ABSTRACT

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Structured benevolent touch (SBT) was examined to discover the effectiveness on perceived positive behavior and sound sleep among an older adult population living with dementia. Two groups of residents (N = 20) were observed at Bethany Lutheran Homes Hearten House system in La Crosse, WI. Group A (n = 12) received the intervention and group B (n = 8) did not. This prospective, quasi-experimental design with a nonequivalent control group developed and utilized the Positive Daily Living Behavior Scale (PDLBS) and the Awake Night Visit (ANV) as observation tools. Pre- and posttest data were analyzed using the Mann-Whitney U test for two independent samples. The intervention was provided over a 14-day time period which was preceded by a 6-day pretest observation period and followed by a 6-day posttest observation period. The ANV was employed during each night of SBT implementation. Analysis of the variables measured demonstrated that positive behaviors with staff and peers increased among group B residents. However, nighttime activity was not impacted by the intervention.

THE PERCEIVED EFFECTS OF STRUCTURED BENEVOLENT TOUCH COMPLEMENTARY THERAPY AMONG CARE FACILITY RESIDENTS LIVING WITH DEMENTIA

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TABLE OF CONTENTS

PAGE

ACKNOWLEDGEMENTS iii

LIST OF TABLES vii

LIST OF APPENDICES viii

CHAPTER

I. INTRODUCTION 1

Background 1

Statement of the Problem 4

Statement of the Purpose 4

Null Hypotheses 5

Limitations 6

Delimitations 6

Definitions 6

II. REVIEW OF RELATED LITERATURE 9

Introduction 9

Dementia 10

Delirium 11

Causes of Dementia 12

Alzheimer's Disease 12

Vascular or Multi-Infarct Dementia 14

Depression 14

CHAPTER PAGE

Behavior Problems Associated with Dementia 15

Treatments 17

Health Promotion of People with Dementia 18

Traditional Dementia Specific Programming 18

Alternative Health Promotion 20

III. METHODS AND PROCEDURES 22

Introduction 22

Methods and Procedures 22

Subject Selection 22

Staff 23

Intervention 24

Staff Training 24

Implementation of the Intervention 25

Instrument Development 26

Data Collection 28

Statistical Treatment 30

IV. RESULTS AND DISCUSSION 33

Introduction 33

Subjects 33

Results 34

Interrater Reliability 34

CHAPTER PAGE

Trainer Evaluation 35

Evaluation of Null Hypotheses 36

Discussion 38

Staff Evaluation 43

V. SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS 44

Summary 44

Conclusions 44

Recommendations 45

REFERRENCES 49

APPENDICES 53

LIST OF TABLES

TABLE PAGE

1. Intervention time periods for Hearten House 1 residents 28

2. Results of Interrater Analysis..... 34

LIST OF APPENDICES

APPENDIX PAGE

A. Discussion of Benevolent Touch Training 53

B. Intervention Protocol 63

C. Positive Daily Living Behavior Scale..... 65

D. Regional Jury of Experts..... 67

E. Inventory Rating Scale..... 69

F. Structured Benevolent Touch Outcome Log Sheet 73

G. Observation Assignment Sheets 75

H. Benevolent Touch Training Evaluation..... 77

CHAPTER I

INTRODUCTION

Background

The goal of health promotion activities has been to facilitate behavior change that can reduce risks for lifestyle-related problems (Carlson DeJong, Robison, & Heusner, 1994; Green & Kreuter, 1991). In a 1996 article commemorating the history, 50 years of the Centers for Disease Control and Prevention (CDC), Director David Satcher stated, "over these 50 years CDC increasingly has confronted public health challenges that originate in human behavior" (p. 1,705). The primary objective of the CDC has changed from identifying diseases that could be contained and treated to identifying patterns of human behavior that frequently result in negative health consequences. While negative health consequences are present in every population group, there is a large body of evidence indicating a strong need for health promotion activities in the older adult population.

Approximately 20% of older adults are living with dementia (Gwyther, 1985; Mace & Rabins, 1991). Dementia is the clinical syndrome of cognitive function impairment occurring in an alert person (American Psychiatric Association, 1994). Diseases known to cause dementia have been found to occur in populations of older adults. One of the major causes of dementia is Azheimer's disease (AD).

Agitation has been identified as a collection of behaviors forming a risk factor for people living with dementia (Gwyther, 1985; Mace & Rabins, 1991). According to Cohen-Mansfield and Werner (1995), agitation behaviors are affected by environmental stressors. When applied to the progressively lowered stress threshold model by Hall and Buckwalter (1987), increased levels of stress have been linked as a cause of agitation. This suggests that interventions designed to reduce stress may have potential to decrease the occurrence of agitation behaviors as well. For example, when residents of long-term adult care facilities were involved in a structured activity, such as playing cards, agitation behaviors appeared to decrease.

A variety of nonmedical intervention methods have been identified for enhancing the quality of life for persons with dementia (Clark, 1995). People living with dementia continue to have needs and require opportunities for human expression and quality of life. Agitation is associated with negative effects on the patients as well as their care providers. The presence of agitation behaviors among a large percentage of persons with dementia poses a distinct care dilemma (Reisberg et al., 1986; Snyder, Egan, & Burns, 1995). The challenge to health care professionals is to discover effective interventions that will enable persons with dementia to function at their most optimal level.

Certain agitation-related behaviors are not only challenging, but may impose a real threat to care providers. Extreme catastrophic reactions such as combativeness can happen often leaving caregivers to feel they cannot continue to provide care. This can result in removal of the impaired person from a care facility, creating more stress for

family members, as it certainly creates more stress for the patient (Gwyther, 1985; Mace & Rabins, 1991). Care managers are confronted with decisions of how to provide care and reduce agitation without the use of physical or chemical restraints (Dossey, 1995; Heidt, 1991; Jonasen, 1994; Lothian, 1993; Randolf, 1984; Snyder et al., 1995; Tabloski, McKinnon-Howe, & Remington, 1995; Weinrich, Egbert, Eleazer, & Haddock, 1995). As noted above, alternative interventions have been successful in achieving this goal. For example, when music was provided for residents in a nursing home facility, a positive relationship was found between the intervention and decreased agitation levels (Tabloski et al., 1995). In addition, studies of alternative health promotion interventions (e.g., therapeutic touch, hand massage, and music therapy) have been found to reduce agitation-related behaviors (Heidt, 1991; Jonasen, 1994; Lothian, 1993; Randolf, 1984; Snyder et al., 1995).

Persons living with AD should expect that their care providers will pursue every means to ensure that the remainder of their lives have meaning. In addition to interventions listed above, other health promotion activities have been developed and implemented in many settings, in addition to long-term adult care facilities. Several studies (Dossey, 1995; Heidt, 1991; Jonasen, 1994; Kavanagh, & Shepherd, 1990; Lothian, 1993; Randolf, 1984) have demonstrated that health promotion activities not only enhance the functional capacity and independence of AD patients in the present, but also may have long term effects.

A recurring theme in the health promotion literature is therapeutic touch. Developed by Krieger (1982), therapeutic touch is described as a mode of treatment based on Eastern healing practices that direct energy through the medium of tactile touch. Montagu (1986) stated:

> ...the human significance of touching is considerably more profound than has hitherto been understood. The skin as the sensory receptor organ which responds to contact with the sensation of touch, a sensation to which basic human meanings become attached almost from the moment of birth, is fundamental in the development of human behavior. The raw sensation of touch as stimulus is vitally necessary for the physical survival of the organism. (p. 401)

Statement of the Problem

Montagu (1986) claimed that tactile needs for people change as they age. Moore and Gilbert (1995), in a study of 25 older adult nursing home residents, found support for Montagu's contention. They reported that the impact of comforting touch as an intervention produced an increased feeling of affection and immediacy. There is a growing body of evidence supporting a strong need for alternative health promotion activities in the older adult population which include touch. The problem of this study then was to examine if Structured Benevolent Touch (SBT) can effectively increase perceived positive behaviors among older adults living with dementia and if SBT can effectively increase the amount of sound sleep among older adults living with dementia.

Statement of the Purpose

The purpose of this research was to examine the perceived effects of SBT on residents living in a dementia specific care facility. Five variables were examined:

(a) positive noninteractive behavior by residents with dementia, (b) positive resident interaction with staff, (c) positive resident interaction with peers, (d) the number of visitations at night which the resident was inactive, and (e) daily behavior which was perceived to be positive.

Null Hypotheses

1. There will be no significant statistical difference between group A (those who received SBT) and group B (those who did not receive SBT) on the change score value of positive noninteractive behavior.
2. There will be no statistical significant difference between group A and group B on change score value regarding positive interaction with staff.
3. There will be no statistical significant difference between group A and group B on change score value regarding positive interactive behavior with peers.
4. There will be no significant statistical difference between group A and group B on the degree of nighttime inactivity.
5. There will be no significant statistical difference between residents observed before 2:00 p.m. (shift 1) and residents observed after 2:00 p.m. (shift 3) regarding overall positive daily behavior of group A residents.

Limitations

The following were limitations to the study:

1. Observation of SBT by other residents may have stimulated a desire to receive SBT.
2. There may have been a variation on the degree of motivation for staff to implement SBT.

Delimitations

The following were delimitations to the study:

1. Only subjects who completed a proper consent form, prior to the onset of the research, were invited to participate in the study.
2. Only subjects who verbally or physically provided consent to treatment, at the time of treatment, received the intervention.
3. Subjects were delimited to residents living in Bethany Lutheran Homes, Hearten House residential facilities in La Crosse, Wisconsin.
4. Subjects were delimited to people who had been diagnosed with a disease that causes progressive recent memory loss and thinking ability.
5. People making observations were delimited to those with specialized training in the social care of residents living with a dementia-causing disease.

Definitions

The following are definitions used in the study:

Active Listening - the ability to understand a message given by someone, then providing feedback that validates that feeling such as saying, "You have the right to be upset" after

having approached a person to provide SBT and he or she stiffened his or her body and frowned (Lonergan & Becker, 1996).

Alzheimer's Disease - a disease of the brain which causes severe progressive recent memory loss and thinking ability in previously healthy middle-aged and older persons. Nerve cells in the portion of the brain that controls memory, judgment, and thinking are damaged which causes an interruption of the messages passed between neurons (Gwyther, 1985).

Awake Night Visit - a term used to describe a staff member's observation of a resident's nighttime behavior (Bliwise, Hughes, Mc Mahon, & Kutner, 1995).

Benevolent Touch - Lonergan and Becker (1996) stated, "...any positive tactile contact on another or one's own skin with loving intent" (p. 5).

Structured Benevolent Touch - intentional or planned positive tactile contact with loving intent including foot massage, arm massage, hand massage, face massage, slow stroking, fully clothed back massage, and head massage (Lonergan & Becker, 1996).

Unstructured Benevolent Touch - spontaneous, positive contact with loving intent including hand holding, pat on the back, hugging, putting an arm around someone, caressing, stroking hair, touching foreheads, sitting in someone's presence, handshaking, and resting hands on shoulders (Lonergan & Becker, 1996).

Centering - "The art of centering is quieting oneself physically and psychologically. It means that one can let go of external distractions, personal anxieties and irritations, and focus on helping a client" (Thayer, 1990, p. 71).

Noninteractive Behavior - Activity of an individual in which the motivation to participate comes from within the individual, such as playing with a child (Mace & Rabins, 1991).

One-to-One Interaction - a verbal or physical engagement of activity by one person with another person, such as getting a back massage or reminiscing (Gwyther, 1985; Mace & Rabins, 1991).

Positive Daily Living Behaviors - daily behaviors of residents that are believed to enhance the livelihood of an individual, such as laughing or assisting with activities (Mace & Rabins, 1991).

Recreation Activities - a meaningful or enjoyable action or engagement, such as reading alone or making decorations with a group (Mace & Rabins, 1991).

Sundowning - a symptom of AD used to describe people's behavior when they become more confused, restless, and insecure usually late in the day (Gwyther, 1985).

Touch with Loving Intent - touch conveying safety, trust, affection, and emotional warmth, such as holding the hand of another person (Lonergan & Becker, 1996).

CHAPTER II

REVIEW OF RELATED LITERATURE

Introduction

Touch is a mystery. People long for touch and generously reward physical therapists, masseuses, and other professionals who use touch in therapeutic methods. Montagu (1986) so eloquently wrote:

> Compared to the female, the male is culturally encouraged, in the Western world, to remain all the days of his life a virtually nontactile creature—hungering for tactual experience, and seeking it, mainly, through sexual contacts. When in old age, the male's sexual capacities are diminished or completely reduced, the tactual hunger is more powerful than ever, for it is the only sensuous experience that remains to him. It is at this time, when he has again become so much dependent upon others for human support, that he is in need of embraces, of an arm around his shoulder, of being taken by the hand, caressed, and given opportunity to respond. Women need such communications even more than men. Yet this is where we fail the aging quite miserably—as we do in so much else. The aged desire neither to be patronized nor tolerated, but to be understood, respected, and worthy of love they have bestowed on others. Because we are unwilling to face the fact of aging, we behave as if it isn't there. It is this massive evasion that is the principal reason for our failure to understand the needs of the aging. (p. 395)

The skin is our first instrument of communication as well as our greatest protector. Montagu (1986) and Marieb (1992) submit that the entire human body is covered by skin. It is, in fact, the largest organ. The skin is the first line of defense against disease. Further, Montagu (1986) stated that the skin is an extension of the central nervous system. He continued to express that both skin and the nervous system were developed from the same embryonic cell layer, the ectoderm. The central nervous

system develops as the internal portion of the general surface of the embryonic body while the remainder of the surface covering becomes the skin during the development of a human embryo.

Skin is the medium by which the external world is perceived. A sample of skin the size of a quarter contains more than 3 million cells. These cells decrease in number with the aging process. Despite this reduction in human tissue, the need for touch does not appear to decline with aging (Montagu, 1986; Moore & Gilbert, 1995; Snyder et al., 1995).

Dementia

Demographically, dementing diseases have no apparent boundaries. People from all races, economic strata, gender, and educational backgrounds are susceptible to these diseases provided they live beyond their 50's. A common myth about memory loss is that it is a normal part of growing older. Although it is true that irreversible dementing illnesses become more common as a person reaches 80 and 90 years of life, approximately 80% of older adults never experience a significant memory loss or, therefore, a dementing illness.

The many diseases known to cause dementia vary a great deal in their treatability. Thyroid disease for example, is treatable and the dementia can be reversed, whereas, Mace and Rabins (1991) as well as Gwyther (1985) have stated that there is currently no available treatment for AD. However, the symptoms associated with AD can be managed. Dementia is the name given to a group of symptoms that affect a person's

memory, thinking, and reasoning capabilities (Gwyther, 1985; Mace & Rabins, 1991). It is derived from two Latin words meaning "away" and "mind."

The word dementia is a description of the symptoms of different illnesses and not of a person. Dementia is also described as a decline in multiple areas of intellectual ability (Gwyther, 1985; Mace & Rabins, 1991). The severity of the decline in functioning is such that it has interfered with daily functioning in an awake person. The individual who has experienced the dementing illness is aware that changes have occurred. The changes endured by the individual often affect her or his personality because there is no longer an explanation to her or his environment.

Delirium

According to Mace and Rabins (1991), delirium is closely associated with dementia. Together, they are seen as the two major conditions that result in the symptoms of memory loss, mental confusion, disorientation, or intellectual impairment. Delirium is the group of symptoms that occur when a person is less alert than their normal healthy functioning. It is more likely that a person with a dementia develop a delirium in addition to the dementia. A delirium is manifested by a reduced clarity of awareness of the surrounding environment (APA, 1994). The ability to sustain, focus, or shift attention is impaired. The affected person primarily appears to be drowsy, but may vary irregularly between drowsiness and restlessness. Similar to the demented person, the person suffering delirium is also confused, disoriented, and is often forgetful. Visual hallucinations are also common with delirium.

Delirium can be caused by reactions to medications, malnutrition, infectious diseases such as pneumonia, or other serious illnesses such as chronic lung disease (APA, 1994; Gwyther, 1985; Mace & Rabins, 1991). Symptoms of delirium develop over a few hours or days and sudden worsening is noticeable among people who have had other problems.

Causes of Dementia

As previously stated, there are several causes of dementia. The two predominant causes are AD and multi infarct dementia (MID) causing approximately 85% of all cases of dementia (Gwyther, 1985). Other causes of dementia include metabolic disorders, structural problems with the brain, infectious diseases, toxins, other degenerative diseases, vascular diseases, autoimmune diseases, psychiatric disorders, and multiple sclerosis (Gwyther, 1985; Mace & Rabins, 1991).

Alzheimer's Disease

In 1907, Alois Alzheimer was the first person to describe the debility that causes a gradual memory loss and apathy of the brain. The distinguishing feature of AD from other dementia causing diseases is that the symptoms are gradual (Mace & Rabins, 1991). Another generality accompanying the identification of AD is that it is more likely to occur in women over the age of 65.

Upon early onset of the disease, the affected person will appear to be a little more than forgetful with no other signs of decline. He or she may have difficulty learning new skills or performing tasks that require calculation or abstract reasoning. He or she may

have difficulties with job performance and personality changes are likely (Corey-Bloom et al., 1995; Gwyther, 1985; Mace & Rabins, 1991; Reisberg et al., 1986).

As the degenerative disease persists, noticeable changes in the affected persons' language and motor abilities have been observed. Affected people have had difficulty performing tasks that were easy at one time. Handwriting has changed, motor skills diminished, or the person may have difficulty finding the correct word for discussion, and gradually the ability for self-expression has disappeared. Because the affected person is aware of these difficulties, changes in her or his personality or unexplained outbursts of anger may occur as well (Corey-Bloom et al., 1995; Gwyther, 1985; Mace & Rabins, 1991; Reisberg et al., 1986).

It has been noted that the person will become severely impaired with progression of the illness (Gwyther, 1985; Mace & Rabins, 1991). Documented as notable changes in the affected persons life have been: incontinence, frequent falls, limitation to a small vocabulary, and recognition of people and objects diminish. AD is slowly and relentlessly progressive usually leading to death within 10 years.

An initial diagnosis of AD can be made on the basis of type of symptoms, the progression of the symptoms, the elimination of other causes for the symptoms, and a compatible computerized tomography (CAT) scan of the brain. A brain biopsy is required to make a final diagnosis of AD. This removal of a small portion of brain tissue has no effect on mental function. However, because of the invasive procedure of a brain

biopsy and the absence of an effective treatment, brain biopsies are not performed on a regular basis (Gwyther, 1985; Mace & Rabins, 1991).

Vascular or Multi-Infarct Dementia

The second most frequent cause of dementia is known as vascular or MID. In the past, dementing illnesses associated with aging people were thought to have been caused by hardening of the arteries. It is now known that the cumulative effect of multiple strokes cause brain damage, which lead to dementia (Corey-Bloom et al., 1995; Gwyther, 1985; Mace & Rabins, 1991).

MID is distinguished from AD in that it generally affects more men and earlier in life (between the ages of 45 and 65). There is generally a history of previous vascular problems among people with MID. The course of MID has noticeably occurred in a stepwise fashion and has generally been associated more frequently with depression than AD. In some cases, MID has been stopped by preventing further strokes to occur (Gwyther, 1985; Mace & Rabins, 1991).

Depression

One treatable cause of dementia is depression. Mace and Rabins (1991) reported that about 25% of patients with dementia, seen at Johns Hopkins Hospital, were depressed. They also found that of the dementia patients who received treatment for depression, approximately 80% showed signs of improvement (Gwyther, 1985; Mace & Rabins, 1991).

Frequently, people with a dementing illness will also show symptoms of depression, such as a poor appetite, tearfulness, restlessness, or refusal to take part in previously enjoyed activities. Mace and Rabins (1991) discuss the importance of treating depression even for someone who has an irreversible dementia on the basis that it may improve her or his quality of life.

Behavior Problems Associated with Dementia

A frequent occurrence among people with a brain disease has been rapid mood change or excessive disturbance. This has most often occurred because of a confused person being introduced into an even more confusing situation. Groups of people, noisy situations, being asked several questions at once can all precipitate what is known as a catastrophic reaction (Gwyther, 1985; Mace & Rabins, 1991).

People with a dementing illness have misperceived an environmental cue and act upon that misperception. As a result of the demented persons' brain disease, they are no longer able to evaluate the seriousness of an incident or to think of other people their behavior may effect. People with AD also experience a loss of impulse control resulting in situations in which the confused person lashes out at their family (Snyder et al., 1995). Conversely, a person with AD may also become inconsolably tearful or upset at relatively minor incidents (Gwyther, 1985; Mace & Rabins, 1991).

"Combativeness is almost always an extreme catastrophic reaction (Mace & Rabins, 1991, p. 52)." On the basis of the affected persons brain damage and confused state of mind, frequent hitting, biting, pinching, or kicking has occurred (Snyder et al.,

1995). However, literature designed for people who provide daily care offer suggestions for managing these difficult behavior problems (Gwyther, 1985; Mace & Rabins, 1991).

There are many other characteristic behaviors often associated with people with dementia (Gwyther, 1985; Mace & Rabins, 1991). Delusions, hallucinations, catastrophic reactions, and wandering represent a portion of these behaviors, all of which relate a potential hazard for the demented person as well as the caregiver.

Sundowning is a behavior specific to people with a dementing illness (Bliwise, et al., 1995). People experiencing the sundowning effect become more confused late in the day as the lights become increasingly dim. Affected persons have become more impulsive and restless. The routine visuals and noises experienced during the day have provided security of familiarity for many people affected by dementia. It is postulated that as this stimuli disappears in the evening, the environment becomes less familiar causing affected people to become more insecure of their surroundings (Gwyther, 1985; Mace & Rabins, 1991).

Some people with dementing illnesses have become restless at night. In their confusion they also have experienced disorientation and began to wander attempting to find something familiar. They may hallucinate and become frightened of the shadows from the dim light. There also exists a potential for the confused person to misinterpret what he or she has seen, which could cause a catastrophic reaction (Bliwise et al., 1995; Cohen-Mansfield, Werner, & Freedman, 1995).

People suffering a dementing illness experience many losses. Unexplainable occurrences create an environment that may undermine a sense of security and trust. Because of this, another frequent behavior associated with dementia is suspiciousness. "If a person is suspicious or 'paranoid,' one must consider the possibility that her suspicions are founded on fact" (Mace & Rabins, 1991, p. 153). However, some people with dementing illnesses have developed an exaggerated and inappropriate level of suspiciousness (Gwyther, 1985; Mace & Rabins, 1991).

Treatments

To date, treatment of dementia has been disappointing. One treatment that has been promoted is based on the use of fetal cells. "...cells from fetuses or laboratory-grown cell cultures will grow and manufacture neurotransmitters when they are transplanted into animals with brain damage" (Mace & Rabins, 1991, p. 296). Grafts of fetal tissue have been documented to survive for long periods in the brain and restore the atrophied connection in the brain of patients with Parkinson's disease (Kordower et al., 1995).

Treatment efforts have become increasingly sophisticated as a clearer understanding of AD develops (Hollister & Gruber, 1996). A number of drugs have been created to help this effort. However, many drugs have been developed with minimal benefit (Hollister & Gruber, 1996). As a result, alternative methods of promoting the health of people with dementia have been developed (Beullens, 1995; Denney, 1997;

Forbes, 1997; Olson & Sneed, 1995; Ragneskog, Brane, Karlsson, & Kihlgren, 1996; Ragneskog & Kihlgren, 1997).

Health Promotion of People with Dementia

Green and Kreuter (1991) state that health promotion is defined as "the combination of educational and environmental supports for actions and conditions of living conducive to health" (p. 17). As previously stated, people living with a dementia-causing disease should expect their care providers to pursue every means to ensure a supportive environment for healthy living.

Agitation related behaviors have been documented to cause an increase in stress for both care provider and dementia patient. A health promotion program that reduced the level of agitation and promoted a living atmosphere with minimal stressors has created a supportive environment for quality of life for people with dementia (Lonergan & Costanzo, 1996).

Traditional Dementia Specific Programming

Mace (1987) has stated that the goal of dementia specific programming is to "create immediate pleasure, restore dignity, provide meaningful tasks, restore roles, and enable friendship" (p. 13). Historically, a holistic approach to providing care and promoting health for this population has been through dementia specific programming. Hellen (1992) has identified three components of this type of programming as activities of daily living, voluntary task oriented activities, and traditional recreational activities.

This approach has been inclusive of an individual's physical, emotional, cognitive, and spiritual need.

The role of care providers concerning daily living activities has focused on performing these activities with the resident, not for the resident. Some of these activities include grooming, dressing, toileting, bathing, and eating. Forbes (1997) stated, "active participation in one's daily care is critical to support the residents quality of life" (p. 16-17). The effort of promoting the self-care activities has been intended to build and maintain the self-esteem of the individual.

Voluntary task oriented activities has been defined as the second component of dementia specific programming (Hellen, 1992). These activities include meal preparation, cleaning, and housekeeping tasks. Forbes (1997) stated that there were two objectives for this component. The first objective was to provide the residents with an opportunity to contribute to their residence. The second objective was to provide the resident with an opportunity to be successful in an area that retrieves long term memory skills. These tasks have provided residents (with dementia) a familiarity of past accomplishment in addition to a contribution of the present (Forbes, 1997).

The third component of dementia specific programming was identified as traditional recreation activities (Hellen, 1992). Recreational activities have also been associated with objectives of providing a specific category of stimulation. Cognitive, physical, social, spiritual, and emotional needs were met with activities designed for each category. For example, sensory stimulation was provided through alternative health

promotion activities such as music during times of relaxation, smells and tastes of food, as well as touch and feel stimulation by receiving a massage (Forbes, 1997).

Alternative Health Promotion

Led by Krieger (1982), therapeutic touch has been implemented in a variety of settings for different populations of people. This method of complementary therapy was founded on the basis of Eastern philosophies of healing. Krieger (1982) theorized that electrical conduction has been the means by which the functions of the human body occur. Further, Krieger (1982) postulated that an energy field, which carries a charge, travels through and around all living beings. In discussing therapeutic touch, Montagu (1986) stated that people known as healers direct the movement of energy, by means of their hands, through the healee's (an ill person) body.

On the basis that therapeutic touch involves respiration, hemoglobin values were compared in a case-control study by Krieger (as cited in Montagu, 1986). It was found to be statistically significant at the 0.01 level that hemoglobin values increased among those people receiving therapeutic touch. Further, among patients hospitalized with cardiovascular disease, a significant decrease in acute anxiety was discovered following noncontact therapeutic touch in a study by Quinn (as cited in Montagu, 1986).

Music and light have also been used as complementary therapies for people with dementia (Beullens, 1995; Denney, 1997; Ragneskog & Kihlgren, 1997). Denney (1997) as well as Ragneskog and Kihlgren (1997) have shown that music has been effective at

reducing agitation among people living with dementia. Light therapy has been effective for the purpose of restoring sleep patterns to people with dementia (Beullens, 1995).

An evolving complementary therapy, benevolent touch was developed as a method of concentrated nonverbal communication from the same principles as therapeutic touch (Lonergan & Becker, 1996; Lonergan & Costanzo, 1996). The therapy consists of three components. Traditional benevolent touch has involved touch with loving intent by means of activities such as dancing, petting animals, or the assistance with walking. Unstructured benevolent touch involved activities in which a loving intent was held by the caregiver through spontaneous activities such as stroking hair, holding hands, or hugging. Structured benevolent touch (SBT) involved more planning as described by Lonergan and Becker (1996). In this study (Lonergan & Costanzo, 1996) staff provided the intervention of benevolent touch over a 15-month period of time.

According to Lonergan and Costanzo (1996), SBT was provided to residents with dementia by staff caregivers trained in providing the therapy. It included verbal and nonverbal communication that resulted in emotional satisfaction for caregiver and resident. Providing the intervention demanded that the caregiver be emotionally centered toward helping the recipient prior to applying the therapy. The intervention was described as a "safe" (Lonergan & Costanzo, 1996, p. 7) activity that provided boundaries to ensure that SBT was not considered intrusive to the resident.

CHAPTER III

METHODS AND PROCEDURES

Introduction

This study was a prospective, nonequivalent control group, quasi-experimental design. This design incorporated two groups of subjects to be compared to each other. The group that received the intervention (group A) was tested before and after the application of structured benevolent touch (SBT). The group that did not receive the intervention (group B) was also measured on a pre- and posttest basis. The pre- and posttest change score values of each group were then statistically analyzed.

Methods and Procedures

Subject Selection

The focus of this study was on the effects of SBT on residents living in a dementia specific residential care facility. Bethany Lutheran Homes, Hearten House residential facilities in La Crosse, Wisconsin was the location for this research. There were three Hearten House residential facilities in La Crosse dedicated to the treatment of people living with dementia. Each facility had a capacity of 12 residents. Residents receiving the intervention (n = 12) were from Hearten House 1. Hearten House 2 residents (n = 8) participated in the study as the control group. The initial testing of the instruments was completed with residents (n = 7) living at Hearten House 3. All subjects

participating in this study had a consent form signed by their family or representative of power of attorney for health care prior to participation.

The Hearten Houses were licensed group homes that offered 24 hour dementia-specific care in a home-like setting. Residents were placed in a facility on the basis of availability of space. Each resident met two specifications to be considered for admission into one of the group homes:

1. the subject had to have AD or a related irreversible dementia; and
2. the subject had to be in need of 24 hour supervised care and assistance, but did not need the care and services of skilled nursing professionals.

Staff

The staff were comprised of people from communities surrounding La Crosse, Wisconsin. Thirty staff members (29 females and 1 male) worked in the three Hearten Houses. All staff members were between 18 and 65 years of age. Employees of Hearten House 1 were selected to receive the inservice on SBT because residents of that facility would be receiving the intervention. Staff from Hearten House 2 were asked to monitor participating residents behavior but were not trained to provide SBT. Staff employed at Hearten House 3 were asked to assist with the development of the instruments by observing resident behavior prior to implementation of the intervention. Hearten House 3 staff were also not trained in SBT. Staff from Hearten Houses 2 and 3 had an equal opportunity to learn SBT intervention upon completion of the research project.

The staff were trained to understand dementia and the typical behavior challenges that coexist with the several diseases that cause dementia. The 10 staff at each facility provided personal care and activities for the residents as well. Other shift duties included light housekeeping and meal distribution. All staff completed training that included medicine distribution, resident rights and confidentiality, fire safety, and universal precautions. Staff attended monthly inservices to enhance skill development in these responsibility areas.

Intervention

Staff Training

Once the intervention of SBT was selected, a trainer with specific expertise, Sister Edna Lonergan, provided a training inservice. She has lectured on the topic of benevolent touch with people who have AD. She received a Masters level education in aging, in addition to being certified in Massage Therapy by the American Massage Therapy Association. At the time of the training for this study, she was the Executive Director of St. Ann Adult Day Care located in Milwaukee, Wisconsin.

Prior to SBT implementation, staff received training in all areas of BT. Sister Lonergan introduced the BT training with a theoretical background of its development. She included handouts and audio-visual material in the 4.5 hour inservice. It was concluded with an evaluation of the entire training process. All staff from Hearten House 1 were included in this training.

The practical approach to BT application also was presented. In a 4.5 hour inservice, the trainer defined BT, Unstructured Benevolent Touch, Traditional Benevolent Touch, and SBT. The staff at Hearten House 1 were informed about: (a) the guidelines for providing the intervention, (b) self-nurturing techniques for themselves, and (c) a brief background about some practicalities surrounding the process of the intervention. The main portion of the training involved teaching the staff the procedures for providing SBT to people with dementia. A detailed discussion of the training including handouts that were distributed on location may be found in Appendix A.

Implementation of the Intervention

SBT was selected since it was short in implementation duration, physically noninvasive, and it has demonstrated a repeated relaxation response in similar populations (Lonergan & Becker, 1996). Staff members implemented the intervention protocol (see Appendix B) for 15 minutes during three intervention periods each day for 14 days. This was implemented between the pre- and posttest.

Using the last six digits of the residents' social security number as an identifier, subjects were randomly selected and placed into intervention periods. During the three daily intervention periods, two applications of SBT were provided following the protocol guidelines. Time of day for implementation was decided on the basis of convenience for the staff.

Having knowledge of the scheduling procedures, anticipated active times of day for the residents, and when multiple staff were working, the staff selected two

observation periods. Observation period 1 was between 6:45 a.m. and 1:45 p.m. and observation period two was between 2:15 p.m. and 9:45 p.m.

Instrument Development

Prior to implementation of SBT, staff were asked to develop a list of positive behaviors which addressed the manner in which residents engaged with other residents, staff, and themselves. Through the Nominal Group Process, a list of behaviors to be measured was developed and condensed into a one page Positive Daily Living Behavior Scale (PDLBS) (see Appendix C) by the researcher. Hearten House 3 residents and staff were involved in a trial test of the instruments. Data were collected in a method specific to this study and population. All variables of the PDLBS were measured on a Likert-type scale.

The PDLBS was checked for validity through a review process utilizing a panel of experts (see Appendix D). Experts were selected on the basis of their experience with the subject population as well as their credentials in the fields of Health Promotion, Gerontology, Sociology, Psychology, and Psychiatry. Each panel member was asked, individually, to rank the variables on the basis of their acceptability as observational behavior using the Inventory Rating Scale (Gilmore, 1974) (see Appendix E). A value of three or higher was set as the standard for item acceptability. Based on this process, one item was eliminated from the inventory.

Hearten House 3 provided a location to finalize the development of each instrument. It was similar to Hearten Houses 1 and 2 regarding the environmental

surroundings, residents' diagnoses, and social care for the residents. A trial test of the PDLBS was completed at this location to ensure its clarity. Interrater reliability was completed on the basis that some behaviors measured required interpretation. Hearten House 3 staff were asked to observe the same scenario of residents interacting during the day at the same time to evaluate this factor. Immediately following behavior observation, staff indicated their responses on the PDLBS. On the basis of the ordinal level of the data, Spearman's coefficient for correspondence was utilized for the analysis of these data.

On the basis of the documented effects of relaxation on sleep (Richards, 1996) and the effects of dementia on sleep (Mace & Rabins, 1991), a separate instrument was used to monitor night behavior. In the nominal group process described previously, staff indicated that the overnight shift was an appropriate time to observe nighttime activity. The researcher developed a form by which staff were able to indicate activity or inactivity. The Awake Night Visit (ANV) indicator was checked for validity using the same panel of experts as earlier using the Inventory Rating Scale (Gilmore, 1974) and procedures. A value of three or higher was set as the standard for variable acceptability. All variables receiving a mean score value lower than three were to be omitted from the ANV. There were no variables eliminated from this instrument.

Between the hours of 11:00 p.m. and 7:00 a.m., the staff observed resident behavior by listening at the entrance of the residents' rooms and monitoring the activity status of each individual. A positive indicator (+) was used to identify nighttime activity.

A negative indicator (-) was used to identify inactivity. Nighttime behavior was observed during 15 consecutive overnight shifts. A median value of the sum of the negative indicators for each night was presented as the data for this instrument.

Data Collection

Normal operations of the facility were taken into consideration upon assignment of residents to intervention time periods (see Table 1). Three intervention time periods (10:30 a.m., 3:30 p.m., and 7:00 p.m.) were held during each day. Enough time was allotted for two interventions to occur during each of the time periods. This provided the

Table 1. Intervention time periods for Hearten House 1 residents.

Phase	Subjects	Intervention
	S^1	X^R 10:30 a.m.
	S^2	X^R 10:30 a.m.
R Day 1	S^3	X^R 3:30 p.m.
	S^4	X^R 3:30 p.m.
	S^5	X^R 7:00 p.m.
	S^6	X^R 7:00 p.m.
		(X) S^{7-12}
	S^7	X^R 10:30 a.m.
	S^8	X^R 10:30 a.m.
R Day 2	S^9	X^R 3:30 p.m.
	S^{10}	X^R 3:30 p.m.
	S^{11}	X^R 7:00 p.m.
	S^{12}	X^R 7:00 p.m.
		(X) S^{1-6}

opportunity for only six residents to receive the intervention each day. On this basis, a two day cycle was designed in which residents 1-6 received the intervention on the odd days (1, 3, 5, etc.) and residents 7-12 received the intervention on even days (2, 4, 6, etc.).

The 12 residents living at Hearten House 1 were assigned to one of these time periods. The first two residents randomly selected without replacement, received their intervention on the first day and during the first time period. The following residents were assigned to the second time period of the first day and this pattern repeated itself until each resident was randomly selected and assigned to an intervention time period.

Twelve residents resided in Hearten House 2, which served as the comparison group. Ten of those residents had a signed consent form to participate in the study. This location was selected on the basis that it was similar in environmental surroundings, residents' diagnoses, and social care for the residents. It also is close in proximity to Hearten House 1. The comparison group (N = 10) was monitored using the same pre- and posttest procedure. The last six digits of their social security number identified subjects receiving the intervention, whereas controls were identified by the last four digits of their social security number.

Trained in SBT and being knowledgeable of the population, staff selected the specific procedure of SBT for each individual application. Staff documented outcomes on a log sheet (see Appendix F) with the name of the subject, social security number, and type of SBT provided. A research assistant collected the data and dropped the name as an

identifier to blind the researcher. Following the duration of the 14-day SBT implementation, the posttest was performed.

During the course of the pretest, all residents of Hearten House 1 were observed by staff every day for six days prior to SBT implementation. Six residents were observed during the first staff work shift (6:45 a.m. - 1:45 p.m.) and the six remaining residents were observed during the third shift (2:15 p.m. - 9:45 p.m.). A posttest was completed during the six days following the SBT implementation. The posttest was completed by following the same procedures for the pretest. Assignment sheets were provided for staff to understand when to observe each resident (see Appendix G).

Throughout the duration of the 14-day intervention period, the staff observed nighttime behaviors of all residents (20) at the two Hearten Houses. The Awake Night Visit (ANV) indicator was used to collect these data. Nighttime behavior observations began during the overnight shift before the first day of the intervention. The final nighttime observations were made during the overnight shift immediately following the last day of the SBT intervention. Each resident was observed 8 times each night for 15 nights. It was also during this time that staff were encouraged to document any other behavior observations as a journal entry.

Statistical Treatment

On the basis that the level of data from the PDLBS was ordinal, the sample size was small, and a normal distribution of the sample could not be assumed, a nonparametric statistical test was deemed appropriate. The Mann-Whitney U test was

selected to treat the data for the PDLBS. The small sample size led to the prediction that a normal distribution would not be attained. The measurements of the PDLBS also failed to achieve interval scaling, therefore, the Mann-Whitney U test was found to be the most appropriate test for analysis of these data.

There were 15 items on the PDLBS, which were equally combined (5 items for each variable) into three variables:

1. positive, noninteractive behavior of the resident,
2. positive behavior with the staff, and
3. positive behavior with other residents.

Each category contained five items that were measured. The values of these items were combined into one score representing each variable with a range of 5 to 25. A median score from the six observations for each subject during the pretest was calculated. These data were compared to a median score from the six-posttest observations on each of the three variables. A change score value was calculated as the difference between the subject pre- to posttest scores for all variables compared by means of ranking. This process was completed for group A and B residents.

There was only one variable measured on the ANV. However, it was measured eight times for each resident during each night of the 15-day data collection period. The number of times a resident was observed to be inactive during the third work shift (11:00 p.m. - 7:00 a.m.) was counted. The observations of inactivity were combined for one total score. This process provided a range from zero to eight. This value was then added

to the 14 other scores for that same individual with the median value derived from the final 15 scores. Median values of these data were examined for a statistical difference among residents who received SBT and those who did not.

A resident observed to be active three times was exactly half as active as a person observed to be active six times. Thus, these data had the appearance of interval level counts. However, a normal distribution could not be assumed. In addition to the small sample size, the Mann-Whitney U test for two independent samples was used to statistically treat these data.

CHAPTER IV

RESULTS AND DISCUSSION

Introduction

This study was designed to identify the perceived effects of Structured Benevolent Touch (SBT) among residents of a dementia specific care facility. The research design used two groups of subjects that were compared to each other. Group A were those residents who received the intervention, while group B did not. Behavior was measured on the Positive Daily Living Behavior Scale (PDLBS) before and after the intervention. The Awake Night Visit (ANV) indicator was used to document behavior during the course of the intervention. Five null hypotheses were analyzed using the Mann-Whitney U test.

Subjects

A total of 19 females and one male were observed for data collection (N = 20). The male resident was in group B, the comparison group. The median age of residents who received SBT (group A, n = 12) was 84 years with a range of 24 years. Those who did not receive the intervention (group B, n = 8) had a median age of 82.5 years with a range of 21 years. One resident from the control group was dropped from the study due to circumstances beyond the control of the researcher.

Results

Interrater Reliability

Reliability of the PDLBS was evaluated prior to the implementation of the pretest. Five raters from Hearten House 3 observed the same scenario of behaviors among Hearten House 3 residents who had completed consent forms (n = 7). The following results were discovered upon application of Spearman's coefficient for correspondence to the data.

Although there was a high degree of variability (Table 2) between the range of the following scores, three of the five raters were very consistent with correlation's that ranged between 0.750 and 1.000.

Table 2. Results of Interrater Analysis

PDLBS Item Number	Level of Significance	Range of Scores (all raters)
1	0.002	0.9303 – 0.4216
2	0.007	0.8902 – 0.5401
3	0.042	0.7723 – 0.0756
4	0.003	0.9231 – 0.1972
5	0.018	0.8402 – -0.7217
6	0.000	1.000 – 0.6575
7	0.000	1.000 – 0.3064
8	0.011	0.8671 – 0.3000
9	0.002	0.9354 – 0.2269
10	0.000	1.000 – 0.3944
11	0.000	0.9903 – 0.7562
12	0.003	0.9231 – 0.1667
13	0.000	1.000 – 0.4504
14	0.000	1.000 – 0.9080
15	0.000	1.000 – -0.2582

Trainer Evaluation

Upon the completion of the Benevolent Touch training, Sister Edna Lonergan employed an evaluation of the training session. It was composed of 5 open-ended questions. They were: What aspects of the workshop were helpful in the workplace?, What aspects were least applicable?, What information would you like more of?, What changes would you like to see made in this presentation that would be more helpful to you?, and Other comments and rate your readiness from 1 (less ready to apply) to 5 (most ready to apply to residents).

Fifteen participants (100%) completed the evaluation. In response to item number one, 13 participants thought that the demonstrations and applications were most helpful. It was agreed upon by six participants that taking care of one's self was most helpful and six others agreed that learning about the proper method of approaching someone to provide the intervention was the most helpful.

There was no agreement on item number two. Four participants requested more information on the subject of reflexology in response to item number three. Three participants requested more practice time in response to item number four.

In response to item number five, 7 people felt very comfortable with most of the techniques learned at the workshop while four people identified a need for more practice. The total number of participants completing item number five was 15 with a median readiness level of 4. The readiness level indicated that the participants of this training

were comfortable with their training and were ready to begin providing Structured Benevolent Touch to the residents at Hearten House 1.

Evaluation of Null Hypotheses

The following null hypotheses were reviewed based upon the data analysis.

Null hypothesis number 1. There will be no significant statistical difference between group A and group B on the change score values of openness to interaction. Differences of openness to interaction between group A and group B were analyzed using the Mann-Whitney U test of two independent samples. The statistical analysis of these data reported a Z-score of -0.3325 and a 2-tailed P value of 0.7395. These data showed that group A residents did not demonstrate a significant difference in openness to interactive behaviors when compared to group B residents at the 0.05 alpha level. Therefore, the analysis failed to reject the null hypothesis.

Null hypothesis number 2. There will be no significant statistical difference between group A and group B on the change score values regarding interactive behavior with staff. These differences were also identified using the Mann-Whitney U test for two independent samples. The statistical analysis of these data reported a Z-score of -3.2383 and a 2-tailed P value of 0.0012. These data showed that group A residents demonstrated statistically significant differences at the 0.05 alpha level from group B residents on perceived positive behavior with the staff at Bethany Lutheran Homes. Group B residents were found to show a significant increase in observed behaviors with staff.

Likewise, group A residents were found to show a significant decrease in perceived positive behaviors with the staff. Therefore, the analysis rejected the null hypothesis.

Null hypothesis number 3. There will be no significant statistical difference between group A and group B on the change score values regarding interactive behavior with other residents. This hypothesis was examined again by using the Mann-Whitney U test for two independent samples. The statistical analysis of these data reported a Z-score of -2.6541 and a 2-tailed P value of 0.0080. Presentation of these data show that group A residents demonstrated a statistically significant difference from group B residents on perceived positive behavior with other residents at the 0.05 alpha level. Therefore, the analysis rejected the null hypothesis.

Null hypothesis number 4. There will be no significant statistical difference between group A and group B on the degree of nighttime inactivity. Between group A and group B, nighttime activity differences were examined using the Mann-Whitney U test for two independent samples. The statistical analysis of these data reported a Z-score of -0.5185 and a 2-tailed P value of 0.6041. Presentation of these data show that group A residents failed to demonstrate a statistically significant difference from group B residents on degree of nighttime inactivity at the 0.05 alpha level. Therefore, the analysis failed to reject the null hypothesis.

Null hypothesis number 5. There will be no significant statistical difference between group A residents observed before 2:00 p.m. (shift 1) and residents observed after 2:00 p.m. (shift 3) regarding overall daily behavior. Residents that were observed

during shift 1 (6:45 a.m. - 1:45 p.m.) were compared to residents that were observed during shift 3 (2:15 p.m. - 9:45 p.m.). The statistical analysis of these data reported a Z-score of -0.9625 and a 2-tailed P value of 0.3358. Presentation of these data show that residents observed during shift 1 failed to demonstrate a statistically significant difference from residents observed during shift 3 at the 0.05 alpha level. Therefore, the analysis failed to reject the null hypothesis.

Discussion

This study examined the perceived effects of Structured Benevolent Touch (SBT) among residents with Alzheimer's-related dementia. All indicators on the Positive Daily Living Behavior Scale (PDLBS) were designed to identify positive behaviors making this study unique. Studies have shown that, given the opportunity to express oneself through touch, positive outcomes have been achieved (Montagu, 1986; Moore & Gilbert, 1995; Olson & Sneed, 1995). The concept that people with Alzheimer's disease (AD) have a need for touch was at the foundation of the development of SBT.

Regarding the group of observations on the PDLBS that measured a resident's openness to interactivity, there was no significance found between group A and group B. These factors identified behaviors in which a person would be motivated from an internal source. For example, an internal motivator such as a happy feeling stimulating a smile. However, having exposure to the intervention did not make a statistical difference with the group A residents.

Because of the operations of the Hearten Houses, some instances demand that staff from one setting work at another. This suggests the possibility of diffusion of treatment. If diffusion of treatment did occur, staff working with control subjects would have knowingly or unknowingly provided treatment or hints to others to provide treatment, thus skewing the results. Compensatory rivalry may have also effected staff working at Hearten House 2. In this case staff knowingly or unknowingly may have tried to make up to their patients with special treatment because they were in the control group.

The likelihood of compensatory rivalry could have potentially effected the results of this null hypothesis as well. However, a previous study (Lonergan & Costanzo, 1996) that observed behaviors of people with dementia provided the intervention of benevolent touch over a longer period of time. Lonergan and Costanzo (1996) found that positive behaviors increased among those who received the intervention. The shorter length of this study may have impacted the statistical findings.

Encouraged to write and submit journal entries as qualitative data, one staff person wrote about a resident receiving a hand massage, "It put her right to sleep. She opened her eyes every once-in-awhile and smiled at me." Another staff person wrote about a resident's response to a back and shoulder massage, "...she was very thankful." This may have been a single occurrence for one resident. On these occurrences, it appears that the intervention was beneficial as residents gratefully acknowledged it. This outcome is consistent with previous research (Lonergan & Costanzo, 1996).

Significant findings were made on the variable that measured perceived positive interactive behavior with staff. This variable was composed of five items designed to identify a resident's behavior with the staff people who worked with them. Because the PDLBS identified only perceived positive behaviors, the increase observed in group B demonstrated that residents not receiving the intervention showed a significant increase in these behaviors. There may have been an opportunity for the Hawthorne effect to enter the study.

Compensatory rivalry may explain this outcome as well. On the basis that staff at all of the Hearten Houses were aware that there was research occurring at the Hearten House 1, staff working at Hearten House 2 (control) may have been motivated to submit observations which made Hearten House 2 residents appear to be making positive changes. This internal threat to the validity of this study was not controlled for on the basis that normal operations of the care facilities were of primary concern. In addition, a portion of the procedure for replacement of ill staff includes recruiting available staff from the Hearten House system.

Significant findings were made on the variable that measured interactive behavior with other residents. This variable was composed of five items designed to identify a resident's frequency of positive interaction with their peers in their residential setting. Similar to the previous variable, group B residents demonstrated an increase in positive behavior toward their peers. Perhaps a likely explanation for each variable would be that a change in routine created a disturbance among group A residents leading to agitation

which caused them to show a decrease in positive behavior toward the staff and their peers (Gwyther, 1985; Mace & Rabins, 1991).

No significant findings developed from the analysis of degree of nighttime inactivity between group A and group B residents. Upon the initial discussions with the staff of Bethany Lutheran Homes, nighttime activity was a consistently observed behavior of the residents. This observation is also supported in the literature (Richards, 1996). A careful review of the intervention indicated that a response of relaxation could be expected. Literature (Bliwise, et al., 1995; Richards, 1996) describing the effects of relaxation techniques on this population suggested that behavior changes could be identified in observed behavioral sleep patterns. However, the statistical analysis demonstrated that there were no differences between the groups on this variable.

The remaining variable measured the effect of sundowning on the residents within group A. The findings were found to be significant demonstrating that sundowning did not influence the results of the data collected between residents observed during shift 1 and residents observed during shift 3.

Other explanations for these findings may have been due to some resistance to the intervention on three levels; one with the residents, one with the staff, and another with the intervention. Staff were asked to add the activities of this research to their extensive workload. Although they were committed to providing a caring intervention for the residents, a break in their normal work routine may have caused some stress for them, as well as residents. One staff member wrote, "I wish I had more time to do this and all of

my other responsibilities. I think the residents enjoy the massages." This person may have been voicing concern of having too many tasks to complete in the amount of time provided.

The second level of resistance may have been an increase in stress on the residents. One staff member wrote, "Residents who experienced anxiety consistently, were more likely to sense relief from the intervention. Whereas, residents consistently experiencing levels of paranoia were less likely to demonstrate physical signs of relaxation—like facial softening." This may have been a result of added stress to the residents.

Brevity of the intervention may have had an impact on the results as well. Previous research on Benevolent Touch had been done over several months (Lonergan & Constanzo, 1996). Integrating SBT into the work environment over a longer period of time may have allowed the staff and residents to become more accustomed to the application of SBT. As routine, it may have increased benefits for residents and less resistance from staff.

It was important for Hearten House 1 to continue with the care practices employed prior to the research. Although this study added approximately 3 hours of work to a 24-hour period of time, staff were still expected to complete the same amount of tasks as they were before the research. This expectation may have caused stress to staff workers. As previously stated, staff journal entries implied this very point. If a

greater workload did cause an increase in stress for the staff, this may have negatively effected the residents and the results of the study.

Staff Evaluation

Upon the completion of the Benevolent Touch training, Sister Edna Lonergan employed an evaluation (see Appendix H) of the training session. Fifteen participants (100%) completed the evaluation. In response to item number one of the training evaluation, 13 participants wrote that the demonstrations and applications were the most helpful portion of the training. It was agree upon by 6 participants that taking care of one's self was most helpful and 6 others agreed that learning about the proper method of approaching someone to provide the intervention was the most helpful.

There was no agreement on item number two. More information on the subject of reflexology was requested by four people in response to item number three. More practice time was requested by three participants in response to item number four.

In response to item number five, seven people felt very comfortable with most of the techniques learned at the workshop while four people identified a need for more practice. The total number of participants completing item number five was 15 with a median readiness level of 4. The readiness level indicated that the participants of this training believed that they would be able to perform the Benevolent Touch techniques for the residents of Hearten House 1.

CHAPTER V

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

Summary

The application of Structured Benevolent Touch (SBT) did not appear to be effective at increasing the perceived positive behaviors of residents with dementia. On the basis of this study, by comparison to a control group (group B), the observed behaviors of residents who received the SBT complementary therapy (group A) decreased on all three variables of the Positive Daily Living Behavior Scale (PDLBS). In addition, SBT did not appear to affect sleep patterns of group A residents.

Conclusions

Conclusions regarding null hypotheses, as well as possible applications of this study, are as follows:

1. On the basis of the results of this study, there was no difference between group A and group B on the change score value regarding openness to interactivity that was perceived to be positive.

2. Interactivity with other residents and staff was found to be statistically significant. This finding provides evidence that the intervention was effective for these two variables. However, the results of this study were inconclusive regarding the effectiveness of Structured Benevolent Touch (SBT) as a short-term complementary therapy for people living with dementia.

3. The application of SBT did not appear to impact nighttime activity.
4. Based upon the sequential observation procedure of residents within group A, the study design adequately controlled for the potentially confounding variable of sundowning.

Recommendations

The results and conclusions of this study have generated additional recommendations and possible exploratory opportunities that were not initially considered at the start of the study. Recommendations are as follows:

1. On the basis of the extreme differences in program plans offered thus far, it is necessary to provide the implementation of the intervention over an intermediary timeframe. Having asked staff members to increase their workload, more time to acclimate to new procedures should have been built into the structure of the program plan. A previous study (Lonergan & Costanzo, 1996) evaluating SBT and Unstructured Benevolent Touch provided the intervention for 15 months with a similar population. This study found significant differences of positive qualities among people who received the intervention. It is, therefore, recommended that the implementation of SBT be provided for the minimum of 3 months.
2. An interesting discovery was made upon analysis of the Benevolent Touch training evaluation. Participants completed the self-assessment indicating a high level of readiness to perform Benevolent Touch techniques. However, 4 (27%) participants indicated that they preferred more time to practice during the training. This may have

indicated a need for a trained, objective evaluation of participant skills by the inservice facilitator. It is, therefore, recommended that this observation be taken into consideration for future research.

3. On the basis of journal entries by staff and previous research on burnout, it is recommended to assign an additional staff member during the shift in which SBT will be administered. One person identified to provide the interventions during a given shift would enable other staff to complete their regular tasks. This would reduce the amount of work needed to provide adequate care for the residents during each shift and provide an opportunity for residents to receive complete individual attention (Lonergan & Costanzo, 1996).
4. Regarding the aspects of positive affects on the person providing the intervention, it is recommended that a qualitative inquiry be added to future research of SBT. This value would add richness to the study that would normally be overlooked by focussed quantitative data. A combination of the two forms of data may provide a deeper understanding of SBT with this population.
5. More research is necessary using a larger random sample with a similar population to ascertain the practicality and subsequent use of SBT in health promotion planning in similar settings. A total population greater than 30 has been used in previous research providing the opportunity to project on to a larger population (Lonergan & Constanzo, 1996). Future research of this nature could provide more detailed analysis

using a t-test. These data could be of further value when planning health education interventions.

6. Future research is encouraged to include an evaluation of the process of receiving SBT. This may offer insight into what is happening for the resident during the intervention (e.g., if any stressors are experienced or if any relaxation is being achieved). Lonergan and Costanzo (1996) discussed the impact of stressors on a person with dementia. A qualitative or quantitative process evaluation may provide clues as to why SBT may be ineffective when used as a short-term intervention.
7. A research design that included subjects (cases and controls) from the same Hearten Houses may provide more precise subject matching. On the basis of organizational conditions, it was decided that training staff from Hearten House 1 would be to the advantage of the organization, residents, staff, and this study. This may have decreased the opportunity for optimal case-control subject matching. It is, therefore, recommended that future research includes both case and control residents from the same dwelling.
8. On the basis of variable findings between raters in the pilot test of the Positive Daily Living Behavior Scale (PDLBS), a review and modification of the instructions are necessary to ensure better consistency among future raters.
9. The application of SBT to health education has potential among three related populations. Residents who received the intervention were provided with another opportunity to achieve a greater quality of life. Communicating with others by means

of touch has limitless potential (Montagu, 1986). On this basis, care providers (professional and familial) were given another opportunity to communicate with the people for whom they care. In addition, a portion of the SBT training was devoted to providing care for caregivers. A relatively novel idea, it enables care providers an opportunity to care for themselves.

10. Future research is encouraged to include having relatives provide SBT application. This process has the potential to relieve staff of additional tasks, increase communication between families and residents, further relax the residents, and increase communication between staff and families. The potential for a triangular support system may have merit to these populations.

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APPENDIX A

DISCUSSION OF BENEVOLENT TOUCH TRAINING

BETHANY LUTHERAN HOMES, INC.

LA CROSSE

MEMO

TO: All Hearten House I - RCAs
Mary Lou Shanklin, Assistant Program Director
Linda Erickson, Program Director
Amy Duquette, S.T.A.R. Coordinator
Teresa Mears, S.T.A.R. On-Call
Kelly Stokes, Intern
Chad Schaben, Researcher

FROM: Linda O'Connor, Program Development LO/hb

DATE: October 23, 1996

RE: Benevolent Touch Training

Sister Edna Lonergan, St. Ann Adult Day Care, Inc., Milwaukee, will provide our Benevolent Touch training on Saturday, Nov. 2, from 9:45 a.m. to 2:30 p.m. The training will take place at St. Paul's Lutheran Church, 420 West Ave. South, La Crosse, in the lounge area. Feel free to park in the school parking lot, across from the church. Enter through the front door--climb the stairs to the right. Go through the sanctuary and double doors, past the office. The lounge is ahead and to the right. Lunch and break refreshments will be provided. Please dress comfortably.

I want to take this opportunity to thank each of you for your willingness to become involved in this exciting research project. Hearten House and its residents continue to benefit from your individual caring commitment.

If you have any questions, contact either myself at 784-4513 or talk with Mary Lou. See you on the 2nd.

hb
cc Mary Lou Stuenzi

Bethany Lutheran Homes, Inc., 2575 South Seventh Street • La Crosse, WI 54601 • (608) 784-3380 • FAX (608) 785-7731
An Affiliate of Lutheran Health System - La Crosse

Benevolent Touch Training

The Benevolent Touch (BT) training began with an introduction of Sister Edna Lonergan and the training participants. She presented the theory from which BT was developed, as well as definitions of terminology specific to BT. She continued to instruct the participants that a portion of the application included self-nurturing skills. The participants of the training also practiced activities that permitted residents to express rage and anger.

Sister Edna Lonergan discussed the process involved to provide BT. This process included guidelines for providing SBT. The three guidelines were;

1. know your client,
2. ask for permission to provide care, and
3. you and the resident must be centered.

These guidelines were set to establish a benevolent relationship with the resident. Part of that relationship included the consistency of application among and within care providers.

Before applying BT, the presenter emphasized the importance of recognizing nonverbal cues that would indicate either a positive or negative response to an external stimulus (see page 57).

A packet of information (pages 57 - 72) covered during the day was supplied to all of the participants for later reference. When Sister Edna Lonergan presented the theoretical framework supporting SBT, she presented a series of slides that further demonstrated her points. As the methods of the intervention were presented, a video was

used to support the teachings of the presenter. Interactive group discussions and hands-on learning activities provided the learner to apply new knowledge almost immediately.

The final portion of the training was an evaluation (Appendix H) of the workshop. The evaluation was designed by the presenter, in a qualitative format to allow for unrestricted responses. It was disseminated upon the completion of material regarding Benevolent Touch. All evaluations were collected as participants departed the facility.

Nonverbal cues:

Increased breathing

Shoulders held high

Clenching of jaw

Clenching fist

Frowning; grimacing

Chest breathing

Rapid Eye Movement

Excessive talking

Biting lips

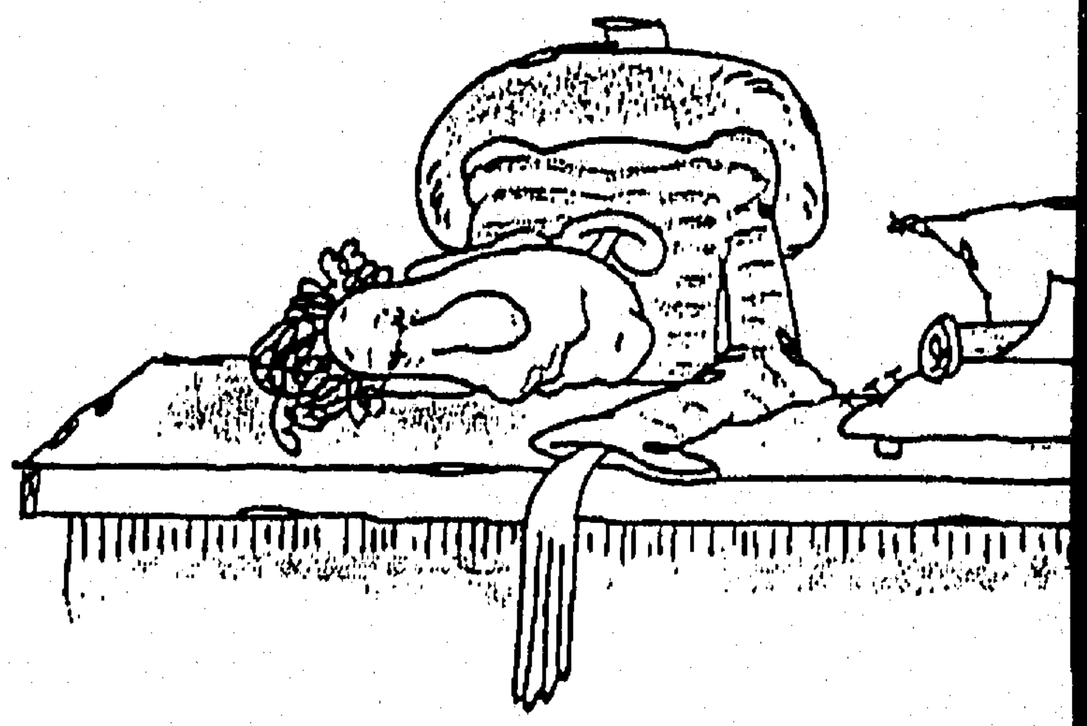
Rocking motion

Folding ones arms

Facial softening

Deep breathing

Decreased rigidity



RAGE AND RELAXATION

Rage:
- Screaming In Car Kit
- Pounding On Pillow, Bed, etc.
- Throwing Pillow Overhead
- Seed Spitting
- Having A Fit
- Groaning
- Growling

Relaxation:
- Combing The Aura
- Rolling Pin Roll
- Pushing Against Hand Pressure
- Slow Stroking
- Body Tensing & Eye Squeeze
- Mirror Talk
- Arm Circles
- Finger Walking

SIGNS OF UNHEALTHY BOUNDARIES

1. Telling all.
2. Talking on an intimate level on the first meeting.
3. Falling in love with a new acquaintance.
4. Falling in love with anyone who reaches out.
5. Being overwhelmed by a person – preoccupied.
6. Acting on first sexual impulse.
7. Going against personal values or rights to please others.
8. Not noticing when someone else displays inappropriate boundaries.
9. Not noticing when someone invades your boundaries.
10. Accepting food, gifts, touch, sex that you don't want.
11. Touching a person without asking.
12. Taking as much as you can get for the sake of getting.
13. Giving as much as you can for the sake of giving.
14. Allowing someone to take as much as they can from you.
15. Letting others direct you.
16. Letting others describe your reality.
17. Letting others define you.
18. Believing others can anticipate your needs.
19. Expecting others to fulfill your needs automatically.
20. Falling apart so someone will take care of you.
21. Self abuse.
22. Sexual and physical abuse.
23. Food abuse.

FACIAL MASSAGE

1. Apply oil if desired.
2. Using circular motion, massage chest, sternum, and inside of arm 2 times.
3. Carve out jaw to ears 2 to 3 times.
4. Circular motions from chin to ears with alternating thumbs.
5. Massage cheeks and under eyes around side of face to forehead.
6. Smooth forehead.
7. Circular motions to forehead.
8. Scissor forehead.
9. Massage down to nose.
10. Iron out forehead.
11. Hold pressure points.
12. Massage under eyes under the bony prominence.
13. Circular motions to forehead and sweeping motion to face.
14. Repeat circular motions around sternum, arms, neck, up through face and out scalp.

FULLY CLOTHED BACK MASSAGE

Fully clothed, sit down massage sequence for back, neck shoulders, and arms.

Neck and Shoulders

1. Greet and ask permission to give a massage.
2. Rest your hands on top of shoulders, from neck to upper arm.
3. Gently squeeze along the top of shoulders, from neck to upper arm.
4. Begin at neck again and make circles with your thumbs . . . it's a gentle kneading of shoulders all the way over the upper arm. (3x)
5. With your right hand, using heel of the hand, make circles along right side down to the hips. (2-3x)
6. Next, use full hand pressure over the same area. (2-3x)
7. Next, include finger pressure over the same area. (2-3x)
8. Start at the top of shoulders and do 3 slow strokes to finish the area.
9. Repeat for the left side.

Arms

1. Pick up the arm with both hands, gently squeeze entire arm starting at the shoulder, down and including the hand. (3x)
2. Hold the wrist with the right hand and squeeze inside of arm. (1x)
3. Coin each of the fingers. Circle each knuckle and squeeze the hand.
4. At the top of the shoulder with both hands, roll the arm down to the wrists. (3x)
5. Slowly stroke from the top of the shoulder down to and off the fingers.

Head

1. Rest the palm of your hand on their forehead.
2. Make circles with your fingers and/or thumb on, below, and above bony ridge-occiput.
3. Do crab walk on scalp. Plant your fingers on scalp and move scalp.
4. Finish with using back of hand moving up back and over head and down the arms and slow stroking from head down.
5. Thank the person.

SPECIAL GOURMET BILL OF RIGHTS

Dear Special Person,

The secret of healthy living is a firm belief that I can continue to be made anew despite it all! This is my wish to you. This is a recipe for this newness, called my "Special Gourmet Bill of Rights." Say them every day—or more often—as need warrents.

1. I have numerous choices in my life beyond mere survival.
2. I have a right, when I'm driving alone, to roll up the window, turn on the radio full blast and scream at the top of my lungs.
3. I have a right to look in the mirror every day and say "You are the most wonderful person in the world."
4. I have a right to say no to anything I feel violates my personal dignity.
5. I have a right to determine and honor my own priorities.
6. I have a right to throw my arms up in the air and growl like a tiger.
7. I have a right to be angry at someone I love.
8. I have a right to make mistakes and not have to be perfect.
9. I have a right to be uniquely me, without feeling I'm not good enough.
10. I have a right to feel scared and to say "I'm afraid."
11. I have a right to blow out watermelon seeds as far as I can spit.
12. I have a right to be relaxed, playful, and frivolous.
13. I have a right to be understood.
14. And when all else fails, or better still, <u>before</u> all else fails, I have a right to have a temper tantrum!

Now you continue, you wonderful people, to add your own insights to this gourmet delight. This list is endless. Remember to take care of yourself. YOU ARE THE MOST WONDERFUL PERSON!! You have a right to happiness, personal space, and time needs.

Peace,

Edna Lonergan, OSF

APPENDIX B

INTERVENTION PROTOCOL

Structured Benevolent Touch Protocol

1. Find the name of the next resident to receive the intervention from the daily assignment sheet.

2. Approach that person* with a social greeting and ask if they would like for you to give them a massage.
   >>if "yes"...continue
   >>if "no"...provide verbal closure by thanking them. Document outcome.

3. Apply the massage that best fits their description.
   >>you may clarify the method of intervention if the choices do not exactly match resident says: "I would like for you to rub my neck." SBT does not include neck massage so, staff replies: "Would a back massage be o.k.?"

4. Provide v al closure by thanking the resident

5. Document outcome

APPENDIX C

POSITIVE DAILY LIVING BEHAVIOR SCALE

Positive Daily Living Behavior Scale

Directions: Please rate the frequency of each factor on a scale of 1 to 5 by circling the appropriate number.

1=NEVER, 3=MODERATELY, and 5=ALMOST ALWAYS

Date: _____ Shift: _____ Resident ID Number:_____

Behavior with Self	Please Circle Only One Value					Not Applicable
Laughing/Smiling	1	2	3	4	5	NA
Participates in formal recreation activities without prompting	1	2	3	4	5	NA
Articulates needs to staff or others	1	2	3	4	5	NA
Participates in own personal hygiene and dressing activity with minimal prompting (i.e., verbal or physical prompts)	1	2	3	4	5	NA
Positive self comments	1	2	3	4	5	NA
Behavior with Staff						
Complies with staff	1	2	3	4	5	NA
Initiates one to one interaction	1	2	3	4	5	NA
Initiates touch with perceived loving intent	1	2	3	4	5	NA
Assists staff with activities	1	2	3	4	5	NA
Gives verbal affirmation (i.e., a compliment)	1	2	3	4	5	NA
Behavior with Other Residents						
Interacts with group during formal recreation activities	1	2	3	4	5	NA
Initiates one to one verbal interaction	1	2	3	4	5	NA
Initiates one to one physical interaction	1	2	3	4	5	NA
Initiates touch with loving intent	1	2	3	4	5	NA
Gives verbal affirmation (i.e., a compliment)	1	2	3	4	5	NA

Observer_____

APPENDIX D

REGIONAL JURY OF EXPERTS

Regional Jury of Experts

Margaret F. Dosch, Ph.D., CHES
Health Education and Health Promotion
206 Mitchell Hall
University of Wisconsin – La Crosse
La Crosse WI 54601
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Tracy Luff, Ph.D.
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Balaji Vishwanat, M.D.
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(608)782-7300

APPENDIX E

INVENTORY RATING SCALE

Chad P. Schaben
121 21st Street
La Crosse WI 54601

October 10, 1996

Dear expert,

Thank you for participating in this research regarding Benevolent Touch and its effects on people with dementia. On the basis of your experience and credentials in your field, you have been selected as an expert of Alzheimer's Disease, Gerontology, Sociology, Psychiatry, Psychology, or Health Promotion. It has been proposed that the Positive Daily Living Behavior Scale (PDLBS) will be used in a research project in the near future. For the validation of this instrument, a panel of experts are being asked to indicate the acceptability of the scale to be used.

Benevolent Touch is defined by the creator (Sister Edna Lonergan) as "...any positive tactile contact on another or one's own skin with loving intent." It is the goal of the project to evaluate the effectiveness of a portion of this intervention called Structured Benevolent Touch (SBT).

SBT is a unique intervention in that it has been successfully used for a wide variety of purposes with family members, residents, and staff. SBT has previously been used to help alleviate challenging behaviors of people who have been diagnosed with a dementia causing disease. It has also been used for pain relief for people with dementia as well as a method of coping for family members. Staff have received additional benefits from Benevolent Touch in that they are taught stress management techniques during the training sessions.

I am fully aware that you are a very busy person however, I must ask that you will have the instrument reviewed with your comments within a 24 hour time period due to the timeline provided to the research team for this project. If you have any questions regarding this instrument, the directions, or the research project feel free to contact Dr. Gary D. Gilmore by phone at 785-8163 or Chad Schaben at 785-0029. Thank You for your participation.

Yours In Health,

Chad P. Schaben
Primary Researcher

Inventory Rating Scale: Regional Jury

Directions:

Enclosed is a list of statements regarding positive daily behaviors among people with dementia. Please read each statement and use the scale to the right of the statement to indicate its acceptability, based upon the degree to which the statement will reveal a test subject's behavior (observers who eventually will respond to these statements will be indicating their observations along a five point scale). In this manner, you will be judging the curricular validity of these behaviors to be observed. Positive daily living behaviors, for the purpose of this study, has been defined as daily behaviors of residents that are believed to enhance their livelihood.

You will be rating the statements using the following scale definitions:

1. **NOT ACCEPTABLE**: The item has no value as an observational statement for revealing the subject's frequency in specified behavior.

2. **SOMEWHAT ACCEPTABLE**: The item has some value as an observational statement for revealing the subject's frequency in specified behavior.

3. **ACCEPTABLE**: The item is valuable as an observational statement for revealing the subject's frequency in specified behavior.

4. **VERY ACCEPTABLE**: The item is very valuable as an observational statement for revealing the subject's frequency in specified behavior.

5. **INDISPENSABLE**: The item is absolutely necessary as an observational statement for revealing the subject's frequency in specified behavior.

Daily Behavior Observations

NOT ACCEPTABLE 1	SOMEWHAT ACCEPTABLE 2	ACCEPTABLE 3	VERY ACCEPTABLE 4	INDISPENSABLE 5

	Please Circle Only One Value					Comment
Behavior with Self						
Laughing/Smiling	1	2	3	4	5	
Participates in formal recreation activities without prompting	1	2	3	4	5	
Articulates needs with staff or others	1	2	3	4	5	
Participates in own personal hygiene and dressing activity with minimal prompting (i.e. verbal or physical prompts)	1	2	3	4	5	
Positive self comments	1	2	3	4	5	
Initiates individual recreation activities with self	1	2	3	4	5	
Behavior with Staff						
Cooperates with staff	1	2	3	4	5	
Initiates one to one interaction	1	2	3	4	5	
Initiates touch with loving intent	1	2	3	4	5	
Assists staff with activities	1	2	3	4	5	
Gives verbal affirmation (i.e., a compliment)	1	2	3	4	5	
Behavior with Other Residents						
Interacts with group during formal recreation activities	1	2	3	4	5	
Initiates one to one interaction	1	2	3	4	5	
Initiates touch with loving intent	1	2	3	4	5	
Gives verbal affirmation (i.e. a compliment)	1	2	3	4	5	

APPENDIX F

STRUCTURED BENEVOLENT TOUCH OUTCOME LOG SHEET

Date ____/___/___

Log Sheet

IH resident #	ID. Number	Outcome	Type of SBT
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			

APPENDIX G

OBSERVATION ASSIGNMENT SHEETS

Assignment Sheet

Day 1 **Date** _____

Observation Period 1

HH#	ID #	Name
1		
2		
3		
4		
5		
6		

Observation Period 2

HH#	ID #	Name
7		
8		
9		
10		
11		
12		

Day 2 **Date** _____

Observation Period 1

HH#	ID #	Name
1		
2		
3		
4		
5		
6		

Observation Period 2

HH#	ID #	Name
7		
8		
9		
10		
11		
12		

APPENDIX H

BENEVOLENT TOUCH TRAINING EVALUATION

St. Ann Adult Day Care
3321 S. Lake Dr.
Milwaukee, WI 53235
(414) 482-1340

BENEVOLENT TOUCH
WORKSHOP EVALUATION

What aspects of this workshop were helpful in the work place?

What aspects were least applicable?

What information would you like more of?

What changes would you like to see made in this presentation that would be more helpful to you?

Other comments: