACL

TABLE 10

POINT BISERIAL CORRELATIONS (r_{pb}) FOR PERCEIVED AMOUNT OF CHOICE AND DEPENDENT VARIABLES FOR GROUPS EI, ST, AND C WITH MEAN SCORES FOR EACH MEASURE

Group	Variable	r_{pb}[a]	No Choice	Partial Choice
EI			(n = 9) Mean	(n = 3) Mean
	Pre Anxiety	-.71[b]	11.88	6.66
	Day 10 Anxiety	-.58[b]	11.00	7.66
	Day 10 Depression	-.71[b]	22.10	16.00
	Pre Hostility	-.72[b]	9.55	3.33
	Day 10 Hostility	-.92[c]	10.70	3.60
	Day 14 Hostility	-.62[b]	9.55	5.00
	Day 10 ABS Pos	.71[b]	1.44	3.66
ST			(n = 8) Mean	(n = 4) Mean
	No Significant Correlations			
C			(n = 7) Mean	(n = 5) Mean
	Pre Hostility	-.61[b]	10.29	4.00

[a]Due to the coding of the dichotomous variables, a positive r_{pb} indicates the variable is positively related to Partial Choice.

[b]$p < .05$

[c]$p < .01$

Pre-Hostility measure than did those C Group subjects in the No Choice category. Amount of choice did not correlate significantly with any variable for those subjects in the ST Group.

Expected length of stay was another situational variable which was examined in this study. Individuals were divided into two categories dependent upon their perceptions of the length of time they expected to stay in a nursing home. One category consisted of those subjects who believed they were going to a nursing home for a period

of time to convalesce but did not plan on being permanent residents. The other category consisted of those individuals who believed they would be permanent residents of the home.

Separate correlation matrices were generated for the two treatment groups and the Control group (see Appendix D). For the EI Group, expected length of stay correlated significantly with Day 14 Hostility Rating (r_{pb} = .64, t = 2.63, df = 10, p <.05) indicating that those EI subjects who expected to have a short term stay in the nursing home were rated as less hostile than those EI subjects who believed they would be permanent residents of the facility (perceived temporary residency, n = 6; perceived permanent residency, n = 6).

For the C Group, expected length of stay correlated -.67 with Pre-ABS negative scores (t = 2.85, df = 10, p <.02) reflecting fewer negative feelings expressed by the C Group subjects who, prior to their admission to the home, anticipated only a temporary stay there (perceived temporary residency; n = 5, perceived permanent residency, n = 7).

Expected length of stay did not correlate significantly with any variable for the subjects in the ST Group (perceived temporary residency, n = 8; perceived permanent residency, n = 4).

Comparisons were also made between males and females. A point biserial correlation was used to determine if the sex variable influenced adjustment to a nursing home facility. The significant correlations and mean scores for males and females on those measures are presented in Table 11. Inspection of this table reveals that when all 36 subjects are considered, females were significantly more anxious

than males across all days on the MAACL anxiety measure. They were also significantly more depressed than males on the Day 14 MAACL depression scores.

TABLE 11

POINT BISERIAL CORRELATIONS (r_{pb}) FOR THE SEX VARIABLE WITH ALL SUBJECTS COMBINED, AND FOR THE EI, ST, AND C GROUPS CONSIDERED SEPARATELY. MEAN SCORES ARE ALSO PROVIDED

Group	Variable	r_{pb}[a] Sex	Male Mean Score	Female Mean Score
All Subjects			(n = 12)	(n = 24)
	Pre Anxiety	.35[b]	15.50	21.17
	Day 6 Anxiety	.44[c]	6.66	16.04
	Day 10 Anxiety	.35[b]	7.00	9.29
	Day 14 Anxiety	.33[b]	7.00	9.29
	Day 14 Depression	.44[c]	15.42	19.90
EI			(n = 3)	(n = 9)
	Day 14 Depression	.59[b]	15.66	21.33
	LSI-B	.63[b]	4.00	9.22
ST			(n = 5)	(n = 7)
	Pre Hostility	.57[b]	3.20	7.86
C			(n = 4)	(n = 8)
	Day 6 Anxiety	.57[b]	5.50	10.00
	LSI-A	-.71[c]	11.75	6.25

[a]Due to the coding of the dichotomous variable, a positive correlation indicates that the variable is positively related to females.

[b]$p < .05$

[c]$p < .01$

When data from the specific groups are examined separately, the information is similar to that for all 36 subjects. Females in the EI Group showed more depression than males on Day 14 MAACL scores. However, they also indicated more satisfaction with their lives as evidenced by higher LSI-B scores. Females in the ST Group scored significantly higher than males on the pretreatment MAACL hostility scores. Females in the C Group scored higher than males on the Day 6 MAACL anxiety measure but lower than males on the LSI-A. It should be noted that LSI-A scores for all subjects were found to correlate significantly, in a positive direction, with LSI-B scores (r = .52, t = 3.55, df = 54, p <.01).

Internal-External Locus of Control

An additional purpose of the present study was to obtain information on this population regarding internal-external locus of control and to assess the possible relationship between differences in locus of control orientation and reaction to nursing home placement. The data indicate that the three groups were not significantly different in terms of locus of control as measured by the Adult Nowicki-Strickland Internal-External Locus of Control Scale - Geriatric Form (ANSIE-G) (F = 0.176, df = 2, 33, p >.05). The ANSIE-G score means and standard deviations for the EI, ST, and C Groups separately were: 15.08, 3.15; 15.83, 4.44; 15.00, 3.65. Locus of Control scores ranged from 7 to 23 with a mean value of 15.31 and standard deviation of 3.69 for all 36 subjects.

The Pearson product moment correlation coefficient, r (McNemar, 1969), was used to assess the possible relationships between locus of

control and the other dependent and situational variables. The t-test for the significance of r (McNemar, 1969) was used to determine significance. The correlations between locus of control and the remaining dependent and situational variables are presented in Appendix D. The correlation matrices for each group indicated that none of the ANSIE-G scores were significantly correlated with any measures of psychological state or with any of the situational variables.

Descriptive Data

Descriptive data obtained from each individual during the initial interview revealed that all 36 subjects desired to return to their own residence rather than go to a nursing home. Thirty-two subjects verbalized negative feelings about going to a nursing home (e.g., helplessness, fear, sadness, and/or anger). Four subjects verbalized neutral to positive feelings about the pending relocation (e.g., a wait and see attitude). Two-thirds of the subjects indicated that they were somewhat afraid of being in a nursing home. Twenty-three subjects expressed extreme sadness over the pending move and thirteen individuals, all female, became tearful and/or began to cry when they spoke of having to go to a nursing home and the loss of role, property, and change in lifestyle that it meant for them.

CHAPTER IV

DISCUSSION

The results of this study appear to offer no conclusive evidence regarding the relative effectiveness of the treatments in modifying the stress incurred by nursing home placement or that either treatment was superior to no treatment. Some general tendencies are suggested, however.

The primary finding that may reflect treatment effectiveness is found in the Day 14 staff ratings on overall adjustment. The ST Group subjects achieved significantly better adjustment ratings than did the C Group subjects. The EI Group was also rated as better adjusted than the C Group, but the difference did not reach significance. However, the indication that the staff saw the ST treatment group as better adjusted was not corroborated by the residents' subjective reports on the measures assessing psychological well being (i.e., MAACL, ABS, LSI indices, and ANSIE-G). Questions regarding the meaningfulness of the staff ratings are also raised by the finding that the staff ratings were not significantly related to any other dependent measures. It is, therefore, difficult to accurately interpret the findings of better adjustment ratings for the ST treatment group.

The MAACL scores obtained in the two-week period subsequent to relocation are also difficult to interpret. These scores indicated that the EI Group subjects, relative to the ST and C Group subjects, evidenced more anxiety and, to a lesser extent, more depression during

the first two weeks in the nursing home. The anxiety and depression scores for the EI Group remained relatively constant from the Pretreatment testing to the Day 10 testing period, while the scores of the ST and C Groups decreased. The EI Group subjects did not begin to show a decrease in anxiety and depression scores until Day 14.

Two tentative hypotheses are offered which may explain the EI Group's higher anxiety and depression scores. First, the EI treatment may have had the predicted effect of alerting the subject to the difficulties he might encounter in the nursing home. It may also have decreased the subject's denial and prevented the decline in anxiety and depression scores as observed in the ST and C Groups.

An alternate hypothesis is that exposure to the emotional inoculation treatment may have acted as a catalyst for the subject to verbalize his feelings. In essence, the fact that he might experience some difficulties in residing in a nursing home was acknowledged (by the therapist). This recognition of the patient's situation may have functioned as permission for the subject to admit more freely to negative feelings. Thus, the higher anxiety and depression scores may have reflected an increased "expression" of these feelings. Likewise, the lower scores obtained by the ST and C Groups may have reflected denial or an unwillingness to admit to those socially undesirable feelings. This is congruent with the suggestion of Zuckerman and Lubin (1965), developers of the MAACL, that the MAACL scores may be influenced by denial and/or the social undesirability of admitting to such negative feelings.

The apparent limited effectiveness of the treatments may be attributed to several factors. A primary factor to be considered is

that all of the subjects in this study believed that the decision to go to a nursing home was made by someone else and that they were powerless to do otherwise. It may be that the trauma of having one's life disrupted so completely and having little power to alter the situation may not be amenable to such short-term treatment. Another aspect of the study that could have contributed to limited treatment effectiveness was the limited experience and training of the therapists. Although they were graduate students in clinical psychology and had received training specific to this study they were not professionals.

The third important factor is that the data were collected over a very short period of time. Due to limited resources and limited time, a longer follow-up was not feasible. It could be that a 6 or 8-month follow-up would have yielded different information concerning the treatment effects. This hypothesis would be congruent with the findings of the Philadelphia Geriatric Center Study (1974). The data from that study revealed a substantial decrease in the resident's adjustive functioning two weeks following relocation. Four months later, their level of functioning had increased only to a point midway between the two-week and baseline level of functioning (taken prior to the announcement of the pending relocation). It took a period of 8 months for the residents to return to their pre-relocation level of functioning in spite of fairly extensive pre- and post-relocation therapy. In addition, the data from the Boureston and Tars (1974) study suggested that more radical relocation engendered more stress. In view of this the individuals in the Philadelphia study (who were being relocated within an institution) were most likely not undergoing as severe a crisis as were the

subjects in the present study (who were being relocated from their own residencies in the community).

That the present study did not show an increase in stress (anxiety, depression, and hostility) during the first two weeks and even showed a slight decrease, would support the suggestion by Leiberman et al. (1968) and Aldrich and Mendkoff (1963) that the pre-location period may be as stressful as the actual relocation. The fact that the subjects were undergoing stress prior to relocation would seem evident; each had suffered some physical impairment, had been hospitalized, and been informed that he would be sent to a nursing home. For many, this meant a loss of their home, their furniture, their regular contact with family members, and their way of life.

More empirical evidence reflecting pre-relocation stress is obtained from the MAACL scores. Zuckerman and Lubin (1965), developers of the MAACL, suggest that anxiety scores between 8 and 12 reflect mild anxiety. These investigators also report mean depression scores for several populations: job applicants at a medical center personnel office had mean depression scores of 10.0 and 11.1 for males and females respectively; male college students had a mean of 14.7 while female college students had a mean of 13.6; a sample of hospitalized psychiatric patients yielded mean depression scores of 15.6 for males and 20.8 for females.

The anxiety and depression scores of subjects in the present study did not differ significantly as a function of group membership prior to treatment. The mean pre-anxiety score for the 36 subjects was 9.58 (S.D. 3.75) which reflects mild anxiety. The mean pre-treatment depression score was 18.75 (S.D. 5.83) for males and

20.04 (S.D. 6.53) for females. These data appear to more closely resemble those of hospitalized psychiatric patients than those of the other samples consisting of individuals who were not identified as experiencing psychological distress.

Additional information obtained on this population is interesting when compared to that obtained on noninstitutionalized elderly. Neugarten, Havighurst, and Tobin (1961), developers of the LSI-A and LSI-B, report the means and standard deviations for the population on which the tests were standardized. Their subjects ranged in age from 50 to 90 and represented a cross-section of the socio-economic levels. None of their subjects were bedridden or chronically ill. For this population, they report a mean LSI-A score of 12.4 (S.D. 4.4) and a mean LSI-B score of 15.1 (S.D. 4.7). The present investigation obtained a Day 10 LSI-A score of 8.50 (S.D. 2.88) for males and 6.79 (S.D. 3.40) for females. The Day 14 LSI-B scores were 9.00 for males and 9.75 for females with standard deviations of 4.73 and 4.08 respectively. These scores were considerably lower than those obtained by Neugarten et al. and reflect a lower overall sense of life satisfaction for the subjects in the present study.

There was some indication that males react differently to nursing home placement than do females. Females scored higher on measures reflecting anxiety and depression. This may be interpreted as indicating that females were more stressed by the nursing home placement than were males. However, the cultural values dictating that it is more acceptable for females to admit feelings of anxiety and depression than for males may also explain the data and may negate the hypothesis that females were more stressed by the relocation than were males.

The internal-external locus of control data indicated that the subjects in all three groups were functioning at an external level (i.e., felt their lives were generally controlled by chance, fate, or powerful others). The differences between groups was not significant and the mean Day 6 ANSIE-G score for the 36 subjects was 15.31 (S.D. 3.69). This remained nearly constant during the following two months as reflected by a mean two-month score of 15.33 (S.D. 4.36, $\underline{n} = 24$).

The externality of these scores is extremely higher when compared with the data obtained on institutionalized elderly by Duke, Shaheen, and Nowicki (1974). These authors administered the ANSIE-G to 66 elderly females ranging in age from 65 to 90, with a mean age of 78.5 years. All were residents of a nursing home complex. Their results yielded a mean ANSIE-G score of 8.74 (S.D. = 3.59).

Information concerning locus of control for noninstitutionalized elderly was obtained by Wold and Kurtz (1975). Rotter's IE Scale (1966) was given to 92 individuals aged 60 to 85. The results revealed that the mean IE score was 8.22 with 53% of the elderly scoring at or below 9 and only 14% scoring at or above 14. Individuals were designated internal if they scored 8 or below and external if they scored 10 or above. Analysis of the data indicated that internals demonstrated significantly higher levels of social involvement and scored significantly higher on the adjustment and life satisfaction indexes.

While most studies imply that locus of control is a relatively stable personality variable that may gradually change with age, there is evidence that it may change dramatically in a short period of time. Smith (1970) administered Rotter's IE Scale to patients experiencing acute life crises who came to a neuropsychiatric center for help. The

subjects were given the IE scale immediately prior to crisis intervention treatment and again six weeks later.

The results revealed a significant increase in the internal direction from pre- to post-treatment testing. These results were compared with those of a noncrisis control group consisting of patients who were beginning long-term psychotherapy. There was no significant difference between the groups on locus of control prior to treatment and internality did not significantly increase in the noncrisis group over the six week period.

The author suggests that a person in crisis finds his usual coping mechanisms ineffective and a resulting feeling of powerlessness ensues. This is reflected in an elevated IE score (more external). As the individual begins to resolve the crisis, he returns to old coping responses and/or develops new ones and his feelings of helplessness decrease. Concurrently his IE score decreases (i.e., becomes more internal).

In interpreting the results of his study Smith hypothesized that crisis intervention treatment may significantly increase internality. He offered, as an alternate hypothesis, the possibility that those individuals who seek treatment in a crisis may be highly internal people who, as they find their normal coping responses are no longer effective, become overwhelmed by feelings of helplessness and seek help. The immediate situationally induced stress is reflected in an elevated IE score. As the crisis resolves the individual returns to his normal level of IE functioning.

The high internal-external locus of control scores obtained in the present study could support Smith's (1970) hypothesis that

individuals in crisis score more externally on measures of locus of control. An additional hypothesis may also help explain the high ANSIE-G scores obtained in the present study. The subjects in this study appeared to feel extremely helpless. None of them wanted to go to a nursing home, yet none of them were able to alter the situation. Many of them even had no choice of nursing home. In view of this, the high ANSIE-G scores may somewhat accurately reflect reality in that the individual had little control over his environment.

Another interesting finding of the present study is the indication that those individuals who perceived their stay in the nursing home to be temporary were rated as less hostile and had fewer negative ABS statements than those who believed they would be permanent residents of the nursing home. It should be pointed out that the individual's perception (or verbalization) of expected length of stay did not necessarily coincide with reality. For example, some individuals insisted that they were only going to stay in the facility until they regained their health in spite of the fact that their relatives had already sold their property and they had no place to reside in the community.

Because there were no subjects who believed they had the choice of going to a nursing home or living in the community (category #3) it was impossible to assess the importance of perceived amount of choice. The data pertinent to perceived amount of choice indicated that the only variable significantly effected was Day 10 MAACL hostility scores (those subjects who felt they had a choice of home were less hostile). The data indicating that the EI Group subjects were more influenced by perceived amount of choice (i.e., numerous variables were related to

degree of choice) may be spurious due to the small sample size of the partial choice category ($n = 3$).

The mortality statistics from the present study revealed that of the original 53 subjects, 9.4% died before the two-month follow-up. It is not possible to make meaningful comparisons between this finding, based on two-month data, and that of other investigators based on longer periods of time. However, these mortality rates do not appear to be incongruent with the results reported by Aldrich and Mendkoff (1963), Camargo and Preston (1945), and Boureston and Tars (1974). The 9.4% mortality in only eight weeks is surprisingly high in view of the fact that none of these individuals were considered to be terminally ill by their attending physicians.

The current trend of increasing nursing home placements for the elderly shows no signs of reversing. Methods of attenuating the stress engendered by this placement are desperately needed. Future research might explore the efficacy of combining the two treatments employed in the present study and lengthening the post-relocation supportive therapy. The extremely short duration of the treatments in the present study might have severely limited their effectiveness. Maximum benefit might be obtained if the same individual served as therapist from pre-location throughout the first several months of post-relocation.

Future investigators should consider the efficacy of an extended longitudinal design in assessing the effects of various intervention strategies.

Summary of Findings

In conclusion, the results of the current study indicated the following:

1. The ST Group was rated as significantly better adjusted than the C Group on the Day 14 staff ratings.

2. The EI Group scored significantly higher on the MAACL anxiety scores (for Days 6, 10, and 14 combined) than did the ST and C Group.

3. The ST Group subjects were rated as significantly better adjusted than EI and C Group subjects with the Day 14 and two-month data combined.

4. Subjects, irrespective of group membership, were rated as less well adjusted, more depressed, and more hostile at two months than at Day 14.

5. Individuals in the EI Group who believed they had no choice in going to a nursing home and no choice in the specific home evidenced more anxiety, depression, and hostility (as measured by the MAACL) than did those EI subjects who believed they had a choice in home. Members of the C Group who believed they had a choice in the home scored lower on the MAACL Pre-Hostility measure than did those in the No Choice category.

6. Subjects in the EI Group who expected their stay in the nursing home to be temporary were rated as significantly less hostile on Day 14 than were those EI Group subjects who believed they would be permanent residents. C Group subjects who expected their stay to be temporary had significantly fewer Pre-ABS negative statements than those C Group subjects who expected to be permanent residents of the home.

7. Females, irrespective of group membership, had significantly higher MAACL anxiety scores on the Pre-treatment, Day 6, Day 10,

and Day 14 than did the males. Females also had higher MAACL depression scores on Day 14.

8. Subjects did not differ significantly as a function of group membership on the measure of internal-external locus of control. However, the data indicated the individuals in this study were functioning at a very external level (i.e., believed their lives were controlled by chance, fate, or powerful others).

9. The mortality statistics indicated that 9.4% of the original 53 subjects died before the two-month follow-up.

APPENDIX A

INSTRUCTIONS TO THERAPISTS

INSTRUCTIONS TO THERAPISTS

Emotional Inoculation

The following are stress factors commonly encountered by elderly people admitted to nursing homes. All of these topics must be discussed with the patient during the three sessions prior to his entering the home. All sessions should be approximately fifty minutes long.

Day 1

I. Introduction and establishing rapport. The therapist should include such things as finding out about the person "as a person" (e.g., where he's from, information about his family, his occupation, where he was living before he came to the hospital). This should lead to an exploration of what his feelings and expectations regarding living in a nursing home.

II. Stress factors.

1. Missing familiar aspects of home.

Example: "One of the things that many people who move to a nursing home find at first is that they miss their own home and all the familiar things about it. Maybe you've thought about that already . . . ."

Discuss missing their own furniture, neighbors, pets or neighborhood animals, etc. Much of what you talk about will depend on where the person has been living immediately prior to hospitalization.

2. Feeling like a stranger at first--feeling lonely.

3. There are a lot of "old" people there. Some are sick (physically) and some display abnormal behavior (emotional problems).

Example: "Another thing that many people find they have to get used to is the fact that there are a lot of old people there. Some are in wheelchairs--a few others might be confused at times . . . ."

The therapist will want to discuss any fears that the patient may have regarding the possibility of his becoming "like them." The therapist should guard against her own tendencies to use denial (e.g., if the patient does express a concern about this don't say "Oh, you won't be like that--you're healthy.") Try to reflect some of the feelings and fears that might be behind the person's comments on this subject--e.g., "That must be kind of a scary feeling . . . ."

Before leaving, tell the person what time you would like to return the next day.

Day 2

4. Loss of control over many of the routine things of daily living.

Example: "Another thing that many people find pretty frustrating and hard to accept at first is not being able to have full say over things they're used to deciding for themselves. Things like when to eat--when to get up--when to go to bed."

Allow patient to react to this. Will this interfere with his routine--is he used to eating meals at certain times--is he used to eating alone or with others--does he get up early or late--does he go to bed early or late.

5. Smoking rules.

All homes allow smoking only in the main areas (not in person's room). Usually they will keep his cigarettes at the main desk and he can ask for them when he wants one.

6. Limited funds on person.

The homes usually prefer that each resident keep only a minimum amount of money on his person or in his room. When he needs additional money, he can obtain it from the main office and it is put on his account. About the only thing to spend money on is vending machines.

Day 3

7. Lack of privacy.

All rooms have toilets and a sink. The bath tubs and shower facilities are centrally located. The individual can still have privacy while bathing unless it is necessary for a nurse to assist him.

8. Living with a roommate.

The therapist will want to discuss the every day problems that can arise when one has to live with someone else--e.g., "They may want to talk when you don't feel like talking or when you want to sleep. They may want to watch a different television program or listen to a radio if they have one." Also mention the benefits (e.g., mutual support, companionship, etc.).

9. Supply the patient with as much information as possible about the particular home he will be going to.

a. Show them the picture of the exterior of the home.
b. Show them the location of the home on the map.
c. Tell them the times of each meal.
d. Tell them the administrator's name.
e. Tell them the size of the home (number of people there).
f. Show them the picture of the typical room and main room.
g. Explain that residents can wear their own clothes (bathrobes, p.j.'s, or regular clothes).
h. Discuss the fact that each home has a chapel (with Sunday services).

Advantages

Begin by saying: "We've talked about some of the problems people sometimes encounter when they first go to a nursing home. Can you think of any advantages or things you might like about living there?"

Allow the person time to think about and discuss this. If he fails to talk about the following, the therapist might approach it like this: "Some people really like the fact that they don't have to worry about being sick or falling down and not having anyone there to help them. At the nursing home there are always professional staff on duty twenty-four hours a day."

"A big factor for some people is not being alone. Even if you don't know anyone when you first move there, you'll meet new people--many of them may be feeling the same way you do about a lot of things."

Supportive Therapy

The primary function of the short-term therapy conducted during the individual's first week in the home is to be supportive. The therapist will primarily need to be a good listener and let the patient know she understands his feelings. Again, the therapist will have to guard against denial (both her's and the patient's). Instead of trying to convince the patient that he's privileged to be there and that the world is all rosey, try to reflect what he's feeling.

Some patients may not be very verbal and may not express their feelings about being in a home. With these people the therapist may have to be more directive and at times it may seem more like a social visit. The effect can still be profound--even a totally noncommunicative patient can benefit from the knowledge that someone is interested in him.

The sessions should be a maximum of fifty minutes and may be shorter depending on the patient.

Day 1

1. The first part of the session should be devoted to introductions and establishing rapport.

2. The therapist should not follow a specific a priori plan and should allow the subject to direct the conversation. Some subjects may wish to discuss their current situation while others may want to talk about other aspects of their lives. Reflective listening should be the primary therapeutic technique.

3. Before leaving, tell the person what time you would like to return the next day.

Day 2

1. The therapist should follow essentially the same procedure as outlined for Day 1. She should be supportive and communicate to the subject that she is listening and understands his concerns.

2. Again, the therapist should consult with the subject regarding a convenient time to return the following day. She should also remind the subject that the next session would be their final one.

Day 3

1. The general procedure for Day 3 should be much the same as that of the previous sessions. If the subject has failed to mention any concerns he may have about residing in a nursing home, the therapist should attempt to explore concerns the patient may have by covering the stress factors outlined in the emotional-inoculation procedure. For example, to begin with, the subject might be asked if he found the smoking rules to be inconvenient or if he encountered any difficulties living with a roommate.

2. The therapist should remind the subject that a colleague will be visiting him in a few days to ask some questions similar to those he had initially answered before coming to the nursing home.

APPENDIX B

ASSESSMENT FORMS

ANSIE – FORM G

YES	NO		
___	___	1.	Do you believe that most problems will solve themselves if you just don't fool with them?
___	___	2.	Do you believe that you can stop yourself from catching a cold?
___	___	3.	Are some people just born lucky?
___	___	4.	Most of the time did you feel that getting good grades meant a great deal to you?
___	___	5.	Are you often blamed for things that just aren't your fault?
___	___	6.	Do you believe that if somebody studies hard enough he or she can pass any subject?
___	___	7.	Do you feel that most of the time it doesn't pay to try hard because things never turn out right anyway?
___	___	8.	Do you feel that if things start out well in the morning that it's going to be a good day no matter what you do?
___	___	9.	Do you feel that most of the time children listen to what their parents have to say?
___	___	10.	Do you believe that wishing can make good things happen?
___	___	11.	Most of the time do you find it hard to change a friend's (mind) opinion?
___	___	12.	Do you think that cheering more than luck helps a team to win?
___	___	13.	Did you feel that it was nearly impossible to change your parent's mind about anything?
___	___	14.	Do you believe that parents should allow children to make most of their own decisions?
___	___	15.	Do you feel that when you do something wrong there's very little you can do to make it right?
___	___	16.	Do you believe that most people are just born good at sports?
___	___	17.	Are most of the other people your age and sex stronger than you are?
___	___	18.	Do you feel that one of the best ways to handle most problems is just not to think about them?
___	___	19.	Do you feel that you have a lot of choice in deciding whom your friends are?
___	___	20.	If you find a four leaf clover, do you believe that it might bring you good luck?
___	___	21.	Did you often feel that whether or not you did your homework had much to do with what kind of grades you got?
___	___	22.	Do you feel that when a person your age is angry at you, there's little you can do to stop him or her?
___	___	23.	Have you ever had a good luck charm?
___	___	24.	Do you believe that whether or not people like you depends on how you act?
___	___	25.	Do your children usually help you if you ask them to?
___	___	26.	Have you felt that when people were angry with you it was usually for no reason at all?
___	___	27.	Most of the time, do you feel that you can change what might happen tomorrow by what you do today?
___	___	28.	Do you believe that when bad things are going to happen they just are going to happen no matter what you try to do to stop them?
___	___	29.	Do you think that people can get their own way if they just keep trying?
___	___	30.	Do you feel that when good things happen they happen because of hard work?
___	___	31.	Do you feel that when somebody your age wants to be your enemy there's little you can do to change matters?
___	___	32.	Do you feel that it's easy to get friends to do what you want them to do?
___	___	33.	Do you feel that when someone doesn't like you there's little you can do about it?
___	___	34.	Did you usually feel that it was almost useless to try in school because most other children were just plain smarter than you are?
___	___	35.	Are you the kind of person who believes that planning ahead makes things turn out better?
___	___	36.	Most of the time, do you feel that you have little to say about what your family decides to do?
___	___	37.	Do you think it's better to be smart than to be lucky?

LSI – A

LIFE SATISFACTION INDEX A

Here are some statements about life in general that people feel differently about. Would you read each statement on the list, and if you agree with it, put a check mark in the space under "AGREE." If you do not agree with a statement, put a check mark in the space under "DISAGREE." If you are not sure one way or the other, put a check mark in the space under "?." PLEASE BE SURE TO ANSWER EVERY QUESTION ON THE LIST. (Key: Score 1 point for each response marked X.)

	AGREE	DIS-AGREE	?
1. As I grow older, things seem better than I thought they would be.	___	___	___
2. I have gotten more of the breaks in life than most of the people I know.	___	___	___
3. This is the dreariest time of my life.	___	___	___
4. I am just as happy as when I was younger.	___	___	___
5. My life could be happier than it is now.	___	___	___
6. These are the best years of my life.	___	___	___
7. Most of the things I do are boring or monotonous.	___	___	___
8. I expect some interesting and pleasant things to happen to me in the future.	___	___	___
9. The things I do are as interesting to me as they ever were.	___	___	___
10. I feel old and somewhat tired.	___	___	___
11. I feel my age, but it does not bother me.	___	___	___
12. As I look back on my life, I am fairly well satisfied.	___	___	___
13. I would not change my past life even if I could.	___	___	___
14. Compared to other people my age, I've made a lot of foolish decisions in my life.	___	___	___
15. Compared to other people my age, I make a good appearance.	___	___	___
16. I have made plans for things I'll be doing a month or a year from now.	___	___	___
17. When I think back over my life, I didn't get most of the important things I wanted.	___	___	___
18. Compared to other people, I get down in the dumps too often.	___	___	___
19. I've gotten pretty much what I expected out of life.	___	___	___
20. In spite of what people say, the lot of the average man is getting worse, not better.	___	___	___

LIFE SATISFACTION INDEX B

(with scoring key)

Would you please comment freely in answer to the following questions?

1. What are the best things about being the age you are now? _____

2. What do you think you will be doing five years from now? How do you expect things will be different from the way they are now, in your life? _____

3. What is the most important thing in your life right now? _____

4. How happy would you say you are right now, compared with the earlier periods in your life? _____

5. Do you ever worry about your ability to do what people expect of you - to meet demands that people make on you? _____

6. If you could do anything you pleased, in what part of --------would you most like to live? _____

7. How often do you find yourself feeling lonely? _____

8. How often do you feel there is no point in living? _____

9. Do you wish you could see more of your close friends than you do, or would you like more time to yourself? _____

10. How much unhappiness would you say you find in your life today? _____

11. As you get older, would you say things seem to be better or worse than you thought they would be? _____

12. How satisfied would you say you are with your way of life? _____

ABS

Here are some questions about feelings that people answer differently. Please answer "YES" or "NO" to each question by placing a check mark in the appropriate column.

During the past few weeks did you ever feel...	YES	NO
1. Pleased about having accomplished something?	___	___
2. That things were going your way?	___	___
3. Proud because someone complimented you on something you had done?	___	___
4. Particularly excited or interested in something?	___	___
5. On top of the world?	___	___
6. So restless that you couldn't sit long in a chair?	___	___
7. Bored?	___	___
8. Depressed or very unhappy?	___	___
9. Very lonely or remote from other people?	___	___
10. Upset because someone criticized you?	___	___

_____
(Identification Number)

_____

STAFF RATING

The following person has agreed to participate in a research program. All information is strictly confidential and will not be disclosed to the nursing home, patient, or anyone else. Please answer the following questions carefully and honestly. Your cooperation is greatly appreciated.

1. Please rate _____'s general adjustment to the nursing home by placing an X in the space next to the appropriate description below.

   Very well adjusted _____
   Moderately well adjusted _____
   Adjusted _____
   Poorly adjusted _____
   Very poorly adjusted _____

2. How often does this individual demonstrate depression?

   _____ Several times a day
   _____ Several times a week
   _____ About once a week
   _____ Several times a month
   _____ Once a month (or less frequently)

3. How often does this individual demonstrate hostility (including anger directed toward the staff, other patients; refusing to cooperate, etc.)?

   _____ Several times a day
   _____ Several times a week
   _____ About once a week
   _____ Several times a month
   _____ Once a month (or less frequently)

Thank you for your assistance.

MARY CARMAN, M.A.
Psychology Intern

Date: _____

MULTIPLE AFFECT ADJECTIVE CHECK LIST

TODAY FORM

By Marvin Zuckerman and Bernard Lubin

Name..... Age..... Sex.....

Date..... Highest grade completed in school.....

DIRECTIONS: On this sheet you will find words which describe different kinds of moods and feelings. Mark an ☒ in the boxes beside the words which describe how you feel now - today. Some of the words may sound alike, but we want you to check all the words that describe your feelings. Work rapidly.

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MAA 001

	A	D	N
1 ☐ active	45 ☐ fit		89 ☐ peaceful
2 ☐ adventurous	46 ☐ forlorn		90 ☐ pleased
3 ☐ affectionate	47 ☐ frank		91 ☐ pleasant
4 ☐ afraid	48 ☐ free		92 ☐ polite
5 ☐ agitated	49 ☐ friendly		93 ☐ powerful
6 ☐ agreeable	50 ☐ frightened		94 ☐ quiet
7 ☐ aggressive	51 ☐ furious		95 ☐ reckless
8 ☐ alive	52 ☐ gay		96 ☐ rejected
9 ☐ alone	53 ☐ gentle		97 ☐ rough
10 ☐ amiable	54 ☐ glad		98 ☐ sad
11 ☐ amused	55 ☐ gloomy		99 ☐ safe
12 ☐ angry	56 ☐ good		100 ☐ satisfied
13 ☐ annoyed	57 ☐ good-natured		101 ☐ secure
14 ☐ awful	58 ☐ grim		102 ☐ shaky
15 ☐ bashful	59 ☐ happy		103 ☐ shy
16 ☐ bitter	60 ☐ healthy		104 ☐ soothed
17 ☐ blue	61 ☐ hopeless		105 ☐ steady
18 ☐ bored	62 ☐ hostile		106 ☐ stubborn
19 ☐ calm	63 ☐ impatient		107 ☐ stormy
20 ☐ cautious	64 ☐ incensed		108 ☐ strong
21 ☐ cheerful	65 ☐ indignant		109 ☐ suffering
22 ☐ clean	66 ☐ inspired		110 ☐ sullen
23 ☐ complaining	67 ☐ interested		111 ☐ sunk
24 ☐ contented	68 ☐ irritated		112 ☐ sympathetic
25 ☐ contrary	69 ☐ jealous		113 ☐ tame
26 ☐ cool	70 ☐ joyful		114 ☐ tender
27 ☐ cooperative	71 ☐ kindly		115 ☐ tense
28 ☐ critical	72 ☐ lonely		116 ☐ terrible
29 ☐ cross	73 ☐ lost		117 ☐ terrified
30 ☐ cruel	74 ☐ loving		118 ☐ thoughtful
31 ☐ daring	75 ☐ low		119 ☐ timid
32 ☐ desperate	76 ☐ lucky		120 ☐ tormented
33 ☐ destroyed	77 ☐ mad		121 ☐ understanding
34 ☐ devoted	78 ☐ mean		122 ☐ unhappy
35 ☐ disagreeable	79 ☐ meek		123 ☐ unsociable
36 ☐ discontented	80 ☐ merry		124 ☐ upset
37 ☐ discouraged	81 ☐ mild		125 ☐ vexed
38 ☐ disgusted	82 ☐ miserable		126 ☐ warm
39 ☐ displeased	83 ☐ nervous		127 ☐ whole
40 ☐ energetic	84 ☐ obliging		128 ☐ wild
41 ☐ enraged	85 ☐ offended		129 ☐ willful
42 ☐ enthusiastic	86 ☐ outraged		130 ☐ wilted
43 ☐ fearful	87 ☐ panicky		131 ☐ worrying
44 ☐ fine	88 ☐ patient		132 ☐ young

APPENDIX C

RAW DATA

TABLE 12

MAACL ANXIETY SCORES FOR GROUPS EI, ST, AND C

Subject	Pre	Day 6	Day 10	Day 14	2 Mo
			EI Group		
1	15	13	10	11	-
2	12	13	11	7	-
3	14	8	10	10	-
4	10	9	8	6	-
5	5	8	11	13	9
6	9	8	12	9	-
7	15	13	11	14	-
8	10	14	15	11	10
9	10	12	10	10	10
10	5	8	4	4	7
11	10	11	11	10	9
12	12	9	9	9	9
			ST Group		
13	10	7	7	12	9
14	1	4	4	3	6
15	7	12	11	12	-
16	8	8	6	8	10
17	7	6	5	4	6
18	6	6	5	7	7
19	8	3	3	13	-
20	17	19	8	2	10
21	3	7	10	8	11
22	14	6	9	9	-
23	10	8	7	8	9
24	8	7	7	6	8
			C Group		
25	18	16	15	13	-
26	9	10	13	14	10
27	11	12	10	10	10
28	7	13	5	7	6
29	10	4	5	5	-
30	7	7	10	14	16
31	14	9	10	3	-
32	12	3	4	5	5
33	10	10	11	9	10
34	7	5	5	7	9
35	7	6	7	7	7
36	7	7	8	7	16

TABLE 13

MAACL DEPRESSION SCORES FOR GROUPS EI, ST, AND C

Subject	Pre	Day 6	Day 10	Day 14	2 Mo
			EI Group		
1	26	18	23	23	-
2	24	23	29	21	-
3	23	18	23	20	-
4	24	20	18	18	-
5	8	14	14	28	26
6	23	13	19	20	-
7	26	26	22	21	-
8	13	22	23	19	15
9	23	22	19	20	22
10	18	28	16	9	15
11	20	20	20	22	19
12	18	19	21	18	19
			ST Group		
13	22	15	21	21	16
14	12	13	13	11	13
15	10	17	23	21	-
16	28	20	19	23	30
17	16	10	11	12	10
18	16	16	15	13	13
19	12	11	6	21	-
20	30	30	14	21	19
21	11	19	17	19	24
22	27	25	23	22	-
23	19	17	17	16	18
24	18	17	15	16	17
			C Group		
25	30	21	23	25	-
26	29	21	21	22	17
27	23	22	21	22	24
28	17	18	13	12	13
29	18	10	10	10	-
30	10	18	18	26	27
31	21	26	19	17	-
32	21	8	8	13	20
33	28	22	19	20	18
34	12	14	15	12	16
35	13	17	16	17	23
36	11	8	10	12	25

TABLE 14

MAACL HOSTILITY SCORES FOR GROUPS EI, ST, AND C

Subject	Pre	Day 6	Day 10	Day 14	2 Mo
			EI Group		
1	11	2	12	9	-
2	13	8	12	4	-
3	13	8	12	11	-
4	3	9	4	5	-
5	3	6	3	8	6
6	10	10	10	13	-
7	12	13	12	11	-
8	4	7	9	9	5
9	7	11	12	12	13
10	4	9	4	2	8
11	10	9	10	9	8
12	6	8	8	8	8
			ST Group		
13	12	7	8	8	7
14	1	4	4	5	3
15	8	7	13	10	-
16	4	7	6	7	11
17	3	4	4	1	4
18	7	5	6	6	6
19	5	5	5	10	-
20	3	16	10	14	11
21	1	7	9	12	12
22	15	8	8	10	-
23	7	8	8	9	8
24	5	6	7	8	8
			C Group		
25	7	2	7	5	-
26	10	9	9	11	11
27	12	14	13	13	12
28	7	8	5	5	2
29	7	2	3	3	-
30	1	8	5	11	13
31	12	3	2	1	-
32	13	8	6	7	6
33	17	6	11	10	13
34	4	3	3	5	3
35	1	3	4	3	5
36	1	3	2	3	9

TABLE 15

ABS SCORES FOR GROUPS EI, ST, AND C

Subject	EI Group Pre ABS	EI Group Day 10 ABS	EI Group 2 Mo ABS	Subject	ST Group Pre ABS	ST Group Day 10 ABS	ST Group 2 Mo ABS	Subject	C Group Pre ABS	C Group Day 10 ABS	C Group 2 Mo ABS
1	8	10	-	13	7	9	9	25	7	6	-
2	7	7	-	14	14	7	12	26	9	6	8
3	8	8	-	15	9	8	-	27	10	10	10
4	9	10	-	16	6	10	10	28	8	11	9
5	9	10	7	17	9	12	10	29	12	14	-
6	8	7	-	18	13	11	10	30	10	7	7
7	11	11	-	19	14	10	-	31	12	11	-
8	11	9	10	20	10	9	8	32	10	14	9
9	8	10	11	21	14	6	9	33	6	6	9
10	10	10	10	22	6	9	-	34	12	12	9
11	8	9	9	23	11	9	10	35	10	9	10
12	10	10	10	24	10	9	9	36	12	13	6

TABLE 16

LSI-A AND LSI-B SCORES FOR GROUPS EI, ST, AND C

Subject	Day 10 LSI-A	2 Mo LSI-A	Day 14 LSI-B	2 Mo LSI-B
		EI Group		
1	7	-	14	-
2	4	-	10	-
3	4	-	7	-
4	7	-	13	-
5	7	8	8	-
6	4	-	1	9
7	7	-	7	-
8	3	5	6	-
9	7	8	11	0
10	6	7	3	2
11	7	8	7	9
12	6	7	8	10
				8
		ST Group		
13	8	4	8	9
14	6	10	15	15
15	5	-	11	-
16	9	11	7	9
17	8	10	14	14
18	11	12	12	12
19	16	-	19	-
20	1	2	3	3
21	9	5	10	11
22	11	-	4	-
23	7	7	12	10
24	8	8	10	11
		C Group		
25	2	-	5	-
26	11	9	3	7
27	4	3	5	6
28	7	10	12	10
29	14	-	14	-
30	6	6	9	3
31	3	-	8	-
32	11	6	9	6
33	8	11	14	12
34	11	10	12	13
35	8	12	15	14
36	12	5	16	5

TABLE 17

I-E SCORES FOR GROUPS EI, ST, AND C

EI Group			ST Group			C Group		
Subject	Day 6 I-E	2 Mo I-E	Subject	Day 6 I-E	2 Mo I-E	Subject	Day 6 I-E	2 Mo I-E
1	15	-	13	16	16	25	11	-
2	14	-	14	15	13	26	19	17
3	14	-	15	18	-	27	15	19
4	7	-	16	17	20	28	13	11
5	16	16	17	11	9	29	20	-
6	15	-	18	20	11	30	19	19
7	15	-	19	20	-	31	15	-
8	15	16	20	23	29	32	17	11
9	19	18	21	11	17	33	11	11
10	20	11	22	7	-	34	9	13
11	15	14	23	16	14	35	13	18
12	15	11	24	16	15	36	18	19

TABLE 18

ADJUSTMENT, DEPRESSION, AND HOSTILITY RATINGS FOR GROUPS EI, ST, AND C

Subject	Day 14			2 Mo		
	Adj.	Dep.	Host.	Adj.	Dep.	Host.
			EI Group			
1	4.0	3.0	5.0	-	-	-
2	3.5	2.0	5.0	-	-	-
3	2.5	1.5	2.0	-	-	-
4	5.0	4.0	5.0	-	-	-
5	4.0	4.5	5.0	3.5	2.5	3.5
6	4.0	2.5	2.5	-	-	-
7	5.0	4.0	4.5	-	-	-
8	5.0	5.0	5.0	5.0	5.0	5.0
9	5.0	3.0	5.0	3.5	2.0	3.5
10	5.0	5.0	5.0	3.5	4.5	5.0
11	4.5	4.0	4.0	4.0	3.5	4.0
12	5.0	4.5	4.5	4.5	3.5	4.5
			ST Group			
13	5.0	5.0	5.0	4.0	3.0	5.0
14	5.0	5.0	5.0	5.0	5.0	5.0
15	5.0	4.5	5.0	-	-	-
16	5.0	5.0	5.0	3.5	1.0	5.0
17	5.0	5.0	5.0	5.0	5.0	5.0
18	5.0	2.0	5.0	4.5	4.0	4.0
19	5.0	5.0	5.0	-	-	-
20	5.0	5.0	5.0	5.0	5.0	5.0
21	5.0	5.0	5.0	5.0	5.0	5.0
22	5.0	4.5	5.0	-	-	-
23	4.5	3.5	5.0	5.0	3.5	4.5
24	5.0	4.5	4.5	5.0	4.0	4.5
			C Group			
25	4.0	2.5	5.0	-	-	-
26	4.5	3.5	5.0	4.5	3.5	3.5
27	4.0	4.5	5.0	4.5	4.0	5.0
28	5.0	5.0	5.0	5.0	5.0	5.0
29	5.0	5.0	5.0	-	-	-
30	5.0	4.5	5.0	5.0	5.0	5.0
31	3.5	1.0	5.0	-	-	-
32	2.5	5.0	3.5	3.5	2.0	3.5
33	4.0	3.5	4.0	4.5	4.5	4.5
34	4.0	3.5	4.5	4.0	3.0	4.5
35	3.0	4.5	5.0	1.5	1.0	2.0
36	4.5	5.0	5.0	4.0	4.0	4.0

APPENDIX D

CORRELATION MATRICES

Identification of Variables in Correlation Matrices

Variable #	Variable Name
1	Sex
2	Choice in going
3	Expected Stay
4	Pre Anxiety
5	Day 6 Anxiety
6	Day 10 Anxiety
7	Day 14 Anxiety
8	Pre Depression
9	Day 6 Depression
10	Day 10 Depression
11	Day 14 Depression
12	Pre Hostility
13	Day 6 Hostility
14	Day 10 Hostility
15	Day 14 Hostility
16	Pre ABS
17	Day 10 ABS
18	Day 10 LSI-A
19	Day 14 LSI-B
20	Day 14 Adj. Rating
21	Day 14 Dep. Rating
22	Day 14 Host. Rating
23	Day 6 I-E
24	Pre ABS Pos.
25	Pre ABS Neg.
26	Day 10 ABS Pos.
27	Day 10 ABS Neg.

TABLE 19

CORRELATION MATRIX--CONTROL GROUP

	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1	1.00													
2	-0.11	1.00												
3	0.23	0.31	1.00											
4	0.08	-0.02	0.53	1.00										
5	0.56	-0.15	0.24	0.44	1.00									
6	0.38	0.00	0.25	0.51	0.69	1.00								
7	0.13	0.18	-0.19	0.03	0.48	0.70	1.00							
8	-0.00	-0.33	0.09	0.69	0.58	0.71	0.45	1.00						
9	0.47	-0.43	0.04	0.36	0.68	0.68	0.33	0.56	1.00					
10	0.38	-0.15	0.09	0.40	0.71	0.86	0.63	0.62	0.88	1.00				
11	0.40	-0.05	-0.02	0.35	0.55	0.84	0.81	0.58	0.66	0.84	1.00			
12	-0.11	-0.61	0.02	0.48	0.22	0.19	-0.13	0.72	0.39	0.22	0.10	1.00		
13	0.04	-0.51	-0.22	-0.14	0.22	0.08	0.36	0.28	0.24	0.22	0.35	0.37	1.00	
14	0.12	-0.45	-0.10	0.21	0.48	0.47	0.52	0.69	0.44	0.54	0.57	0.61	0.73	1.00
15	-0.01	-0.22	-0.31	-0.09	0.23	0.36	0.69	0.45	0.28	0.43	0.62	0.33	0.83	0.84
16	-0.33	0.33	0.33	-0.27	-0.65	-0.49	-0.51	-0.68	-0.43	-0.46	-0.51	-0.41	-0.25	-0.65
17	-0.37	0.13	0.25	-0.18	-0.61	-0.83	-0.80	0.61	-0.70	-0.84	-0.86	-0.12	-0.18	-0.54
18	-0.70	0.21	-0.25	-0.55	-0.72	-0.58	-0.26	-0.38	-0.77	-0.72	-0.66	-0.17	-0.18	-0.29
19	0.11	0.21	-0.11	-0.54	-0.49	-0.60	-0.53	-0.68	-0.53	-0.64	-0.64	-0.35	-0.50	-0.50
20	0.03	0.49	0.17	-0.32	0.23	0.08	0.36	-0.13	-0.01	0.03	0.02	-0.38	0.04	-0.12
21	-0.17	0.10	-0.25	-0.60	-0.37	-0.57	0.00	-0.44	-0.70	-0.63	-0.36	-0.32	0.30	0.03
22	0.41	0.27	0.39	-0.13	0.43	0.37	0.28	-0.12	0.39	0.43	0.23	-0.47	-0.14	-0.14
23	-0.25	0.09	0.19	-0.16	-0.36	-0.06	0.06	-0.07	-0.33	-0.32	-0.02	-0.13	0.20	-0.13
24	-0.32	0.05	-0.34	-0.48	-0.57	-0.28	-0.25	-0.53	-0.22	-0.25	-0.33	-0.38	-0.34	-0.58
25	0.08	-0.32	-0.67	-0.04	0.30	0.35	0.40	0.43	0.32	0.33	0.32	0.22	-0.00	0.32
26	-0.36	0.01	-0.19	-0.35	-0.74	-0.81	-0.61	-0.63	-0.73	-0.87	-0.70	-0.34	-0.28	-0.65
27	0.25	-0.18	-0.50	-0.00	0.29	0.55	0.65	0.38	0.42	0.52	0.68	-0.09	0.04	0.26

TABLE 19--Continued

	15	16	17	18	19	20	21	22	23	24	25	26	27
15	1.00												
16	-0.44	1.00											
17	-0.51	0.71	1.00										
18	-0.12	0.38	0.50	1.00									
19	-0.50	0.23	0.43	0.49	1.00								
20	0.10	0.08	-0.07	0.13	-0.00	1.00							
21	0.21	0.06	0.38	0.57	0.41	0.22	1.00						
22	-0.13	0.13	-0.28	-0.27	-0.05	0.66	-0.18	1.00					
23	0.12	0.39	0.23	0.39	-0.10	0.35	0.36	0.06	1.00				
24	-0.34	0.57	0.22	0.41	0.25	-0.16	-0.14	-0.08	0.03	1.00			
25	0.24	0.77	-0.69	-0.06	-0.03	-0.18	-0.16	-0.18	-0.40	0.05	1.00		
26	-0.53	0.50	0.73	0.57	0.51	-0.17	0.50	-0.34	0.36	0.37	-0.29	1.00	
27	0.31	-0.62	-0.84	-0.27	-0.21	-0.03	-0.14	0.13	-0.04	-0.02	0.75	-0.25	1.00

TABLE 20

CORRELATION MATRIX--EI GROUP

	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1	1.00													
2	-0.11	1.00												
3	0.19	0.19	1.00											
4	0.34	-0.71	-0.07	1.00										
5	0.54	-0.54	0.43	0.50	1.00									
6	0.42	-0.58	-0.20	0.28	0.51	1.00								
7	0.47	-0.40	-0.36	0.44	0.41	0.59	1.00							
8	0.09	-0.42	0.15	0.69	0.25	-0.16	-0.05	1.00						
9	0.03	0.05	0.45	0.07	0.40	-0.38	-0.32	0.21	1.00					
10	0.29	-0.70	0.20	0.73	0.63	0.39	0.08	0.48	0.20	1.00				
11	0.58	-0.21	-0.37	0.21	0.20	0.63	0.75	-0.16	-0.63	0.08	1.00			
12	0.20	-0.71	-0.26	0.72	0.29	0.23	0.28	0.67	-0.00	0.70	0.23	1.00		
13	-0.14	-0.07	-0.25	-0.04	-0.07	-0.07	-0.23	0.24	0.39	-0.10	-0.29	0.08	1.00	
14	0.28	-0.92	-0.04	0.78	0.58	0.44	0.39	0.63	0.06	0.74	0.21	0.85	0.10	1.00
15	0.13	-0.62	-0.49	0.38	0.10	0.59	0.65	0.17	-0.47	0.02	0.47	0.36	0.20	0.56
16	-0.19	0.18	-0.06	-0.09	0.10	0.00	0.12	-0.36	0.41	-0.25	-0.31	-0.47	0.23	-0.33
17	0.11	0.35	0.06	-0.01	0.10	-0.34	0.29	-0.12	0.35	-0.46	-0.06	-0.44	0.05	-0.32
18	0.16	0.35	-0.05	-0.05	-0.06	-0.44	0.21	0.10	0.09	-0.50	0.17	-0.20	0.04	-0.25
19	0.62	0.01	0.44	0.42	0.39	-0.03	0.22	0.29	0.00	0.24	0.35	0.01	-0.39	0.13
20	-0.24	0.12	0.31	-0.15	0.27	-0.17	-0.17	-0.00	0.51	-0.26	-0.45	-0.51	0.36	-0.23
21	-0.12	0.37	0.21	-0.50	0.09	-0.15	-0.03	-0.51	0.35	-0.57	-0.24	-0.78	0.16	-0.50
22	0.26	0.37	0.64	-0.19	0.46	-0.17	-0.02	-0.23	0.47	-0.05	-0.04	-0.49	-0.21	-0.32
23	-0.30	-0.14	0.02	-0.31	0.07	-0.10	0.08	-0.29	0.28	-0.17	-0.21	-0.02	0.06	0.12
24	-0.35	0.53	-0.00	-0.55	-0.23	-0.06	-0.02	-0.45	-0.12	-0.68	-0.14	-0.71	-0.05	-0.69
25	-0.12	0.30	0.07	-0.43	-0.34	-0.06	-0.17	-0.03	-0.59	-0.37	0.21	-0.15	-0.32	-0.29
26	0.14	0.71	0.12	-0.44	-0.08	-0.24	0.16	-0.55	0.01	-0.54	0.19	-0.63	-0.40	-0.71
27	0.08	0.42	-0.00	-0.52	-0.19	0.09	-0.11	-0.52	-0.37	-0.15	0.32	-0.23	-0.51	-0.48

TABLE 20--Continued

	15	16	17	18	19	20	21	22	23	24	25	26	27
15	1.00												
16	-0.07	1.00											
17	-0.09	0.60	1.00										
18	-0.06	0.03	0.76	1.00									
19	-0.13	-0.27	0.34	0.46	1.00								
20	-0.15	0.60	0.59	0.35	0.00	1.00							
21	-0.17	0.64	0.71	0.42	-0.02	0.80	1.00						
22	-0.56	0.28	0.57	0.41	0.53	0.52	0.63	1.00					
23	0.10	0.13	0.10	-0.03	-0.43	0.10	0.36	0.09	1.00				
24	-0.12	0.55	0.37	0.20	-0.30	0.53	0.59	0.21	-0.02	1.00			
25	-0.03	-0.59	-0.31	0.16	0.02	-0.17	-0.14	-0.11	-0.17	0.34	1.00		
26	-0.46	0.34	0.64	0.58	0.29	0.23	0.55	0.67	-0.02	0.56	0.16	1.00	
27	-0.44	-0.30	-0.32	-0.07	-0.04	-0.34	-0.08	0.14	-0.14	0.27	0.59	0.48	1.00

TABLE 21

CORRELATION MATRIX--ST GROUP

	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1	1.00													
2	0.23	1.00												
3	0.11	0.12	1.00											
4	0.50	-0.04	-0.12	1.00										
5	0.24	-0.08	0.04	0.60	1.00									
6	0.15	0.28	0.02	0.25	0.53	1.00								
7	0.36	0.27	-0.17	-0.01	-0.30	0.17	1.00							
8	0.15	-0.07	-0.35	0.79	0.46	0.09	-0.24	1.00						
9	0.26	-0.00	0.03	0.69	0.73	0.57	-0.25	0.71	1.00					
10	0.17	0.50	-0.28	0.27	0.29	0.78	0.32	0.32	0.46	1.00				
11	0.35	0.20	-0.15	0.51	0.34	0.44	0.54	0.44	0.53	0.46	1.00			
12	0.56	0.53	-0.18	0.49	-0.07	0.29	0.55	0.33	0.19	0.64	0.38	1.00		
13	0.27	-0.11	-0.00	0.78	0.89	0.45	-0.25	0.65	0.87	0.24	0.49	0.05	1.00	
14	0.38	0.25	0.02	0.37	0.69	0.89	0.29	0.07	0.55	0.67	0.53	0.29	0.58	1.00
15	0.39	-0.01	0.07	0.47	0.55	0.56	0.22	0.22	0.70	0.26	0.68	0.12	0.73	0.70
16	-0.16	-0.30	0.42	-0.56	-0.26	-0.34	-0.15	-0.69	-0.36	-0.67	-0.48	-0.60	-0.24	-0.24
17	0.15	-0.37	-0.07	0.29	-0.10	-0.50	-0.04	0.27	-0.24	-0.26	-0.22	0.17	-0.15	-0.43
18	0.10	-0.15	0.05	-0.24	-0.79	-0.44	0.56	-0.26	-0.47	-0.27	0.05	0.23	-0.60	-0.47
19	-0.22	-0.14	0.18	-0.67	-0.64	-0.61	0.20	-0.80	-0.89	-0.68	-0.50	-0.37	-0.73	-0.51
20	0.35	0.21	0.42	-0.12	-0.01	-0.02	-0.02	-0.02	0.02	-0.06	0.17	-0.08	-0.09	-0.08
21	-0.19	0.20	-0.00	0.04	0.09	0.08	-0.01	0.09	0.03	-0.09	0.41	-0.23	0.14	0.00
22	-0.25	0.21	0.42	0.01	0.05	-0.02	0.14	0.01	0.02	0.06	0.17	0.06	0.09	0.04
23	0.36	-0.30	-0.06	0.17	0.45	-0.25	-0.01	0.04	0.08	-0.31	0.09	-0.26	0.36	0.15
24	-0.28	-0.37	0.37	-0.65	-0.47	-0.50	-0.05	-0.69	-0.51	-0.77	-0.41	-0.64	-0.44	-0.45
25	0.01	0.18	-0.41	0.39	0.00	0.13	0.22	0.58	0.15	0.47	0.48	0.46	0.01	-0.00
26	0.33	-0.35	0.22	0.52	0.16	-0.47	0.03	0.28	0.12	-0.53	0.23	-0.01	0.33	-0.19
27	0.13	0.08	0.28	0.15	0.26	0.11	0.07	-0.03	0.36	-0.20	0.45	-0.19	0.47	0.28

TABLE 21--Continued

	15	16	17	18	19	20	21	22	23	24	25	26	27
15	1.00												
16	0.06	1.00											
17	-0.53	-0.30	1.00										
18	-0.18	0.18	0.28	1.00									
19	-0.45	0.66	0.13	0.49	1.00								
20	-0.06	-0.07	0.01	0.10	-0.10	1.00							
21	0.13	-0.21	-0.30	-0.16	-0.08	0.34	1.00						
22	0.03	0.02	0.01	0.02	0.02	-0.09	-0.00	1.00					
23	0.27	0.26	0.16	-0.22	0.10	-0.01	-0.21	-0.01	1.00				
24	-0.08	0.92	-0.17	0.42	0.78	0.01	-0.06	0.01	0.15	1.00			
25	0.20	0.92	0.38	0.08	-0.44	0.15	0.33	-0.03	-0.34	-0.71	1.00		
26	0.22	0.09	0.49	0.23	0.13	-0.01	0.03	0.20	0.51	0.16	-0.00	1.00	
27	0.76	0.40	-0.61	-0.08	-0.01	-0.03	0.36	0.17	0.23	0.33	-0.41	0.38	1.00

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