

The Relaxation Response and Reframing
as an Intervention with
Family Caregiver Stress

By

Teresa Keane, R.N., B.S.N.

A Master's Research Project

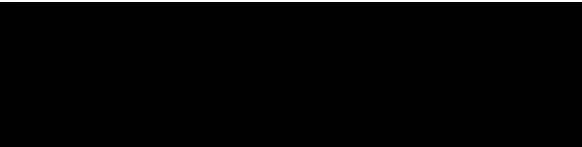
Presented to
Oregon Health Sciences University
School of Nursing
in partial fulfillment of
the requirements for the degree of
Master of Science

June 1, 1994

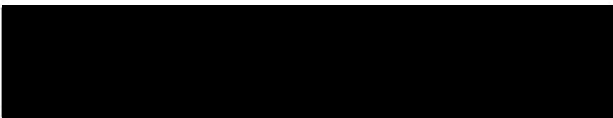
APPROVED:



Patricia G. Archbold, DnSc, RN, FAAN, Research Advisor, Professor, Department of Family Nursing, School of Nursing



Barbara J. Stewart, PhD, Committee Member, Professor, Department of Family Nursing, School of Nursing



Sheila M. Kokadek, PhD, RN, Department Chairperson, Associate Professor, Department of Family Nursing, School of Nursing

ACKNOWLEDGMENTS

This research was supported in part by the Alzheimer's Disease Center NIA Grant P30 AG08017.

ACKNOWLEDGMENTS

I would like to acknowledge a few people who have provided me with support and encouragement through the duration of this project.

Patricia G. Archbold, DNSc, FAAN, my research advisor, deserves special thanks for her inspiration and encouragement in the process and progress of this endeavor. Her wisdom and the generous gift of her time are most appreciated. I also gratefully acknowledge the expertise and kindness of Barbara J. Stewart, PhD, for her assistance in data analysis and continual support.

I would like to express my appreciation to Dr. Jeffery Kaye and Joyce Lear, RN, MSN, and the rest of the Aging and Alzheimer's Disease Center staff for sharing their expertise and wisdom in dealing with caregivers of Alzheimer's Disease patients.

Special thanks goes to my sons Maco and William for their unending love and support throughout my academic career. Also I wish to thank my friend John Houston for his support and assistance with data verification.

ABSTRACT

Research has shown that the demands of caregiving for a demented relative may take a physical, psychological, and emotional toll on the family caregiver. Many caregivers experience the negative effects of stress, depression, interference with social activities, and mental health problems. The practice of the relaxation response and reframing was used in an 8-week pilot study to teach family caregivers techniques in stress reduction. The relaxation response is an innate physiological response which counteracts the effects of the flight-or-flight response which humans experience when stress is perceived. It has been successful in the treatment of stress related illnesses such as cardiovascular disease, gastrointestinal disorders, chronic pain, insomnia, and infertility. Reframing intervenes in the stress response by teaching people to change their appraisal of an event or situation. This pilot study used a sample of 9 caregivers to persons with Alzheimer's disease. A convenience sample of caregivers were divided into the experimental (n=5) or the control (n=4) condition. Experimental caregivers received a total of 16 hours (2 hours/week for 8 weeks) of intervention in a group setting. The researcher led the group in discussions and practice. Data on the dependent variables of mood and stress were measured at baseline and at eight weeks (after completion of the intervention for the experimental group). The data was collected by mailed questionnaire. The effects of the intervention on the dependent variable were evaluated using a 2 x 2 (groups x time) repeated measures analysis of variance. Of the five subjects in the intervention group, clinically significant decreases in POMS subscales were as follows: one subject had five, one subject had four, one subject had two, and one had one. The subjects with no variability and low variability had initially low scores, many with

less than 0.5 at pretest. Overall in comparing means and standard deviations, changes in mood may be clinically significant with a larger sample.

TABLE OF CONTENTS

LIST OF TABLES	viii
PAPER FOR SUBMISSION	1
APPENDICES	
Appendix A - Changes Made In the Program	32
Appendix B - Intervention Manual	36
Appendix C - Literature Review Tables	60
Appendix D - MRP Proposal Reference List	116

LIST OF TABLES AND FIGURES

TABLES

1. Demographic characteristics of the sample	24
2. Means and standard deviations for intervention and control groups	25
3. F test for group x time interaction	26

FIGURES

1. Comparison of Mean Mood Disturbance between intervention and control groups	27
2. Subject # 1 summary of POMS pretest and posttest scores	28
3. Subject # 10 summary of POMS pretest and posttest scores	29
4. Subject # 5 summary of POMS pretest and posttest scores	30
5. Subject # 6 summary of POMS pretest and posttest scores	31

The Relaxation Response and Reframing as an
Intervention with Family Caregiver Stress

As the number of aging individuals has increased, the prevalence of dementia has also increased (Cummings, 1992). Significant numbers of older individuals need support ranging from occasional visits to complete assistance with activities of daily living (ADLs) (Bunting, 1989). In a national study of the non-institutionalized impaired elderly and their family caregivers, 42% had difficulty with at least 5 ADLs. Twenty percent were 85 years old or older and most lived at home with a family member (Stone, Cafferata, & Sangl, 1987). To keep a demented person at home, the presence of a capable caregiver is essential.

Caregivers have been shown to be at higher risk for increased health and psychological problems than the general population (Neundorfer, 1991). Many caregivers experience the negative effects of stress, depression, interference with social activities, and mental health problems (Given, Collins, & Given, 1988; Schultz & Williamson, 1991). Because of these consequences, we think that biopsychosocial interventions, designed to decrease the experience of caregiver distress, may be helpful in maintaining the health of this at risk population.

This research project was a pilot test of a biopsychosocial intervention that has been found successful with many medically-needy populations, on a new population, family caregivers of the demented elderly. The intervention was a combination of the relaxation response and reframing techniques. The term "relaxation response" describes a physiological mechanism inherent in each of us (Benson & Stuart, 1992). The relaxation response is an inborn set of physiological changes that offset those of the fight-or-flight response. These changes act simultaneously and in conjunction. The relaxation response is a counterbalancing mechanism of the fight-or-flight response which humans experience when stress is perceived (Selye, 1946).

Reframing is a technique designed to change the "frame" in which a person perceives an event so that the meaning associated with the event can be changed (Pesut, 1991). Adaptive thoughts serve as a buffer between a stressful event and a reaction to it (Gillis & Lanning, 1989). For this study, the reframing intervention was designed to decrease perceptions of stress and increase feelings of well-being.

Review of the Literature

Caregiver Stress

Nature of caregiver stress. Caring and caregiving are the foundation on which relationships are built. Caregiving is a healthy part of all positive relationships (Pearlin, Mullan, Semple, and Skaff, 1990). With dementia, the activities of caregiving can be transformed in ways that make them stressful and burdensome. The balance of give and take changes into a caregiver-carereceiver dynamic. Caring and affection may no longer be reciprocal. The stress that evolves from being the caregiver of a demented family member can have a global effect on the life of the caregiver (Pearlin, 1989).

Manifestations of caregiver stress. Many researchers have tried to identify and describe the stresses of caregiving (Zarit & Reever, 1980). An increased prevalence of physical and mental health problems have been found in this group (Baumgarten, 1989). Caregivers have more chronic conditions (including depression), prescription drug use, and doctor visits, than matched non-caregivers (Grafstrom, Fratiglioni, Sandman & Winblad, 1992; Haley, Levine, Brown, Berry, & Hughes, 1987). Burden has been reported primarily in the areas of mental health and social participation (George & Gwyther, 1986). Higher levels of anxiety, guilt, and self-blame have been noted as well as higher levels of annoyance and temper outbursts (Anthony-Bergstone, Zarit, & Gatz, 1988). Caregivers can develop resentment (Fengler, 1979), anxiety and

loneliness (Farkas, 1980). Many caregivers have identified stress from family conflicts (Bunting, 1989), lack of free time for socializing (Cantor, 1983), and social isolation (Archbold, 1980). Depression has been identified as a negative psychological consequence in many studies. It has been correlated with feelings of loss of control (Pagel, Becker, & Coppel, 1985) and lower self-esteem (Skaff, & Pearlin, 1992).

It is evident that caregiving can be physically, emotionally, and psychologically overwhelming. In study after study, variables have been identified which show higher levels of: depression, anxiety, guilt, self-blame, loneliness, and conflict in caregivers. In a study which used existentialism as a theoretical framework, caregivers who reported a higher level of burden also reported higher levels of powerlessness and lower levels of personal choice (Farran, Keane-Hagerty, & Salloway, 1991).

Interventions to Reduce Caregiver Stress

There have been many attempts to alleviate caregiver stress over the last two decades. Psychoeducational interventions have been designed to improve caregiver's ability by providing information and teaching coping skills. These interventions have been shown to reduce depression and increase moral (Lovett, 1988). The intervention used in this study used a psychoeducational format.

A meta-analytic review of caregiver interventions by (Knight, Lutzky, & Macofsky-Urban, 1993) showed group psychosocial interventions had a small positive effect on caregiver stress. Respite interventions and individual psychosocial interventions were moderately effective.

In a recent report not included in the meta-analysis (Williamson, 1993), ten strategies including reframing, catharsis, relaxation, and social support were evaluated for their effectiveness in preventing or reducing depression in caregivers of people with dementia. She found that increased use of relaxation

was related to fewer depressive symptoms when dealing with family members with memory loss. Acceptance was an effective coping strategy for the loss of communication with the demented relative. Seeking emotional support from others was positively associated with fewer symptoms of depression when coping with the family members decline.

Relaxation and Reframing

Relaxation. The early studies evaluating relaxation and reframing in western medicine were done in the area of cardiovascular medicine. The relaxation response was first evaluated as an intervention to treat hypertension (Benson, 1975). Later, it was determined that the effect of the relaxation response on lowering blood pressure lasted throughout the day after relaxation techniques were practiced (Agras, Allen, Kraemer, Schneider, & Taylor 1980). Significant reductions in blood pressure, cholesterol, triglycerides, weight, and body fat were found in outpatients who practiced relaxation and reframing techniques (Stuart, Caudill, Leserman, Dorrington, Friedman, & Benson, 1987). The relaxation response has also been found to be an effective intervention in lowering supraventricular tachycardia in the postoperative recovery of cardiac patients (Lesserman, Stuart, Mamish, & Benson, 1989). Progressive muscle relaxation has been used as a stress intervention with elderly people. It has been effective in the treatment of tension headaches (Arena, 1988) and improvement in memory training was shown with relaxation training (Yesavage, 1983).

Reframing. The literature on reframing describes it as an intervention aimed at changing one's appraisal of an event or situation. According to the stress and coping theory (Folkman, 1985), as an appraisal occurs, an event is judged as threatening and stress provoking or benign. Many appraisals are based on irrational beliefs which are stress provoking (Ellis, & Dryden, 1987). These irrational beliefs are expressed as "musts," "shoulds," and "oughts," and

lead to negative emotional states. Through observation and insight, behavioral patterns can be changed from unhealthy to healthy.

There has been success in using reframing to treat psychological illness. It increased perceptions of control over pain in subjects with ankylosing spondylitis (Basler, and Rehfisch, 1991). With psychotic patients, reframing has been shown to be as effective as medication (Corrigan, and Storzach, 1993). For a brief, effective, intervention, reframing has successfully allowed patients to change their perceptions to better cope with medical treatment (Eisendrath, 1993). A woman hospitalized for depression and chronic pain used reframing and imagery to enhance coping and achieve greater psychological stability (Murphy, Tosi, and Pariser, 1989).

Reframing has been used successfully to decrease stress in high anxiety professions. It has been used to assist teachers in managing stress which interfered with classroom performance (Stanton, 1989). Physicians have successfully used reframing to cope with death, mistakes, and to facilitate self-care (Quill, & Williamson, 1990). Supervisors at a VA hospital were taught reframing skills and were found to have greater job satisfaction and productivity (Frisch, 1989). Becoming the family caregiver of a demented family member becomes a lifestyle. Use of reframing in these cases may assist caregivers in managing stress.

Combined relaxation and reframing. Relaxation and reframing are two components in a program which has been found to reverse atherosclerosis (Ornish, et al. 1990). Other medical conditions which have been favorably treated are: chronic pain (Kabat-Zinn, 1982; Caudill, Schnable, Zuttermeister, Benson, & Friedman, 1991), psychosomatic illness (Hellman, Budd, Borysenko, McClelland, & Benson, 1990), insomnia (Jacobs, Benson, & Friedman, 1993), infertility (Domar, Seibel, & Benson, 1990), premenstrual syndrome (Goodale &

Domar, 1990), and problems with the immune system (Kiecolt-Glaser, et al. 1985). All studies showed positive effects on the physiological condition being studied. Psychological improvements were shown in the measured variables of: anxiety, hostility, depression, fatigue, stress, tension, anger, and total mood disturbance.

This pilot contains both relaxation and reframing approaches. The intervention is designed to increase the use of relaxation and reframing as coping skills. Such cognitive and behavioral techniques are coping based and emphasize the use of practical skills to gain control over mood, and thinking patterns. The intervention also has a support component. It took place in a small group where personal experiences were discussed.

Method

Design

This pilot study was designed to determine the feasibility of an educational program consisting of the relaxation response and reframing techniques for use in primary caregivers of Alzheimer's patients. An experimental group (n = 5) was taught the two techniques. A control group (n = 4) received no intervention. Measures of perceived stress and emotional states were taken before and after the intervention period.

Sample

A convenience sample of 9 family caregivers was drawn from a local university Alzheimer's center (n=6) and a local Alzheimer's Association (n=3). To be included in the sample, caregivers had to be the primary caregiver of a demented family member, had to report high levels of stress from their caregiver role, and had to be English speaking.

After recruitment one of the caregivers was lost because she relocated to a different state. Her data were lost to follow-up.

Most of the caregivers in this study identified themselves as primary caregivers with no help from other people in their caregiving (n = 7). Two caregivers used both formal and informal help. The majority were women (n = 8). Their ages ranged from 45-54 years (n = 1), 55-64 years (n = 2), 65-75 years (n = 4), to 76+ (n = 2). All caregivers were living with, and married to, the disabled spouse. Caregivers described their health as excellent (n = 4), good (n = 3), or fair (n = 2). Length of caregiving ranged from less than one year (n = 1), 1-4 years (n = 7), to 5 or more years (n = 1). Eight of the caregivers cared for their spouse 7 days a week. One caregiver cared for the spouse 1-3 days per week. This caregiver was male and had a full time job. His wife was in day-care. Four caregivers spent 1-2 extra hours per day caregiving. Two caregivers spent 3-4 extra hours and three spent 5 hours or more per day in caregiving responsibilities. About half of the caregivers (n = 5) helped with 1-2 activities of daily living (ADLs). Two caregivers helped with 3-4 ADLs and two helped with 5-6 ADLs. Four caregivers helped with 5-6 instrumental activities of daily living (IADLs). The other five helped with 9-10 IADLs. Seven of the caregivers were not employed outside the home. (see to Table 1).

Intervention

The intervention was provided by the author and consisted of an 8-session program of weekly group meetings, each 120 minutes in duration. The goal of the program was to provide two strategies for caregivers to use to prevent or decrease stress.

The relaxation response describes a series of physiological changes which occur when certain techniques are practiced. Several techniques can be used to elicit the relaxation response. They are: diaphragmatic breathing, mental focus, progressive muscle relaxation, autogenic training, mindfulness, and imagery. Continued practice of the relaxation response can bring about greater feelings of

well-being and decreases in stress-related conditions and symptoms (Benson, 1992).

Reframing acts as a stress-mediating mechanism by modifying distorted ways of viewing stress inducing situations. This intervention is designed to encourage people to become aware of thoughts they have when a stressful situation occurs. Instead of allowing a process of automatic negative thoughts to color perception, events can be viewed, appraisal can be chosen, and negative thoughts, symptoms, and emotions can be decreased (Pesut, 1991). A complete manual of the intervention is available from the author.

Session 1. The rationale for using relaxation techniques as an intervention in caregiver stress was discussed. The techniques of breath awareness and progressive muscle relaxation were practiced for 20 minutes. Using breath awareness to counteract the stress response, during the day, was discussed and practiced. A homework assignment, listening to an audio cassette tape of a relaxation exercise was given.

Session 2. Caregivers were encouraged to communicate the difficulties and successes they encountered in using the techniques the past week. Week one materials were reviewed. Instruction in eliciting the relaxation response through focusing attention on a chosen word or phrase was discussed. Each caregiver chose a focus word or phrase which suited her personal belief system. Using breath in conjunction with the focus word was practiced for twenty minutes. The symptoms of stress were reviewed and a discussion ensued in which each caregiver described her personal experience of the stress response. Homework consisted of continued use of the audio tape for relaxation practice at home and identifying two examples of a stressful situation and how it was experienced physically, mentally, and emotionally.

Session 3. The group discussed imagery and its use in modifying physical, psychological, and emotional stressors. We then used guided imagery as a technique to elicit the relaxation response. Several short imagery exercises were done and discussed. A twenty minute exercise in using imagery was practiced.

Session 4. The emotional component of stress was discussed at length. A relaxation technique using visualization of emotions and breath awareness was practiced for twenty minutes. A discussion followed regarding healthy attitudes and use of emotion. Continued daily practice of the relaxation techniques was assigned.

Session 5 and 6. Reframing, or practicing mental clarity, consisted of observing the automatic thought processes of the mind and challenging those that were irrational and unrealistic. The ability of each person to change unhealthy thought patterns to healthy ones was discussed. Exercises in observing thoughts were practiced. Using mindfulness as a technique for relaxation was used for 20 minutes. A discussion of the importance of the appraisal of an event was discussed.

Session 7. The characteristics of a successful stress survivor were discussed. Each participant observed and analyzed which qualities they had and which they could work to increase. How each quality works to overcome stress was discussed. Relaxation was practiced using breathing techniques and visualization. Each caregiver practiced thinking about ways to improve their lives by developing their interests and strengths.

Session 8. The focus of this session was optimism and its importance as a technique to alleviate stress. The caregivers further discussed ways to control stress through positive thoughts and emotional responses. The use of affirmations was introduced and practiced. Relaxation was practiced through a combination of a body scan, breathing techniques and imagery. The calendars

were collected and we discussed the caregivers regular home practice which ranged from three times a week (n=1), to 5-6 times a week (n=2) to daily (n=2). A wrap-up discussion followed where questions and comments were encouraged.

Measures

Questionnaires containing the Profile of Mood States (POMS), and the Perceived Stress Scale (PSS) were sent to all the participants 2 weeks before the study began and the week after the intervention was complete for the experimental group (week 9).

The POMS is a 65-item instrument that measures overall emotional disturbance and factors of tension-anxiety, depression-dejection, anger-hostility, vigor-activity, fatigue-inertia, and confusion-bewilderment (McNair, 1981). These factors have internal consistency reliabilities ranging from .84 to .95. The test-retest reliability estimates for the entire scale ranged from 0.65-0.74.

The PSS is a global measure of stress (Cohen, 1983). It is a 14-item instrument designed to measure the degree to which life events are perceived as unpredictable, uncontrollable, and overloading. These three issues have been found to be central components of the experience of stress (Averill, 1973). Cronbach's alpha reliabilities on this scale range from .84-.86. The test-retest reliability ranged from .85 in two days and .55 after six weeks.

Procedure

Sample access

The sample was drawn from the Aging and Alzheimer's Center of a large Pacific Northwest medical center and from a local Alzheimer's Association. Caregivers were recruited if they identified high levels of stress from their caregiving role.

Instrument administration

The pretest instruments were mailed to the caregivers two weeks before the intervention began. Caregivers returned the questionnaires in self-addressed stamped envelopes. The posttest questionnaires were mailed out the last day of the intervention and returned by mail.

Human subjects approval and consent

This study was approved by the Institutional Review Board of Oregon Health Sciences University. Informed consent was obtained from each caregiver.

Results

Group Comparisons

Overall analysis of variance of each dependent variable was done to compare changes in the intervention group ($n=5$) and the control group ($n=4$), from pretest to posttest. For neither group was the intervention between group and time statistically significant. In Table 2 are presented the means and standard deviations for each dependent variable for the experimental and control group at pretest and posttest. One control group contains all four caregivers. For the control group with three caregivers the scores from one outlier were eliminated to observe her effect on the control group results. (see to Table 2).

In comparing the differences in means between the experimental group and the control groups, the observed changes are in the hypothesized direction for tension, anger, confusion, depression, fatigue and the Total Mood Score. These might have been statistically significant had a larger sample size been used. There was no change in vigor. (see Table 3.)

Changes in the Mean Mood Disturbance Score appear clinically important for the intervention group. Although there was a decline in all three groups, the

intervention group, as seen in Figure 1, had a decline which would suggest clinically important decreases in negative mood states. (see Figure 1).

The PSS difference between pretest and posttest was not significant ($P = 0.37$).

Individual Comparisons

Examination of individual profiles from pretest to posttest was done in order to evaluate whether the intervention provided clinically important changes in individuals. On each POMS factor the total score was divided by its number of items. In comparing the pretest and posttest scores a change of 0.5 or greater was considered clinically important. The number 0.5 was chosen because it represents about 0.5 to 1.0 standard deviation on each factor.

There were five caregivers in the intervention group. The first caregiver showed greater than 0.5 decrease on the POMS subgroups for tension, anger, fatigue, and depression. Caregiver # 2 showed greater than 0.5 decreases in anger and fatigue. This caregiver had less than 0.5 on her initial depression score and had little room to move. Caregiver # 3 showed decreases of greater than 0.5 in tension. All of her other initial factor scores were below 0.5. Caregiver # 4 showed no improvement greater than 0.5. The last intervention caregiver, # 10, showed a greater than 0.5 decrease in tension, anger, fatigue, confusion, and depression. (see Figures 2 & 3).

In the control group, using the same measure of clinical significance, caregiver # 5 had a greater than 0.5 decrease in tension and increase in vigor. Caregiver # 6 had a significant increase in anger and decrease in fatigue. Caregiver # 7, had decreases in anger, and depression and increased in confusion. She had very high initial scores in all the subgroups. Caregiver # 8 had a greater than 0.5 decrease in anger. (see Figures 4 & 5).

In the intervention group, Caregiver #4 had very low initial scores at the pretest and had little room for movement. She showed no clinically important improvement. In the control group, caregiver #7 had very high scores on the factors of anger, fatigue and depression at pretest and showed important decreases in anger and depression. These two scores masked the change of the caregivers with more moderate pretest factor scores.

Discussion

Over the last ten years many interventions to relieve stress have been tried with family caregivers of the demented elderly. This intervention was designed to improve the well-being of the caregiver through the development of coping skills.

Questions of concern in this pilot study included: Was this an appropriate intervention for an elderly population? Was the intervention effective in relieving caregiver stress? Does it have broad application and clinical significance?

An important strength of this intervention is its ability to be tailored to the individual personality of each caregiver. Over the eight week program many techniques to elicit the relaxation response were practiced. Different techniques are experienced as more physical (progressive muscle relaxation), mental (focus word), visual (imagery), and tactile (autogenics) and appeal to people differently. Each caregiver found at least one technique which suited her. Progressive muscle relaxation was found to be the easiest. Use of a focus word was the most difficult.

There were changes in the circumstances of three of the ten caregivers. One caregiver in the intervention group missed the last two classes. She was hospitalized with congestive heart failure. She did continue listening to the audio tape and practice the relaxation techniques. One care recipient in the

intervention group was placed in foster care during the intervention, a move prompted by the caregivers worsening health and continued weight loss. Initially, she felt confusion and guilt and stated that the relaxation and reframing techniques helped her put the situation in a more positive perspective. One caregiver in the control group moved to a different state and her post-intervention data was lost. These kinds of unforeseen changes are common in this population of frail elderly caregivers.

Timing was a crucial factor which affected the assignment of subjects to the experimental and control group. First, the potential caregivers were identified. When the intervention was ready, half the caregivers had plans to be away during the eight week period. The researcher had a deadline date for completion in order to graduate from a MSN program and could not delay the intervention until all the caregivers were available. This prevented randomization. The patients self-selected into the intervention group and the control group. This situation presented problems with assessing treatment outcomes. In both groups, caregivers varied considerably in their initial levels of functioning on the POMS factors. It might be predicted that caregivers with initially low scores may report little or no change in negative moods or even increases over time. The limited amount of improvement reported in two intervention group caregivers may be partly due to including people who could not show improvement on outcome measures.

During recruitment, all the caregivers expressed symptoms of stress in initial interviews. This was not however how they scored on the pretest measures. This finding indicates the importance of symptom specific measures which are multi-faceted. One approach in future research would be to set entry criteria based on pretest scores. Then particular symptoms could be targeted. The goal of the intervention was to treat a particular problem, caregiver stress.

Participants need to express high levels of stress at the beginning on pretest measures.

The caregivers with the highest pretest scores were the ones who were unable to participate in the intervention group. Possibly they are the caregivers who would have benefited the most from the intervention.

The cost of the program was relatively small. In a larger study the budget would have to cover salaries for the interventionist and a research assistant. In this study one person was the researcher and data collector. In a larger study this would be two people to minimize researcher bias. Equipment for the project was minimal. It included use of a room and printed material and audio tapes.

The caregivers were self-selected from sites where they were seeking diagnostic or treatment services. They agreed to participate in the study and stayed with the program until the end. Perhaps this was because they enjoyed the intervention or felt obligated to the researcher. Both the intervention group and the control group were receiving services when they were recruited. Therefore the control group can not be considered inactive. They may be making substantial changes in their caregiving arrangements. In a larger study the services used by the control group would need to be assessed and controlled.

There were limitations with the measures. The measures had not been evaluated with family caregivers. Although the PSS has been shown to have reliability, it has not been tested with the elderly. The POMS has been shown to be sensitive to change. It is in common use and can be used to enhance generalizability of improved emotional outcome. The POMS is designed for people with some high school education. This prohibits its use in less educated populations. The PSS is a global, multi-dimensional construct. Changes which affect one dimension of stress may not affect the others. Also the eight week

intervention may not have been long enough to show global changes which address the negative, stressful consequences of caregiving.

This intervention could have broad application for reducing caregiver stress. The pilot study showed drops in tension in all the intervention group caregivers. Four caregivers showed drops in anger while one was unchanged. Four of the five caregivers in the intervention group showed decreases in four of five negative mood states. The intervention needs to be repeated with a larger sample to test for statistical significance.

Future research into the effectiveness of this intervention with family caregivers is warranted. Although the results were not statistically significant, evidence suggests merit that the intervention provides preliminary documentation that a larger study is in order. Systematic research could complement clinical efforts to assist caregivers.

In a larger study the design might undergo modifications. The group size would optimally be 8 to 10 caregivers. This would allow for increased variety of shared experiences. Also a three group comparison of an individual intervention, a group intervention and a control group might provide an improved model of the interventions effect in decreasing caregiver stress.

References

- Agras, S., & Taylor, C., & Kraemer, H. (1980). Relaxation training. Archives of General Psychiatry, 37, 859-863.
- Anthony-Bergstone C., & Zarit, S. & Gatz, M. (1988). Symptoms of psychological distress among caregivers of demented patients. Psychology and Aging, 3, (3), 245-248.
- Archbold, P. (1980). Impact of parent caring on middle-aged offspring. Journal of Gerontological Nursing, 6, (2), 79-85.
- Arena, J., & Hightower, N., & Chong, G. (1988). Relaxation therapy for tension headaches in the elderly: A prospective study. Psychology and Aging, 3, (1), 96-98.
- Averill, J. (1973). Personal control over aversive stimuli and its relationship to stress. Psychological Bulletin, 80, 286-303.
- Basler, H., & Rehfisch, H. (1991). Cognitive-behavioral therapy in patients with ankylosing spondylitis in a German self-help organization. Journal of Psychosomatic Research, 35, (2/3). 345-354.
- Baumgarten, M. (1989). The health of persons giving care to the demented elderly: A critical review of the literature. Journal of Clinical Epidemiology, 42, (12), 1137-1148.
- Benson H. (1975). The Relaxation Response. New York. Avon Books.
- Benson, H. & Stuart, E. (1992). The Wellness Book. New York: Carol Publishing Group.
- Berthold, H. & Landahl, S., & Svanborg, A. (1991). Intermittent care and caregivers at home. Aging, 3, 51-56.
- Bunting, S. (1989). Stress on caregivers of the elderly. Advanced Nursing Science, 11, (2), 63-73.

- Cantor, M. (1983). Strain among caregivers: A study of experience in the United States. The Gerontologist, 23, (6), 597-604.
- Caudill, M., & Schnable, R., & Zuttermeister, P. (1991). Decreased clinic use by chronic pain patients: response to behavioral medicine interventions. The Clinical Journal of Pain, 7, 305-310.
- Cohen, S., & Kamarch, T., & Mermelstein, R. (1983). A global measure of perceived stress. Journal of Health and Social Behavior, 24, 385-396.
- Conlin, M., & Caranasos, G., & Davidson, R. (1992). Reduction of caregiver stress by respite care: A pilot study. Southern Medical Journal, 85, (11), 1096-1100.
- Corrigan, P., & Storzbach, D. (1993). Behavioral interventions for alleviating psychotic symptoms. Hospital and Community Psychiatry, 44, (4), 341-347.
- Cummings, J., & Benson, H. (1992). Dementia, a clinical approach. Stoneham, MA. Butterworth-Heinemann.
- Domar, A., & Seibel, M., & Benson, H. (1992). The Mind/Body Program for infertility: a new behavioral treatment approach for women with infertility. Fertility and Sterility, 53, (2), 246-249.
- Eisendrath, S. (1993). Brief psychotherapy in medical practice, keys to success. The Western Journal of Medicine, 158, (4), 376-378.
- Ellis, A., & Dryden, W. (1987). Rational-emotive therapy: an excellent counseling theory for NP's, Nurse Practitioner, July, 16-37.
- Farkas, S. (1980). Impact of chronic illness on the patient's spouse. Health and Social Work, 39, 39-46.
- Farran, C., & Keane-Hagerty, E., & Salloway, S. (1991). Finding meaning: An alternative paradigm for Alzheimer's disease family caregivers. The Gerontologist, 31, (4), 483-489.
- Fengler, A., & Goodrich, N. (1979). Wives of elder disabled men: The hidden patients. The Gerontologist, 19, (2), 175-183.

- Folkman, S., & Lazarus, R. (1985). If it changes it must be process: Study of emotion and coping during three stages of a college examination. Journal of Personality and Social Psychology, 48, (1), 150-170.
- Frisch, M. (1989). An integrative model of supervisory training for medical center personnel. Psychological Reports, 64, 1035-1042.
- Gallagher, D., & Lovett, S., & Zeiss, A. (1991). Interventions with caregivers of frail older persons. Aging and Health Care: Social Sciences and Policy Perspective. Edited by Ory, M., & Bond, K. London: Routledge Press, 169-189.
- George, L. & Gwyther, L. (1986). Caregiver well-being: A multidimensional examination of family caregivers of demented adults. The Gerontologist, 26, (3), 253-259.
- Gillis, J., & Lanning, K. (1989). Cognitive mediation of responses to life stress. Behavioral Medicine, Spring, 18-22.
- Given, C., & Collins, C., & Given, B. (1988). Sources of stress among families caring for relatives with Alzheimer's Disease. Nursing Clinics of North America, 23, 69-81.
- Goodale, I., & Domar, A., & Benson, H. (1990). Alleviation of Premenstrual Syndrome symptoms with the relaxation response. Obstetrics and Gynecology, 75, (4), 649-655.
- Grafstrom, M., & Fratiglioni, L., & Sandman, P-O. (1992). Health and social consequences for relatives of demented and non-demented elderly. A population based study. Journal of Clinical Epidemiology, 45, (8), 861-870.
- Haley, W., & Levine, E., & Brown, S. (1987). Psychological, social, and health consequences of caring for a relative with senile dementia. Journal of the American Geriatric Society, 35, (5), 405-411.

- Hellman, C., & Budd, M., & Boryshenko, J. (1990). A study of the effectiveness of two group behavioral medicine interventions for patients with psychosomatic complaints. Behavioral Medicine, Winter, 165-173.
- Jacobs, G., & Benson, H., & Friedman, R. (1993). Home-based central nervous system assessment of a multifactor behavioral intervention for chronic sleep-onset insomnia. Behavior Therapy, 24, 159-174.
- Kabat-Zinn, J. (1982). An outpatient program in behavioral medicine for chronic pain patients based on the practice of mindfulness meditation. General Hospital Psychiatry, 4, 33-47.
- Kiecolt-Glaser, J., & Glaser, R., & Shuttleworth, E. (1987). Chronic stress and immunity in family caregivers of Alzheimer's Disease victims. Psychosomatic Medicine, 49, 523-535.
- Knight, B., & Lutzky, S., & Macofsky-Urban, F. (1993). A meta-analytic review of interventions for caregiver distress: recommendations for future research. The Gerontologist, 33, (2), 240-248.
- Lazarus, R. (1966). Psychological Stress and the Coping Process, McGraw Hill, New York.
- Lesserman, J., & Stuart, E., & Mamish, M. (1989). The efficacy of the relaxation response in preparing for cardiac surgery. Behavioral Medicine, Fall, 111-117.
- Lovett, S. & Gallagher, D. (1988). Psychoeducational interventions for family caregivers: Primary efficacy data. Behavior Therapy, 19, 321-330.
- McNair, D., & Lorr, M., & Dropplemann, L. (1981). Profile of Mood States. Educational and Industrial Testing Service, San Diego, Ca.
- Murphy, M., & Tosi, D., & Pariser, R. (1989). Psychological coping and the management of pain with cognitive restructuring and biofeedback: a case study and variation of cognitive experimental therapy. Psychological Reports, 64, 1343-1350.

- Neundorfer, M. (1991). Coping and health outcomes in spouse caregivers of persons with dementia. Nursing Research, 40, (5), 260-265.
- Ornish, D., & Brown, S., & Scherwitz, L. (1990). Can lifestyle changes reverse coronary heart disease? Lancet, 336, 129-133.
- Pagel, M., & Becker, J., & Coppel, D. (1985). Loss of control, self-blame, and depression: An investigation of spouse caregivers of Alzheimer's Disease patients. Journal of Abnormal Psychology, 94, (2), 169-182.
- Pearlin, L., & Mullan, J., & Semple, S. (1990). Caregiving and the stressprocess: an overview of concepts and their measures. The Gerontologist, 30, (5), 583-594.
- Pesut, D. (1991). The art, science, and techniques of reframing in psychiatric mental health nursing. Issues in Mental Health Nursing, 12, 9-18.
- Quill, T., & Williamson, P. (1990). Healthy approaches to physician stress. Archives of Internal Medicine, 150, 1857-1861.
- Schultz, R., & Williamson, G. (1991). A 2-year longitudinal study of depression among Alzheimer's caregivers, Psychology and Aging, 6, (4), 569-578.
- Selye, H. (1946). The general adaptation syndrome and the diseases of adaptation. Journal of Clinical Endocrinology, 6, 117.
- Skaff, M., & Pearlin, L. (1992). Caregiving: Role engulfment and the loss of self. The Gerontologist, 32, (5), 656-664.
- Stanton, H. (1989). Hypnosis and rational-emotive therapy, a de-stressing combination. International Journal of Clinical and Experimental Hypnosis, 37, (2), 95-99.
- Stone, R., & Cafferata, G., & Sangl, J. (1987). Caregivers of the frail elderly: A national profile. The Gerontologist, 27, (5), 616-624.
- Stuart, E., & Caudill, M., & Leserman, J. (1987). Nonpharmacological treatment of hypertension: A multiple risk factor approach. Journal of Cardiovascular Nursing, 1, (4), 1-14.

- Toseland, R. & Rossiter, C., & Peak, T. (1990). Comparative effectiveness of individual and group interventions to support family caregivers. Social Work, 209-217.
- Weinrich S., & Boyd, M., & Nussbaum, J. (1989). Continuing education adapting strategies to teach the elderly. Journal of Gerontological Nursing, 15, (11), 17-21.
- Williamson, G., & Schultz, R. (1993). Coping with specific stressors in Alzheimer's Disease caregiving, The Gerontologist, 33, (6), 747-755.
- Yesavage, J. (1984). Relaxation and memory training in 39 elderly patients. American Journal of Psychiatry, 141, (6), 778-781.
- Zarit, S., & Reever, K., & Bach-Peterson, J. (1980). Relatives of the impaired elderly: Correlates of feelings of burden. The Gerontologist, 20, (6), 649-655.

Table 1
Participant Demographics (n=9)

Type of caregiver		
	Primary	7
	Primary with formal and informal help	2
Age		
	45-54	
	55-64	2
	65-75	4
	76+	2
Gender		
	Female	8
	Male	1
Live with disabled person		9 ^a
Marital status		
	Married	9
Health status		
	Excellent	1
	Good	5
	Fair	3
Length of caregiving		
	Less than one year	1
	1-4 years	7
	5 years or more	1
Number of days per week spent caregiving		
	1-3	1
	7	8
Number of extra hours per day spent on caregiving		
	1-2 hours	4
	3-4 hours	2
	5 hours or more	3
Number of activities of daily living assisted with		
	1-2	5
	3-4	2
	5-6	2
Number of instrumental activities of daily living assisted with		
	5-6	4
	9-10	5
Employment status		
	Working	2
	Not working	7

^a One spouse was placed in foster care during the first week of the intervention.

Table 2

Means and Standard Deviations
For Intervention And Control Groups

		Intervention Group (n=5)		Control Group (n=4)		Control Group (n=3)	
		pretest	posttest	pretest	posttest	pretest	posttest
Tension	M	12.0	6.0	13.0	5.1	11.3	9.0
	SD	4.6	2.6	11.5	5.8	4.8	3.7
Anger	M	8.2	2.4	14.2	11.0	7.6	9.7
	SD	7.2	3.0	14.4	5.5	7.0	5.9
Fatigue	M	10.8	5.8	15.8	12.5	13.3	9.0
	SD	6.2	5.3	5.4	7.2	3.0	2.0
Confusion	M	7.2	5.4	10.2	11.5	8.7	9.0
	SD	2.6	1.7	4.6	5.7	4.2	3.5
Depression	M	9.8	4.8	19.0	18.0	11.0	14.0
	SD	9.8	4.0	17.0	13.1	7.2	12.8
Vigor	M	17.0	17.0	11.5	11.8	12.0	13.3
	SD	2.9	2.6	1.7	3.4	1.7	1.5
Total Mood Disturbance	M	31.0	7.4	60.7	52.7	40.0	26.9
	SD	27.2	11.8	47.0	36.7	37.3	24.4
Perceived Stress Scale	M	32.2	26.6	36.5	36.0	34.0	34.3
	SD	7.0	6.2	5.8	4.4	3.6	3.5

Note. Explanation of data for two control groups

Control group (n=4) contains all control group caregivers

Control group (n=3) contains control group caregivers with one outlier removed

Table 3

F Test for Group x Time Interaction

DV	a F _{GxT} (1, 7)	b F _{GxT} (1, 6) =	
Tension	2.94 p = .13	1.53 p = .27	
Anger	.20 p = .67	3.96 p = .10	
Fatigue	.40 p = .54	.05 p = .83	No Effect
Confusion	4.59 p = .07	2.38 p = .18	
Depression	.54 p = .49	2.65 p = .16	
Vigor	.02 p = .89	.75 p = .42	No Effect
Total Mood Disturbance	2.03 p = .20	3.24 p = .13	
Perceived Stress Scale	.90 p = .38	.90 p = .39	

a

F test for group x time interaction in ANOVA with n=5 experimental and n=4 control.

b

F test for group x time interaction in ANOVA with n=5 experimental and n=3 control.

Figure 1

Mean Mood Disturbance

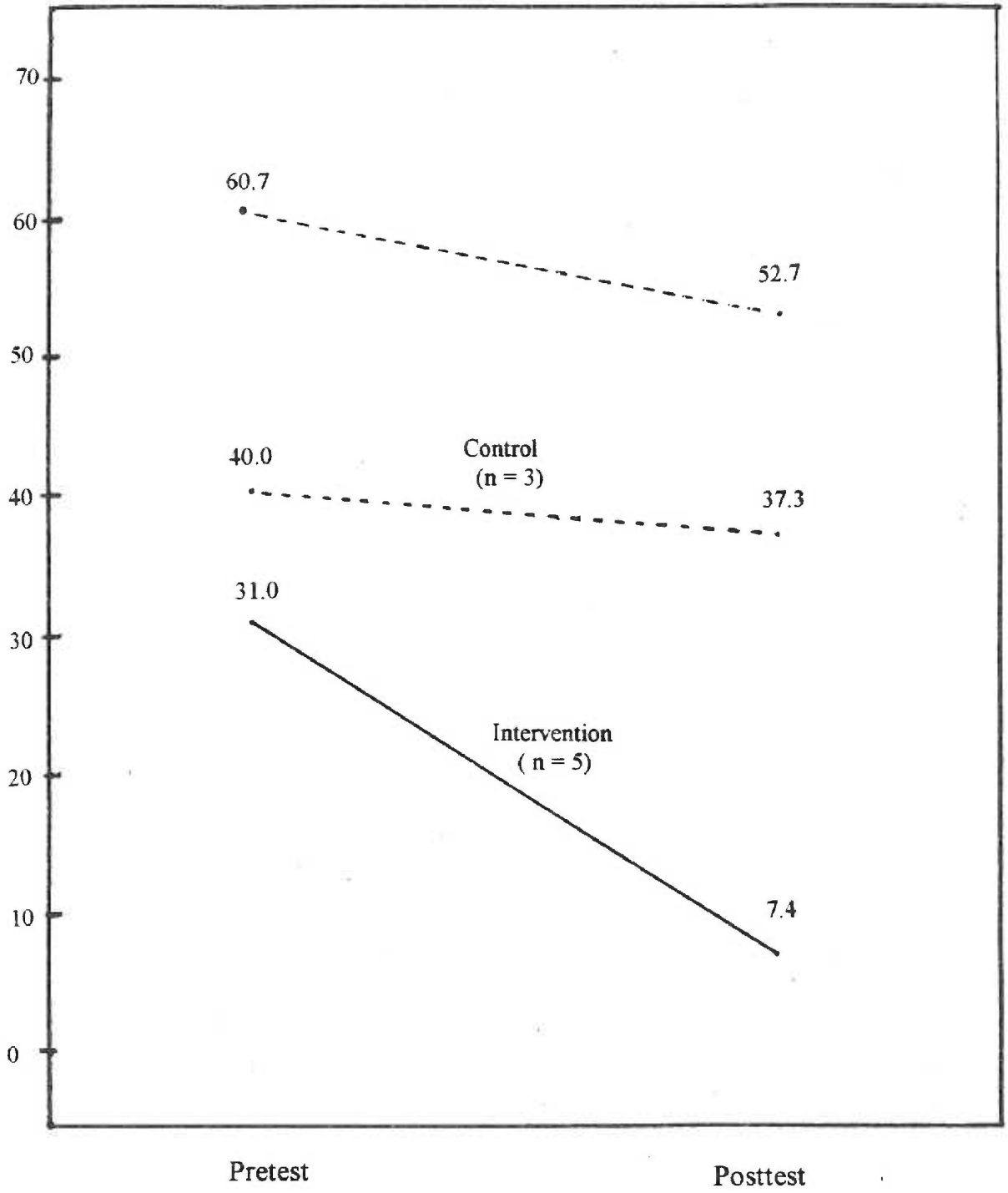
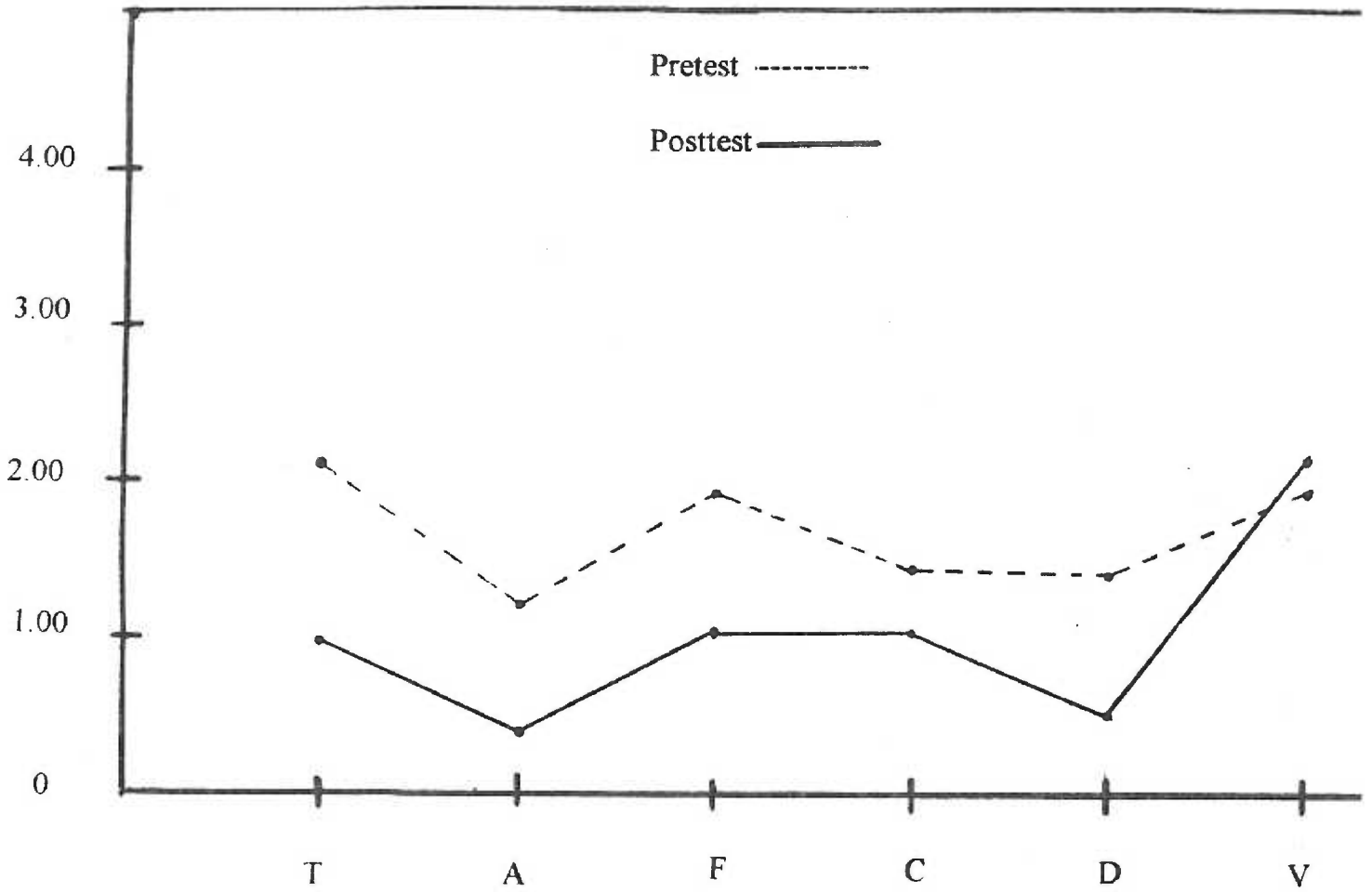


Figure 2

Summary of Individual POMS Pretest and Posttest Scores

Caregiver # 1 Intervention Group



T = Tension

A = Anger

F = Fatigue

C = Confusion

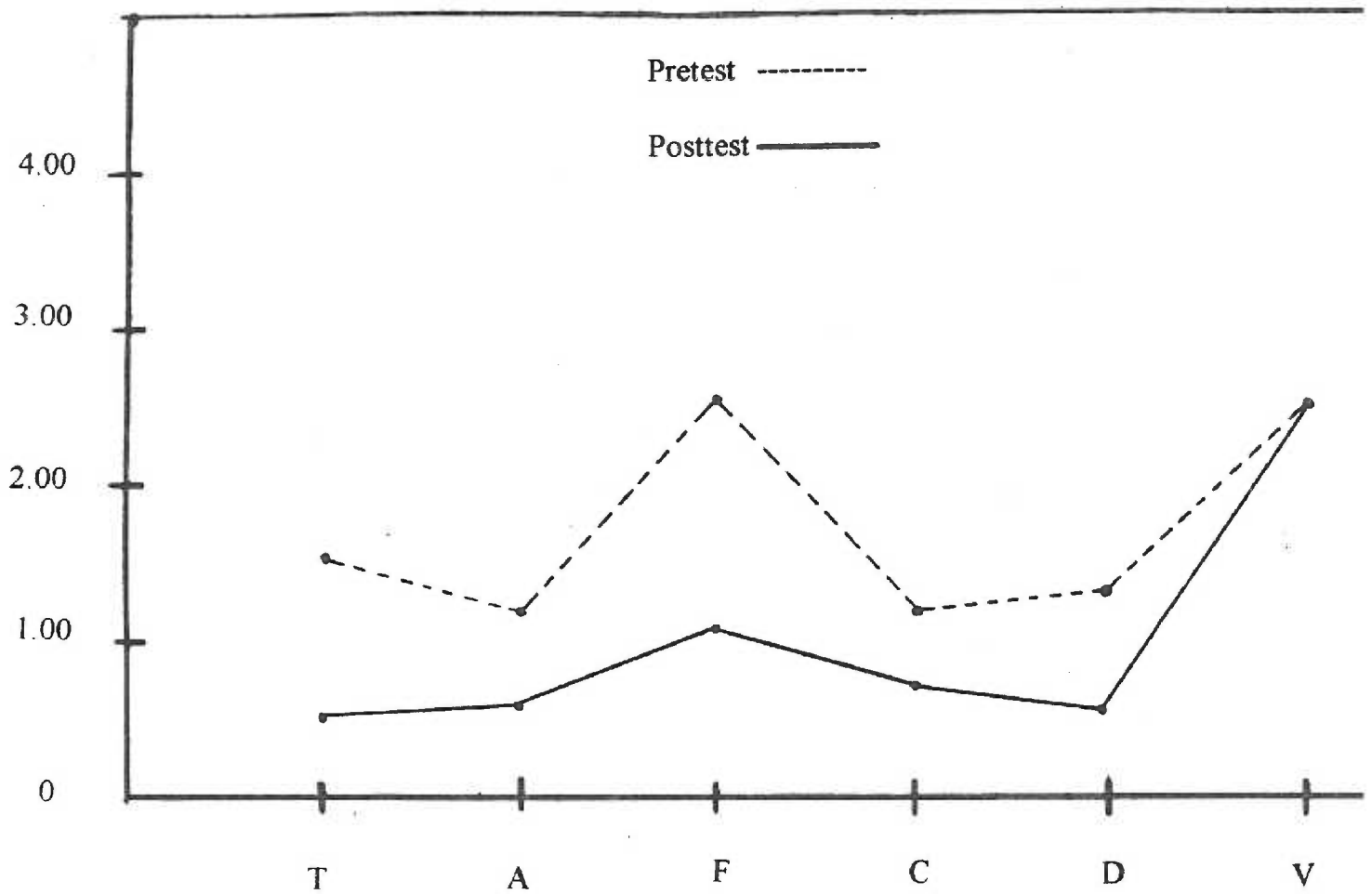
D = Depression

V = Vigor

Figure 3

Summary of Individual POMS Pretest
and Posttest Scores

Subject # 10 Intervention Group



T = Tension

A = Anger

F = Fatigue

C = Confusion

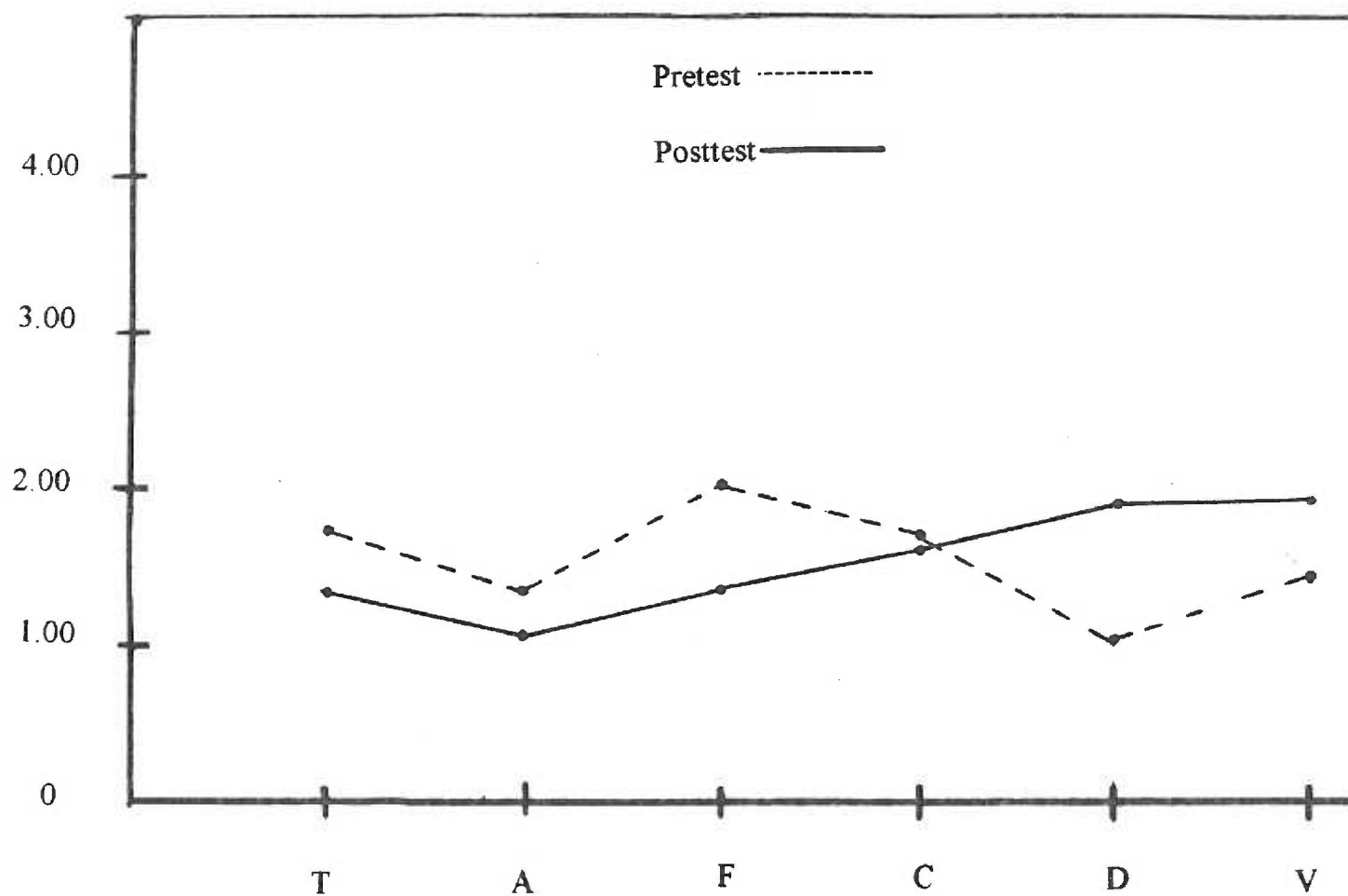
D = Depression

V = Vigor

Figure 4

Summary of Individual POMS Pretest and Posttest Scores

Subject # 5 Control Group



T = Tension

A = Anger

F = Fatigue

C = Confusion

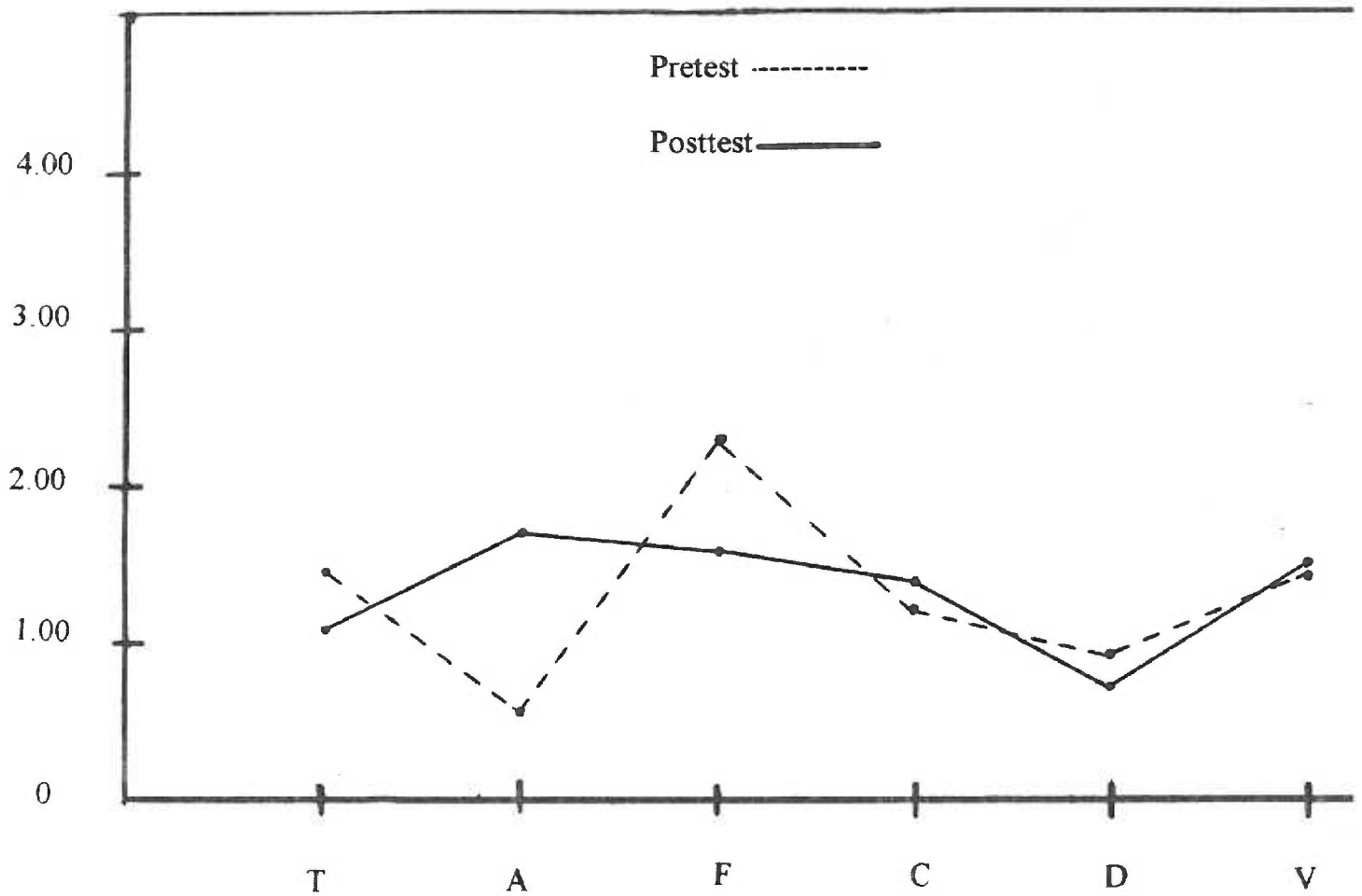
D = Depression

V = Vigor

Figure 5

Summary of Individual POMS Pretest
and Posttest Scores

Subject # 6 Control Group



T = Tension

A = Anger

F = Fatigue

C = Confusion

D = Depression

V = Vigor

Appendix A

Changes In Method From MRP Proposal to Intervention Program

Changes in Method From MRP Proposal to Intervention Program

Several changes in method occurred between the MRP proposal and the intervention. The first was in subject selection. In the proposal, the design included randomizing the subjects into either the control group or the intervention group. In fact, once the subjects were selected, half of them were unable to attend the first intervention program due to prior commitments. Therefore the researcher was not able to randomly assign to the control group and the intervention group.

Other changes occurred in the program as it developed. In the first session the researcher realized that she had designed too much information into the session. Three exercises were omitted. They were the didactic explanation and choosing of a focus word and the time line exercise. These were all moved to the second session. The main relaxation exercise in session one was changed to progressive muscle relaxation. The researcher thought that this was the best introductory exercise because the caregivers were all able to identify symptoms of stress in their bodies.

In session two, the researcher realized the importance of a lengthy review and discussion session. After that she introduced use of a focus word. It provided the relaxation exercise along with breathing techniques. The time line exercise was also done.

Session three was spent on the practice of visualization. This was a new concept for the group and we did several exercises to give each of them a direct experience of it's usefulness. The group had many questions about it's scientific merit and medical application. I explained how visualization

can be used to reduce physical, psychological, and emotional symptoms of stress. Each participant was successful at visualizing. It was easiest in the lemon exercise and each had a physiological response. This allowed them to begin using imagery for health.

Session four concentrated on the emotions. The researcher realized through the discussion period that many of the caregivers experienced stress through their emotions. It became apparent that tailoring the exercises to fit the group was warranted. They described how they often felt gloomy and cried. The researcher added a relaxation exercise focused on emotions and devoted the entire session to this subject.

Over the course of the program the researcher realized that 80% of the caregivers had strong religious beliefs. In presenting the material she considered this and used appropriate examples for discussion.

The rest of the sessions remained basically the same as approved. The researcher added information on the 5L's of happiness to session 7. These are: learn, labor, laugh, love, and let go.

The researcher realized that in providing an educational/experiential program for the elderly, many considerations are necessary. First, the information must be presented at a slower pace. As people age, gradual decreases in functioning can occur in all systems of the body. Frequently the senses, especially hearing decrease in acuity.

Research has shown that in the elderly, the ability to learn is retained (Weinrich, & Boyd, & Nussbaum, 1989). Appropriate teaching methods must be employed. These include slowing the pace of the didactic material, and giving smaller amounts of information at a time. The researcher slowed down the presentation and asked questions to ascertain understanding by the participants. The print size of distributed materials needs to be easily read.

Also, the material needs to be repeated several times with frequent reinforcement.

Appendix B
Intervention Manual

SESSION ONE

Intervention rationale

Description of the fight-or-flight response

First practice of the relaxation response

I began by introducing myself and expressing my interest and excitement over the proposed eight week program. I invited each person in the group to introduce herself and say a few words about who she was and how she experienced caregiving. I asked each person to talk about the things she did when she felt stressful or overwhelmed her by caregiving responsibilities.

Next I discussed the basis for the intervention with an explanation of the mind/body/spirit connection.

Recently a great deal of research has been exploring the mind/body/spirit connection and health. Scientists have been able to follow ways in which thoughts and emotions might affect health. They have also gathered evidence of how stress affects the body's disease fighting system. A new viewpoint is developing within the school of Western Medicine, one that sees the mind, with thoughts and emotions, as having a strong impact on health (Goleman, 1993).

Many decades ago the mind's effect on the body and health was well known and respected. Before the discovery of antibiotics, physicians used bedside manner as an important healing therapy. One of the most telling examples of the mind/body/spirit connection was shown with the use of the "placebo effect" and its power of healing. The placebo effect was used when a patient was given an inactive substance such as a sugar pill by an enthusiastic physician, who told them it would cure them. It worked solely from the patient's belief that it would.

Sixty percent of illness is mind-body related (Cummings, 1993). This means that the working of the mind has a strong effect on the function of the body. For example, how many of you get a stomach ache when you are upset? How many of you get a headache when things aren't going well on a particular day? Researchers have shown that thoughts and feelings lead to reproducible measurable outcomes. This means that in laboratories equipment has been developed to measure the strength of thoughts and emotions in the body. The level of tension or stress one is feeling can be measured by these instruments. Stress is not something which disappears with pills. Stress is caused by events which require change. The reason people experience tremendous levels of stress today is due to the overwhelming amount of information each of us is being bombarded with and our inability to make appropriate adaptive changes. Each one of us responds to events in our lives in different ways. The body reacts to the perception of stress in a well defined physiological response called the fight-or-flight response. The fight-or-flight response is a highly integrated mechanism that is controlled by an area of the brain called the hypothalamus. Faced with a threat, real or imagined, physical or emotional, the hypothalamus activates a part of the body called the Sympathetic Nervous System (SNS). The SNS connects the brain with every organ and cell in the rest of the body. Hormones, which are chemical messengers, are instantly released into the blood stream. Several body functions increase. These are: metabolism (which is all the body's chemical processes), heart rate, blood pressure, breathing, and muscle tension. The fight-or-flight response has been well studied by researchers. Chronic stress, with the resulting arousal of the fight-or-flight response, may lead to permanent changes in the body (Rozanski, 1988).

The relaxation response is a physiological response which brings about a slowing in SNS activity which decreases heart rate, blood pressure, respiration, and oxygen consumption. Studies have shown that using the relaxation response lowers blood pressure. These effects last throughout the day. The relaxation response is an innate, built-in way of controlling the effects of stress in modern life.

Next we will elicit the relaxation response by focusing on the breath.

We are going to use the breath to quiet the mind and practice letting go of the stress in the body. The breath is the mirror of the mind. The quality of the breath reflects the condition of the mind such as agitated or peaceful. Breathing is a physiological process we have control over. We can use it to our advantage.

Let's practice progressive muscle relaxation. This is a strategy which leads to deep muscle relaxation. A way to control tension is to focus on muscle groups and then consciously relax them. When the body responds to a threat, with the fight-or-flight response, one of the things that happens is that muscles contract and become tense. This is in preparation to fight or flee. This physiological tension further aggravates the perception of anxiety. By releasing the tension, using progressive muscle relaxation, the anxiety cycle can be broken (Dossey, 1988).

I want to begin this section with a short exercise. Scrunch up your face and purse your lips. Tighten your jaw and see how that makes you feel. Now relax and let's talk about how that muscle movement felt. Did any of you feel bad? How about angry? How about negative? Did anyone feel no change in mood? Why do you think that making a face can affect a person's emotional state? It is because of the strong connection between our body, mind, and emotion. A change in any of these three systems causes a corresponding change in the other two. Are you ever sad without it showing in your face and body? Are you sad without sad thoughts? Now let's all smile. Look around the room at all the smiles, how does that feel. Does anyone feel anything but joy? Do you feel happy? Do you feel like laughing?

Now we will practice the technique called progressive muscle relaxation. Close your eyes and sit in a comfortable position. Shift your body until you feel your back is straight and your body is in alignment. Focus on your breathing for a few moments. Place one hand on your abdomen and take a few deep breaths. Feel your hand rise and fall as you breathe deeply. Inhale and exhale. With each exhalation let all the tension in your body go.

Focus your attention on your right hand and right forearm. Become aware of any tension you feel in that area of your body. Take a deep breath and as you exhale release any tension from your right hand and right forearm. Breathe and exhale, relaxing. Focus on these muscles as you relax completely. Enjoy the pleasant feelings of relaxation. Now focus your attention on your right upper arm. Become aware of any tension in that part of your body. Take a deep breath and as you exhale release any tension in your right upper arm. Relax your right arm completely. Become aware of how relaxed your whole right arm feels resting on your body. Now focus your attention on your left hand and forearm. Become aware of that part of your body and any sensations you feel in your left hand and forearm. Take a deep breath and as you exhale release any tension you feel in that area. Breathe again and exhale completely. Enjoy the pleasant feelings in your arm as it relaxes. Now become aware of your upper left arm. Experience any sensations or tensions in that area. Now take a deep breath and as you exhale feel your left upper arm relax.

Become aware of the peaceful rhythm of your breath. Become aware of any sensations in your right foot. Take a deep breath and begin to let any sensations of tightness in your right foot go. Breathe and let that area of your body become deeply relaxed. Feel the weight of your right foot as all the tension is released. Become aware of your right calf. Feel any sensations or tensions in the muscles in your right calf. Breathe deeply and as you exhale let that area of your body feel release. Enjoy the pleasant feelings of relaxation in your right calf. Now focus your attention on your right thigh. Now it is time to let your right thigh completely relax. Breathe and let go of any tension in the muscles of your right thigh. Inhale and as you exhale feel your whole right leg relax right onto the floor. Now, as you continue to breathe, focus your attention on your left foot. Become aware of any sensations in that area of your body. Breathe deeply and as you exhale let all the tension in your left foot be released. Breathe and exhale feeling the weight of your left foot relax on the floor. Now bring your attention to your left calf, become aware of that part of your

body, any sensations or feelings of tension. Inhale, and as you exhale feel all that tension be released. Let your left calf completely relax. Now bring your attention to your left thigh. Feel any aches or sensations that might be present there. Inhale and exhale feeling your left thigh completely relax. Now become aware of how your legs and feet feel. If there is any residue of tension left, let it go on your next exhalation...inhale and exhale into a state of deep muscle relaxation.

Now become aware of the feelings in your lower trunk. Feel your hips. Are they sore or tense? Inhale and on your next exhalation let your whole lower trunk relax. Release all the tension in this area. Become aware of your stomach. Many people hold tension in their stomachs. Focus your attention on how your stomach feels. If there is any tension, with the next exhalation let your stomach relax. Release any sensations or discomforts that have been stored there. Continue to feel the rhythm of your breathing as you focus on your back. Scan your back from the base of your backbone all the way up to the top of your neck. If there is any tension in your back, become aware of it. On your next exhalation let the tension in your back be released. Inhale again and as you exhale release all the muscles in your back. Feel how good it is to let your back go into a totally relaxed state. Now become aware of your shoulders. If you feel any tension, focus on that area. With your next exhalation let your shoulders relax. Feel how good it feels to let them drop, let all the tension go. We have relaxed all the muscles in the hands and arms, feet and legs. Then we relaxed the trunk of our bodies. Feel how good this state of relaxation feels. Inhale deeply, and if you feel any tension left in your body, as you exhale, let it go.

Now let's move to our necks. Neck muscles become tense supporting the head all day. Focus your attention on how your neck feels. On your next breath release the tension in your neck muscles. Inhale again and on your next exhalation let all the tightness in your neck muscles go. Now focus your attention on the muscles around your mouth. Think of how much these muscles are used throughout the day. With your next exhalation let the muscles surrounding your mouth relax. Inhale and exhale feeling the pleasant sensations of relaxation. Now bring your attention to your forehead. Focus on how the muscles in that area feel. With your next exhalation let your forehead relax. Let all the tension in that area be released.

With the next few breaths, scan your body in it's state of profound relaxation. Become aware of the level of peace you are feeling. Take a few more breaths and with each exhalation let the level of relaxation deepen further. Now let's sit quietly for a few moments and enjoy this state of deep relaxation. Focus on your breath. As thoughts pass into your mind, let them flow on out. Keep your attention focused on your breath.

I will slowly count backwards from 4 to 1. On the count of 1, open your eyes and become aware of your surroundings. When you feel ready, begin to stretch your toes and become aware of how good your body feels. Slowly begin moving the rest of your body when you feel ready.

The rest of the session was spent reviewing handouts. We reviewed the stress response and the relaxation response

- We discussed instructions for using the relaxation response.

We reviewed guidelines for using the relaxation response. These included: when, where, body position, how long to practice, and how to focus the mind.

Then relaxation moments were explained and several exercises were practiced. Examples of good times to do relaxation moments were discussed.

Each participant was given an audio tape with a twenty minute relaxation exercise on each side. They were instructed to try to listen to one side at least once a day. They were each given a calendar to mark the days when they listened to the tape.

SESSION TWO

Relaxation response

The second week of the intervention was focused completely on the techniques which elicit the relaxation response.

The session began with a greeting and a half hour discussion of the experiences the caregivers had during the past week using the relaxation techniques. I began by asking who in the group had problems and what those problems were. I encouraged the other members to participate in the conversation. Then I asked people to share positive experiences they had. I wanted to know how the relaxation response may have helped them in the last week and I wanted the group to share experiences of times when relaxation moments were used. I began with sharing one of my own experiences because I use the "moments" technique several times throughout the day.

During the second half hour, we used a focus word along with breathing techniques to elicit the relaxation response. We discussed the relationship between stress and the breath. In order to understand our reaction to stressful events it is important to be aware of the relationship between the breath and the state of being. We then discussed our own personal physical, mental, emotional and behavioral reactions to stress.

I explained that the two main components of the relaxation response are: focus of attention and a passive disregard for thoughts. One way to focus the mind is to choose a word or phrase which fits your personal belief system and repeat it with the breath as the object of attention.

I want each of you to pick a focus word to try along with your breathing. A focus word is just what it's called. It is a tool to focus the mind. It gives the mind something to think about instead of distracting thoughts. It is used in conjunction with the breath. Thoughts are like sound waves. Sound waves have physical properties. They bounce off more solid objects and have effects on them (Forem, 1973). In the human body, sound waves affect the nervous system. Look at the effect of different types of music. Some music makes people feel happy and peaceful. Other music is annoying and makes people nervous. Thoughts do the same thing. Researchers found that different types of music affected the growth of plants. In experiments where conditions such as light, water, and temperature were the same, different types of music was played to plants. In some cases the plants grew strong and in others they died (What noise, 1970).

A focus word can actually be either a word, phrase, or prayer. Choosing a focus word which is meaningful for you is an important part of this technique. It works as an anchor which helps to quiet the chatter in which the mind is always engaged. When the mind is focused, negative, anxious, thoughts are minimized. Your focus word can be tailored to your own beliefs. Pick a word that has special significance for you. That way it will be more meaningful in your practice. If you belong to a religious discipline pick a word or phrase from that belief system which you like. For instance, if you are a Christian, you could pick something like, "The Lord is my shepherd," or "Lord Jesus Christ have mercy on me." If you are Jewish, you could pick something like, "Shalom," or "Hashem (The Name)." These are examples of only two types of religious systems. There are many more. Other people choose a more general word. General focus words that some people prefer are "Peace," "Let it be," or "Relax." The important thing is to pick one that feels good to you. Keep the word or phrase short enough to coordinate with the breath. Try it out and see how it feels and fits. If it is short, you can repeat it with each inhalation and again with each exhalation. If it is longer, you can repeat half with the inhalation and the second half with the exhalation. So choose a focus word. Does anyone have any questions about this? Does anyone have a focus word they would like to practice with so we can see how it fits with the breath? Let's try the word "Peace." Try inhaling and say the word peace to yourself. As you exhale say it again. If you find it helpful, see the letters P-E-A-C-E in

your head as you hear the word in your mind. If you prefer you can imagine a peaceful scene in your mind. Create a place of peace as you say the word peace to yourself with your breath.

I instructed the group on using deep diaphragmatic breaths by saying:

Place one hand on your abdomen and observe how your hand moves as you inhale and exhale. Now take a deep breath using your abdominal muscles and completely fill your lungs with air. As you exhale let your abdominal muscles completely relax. Take ten deep abdominal breaths and count backwards from ten to one with each exhalation. Practice "letting go" with each exhalation.

For the next half hour we sat quietly repeating the focus word along with the breath as a relaxation practice.

The mind/body concept of health suggests that there are many aspects of today's environment which contribute to many stress related illnesses. This has been especially true in the areas of heart disease, high blood pressure, insomnia, chronic pain, and infertility (Benson, 1992). Relaxation training is a tool that you can use to control the feelings of stress in your body, mind, and emotions. You don't need to pop a pill or take a drink. You don't need to visit your doctor for a prescription. By using your awareness and your thoughts you can begin to limit your reactions to stress. You can turn within to a place of repose and begin to feel tension and anxiety decrease.

How many of you felt that peaceful place deep inside when we did the relaxation exercise? Do you believe that you can go to that place at will? Do you know that peaceful place inside you is always there, available for your use? When you do the relaxation moments you are again using your skills to enter that place. The more you practice getting in touch with your inner peacefulness the easier it becomes.

Most of the research on the relaxation response was done by a cardiologist at Harvard University named Herbert Benson (Benson, 1975). He was able to teach rats to control their blood pressure through the use of simple conditioning techniques. The results were being published when a group of transcendental meditation (TM) practitioners came to him and told him they could do the same thing. Dr. Benson and his colleagues decided to study and measure their changes in blood pressure as well as other body functions when they were practicing TM. First, he took measurements after they had been sitting quietly for about an hour. Then he asked them to practice TM for about twenty minutes. There was no change in their posture or movement. All that changed were the thoughts in their minds. During the 20 minutes of meditation the measurements continued. Then the group was asked to change to their normal way of thinking. The results of the experiment showed dramatic body changes. Many different aspects of the body's main functions changed. The measurements began when the body was already in a quiet state. During the meditative state 17% less oxygen was consumed. Breathing slowed from about 15 breaths per minute to approximately 10 or 11. The total amount of air going in and out of the lungs also decreased. Changes in the chemical messengers flowing in the blood occurred. Brain wave patterns slowed down (Benson, 1975). As a result of continued research, Dr. Benson showed that within each human being there is a remarkable means of regulating one's own physical responses. It is a stress reducing response which he called the "relaxation response."

Each of us has this innate ability to relax, to let go. It causes a state of profound rest that can be effective throughout the day. What is meant by the term relaxation? It happens on different levels. In the body it means a decrease in muscle tension. Emotionally it means trying to create an attitude of greater balance and acceptance of who we are and where we are in our lives. Mentally relaxation means trying to quiet down the agitation in the mind.

To elicit the relaxation response it is necessary to learn techniques which are new to most people. It requires learning to "let go" more deeply than we are used to. Cultivating a state of peacefulness in a world that is so fast and hectic is a new experience for most people. It's something we may not have learned throughout our lives. Numerous techniques elicit the relaxation response. They are: meditation, diaphragmatic breathing, imagery, yoga stretching, progressive muscle relaxation, mindfulness, and autogenic training. During the course of this intervention we will try most of these techniques. Some people prefer one technique over all the others. Some people like to use them all.

Although the techniques seem different they all have two things in common: 1) the focusing of attention, and 2) the passive disregard for everyday thoughts (Benson, 1992). It is possible to focus the attention through use of the breath, use of a focus word, or through physical activity. To develop a passive disregard for everyday thoughts requires a little practice. One technique is to observe or witness the arising and passing of thoughts, sensations, and emotions. Another is to bring the wandering mind back to the focus word you have chosen. Another is to develop an attitude of acceptance towards whatever happens in the process. When you notice the mind is wandering, caught up in the continuing pattern of changing thought, gently refocus it on the breath, word, or phrase.

Experiencing a deep state of relaxation is an ability each of us has. Remember how it feels when you are drifting off to sleep and you feel calm and pleasant. You can use your ability to be able to use this response for your benefit at any time throughout the day.

See how easy that is? You all just experienced this. Does anyone have any questions or comments about this? Continue to do your practice this week. Eliciting the relaxation response gets easier with each practice session you do. Listen to your tapes. I'll look forward to seeing you next week.

SESSION 3 IMAGERY

How it works
Practice exercises
Imagery and health

We spent the first half hour of the session reviewing relaxation practices. Experiences were shared and questions were answered.

I then gave an overview of the use and physiology of imagery.

Imagery or visualization is another method to elicit the relaxation response. Imagery is a way to actively use the mind to create a state of relaxation. It works by stimulating a part of the brain called the cerebral cortex. This is the site of higher function such as language, thinking, and problem solving. There is now technology which can actually show changes in the brain occurring in people who are visualizing different scenes. These same changes seem to appear when people are actually seeing an image or practicing visualization. This suggests that: imagining visual objects stimulates an area of the brain called the visual cortex. Imagining listening to beautiful music arouses the auditory cortex and visualizing tactile sensations, or touch, stimulates the sensory cortex.

This information suggests that imagery sends a message from the higher brain centers to the lower brain centers, including the limbic system or center of emotion, where it is relayed to the rest of the nervous system and the endocrine system.

The more fully you use your abilities to imagine a scene using sight, sound, taste, smell, and touch, the more your body, mind and emotions are affected. The more real the image is, the more information is passed between your brain and your nervous system.

Let's try an exercise and see what happens.

Close your eyes and get into a comfortable position. Imagine that you are standing in your kitchen. Try to make this image in your mind as real as possible. See exactly what your kitchen looks like as you look around the room. Use your hearing to hear the sounds of your kitchen. Is the refrigerator humming? What does your kitchen smell like? Have you baked anything recently? Take your hand and run it along the top of the counter. Feel what that counter feels like under your finger tips. Now take out your cutting board and place it on the counter in front of you. Take out a long, sharp cutting knife. Imagine what the weight of that knife feels like in your hand. Now look down at the counter and see that there is a big, juicy, lemon sitting on the counter. Look at the bright yellow color. Pick up the lemon and feel the texture of its skin on your fingers. Hold it up to your nose and smell the sweet scent coming from the fruit. Now put the lemon on the cutting board and pick up the knife. Hold the lemon firmly with one hand and slice through the skin, cutting it in half. Feel the resistance of the skin as you first begin to slice through it. Feel how it gives way as you reach the juicy fruit. See the spray of juice and feel its moisture on your fingers. See the yellow fruit inside and notice if you cut through any seeds. Now carefully cut one of the halves into quarters. Imagine lifting up one of the quarters and smelling the fragrant scent. Now imagine putting the lemon into your mouth and biting into it.

What happened when you imagined this scene? How many of you felt your mouth watering and your lips puckering as you bit into the fruit. Which of your senses most vividly experienced the scene? Was it your sense of sight, smell, taste, hearing or touch? This exercise is designed to give you a first hand experience of how the thoughts in the mind can actually trigger a physical response. In this way you can imagine a scene which will trigger the relaxation response.

There are three main ways that imagery can have a profound effect on your state of being. As you just experienced, it can bring about changes in your physiological state. It can make you salivate and pucker your lips. The second effect is that practicing imagery can lead to psychological insight. Looking at your dreams is an example of this. Have any

of you ever done this? Each of us has our own symbols in dreams. They are filled with vivid images which can give insight and understanding into many of the experiences we have in our lives. The third area where imagery can be helpful is in giving emotional awareness. Take a moment to think of how the emotions create changes in the thoughts and the body. Imagining something scary can make our heart pound. Picturing something funny can make us laugh.

Let's try another exercise. Close your eyes and take a few deep breaths. As you exhale feel your body relaxing. Get comfortable and imagine that you are looking into the face of someone you love like a close friend or relative. See that person smiling at you and looking at you warmly. How does that make you feel? What emotion does that create inside you?

Let's take a break and then we will continue.

We took a ten minute break.

Let's have some more fun with imagery. Close your eyes and get comfortable. We are going to relax and let our brains create a wonderful peaceful scene to relax into. Begin by focusing your attention on your breath. Watch the gentle peaceful rhythm of your body as you inhale and exhale. Let your thoughts fade into the background as your attention focuses on your breathing. Let's give the breath a sensation. As you breathe in, experience your breath as warm soothing air and let it fill your lungs. Take ten deep, warm, diaphragmatic breaths. As you exhale allow your whole body to relax a little further. Now let's give the breath a color. As you inhale, give your breath the color orange. Orange is the color of joyful energy. Breathe in this joyful orange energy and let it completely fill your body. Now as you inhale give your breath the color yellow. Yellow represents the color of sunlight. As you inhale the yellow light think of the warm pleasant energy of the sun. Let your breath be the color green. Pick a shade of green that you particularly enjoy. Green is the color of healthfulness and equilibrium. As you breathe in green light, allow your body to feel healthy and balanced. Now give your breath the color rosy-pink. Rosy-pink is the color of love and compassion. As you breathe in rosy-pink light allow yourself to be filled with feelings of love and compassion for yourself and others. Now give your breath the color purple. As you inhale, allow your body to be filled with beautiful, purple light. Purple symbolizes the comfort of wisdom and knowledge. Purple also represents inner peace. Let your body be filled with peace as you breathe in purple light. Now let your breath be the color blue. Pick a shade of blue that you particularly love and let that blue light fill your body. Blue represents the color of spirituality. Let the peacefulness of spiritual awareness fill your whole body. Now give your breath the color white. Inhale white light into your body and let that light fill you from the top of your head to the tips of your fingers and toes. White represents clarity and healing. If there is any part of your body that needs healing energy, bring that white light to that part and focus it there. Allow that white light to help you feel clear in your mind and emotions. Continue watching your breath and enjoying this time of relaxation. Let's use the images in the mind to increase our feelings of relaxation. Imagine that you are lying on a beach, at the water's edge. See this scene around you. See the color of the clean, clear water. Feel the warmth of the water gently touching your body. The water is a perfect temperature. With each inhalation see a warm gentle wave coming up and gently caressing the backside of your body. As you exhale see the wave gently receding. See the wave taking with it any tension which remains in your body. Enjoy yourself in this beautiful, gentle, sunlit place. Feel the warmth of the sunlight around you. It is a perfect temperature, not too hot and not too cool. Listen to the sound of the gentle waves flowing in and out at the shoreline. See the seagulls in the distance and hear their gentle birdsong. Fill the scene with all the colors of the beach. Use your imagination to make the scene as vivid as possible. See the green beach grass swaying gently in the breeze. Enjoy yourself there and let the peacefulness completely fill you. Let the outgoing waves take you deeper and deeper into a state of complete relaxation. As you breathe in, imagine the sunlight entering your body from the

top of your head. See it's bright yellow light filling you with energy and light. With each breath allow it to get brighter and brighter. The light is peaceful and gives you feelings of love and joy. Let yourself dive into that love and experience it as completely as you can. Allow yourself to remain in this peaceful place of inner love for a few minutes. Keep your attention focused on your breath. Just let the thoughts of your mind pass on by as you remain totally relaxed on this beautiful beach, filled with light and love.

We remained in a quiet relaxed state for ten minutes.

When you are ready you can open your eyes and bring your attention back into the room. What was this experience like for you? Let's talk about what your thoughts and experiences were.

Let's discuss some of the ways imagery can contribute to health.

We spent the rest of the session discussing experiences and discussing ways that imagery can be used to alleviate stress.

SESSION 4 EMOTIONS

What are emotions
 What do emotions have to do with stress
 Emotion exercise

We began the session with a half hour review and questions and answers. The participants were all practicing the techniques at home and their shared stories were encouraging to each other.

We have spent the last few sessions learning about and experiencing how the body and mind can contribute to stress and be used to relieve stress. Today, we are going to talk about the importance of emotions. Is there anyone who feels uncomfortable talking about emotions? We live in a culture where emotions are often hidden and discouraged. Did anyone get a twang in their stomach at the thought of talking about emotions? There is a wide range of emotional display among families. There are classic stereotypes such as the Italian family which has a great show of drama and emotion and the German family which is like stone where no emotional display is permitted. Of course these are gross generalizations but it makes a point. Think for a moment about what kind of emotional climate you grew up in. Were you allowed to talk about your emotions? How many of you grew up in families where showing emotion was encouraged? This kind of behavioral programming is ingrained in each of us. We learned it as children. Children are present with their emotions. Think about how children are uninhibited and blurt out what they feel. Before children develop language, they are strongly in tune with the connection between the physical and the emotional. When they feel uncomfortable in their bodies, they make a corresponding noise. If they want to be picked up by a parent they use their body to communicate that. As language develops, words are used by the mind to interpret emotional experiences. Words like "bad" and "no" teach a child that certain physical behaviors and feelings are unacceptable and should be repressed. As more complex interpretations occur the mind becomes a screen that blocks out the strength of emotions so that our interpretations of the present are compared to similar experiences of the past. We learn to filter our emotions through the mind so the emotion shifts and is affected with thoughts related to past emotional experiences. Think about a person you know who wears the filter of anger. Whatever happens to that person a cloak of anger is applied. Who knows a person who wears a cloak of hopelessness, no matter what happens to that person it is a hopeless situation. Usually these people act this way unconsciously. They are not even aware of the world they have created around themselves. They don't know that things could be different and that different choices can be made. What style of emotional expression did you learn from your family? Is it the same as the style you have today?

So what are emotions? Emotions are a direct expression of what each of us is experiencing in the present moment. Often thoughts are reliving the past or projecting into the future. Emotions are a present oriented experience. If you are used to filtering your emotions through your mind, it takes a little practice to switch into an awareness where you can allow yourself to experience the emotion in it's present tense.

Let's do an exercise with emotions and see what happens. First, let's get in a totally relaxed state by doing some deep breathing exercises and letting go of the stress in our bodies. (We did this for about ten minutes until everyone was very relaxed). Now think of a past experience where you felt very angry. Use imagery to bring that emotion back to life. Use all your senses to remember the events which led up to that emotional experience. Now become aware of how that emotion feels in your body. Is it in any one particular area? Scan your body and see if there is a particular place associated with that anger. What thoughts are associated with that anger? Now give that anger a shape and a color. Choose a form for it. Now use your breath to release that anger from your body. As

you exhale, let go of the anger and see yourself breathing it out of your being. Exhale a few more times until you get all the anger out of your cells, completely release it into the environment. (We continued with the same practice replacing anger with guilt, fear, shame, sadness, and resentment. Then we did some more breathing exercises to get deeply relaxed.) Now think of an experience where you felt great joy. Think of the events in your life which led up to that experience. Try to use your senses to fully recreate that joy in your experience right now. Where do you feel that joy in your body? What thoughts are associated with that feeling of joy? As you inhale, allow the feelings of joy to increase in your body. With each inhalation, allow that joy to increase and expand. Give joy a color and allow that color to fill you from the top of your head to the tips of your toes. Allow yourself to experience how good that joy feels right now. (We then repeated the practice with the feelings of confidence, peace and love). Allow yourself to lie here for a moment and experience what it's like to be present with your emotions. Just observe how it feels. Leave your judgments of good and bad out of it. Be the observer for a few moments.

We sat quietly for ten minutes and then opened our eyes. We then took a short break. After the break we spent ten minutes talking about the exercise.

Let's talk a bit about the importance of emotions. Emotions are our experience in the present. They are a part of every human experience. They are there for our use. Emotions come from deep in our spirit and then they are transformed by the mind into thoughts. To be in the present, it is necessary to allow emotions to be experienced as they happen. We can then make an appropriate interpretation and release the experience. Be present with your sensations. Deal with them as they happen. Remember that the only negative emotions are the ones you push away and deny. Resist the desire to ignore them. Be honest with people around you. Resolve problems as they occur and move on freely. Finish your unfinished business. Let go of old regrets you are holding on to. This way you won't have to carry hurt feelings around with you. These are the things that contribute to poor health. Practice forgiveness. Let go of harsh judgments towards yourself and others. Honor your differences.

We spent the rest of the session reviewing and discussing the handouts.

SESSION 5 THE MIND

We spent the first half hour talking about the relaxation practices and how the group was doing. With regular practice, the relaxation techniques should be getting easier and more automatic.

Much of the emotional suffering we feel is due to the thoughts we think. Much stress is experienced in the body from negative thoughts. Each thought sends chemicals circulating through the body that affect each of our cells (Chopra, 1993). Often times we feel the way we think. This was evident in the imagery exercise we did in session 3. The same would be true if you thought of a painful experience. You would probably feel your face frown and maybe feel an ache in your stomach. We are what we think. We are who our inner dialogue says we are.

Negative thoughts are part of a circular pattern. Negative thoughts contribute to negative feelings and moods. If you think, "Nobody likes me. I can't do anything right," you feel disheartened and feel low in self-esteem. Negative feelings and moods contribute to symptoms of illness and pain such as headaches, back pain, stomach pain, and insomnia. Physical symptoms contribute to negative behaviors such as smoking and overeating or lying on the couch in front of the TV. Negative behaviors bring us back to negative thoughts and the circle continues.

It is possible to break this circular pattern by moving into witness consciousness and observing the negative cycle. Once you see negative thoughts, it is possible to challenge them. This is done by forming a new concept by breaking down the pattern into parts. Then, it is possible to come up with more rational responses, affirmations and statements. This is hard sometimes because most people are comfortable going through life and finding fault with everything around them. It's normal to have negative thoughts. It would be impossible not to. The trick is to be aware of them and not get stuck in them.

We are going to do an exercise today called mindfulness. The goal of the practice of mindfulness is to be present in a state of choiceless awareness (Kabat-Zinn, 1990). In this practice the attitude of being, simply being, with whatever exists in the present is crucial. Trying to force yourself to have a particular feeling or experience defeats the purpose. Awareness is focused on simply seeing things as they are. Nothing needs to be done. Nothing needs to change, simply be. There are seven attitudinal qualities which can help you in mindfulness practice. They are: (1) non-judging, or remaining in the place of the witness; (2) patience, letting each moment be without rushing through it to get to the next; (3) beginners mind, seeing each experience as if it were your first; (4) trust, in your own inner wisdom; (5) non-striving, allowing each moment to unfold without expectations; (6) acceptance, being present in your experience exactly as it is; and (7) letting go, not being attached to results. Now let's begin our first mindfulness practice. Close your eyes and sit quietly. Keep your attention focused on the present moment and allow yourself to just simply be.

We sat quietly for 20 minutes. Then we opened our eyes and took a break.

We spent the next few minutes talking about our experience of mindfulness. Then we began to review negative thinking patterns.

Let's talk about some of the most common patterns of negative thinking that we all get caught up in.

The first of these is called all or nothing thinking. This describes how the mind tends to see things in black and white. For example, if you plan a party for a group of friends and at the last minute realize you forgot one thing, then you see the whole party as a failure. Who can think of any examples of this kind of thinking?

The second type of negative thinking is called overgeneralization. This is when you see a single negative event as a never-ending pattern of defeat. An example of this is when

you apply for a job and are turned-down. Next your mind starts saying "I'll never get a job." Can anyone give an example of this kind of thinking?

The third type of negative thinking is called the mental filter. This is when you pick out a single negative detail and dwell on it exclusively, thus perceiving the whole situation as negative. An example of this would be if there was one person you didn't like in a group you attended, then the whole group would appear negative. This refers to a situation you are in, not a performance of something you did. Can anyone think of any examples of this from your life?

The fourth type of mind trap is disqualifying the positive. This is when you reject positive experiences by insisting they don't count for some reason or another. In this way you maintain a negative viewpoint that is contradicted by everyday experience. An example of this is how people can't accept compliments. Instead they respond with an insult towards themselves. Can anyone give an example of this in their lives?

The fifth type of negative distortion is jumping to conclusions. This is when you make a negative interpretation even though there are no facts to support the conclusion. This occurs when someone tells you something and you choose to believe something else. Two kinds of jumping to conclusions are mind reading and being a fortune teller. Mind reading is when you arbitrarily conclude that someone is thinking negative thoughts about you and you don't bother to check them out. Being a fortune teller is when you anticipate that things will turn out badly and you are sure that your prediction is already an established fact. Can anyone give examples of these in their life?

The sixth mental distortion is magnification (catastrophizing) or minimization. This is when you exaggerate the importance of something small, like a mistake or you shrink things until they seem tiny. An example of magnification would be to go on and on about a goof up you or someone else made. Minimization is when you accomplish something well and don't give yourself credit. Who has an example of this kind of thinking?

The seventh type of negative thinking is called emotional reasoning. This is when you assume that your negative emotions are accurate reflections of the way things really are. An example of this is when you say to yourself: "I feel this, therefore it must be accurate." This doesn't take into account all the past impressions that are affecting your vision of the event. Can anyone give an example of this type of thinking?

The eighth type of mental distortion is probably one we are all very familiar with. It is the should statements. How many time do you tell yourself, "I should have done this" or "I should have done that." You try to motivate yourself with should and shouldn'ts. When these statements are directed at ourselves the emotional consequence of these statements is guilt and lack of self love. When they are directed at others the consequence is anger, frustration and resentment. Who wants to give an example of how this has been used in their life?

The ninth mental distortion is labeling and mislabeling. This is an extreme form of overgeneralization. Instead of addressing your error you attach a negative label to yourself such as "I'm a loser." When someone else's behavior offends you, you attach a negative label to them such as: "They are a bunch of idiots." The problem with this is that the language used to describe the event is emotionally charged and gives the person using it a strong emotional reaction. Does anyone want to give an example of this?

The tenth type of mental distortion is called personalization. This is when you see yourself as the cause of a negative external event which in fact you were not responsible for. An example of this would be if your car breaks down and you say it is your fault even though you have taken good care of your car all along.

The eleventh type of mental distortion is called the kitchen sink. This is when you get into an argument and begin bringing up all kinds of old wounds from the past instead of sticking to the issue at hand. Who can give an example of this kind of thinking?

The twelfth mental distortion is called needing to be right. This occurs when you think you are always right and that anyone who disagrees with you is wrong.

Does anyone have any questions or comments about these twelve mental distortions?

We are going to continue with this in our next session. For a homework assignment I want you to watch your automatic thoughts. Take an experience this week and try to observe yourself and catch yourself using these distortions. This is the first step in changing them. Pay attention to the chatter going on in your mind. When you catch yourself using one, note how it makes your body and emotions feel. Look for stress warning signs such as tense muscles or the beginning of a headache.

Here is a sheet for you to use to monitor your distortions and the behavior around them. I want you to take a couple of examples from things that happen during the week and fill in what you noticed about yourself. Next week we will talk about some different ways we can respond to create different outcomes.

SESSION 6 REFRAMING

The session began with a half hour review and questions and answers. The homework was reviewed and discussed. Each group member was able to give an example of negative automatic thoughts and how they recognized them.

We are going to continue today where we left off last week with negative mind traps which cause stress in our lives.

Before we begin let's practice eliciting the relaxation response for a few minutes. Let's practice with our focus word and breath. Everyone get comfortable in your chair. Move around until you get your spine straight and put your body in alignment. Close your eyes and begin doing diaphragmatic breathing. Inhale and feel your tummy expand. Exhale and feel it relax. Let your body feel the relaxation that comes along with focusing on the movement of your breath. Do this for a few more minutes. Now, on the next inhalation, begin to use your focus word in coordination with your breath. Let your mind latch on to the focus word and keep other distracting thoughts at bay. If a thought comes into your consciousness, let it flow out. Let your mind concentrate on your focus word as you continue to breathe quietly. Continue to do this for a few more minutes.

Fifteen minutes later.

When you are ready you can open your eyes.

Let's take a break then we will continue.

Now that we all see how negative mental distortions affect our stress level, let's talk about some of the ways we can challenge and change these thought processes. Automatic thoughts often result from our distorted appraisal of a situation based on things that happened in the past, rather than things that are appropriate in the moment. One way to try to accurately appraise the situation is to ask yourself some questions about the stressful automatic thoughts you are having. Think of the situation you identified this week and let's ask some questions about it.

1. Is it really true?
2. Am I jumping to conclusions?
3. What is the evidence?
4. Am I exaggerating or over-emphasizing a negative aspect of the situation?
5. Am I catastrophizing?
6. How do I know it will happen?
7. So what if it happens?
8. Is it really as bad as it seems?
9. Is it to my advantage to maintain this appraisal?
10. Is there another way to look at this situation?

Let's discuss some of the situations we just talked about and ask these questions. Then we can come up with more rational responses.

How did you feel when you turned off the negative thoughts? Did you feel empowered? Did you feel a sense of self-control? Were you able to see the connection between thoughts, moods and physical responses?

Whenever you experience stress there are three stages to the response. The first stage is the stressful event itself. The second stage is your inner appraisal of it. The third stage is your body's reaction-physically, mentally, and emotionally. The challenging thing is that once the stress response occurs, it happens very fast and it is very difficult to affect the process in any way.

In modern life, the stress response gets triggered in very inappropriate ways. It can happen in the middle of an unexpected traffic jam with no way to handle it's intended

purpose-to fight or flee. In a city, stressful events are happening all around us. There is not much we can do to control or remove stressful events from the environment.

This means that our chance of dealing with stress must fall on stage two, appraisal. This is why the mental exercises we have been working on are so vital. They are the link between the stressful event and the body's reaction. We need to break the flow so the effects of stress can be controlled and not result in illness. The individual way we filter life's events determines the level of stress we experience. When a policeman arrives at the scene of a crime, think about the different reactions between the criminal and the victim. The criminal is filled with panic as the victim is filled with relief. External stressors are triggers. They cause the release of powerful hormones. Hormones break down tissues and with continual release disease develops (Chopra, 1993). Managing stress requires neutralizing these old reactions and thought patterns so that a situation can be seen and appraised in the present and dealt with appropriately.

In order to listen to the tape that is constantly running in the back of our brains, self-observation is required. That tape of automatic thoughts has been running on for years and years saying the same old things to us. Most of them are negative criticisms of ourselves, our environment and others. Let's talk about self-observation. How many of you have been able to step back and become the watcher of your thoughts and feelings? What is that like?

Once we begin to observe our mind-chatter we can take it one step further and identify what basic beliefs we have which those thoughts are based on. Beliefs are located in our subconscious mind and have a profound effect on our thoughts and our behaviors. They also develop when we are very young. How many times have you heard that children who come from divorced homes often blame themselves for their parents divorce. They develop the belief of something like "It's my fault therefore I am a bad person." From that core belief emotional problems and behaviors develop. Some of the qualities of irrational beliefs are listed. Irrational beliefs are based on a premise which is inaccurate. An example of this is that the child is not responsible for the parents divorce. Irrational beliefs impose rigid, inflexible, judgments. The judgment from this example is that "I am a bad person." They dictate a specific behavior. An example in this case could be that the child withdraws or begins getting into trouble in school or getting sick. Inaccurate beliefs generate negative mood states. This could be the development of the mental filter of anger or sadness.

Let's discuss some common irrational beliefs. Are there any you can relate to or would like to discuss.

We spent the rest of the time talking about irrational beliefs.

This week give a couple more examples of negative thoughts and see if you can identify an irrational belief that the negative thoughts are based on. See you all next week.

SESSION 7 SURVIVAL TECHNIQUES

We began the session with a review of last weeks information. Issues were discussed and questions were answered.

Today we are going to talk about other ways we can deal with all the stressful events which occur in our lives. Before we begin let's practice a little relaxation. Try to let go of all the things that are bothering you right now. Pretend you left them outside. Let's go through the body and relax each area of it. We will start at the top, at the forehead and work our way down to the ends of our toes. Close your eyes and relax into a comfortable position. Begin using your breath by inhaling deeply, filling your lungs completely, and then exhale and relax. Feel your diaphragm expand as you inhale and contract as you exhale, relaxing. Now bring your attention to your forehead. Become aware of any tension as you inhale. Release the tension as you exhale and relax. Breathe in and focus on your eyes. They may feel tired after a long day. Become aware of the feelings in your eyes and as you exhale relax. Continue to breathe, using your breath as a tool to keep you focused in the moment. On your next inhalation bring your attention to your jaws. Think of how well they serve you throughout the day enabling your communication with others. Become aware of any tension felt in them and as you exhale let them relax. Now, as you breathe become aware of your neck. Feel if any tension is felt there from holding up your head each day. Focus on the muscles supporting the weight of your head, and as you exhale let those muscles relax. Let all the tension be released and feel the sense of relaxation in your neck and head. Now continue to be aware of your breath. Keep your mind focused on the air passing by your nostrils and entering your lungs bringing you a sense of peacefulness. Now put your attention in your shoulders. Feel how the muscles feel in that region of your body. Become aware of any tension and as you exhale relax. Feel all the stress being released as your shoulders relax and become limp. Bring your attention to your right arm. Become aware of how it feels resting next to your body. As you exhale, relax your right arm and let it lay limply against your body. Now become aware of the feelings in your right hand. Think of all the movements your hand may have made throughout the day. Feel how well the muscles have worked and concentrate now on letting them relax. As you exhale let your right hand completely relax as you feel the gravity pulling it into your lap. Now become aware of the sensations in your left arm. Be aware of how your left arm feels attached to your body at the shoulder. Feel if any stress is present there and on the next exhalation let your left arm relax. Now, focus your attention on your left hand. Think of how many thousands of movements your left hand made today. Feel how good it will be to let your left hand completely relax as you exhale. Feel the force of gravity on your hand as it rests in your lap. Now become aware of your chest. All day long the muscles expand and contract as air is brought in and released from your body. Become aware of how all the organs in your chest feel. Be aware of your heart beating to pump blood to every cell. As you exhale let all the muscles in your chest relax and release. Experience the sense of letting go of any tension in that area. Now bring your attention to your upper back. Feel if there is any stress being stored there. Picture all the muscles in your upper back relaxing as you exhale. Let your upper back relax into the force of gravity. Now bring your attention to your middle back. As you inhale become aware of any tension in that region of your body. Exhale and let your middle back relax. As you exhale let your stomach region relax and feel all the stress being released. Now bring your attention to your lower back. Think of all the weight your lower back supports throughout the day. As you exhale, let that area of your body relax. Now bring your attention to your belly. Focus your energy on any tension being held in that region of your body. Take a few breaths and scan your body. If there is any tension left, as you exhale, let it be released. Bring your attention to

your right thigh. Feel any sensations of tension in that part of your body. As you exhale let your right thigh relax. Now bring your focus to your right calf. Feel if any tension is present there. On your exhalation let the tension in your right calf be released. Now bring your attention to your right foot. Feel how your right foot has supported your body throughout the day. Become aware of the tension you are storing in your right foot and as you exhale let that area of your body relax. Now bring your attention to your left thigh. Feel any tension you might have stored in that area of your body. As you exhale feel your left thigh relax. Now bring your attention to your left calf. Feel if any tension is present there. As you exhale let that tension be released. Bring your attention to your left foot. Think of how much your foot has supported you throughout the day. The muscles have worked to carry you everywhere you went. As you exhale let the muscles in your left foot relax onto the floor. Now take a few breaths and view your body. Feel if it is completely relaxed. Use your breath to relax any part which may still contain tension. Sit quietly for a few minutes and let the feelings of peace and relaxation permeate your being. Use your mind to focus on your breath, bringing the life-force to every cell of your body.

Allow yourself to experience the silence that is in the center of your being. We are beings of many layers. There is the physical layer, the mental layer and the emotional layer. In these realms things are always changing. Deeper inside of ourselves there is a place which never changes and is ever still. Let the breath take you deep into that place of stillness. Experience that place and know that it is always with you. Sit for a few minutes and experience that place of stillness.

Five or ten minutes passed as the people continue to experience the pleasant sensations of relaxation. We then took a short stretching break.

Scientists are always doing research trying to figure out how the mind and body work. Luckily the true workings of the human being remain a mystery. It has been recognized for quite some time that stress is a major contributor to illness. Many scientists have tried to discover why some people seem to handle stress better than others.

Researchers began to investigate why stress affects individuals differently. They found that people have several resources at their disposal. They are: a family history of good health, social support, health practices and personality dispositions (Kobasa, 1982). A researcher at the University of Chicago, named Suzanne Kobasa, began studying the effect of personality disposition on stress. Her findings are relevant to the work we did in the last two sessions. She found that the way an event is appraised is very important in determining the impact it will have on the body and health. She proposed a model in which resistance to stress comes from a group of personality traits which she named commitment, control and challenge.

Commitment describes an attitude of involvement in the actions one is performing in life. People who feel committed have a sense of purpose in life which gives meaning to the actions they undertake. They have a belief in themselves and their relationships so that they pursue the things they want and don't give up easily. The committed persons attitude toward themselves and their environment is one of activeness and approach.

A person who lacks commitment finds life lacking in meaning. They are passive and don't pursue the things they want. They avoid challenges that come before them and let life pass them by.

The sense of control comes from a belief that one can have an effect on his or her surroundings. It comes from a perception that the human qualities of imagination, knowledge, skill and choice increase a persons influence over events, both expected and unexpected. In the face of life's stresses, a sense of control increases a persons coping mechanisms by giving the ability to act and transform an event into something desirable. A sense of control also provides a person with a collection of possible responses to draw from in stressful situations.

The challenge element is an attitude one takes in the face of life's changes. A person with a sense of challenge sees events as an opportunity for growth where one can learn and transform himself or herself. This gives a person a sense of openness and flexibility which allows a rational appraisal of incidents that occur.

This profile provides a system of beliefs and attitudes which help a person to be resistant to stress. Commitment gives a person a sense of curiosity over the meaning of life. Control allows a person a sense of influence over the events that occur. Challenge gives a person the resources to handle life's changing events with a sense of excitement over an opportunity for learning.

There is another way of thinking about how to decrease stress in your lives. This system is called the 5 L's (Benson, 1992). Let's read through this list and talk about which of these aspects are present in our lives and which we could increase.

We need to provide nourishment for ourselves. One way we do this is by finding the time to do the things we love best. The exercise on page 34 can help to clarify how well we do this for ourselves.

Now we'll take a break and talk more about ways to successfully deal with life's stress.

Let's begin by talking about the different kinds of stress we each are confronted with in life. Let's talk about the types of stress. They are: stress that is avoidable, stress that can be changed or modified, stress that we contribute to, stress we create, and stress we can't avoid.

Let's talk about stress that is avoidable. Take a few moments and think about your life. How many times do people ask you to do things that you really want to say no to, but you don't say no. No is just as Divine as yes. One way to avoid stress is being clear about what you can do. Other responses to requests could be, "I'll think about it," or "I'll see." Another way to avoid stress is to settle for doing something well, even if it doesn't reach your standard of perfection. Has anyone noticed that it's O.K. if the house is not spotless at all times? How about putting aside time for pleasurable activities. How many of you do that regularly? How many of you procrastinate? This can be a very stressful lifestyle because you have to rush around like crazy at the last minute and probably worry the whole time that you won't be ready or that something won't get done.

Let's talk about ways you can modify the stress that you can't avoid. Have you ever known someone who makes you feel stressful just by being in their company? Some people are stress dumpers. They relieve their stress by dumping it on someone else. You need to set limits on these people. Again, it's O.K. to say no! Sometimes saying no to someone else is saying yes to yourself. Be clear who you want to spend time with and how much. You probably all know someone who is addicted to negativity, a "negaholic." When you are around these people you don't have to match each of their negative remarks with one of your own. When you feel sensations of stress rising in your body, take the time out to do a relaxation moment. Remember your breath. It can be a true friend and it will not let you down. Get things out of your life that you don't want. It's your life and your choice.

The third kind of stress is that which you contribute to. These are the automatic negative thought patterns which continue in the mind like a broken tape. Turn the tape off. Remember to give yourself positive strokes and recognize all the good points you have and kind actions you perform.

There are also the stresses you create by viewing a situation in it's most negative light. Remember you have the power to appraise a situation in a positive light. Search for meaning in why that situation is occurring for you. Is there something to be learned here?

Then there are the stresses in life that can not be avoided: the situations at home, the traffic jams, lines, and other frustrations of daily life. This is when the relaxation response pays off. Practice it regularly so when stress is experienced, you have a tool to neutralize it. Humor is also a powerful tool. Don't most situations in life have a humorous side, even if it's just because times can seem ridiculous? Another help is to use your social supports. Don't go through it alone. This is what friends are for. They support us through our hard

times as well as our joys. Learn to ask for help if you need it. Also use your religious beliefs to help you find solace in difficult times. Use the following tool:

STOP BREATHE FEEL REFLECT RESPOND

Stop, let your mind clear so you can see what is happening in the present moment. Use the breath to calm down and counteract the fight-or-flight response. Witness your mind, reflect on the possibilities. Then choose your response. These five steps can occur in a matter of seconds. Practice!

Let's end this session with an exercise. On the sheet of paper in front of you there is a list of different areas of your life. Take a few minutes to write down a change you might like to see happen in these areas of your life. They are: family, friends, time commitments, physical body, living environment, leisure, spiritual, and anything else. Think about a change in these areas which would bring you happiness. This is just for your benefit. Express your own private wishes.

Now let's go through these one by one and imagine these things coming to us in our lives. Remember to make your images as real as possible. Give your images the sights you would really see. Hear the sound you would hear with your creation. Use your senses of smell and touch to create these things clearly in your mind's eye. First take a few breaths and clear all the thoughts out of your mind. Let's begin with family. Use all your senses to create the change in your mind that you would like to see happen with your family. Take a few minutes to make your mind's view as real as you can. Now create the change you would like to see with your friendships. Make your idea as real as you can. See it in your mind's eye. See the people you want involved in the change. Bring them into your creation. Now imagine the change you want to make regarding your time commitments. See how this would happen. Make the images of what you want clear in your mind's eye. Now see any changes you would like in your physical body. Become aware of what that would be like, how that would feel. See what your body would look like, how it would move. Create that in your mind's eye. Now picture the change you want to make in your life environment. See exactly what that change would look like. Bring clarity into your image to create exactly what you want. Now image the change you want in your leisure time. Maybe you want more of it and can see yourself spending time doing things you want to do, maybe relaxing. Make that picture clear in your mind's eye. Picture the change you would like to see in your spiritual life. Make a clear picture of yourself with that change in place. See exactly what that change looks like. Now imagine any other changes you might want which we didn't cover. Use your senses to create a clear picture of what you want for yourself. Now take a few moments to focus on your breath. Remember that with each breath life force is entering your body, healing any pain, bringing joy and peace from the universe.

When you are ready, open your eyes and begin to move your body. Next week we will wrap up the program. If you have any concerns or comments, please bring them with you. We will have a discussion period. Thank you all for coming. Remember this week to use your tools to take charge of the stressful situations that occur. Remember to STOP, BREATHE, FEEL, REFLECT, CHOOSE.

SESSION 8

We began the session with a half hour review and questions and answers. Then we continued with an exercise.

Let's do an exercise. I am going to say something to you. I want you to listen carefully and on a blank piece of paper write down the thoughts that come to your mind and any emotions you feel. Begin by taking some deep breaths and feel yourself relax as you exhale.

We did breath relaxation for a few minutes.

This exercise is for you. Nobody is going to see what you write. I then said, "I AM A BEING OF LIGHT AND LOVE. ALL GOOD THINGS COME TO ME. ANYTHING IN MY LIFE WHICH I DON'T NEED FALLS AWAY. Now write down all the thoughts you are having.

We've spent lots of time talking about how to alleviate stress in the body and the mind. What about the spirit? There are three parts of a human being. The physical is this body made up of atoms and molecules, cells and organs. Then there is the mind, the thoughts. And then there is the spirit, the feelings of love which you experienced in last weeks exercise come from the Spirit part of your being.

These three parts make up the totality of our wholeness. They are intertwined and inseparable. Together they allow us to experience life. That last exercise was to give you a look at some of the beliefs you hold. When I said the words, I am a being of light and love, how did you react? Did that statement make you feel good and secure? Did it make you think, "No I'm not!" Look at what you wrote down and think very carefully about it. All the experiences of our lives surround us like layers of an onion. Our inner intelligrnce contains every past experience we have ever had in our lives. We also contain every interpretation and judgment we have made from each of these experiences. Deep within our onion is the place of inner peace. I hope that in this program you have been able to experience that place and incorporate it into your own belief system of who you are.

Let's do the following exercise....Imagine you are breathing in a stream of warm, loving energy. Direct that energy into your head. See your head filled with a glow of warmth and love. Now allow that energy to expand and direct that energy to your neck...your shoulders...breathe that feeling into your arms all the way to the tips of your fingers...fill your heart with love and let it radiate out to every cell of your body...breathe love into your stomach and your pelvis...let it fill all the organs contained there. Feel the energy and love traveling down your legs ...right to the bottoms of your feet.

Now imagine yourself healthy, happy and peaceful. Allow yourself to completely experience this state of calmness which exists inside yourself.

On the outer surface of the onion, the mind creates the negative thoughts which may try to prevent you from experiencing the peace and love which exists within. You just had the experience of that place with the last exercise. Therefore beneath all the layers of your being there is an awareness which agrees with the statement, "I am a being of light and love." Love is an essential part of every human being. It is constantly vibrating deep within our spirit self. If it were not true we would never experience it in our lives. By getting in touch with that place we can experience love for ourselves. We can then let that love radiate into the environment around us. Remember that the interpretations you make of the events that happen around you are a reflection of who you are. As a human being you were given awareness and the ability to stop and choose how you react to things that happen around you. If you live with the deep awareness of "I am a being of light and love," this awareness will color your experiences with love and allow those feelings to grow. As you practice this, the mind will latch on to this experience and it's interpretations will come from the thoughts that, "I am a being of light and love." This

thought is extremely powerful in reminding us of our inner nature. The more we practice it, the closer it comes to the surface of our experience.

Another way you can use your mind to your own benefit is through affirmations. Affirmations use the creative power of the mind to bring you things into your life that you want. The use of affirmations can erode away negative thinking patterns (Borysenko, 1987). They can be used to challenge thoughts which you want to change. An example might be if you get angry and feel frustrated by a situation you could make the affirmation, "I am becoming more loving and compassionate." It is important to phrase affirmations in a positive way. If you said, "I will not get angry," that brings up the memory of anger from your emotions. Affirmations are more effective when the words chosen to express them are all positive. Using affirmations is a way for your conscious mind to effect your unconscious. Now let's end today's session with an exercise in affirmations. Close your eyes and begin to take a few deep, abdominal breaths. Find the peaceful place inside yourself. Think of an affirmation you want to say to yourself for the coming week to create something that will bring joy into your life. Let judgments stay behind. They only block your creativity. An idea for an affirmation might be something like, "I will use my power to respond appropriately to stressful situations," or "This week I will use my breath as a tool when something unpleasant happens unexpectedly.

We spent the rest of the session in review and discussion.

During this program you have learned many tools and practiced many techniques to help control stress and increase feelings of well-being. I hope you have enjoyed the program as much as I have. Thank you all so much for participating in this project with me.

References

- Benson, H. (1975). The Relaxation Response. New York. First Avon Books.
- Benson, H., & Stuart, E. (1992). The Wellness Book. New York: Carol Publishing Group.
- Borysenko, J. (1987). Minding the Body, Mending the Mind. Reading, MA: Addison-Wesley Publishing.
- Chopra, D. (1993). Ageless Body, Timeless Mind. New York. Harmony Books.
- Cummings, N. (1993). Somatization: When physical symptoms have no cause. In D. Goleman & J. Gurin (Eds.) Mind Body Medicine (pp 221-230). New York, Consumer Reports Books.
- Dossey, B. (1988). Imagery: Awakening the Inner Healer. Holistic Nursing: A Handbook for practice. Rockville, MD. Aspen Publishers, Inc.
- Forem, J. (1973). Transcendental Meditation. New York. E.P. Dutton & Co. Inc.
- Goleman, D. (1993). Mind Body Medicine. New York, Consumer Report Books.
- Kabat-Zinn, J. (1982). An outpatient program in behavioral medicine for chronic pain patients based on the practice of mindfulness meditation. General Hospital Psychiatry, 4, 33-47.
- Kobasa, S., & Maddi, S., & Kahn, S. (1982). Hardiness and Health: A prospective study. Journal of Personality and Social Psychology, 42, (1), 168-177.
- Rozanski, A. & Bairey, C. (1988). Mental stress and the induction of silent myocardial ischemia in patients with coronary artery disease. New England Journal of Medicine, 318, (16), 1005-1012.
- What noise does to plants. (1970, December). Science Digest, p. 60.

Appendix C
Literature Review Tables

Contributions of Caregiver Stress

Author/Date	Purpose	Type/Stress	Sample/ criteria	Intervention	Measures	Results	Comments
Gold, P.	Summary of interview data with 6 families with a stroke parent	social isolation, strain, anger, resentment	pt. ages 65-71, one or more years post-stroke		Basic strategies and organizational arrangements used by families	Social isolation was universal	

<p>hony- zstone, C. arit, S. 8).</p>	<p>Compare caregivers with age matched sample on Brief Symptom Inventory (BSI), and to assess relationship with burden.</p>	<p>Hostility, anger, burden.</p>	<p>N= 184 caregivers</p>	<p>Caregivers grouped by age and gender to compare with normal group</p>	<p>BSI</p>	<p>For all 3 groups Anxiety (t= 2.79) and Hostility (t=3.25), showed greatest differences</p>	<p>Shows specific symptoms to target for relief, scores for depression were only elevated for older women</p>
<p>ting, S. 9).</p>	<p>To describe characteristic s and expectations of caregivers and their ability to care for themselves and dependant elders</p>	<p>emotional stress, economic burdens, effects on marital, family and social relationships</p>	<p>General description of CG's based on Health Care Financing Agency survey.</p>	<p>Conceptualiza tion of competing demand for the resources of the caregiver- attention, time, energy, and money.</p>	<p>Uses Orem's Self-Care Deficit Theory</p>		

<p>garten, Meta-analysis 989). For CG- 1) Frequency of health probs., 2) changes in frequency over time, 3) factors affecting frequency of probs.</p>	<p>Review of 28 reports</p>	<p>Relative Rating Scale, Relatives Mood Scale, others not mentioned</p>	<p>#1-4 studies reviewed frequency of health probs, higher scores on RRS, higher scores on RMS, (Haley)- more chronic conditions, meds, MD visits, depression #2-Significant increases in frequency of psych. Sx over time but no change in physical rating scale. #3-200 different correlates reported</p>
---	---------------------------------	--	---

<p>or, M.).</p>	<p>How caregiving affects the lives of caregivers.</p>	<p>emotional strain, changes in lifestyle, strain in family bond, conflict in marriage and family</p>	<p>Marginal income elderly N=111. Secondary analysis from "The Impact of the Entry of the Formal Organization on the Informal Support System of Older Americans.</p>	<p>1) Impact on free time for self and social life, 2) Emotional strain.</p>	<p>Nature of stress-emotional strain pervasive among all groups.</p>
<p>as, 30).</p>	<p>Help social workers understand the needs of CG's.</p>	<p>Communication, planning care, financial concern, guilt and anger, conflicting needs, anxiety, fear</p>	<p>Guilt and Anger are two of the most common problems, fear of being alone</p>	<p></p>	<p></p>

<p>3, J. M. F. nson, D.</p>	<p>To examine the psychological well-being and strains perceived by supporters of demented elderly subjects.</p>	<p>79 elderly supporters, 21 male, 58 female mean age = 64.9 39 care recipients non- demented, 40 demented.</p>	<p>General Health Questionnaire RMS Relatives Mood Scale RSS Relatives Stress Scale BRS Behavior Rating Scale CAPE Clifton Assessment Procedure for the elderly</p>	<p>Supporters of demented showed no significant increase on GHQ and RMS. than supporters of non- demented. Differed sign on RSS. ($P < 0.001$) Stress increased significantly as dementia increased.</p>
-------------------------------------	--	---	---	--

<p>er, A. rich, N.).</p> <p>1. Does being married affect institutionalization of men. 2. Is there a price paid by non-disabled wives.</p>	<p>Men, randomly assigned to workshop or control group followed for 6 months</p>	<p>men and wives were given life satisfaction scales, multiple interviews, on-site observations, case materials</p>	<p>1. Without support, likelihood of institutionalization increases. 2. Wife had low morale scores; income and health affect life satisfaction; isolation; restriction of social network.</p>
--	--	---	---

er, L.	To contribute understanding of impact of caregiving on caregiver.	Caregiver burden- physical, psych or emotional, social and financial probs	510 family CG's	survey	Short Psychiatric Evaluation Schedule, Affect Balance Scale, Psychotropic Rx use	Health of CG's similar to other populations, MH- 3x as much stress; affect balance, and life satisfaction, considerably lower, increased use of Rx (28%) vs. (19%), decreased social support	CG burden mainly in mental health and social participation, high psychotropic drug use indicator of psychic distress.
--------	---	--	-----------------	--------	--	--	---

strom,	1) Does presence of demented person at home affect psychological and physical health of relatives?	2,368, 76% female, MMSE used to determine dementia	ORs (burden, social limitation), MMSE, psychotropic drug use	Group with demented person at home: Rx use 2x as high, increased stress, limited in their affective life and social life, Increased ORs for social life was significant	1) demented people are more commonly institutionalized than non-demented, 2) Relatives of demented elderly judge their health to be worse than those of non-demented elderly
D).	2) Study differences in psychological and physical stress of relatives with demented person at home vs. institution				

y, W. e, E.).	Assess effects of CG on broad range of measures of psychological, social, and health functions	One group of primary Cg's, tested one control group, number of subjects was not given	BDI, Life Satisfaction Index, EFC, PILL, Health Status Questionnaire , HDLF	Significant negative effects on psych variables, depression, life satisfaction, relationship with elderly relative; overall poorer health	Negative health outcomes can be affected by stress through physiological arousal, increased attention to Sx, & maladaptive or unhealthy behaviors.
----------------------	---	---	---	---	---

(continued)

<p>J. R. Investigate immunologic al consequences of chronic stress on humans</p>	<p>34 CG's and 34 matched subjects</p>	<p>BDI, Older Americans' Resources & Services Multidimensi onal Functional Assessment Questionnaire , Immune. Assays, Nutrition</p>	<p>CG's= higher BDI scores $F(1,66) = 4.02, p < 0.05$. & life satisfaction scores $F(1,66) = 5.34, p < 0.05$. OARS $F(1,66) = 8.11, p < 0.01$); higher antibody titers $F(1,65) = 4.65, p < 0.05$, lower T lymphs. No lower NK cells</p>	<p>CG's more distressed and have poored immune function</p>
--	--	---	--	---

Continued)

Lorfer,	Stressors, appraisals of stressors appraisal for managing and coping efforts were examined	Effects on depression, anxiety and physical health	60 caregivers from registry at large hospital, 63% wives and 37% husbands	Memory and Behavior checklist, Ways and Coping Checklist, OARS, Brief Symptom Inventory	1) Wishing-Emotive coping was a significant predictor of depression and anxiety, 2) greatest coping effort was through social support, least used was escape-avoidance	1) low initial stress scores 2) little variability on physical health, 3) age was negatively related to depression 4) severity of dementia was not related to health outcomes
M. r, J.	To study predictions from Reformulated Learned Helplessness depression Model.	Lack of control will result in depression	N=68 spouse caregivers	4 semistructured initial interviews & two follow-up interviews with project psychologists; BDI, Hamilton Depression Scale, SCL-90.	Initial BDI 10.3 + 5.7 range 1-27, follow-up 10.3 + 5.5 range 1-27	Perceived loss of control elicits hostility as well as depression

Continued)

<p>ts, B. Moderator model of stress is assessed among the oldest old</p>	<p>153 persons aged 85 and older from a variety of non-institutionalized sources</p> <p>Stress is the daily strains that tax or exceed the person's resources to manage them. As fewer resources are available, ability to alleviate the effects of stress may be reduced</p>	<p>Hassles Scale, Geriatric Scale of Recent Life Events, Rosenberg Self-Esteem Scale, ADL's and IADL's, OARS, Bradburn Affect Balance Scale</p>	<p>1) Persons in fair health with 2.80 MD visits in last six months, 2) Moderate self-esteem, perceived control of events, global capabilities, 3) moderate mental health</p>	<p>1) Strain was associated with negative psychological well-being</p>
--	---	---	---	--

(Continued)

<p>ltz, R.). Longitudinal effect of stroke on the social supports and well-being of patient's primary support person</p>	<p>1) objective conditions conducive to stress, 2) perceptions of stress, 3) short-term responses to stress, 4) enduring outcomes of stress, 5) individual and situational conditioning variables that affect above factors</p>	<p>162 patient/ support person dyads</p>	<p>CES-D, Index of Psychological Well-Being, Level of Optimism Scale</p>	<p>Mean levels of depression and negative well-being did not change from time 1 to time 2, there was a significant decrease in optimism</p>	<p>Psychological well-being was related to aspects of the stroke</p>
---	---	--	--	---	--

(Continued)

Itz, R.).	Four wave longitudinal study of caregivers - What happens to caregivers over time?	Psychiatric and physical symptoms	174 caregivers, 79 completed the study	1) functional status, (OARS), 2) demographics 3) caregiver depression(C ES-D)	1) women reported significantly more depression than men, 2) patient problem behaviors correlated with increased depression	Higher levels of depression were reported with worry over income
---------------	---	---	---	---	---	--

Continued)

<p>M. L.</p>	<p>Evaluate conditions that collectively constitute role engulfment</p>	<p>The global elements of self are usually viewed as personal attributes that form early, are relatively stable, somewhat independant of situations and serve as resources to buffer stress.</p>	<p>n= 527, spouses n=310, adult children n=219.</p>	<p>structured interviews, self-loss measured with two items- how much have you lost, (a) a sense of who you are and, (b).an important part of your life; Rosenberg Self-Esteem Scale, Hopkins Checklist</p>	<p>Women and spouses > loss of self</p>
<p>d, J</p>	<p>What do caregivers find is a barrier to home mgmt? Which probs can they cope with</p>	<p>50 cases of admits to a geriatric hospital unit. divided into 3 groups</p>	<p>interviews</p>	<p>Group #1 prob-sleep disturbance, mean # of probs=9, #2 lack of time for themselves</p>	

(Continued)

S. K.).	To identify sources of burden & facilitate development of interventions	older people with senile dementia (N=29) and their CG's (n=29).	No intervention	Interviews, 29 item self-report inventory given to primary CG's during assessment interview	None of the behavioral variables correlated to feelings of burden; Burden was inversely related to number of visits to household; no other variable was significantly related	Increasing social supports may decrease burden.
----------	---	---	-----------------	---	---	---

Relaxation Response As An Intervention
Stress Related Physiological Conditions

Author/Date	Purpose	Definition of Stress	Sample	Intervention	Measures	Results
W. C.	Do effects of RR on BP last only during RR practice?		5 subjects with essential HTN on no meds, poorly controlled on meds.	baseline phase followed by intensive RR training then recovery; PMR taught 3x day times 3 Tx days, 9am, 1pm, and 6pm.	24 hour BP lowering effect; every 15 minutes 7a-3p, every half hour from 3p-12a, every 2hours until 7a.	SBP dropped in 33 of 45 sessions BP drop was greatest at nighttime; BP is lowered during practice and carries over throughout the day
on, (73).	Does RR have a place in therapy with pts. with HTN?	negative effects of life's pressures and events	86 subjects who were initiates in TM instruction who had high blood pressure, 36 completed the study by not altering their RP	Regular practice of RR for 6 weeks	Systolic/Diastolic Blood Pressure	Average SBP drop was 10, average DBP drop was 5. lower BP measures lasted only as long as practice of RR continued; RR decreases SNS arousal that accompanies stress

12 (Continued)

<p>11, M. & Examinate ble, R., clinic use & health care costs of chronic pain pts. given behavioral medicine interventions. Also long range effect by clinic use.</p>	<p>11 independent and sequential groups N=109.</p>	<p>10-sessions each 90 minutes #1 pathology of pain, given daily pain diaries with medication use #2 RR with breath exer. to be used daily #3 Pace activity between rest and work, schedule pleasurable activities. #4 Nutritional guidance and yoga. #5-10 cognitive restructuring examine automatic thoughts</p>	<p>clinic use, SCL_90R</p>	<p>36% reduction in clinic use over two years; reduction in anxiety, hostility and depression</p>	<p>Projected costs to HMO in two year period + \$23,000</p>
---	--	--	--------------------------------	---	---

man, R., present rationale for non-pharmacologic Tx of HTN

Wt. Reduction, Na restriction, decreased alcohol, RR exercise, RR

RR decreases plasma norepinephrine & reduces anxiety

Since regular elicitation of RR decreases stress, and stress is a component of infertility it seems logical to apply to infertile pop.

54 women, infertile one year, mean 3.3 yrs.

10 sessions' each began with RR #1
Physiology of stress, #2
dramatic breathing & mini responses, #3, cog restructuring and affirmations#4, Self-empathy, compassion, #5, Nutrition, exercise, #6, Mindfulness awareness #7 emotions #8 anger, forgiveness #9 couples

STAI, POMS, AnEx,

Significant decrease in depression, anxiety, and fatigue. Increased vigor; no significant changes in anger 18/36 conceived within 6 mos of completion; increased feelings of control, security well-being and self-esteem

Continued)

e, I. , A.	determine whether elicitation of RR reduces severity of physical and emotional PMS's	107 women entered initial phase, 46 women completed, others dropped out due to lack of interest, med probs.	3 groups, one charted daily symptoms, one read leisure material 2x day and charted symptoms, one used RR 2x day and charted symptoms RR group was asked to practice 15-20 minutes/day 2x day, times 3 months	Holmes & Rahe Life Events Stress Inventory; Daily Rating Form	RR group Improved signif on physical symptoms ($P < .025$), emotional symptoms ($P < .001$), and social withdrawal ($P < .01$). Women with severe symptoms showed 58.0% improvement.
---------------	--	---	--	---	--

<p>an, C. d, M.</p>	<p>Evaluate effectiveness of 2 Behavioral Medicine Programs with pts. with psychosomatic illness Mind/Body & Ways to Wellness</p>	<p>N= 80 3 groups, M/B, WTW, stress mgmt, 11% Tx drop-outs</p>	<p>Both groups met 1.5 hours x 6wks, had RR, awareness, & cognitive restructuring, WTW taught that language shapes your world, M/B used RR as main technique</p>	<p>Medical Symptoms Checklist, POMS-BI</p>	<p>2 ex groups decrease of 2.8 clinic visits > Tx, significant reduction in discomfort (t= 3.15, p<.01), marked decline in psych. stress (t= 4.02, p<.01).</p>	<p>BM intervention are cost effective, number of patients who might benefit is significant.</p>
-------------------------	---	--	--	--	---	---

<p>G., H.</p> <p>1) Evaluate multifactoral behavioral intervention for sleep onset insomnia</p> <p>2) Do insomniaics have > CNS arousal at bedtime?</p>	<p>Control N=14, insomniaics N=12, Insomnia > 6 mos.; one nighttime sequelae; age 25-52; free of hypnotic meds; no psychoactive drugs; not work on rotating shifts</p>	<p>sleep restriction, stimulus control, RR; 5-30 minute individual Tx sessions q 2 wks, sleep diary, discussion of problems #1 Sleep ed.-stages, requirements, expectations, mood, performance; #2 Sleep scheduling #3 stimulus control, #4 RR-25 minute tape of PMR, breathing, visualization to use 1x day, #5 Bedtime RR add at bedtime in addition to</p>	<p>BDI, CES-D, STAI</p>	<p>Insomniaics show > CNS arousal at bedtime, insomniaics signif (p<.001) beneficial changes in SOL & sleep efficiency, 54 min. increase in sleep time; significant improvement s on CES-D (F 1,24+ 24.1, p<.001) and Trait (F 1,24 = 12.2, p<.01.</p>
--	---	---	-------------------------	--

Continued)

Zinn, 32).	test clinical effectiveness of meditation as coping strategy for long term chronic pain pts.	Self-regulation is promoted and learned via the directed attention characteristic of mindfulness meditation.	51 pts. ages 22-75 in one of three ten week cycles, duration of pain 6 mos-48yrs.	Wks #1-4, sweeping-scan body from head to toe focusing on proprioception and breath awareness, 45 minute tape to do at home 6 days/wk; Wk #4 to 6 Hatha Yoga to alternate with sweeping; #7/8 30-45 min/day yoga or sweeping without tape, #9/10 any form 30-45 min with or without tape; didactic materials given on stress physiology & coping	Pain Rating Scale, Body Parts Problems Assessment; Dermatome Pain Map, Table of Levels of Interference & Drug use; POMS; Multidimensional Locus of Control; SCL-90-R; Medical Symptoms Check List;	65% had 33% reduction of pain, 50% had >50% reduction; 76% had total mood disturbance reduction > 33%; 62% had TMD reduction > 50%.	Program focused on self-regulation and responsibility
------------	--	--	---	--	--	---	---

Author	Assessment	Subjects	Randomly assigned to	Hopkins Symptoms	RR group	RR presented
Boltner, J. & R.	Assess enhancement of immune response by RR and social contact	45 subjects from geriatric independent living facilities; ambulatory; verbal; no physical or psych symptoms; no immune problems	3 protocols, #1-RR, #2-social contact, #3-no contact; RR taught 45 minutes 3x week for a month using PMR and guided imagery; social contact with graduate/medical students 45 minutes 3x wk/month	Symptoms Check List; Life Satisfaction Index-Z, Desired Control Interview, NK Assay; Enzyme Linked Immunoassay; Blastogenesis	Signif decreases in interpersonal sensitivity, F(2,84) = 6.64, p<.01, anxiety, F(2,84)= 6.37, p<.01, obsessive compulsive symptoms F(2,84)=3.78, p<.05; differences in NK cells sign, F(2,70)= 402.80, p<.0001.	RR presented as active coping skill used to exert personal control

<p>serman Stuart, E., 9).</p> <p>evaluate efficacy of RR on post-op recovery of cardiac surgery pts.</p>	<p>Randomly assigned, 13 experimental group; 14 control group</p>	<p>Experiment.- educational info & RR training on admission, asked to practice 2x daily with PMR tape; cont- info. only</p>	<p>HR, BP arterial pressure, # days in SVT, Incidence of arrhythmias; POMS</p>	<p>RR- lower SVT (p=.04); POMS showed RR group had signif > reductions in tension & anger</p>
<p>ich, C., & rt, E., l).</p> <p>To emphasize interventions which have acted</p>	<p>RR- integrated set of physiological changes, including decreases in</p>	<p>all processes, whether originating in the external environment</p>		

sh, D. & vn, S.) to determine the effects of behavioral interventions on cardiac disease	28 to Ex. group of low fat veg. diet, stop smoking, RR and exercise; 20 to control group	Low fat vegetarian diet, RR= breathing, meditation, PMR, imagery & stretching x 1hr/day; exercise 1 hr 3x/week	Arterial stenosis decreased 0.4% in ex. group;art stenosis increased 3% in control group; strong relationship between adherence and results	Pts. were motivated to make changes for 1 year; Lifestyle changes may reverse severe heart disease after 1 yr. without lipid lowering drugs
er, B.) To see if psychiatric inpatients who receive RR will show a decrease on an anxiety scale relative to a control group,	N=12, psychiatric inpatients for the duration of the study- 4 weeks.	PMR exercises conducted 2x week for 4 weeks	Pretest-posttest design, Mann-Whitney U test showed no significant difference pretest to posttest. U=45. p=.3182, was not significant at .10.	1) Small sample size. 2) Short intervention
An automatic response pattern that is part of the organisms response to noxious stimulation. A noxious stimulus is one that causes tissue disturbance.	AACL, Affect Adjective Checklist, 61 item self-report checklist.			

<p>nyder, M. 984).</p>	<p>Review 13 studies using PMR.</p>	<p>Number sessions, environment, mode of instruction</p>	<p>AC, State- Trait Anx. Inventory, SCL-90, TMAX, SRS, Vital signs, EMG, GSR.</p>	<p>PMR had positive outcomes in 12/13 studies, technique has wide implications for nursing.</p>	<p>Pts. must understand the importance of daily practice, mastery of technique more important than number of sessions</p>
----------------------------	---	--	---	---	---

<p>tuart, E. & audill, M. 987</p> <p>assess multi- dimensional behavioral intervention designed to decrease cardiac risk.</p>	<p>98 pts., 20-77 years old.</p>	<p>11 - hr group sessions over 6 months; #1- 4 = pathophysiolo gy of HTN & risk factors, self- monitoring BP, RR, nutrition and exercise. #5= goal setting, progress, review medications; #6-11= Reframing to empower pts to participate in own care, review knowledge, attitudes and change.</p>	<p>BP, cholesterol, SCL-90, urine, body fat%.</p> <p>Ex group - significant decreases in BP, with decreases in meds, cholesterol, all measures of SCL-90-R, anxiety, hostility, depression.</p>
---	--	---	---

Stress Response in
Elderly Populations

Author/Date	Purpose	Stress Defined	Sample/ criteria	Intervent.	Measures	Results	Comments
Lawton, J and N. S. (1988)	Prospective study on effects of PMR on tension headaches in elderly		5 women, 5 men ages 62-80, HA's at least 10 years	7 sessions PMR over 8 wks.	Daily diary of headache activity-intensity/ and duration; # HA free days: peak single HA; meds used	7/10-50% decrease HA activity 2 complete improvement; sign improv. in HA free days & Peak HA rating; med changes insignif.	Subjects were asked to verbalize instructions, many required extra instructions before verbalization <u>no control</u> <u>HIGHER RATE OF PRACTICE LINEARLY RELATED TO HA RELIEF</u>

3 (Continued)

inberger 1991).	Discuss ways to teach elderly stress reduction	State of mind caused by anything that is perceived as a threat	Not a research design	Relaxation Response, PMR, and Guided Imagery	Significantly greater improvement in memory in experimental group; lower state anxiety scores were significant in Relaxation group	SCL-90 for anxiety; analogue scales- nervous- calm, relaxed-tense, anxious- tranquil	1.5 hr sessions 2x week for 3 weeks, first three sessions taught PMR and asked to practice at home 2x day, & record experiences in a dairy, 4-5 session taught mnemonic technique	39 elderly subjects, relaxation and control groups; randomly assigned; mean age 76.1	Relaxation training might be useful as a preliminary to specific memory training's	Relaxation may reduce anxiety caused by other training, Relaxation may enhance elderly ability to benefit from memory and other training
--------------------	---	--	-----------------------------	--	--	--	--	---	---	---

savage, J.
(84).

<p>asega, C. Promote effective coping, reduce stress in CG's; Stress Mgmt will be more effective than support groups</p>	<p>quasi-ex 75 subjects, 7 control groups, 5 Tx groups</p>	<p>4 parts 2-insight into CG stress, 2 relaxation techniques & communication (assertiveness).</p>	<p>Burden Interview COST, Coping Strategies</p>	<p>changes in burden non-significant, significant changes post-test with intervention group in using more beneficial behavior.</p>	<p>improvement in ways CG's cope with frustrations greater with stress mngmt group.</p>
--	--	---	---	--	---

1 (Continued)
Support/ Counseling Interventions

Author/Date	Purpose	Definition/ Intervention	Sample	Intervention	Measures	Results	Comments
St. S. & Honey C. (2).	Assess interventions with frail elders and their families; 4 controlled studies reviewed.	Individual family counseling(IF C) vs. Support Group (SG) vs. WL				No significant differences in burden and affect	Burden defined as load borne by CG's, their appraisal of elders behavior, tasks they perform, eval of consequences
St. S. & Honey C. (7).	Comparison of family counseling(IF C), and support groups(SG).		119 CG's, completed intervention, 22% declined to participate 14 % dropped out during study	8 sessions designed to increase understanding of pts. disease, help with behavioral mgmt, ID formal & informal supports, IFC group differed with intervention	BI, BSI, MBP	No significant improvement over people in WL group	Authors question ability of global measures to assess changes in CG's

4 (Continued)
 Professionally led and peer led interventions with caregivers

Author/Date	Purpose	Definition	Sample	Intervention	Measures	Results	Comments
Land, R. Cassiter, C, 1990).	Review of 29 studies		White middle class persons caring for frail elderly	6-8 weekly sessions from 1.5-2 hrs, education and support; medical info, info on aging, development of group support system, emotional impact of caregiving, self-care, communicati on, home care skills			LACK OF GROUP PROGRAMS WHERE STRESS REDUCTION TECHNIQUE S HAVE BEEN UTILIZED.
Land, R. Cassiter, 1990).	Examine effectiveness of individual and group interventions with family CG's.	THEORY: Ecological Systems framework- human beings use coping skills to adapt to the stresses they	175 recruited, 21 dropped due to lack of compliance, 154 participants- daughters or daughter-in- laws; CG	8 weekly 2 hr sessions for both groups, individual counseling(IC , and support groups(SG), + individual counseling,	Bradburn Affect Balance Scale, Zarit Burden Inventory, BSI, informal social supports	BABS no signif diff in well being, Both groups sign improvement in dealing with stress, IC > effects in	Perhaps interventions need to be individually designed to particular caregiver problems

(Continued)
spite Care

or/Date	Purpose	Definitions	Sample	Intervention	Measures	Results	Comments
Gold, H. & Sahl, S.)	Investigate informal & formal CG's experience with involvement in the program		19 relatives interviewed with questionnaire, 12 home helpers questionnaire of structured questions with room for comments	Not clearly described as far as times, days, use etc		Relatives-Respite care of great importance for rest, alone time, calm, unburdened, secure Home-helpers-thought most pts in great need of help with hygiene & household tasks, thought pt got on well in Nrsrg home	Found intermittent care valued alternative to nursing home
Montgomery, E.,)	determine whether educational or respite services alone or combo would affect CG burden or Nrsrg home placement		541 families randomly assigned to one of 5 Tx groups #1-all services seminars, support groups, consultation,	seminars-6wks, 2 hr sessions, SG to meet with other people, Consultation-indiv training & assist, Respite-14 days	Multi-Dimensional Functional Assessment, OARS Methodology ADL, Burden,	Sign decrease in Burden, no effect on Nrsrg Home placement, No sign differences between Tx Groups on any	CG's not receptive to increased demands on their time, many families did not use the services; many

4 (Continued)
meta-analysis

Author	Purpose	Def. of Stress	Sample	Intervention	Measures	Results
Light, B. 3).	Review of quantitative data across studies to help determine the effectiveness of various interventions.		n = 10 to n = 189	1) psychosocial interventions 2) respite care	1) burden 2) dysphoric emotional outcomes	1) Effect size for group interventions = .15/ burden, .31/ emotional dysphoria 2) Effect size for individual interventions = .41/ burden, .58/ emotional dysphoria 3) Effect size for respite care = .15

Author/ Date	Purpose	Description of Technique	Sample/ Criteria	Measure	Results	Comments
Baucom, H. Sher, T. (1990).	To determine whether the effectiveness of behavioral marital therapy could be increased by adding treatment components that focus on couples' cognitions and emotions.	1. Cognitive restructuring (cr). 2. Emotional Expressive Therapy (EET).	60 maritally distressed couples	1. Therapist Intervention Rating Form 2. Dyadic Adjustment Scale 3. Behavior Measures	Adding CR or EET did not increase the effectiveness of behavior marital therapy	1. Measures were taken pretest and posttest 2. CR, 2 rationales a). Behavior change is not necessary if change in thought can occur. b). Cognitive changes facilitate behavioral changes.

Part 5 (Continued)

Corrigan P. Storzbach, D. (1993).	To review the strengths and weaknesses of behavioral strategies	Cognitive reframing may diminish the frequency and experience of delusions	4 separate groups of patients	Therapist evaluation.	Subjects reported decreases in social anxiety, intensity of delusion, and overall psychopath.	Pt. and clinician jointly evaluated the evidence or lack of evidence supporting a delusion.
Eisendrath, S. (1993).	Analysis of solution oriented psychotherapeutic techniques which provide brief, effective interventions.	Reframing allows a person to change the meaning of a situation by seeing it from a previously unconsidered viewpoint.	A 53 yr old man with an MI. A 32 yr old man with a colectomy		Stay in CCU was reframed from weakness to health Ileostomy reframed to contribute to health and freedom.	Reframing can be used to increase a pts. tolerance of disease and procedures.

Part 5 (Continued)

Ellis, A. 1992).	<p>To change three self-destructive thought headings</p> <ol style="list-style-type: none"> 1). I absolutely must (ego). 2. You must (other people). 3. Conditions must (environment). 	<p>When people disturb themselves they produce dysfunctional thoughts (obsessions), feelings (panic), behaviors (compulsions).</p>	<p>When dysfunctional core beliefs are identified they can be directly and vigorously disputed and replaced with a counteracting coping strategy.</p>	<p>People have strong innate predispositions to disturb themselves consciously and unconsciously.</p>
---------------------	---	--	---	---

<p>Ellis, A. (1987).</p>	<p>To explain that Rational-Emotive Therapy (RET), is a good tool for Nurse Practitioners</p>	<p>1. Uses an educational approach 2. Emphasizes biological and physical aspects of emotional problems</p>	<p>RET is an active-directive method where people are directed to identify the philosophical source of their psychological problems and thereby challenge and change their irrational, evaluations</p>	<p>Irrational beliefs are 1. Absolute and expressed in rigid musts, "shoulds" and "oughts" and "have tos." 2. They lead to negative emotions</p>
------------------------------	---	--	--	--

Frisch, M. (1989).	To present details of the development, implementation and initial evaluation of a supervisory training program for supervisors at a VA Medical Center.	1. Needs assessment 2. Awareness building and cognitive restructuring 3. Skills training 4. Application of skills on the job	12 supervisors	1. "How Supervise?" test 2. Supervisory Training Evaluation	On "How Supervise" significant increase ($t=5.64$, $p<.001$). On Training Evaluation-optimistic response in increasing job satisfaction and productivity.	The program seems promising in it's flexibility.
-----------------------	--	---	----------------	--	---	--

Part 5 (Continued)

Gillis, J. Lanning, K. (1989).	After determining the level of stress individuals had recently encountered and corresponding maladaptive cognitions, assessed whether persons a) subjected to similar stress but b) differing in maladaptive cognitions c) showed differences in two affective states- depression and anxiety	125 undergraduate students enrolled in an introductory psychology class	1. Social Readjustment Rating Scale (SRRS) 2. State Trait Anxiety Scale (STAI). 3. Dysfunctional Attitudes Scale (DAS).	1-month and 6 month Life Change Units (LCU) were highly correlated at (r = .67). Correlation among distress was uniformly high at .55 to .66	1. Persons with functional attitudes may be less likely to experience or report distress. 2. Functional attitudes may mitigate against the detrimental effects of stressful life events
--------------------------------	---	---	---	---	--

Part 5 (Continued)

Heinz-Dieter, B. Rehfishch, H. (1991).	To evaluate a pain management program with patients suffering from Ankylosing Spondylitis (A.S.)	12 weekly 90 minute sessions based on 1. Relaxation 2. Reframing 3. Pleasant activity scheduling	45 patients with AS, randomly assigned to either treatment or control groups	1. Pain diary 2. State-Trait Anxiety Inventory 3. von-Zerssen depression scale 4. Psychophysiolo gical complaints checklist 5. Sleep disorders due to pain checklist 6. Somatic symptoms during pain attacks 7. Visual Analog Scale to measure pain intensity	1. Pain diary showed 14% reduction in pain 2. Confirmation of beneficial emotion affects- stabilization and increased well-being.	High compliance in treatment group, 1/25 did not practice relaxation at least once/day
---	--	--	--	---	---	--

Murphy, M. Tosi, D. Pariser, R. (1989).	Case study illustrating the use of cognitive restructuring and biofeedback with a woman hospitalized with depression and chronic pain	Pt passes through six stages while in a state of relaxation: awareness, exploration, commitment, implementation, internalization, behavior stabilization	33 yr old woman hospitalized for major depression and chronic muscular head pain, abuse of Demerol.	The Millon Scores of 20 individual scales	Reductions on all 20 scales from pre to posttest. On FU: situation improved, cognitive processes were more rational, affect was stable and manageable, physiological responses improved, behavior stabilized.	Hypnosis and imagery facilitate rational restructuring of negative cognitive, emotional, physiological and behavioral states
Quill, T. Williamson, P. (1990).	To determine how physicians cope with 10 common dilemmas they face.	Open ended survey asking how they cope, don't cope or creatively solve problems re: self-care (physical), self-care (emotional), personal	Survey sent to 550 readers of Medical Encounter Newsletter. 10% response rate, most with a mixture of academic and pt. care responsibilities	1. Vulnerable feelings and strong reactions were powerful resources. 2. Unhealthy behavior patterns are signals for change.	Survival strategies were used for adaptation to overwhelming stress. Values that attract people to medicine need to be developed.	

Part 5 (Continued)

<p>Desut, D. (1991).</p>	<p>To discuss reframing as a therapeutic intervention technique.</p>	<p>Reframing means to change the conceptual, or emotional setting of some event or thing or to place it in another frame that fits the facts just as well or better.</p>	<p>The language people use clues to their generalizations, deletions, and distortions. Deframing occurs when the person challenges the meaning</p>	<p>A model of the world evolves from three processes:</p> <ol style="list-style-type: none"> 1. Generalization where elements of an experience represent the entire category, 2. Deletion where attention is paid to certain dimensions to the exclusion of others, 3. Distortion, allows shifts in the experience of sensory data <p>To measure the interaction of attention and verbalization. Verbalization of sensations is</p>
<p>Scholle, S. (1992).</p>	<p>To report on a study of a sensorimotor-interpersonal interaction model for</p>	<p>Levels of verbalization from silence, to talking without a listener to</p>	<p>Between group pilot study N=120, n=20 per group</p> <p>State Trait Anxiety Inventory</p>	<p>Significant interactions were found for awareness versus verbalization</p>

Part 5 (Continued)

Stanton, H. (1989)	To test the hypothesis that teacher stress might be reduced through cognitive restructuring to improve the rationality of their thinking.	Combining Rational Emotive Therapy and Hypnosis to challenge irrational beliefs.	40 high school teachers	Face Valid Stress Test, (a 45 item scale designed to measure the irrational beliefs of teachers	The experimental group had a significant decline in irrational thinking (F = 30.65, df = 1, 19; p < .01). This was maintained at a twelve months.	Cognitive restructuring is a useful approach in stress management.
-----------------------	---	--	-------------------------	--	---	--

Part 5 (Continued)

Teasdale, J. (1993).	To consider the relationship between cognitive- behavior therapy and the relevant science base in this case depression	Patients experience emotional reactions without being able to identify any related automatic negative thoughts	Growth and progress can be looked forward to in cognitive- behavioral therapy if a productive exchange of information continues between basic science and clinical experience.
-------------------------	---	---	--

Author/ Date	Concepts Measured	Samples Studied	Reliability	Validity	Mean/ Standard Deviation	Comments
Bradburn Affect Balance Scale (1969), by Bradburn, N.	Positive affect, negative affect and overall psychological well-being	3 generations of family members (N= 1,159) over a period of 15 years.	Internal consistency range from .60-.73	Stability on affect variables over 14 years ranged from .30-.44		Scale of ten items 5 positive and 5 negative, respondants indicate whether they have experienced each affect within the last few weeks; balance score is the difference between positive and negative affect.

	Validity checked with PSSQ (Psychology Student Stress Questionnaire) ($r = .32, p < .05$).	Mean score 2.44 +/- 1.77
Health & Daily Living Form, (1985), by Moos, R.H. & Cronkite, R. C., & Billings, A.G.	Graduate psychology students (N=133)	
Immunoassays Van Rood, Y., R., & Bogaards, M., & Goulmy, E.	Nursing home residents	p < .05 (F = 4.34)
Meta-Analysis	Students taking exams	Results for WBC's are consistent across studies but not significant p < .001 ((F(1,18) = 17.89)) p < .0001 ((F(2,94) = 42.81)).

<p>Life Satisfaction Index Z (1961), by Neugarten, B. & Havighurst, R. & Tobin, S.</p>	<p>Measures a sense of well-being in elderly subjects</p>	<p>945 60 years or older people living in Nigeria. Studies in Nottingham, England</p>	<p>Internal consistency of 0.79</p>	<p>Comparison with a British population, sums of Mean scores are 18.23 (Nigerian) and 16.88 (British), sum variance 7.78 and 9.65 Z=10.08 p<0001. Correlated with 11 social and demographic variables, high correlation with income, loneliness, self-assessed health, location, sex, and bereavement</p>	<p>Mean score 18.04 +/- 5.25 for ages 61-74; for 65 and older- Mean score 18.15 +/- 5.01.</p>	<p>13 item questionnaire with a total score of 26.</p>
--	---	---	-------------------------------------	--	---	--

<p>OARS, Older Americans' Resources and Services (1978).</p>	<p>3 elements, 1) population classification according to functional state; 2) services used and 3) impact of service packages used; ie. five dimensions of personal functioning: social, economic, mental health physical health and self-care capacity.</p>	<p>United States General Accounting Office longitudinal study of the well-being of Cleaveland residents. 30 subjects from 11 geographically dispersed areas.</p>	<p>Interrater reliability on average of five weeks 92% of items rated identically</p>	<p>Questionnaire ratings compared with ratings made by professionals. Rated with Karnofsky scale .62 for mental health & .75 for physical health & .83 for self-care using Kendall's Tau and Spearman's r</p>
--	--	--	---	---

Part 6 (Continued)

Perceived Stress Scale (1983), by Cohen, S, & Kamarck T. & Mermelstein R.	The degree to which situations in one's life are unpredictable, uncontrollable & overloading	Three samples, two of college students; one of a heterogeneous smoking cessation class	Coefficient alpha- .84, .85, and .86; test-retest- .85(college students), .55 (smokers)	Validity with Life Event Scores, with depression, .18-.33; with physical symptoms- .23-.51.	Mean 23.18, 23.67 & 25 Standard Deviation 7.31, 7.79 and 8.0.	A 14 item measure, with 5 option choices; a brief, easy to use measure.
---	--	--	---	---	---	---

Part 6 (Continued)

<p>POMS Profile of Mood States (1971), by Douglas McNair, Maurice Lorr, and Leo Droleman</p>	<p>Measure 6 mood states; tension-anxiety, depression-dejection, anger-hostility, vigor-activity, fatigue-inertia and confusion-bewilderment.</p>	<p>Normal college students, pts in psychotherapy, and hospitalized pts.</p>	<p>Internal consistency .90, test-retest-.65 to .74</p>	<p>1) Sensitive to change associated with psychotherapy; 2) Sensitive to short term changes associated with mild tranquilizers, 3) Valid with dental pts., people viewing autopsy films, people engaged in public speaking, & drug users; Correlated with Hopkins Symptom Distress Scale for Somatization, Anxiety, and Depression</p>	<p>65 item 5 point rating scale, described as particularly useful with assessing psychiatric outpatients and sensitive responses to therapeutic approaches</p>
--	---	---	---	--	--

Part 6 (Continued)

Rosenberg Self-Esteem Scale (1965). Rosenberg, M.	Assessment of self-worth Adolescents	Test-retest reliability for a two week period -.85, coefficients of reproducibility .90 among adolescents	Face validity, Correlation of .60 between RSE scale and Coopersmith Self-Esteem Inventory	10 items with a 4-point Likert scale
Rotter Locus of Control Score (1966).	Assess the extent to which individuals believe they are in control of their own reinforcers "locus of control."	178 Air Force or Navy personnel stationed at 10 different bases	Social System Control Factor and 12 item Fatalism factor correlates well($r=.75$).	29 item forced choice instrument

Part 6 (Continued)

State Trait	Measure	186 white English male pupils, and 101 male skilled and semi-skilled employees	Test-retest was	Validity measured with Stress Arousal Checklist-stress ($r = .85$, $p < .01$) on arousal were not correlated ($r = -.03$).	Mean scores for school group on first and second test were $M = 35.09$, $SD = 9.06$; $M = 34.97$, $SD = 10.37$; for the adults $M = 43.04$, $SD = 8.19$; $M = 38.62$, $SD = 10.81$
Anxiety Inventory, (1970), by Spielberg, C. & Goruch, R	transitory conditions of perceived tension and apprehension; Trait Anxiety refers to differences in anxiety proneness, a personality disposition that is in-pervious to the situation, State anxiety refers to feelings at a particular moment in time		.33		

Appendix D

Reference List For MRP Proposal

References

- Anthony-Bergstone C., & Zarit, S., & Gatz, M. (1988). Symptoms of psychological distress among caregivers of demented patients. Psychology and Aging, 3, (3), 245-248.
- Archbold, P. (1980). Impact of parent caring on middle-aged offspring. Journal of Gerontological Nursing, 6, (2), 79-85.
- Arena, J., & Hightower, N., & Chong, G. (1988). Relaxation therapy for tension headaches in the elderly: A prospective study. Psychology and Aging, 3, (1), 96-98.
- Averill, J., (1973). Personal control over aversive stimuli and it's relationship to stress. Psychological Bulletin, 80, 286-303.
- Bandura, A., (1980). Self-efficacy mechanism in human agency. American Psychologist, February.
- Basler, H., & Rehfisch, H. (1991). Cognitive-behavioral therapy in patients with ankylosing spondylitis in a German self-help organization. Journal of Psychosomatic Research, 35, (2/3), 345-354.
- Baucom, D., & Sayers, S., & Sher, T. (1990). Supplementing behavioral marital therapy with cognitive restructuring and emotional expressiveness training: an outcome investigation. Journal of Consulting and Clinical Psychology, 58, (5), 636-645.
- Baumgarten, M. (1989). The health of persons giving care to the demented elderly: A critical review of the literature. Journal of Clinical Epidemiology, 42, (12), 1137-1148.
- Benson, H. (1975). The Relaxation Response. New York. Avon Books.
- Benson, H., & Alexander, S., Feldman, C. (1975). Decreased premature ventricular contractions through use of the relaxation response in patients with stable ischemic heart disease. Lancet, 2: 380.
- Benson, H., & Stuart, E. (1992). The Wellness Book. New York: Carol Publishing Group.

- Berry, G., & Zarit, S., & Rabatin, V. (1991). Caregiver activity on respite and non-respite days: A comparison of two service approaches. The Gerontologist, 31, 830-835.
- Berthold, H. & Landahl, S., & Svanborg, A. (1991). Intermittent care and caregivers at home. Aging, 3, 51-56.
- Blenkner, M. (1965). "Social work and family relationships in later life with some thoughts on filial maturity." in E. Shanas & G. Strieb (Eds.) Social Structure and the Family: Generational Relations. Englewood Cliffs, NJ. : Prentice Hall.
- Bortz, W. (1980). Effect of exercise on aging, affect of aging on exercise. Journal of the American Geriatric Society, 28, (2), 49-51.
- Borysenko, J. (1987). Minding the Body, Mending the Mind. Reading, Massachusetts: Addison-Wesley Publishing.
- Bradburn, N. (1969). The Structure of Psychological Well-Being. Chicago: Aldine.
- Bunting, S. (1989). Stress on caregivers of the elderly. Advanced Nursing Science, 11, (2), 63-73.
- Cahir, N., & Morris, R. (1991). The Psychology Student Stress Questionnaire. Journal of Clinical Psychology, 47, (3), 414-417.
- Cantor, M. (1983). Strain among caregivers: A study of experience in the United States. The Gerontologist, 23, (6), 597-604.
- Caudill, M., & Schnable, R., & Zuttermeister, P. (1991). Decreased clinic use by chronic pain patients: response to behavioral medicine interventions. The Clinical Journal of Pain, 7, 305-310.
- Chopra, D. (1993). Ageless Body, Timeless Mind. New York. Harmony Books.
- Cohen, S., & Kamarch, T., & Mermelstein, R. (1983). A global measure of perceived stress. Journal of Health and Social Behavior, 24, 385-396.

- Conlin, M., & Caranasos, G., & Davidson, R. (1992). Reduction of caregiver stress by respite care: A pilot study. Southern Medical Journal, 85, (11), 1096-1100.
- Corrigan, P., & Storzbach, D. (1993). Behavioral interventions for alleviating psychotic symptoms. Hospital and Community Psychiatry, 44, (4), 341-347.
- Costa, P. Jr., & Zonderman, A., & McCrae, R. (1987). Longitudinal analysis of psychological well-being in a national sample: Stability of mean levels. Journal of Gerontology, 46, (2), 50-55.
- Crandell, R. (1974). The measurement of self-esteem and related constructs. In J.P. Robinson & P.B. Shaver (Eds.) Measures of social, and psychological attitudes. (pp 45-162). Ann Arbor, The University of Michigan: Institute for Social Research.
- Cummings, J., & Benson, H. (1992). Dementia, A Clinical Approach. Stoneham, Ma. Butterworth-Heinemann.
- Cummings, N., (1993). In D. Goleman & J. Gurin (Eds.) Mind Body Medicine (pp 221-230). Consumer Reports Books.
- Dellasega, C. (1990). Coping with caregiving, stress management for caregivers of the elderly. Journal of Psychosocial Nursing, 28, (1), 15-22.
- Dossey, B. (1988). Imagery: Awakening the inner healer. Holistic Nursing: A handbook for Practice. Rockville, M.D.: Aspen Publishers, Inc.
- Domar, A., & Seibel, M., & Benson, H. (1990). The Mind/Body Program for infertility: a new behavioral treatment approach for women with infertility. Fertility and Sterility, 53, (2), 246-249.
- Eagles, J., & Craig, A., & Rawlinson, F. (1987). The physiological well-being of supporters of the demented elderly. Behavioral Journal of Psychiatry, 145, 172-177.
- Eisendrath, S. (1993). Brief psychotherapy in medical practice, keys to success. The Western Journal of Medicine, 158, (4), 376-378.
- Elder, R. (1989). Relationships between adaption-innovation, experienced control and

- State-Trait Anxiety. Psychological Reports, 65, 47-54.
- Ellis, A. (1992). Group rational-emotive and cognitive-behavioral therapy. International Journal of Group Psychotherapy, 42, (1), 63-80.
- Ellis A., & Dryden, W. (1987). Rational-emotive therapy: an excellent counseling theory for NPs, Nurse Practitioner, July, 16-37.
- Farkas, S. (1980). Impact of chronic illness on the patient's spouse. Health and Social Work, 39, 39-46.
- Fengler, A., & Goodrich, N. (1979). Wives of elder disabled men: The hidden patients. The Gerontologist, 19, (2), 175-183.
- Fillenbaum, G., & Smyer, M. (1981). The development, validity and reliability of the OARS Multidimensional Functional Assessment Questionnaire, Journal of Gerontology, 36, (4), 428-434.
- Fiore, J., & Becker, J., & Coppel, D. (1983). Social network interactions: A buffer or a stress? American Journal of Community Psychology, 11, 423-439.
- Folkman, S., & Lazarus, R. (1985). If it changes it must be a process: Study of emotion and coping during three stages of a college examination. Journal of Personality and Social Psychology, 48, (1), 150-170.
- Forem, J. (1973). Transcendental Meditation. New York. E.P. Dutton & Co. Inc.
- Friedman, R. & Stuart, E. & Benson, H. (1992). Nonpharmacological adjuncts to therapy, Essential Hypertension. pp. 1-5, Mosby-Year Book Inc.
- Frisch, M. (1989). An integrative model of supervisory training for medical center personnel. Psychological Reports, 64, 1035-1042.
- Gallagher, D., & Lovett, S., & Zeiss, A. (1991). Interventions with caregivers of frail older persons. In Aging and Health Care: Social Sciences and Policy Perspective. Edited by Ory, M., & Bond, K. London: Routledge Press, pp. 169-189.
- George, L., & Gwyther, L. (1986). Caregiver well-being: A multidimensional examination

- of family caregivers of demented adults. The Gerontologist, 26, (3), 253-259.
- Gilhooly, M. (1984). The impact of caregiving on caregivers: Factors associated with psychological well-being of people supporting demented relatives in the community. Behavioral Journal of Medical Psychology, 57: 35-44.
- Gilleard, C., & Belford, H., & Gilleard, E. (1984). Emotional distress amongst the supporters of the elderly mentally infirm. Behavioral Journal of Psychiatry, 145: 172-177.
- Gillis, J., & Lanning, (1989). Cognitive mediation of responses to life stress. Behavioral Medicine, Spring, 18-22.
- Given, C., & Collins, C., & Given, B. (1988). Sources of stress among families caring for relatives with Alzheimer's Disease. Nursing Clinics of North America, 23, 69-81.
- Goleman, D. (1993). Mind Body Medicine. New York, Consumer Reports Books.
- Goodale, I., & Domar, A., & Benson, H. (1990). Alleviation of Premenstrual Syndrome symptoms with the relaxation response. Obstetrics and Gynecology, 75, (4), 649-655.
- Grafstrom, M., & Fratiglioni, L., & Sandman, P-O. (1992). Health and Social Consequences for relatives of demented and non-demented elderly. A population based study. Journal of Clinical Epidemiology, 45, (8), 861-870.
- Haley, W., & Brown, L., & Levine, E. (1987). Experimental evaluation of the effectiveness of group intervention for dementia caregivers. The Gerontologist, 27, (3), 376-382.
- Haley, W., & Levine, E., & Brown, S. (1987). Psychological, social, and health consequences of caring for a relative with senile dementia. Journal of the American Geriatrics Society, 35, (5), 405-411.
- Haley, W., & Pardo, K. (1987). Relationship of stage of dementia to caregiver stress and coping. Presented at American Psychological Meeting, New York, August.
- Hellman, C., & Budd, M., & Boryshenko, J. (1990). A study of the effectiveness of two group behavioral medicine interventions for patients with psychosomatic

- complaints. Behavioral Medicine, Winter, 165-173.
- Hinkle, L. (1987). Stress and Disease; The concept after 50 years. Social Sciences Medicine, 25, (6), 561-566.
- Horowitz, A. (1985). Sons and daughters as caregivers to older parents: Differences in role performance and consequences. The Gerontologist, 25, (6), 612-617.
- Jacobs, G., & Benson, H., & Friedman, R. (1993). Home-based central nervous system assessment of a multifactor behavioral intervention for chronic sleep-onset insomnia. Behavior Therapy, 24, 159-174.
- Kabat-Zinn, J. (1982). An outpatient program in behavioral medicine for chronic pain patients based on the practice of mindfulness meditation. General Hospital Psychiatry, 4, 33-47.
- Kiecolt-Glaser, J., & Glaser, R. (1989). Psychosocial enhancement of immunocompetence in a geriatric population. Health Psychology, 4, (1), 25-41.
- Kiecolt-Glaser, J., & Glaser, R., & Shuttleworth, E. (1987). Chronic stress and immunity in family caregivers of Alzheimer's Disease victims. Psychosomatic Medicine, 49, 523-535.
- Kobasa, S., & Maddi, S., & Kahn, S. Hardiness and health: A prospective study. Journal of Personality and Social Psychology, 42, (1), 168-177.
- Larson, E., & Bruce, R. (1987). Health benefits of exercise in an aging society. Archives of Internal Medicine, 147, 353-356.
- Lawton, M., & Brody, E., & Saperstein, A. (1989). A controlled study of respite service for caregivers of Alzheimer's patients. The Gerontologist, 29, 8-15.
- Layton, C. (1986). Test-Retest characteristics of the State-Trait Anxiety Inventory, A-State Scale. Perceptual and Motor Skills, 62, 586.
- Lazarus, R. (1966). Psychological Stress and the Coping Process, McGraw Hill, New York.

- Lazarus, R., & DeLongis, A. (1983). Psychological Stress and Coping in Aging. American Psychologist, March.
- Leserman, J. & Stuart, E., & Mamish, M. (1989). The efficacy of the relaxation response in preparing for cardiac surgery. Behavioral Medicine, Fall, 111-117.
- Lovett, S., & Gallagher, D. (1988). Psychoeducational interventions for family caregivers: Primary efficacy data. Behavior Therapy, 19, 321-330.
- McNair, D., & Lorr, M., & Droppleman, L. (1981). Profiles of Mood States. Educational and Industrial Testing Service, San Diego, Ca.
- Medich, C., & Stuart, E., & Deckro, J. (1991). Psychophysiologic control mechanisms in ischemic heart disease: The mind-heart connection. Journal of Cardiovascular Nursing, 5, (4), 10-26.
- Montgomery, R., & Borgatta, E. (1989). The effects of alternative support strategies on family caregiving. The Gerontologist, 29, 457-464.
- Moos, R., & Cronkite, R., & Billings, A. (1985). Health and Daily Living Form Manuel. Palo Alto, Ca.: Consulting Psychologists Press.
- Murphy, M., & Tosi, D., & Pariser, R. (1989). Psychological coping and the management of pain with cognitive restructuring and biofeedback: a case study and variation of cognitive experiential therapy. Psychological Reports, 64, 1343-1350.
- Ornish, D., & Brown, S., & Scherwitz, L. (1991). Can lifestyle changes reverse coronary heart disease? Lancet, 336, 129-133.
- Ornish, D., & Scherwitz, L., & Doody, R. (1983). Effects of stress management training and dietary changes in treating ischemic heart disease. Journal of the American Medical Association, 249, (1) 54-59.
- Pagel, M., & Becker, J., & Coppel, D. (1985). Loss of control, self-blame, and depression: an investigation of spouse caregivers of Alzheimer's disease patients. Journal of Abnormal Psychology, 94: 169-182.

- Pearlin, L. (1983). "Role strain and personal stress." Howard B. Kaplan (Ed.), Psychological Stress: Trends in Theory and Research, pp. 3-32. New York: Academic Press.
- Pearlin, L. (1989). The sociological study of stress. Journal of Health and Social Behavior, 30, 241-256.
- Pearlin, L., & Mullan, J., & Semple, S. (1990). Caregiving and the stress process: an overview of concepts and their measures. The Gerontologist, 30, (5), 583-594.
- Pesut, D. (1991). The art, science and techniques of reframing in psychiatric mental health nursing. Issues in Mental Health Nursing, 12, 9-18.
- Posner, J., & Gorman, K., & Klein, H. (1986). Exercise capacity in the elderly. American Journal of Cardiology, 57: 52C-58C.
- Prichard, K., & Brown, B., & Kelly, F. (1986). Reliability of a multidimensional locus of control construct for older adults anticipating transitions in careers. Psychological Reports, 59, 1007-1012.
- Quill, T., & Williamson, P. (1990). Healthy approaches to physician stress. Archives of Internal Medicine, 150, 1857-1861.
- Rossmann, M. (1993). Imagery: Learning to use the mind's eye. In Daniel Goleman (Ed.), Mind Body Medicine (pp 291-300). New York: Consumer Reports Books.
- Rotter, J. (1966). Generalized expectancies for internal versus external control of reinforcement. Psychological Monographs, 80, (1, Whole No. 609).
- Rozanski, A., & Bairey, C. (1988). Mental stress and the induction of silent myocardial ischemia in patients with coronary artery disease. New England Journal of Medicine, 318, (16), 1005-1012.
- Scholle, S. (1992). A controlled study of sensation, awareness, and verbal disclosure for regulation of arousal and anxiety. Perceptual and Motor Skills, 74, 307-320.
- Schultz, R., & Tompkins, C., & Rau, M. (1988). A longitudinal study of the psychosocial

- impact of stroke on primary support persons. Psychology and Aging, 3, (2), 131-141.
- Selye, H. (1946). The general adaptation syndrome and the diseases of adaptation. Journal of Clinical Endocrinology, 6, 117.
- Sheer, B. (1980). The effects of relaxation on psychiatric inpatients. Issues in Mental Health Nursing, 2, (6), 1-15.
- Shewchuk, R., & Foelker, G., & Niederehe, G. (1990). Measuring locus of control in elderly persons. International Journal of Aging and Human Development, 30, (3), 213-224.
- Skaff, M., & Pearlin, L. (1992). Caregiving: Role engulfment and the loss of self. The Gerontologist, 32, (5), 656-664.
- Soldo, B., & Myllyluoma, J. (1983). Caregivers who live with dependent elderly. The Gerontologist, 23, (6), 605-611.
- Spielberg, C. (1972). Anxiety as an emotional state. In C. D. Spielberg (Eds.) Anxiety: Current Trends in Theory and Research. (pp 23-49). New York: Academic Press.
- Stacey, C., & Gatz, M. (1991). Cross sectional age differences and longitudinal change on the Bradburn Affect Balance Scale. Journal of Gerontology, 46, (2), 76-78.
- Stagner, R. (1981). Stress, strain, coping and defense. Research on Aging, 3: 3-32.
- Stanton, H. (1989). Hypnosis and rational-emotive therapy, a de-stressing combination. International Journal of Clinical and Experimental Hypnosis, 37, (2), 95-99.
- Stoeckle, J., & Zola, I., & Davidson, G. (1964). The quality and significance of psychological distress in medical patients. Journal of Chronic Disease, 959-970.
- Stone, R., & Cafferata, G., & Sangl, J. (1987). Caregivers of the frail elderly: A national profile. The Gerontologist, 27, (5), 616-624.
- Stuart, E., & Caudill, M., & Leserman, J. (1987). Nonpharmacologic treatment of hypertension: A multiple-risk-factor approach. Journal of Cardiovascular Nursing, 1, (4), 1-14.

- Snyder, M. (1984). Progressive relaxation as a nursing intervention: an analysis. Advances in Nursing Science, April, 47-58.
- Teasdale, J. (1993). Emotion and two kinds of meaning: cognitive therapy and applied cognitive science. Behavioral Research Therapy, 31, (4), 339-354.
- Toseland, R., & Rossiter, C. (1989). Group interventions to support family caregivers: A review and analysis. The Gerontologist, 29, (4), 438-447.
- Toseland, R., & Rossiter, C., & Labrecque, M. (1989). The effectiveness of peer-led and professionally led groups to support family caregivers. The Gerontologist, 29, (4), 465-470.
- Toseland, R., & Rossiter, C., & Labrecque, M. (1989). The effectiveness of three group intervention strategies to support family caregivers. American Journal of Orthopsychiatry, 59, (3), 420-429.
- Toseland, R., & Rossiter, C., & Peak, T. (1990). Comparative effectiveness of individual and group interventions to support family caregivers. Social Work, 209-217.
- Van Rood, Y., & Bogaards, M., & Houwelingen, H. (1992). The effects of stress and relaxation on the in Vivo Immune Response in man: A meta-analytic study. Journal of Behavioral Medicine, 16, (2), 163-181.
- Weinberger, R. (1991). Teaching the elderly stress reduction. Journal of Gerontological Nursing, 17, (10), 23-27
- What noise does to plants. (1970). Science Digest, p. 60.
- Whitlatch, C., & Zarit., & con Eye, A. (1991). Efficacy of interventions with caregivers: A reanalysis. The Gerontologist, 31, 9-14.
- Yarcheski, A., & Mahon, N. (1989). A causal model of positive health practices: The relationship between approach and replication. Nursing Research, 38, (2),

88-93.

Yesavage, J. (1984). Relaxation and memory training in 39 elderly patients. American

Journal of Psychiatry 141, (6), 778-781.

Zarit, S. (1989). Do we need another "stress and caregiving" study? The Gerontologist, 29,

(2), 147-148.

Zarit, S. (1992). Interventions with frail elders and their families: Are they effective and why?

Preprint of paper to appear in Stress and Coping in Later Life Families. Edited by

M.A.P. Stephens, & J. H. Crowther, & S. E. Hobfoll, & D. L. Tennenbaum.

Washington: Hemisphere Publishers.

Zarit, S., & Anthony, C., & Boutselis, M. (1987). Interventions with caregivers of

dementia patients: Comparison of two approaches. Psychology and Aging, 2, (3), 225-

232.

Zarit, S., & Reeve, K., & Bach-Peterson, J. (1980). Relatives of the impaired elderly:

Correlates of feelings of burden. The Gerontologist, 20, (6), 649-655.