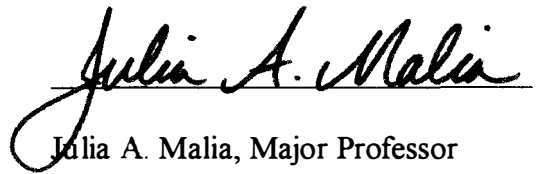
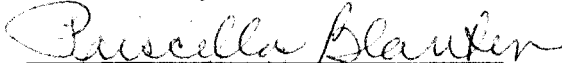
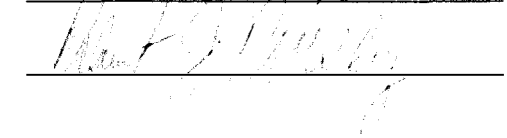


To the Graduate Council:

I am submitting herewith a dissertation written by Kathleen Ann O'Rourke entitled "Intergenerational Programming: Yesterday's Memories, Today's Moments, and Tomorrow's Hopes." I have examined the final copy of this dissertation for form and content and recommend that it be accepted in partial fulfillment of the requirements for the degree of Doctor of Philosophy, with a major in Human Ecology.


Julia A. Malia, Major Professor

We have read this dissertation
and recommend its acceptance:

Accepted for the Council:



Associate Vice Chancellor and
Dean of The Graduate School

INTERGENERATIONAL PROGRAMMING:
YESTERDAY'S MEMORIES, TODAY'S MOMENTS,
AND TOMORROW'S HOPES

A Dissertation
Presented for the Doctor of Philosophy Degree
The University of Tennessee, Knoxville

Kathleen Ann O'Rourke
August 1999

Dedication

With all of my love, I dedicate this work to my grandmother, the late Nora Frances Scahill--my inspiration to make a difference in the lives of those whose memories have faded but whose spirit and wisdom live on through succeeding generations.

Acknowledgments

Many people have provided me with support and encouragement over the past four years as I have pursued my degree. With much appreciation, I would like to acknowledge the following individuals:

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Abstract

Even though the numbers and scope of intergenerational programs continue to grow, research about their impact is limited. The purpose of this study was to compare 12 behaviors of older adults in the presence and absence of children. Six adults with dementia, aged 57 to 86, were videotaped during 10 art activities, 5 with preschool children and 5 with peer adults. The design was a quasi-experimental applied behavioral analysis. Chi-square tests showed that the older adults' behaviors were significantly dependent on children's presence or absence. Repeated measures ANOVAs indicated that children's presence or absence had a significant effect on the older adults' behaviors. Discriminant analyses identified looking and touching as behaviors that best characterized activities with children present or absent. The results of this intergenerational research project support further growth and development in programming and multidisciplinary collaborations that will, in turn, benefit older and younger generations.

Preface

Life is a series of moments--moments to be appreciated in the present, without regret of yesterday or fear of tomorrow. If I were to summarize the following pages, the previous sentence would best represent this study and my experiences with older adults with dementia. In the following chapters, I have attempted to capture a 3-year learning experience of lessons taught by remarkable teachers. When we envision life's teachers, our thoughts may return to school classrooms of our younger years or to university lecture halls. As you read these pages, I invite you to view teachers and learning from what some may consider an unconventional perspective.

The teachers I will speak of range in age from 4 to 86 years old, and the classroom holds no desks, for it is an adult day care setting for those with Alzheimer's disease and related dementias who have regular visits from children from a nearby child care center. Yes, some teachers can be 4 years old and others can have Alzheimer's disease. I can attest to those facts. If we are willing to devote our attention to the lessons, our older and younger generations can serve as valuable teachers. If we discount those truths, we are apt to miss powerful "teachable moments."

Words alone cannot describe the magic that is possible when older and younger generations share meaningful experiences of giving and caring. As young and middle-aged adults, we give of ourselves and care deeply, but we often fall short of doing so with a free spirit. Advantages possessed by older and younger generations are their natural inclinations to give and to share without reservation or hesitation. If you have witnessed the cruel consequences of Alzheimer's disease and related dementias, then you have probably learned to appreciate moments. Holding a hand, witnessing a smile, or hearing

a laugh have greater meaning when much else has been lost and forgotten. Names, dates, times, and places--things you and I commonly deem as important in our daily lives--lose their significance in the face of dementia. Although sometimes presenting patients and their loved ones with a seemingly impossible challenge, Alzheimer's disease and related dementias almost force them to focus on the positive of what still remains--maybe not in the mind, but in the heart.

My learning experience began three years ago with an introduction to the disease at the Alzheimer's Day Treatment Center (ADTC) based at St. Mary's Medical Center in Knoxville, Tennessee. My original plan in 1996 was to complete a 7-week internship in the ADTC to further my almost non-existent knowledge of older adults. Seven weeks turned into 3 years, and I continue to learn more with each day as older adults and the individuals who care for them touch my life. Being a "sheltered city girl" from Chicago, one of the first lessons taught to me was that strawberries do not grow on trees. My teachers, 20 individuals with Alzheimer's disease, were quick to correct my mistaken beliefs with amused smiles and hearty laughs at my expense--all well received. I thought that if, at age 23, I still had such simple lessons to learn, I thought then surely these older adults had much to give to those younger than I.

Having had background experiences of working with young children, I began to see the similarities in program principles and in environmental structure shared by adult day care and child care programs. Certainly, the participants differed greatly in some ways--the older generation with lifetimes of achievements and the younger generation with much yet to be accomplished. However, both shared the need for care, socialization, and an environment set up for success according to varying skill and functional levels.

I began to envision bringing the two generations, the programs, and the staffs together. It seemed a natural fit. At that point I was unaware that, throughout the country and documented in the literature, a name had been attached to this natural fit: intergenerational programming. The programming path I have chosen has allowed me to bring together a generation I have loved for years (young children) and a generation I have grown to love equally (older adults).

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CHAPTER I

INTRODUCTION

Since October 1996, on-going intergenerational activities involving older adults with cognitive impairment, preschool-age children, and two program staffs had evolved at St. Mary's Alzheimer's Day Treatment Center in Knoxville, Tennessee. The Alzheimer's Day Treatment Center is an adult day care program located within St. Mary's Medical Center that has provided therapeutic activities for those with Alzheimer's disease and related types of dementia since 1985. The Alzheimer's Day Treatment Center is representative of a combined medical and social model. From a medical model perspective, a neurologist has served as the medical director; a registered nurse has been on staff; and monitoring of blood pressures, weight, and medications was provided. From a social model perspective, the program has focused on the socialization needs of participants and has provided individuals and group activities and meals.

The typical adult day care participant in the United States is female, aged mid- to late-70s, Caucasian, and unmarried, but not living alone (Conrad, Hanrahan, & Hughes, 1990; Weissert, Elston, Bolda, Cready, Zelman, Sloane, Kalsbeek, Mutran, Rice, & Koch, 1989). Furthermore, approximately 50% of participants are functionally dependent and approximately 40% are cognitively impaired, unless the program is dementia-specific, as is the case at St. Mary's. According to a recent report on community resources, the Alzheimer's Day Treatment Center is one of over 3,000 adult day care programs in the United States (Geller, 1994). In addition, the program has provided respite to caregivers, allowing them to work, care for other family members, and have freedom from caregiving responsibilities. At the time of data collection in the

present study, 25 older adults were enrolled in the program but not all attend 5 days per week. The children involved in activities shared with the older adults attended an employer-sponsored child care center located on the hospital premises. The child care center served children from birth through age 5. The purpose of this study was to compare the behaviors the older adults exhibited during activities with the children present and with the children absent.

Prior to this research study, I had informally observed behaviors that I thought reflected promising attributes and benefits for participants and staff involved in the intergenerational activity experiences. For example, older adults appeared more engaged and behaviorally stimulated during activities with children present in comparison to activities with children absent. The close proximity of the adult day care and the child care center and the existing partnership provided a foundation for expansion to include regular intergenerational activities and formal research.

Statement of the Problem

I primarily was concerned with comparing behaviors exhibited by the frail elderly, specifically individuals with dementia, during structured activities with and without children present. In essence, would the presence of children enhance the behaviors of a person with cognitive impairment? Furthermore, would the behaviors exhibited by the elderly be more positive while interacting with children as opposed to their behaviors while interacting with peer older adults (children absent)? Literature providing evidence that interactions with children contributed to increasing the functional status and positive behaviors of the cognitively impaired elderly was limited (Newman &

Ward, 1993). Nonetheless, existing intergenerational literature provided a foundation for planning further study of the behaviors of older adults with dementia.

Need for the Study

Although a fairly large body of descriptive information exists regarding the benefits of intergenerational programming, little has specifically targeted persons with Alzheimer's disease and related dementias, and even less is available for research and program replication or expansion (Ward, Los Kamp, & Newman, 1996; Newman & Ward, 1993). Researchers have lacked awareness of the experience of older adults with dementia because they "have not attempted to measure features of their [older adults'] daily lives that may convey information about this experience" (Russell, 1996, p. 1400). However, some researchers have suggested that meaningful activities and stimulation, such as interactions with children, may contribute to slowing the cognitive decline of persons with Alzheimer's disease and related dementias (Newman & Ward, 1993; Zgola, 1990).

Despite the emergence of the intergenerational field as well as the growing number of programs, the effects of intergenerational activities, especially those bringing together adult day care and child care centers, have not been systematically documented (Dellman-Jenkins, Lambert, & Fruit, 1991; Travis, Stremmel, & Duprey, 1993; Ward et al., 1996). Furthermore, there exist a limited number of studies documenting the impact of intergenerational interactions on older adults' behaviors. From reviewing the intergenerational literature, I saw a clear need for this study to focus on the underrepresented population of the cognitively impaired elderly with an emphasis on older adult behaviors with children present and absent.

Rationale for Intergenerational Programming

"The quality of a nation is reflected in the way it recognizes that its strength lies in its ability to integrate the wisdom of its elders with the spirit and vitality of its children and youth" (Mead, 1971). As the aging population continues to grow, nurturing caring connections between the generations is imperative. Approximately 12% of the U.S. population are 65 years of age and older (Neal, Chapman, Ingersoll-Dayton, & Emlen, 1993). As of 1996, there were more than 30 million American individuals over the age of 65, the ratio of women to men being 146:100 (Dwyer, 1996). It has been projected that, by the year 2060, the population aged 65 and older will have more than doubled and the population 85 and older will have increased from approximately 3 to 18 million (U.S. Bureau of the Census, 1990).

Four million Americans, the majority being 65 or older, are afflicted with Alzheimer's disease, a progressive degenerative disease of the brain. In addition, 19 million Americans currently are caregivers for elderly persons with Alzheimer's disease, and 36 million Americans know someone with the disease. Along with the growth of the aging population, the number of individuals with Alzheimer's disease and related dementias will continue to rise into the next century, with a greater likelihood at older ages, unless a cure is discovered (Alzheimer's Association, 1998). Currently, 1 out of 12 individuals over the age of 65 suffers from dementia, and one third of individuals over the age of 80 are affected. Because of the demographic shift connected with the growth of the older population, by the middle of the next century almost four times as many individuals, or approximately 14 million, can be expected to be affected by Alzheimer's disease unless a cure is discovered (Moody, 1998).

Older adults may experience loss through isolation in the home and in long-term care facilities and increased frequency and duration of separations from children and grandchildren (Newman, 1995). The family system will continue to be challenged by the absence of grandparents and other older adult role models. Linking older and younger generations has the potential to support not only the generations involved in intergenerational programming but multigenerational families and communities in general as well.

Two generations in the lifespan. From a life-span perspective, intergenerational programs can provide different generations who may otherwise be isolated from one another with opportunities to share experiences and exchange knowledge and skills. Intergenerational exchanges have been defined as “activities which provide individuals, at differing points in the life cycle, opportunities for cooperation and interaction with the specific intent of meeting mutually beneficial needs” (Olson, 1995, p. 45). Programs, however, often continue to separate the generations despite the shared needs of young children and older adults. For instance, there is a common need for supervision and care present for both young children and older adults with cognitive impairment. Young children and older adults also share a common need to be needed. Intergenerational contact “restores to older people and introduces to young people a sense of worth and being needed” (Newman, 1989, p. 247). Furthermore, both generations share the need to maintain past and future links (Newman, 1997). Through intergenerational exchanges, young children can establish roots and a sense of security for the future, and older adults can recognize that the past may be connected to the future through the succeeding generations.

Intergenerational programs create opportunities for lifelong learning at different stages of development (Tice & Warren, 1988). Increased interactions across the generations have the potential to challenge existing stereotypes held by both age groups and to change attitudes toward one another (Newman, 1997). Older adults typically experience a sense of immediacy and value the present moment. The elemental things in life have a renewed importance to older adults (e.g., colors, shapes, plants, nature, physical and emotional human touch), including contact with children. With this heightened sensory awareness and enjoyment, older adults can serve as teachers and guides by nurturing young children who are just beginning to learn about their world.

Restoring a sense of community between the generations. Programs that bring children and older adults together have the potential to involve all generations in community growth. “Intergenerational programming can capture our deep desire for community. Intergenerational programs, well conceived and well implemented, are the microstructures through which we can each learn how the other half lives” (Nee, 1989, p. 89). Members at each stage in the lifespan have the responsibility to transmit lessons of the past to create a better future (Moody & Disch, 1989). Young and old alike have obligations and a need to be a part of a community, to assist others, to share burdens, and to gain the benefits of working with others (Kingson, 1989).

Both the young and the old are members of their communities, which are social systems “existing before their birth and remaining after their departure” from the world (Moody & Disch, 1989, p. 102), but each generation tends to view themselves as a separate community rather than as integral parts of one community. By bridging these

disconnected groups within the population, a new sense of community is created (Olson, 1995). Community citizenship becomes then a collaborative effort within the lifespan.

Intergenerational programs can contribute to community by addressing critical social issues. According to Ventura-Merkel, Liederman, and Ossofsky (1989, p. 176), [intergenerational] programs address a major social problem or issue; rebuild the natural helping relationships that were once provided by extended families and neighborhoods; are mutually supportive and beneficial to all generations involved; provide optimum use of financial resources in communities; build on existing services of institutions; and provide opportunities for local communities to design, support and maintain programs that are appropriate to local resources and needs.

To strengthen the ties of families and community, we must make a commitment to supporting the linkage of generations, especially those typically isolated, through promotion of intergenerational exchanges and relationships.

Familial influences and implications. Today's mainstream American family is experiencing fewer interactions between the generations and loss of extended family (Newman, 1997). Consequently, there is an absence of mutual support, a lack of understanding between generations, and an increased unfamiliarity with aging in the lifespan. Both young children and older adults experience generational isolation (Newman, 1995).

With the increased longevity of the aging population, four- and five-generation families will continue to become more common (Nee, 1989). However, due to geographic mobility and distance, divorce and remarriage, and age-segregated housing,

children will not experience the easy access to older generations that increased longevity may imply.

Older adults and young children often experience social loss as the family becomes increasingly mobile and diverse (Olson, 1995; Re Ville, 1989; Stremmel, Travis, Kelly-Harrison, & Hensley, 1994). Older and younger family members may be separated from one another by geographical or emotional (e.g., divorce) distance. As a result, young children have less exposure to meaningful and nurturing role models that traditionally have provided transference of culture, values, and insights.

Intergenerational programs assist families by both providing care and offering dependent family members contact with different generations. “As a society we must abandon our notion that each family can function as an independent unit. We must realize that for our children to flourish, parents must access the social riches of extended family members and their surrogates” (Crites, 1989, p. 41). The increasing number of small families and single parents suggest that families must rely on external supports. Nationwide surveys have yielded findings indicating that dual earner and working single-parent families increasingly are using community-based care for young children (King & MacKinnon, 1988) and impaired elderly family members (Weissert et al., 1989).

Today’s children--the young and middle-aged adults of the first half of the 21st century--will play major roles in caregiving for their parents (Kingson, 1989). As the elderly of the middle and later 21st century, these same children will benefit from support programs of the elderly who lived before them. Intergenerational programs have the potential to reach beyond the needs and the interests of only young children and older adults to serve families and the community over time.

Relating Family Theory to Intergenerational Programming

One distinguishing feature of a family is its intergenerational aspect. Families are related as parents and children, and, if current fertility and longevity trends prevail, it will continue to be found that family relationships often include living grandparents, great-grandparents, and great-great-grandparents. The intergenerational bonds existing within family structures are critical to human survival because of the dependency of the infant and the fits-and-starts quest for self-sufficiency that spans almost the first 20 years of the individual's life (Klein & White, 1996). Every child needs a caregiver in the formative years of life. However, in turn, through a shifting of roles, many children will become adult caregivers for their aging parents or other older relatives experiencing the onset of physical or cognitive decline.

Three core concepts are emphasized by family development theory. First, each family member has a unique role, and the family is comprised of interdependent and active individuals, both young and old. Second, family members have a shared history based on interactions and interpretations. Third, events in the family, for example caregiving for an aging relative, prompt changes over time such as a shifting of roles, establishing new expectations, or redefining situations (Cohler & Altergott, 1996).

A general overview of family theory highlighting the intergenerational aspect provides, in part, a foundation for linking the generations in a supportive external context (e.g., adult day care and child care) to the family system. In addition, principles of family theory can be applicable to other nonfamilial groups in society, such as the elderly and the children included in the present study. Both groups functioned primarily exclusively in their respective care environments and interactively during intergenerational activity

sessions. Although not related by birth ties, participants shared, as do families, an intergenerational feature.

Research Objectives

Three research objectives guided this study. These objectives were:

1. To test whether older adults' behaviors were significantly dependent on the presence or absence of children during activities.
2. To determine if the presence or absence of children during activities was significantly related to the older adults' behaviors.
3. To determine which older adult behaviors best characterized activities with children present and absent.

Definition of Terms

Eight commonly used terms are found throughout the present study. For clarification, these terms were defined as follows:

1. Alzheimer's Disease: a progressive, degenerative disease that attacks the brain and results in impaired memory, thinking, and behavior. Alzheimer's disease is the most common form of dementia (Alzheimer's Association, 1998).
2. Dementia: a loss of intellectual function (thinking, remembering, and reasoning) so severe that it interferes with an individual's daily functioning and eventually results in death (Alzheimer's Association, 1998).
3. Intergenerational Programming: "activities that provide individuals, at differing points in the life cycle, opportunities for cooperation and interaction with the specific intent of meeting mutually beneficial needs" (Olson, 1995, p. 45).

4. Mini-Mental State Examination (MMSE): a brief screening test that assesses the degree of an individual's cognitive impairment (Tombaugh & McIntyre, 1992) (see Appendix A).
5. Older Generation: individuals aged 55 and older (for the present study).
6. Preschool Children: children aged 4 and 5 years-old (for the present study).
7. Young Children: children from birth through age 8 (Bredekamp, 1987, p. iv).
8. Younger Generation: individuals from birth through age 8 (for the present study).

Limitations

Two attributes may have limited the results of the present study: (a) small sample size and (b) lack of ethnic diversity. The study of such a small sample size may have yields limited results that cannot be generalized to a larger population. A larger sample size would have contributed to greater confidence in the results produced from analyses of the data. Second, of the six older adult participants included in the study, all were Caucasian and from the same geographic area of the Southeastern United States. Consequently, the results may not be generalizable to older adults of different ethnic or racial descent.

Although a larger and more diverse sample would have been preferable, a number of programmatic factors prevented this in the present study. All participants enrolled in the Alzheimer's Day Treatment Center at the time of data collection were Caucasian, a characteristic that is representative of the six adult day cares in the Knoxville, Tennessee, area. In regard to the small sample size, the chosen participants were the only six individuals able to attend on the same days of the week because some of the caregiving

families did not need or could not financially afford the Alzheimer's Day Treatment

Center 5 days per week.

CHAPTER II

REVIEW OF LITERATURE

The following chapter provides a framework for understanding shared developmental characteristics of individuals at either end of the life spectrum, application of theory to intergenerational practice, and a review of empirical findings and methodologies. Awareness and understanding of shared developmental characteristics of older adults and young children provide impetus for intergenerational exchanges that positively impact both generations and, indeed, reach beyond these age groups to impact family members of both groups.

The building of intergenerational theory is a work in progress, and, subsequently, research studies have borrowed from the specific fields of child development and adult development, as well as the general field of human development, to theoretically support the emerging intergenerational field and its related program practices. As Cohon (1989, p. 227) has stated, "Intergenerational program research should aim to refine relevant theories in a manner that contributes to practical aspects of program development." Developmental theories and, to an extent, behavioral theories, have supported the notion that important interactions and relationships can be encouraged through intergenerational programming.

While intergenerational programs are growing in number and diverse composition of populations, individuals with Alzheimer's disease and related dementias have continued to be underrepresented in empirical literature. However, existing studies have provided a basis for both research methodology and program practice adaptation and replication.

Developmental Theory

Developmental theories have been divided into the two categories of child development and later life development in the following section. Child development theories include Piaget's cognitive development theory, Erikson's psychosocial development theory, and Vygotsky's sociocultural development theory. Later life development theories include activity theory, continuity theory, disengagement theory, modernization theory, adaptation theory, and life review theory.

Child development theories. Cognitive developmental theorist, Jean Piaget, is most well known for integrating a developmental stage theory into the study of children. Piaget's work described four developmental stages: (a) sensori-motor intelligence, (b) preoperational thought, (c) concrete operational thought, and (d) formal operational thought. The sensori-motor intelligence stage of children birth to 2 years old is characterized by physical organization of action schemes on the part of a child (e.g., sucking, grasping, hitting) to deal with the immediate world. The preoperational thought stage of children 2 to 7 years old is characterized by the process of learning to think, unsystematic and illogical thought, egocentricity, and the acquisition of symbols (e.g., images, words). During the preoperational stage, children increasingly use pretend play and manipulation of symbols, as this is a stage of experimentation for children. The concrete operational thought stage of children 7 to 12 years old is characterized by the ability to process several ideas simultaneously and to understand others' points of view in real as opposed to abstract situations. The formal operational thought stage of children aged 12 and beyond into adulthood is characterized by the ability to engage in abstract thought, reasoning, and judgment. According to Piaget's theory, individuals of all ages

continue to develop schemas, or mental concepts, as a means of thinking about and interacting with their environment (Piaget, 1964).

Piaget's stage of preoperational thought characterized the 4- and 5-year-old children involved in the present study. Piaget described preoperational children's thought processes as unsystematic and illogical, characteristics that also may be true of individuals with Alzheimer's disease and related dementias. As children in this age group experiment with symbolic representation, older adults with progressive degenerative dementia tend to be impaired when it comes to attempting to correctly represent ideas and objects with symbols. While the young child is newly acquiring the capacity to use symbolic representation, the older adult with dementia is losing this same capacity. Consequently, the two groups, to an extent, share a common trait in their limited capacities for and struggles with symbolic representation.

Piaget's theory of cognitive development, when reversed, is representative of the cognitive decline experienced by a person with Alzheimer's disease and other progressive dementias. The onset of Alzheimer's disease is marked by the loss of cognitive reasoning, judgment, and ability to engage in abstract thought--all characteristics of Piaget's formal operational thought stage. Thus, the degenerative nature of Alzheimer's disease and related dementias causes individuals to cognitively decline in a pattern similar to Piaget's four stages of development in a reversed order. If an individual lives until the end stages of Alzheimer's disease, he or she exhibits similar dependencies to those of an infant. For example, some end-stage individuals will experience the inability to verbally communicate with words, feed themselves, and provide any self-care--characteristics of children in Piaget's sensori-motor intelligence stage.

From a social development perspective, the phenomenon of attachment is a lifelong developmental process (Bowlby, 1979). Shared and trusting relationships in early life tend to lead to successful social and secure intimate relationships in later years. The primary work of children 3 to 6 years old is play. Erikson (1963) described this as the age of initiative, a time when children can plan to achieve small goals. Children at this age and stage are more ready than at any other time to learn quickly and eagerly, and they are willing to channel their energies into socially useful tasks. Adults can help this process by “permitting children to participate as equals on interesting projects” (Erikson, 1964, p. 122). Thus, the work of Erikson also has provided further theoretical justification for programming that pairs preschool-age children with older adults with dementia.

Finally, Vygotsky's sociocultural theory addresses how values, beliefs, skills, and traditions are transmitted to succeeding generations (Gordon & Williams-Browne, 1996). Sociocultural theory supports the notion that there is a connection between culture and development emphasizing the importance of connections formed between children and other important people. The theory incorporates the concept of the zone of proximal development, which proposes that learning is dependent on how much children experience interactions with others. The lower limit of the zone includes tasks a child has mastered, and the upper limit includes tasks for which children need assistance from others. Sociocultural theory stresses the critical element of interaction. Adults have the responsibility to share their knowledge and culture with developing children and to assist children in the mastery of tasks (Newman & Smith, 1997).

Later life development theories. Later life theories primarily have focused on three types of aging: (a) physical aging (changing appearance, changing health status); (b) social aging (changing life roles, changing income status); and (c) emotional aging (multiple losses, adjustment to a changing world) (Newman & Smith, 1997). An overall view of theories relating to older adult development has shown both potential for and variety in positive aging and meaningfulness.

Through the lens of activity theory one can see that an increased number of activities often reflects increased life satisfaction for older adults (Moody, 1998). Activity theory proposes that older adults continue with similar societal roles and life activities as when they were younger because their needs and values remain the same. This theory dovetails with continuity theory, which proposes that older adults are likely to maintain the same habits, personalities, and lifestyles as those of their younger years (Costa & McCrae, 1980). Both activity theory and continuity theory attribute limited societal interaction to poor health or disabilities, rather than any need of society to disengage older adults from their roles and activities (Havighurst, Neugarten, & Tobin, 1973).

In contrast to the aforementioned theories, disengagement theory proposes that, as the health status of the elderly declines and society's efficiency increases, older adults tend to disengage themselves from earlier activities (Cumming & Henry, 1961). This theory has met with criticism due to its 1950s genesis, reflecting a time of different societal conditions (Moody, 1998). For example, although some elderly may not continue with paid employment, they may seek increased involvement in leisure activities. Intergenerational activities, a possible type of leisure activity, increase the

opportunities for older adults to remain valuable resource persons for the community.

For cognitively impaired older adults, intergenerational programs present one of few remaining ways to build and maintain connections with younger generations as opposed to becoming disengaged with society (Newman & Smith, 1997).

Comparable to disengagement theory, modernization theory proposes that the role and status of the elderly diminish as society becomes increasingly modernized (Cowgill, 1986). Factors affecting the decline of role and status of the elderly include urbanization, family mobility, and technological advancement. Like disengagement theory, modernization theory has garnered criticism in light of older adults' emergence as the fastest growing segment of the population (Cohler & Altergott, 1996).

Viewed as a replacement for disengagement and modernization theories, adaptation theory supports the importance of older adults' connectedness with others and their integration into society (Newman & Smith, 1997). Adaptation is viewed as "the ongoing effort to preserve one's psychological well-being and physiological health" (Kimmel, 1990, p. 14). Two phenomena characterize adaptation theory: (a) the ability to adopt new activities (old dogs, new tricks) and (b) the adaptation of old activities to compensate for the shift in social roles that accompany older age (old tricks exchanged for new tricks). Adaptation theory recognizes multiple changes that an aging individual encounters: (a) physical changes, (b) changes in social roles, (c) changes in self-perception, and (d) others' changing perceptions of the older adult. Successful adaptation is characterized as past and present life satisfaction, autonomy in functioning, and a sense of continuity (Newman & Smith, 1997). Within an adaptation framework, individuals

are seen as coping with changes by (a) replacing lost activities and roles with better fitting ones, (b) shifting time and energy toward remaining roles and activities, or (c) disengaging if the abilities or opportunities are lacking to integrate the first two coping options (Atchley, 1988).

Finally, life review theory has been incorporated into Erikson's theory of psychosocial development (Newman & Smith, 1997). Older adults face the crisis of integrity--the acceptance of life versus despair, guilt, and regret over unfinished tasks in life (Erikson, Erikson, & Kivnick, 1986). Life review theory is related to leaving a legacy for succeeding generations. Legacy is the "natural tendency of the old to share their special knowledge and experience with those who are younger; an urge that stimulates the development of links between generations" (Butler & Lewis, 1977, p. 28). In the context of life review, older adults are characterized as individuals (a) desiring to leave a legacy and (b) desiring to share with the young accumulated knowledge and experiences collected over a lifetime (Cohon, 1989).

Older adults share a "concern for, and interest in, guiding children, and for being useful and helpful" (Schirm, Ross-Alaolmolki, & Conrad, 1995). Erikson's (1963) description of generativity as productivity, creativity, and capacity to provide for succeeding generations represented this assertion (Weiland, 1993). Young children need stable, consistent relationships for optimum social and cognitive development (Bronfennbrenner, 1972; Kohlberg, 1964). Adults need to experience providing guidance to the next generation in dealing with the psychosocial crisis of achieving integrity (Erikson, 1964). Upon reaching the stage of integrity in later adulthood (60 and over), individuals tend to have developed an acceptance of other lifestyles, while preserving

their own with dignity. The wisdom of these adult role models represents to young children feelings of wholeness (Re Ville, 1989).

Developmental theories related to children and older adults have provided frameworks that lend support to intergenerational research and practice. Likewise, behavioral theories may provide useful lenses for observation of interactions between older adults and young children.

Shared Developmental Characteristics of Older Adults and Young Children

While each age group possesses unique differences, shared developmental characteristics of older adults, specifically persons with dementia, and young children exist. These developmental characteristics fall into three areas: (a) development of self-esteem, (b) maintaining links between past and future, and (c) feelings of competence.

Development of self-esteem. Young children strive to establish an acceptable identity (Newman, 1997). Beginning in infancy and continuing throughout the early years of life, children are provided with a secure base for warm and positive relationships that foster trust, competence, and self-esteem through socialization with adults (Bredekamp, 1987; Seefeldt, Warman, Jantz, & Galper, 1990). Experiencing continuity of relationships with loving adults leads young children to increased self-esteem and receptivity to positive guidance.

On the other end of the lifespan, it is important for older adults' self-esteem that they are acknowledged by the young as an elder and have their life experiences viewed as interesting and valuable (Re Ville, 1989). One of the earliest intergenerational research studies on the Foster Grandparent Program yielded positive results pertaining to older adults' life adjustment (Saltz, 1971). Even beyond the time of participation in the Foster

Grandparent program, older adults showed increased life satisfaction and positive health effects. One study, involving 360 elderly individuals volunteering in schools, found that, after spending time as volunteers, the older adults experienced greater life satisfaction, heightened feelings of self-esteem, and a sense of contributing to the good of the community (Diamond, 1988). Similarly, a study by Newman, Karip, and Faux (1995) found that everyday memory abilities and self-perception of memory performance were positively impacted after older adults had participating in a school volunteer program.

Maintaining links between past and future. Young children need to acquire a perspective about their roots and a sense of security for the future (Newman, 1997). Stable, consistent adult role models are needed for optimum social and cognitive development (Bronfenbrenner, 1972; Kohlberg, 1964). Socially, children first begin to develop an awareness of the self as separate from others during their toddler years (Bredekamp, 1987; Seefeldt et al., 1990). By the age of 5, children's maturity enables them to develop an interest in community and the world beyond their own. As children reach the age of 8, they are able to learn more about distant others outside of their own environment. Research conducted by The University of Pittsburgh's Generations Together program showed that children who had frequent contact with older adults had a more positive notion of the continuity of life (Diamond, 1988).

In comparison, older adults have a need to recognize their past as being connected to today and tomorrow in order to establish a sense of continuity. According to Erikson's (1964) theory of human development, wisdom emerges from integrity versus despair in the eighth stage (60 and over) of life. Wisdom maintains and conveys integrity of life experiences. Having achieved a sense of integrity, individuals preserve and defend their

lifestyle with dignity. Having acquired wisdom, older adults have the potential to represent a life of wholeness to younger generations, providing young children with positive role models. The serenity and wisdom gained from resolved conflicts and a gratifying life review enable older adults to be mentors, caregivers, teachers, counselors, and friends to the young. Older adults can assist and encourage the young, while these types of interactions with children can encourage adaptability, spontaneity, and youthfulness in older adults.

Feelings of competence. In a rapidly changing and increasingly technological society, young children and older adults need to develop areas of strength to gain confidence (Newman, 1997). Children learn through active involvement with people and by manipulating objects (Bredekamp, 1987; Seefeldt et al., 1990). Infants seek frequent responses from people around them and a variety of sensory and motor experiences to develop cognitively and emotionally. Beginning at around 18 months of age, children thrive on exploration, discovery, questioning, and seeking meaning in events, objects, and ideas. During the preschool and primary grade years, children learn through active, hands-on, direct experiential activities. Curiosity, social interest, and empathy for others heighten during the preschool years.

In comparison, older adults tend to experience a sense of immediacy and appreciate the here-and-now of the moment (Re Ville, 1989). The elemental things in life such as being around children, plants, and nature become increasingly important. There is more sensory awareness and enjoyment in older adulthood, which can enhance the person's ability to teach and nurture curiosity in young children. Older adults have achieved a sense of the life cycle. They have developed a heightened interest in

philosophy, religion, art, literature, and history and an increased capacity to summarize and share these perspectives with the young. Older adults share a “concern for, and interest in, guiding children, and for being useful and helpful” (Schirm et al., 1995), an assertion that is represented in Erikson’s (1963) description of generativity as productivity, creativity, and capacity to provide for succeeding generations (Weiland, 1993).

Behavioral Theory

The works of behavioral theorists such as Watson, Thorndike, Skinner, and Bandura place an emphasis on environment and acquisition of learning through reinforcement (Gordon & Williams-Browne, 1996). Environmental arrangement has played an important role in the behavioral responses examined in the present study, especially given the sometimes vulnerable and unpredictable nature of the two participating populations. The environment was arranged in such a way as to promote interactions with either children or peer older adults during shared activities (e.g., close proximity, eye-level contact, shared materials).

Learning is believed to be a series of associations that form connections between stimulus and response (Skinner, 1953). The presence of both the children and peer older adults provided stimuli for the behavioral responses of the older adult participants. Applied behavioral analysis design is based on reinforcement theory (Huck, Cormier, & Bounds, 1974). A principle of reinforcement theory states that specific environmental events maintain or change (reinforce) individual behavior, increasing the probability of behaviors being repeated. For this study, the environmental events included the presence or absence of 4- and 5-year-old children during art activities with older adult participants.

Intergenerational Programming for Older Adults with Dementia and Preschool Children

The benefits of intergenerational programs for older adults with cognitive impairment have not been sufficiently documented in the literature (Newman & Ward, 1993; Ward et al., 1996). Although limited, existing research has yielded favorable findings. While the disease course cannot be reversed, adults with dementia can benefit from meaningful structured activities. Such activities have the potential to make the most of older adults' existing abilities through demonstration of skill, increased confidence, establishment of relationships, and personal enjoyment (Ward et al., 1996).

Research findings have indicated that the elderly benefit from contact with young children (Liebman, 1984; Seefeldt, Jantz, Bredekamp, & Serock, 1977; Whitley, Duncan, McKenzie, & Sledjeski, 1976). In a survey of 346 centers serving adult populations with Alzheimer's disease and related dementias (Lindeman, Downing, Corby, & Sanborn, 1991), visits by children were cited as one of the five most successful activities. Furthermore, studies have shown that during weekly music activities with young children present, adult participants exhibited consistent positive behaviors (e.g., eye contact, touching, smiling), that the adults otherwise did not display, with frequencies of touch and extending of hands being significantly higher (Newman & Ward, 1993; Ward et al., 1996). As part of a program evaluation conducted by Ward and Streetman (1996), 17 behaviors of older adults (60% with dementia) over 27 activities identified looking, smiling, participating in activity, and touching as being exhibited at higher frequencies and expressions of dissatisfaction and inappropriate behaviors at lower frequencies. In addition, levels of agitation in older adults were found to be lower on days when children were present for activities. In a similar study, Kuehne (1989) observed activities shared

between adult day care participants and 4- and 5-year-old child care participants, finding that the most frequent interactions included giving affection, complimenting, and playing. Kuehne's results showed a total of 462 positive interactions and 14 negative interactions, mostly aggression, over nine activity sessions. Green (1991) found that positive emotional memories of happy interactions with children lingered with patients in a dementia care facility. A study of a program that included undergraduate students visiting nursing home residents twice a week showed improved cognitive function and morale in the elderly participants (Reinke, Holmes, & Denney, 1981).

In addition to benefits of intergenerational activities for older adults with cognitive impairment, young children have responded positively from exposure to such interactions. Research findings have shown that intergenerational contacts diffused children's stereotypes of the elderly's physical and behavioral characteristics (Cartensen, 1980; Seefeldt, 1987; Seefeldt & Jantz, 1977). Intergenerational programs have assisted children in developing a more realistic understanding of aging and a reversal of negative attitudes toward the elderly (Caspi, 1984; Dellman-Jenkins, 1986; Parnell, 1980; Rosencranz & McNevin, 1969; Seefeldt, Jantz, Galper, & Seroock, 1979).

In a study by Dellman-Jenkins et al. (1991), prosocial behaviors of sharing, helping, and cooperating exhibited by children 3- to 5-years-old increased after participating in a 9-month intergenerational program with elderly persons. Research has supported four reasons for including preschool children in intergenerational programs: (a) Preschool children have fewer biases and negative stereotypes about the elderly than older children; (b) preschool children are generally more accepting, open, and nonjudgmental than children over the age of 6; (c) the same activities are

developmentally appropriate for both groups; and (d) a natural connection exists between the young and old (Issacs & Bearison, 1986; Newman & Ward, 1993; Seefeldt et al., 1977).

Methodologies of Comparable Intergenerational Research

Two research studies that focused on older adults with dementia and preschool children provided a replicable methodological basis for the present study. In the first antecedent study, Newman and Ward (1993) compared the behaviors of 21 older adults with dementia during music activities with children present and with children absent. A repeated measures design was used with a treatment group (activities with children) and a comparison group (activities without children), with spontaneous behaviors (e.g., touching, hugging) serving as the dependent variable. The researchers hypothesized that a within-subjects increase in spontaneous behaviors would occur during activities with children present. Interactions of older adults with children (5 activity sessions) and with staff caregivers (5 activity sessions) were videotaped during a total of 10 similar music activities. Activities with children absent were 30 minutes in length. Following a 15-minute break, the activities were repeated with children present on the same day of the week over the course of 5 weeks. A total of 60 minutes of videotaped data for each older adult participant was available to be coded by two trained graduate students. Results demonstrated significantly higher frequencies of touch and extending hands during activities with children present.

In the second antecedent study, a follow-up study by Ward et al. (1996), behaviors of 21 older adults were compared during music activities with children present and with children absent. A total of 12 intergenerational activities (6 with children

present and 6 with children absent) were conducted. Data collection included both video observation and natural observation with a graduate student and a researcher serving as the coders. Interrater reliability was reported at 90.7%. Results indicated significantly higher frequencies of touch being exhibited by older adults during activities with children present. Two limitations cited were self-consciousness of the staff during videotaped observations and problems with the environmental arrangement of the participants for videotaped activities.

These studies provided a basis for replication and adaptation for the present project. For the present study, a comparable methodological approach was used with a focus on behaviors exhibited by older adults during art rather than music activities with children present and children absent.

CHAPTER III

METHOD

The following chapter focuses on the method of the present research study. This chapter includes descriptions of the (a) pilot study, (b) sample, (c) sample selection, (d) environmental arrangement, (e) staff training, (f) art activities, (g) design of the present study, (h) research hypotheses, (i) instrumentation, (j) procedures for data collection, and (k) data analysis.

Pilot Study

Prior to data collection for the present study, intergenerational activities at the Alzheimer's Day Treatment Center had occurred on a monthly basis for over 2 years. Most activities had been videotaped, always with permission, for use at hospital and community presentations. Past experience along with reviewing the existing videotapes served as a pilot study for critical examination of the present study's research methodology. The pilot study assisted in refining (a) sample selection procedures, (b) environmental arrangement, (c) plans for and implementation of art activities, (d) operationalization of behavioral variables, and (e) procedures for data collection.

Sample selection. Past experience working with cognitively impaired older adults and, in particular, with older adults in the actual sample enabled me to be familiar with typical behaviors exhibited by the older adults on a daily basis and during group activities. This experience in addition to staff input and reviews of functional assessments served as a basis for making sound judgments about how to include only older adults whose behaviors would not frighten or endanger the children. In addition, I had established trusting relationships with both the older adults' primary caregivers and

the staff of the St. Mary's Child Care Center. Consequently, there was no hesitation on the part of caregivers or children's parents to consent to their family member's inclusion in the research sample.

Environmental arrangement. The pilot study assisted me in making decisions regarding the logistical arrangements of participants, staff, camera operators, and activity scheduling. Three to 5 participants always had been seated at each table during prior intergenerational activities. Having fewer older adults at each table was a way to decrease the amount of stimulation and possible confusion. Staff members were accustomed to the presence of video cameras and had learned from viewing videotaped activities how to best position themselves so as to not interfere with the operation of the cameras. During past activities, older adults and children displayed little to no awareness of the presence of one or two video cameras. I decided that having more than two video cameras and operators would create distractions and over-crowding in the room. In selecting the times of day for the activities, I determined which blocks of time were possible for the activities to not interfere with established routines (e.g., mealtimes for either group, naps for children) of either program.

Plans for implementation of art activities. I developed three criteria to guide activity planning and preparation: (a) simplicity of materials and the overall art project, (b) a balance of open-ended and structured creativity, and (c) a focus on process rather than product. Based on my past experience in planning and implementing group activities for cognitively impaired older adults and young children, I knew which types of activities were developmentally and functionally appropriate for the ages and skills of the older and younger participants. Simplified activities using few materials allowed both

age groups more opportunities for success, appropriate levels of stimulation, and less confusion. In addition, activities for the present study were planned with an awareness of the length of time required for completion. Activities requiring more than 25 to 30 minutes were felt to be too long for the attention spans and energy levels of both age groups. Consequently, for the present research study, all activities were projected to last no more than 25 minutes.

Operationalization of behavioral variables. Through retrieving past videotaped activities and considering informal natural observations made by the staff and me, broad categories of behaviors emerged and general definitions were developed. Further viewing of the videotapes and a review of comparable research studies (Newman & Ward, 1993; Ward et al., 1996) assisted me in selecting and defining 12 specific behaviors as target variables. In addition, I specified narrow definitions of behaviors and used specific examples from existing videotapes to avoid overlapping the categories of behavioral variables.

Procedures for data collection. Due to the time limit of approximately 25 minutes for each activity, I determined that older adult participants would be videotaped in 5-minute time intervals. Videotaping each participant for 10-minute intervals was attempted during the pilot study, but, with only two camera operators being feasible, 10-minute videotaping of each older adult participant was not possible. In addition, the decision to collect data over a 3-week period was made based on the threat of participant attrition. I could not depend on even those older adults in the best of physical and cognitive health to remain in the program for any specified length of time. Physical health complications (e.g., injury from a fall, stroke) and changing family needs

(e.g., assisted living or nursing home placement) were unpredictable at all times.

Therefore, a shorter data collection time period was instituted in an attempt to minimize participant attrition.

Sample Description

Participants included older adults from St. Mary's Alzheimer's Day Treatment Center in Knoxville, Tennessee, and preschool children, ages 4 and 5, from St. Mary's on-site child care center. All of the older adult participants had a primary diagnosis of dementia, the majority having dementia of the Alzheimer's type. Older adults ranged in age from 57 years old to 86 years old with a mean age of 71.5. A total of 6 older adult participants, 4 women and 2 men, were included in the sample. Likewise, six 4- and 5-year-old children, three girls and three boys, participated in the activities. All of the children were a part of one preschool classroom and had parents employed at St. Mary's Medical Center. These particular children had been participating in intergenerational activities at the Alzheimer's Day Treatment Center for 8 months prior to the data collection period. All participants, both the older adults and the children, were Caucasian and from middle-class, urban families.

Person One. Person One was a 76-year-old woman who had attended the Alzheimer's Day Treatment Center (ADTC) for 1 month prior to data collection. She was a widow, and her primary caregiver was her daughter, with whom she lived. Person One had three daughters and four grandchildren. Her medical history included a diagnosis of dementia and multiple strokes. At the time of data collection, Person One was taking no medications. Her occupation had been accounting, and she had an eighth grade level of education. On the Mini-Mental Status Examination (MMSE), she scored a 1 out of 30,

indicating substantial cognitive impairment. Her most recent monthly functional assessment indicated a confused level of orientation. However, she was consistently able to follow directions and to cooperatively participate in group activities. Person One was able to function independently in feeding, toileting/personal hygiene, and gait (able to walk without an assisting person or device). She had no problems with vision, hearing, or motor coordination.

Person Two. Person Two was an 86-year-old woman who had attended the ADTC for 16 months prior to data collection. She was widowed, and her primary caregiver was her daughter, with whom she lived. Person Two had two daughters, two sons, and two grandchildren. She had never worked outside of the home, and she had a high school diploma. Her medical history included a diagnosis of dementia of the Alzheimer's type 2 years 6 months prior to data collection. Person Two was taking the following medications: Relafen (anxiety), Vistaril (depression), Aricept (Alzheimer's disease), and Alprazolam (anxiety). On the MMSE, she scored 17 out of 30, indicating moderate cognitive impairment. Her most recent monthly functional assessment indicated a confused level of orientation. She was able to follow directions with reminders and had a strong tendency to engage in repetitious tasks. Person Two cooperatively participated in group activities, exhibiting regular verbal engagement and anxious behaviors (e.g., talking to herself, holding head in hands, frowning). She was independent in feeding, toileting/personal hygiene, and gait. She wore corrective lenses for vision and had no problems with hearing or motor coordination.

Person Three. Person Three was a 65-year-old man who had attended the ADTC for 4 months prior to data collection. He was married, and his primary caregiver was his

wife. Person Three had four daughters and three grandchildren. His occupation had been a maintenance engineer, and he had served in the military. He had a fifth grade level of education, a GED (graduate equivalency degree), and some college. His medical history included a diagnosis of dementia of the Alzheimer's type and mild depression. The dementia diagnosis was made 7 years prior to data collection, with cognitive impairment first evident 2 years earlier. Person Three was taking the following medications: Neurotin (seizures), Prevacid (ulcer), Aricept (Alzheimer's disease), Zoloft (depression), Cardura (heart), and Duradian (steroid). On the MMSE, he scored a 9 out of 30, indicating substantial cognitive impairment. His most recent monthly functional assessment indicated an orientation to date and place. He was able to follow directions and cooperatively participate in group activities. He was independent in feeding, toileting/personal hygiene, and gait. Person Three had no problems with vision, hearing, and motor coordination.

Person Four. Person Four was an 81-year-old woman who had attended the ADTC for 3 months prior to data collection. She was widowed and lived alone, although her daughter was the primary caregiver. She had one daughter, one deceased son, and no grandchildren. Her occupation had been a sales clerk, and she had attended high school through her junior year. Her medical history included a diagnosis of dementia of the Alzheimer's type, hypothyroidism, and depression. The dementia diagnosis was made 3 months prior to data collection, with cognitive impairment having been evident for a 2-year period. Person Four was taking the following medications: Norvasc (angina), Prophandol (tremors), and Propulsid (heartburn). On the MMSE, she scored 20 out of 30, indicating mild cognitive impairment. Her most recent monthly functional

assessment indicated occasional disorientation. She was able to follow directions and cooperatively participate in group activities with regular verbal engagement. Person Four was independent in feeding, toileting/personal hygiene, and gait. She wore corrective lenses for vision and a hearing aid and had no problems with motor coordination.

Person Five. Person Five was an 83-year-old woman who had attended the ADTC for 23 months prior to data collection. She was widowed, and her primary caregiver was her daughter, with whom she lived. Person Five had one daughter, one son, and no grandchildren. Her occupation had been a family child care provider, and she had some elementary school education. Her medical history included a diagnosis of dementia of the Alzheimer's type and mild depression. The dementia diagnosis was made 3 years prior to data collection. Person Five was taking the following medications: Prednisone (arthritis), Furosemide (hypertension), Lorazepam (anxiety), Lanoxin (heart), Coumadin (blood thinner), Hydroxyzine (anxiety), Doxepin (depression), Cardiazem (angina), Nitrostat (angina), Glucophage (diabetes), Zoloft (depression), Amaryl (blood pressure), and Trazadone (depression). On the MMSE, she scored a 23 out of 30, indicating mild cognitive impairment. Her most recent monthly functional assessment indicated an orientation to date and place. Person Five was able to follow directions and cooperatively participate in group activities with regular verbal engagement. She was independent in feeding, toileting/personal hygiene, and gait with the use of an assisting device (a cane). She wore corrective lenses for vision and had no problems with hearing or motor coordination.

Person Six. Person Six was a 57-year-old man who had attended the ADTC for 15 months prior to data collection. He had never been married and had no children. His

primary caregiver was his sister, with whom he lived. His occupation had been military service, and he had a GED. His medical history included organic brain syndrome from a head injury sustained at age 21. In addition, Person Six had been diagnosed with dementia, depression, and chronic insomnia. Person Six was taking the following medications: Zoloft (depression) and Meclizine (vertigo). On the MMSE, he scored 22 out of 30, indicating mild cognitive impairment. His most recent monthly functional assessment indicated an orientation to date and place. He was able to follow directions and cooperatively participate in groups with regular verbal engagement. He was independent in feeding, toileting/personal hygiene, and gait with the use of an assisting device (a cane). He had no problems with vision or hearing. His motor coordination was impaired, with hand tremors and aphasia (impaired speech).

Sample Selection

To be included in the sample, older adult participants had to meet seven criteria that I developed with the assistance of the Alzheimer's Day Treatment Center staff. The criteria for selection of older adults included:

1. Enrolled in the Alzheimer's Day Treatment Center since May 1, 1999.
2. Had an anticipated length of stay of at least 2 months.
3. Had a primary diagnosis of dementia documented in medical chart.
4. The Alzheimer's Day Treatment Center staff and I had reached agreement that the older adult's behavior would not frighten or endanger children. Agreement was reached based upon (a) daily interactions with older adults, (b) discussion of typical behaviors exhibited throughout any given day and during group activities, and (c) a review of the older adult's monthly functional assessment (see Appendix B).

5. Had verbally consented to participation in each activity.
6. Had a primary caregiver willing to give signed consent for the older adult's participation in the activities (see Appendix C).
7. Was present on Tuesdays and Fridays from 10:15 to 11:00 a.m. and from 1:15 p.m. to 2:00 for the 3-week data collection period.

To be included as a participant, preschool children had to meet five criteria that I developed. The criteria for selection of preschool children included:

1. Enrolled in the child care center since May 1, 1999.
2. Had an anticipated length of stay of at least 2 months.
3. Had verbally consented to participation in each activity.
4. Had a parent or legal guardian willing to give signed consent for the child's participation in the activities (Appendix D).
5. Was present on Tuesdays and Fridays from 10:15 to 11:00 a.m. and from 1:15 to 2:00 p.m. for the 3-week data collection period.

Environmental Arrangement

All activities occurred in the same room at the Alzheimer's Day Treatment Center, located within walking distance from the child care center. The room was large enough to safely accommodate participants and staff from the two programs. Utilization of this space allowed older adult participants to remain in a familiar environment--an important consideration for adults with Alzheimer's disease and related types of dementia. Environmental change or exposure to highly overstimulating environments is often confusing and upsetting to the individual with dementia.

During activities with children present, each of the two tables was comprised of (a) three seated older adults, (b) three standing children, each paired with an older adult, (c) one staff member standing nearby, and (d) one camera operator standing nearby (see Appendix E). During activities with the children absent, one of the two tables was comprised of (a) 4 seated older adults (two pairs seated next to each other), (b) one staff member standing nearby, and (c) one camera operator standing nearby (see Appendix F). The other table during activities with children absent was identical except that only 2 older adults were seated at the table (one pair seated next to each other).

Staff Training

Staff members at the Alzheimer's Day Treatment Center were familiarized with the data collection procedures to be used prior to the activities. I conducted a training session with the staff that focused on: (a) the purpose and objectives of the present study, (b) safety and comfort levels of older and younger participants as the top priority, (c) allowing older and younger participants to work on the activity as independently as possible, (d) assisting participants on an as-needed basis, and (e) positioning themselves so as to not interfere with the videotaping. Previewing past videotaped activities illustrated the optimal arrangement of the environment and staff positions at each table. The training session was concluded with a question-and-answer period. Throughout the data collection period, I was available to discuss questions or concerns of staff members.

Description of Art Activities

Five different art activities were planned and implemented for the data collection period. One consistent staff member and I were responsible for the planning and

preparation of all art activities. To provide a clearer picture of the activities, the following description includes a list of materials used for each.

Activity 1: Mosaic Tulips

Materials:

Large white poster boards--pre-cut into tulip, stems and leaf shapes
Construction paper squares--green, purple and yellow squares
Glue

Activity 2: Log Cabins

Materials:

Large white construction paper--background
Brown construction paper--pre-cut into door, window and chimney shapes
Popsicle sticks--logs
Cotton balls--chimney smoke
Glue

Activity 3: Kites

Materials:

Large light blue construction paper--pre-cut into diamond kite shapes
Construction paper shapes (variety of colors)--pre-cut into circles, squares and triangles
Cotton balls--used in addition to the shapes
Yarn--kite strings
Glue

Activity 4: Windsocks

Materials:

Large turquoise construction paper--body of windsock
Construction paper shapes (variety of colors)--pre-cut into circles, squares and triangles
Crepe paper (variety of colors)--pre-cut strips to attach to body of windsock
Yarn--pre-tied to body of windsock
Stapler
Glue

Activity 5: Oceans

Materials:

Large blue construction paper--water background

Fish (eight varieties)--pre-cut shapes
Cotton balls--clouds
Crayons--used to color fish
Glue

From the start of the intergenerational activities at the Alzheimer's Day Treatment Center, a major focus for all activities was on the interactive process rather than the finished product. The types and amounts of materials assisted in making activities simple, hands-on, and easily mastered by participants. In addition, activities requiring pre-preparation of materials allowed older adult participants to have a role in the planning and development phase of the activities. For example, on the day before the scheduled activities, time was set aside in the afternoon for interested older adults to assist with preparations. The older adults assisted in cutting, sorting, counting, and, during holiday celebrations, making gift bags or cards for the children. More importantly, preparation for activities had an attached meaning and sense of purpose for the older adults: The work would benefit children.

Design of the Study

The design of the study was a quasi-experimental applied behavioral analysis, specifically a repeated measures design. Applied behavioral analysis is an intrasubject comparison of individual or small group behavior under at least two different conditions and times periods (Huck et al., 1974). In this study, behaviors were compared under two different conditions (activities with children present and with children absent) and during 10 activity sessions (5 with children present and 5 with children absent). Within the present study, the presence or absence of children served as the two-level independent variable. The behavior of the older adults served as the dependent variable.

The decision was made to record behavioral frequencies (the number of times a behavior occurred during a specified time period) as opposed to time sampling (recording occurrence or nonoccurrence of behavior one time during a specified time period). It was believed that recording all of the 12 behaviors occurring in a 5-minute time period would provide richer data and, in turn, give a clearer picture of older adults' behavioral responses to children and peer older adults (children absent). Tabulating the total frequencies of behaviors over an extended time period allowed for assessing the relationship between stimulus (children present or absent) and response events (behaviors), as well as recording a large number of responses within a given period.

In addition to reporting quantitative statistical findings, a multimethod approach including qualitative case studies provided a narrative description of each older adult participant. According to Russell (1996, p. 1401), "accepting that there are diversities in the dementia experience and that the meaning of these experiences is uniquely individual, and perhaps creative, demands that we begin to embrace research methods that are sensitive to the personal experiences. ..." A qualitative approach can provide a depth of understanding to intergenerational programming while a quantitative approach can enrich research with the addition of data that may be generalizable (Angelis, 1992), or at least numerically descriptive.

The most likely threat to validity in the present study was participant attrition. The age and health status of the older adult participants increased the likelihood of attrition, due specifically to the possible death of participants or their withdrawal from the adult day care program during the data collection phase to enter a residential long-term care

facility or an alternate care arrangement (e.g., in-home care). Fortunately, all 6 older adult participants remained present throughout the data collection period.

Serving as controls for extraneous variables, specific strategies for exacting and standardizing conditions were incorporated into the present study. These strategies included:

1. The same children were paired with the same older adult participants during each activity.
2. The same older adult peers were paired during each activity with children absent.
3. All activities occurred at the same times, 10:15 a.m. (children present) and 1:30 p.m. (children absent), and on the same days, Tuesdays and Fridays.
4. Activities with older adult peers (children absent) always followed activities with children present.
5. The same staff member was present at the table with the same older adult participants for all activities.
6. The location and environmental arrangement was identical for each activity.
7. Art activities with children present were identical to art activities with older adult peers (children absent).

Research Hypotheses

For the present study, two research hypotheses were developed. They were:

1. The behaviors of older adults were significantly dependent on the presence or absence of children during activities.
2. The presence or absence of children during activities was significantly related to the older adults' behaviors.

Instrumentation

To document types and frequencies of behaviors exhibited during art activities with children present and with peer older adults (children absent), older adult participants were videotaped during activities. Direct measurement of videotaped activities in applied behavioral research has been favored in comparison to natural human observation in which behaviors are coded as they actually occur because the direct measurement method is more rapid, less troublesome, and easier to score (Hersen, 1976). Furthermore, an advantage to using recording devices such as video cameras is that the error element found in the natural human observation method is lessened (Simkins, 1971; Tighe & Elliot, 1968).

Observation recording sheets (Appendices G and H) were used by two independent coders to code types and frequencies of behaviors. Included on the observation recording sheets were 12 behaviors, with the first 8 suggesting positive behaviors and the remaining 4 suggesting negative behaviors. Positive-valence behaviors included (a) responds to child/peer, (b) talks spontaneously to child/peer, (c) offers help to child/peer, (d) participates in activity, (e) looks at child/peer, (f) smiles, (g) appropriately touches child/peer, and (h) laughs. Negative-valence behaviors included (a) withdraws from activity, (b) displays agitation, (c) displays anxiety, and (d) displays aggression or other inappropriate behavior. The behaviors and their measurement were adapted and modified from the Elder/Child Interaction Analysis (Ward & Streetman, 1996), used in an intergenerational program evaluation examining 17 behaviors of older adults (60% having Alzheimer's disease and related dementias) during 27 activities with young children.

Behavioral variables were operationalized as follows:

1. Responds to child/peer: verbally or physically (e.g., nodding head) acknowledging question, statement, or request.
2. Talks spontaneously to child/peer: verbally communicating without prompting (e.g., question, request).
3. Offers help to child/peer: providing verbal or physical assistance or encouragement during an activity (e.g., holding piece of paper while the other glues, colors or draws; demonstrating or explaining a part or all of the activity to the other; picking up an article the other dropped).
4. Participates in activity: physically manipulating activity materials; physically contributing to process of activity (e.g., gluing, cutting, drawing, coloring).
5. Looks at child/peer: turning head toward child/peer with eyes focused somewhere between the top of the head and feet (Eisler, Hersen, & Agras, 1973).
6. Smiles: a crease appearing in the cheek and corners of mouth turning upward; teeth are usually but not always showing (Eisler et al., 1973).
7. Appropriately touches child/peer: making physical contact for any length of time (e.g., hugging, placing arm around shoulder, child sitting in lap, holding hand, patting back).
8. Laughs: a crease appearing in the cheek and corners of mouth turning upward; accompanied by chuckling or giggling in amusement; teeth are usually but not always showing (Eisler et al., 1973).
9. Withdraws from activity: physically ceasing all interactions with child, peer, or activity (e.g., leaving table to relocate to another space in the room).

10. Displays agitation: physically appearing upset or disturbed (e.g., frowning, sighing, look of disgust).

11. Displays anxiety: physically exhibiting concern, fear, repetitive nervous motions (e.g., holding head in hand, wringing hands).

12. Displays aggression or other inappropriate behavior: behavior intended to inflict physical or psychological harm or discomfort to a person or object (e.g., pushing or pulling hand away, hitting, kicking, biting, pinching, using foul language).

Procedures for Data Collection

In compliance with use of human subjects in research regulations, approval for the present study was obtained from the Institutional Review Board at The University of Tennessee, Knoxville. Obtaining approval for research involving human subjects at St. Mary's Medical Center involved submission of a descriptive memo to the head of the Ethics Committee (Appendix I) and obtaining permission from the directors of St. Mary's Alzheimer's Day Treatment Center (Appendix J) and St. Mary's Child Care Center (Appendix K). In accordance with the requirements of the University's Institutional Review Board, signed written consent forms were obtained from older adults' primary caregivers and children's parents or legal guardians.

Activities with children present. Orientation to groups always has been recognized as a critical feature of quality activities and included in planning and implementation of programming in the Alzheimer's Day Treatment Center.

Approximately 15 minutes before the children's arrival for activities, the staff members and I oriented the older adults to the upcoming activity and facilitated discussions pertaining to children. An earlier orientation with older adults most likely would have

necessitated repeating the discussion, as the short-term memory of individuals with dementia is impaired. During the introductory orientation, the staff members and I engaged the older adults in discussions about the importance of positive role models for children, joys and challenges related to caring for children, and the value of teaching and learning to attach a sense of purpose and meaning to the activities. During activities with children present, behaviors of the older adults during their interactions with children were videotaped.

Activities with children absent. Later the same day, the identical art activity was repeated with pairs of older adult peers. Approximately 15 minutes before the activity, the staff members and I oriented the older adults to the upcoming activity. During the introductory orientation, it was explained to the older adult participants that the art activities could be (a) displayed on bulletin boards for others' viewing enjoyment, in particular children's; (b) given to the children to display in their classroom; or (c) taken home and given to relatives as gifts. Again, such discussion attached a sense of purpose and meaning to the activities. During activities with children absent, behavioral interactions with each older adult participant and the same peer older adult were videotaped. Pairing older adults with children and with peer adults allowed for comparison of behavioral patterns--similarities, differences, or no changes.

Videotaping procedures. Older adult participants were videotaped for 5-minute intervals during each of the 10 activities, 5 with children present and 5 with children absent. I acknowledge that the presence of the video cameras may have altered the behaviors of participants or staff members during the activities. However, participants

and staff members had prior experience with the videotaping of activities, as the majority of past intergenerational activities over a 2 year 6 month time had been videotaped.

For all activities, one staff member remained near each table, intervening on an as-needed basis for safety and assistance purposes. Two camera operators used hand-held video cameras to record older adults' behaviors during interactions with children or with peer older adults. During each activity, one camera operator was responsible for separately videotaping three older participants at one table. Hand-held video cameras allowed operators to move freely around the table to best capture behavioral interactions and to attract minimal attention, so as to not distract participants. At the end of the 3-week data collection period, 50 minutes of videotaped data were available for each older adult.

Coding of the videotapes. At the conclusion of the data collection period, two coders (a trained graduate student and I) viewed and coded the videotaped data. Behavioral observations require trained observers who make judgments in accordance with predetermined behavioral codes (Hersen, 1976). Training of the graduate student involved (a) a review and discussion of the 12 operationalized behaviors and (b) trial coding sessions of three videotaped segments from activities prior to the data collection. The trial coding sessions allowed for further clarification of variable definitions and for practice using the observation recording sheets.

To obtain a reliability rating for the two independent observers, a two-way random effects (SPSS for Windows, 1997) model determined observer agreement on the occurrence or nonoccurrence of the 12 behaviors. Interobserver agreement exceeding 80% is considered to be "sufficiently high and it is presumed that the two observers have

agreed upon the occurrence of a real event" (Hersen, 1976, p. 130). A highly correlated inter-rater reliability coefficient of .9955 (range .9948 to .9961), $p < .01$, was achieved.

Data Analysis

All of the data analyses were run using SPSS for Windows, Version 9.0. A one-way chi-square test was run to analyze the frequency of older adult participant behaviors. A one-way chi-square analysis is appropriate when there is one independent variable (children) with two or more levels (children present and children absent) (SPSS for Windows, 1997). Seven separate chi-square analyses were run: one for the behaviors of all 6 participants grouped together and one for each of the 6 independent participants. The chi-square analyses tested whether behaviors exhibited during activities with children present and activities with older adult peers (children absent) were independent of one another.

According to Cohon (1989, p. 227), intergenerational research "should not be limited to quantitative methodology but utilize an integrative approach that combines clinical and case study information with statistical findings." A multimethod approach can uncover things other methods may overlook and strengthen the researcher's argument for measurement validity by corroborating the information in different ways (Rosenblatt & Fischer, 1993). For each of the 6 participants, independent t tests of the 12 behaviors were run to determine if mean scores were significantly different during activities with children present and with older adult peers (children absent). The t -test analyses were useful in looking at each of the participants as an individual case study. Along with the separate chi-square and t -test analyses, a qualitative description of each participant was created to provide a more in-depth analysis of the behaviors of older adults. The

inclusion of individual qualitative reporting was supported by Russell (1996, p. 1401), who stated, "An individualized approach challenges us to go beyond the narrow idea of dementia as a contraction of life to a new and more complex vision of a unique and creative world of those persons living with dementia."

In addition, repeated measures analyses of variance (ANOVAs) were run to determine whether the presence or absence of children had an effect on the behaviors of the older adults. A repeated measures ANOVA is characterized by measurement of the same individual on a number of occasions corresponding to each treatment level (SPSS for Windows, 1997). The criteria for a within-subjects ANOVA include (a) one independent variable, (b) k levels of each variable (children present and children absent), (c) within-subjects comparison, (d) n s must be equal, (e) a specific comparison test can be conducted, and (f) a test of differences between or among conditions can be conducted (Linton & Gallo, 1975). The criteria for a within-subjects analysis of variance were met. Advantages of using a repeated measures approach include: (a) It is acceptable for use with only a small number of participants, and (b) pretreatment measures are not a matter of concern. A major disadvantage to a repeated measures approach is the threat of participant attrition (Huck et al., 1974).

A final statistical test, a discriminate analysis, was run to test for differences among behaviors exhibited with children present and with children absent. The discriminate procedure yields a combination of quantitative predictor variables best characterizing differences among groups (SPSS for Windows, 1997). A discriminate analysis can show differences that t tests may fail to detect. To test for differences among groups (a between-subjects analysis), a Wilk's lambda test shows how well

separated the group means (behaviors with children present and with children absent), or centroids, are from one another, yielding a score between 0 and 1. The closer the score is to 0, the better the classification of what behaviors separate the two groups. The discriminate analysis was helpful in identifying which of the 12 behavioral variables were most helpful in discriminating among activities with children present and with peer older adults present (children absent). The score is similar to a predicted value from a regression model equation. In addition, discriminate analysis yields what percentage of the cases (in the present study, the behavioral observations) are classified correctly (SPSS for Windows, 1997).

CHAPTER IV

RESULTS AND DISCUSSION

This chapter includes the statistical findings and narrative descriptions of the present research study. The first section, answering the first research question, reports the findings of chi-square analyses. The second through seventh sections include separate narrative descriptions of Person One through Person Six. The eighth section, answering the second research question, reports the findings of the repeated measures ANOVAs. The ninth section reports the findings of the discriminant analyses regarding the behavioral characterizations of activities with children present and absent. The tenth section includes an in-depth discussion of the results in relation to existing empirical research studies.

Were Older Adults' Behaviors Dependent on the Presence or Absence of Children During Activities?

In the present study, it was hypothesized that the behaviors of older adults were significantly dependent on the presence or absence of children during activities. To test this hypothesis, chi-square analyses were run for all 6 older adults as a group, as well as for each of the 6 participants separately. The chi-square analysis comparing all of the older adult participants as a group showed that behaviors were dependent on the presence or absence of children during activities (see Table 1 and Figures 1 and 2). The null hypothesis stating that the older adults' behaviors and activities with children present or with peers (children absent) were significantly independent of one another was rejected ($\chi^2_{11} = 73.53, p = .01$), and the alternative hypothesis was accepted. Likewise, the

Table 1

Cross-Tabulation of Older Adults' (n = 6) Behaviors During Activities with ChildrenPresent and Absent

BEHAVIOR	PRESENT	ABSENT	TOTAL
Responds	122	76	198
Talks spont.	231	130	361
Offers help	136	54	190
Participates	62	77	139
Looks	267	116	383
Smiles	156	45	201
Approp. Touch	43	1	44
Laughs	47	28	75
Withdraws	3	3	6
Agitation	21	18	39
Anxiety	10	7	17
Aggression	6	1	7
TOTAL	1104	556	1660

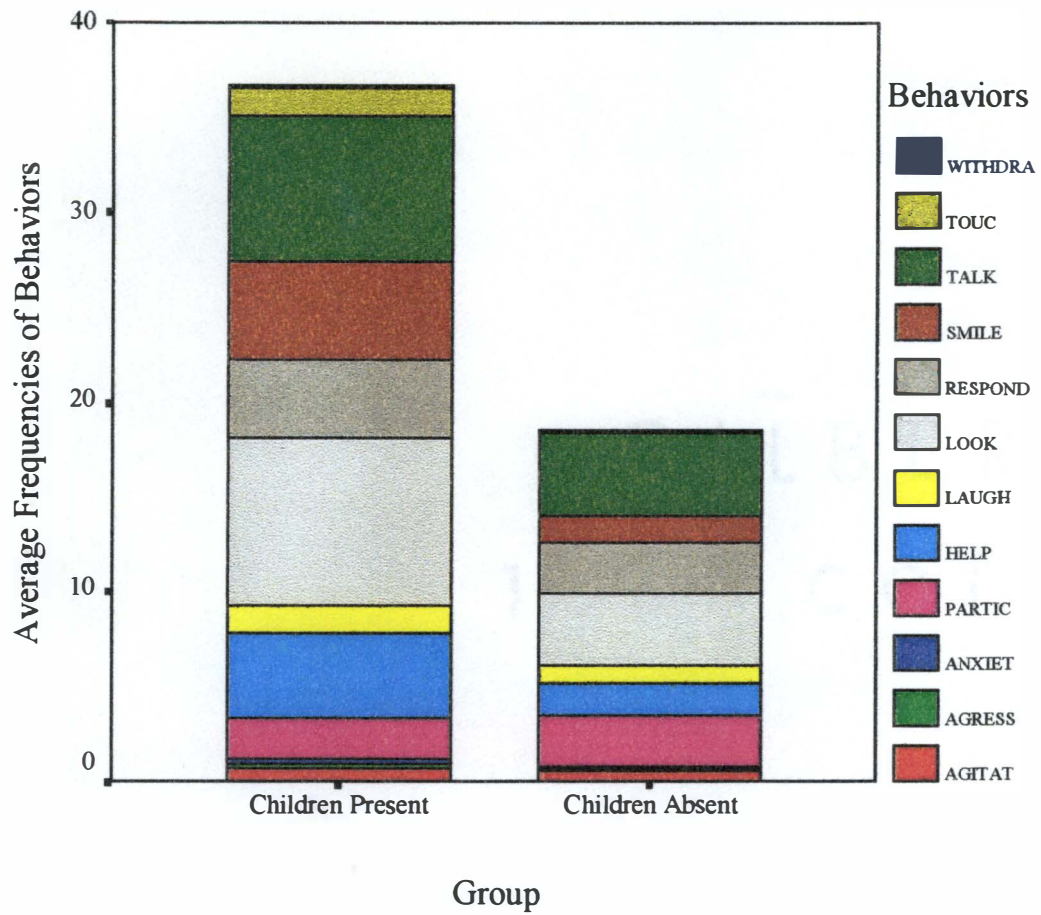


Figure 1. Average frequencies of older adults' ($n = 6$) behaviors during activities with children present and absent.

chi-square analysis for each of the six older adults yielded similar results. For each older adult who participated in the present study, a significant relationship existed between her/his behavior and the presence or absence of children during activities. In addition to the chi-square analysis for each participant, t tests were run to compare means of behaviors. The following sections provide an individual narrative description of each older adult participant in addition to reporting statistical findings from her or his case study.

For each person, the score of their Mini-Mental State Examination (MMSE), an assessment of level of cognitive functioning, is reported. It also should be noted that the degrees of freedom, based on the 12 behavioral variables, for each person's chi-square analysis varied. If the frequency for a behavior was zero, then the behavior was not calculated for the degrees of freedom.

Person One

One of the most interesting facts regarding Person One, a 76-year-old woman, was her extremely low score (1 out of a possible 30) on the Mini-Mental State Examination (MMSE). The only item on the MMSE that Person One correctly identified was the state in which she lived. The MMSE indicated that Person One was not oriented, or aware of, the year, the season, the month, or the day of the week. Person One could not repeat the name of three objects immediately after hearing them verbally stated. She was unable to correctly name a pencil and a watch on the table in front of her, and she was unable to comply with the request of "close your eyes." These examples illustrated the substantial level of cognitive impairment found to be present in this older adult. However, to the uninformed individual, Person One would have left an impression of

being both physically and cognitively higher functioning, even though her MMSE score indicated a substantial level of cognitive impairment. Person One was the only individual of the six participants not currently taking any prescription medications, which is unusual for someone of her age and dementia diagnosis.

Person One was paired with a 5-year-old girl during activities with the children present. Despite her level of cognitive impairment, Person One never exhibited any negative behaviors during activities with the children. She displayed agitated and anxious behaviors only once throughout the activities she shared with a peer older adult. This was characteristic of Person One's typical behaviors on a daily basis and during group activities. Overall chi-square analysis for Person One showed that her behaviors were significantly dependent on the presence or absence of children during activities ($\chi^2_9 = 51.76, p = .01$) (see Table 2 and Figures 2 and 3). However, behaviors of responding, spontaneously talking, looking, smiling, laughing, and appropriately touching were exhibited by Person One at higher frequencies while interacting with children. Of these behaviors, looking ($t = 5.10, p = .01$), smiling ($t = 8.64, p = .01$), and appropriately touching ($t = 5.10, p = .01$) were displayed at significantly higher frequencies.

Person One's partner, Person Two, was more anxious and highly concerned about doing the activity "correctly." Person One seemed to provide a balance with her consistently relaxed and soothing disposition. During activities with Person Two, Person One's behaviors of offering help and participating in the activity were exhibited at higher frequencies than with the children present but were not significant at an alpha level of $p \leq .05$.

Table 2

Cross-Tabulation of Person One's Behaviors During Activities with Children Present
and Absent

BEHAVIOR	PRESENT	ABSENT	TOTAL
Responds	51	25	76
Talks spont.	40	23	63
Offers help	1	7	8
Participates	5	12	17
Looks	65	15	80
Smiles	53	8	61
Approp. touch	13	0	13
Laughs	18	9	27
Withdraws	0	0	0
Agitation	0	1	1
Anxiety	0	1	1
Aggression	0	0	0
TOTAL	246	101	347

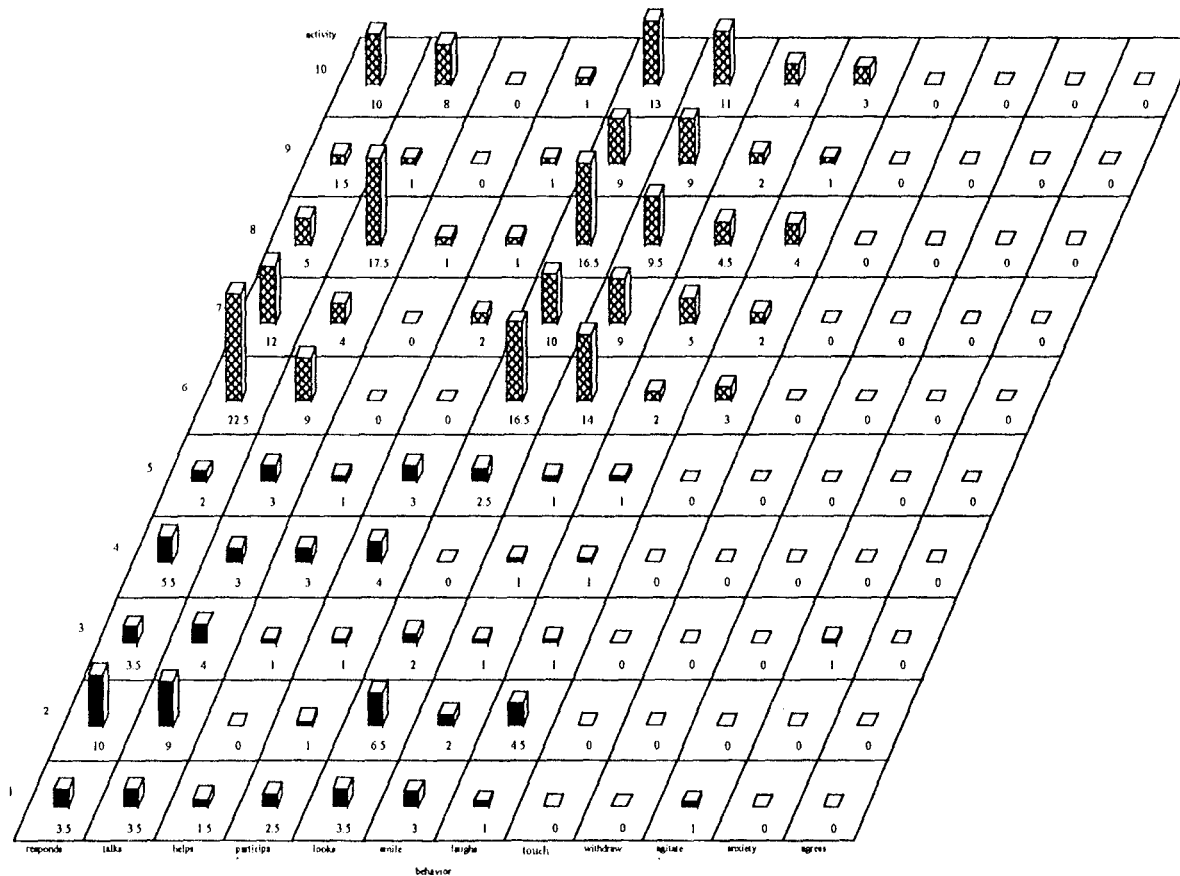


Figure 2. Frequencies of Person One's behaviors during activities with children present and absent.

Note. Activities 1 to 5 include activities with children present and activities 6 to 10 include activities with peer older adults (children absent).

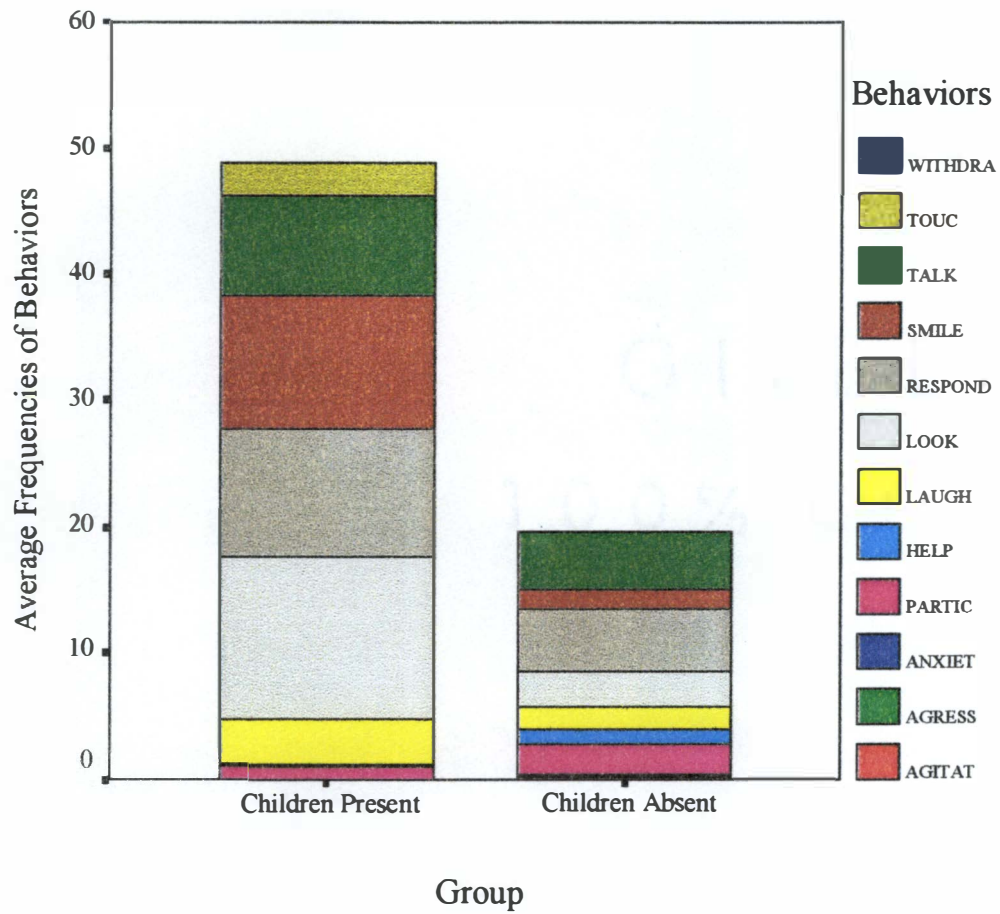


Figure 3. Average frequencies of Person One's behaviors during activities with children present and absent.

Person Two

Person Two, an 86-year-old female, was a striking individual in regard to physical appearance and dress. She had a repertoire of clichés that she repeated throughout the day. Despite her dementia, Person Two had retained a high level of social skills and was accustomed to frequent social outings. However, under her breath and when backs were turned, Person Two was known for whispering what some may term "inappropriate" remarks or rolling her eyes with lips tightly pursed. Person Two continuously exhibited high levels of anxiety that were displayed by the worried tone in her repeated questions and remarks and her nervous behaviors (e.g., holding her head in her hand, difficulty sitting still). Person Two had frequent momentary realizations of her inability to remember things (e.g., how she would get home, where her car was) that may have explained her anxiety to a degree.

Person Two had a score of 17 out of 30 on the MMSE, indicating a moderate level of cognitive impairment. She was taking four prescription medications, one for slowing the progression of Alzheimer's disease, one for depression, and two for anxiety. The dosages of the medications for anxiety had been steadily increased over time since Person Two first started attending the Alzheimer's Day Treatment Center. Of the 6 participants, Person Two exhibited the highest levels of anxiety throughout any given day, regardless of the group activity.

A chi-square analysis for Person Two showed that her behavior was significantly dependent on the presence or absence of children during activities ($\chi^2_9 = 34.72, p = .01$) (see Table 3 and Figures 4 and 5). Person Two was paired with a 5-year-old boy during activities with the children present. During activities with children, Person Two

Table 3

Cross-Tabulation of Person Two's Behaviors During Activities with Children Present
and Absent

BEHAVIOR	PRESENT	ABSENT	TOTAL
Responds	9	23	32
Talks spont.	81	40	121
Offers help	45	22	67
Participates	6	15	21
Looks	45	36	81
Smiles	51	17	68
Approp. touch	3	1	4
Laughs	2	3	5
Withdraws	0	0	0
Agitation	8	7	15
Anxiety	10	6	16
Aggression	0	0	0
TOTAL	260	170	430

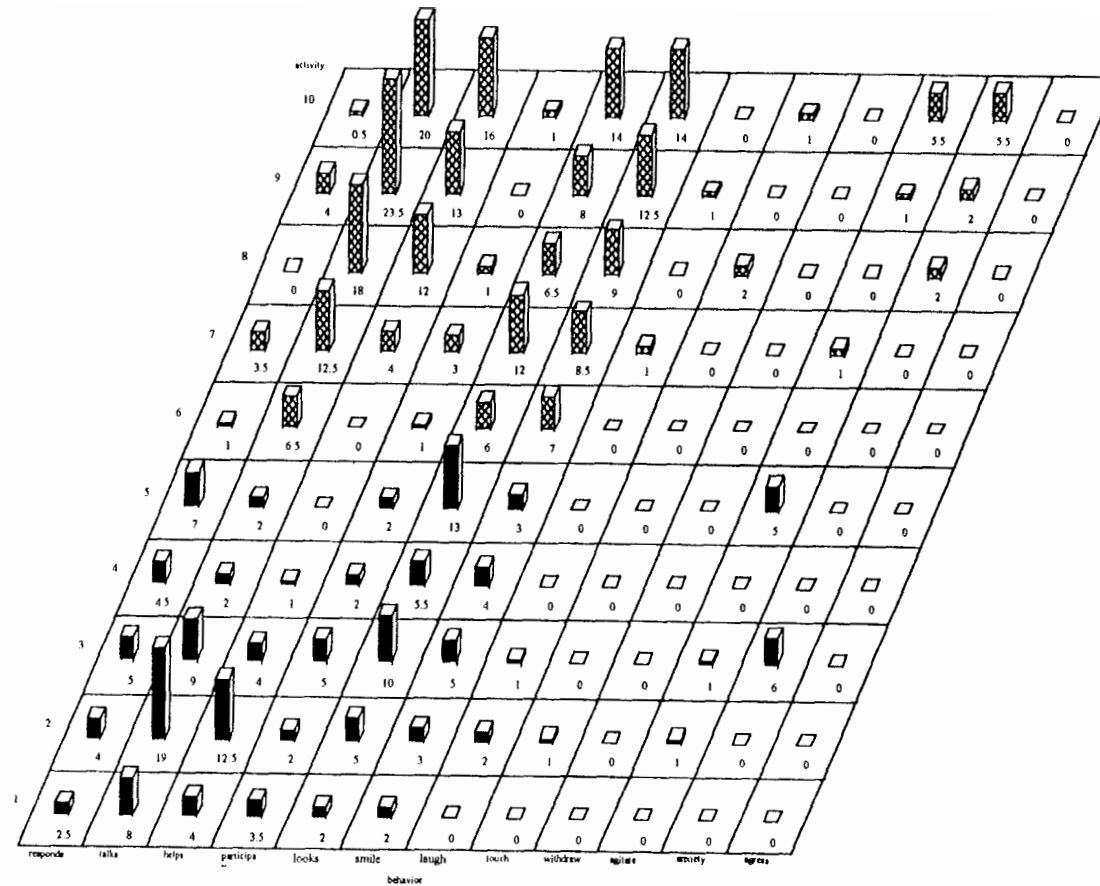


Figure 4. Frequencies of Person Two's behaviors during activities with children present and absent.

Note. Activities 1 to 5 include activities with children present and activities 6 to 10 include activities with peer older adults (children absent)

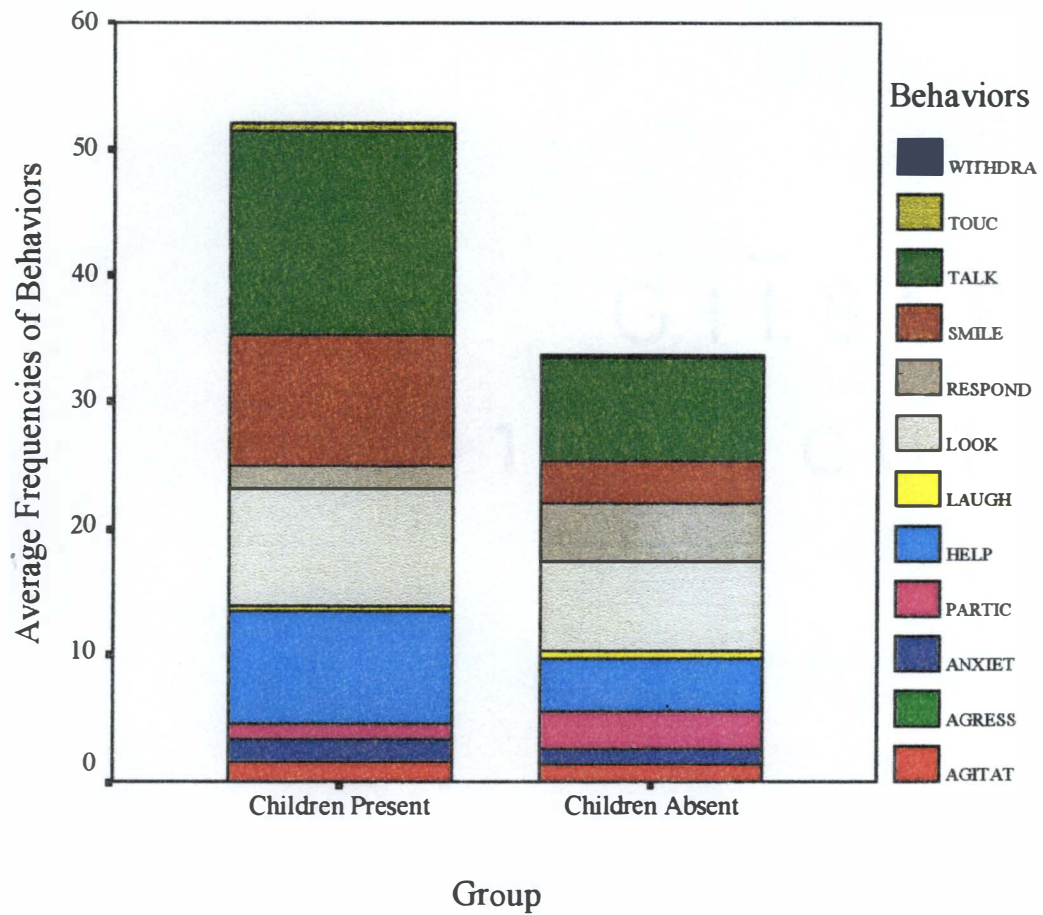


Figure 5. Average frequencies of Person Two's behaviors during activities with children present and absent.

exhibited the behaviors of spontaneously talking, offering to help, looking, smiling, appropriately touching, agitation, and anxiety at higher frequencies than when the children were absent. Of these behaviors, smiles were displayed at significantly higher frequencies ($t = 4.84, p = .01$). During activities with a peer older adult (Person One), behaviors of responding, participating in activity, and laughing were observed at higher frequencies. Of these behaviors, responding was displayed at significantly higher frequencies ($t = 2.56, p = .03$).

Person Three

Person Three, a 65-year-old man, was typically a quiet, reserved individual with a relaxed disposition. During daily group activities, he was often passive and his verbal engagement was minimal. However, during activities with children present, Person Three could be described as "coming alive." During the data collection period, Person Three's wife, his primary caregiver, commented on the attention he now was showing toward children in public places. His wife noticed that he would smile, look at, or engage in play with children on a regular basis. She commented that her husband had never before shown any interest in children, and she attributed this phenomenon to his participation in the intergenerational activities. Person Three had a score of 9 out of 30 on the MMSE, indicating a substantial level of cognitive impairment. He was taking six prescription medications for seizures, an ulcer, slowing the progression of Alzheimer's disease, depression, heart, and fluid build-up, respectively.

While the children were present, Person Three was alert and animated and even initiated games of pretend play with his younger counterpart, a 5-year-old boy, during all five activities. For example, Person Three's table during activities was located close to

the air conditioner vent, which was the same height as the child. After each art project was completed, the child would hold his hands over the vents as the cold air emerged. The child would continue to glance over his shoulder at Person Three, who would pretend not to watch the child. The child then would touch Person Three's arm, and Person Three would jump and laugh in "surprise" at the cold hands. Both the older and the younger participant would laugh heartily and continue with the repetition of this game. Person Three's interactions were reflective of results in Mersereau and Glover's (1990) study examining the effects of children's visits for recreational and education activities on nursing home residents' behavior. Their findings showed that nursing home residents "had play legitimized and encouraged" (p. 3).

A chi-square analysis for Person Three showed that his behaviors were significantly dependent on the presence or absence of children during activities ($\chi^2_{10} = 18.93$, $p = .04$) (see Table 4 and Figures 6 and 7). During activities with the children, Person Three exhibited the behaviors of responding ($t = 7.80$, $p = .01$), spontaneously talking ($t = 10.95$, $p = .01$), offering to help ($t = 3.67$, $p = .01$), looking ($t = 5.66$, $p = .01$), smiling ($t = 3.5$, $p = .01$), laughing ($t = 3.36$, $p = .01$), and appropriately touching ($t = 3.14$, $p = .01$) at significantly higher frequencies than during activities without children present. Participating in activity was displayed at higher frequencies also, but the difference was not significant at an alpha level of $p \leq .05$.

During activities with a peer older adult (Person Six), Person Three's behavior remained highly passive. For example, Person Three did not talk with Person Six once during any of the five activities. On several occasions, I viewed the segments of videotaped data after the coding procedures had concluded. Person Three's behavior

Table 4

Cross-Tabulation of Person Three's Behaviors During Activities with Children Present
and Absent

BEHAVIOR	PRESENT	ABSENT	TOTAL
Responds	20	1	21
Talks spont.	15	0	15
Offers help	5	0	5
Participates	5	4	9
Looks	68	12	80
Smiles	24	4	28
Approp. touch	8	0	8
Laughs	17	3	20
Withdraws	0	1	1
Agitation	1	2	3
Anxiety	0	0	0
Aggression	0	0	0
TOTAL	163	27	190

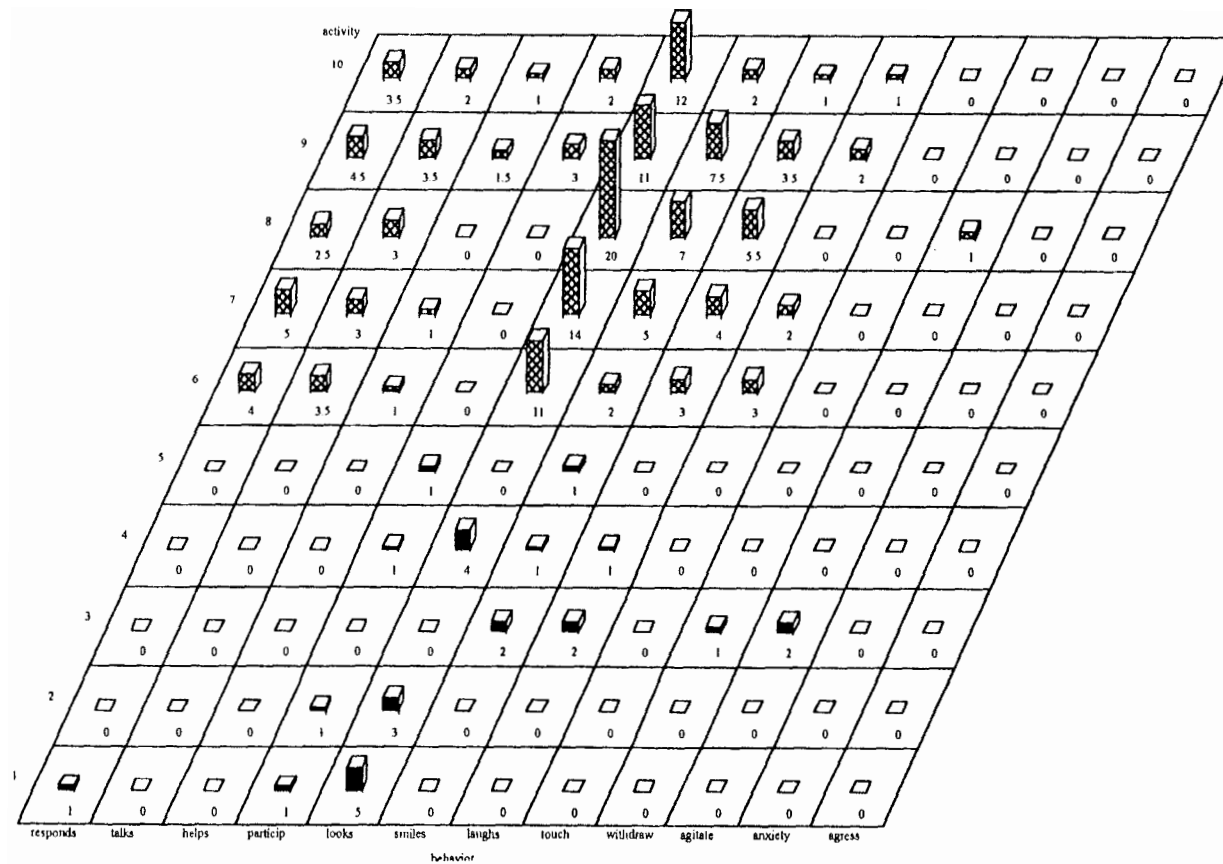


Figure 6. Frequencies of Person Three's behaviors during activities with children present and absent.

Note. Activities 1 to 5 include activities with children present and activities 6 to 10 include activities with peer older adults (children absent).

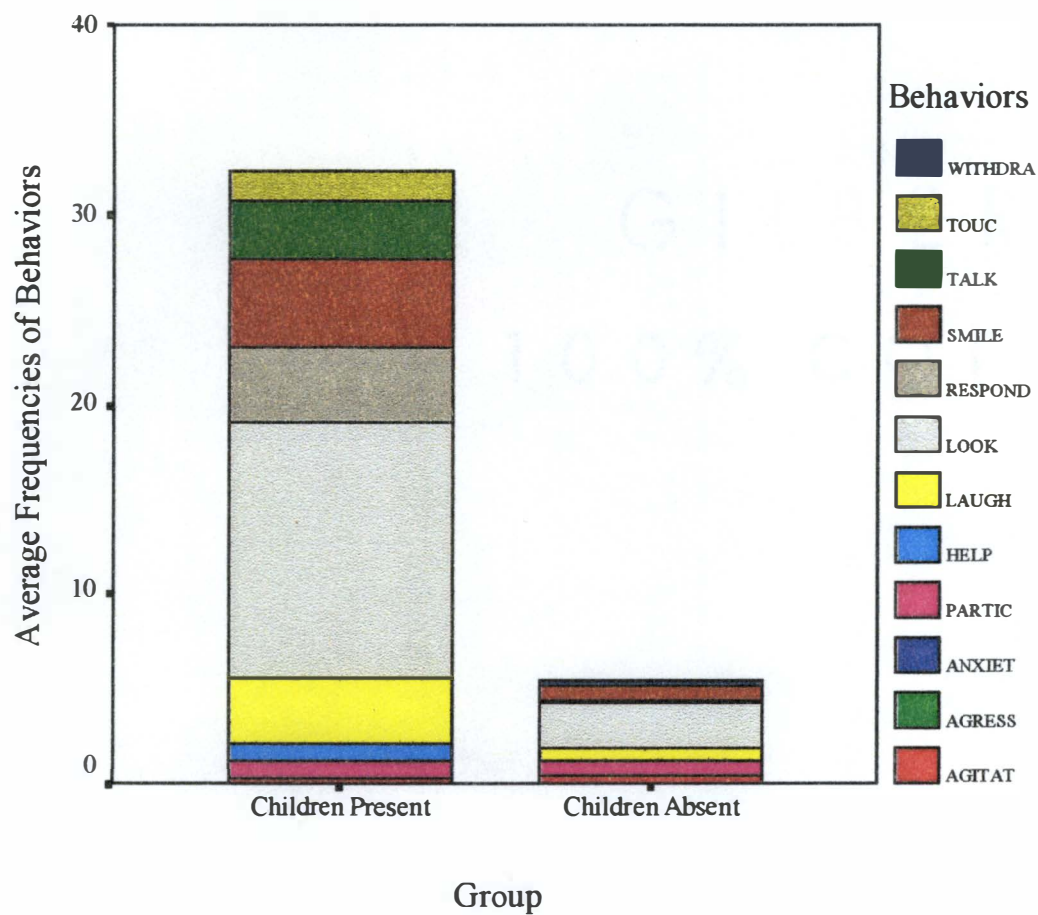


Figure 7. Average frequencies of Person Three's behaviors during activities with children present and absent.

appeared to be a strong reflection of the loss and sadness associated with dementia. At times, Person Three held activity materials in his hands and stared at them with a blank expression, never making any progress on the art project. This was a man only 65 years of age who at one time attended college, served in the military, and had a career. Now, he was unable to understand or complete a simple art project. More than any of the other 5 older adult participants, Person Three's behavior was strikingly different during activities with children present and activities with peer older adults.

Person Four

Person Four, an 81-year-old woman, appeared to enjoy activities with the children but to a limited extent. Of the 6 older adults, Person Four seemed to be the least receptive to any of the activities, whether they were with children or with peer older adults. Occasionally, she would inquire as to where the children's parents were or why the children's parents were not there to assist. Furthermore, she sometimes stated a preference solely for the company of unimpaired adults, wanting to engage in more conversations. Of the 6 older adult participants in this study, Person Four was the most independent in activities of daily living. She lived by herself, dressed impeccably, and was always well groomed. Not having any grandchildren, Person Four had limited or no contact with children outside of these intergenerational activities. Person Four had a score of 20 out of 30 on the MMSE, indicating mild cognitive impairment. She was taking three prescription medications, one for angina, one for tremors, and one for heartburn.

A chi-square analysis for Person Four showed that her behaviors were significantly dependent on the presence or absence of children during activities.

($\chi^2_9 = 25.78, p = .01$) (see Table 5 and Figures 8 and 9). Person Four was paired with a 5-year-old girl during activities with the children present. During activities with the children, Person Four exhibited responding, spontaneously talking, offering to help, smiling, laughing, appropriately touching, withdrawing from activity, agitation, and aggression/inappropriate behaviors at higher frequencies than during activities with peers. However, none of these behaviors were exhibited at significantly higher frequencies at an alpha level of $p \leq .05$.

Examples of Person Four's agitation and inappropriate behaviors while interacting with a child were both verbal and physical. She told the child on more than one occasion that "girls are supposed to know how to [color, draw] better." On two occasions, Person Four physically moved the child's hand out of the way to work on the art project herself. When the child asked Person Four what she needed to do, Person Four ignored her for a short period of time. (From past experience with child, I knew that the child was highly resilient and self-sufficient. The child would continue to work on another part of the project and then resume interactions with Person Four after a short time.) During interactions between Person Four and the child, the staff and I observed closely, ready to intervene or to separate the participants if necessary. The staff member at the table intervened after each of these incidents and positively redirected the attention of Person Four and the child. Prior to data collection, the staff and I agreed that children's feelings and enjoyment while visiting the program took precedence over collaboratively working on an art project. On each occasion, both participants resumed working on the art project as a cohesive pair, and separation of these participants was never necessary.

Table 5

Cross-Tabulation of Person Four's Behaviors During Activities with Children Present
and Absent

BEHAVIOR	PRESENT	ABSENT	TOTAL
Responds	18	10	28
Talks spont.	53	42	95
Offers help	39	16	55
Participates	10	11	21
Looks	16	22	38
Smiles	10	3	13
Approp. touch	5	0	5
Laughs	6	1	7
Withdraws	3	2	5
Agitation	12	7	19
Anxiety	0	0	0
Aggression	6	1	7
TOTAL	178	115	293

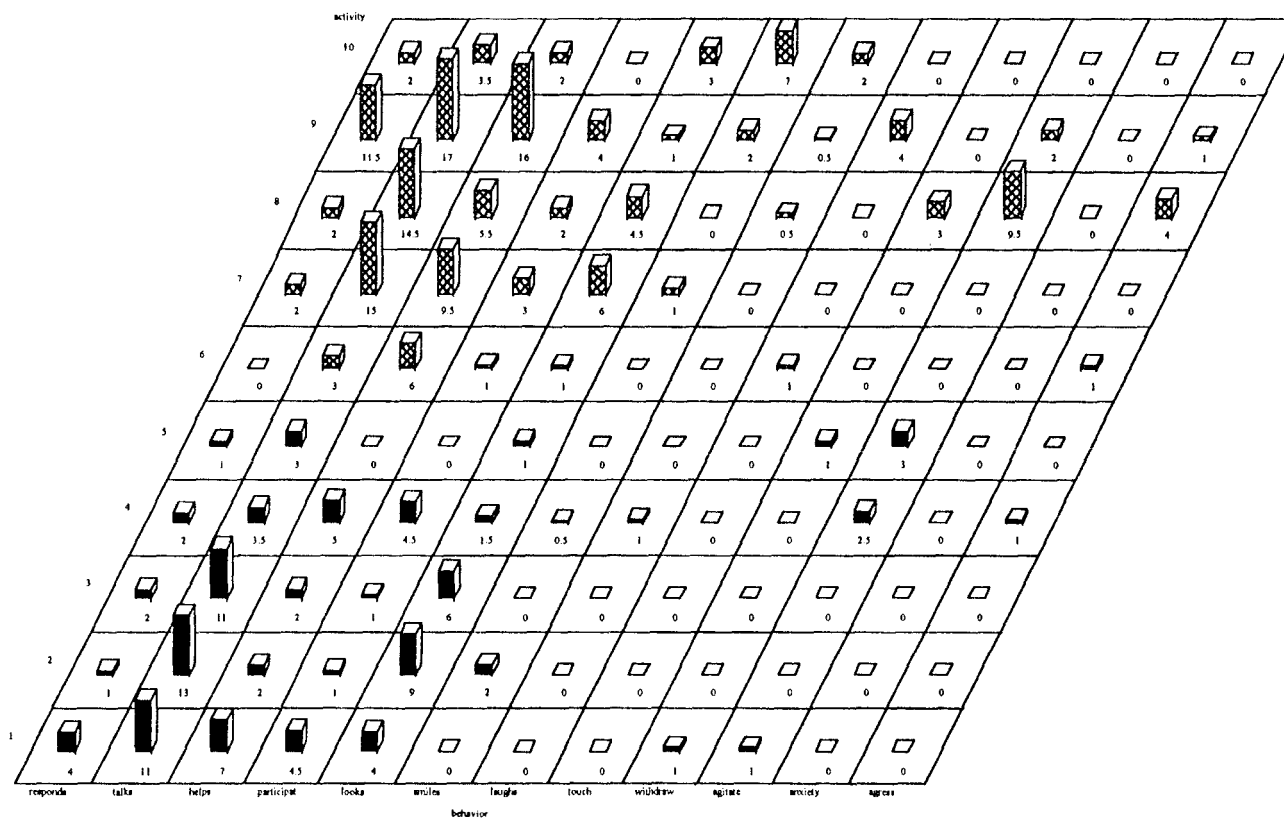


Figure 8. Frequencies of Person Four's behaviors during activities with children present and absent.

Note. Activities 1 to 5 include activities with children present and activities 6 to 10 include activities with peer older adults (children absent).

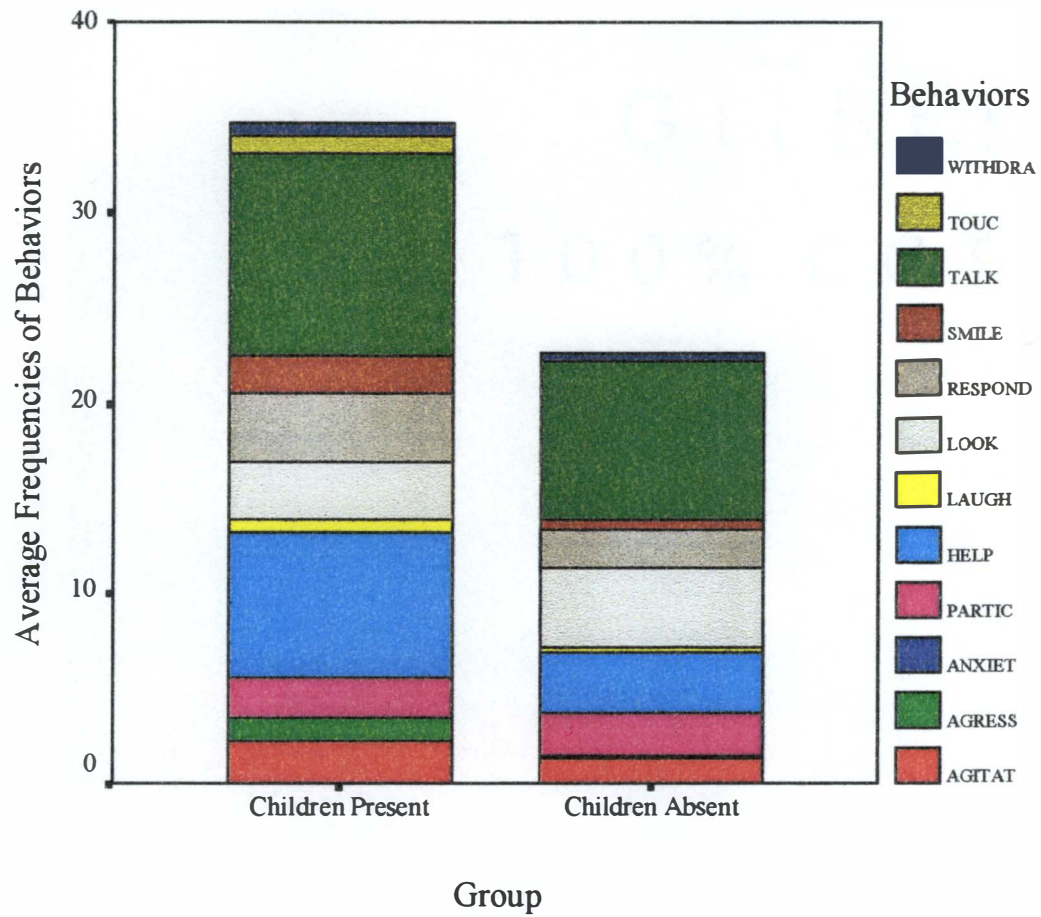


Figure 9. Average frequencies of Person Four's behaviors during activities with children present and absent.

During activities with an older adult peer (Person Five), Person Four's behaviors of looking were exhibited at higher frequencies but were not significantly different than during activities with children present at an alpha level of $p \leq .05$. Person Five was typically more passive and easy-going in demeanor. Consequently, Person Four was able to assume the leadership role in the pair and to direct the process of the art projects to her satisfaction.

Overall, Person Four appeared to tolerate the art activities more than enjoy participating in them. She was an example that intergenerational activities with young children and art activities with peers are not appropriate and interesting for every older adult. Person Four more likely would have benefited from intergenerational activities with college-aged young adults, as she enjoyed and appreciated engaging in conversations. Individual differences and preferences always should be respected and taken into consideration in planning activities for older adults.

Person Five

Person Five, an 83-year-old woman, was a warm and nurturing individual-- characteristics that were consistently reflected in her daily behavior. She verbally expressed her enjoyment of the children prior to and after their visits for activities, often remarking on the sweet nature or the high energy levels of children. Although Person Five had no grandchildren, she had provided child care as an occupation years earlier. Likewise, Person Five was affectionate with (e.g., holding a hand, giving a hug) and complimentary of the peer older adults and staff members on a regular basis. Person Five had a score of 23 out of 30 on the MMSE, indicating mild cognitive impairment. She was taking 13 prescription medications, one for arthritis, two for hypertension, two for

anxiety, three for heart, one for blood thinning, three for depression, and one for diabetes. Even for a woman of her age and with a dementia diagnosis, 13 medications is a large number of prescriptions. The medications, especially the 5 taken for depression and anxiety, were responsible to at least some degree for her typically pleasant disposition and behaviors.

A chi-square analysis for Person Five showed that her behaviors were significantly dependent on the presence or absence of children during activities ($\chi^2_7 = 32.85, p = .01$) (see Table 6 and Figures 10 and 11). Person Five was paired with a 4-year-old boy during activities with the children present. During activities with the children, Person Five exhibited the behaviors of spontaneously talking, offering to help, participating in activity, looking, smiling, and appropriately touching at higher frequencies than during activities with a peer older adult. Of these behaviors, offering to help ($t = 6.90, p = .01$) and appropriately touching ($t = 5.72, p = .01$) were displayed at significantly higher frequencies. Person Five regularly was seen with her younger counterpart sitting on her lap. She was highly attentive to the child's needs and appeared to be genuinely interested in having the child enjoying himself during the activities.

During activities with an older adult peer (Person Four), Person Five exhibited higher frequencies of the behavior of laughing but not significantly higher at an alpha level of $p \leq .05$. The earlier discussion of Person Five's peer partner, Person Four, noted the leadership role that Person Four took during peer activities. Person Five appeared to provide a positive balance to the pairing, as she was one of the few participants to whom Person Four responded well. In response to Person Four's lack of interest in the activities at times, Person Five was successful in redirecting her partner's attention and reminding

Table 6

Cross-Tabulation of Person Five's Behaviors During Activities with Children Present and Absent

BEHAVIOR	PRESENT	ABSENT	TOTAL
Responds	18	18	36
Talks spont.	38	24	62
Offers help	44	6	50
Participates	23	20	43
Looks	44	32	76
Smiles	14	9	23
Approp. touch	14	0	14
Laughs	3	8	11
Withdraws	0	0	0
Agitation	0	0	0
Anxiety	0	0	0
Aggression	0	0	0
TOTAL	198	117	315

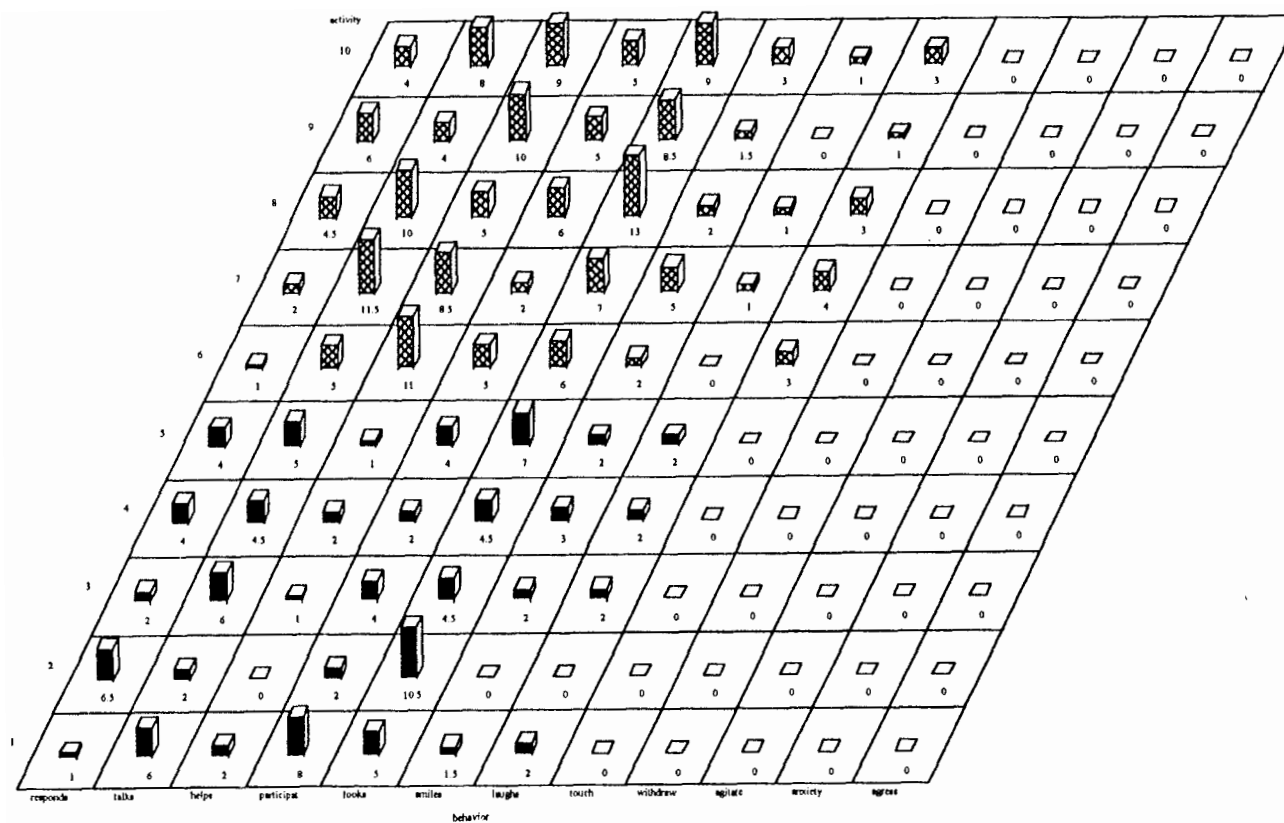


Figure 10. Frequencies of Person Five's behaviors during activities with children present and absent.

Note. Activities 1 to 5 include activities with children present and activities 6 to 10 include activities with peer older adults (children absent).

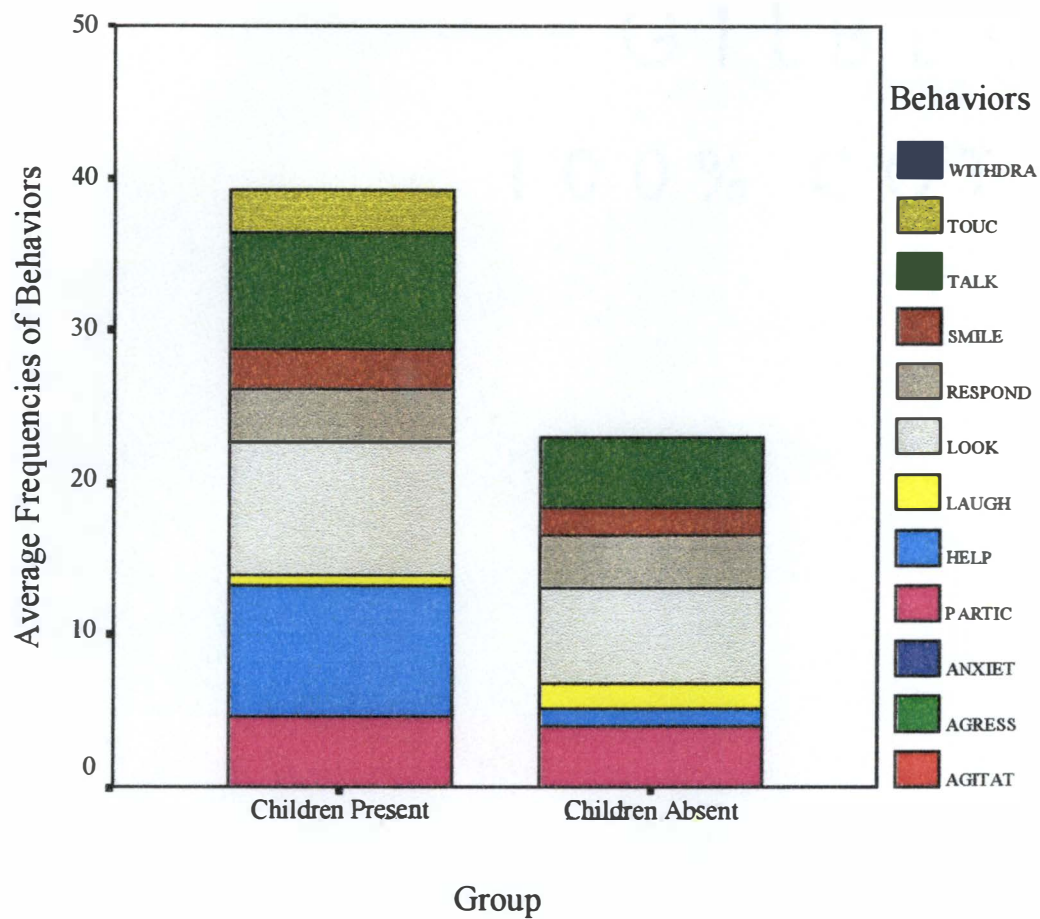


Figure 11. Average frequencies of Person Five's behaviors during activities with children present and absent.

her of different reasons for the activity. On one occasion when Person Four negatively commented on the activity, Person Five looked at her and with laughter said, "Come on [Person Four], we're in our second childhood, and you just need to enjoy yourself more." The comment was well received by Person Four, and, in hindsight, I realized that Person Five was probably one of the few people who could have said that to Person Four without her coming back with a negative response.

Person Six

Person Six, a 57-year-old man, had a sense of humor and a fondness for telling stories, especially stories of his youth. Based on his MMSE score of 22 out of a possible 30, Person Six was the highest cognitively functioning older adult participant in the group. He still was able to recall recent conversations to some extent and had a more heightened awareness of current events in comparison to the other participants. During activities, it appeared that Person Six was most challenged by his aphasia, a pronounced difficulty in his speech. Person Six was difficult to understand unless one had spent time with him and listened attentively. Person Six's aphasia may have explained his low frequencies of many of the twelve behaviors. The inability to verbally communicate with others can result in isolation from others. Person Six was taking two prescription medications, one for depression and one for vertigo.

A chi-square analysis for Person Six showed that his behaviors were significantly dependent on the presence or absence of children during activities ($\chi^2_7 = 32.03$, $p = .01$) (see Table 7 and Figures 12 and 13). Person Six was paired with a 4-year-old girl during activities with the children present. During activities with the children, Person Six exhibited higher frequencies of responding, spontaneously talking, and looking than

Table 7

Cross-Tabulation of Person Six's Behaviors During Activities with Children Presentand Absent

BEHAVIOR	PRESENT	ABSENT	TOTAL
Responds	7	0	7
Talks spont.	5	2	7
Offers help	3	4	7
Participates	13	16	29
Looks	30	1	31
Smiles	5	5	10
Approp. touch	0	0	0
Laughs	1	4	5
Withdraws	0	0	0
Agitation	0	1	1
Anxiety	0	0	0
Aggression	0	0	0
TOTAL	64	33	97

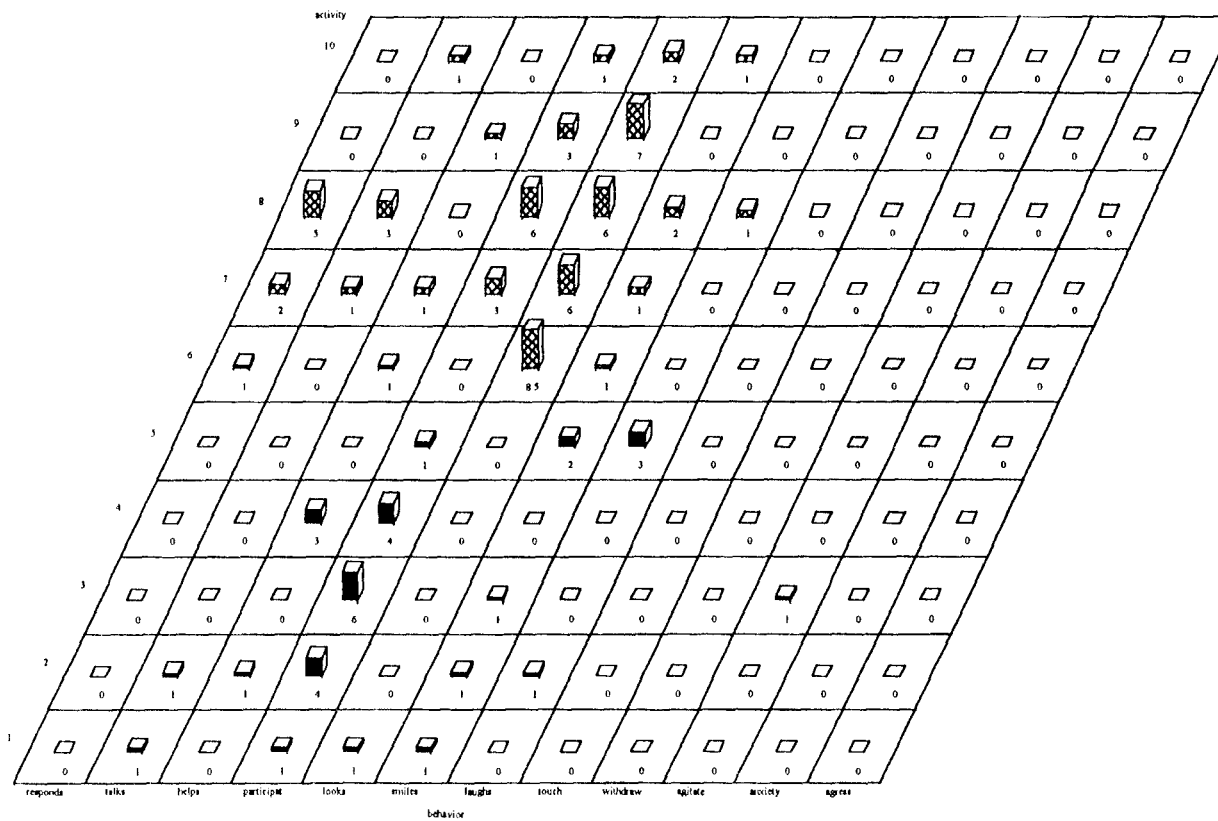


Figure 12. Frequencies of Person Six's behaviors during activities with children present and absent.

Note. Activities 1 to 5 include activities with children present and activities 6 to 10 include activities with peer older adults (children absent).

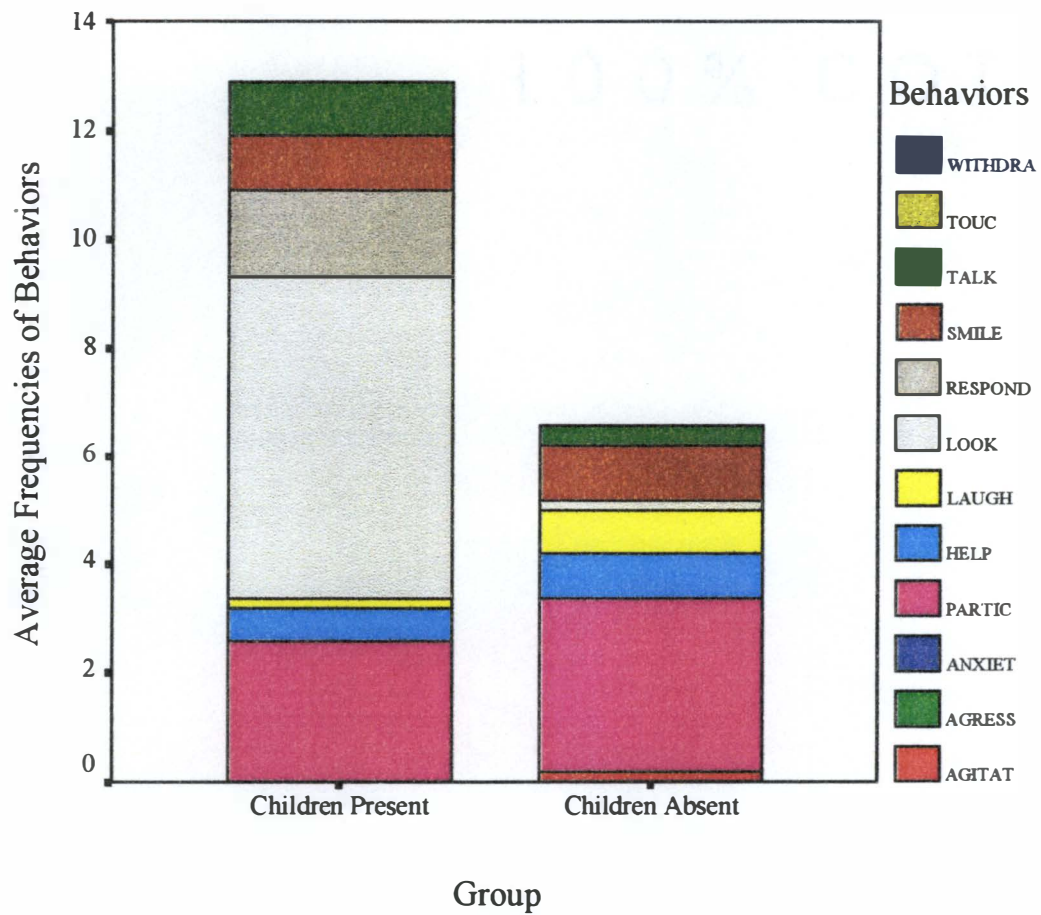


Figure 13. Average frequencies of Person Six's behaviors during activities with children present and absent.

during activities with peers. He displayed the behavior of looking at significantly higher frequencies ($t = 5.20$, $p = .01$). Person Six was aware that the children and most adults had difficulty understanding his speech. He had a tendency to use hand gestures, eye contact, and other physical gestures as a means of communication on a daily basis. Looking at a child may have been his unobtrusive way of interacting with the child.

During his activities with a peer older adult (Person Three), Person Six took the leadership role, as he was highly capable of understanding and manipulating the art projects. He gave much attention to detail and appeared content to work independently, realizing that his peer partner had a limited understanding of the projects. Person Six exhibited the behaviors of offering to help, participating in activity, and laughing at higher frequencies during activities with the peer, although these were not significantly different at an alpha level of $p \leq .05$.

Was the Presence or Absence of Preschool Children During Activities Related to Older Adults' Behaviors?

To test the second research hypothesis stating that the presence or absence of children was significantly related to older adults' behaviors during activities, a repeated-measures ANOVA including the 12 behaviors was run (see Table 8). Results indicated that between-subjects effects for behavior were significant ($F_{11, 60} = 7.32$, $p = .01$). Within-subjects effects for group (children present or children absent) also were significant ($F_{1, 60} = 29.88$, $p = .01$). The interaction of group and behaviors was significant ($F_{11, 60} = 3.50$, $p = .01$), indicating that the presence or absence of the children was significantly related to the older adults' behaviors. Consequently, the null hypothesis

Table 8

Analysis of Variance for 12 Behaviors

Source	<u>df</u>	<u>F</u>
Between subjects		
Behavior	11	7.32**
error	60	(40.03)
Within subjects		
Group	1	29.88**
Group*Behavior	11	3.50**
error (Group)	60	(13.86)
Activity	4	2.49
Activity*Behavior	44	1.27
error (Activity)	240	(4.23)
Group*Activity	4	1.96
Group*Activity*Behavior	44	0.74
error (Group*Activity)	240	(5.29)

Note. Values enclosed in parentheses represent mean square errors.

**p = .01.

stating that the presence or absence of children was not significantly related to the older adults' behaviors during activities was rejected, and the alternative hypothesis was accepted. The effect of activities on behavior was not significant ($F_{4, 240} = 2.49$, $p = .05+$). The interaction of activity and behavior was not significant ($F_{44, 240} = 1.27$, $p = .15$), indicating that the series of different art activities were not significantly related to the older adults' behavior. The interaction of group and activity was not found to be significant ($F_{4, 240} = 1.96$, $p = .12$), nor was interaction of group and activity and behavior ($F_{44, 240} = .74$, $p = .84$).

Due to low frequencies of four behaviors (withdrawing from activity, agitation, anxiety, and aggression/inappropriate behavior), all of which have a negative-valence, in comparison to higher frequencies of the other eight behaviors (responding, spontaneously talking, offering to help, participating in activity, looking, smiling, laughing, and appropriately touching), a second repeated measures ANOVA omitting those four low-frequency behaviors was run (see Table 9). Results indicated that between-subjects effects for the behaviors of older adults were significant, ($F_{7, 40} = 4.25$, $p = .01$). Within-subjects effects of group (children present, children absent) on older adults' behaviors was significant ($F_{1, 40} = 29.02$, $p = .01$). The interaction of group and behaviors was significant ($F_{7, 40} = 2.42$, $p = .04$). Again, the null hypothesis stating that the presence or absence of children was not significantly related to the older adults' behaviors during activities was rejected, and the alternate hypothesis was accepted. Activities did not have a significant effect on behavior ($F_{4, 160} = 2.20$, $p = .07$), again indicating that the series of different art activities did not have an effect on the older adults' behavior. The interaction of activity and behavior was not significant ($F_{28, 160} = 1.28$, $p = .18$). The interaction of

Table 9

Analysis of Variance for 8 Behaviors

Source	<u>df</u>	<u>F</u>
Between subjects		
Behavior	7	4.25**
error	40	(58.62)
Within subjects		
Group	1	29.02**
Group*Behavior	7	2.42*
error (Group)	40	(20.63)
Activity	4	2.20
Activity*Behavior	28	1.28
error (Activity)	160	(5.82)
Group*Activity	4	1.78
Group*Activity*Behavior	28	0.72
error (Group*Activity)	160	(7.46)

Note. Values enclosed in parentheses represent mean square errors.

**p = .01. *p = .04.

group and activity was not found to be significant ($F_{4, 160} = 1.78, p = .16$), nor was the interaction of group and activity and behavior ($F_{28, 160} = .72, p = .84$).

The results of the ANOVA procedures demonstrated that the presence or absence of children significantly affected the behavior exhibited by the older adults. Furthermore, the ANOVA that included only eight behaviors showed that the presence or absence of children had a significant effect on positive-valence behaviors. It also was determined that the art projects did not have a significant effect on the behaviors of older adults. Both the chi-square and repeated measures analyses effectively illustrated that the behaviors of the older adults differed with children and with peer older adults (children absent). In addition, the independent t tests for each participant provided some indication as to which behaviors best characterized their activities with children and with peers by a comparison of means.

What Behaviors of Older Adults Best Characterized Activities With Children Present and Absent?

A discriminate analysis examined behavioral variables that best characterized any differences between the two groups--activities with children present and activities with peers (children absent). A stepwise discriminant analysis identified the behaviors of looking, appropriately touching, and aggression/inappropriate behavior as those that best distinguished between activities with children present and activities with peers ($F_1 = -1.571 + .159 \text{ looking} + .637 \text{ appropriately touching} + .751 \text{ displaying aggression/inappropriate behavior}$). To test for differences among groups (children present and absent), Wilk's Lambda procedure was chosen because it tests how well separated the group means are from one another. Wilk's Lambda produces a number

between 0 and 1. A number closer to 0 is preferred, as that is indicative of a more definitive separation between group means (SPSS for Windows, 1997). For the test of function, results of Wilk's Lambda of .538, $\underline{X}^2 = 35.00$, indicated a marginal difference between the group (children present and children absent) means. For both groups, results showed that 47 (78.3%) of the 60 original grouped cases (i.e., behaviors) were correctly classified. For activities with children present, 20 (66.7%) of the 30 original grouped cases were classified correctly. For activities with peers, 27 (90%) of the 30 original grouped cases were classified correctly.

The finding of low frequencies of aggression in this study were comparable with those of Kuehne's (1989) study of adult day care participants' behaviors in the presence of young children. Kuehne found that, of the 14 negative-valence behaviors exhibited over nine activity sessions, the major behavior was aggression. Taking into consideration that only 1 of the 6 participants in the present study exhibited aggressive/inappropriate behaviors, I decided to run a second discriminate analysis that included only the behaviors of looking and appropriately touching in order to examine how well those two behaviors alone characterized the two groups. For the test of function, Wilk's Lambda was .581, $\underline{X}^2 = 30.956$, again indicating only a marginal difference between the means of the two groups (children present and children absent). In comparison to the discriminate analysis with all 12 behaviors, this test of function showed that isolating only the behaviors of looking and appropriately touching yielded nearly the same results ($\underline{F}_1 = -1.418 + .145 \text{ looking} + .668 \text{ appropriately touching}$). Results showed 46 (76.7%) of the 60 original grouped cases to be classified correctly. Comparing the classification results of the first discriminate analysis, there was a difference of only one case for both

groups. For activities with the children present, 19 (63.3%) of the 30 original grouped cases were classified correctly and for activities with peers, 27 (90%) of the 30 original grouped cases were classified correctly.

Discussion

The discriminate analysis procedures did not provide a strong characterization of the differences in behavior during activities with children and with peer older adults (children absent). However, looking and appropriately touching were reflected in the earlier t tests as behaviors that occurred at significantly higher frequencies for 4 of the 6 older adult participants. These results, identifying looking as a discriminating behavior, were comparable to Ward et al.'s (1996) findings regarding behavior of older adults with dementia during intergenerational music activities. Eye contact with children, a form of looking as operationalized in the present study, was the behavior exhibited at the highest frequencies in Ward et al.'s study. In contrast, the behavior of appropriately touching in the present study conflicts with Ward et al.'s findings showing touching as the behavior exhibited at the lowest frequencies during intergenerational activities. However, in another comparative study examining of behaviors of older adults with dementia, Newman and Ward (1993) found touching to be exhibited at significantly higher frequencies during music activities with children present as compared to music activities with children absent, similar to the findings of the present study.

Providing further support, Ward and Streetman's (1996) evaluation of the Generations program, a shared-site child care and adult day care center, examined the behavior of older adults (60% having Alzheimer's disease and related dementias) in the presence of children. Staff members from the adult and child care centers reported

associating the presence of children with change in the older adults' behaviors in the following ways: (a) increased smiling, (b) attempting at more activities, (c) expressing greater interest, (d) demonstrating higher levels of energy and enthusiasm, and (e) decreased levels of agitation and impatience. Furthermore, the researchers' frequency analysis of 17 older adult behaviors over 27 activity sessions with young children showed that the 4 behaviors exhibited most frequently in rank order were looking, smiling, participating in activity, and touching. The two behaviors exhibited at the lowest frequencies were expressing dissatisfaction and engaging in inappropriate behavior. The Elder/Child Interaction Analysis used in Ward and Streetman's study was the instrument adapted and modified for use in the present study. Results of the present study were comparable with the findings of Ward and Streetman's study, showing higher frequencies of positive behaviors and lower frequencies of negative behaviors.

In sum, the results of the present study yielded several important findings. The presence or absence of children during activities had a significant effect on the behavior of the older adults with Alzheimer's disease and related dementias. In addition, at least one of the behaviors of spontaneously talking, responding, offering to help, looking, smiling, laughing, and appropriately touching were exhibited at significantly higher frequencies by 1 or more of the older adult participants. All seven of these behaviors are deemed positive in nature, and the only positive-valence behavior omitted was participating in activity. In comparison, not one of the 6 older adults exhibited the negative-valence behaviors of withdrawing from activity, or displaying agitation, anxiety, or aggression/inappropriate behavior at significantly high frequencies.

Grouping the 6 participants across activities, there were a total of 1,064 of the eight positive-valence behaviors exhibited during activities with children and only 527 positive-valence behaviors exhibited during activities with older adult peers. In other words, the older adults doubled the number of positive-valence behaviors they exhibited when children were present for activities. In contrast, there were 40 instances of the four negative-valence behaviors exhibited during activities with children present, while 29 instances negative-valence behaviors were exhibited during activities with peer older adults.

It should be noted that of the 40 instances of negative-valence behaviors exhibited with children present, 39 were displayed by either Person Two ($\underline{n} = 18$) or Person Four ($\underline{n} = 21$). Of the 29 instances of negative-valence behaviors exhibited when older adults were with peers, Person Two ($\underline{n} = 13$) and Person Four ($\underline{n} = 10$) accounted for 23 of the behaviors. The negative-valence behaviors exhibited by Person Two were reflective of her typical disposition on a daily basis. Person Two's level of anxiety was frequently high, and her anxiety often would lead to agitation. Individuals with Alzheimer's disease and related dementias commonly exhibit both anxiety and agitation. The inability to recall recent events and the immediate sense of uncertainty that persons with dementia experience are likely to provoke fearfulness that, in turn, manifests as anxiety and agitation. However, Person Four serves as an example that intergenerational activities with young children are not appropriate for all older persons with dementia. Person Four was relatively higher functioning, and she verbally stated preferences for the companionship of unimpaired adults, as opposed to children or peer adults with dementia. Person Four's negative-valence behaviors were attributed to these personal preferences.

When conducting intergenerational research or implementing intergenerational programs, researchers and program personnel always should take individuals like Person Four into consideration, and planning should be tailored to best accommodate the needs of such program or research participants.

Furthermore, the gender of the children may have influenced the behavioral responses of the older adults during activities. The majority of participants attending the Alzheimer's Day Treatment Center hold traditional gender stereotypes. Their cohort grew up during a time of rigid gender roles. Males were viewed as more active, aggressive, and dominant, while females were seen as more passive, nurturing, and accommodating to the needs of others. Examples of possible gender-specific interactions could include behaviors exhibited by Person Three and Person Four. Person Three was paired with a 5-year-old boy and engaged in an active type of "horse-play" (their on-going games) on a regular basis. Although possible, it seemed less likely that Person Three would have engaged in the same kind of interactive play if he had been paired with a female child. As a second example, Person Four was paired with a 5-year-old girl and expressed her dissatisfaction with the girl's progress on the art project on several occasions. As reflected by her comments, Person Four believed that girls should be capable of higher quality art work than boys. It may be speculated that Person Four would have become less agitated with a boy, whom she would have perceived to have a reason--his gender--for not producing high quality art projects. Future researchers should consider the impact that gender may have on behavioral responses and interactions displayed by older adults and young children.

As yielded by the discriminant analysis, the two behaviors that best characterized, or separated, activities with children and with peers were looking and appropriately touching. However, the results of discriminant analysis did not reach statistical significance and should be viewed with caution. Nonetheless, the behaviors of looking and appropriately touching were consistent with the findings of comparable intergenerational research studies.

Finally, the narrative descriptions of older adults served as a means to illustrate the shared characteristics and unique differences among the individual older adult participants. From these narratives, a more in-depth perspective complementing and enriching the quantitative statistics with qualitative words and meanings, was gained for each person.

CHAPTER V

IMPLICATIONS, RECOMMENDATIONS, AND CONCLUSION

Three major findings were derived from the present study. First, the behaviors of older adults with dementia were significantly dependent on whether the participants were paired with a preschool child or a peer older adult. Second, the presence of preschool children or peer older adults during activities had a significant effect on the behaviors exhibited by older adults with dementia. Furthermore, when looking at each of the six participants individually, these results were found to hold true. Third, the positive-valence behaviors of looking at and appropriately touching best characterized the behavioral differences of these older adults with dementia during activities with preschool children and peer older adults. Looking and appropriately touching were the positive-valence behaviors exhibited at the highest frequency when preschool children were present. The older adults did exhibit negative-valence behaviors, but two participants accounted for the majority of these behaviors. The observation of negative-valence behaviors reinforces the notion that activities with young children are not always appropriate for particular individuals, regardless of what their cognitive or physical functioning level is.

Due to the small sample size, these findings should not be generalized to the larger population of older adults with dementia. However, the high frequencies of positive-valence behaviors that were found in comparison to negative-valence behaviors indicate that further study of the behaviors that older adults with dementia exhibit with children present and absent is warranted.

Prior intergenerational research findings that, overall, the presence of children during intergenerational activities seems to positively affect older adults were substantiated by the results of the present study. For example, both prior studies and the present study have shown that positive-valence behaviors are exhibited by older adults more frequently than negative-valence behaviors when children are present. Similar to the findings of Lindeman et al. (1991), who cited visits from children as one of the top five activities in adult day care centers, the present study found that intergenerational activities in comparison to other group activities at the Alzheimer's Day Treatment Center were characterized by the highest levels of engagement seen in the older adults. Prior researchers have focused on staff reports of older adults' behaviors or examined only positive-valence behaviors while in large part neglecting negative-valence behaviors. The present study furthered existing intergenerational research by (a) employing more sophisticated data analyses and (b) including observation of negative-valence behaviors.

From examination of the findings of the present study, I have drawn implications and developed recommendations focusing on empirical research, program practices, and professionalizing the field of intergenerational studies. This chapter outlines in detail the study's implications and proposed recommendations in an effort to contribute to advancing intergenerational research and program practices.

Implications and Recommendations for Research

Six considerations for empirical research can be drawn from the present study. They are (a) intergenerational theory-building, (b) planning for intergenerational

research, (c) collaboration within applied settings, (d) intergenerational research design, (e) intergenerational program evaluation, and (f) replication of the present study.

Intergenerational theory-building. Based on a review of the intergenerational literature, it can be concluded that there exists a clear need to develop and refine intergenerational theory. Researchers and practitioners continue to borrow from existing theories of child development, later life development, and human development. To an extent, such theories are applicable to intergenerational research and practice. However, these theories support intergenerational research and programs with a patchwork of theoretical pieces forced to fit together. A clearly defined intergenerational theory would serve as a strong foundation not only for the growing body of empirical research, but also for the rapidly growing number of intergenerational programs.

According to Burr (1995), essential parts of theory are (a) perspective, (b) concepts, (c) assumptions, (d) generality, (e) explanations, and (f) history. Development of intergenerational theory would provide perspective on the importance of nurturing and maintaining intergenerational ties through shared activities and regular contact between older and younger generations. Concepts applicable to intergenerational activities and contacts may include intergenerational exchanges, roles, meaning, and reciprocity. As defined by Olson (1995, p. 45), intergenerational exchanges are "activities which provide individuals, at differing points in the life cycle, opportunities for cooperation and interaction with the specific intent of meeting mutually beneficial needs." The concepts of roles and meaning traditionally are associated with symbolic interaction theory.

In regard to roles, individual behaviors of older adults may be adapted in a way that will allow the elder to serve as teacher, mentor, role model, nurturer, companion,

confidant, and friend to younger counterparts. The concept of meaning may focus on interactions between older and younger individuals, the development of relationships, and the sharing of common goals. Meaning would focus primarily on quality of time spent together as opposed to quality of a concrete product. Intergenerational togetherness as opposed to separateness would contribute to the meaning of shared experiences and contacts.

Reciprocity, a concept traditionally found in social exchange theory, focuses on the give-and-take or mutual benefits of relationships between at least two individuals. For intergenerational experiences, activities, and relationships to be meaningful for both age groups, older and younger individuals need to experience satisfying benefits or rewards that make contact with one another worthwhile. Examples of possible benefits include opportunities for both to exchange life experiences, wisdom, and skills and to renew or further develop appreciation of creativity, spontaneity, and elemental things.

Intergenerational theory would assume that older and younger generations can benefit from shared experiences. Furthermore, intergenerational theory would be general in nature due to the variety of possible combinations of age, developmental and functional levels, settings, and types of activities. The inclusion in intergenerational theory of Alzheimer's disease as a factor would warrant providing a more specific application. For example, the discussion of Piaget's cognitive development theory given in Chapter Two would serve as one applicable model. I have proposed that reversing the order of Piaget's four stages of cognitive development would provide an accurate characterization of the progressive degenerative stages of Alzheimer's disease.

Intergenerational theory would provide explanations to support further research and continued implementation of intergenerational programs. Such a theory would lend a strong rationale in response to the question of "So what?" that researchers continually seek to answer.

Planning for intergenerational research. As is true for any type of research agenda, those embarking on intergenerational research studies must give critical attention to detail, with a specific focus on methodological considerations. Many variations of participant samples exist. When a researcher selects sample participants, the ages of participants can range from conception to possibly 100 years or older. For older adults, membership or enrollment in a program may be determined by an age criterion. For example, age requirements may be limited to only those over the ages of 50 or 65. Researchers must determine if the sample age range will be broad (e.g., 50 and older) or narrow (65 to 75 years old), depending in part on the phenomena of interest. For younger participants, intergenerational research and programming typically include ranges of infancy to young adulthood (approximately 20 to 30 years old).

The age of participants also depends partly on the chosen site for the research project. Gaining access to older adult participants offers site choices of a variety of recreational and leisure programs (e.g., senior centers, senior exercise programs), independent living communities, adult day cares, assisted living facilities, and nursing homes. Furthermore, choices of urban versus rural, social versus medical model-based programs, geographic regions, or combinations of the aforementioned need to be considered. Likewise, younger participants may be accessed through their involvement

in child care centers, family day care homes, schools (elementary, junior high, high school, colleges, and universities), after-school programs, or recreational centers.

Specific characteristics of the sample may be of interest for research. For older adults, these characteristics may include status of health and well-being, levels of physical and cognitive functioning, race and ethnicity, gender, and income level. For younger participants, these characteristics may include status of health and well-being (e.g., chronically ill children), special needs (e.g., Down's syndrome, autism), academic challenges (reading abilities, tutoring, career mentoring), race and ethnicity, gender, and family income level. Furthermore, research involving frail older adults with physical or cognitive impairment increases the threat of participant attrition. The unpredictable nature of the aging population (e.g., sudden changes in health status, family needs, or caregiving arrangements), in particular the frail elderly, must be recognized. Another consideration of the research planning process is the collaborative effort involved in partnering with applied settings, an aspect that will be discussed in detail next.

Collaboration within applied settings. It is imperative that individuals in a variety of roles be supportive of research conducted in an applied setting. This includes administrative staff, direct care staff, participants, and their families. Attempts to conduct research in an applied setting without first establishing trusting relationships would greatly hinder the research process. For example, the present study was conducted after I had spent three years working with administrative staff, direct care staff, older adult participants, and their families at St. Mary's Medical Center. This example is not to suggest that researchers must spend a period of months or years working with staff before engaging in research. Rather, it is recommended that researchers genuinely invest time

and energy in establishing trusting relationships and maintaining open communication during every step of the research process.

Conducting research in an applied setting is likely to impose burdens on a program, especially for the direct care staff. It is the responsibility of the researcher to justify there being potential advantages to those affiliated with the program. Reciprocity is important in the relationships between researchers and those involved with a program. A give-and-take consensus enables all concerned to benefit from a win-win situation. Furthermore, researchers must take care to not create hierarchical barriers between themselves and those affiliated with the program, especially if they do not possess prior experience working in an applied setting. To the greatest extent possible, researchers need to include staff in the research process by keeping them informed, soliciting their assistance, and acknowledging their expertise. In addition, participants and family members should be fully informed about and truly willing to consent to being involved in the research. Finally, familiarity with program structure allows the researcher to assess the best and most feasible approach to designing the study.

Intergenerational research design. To maximize the usefulness of research results, the design of intergenerational research should include both quantitative and qualitative components. Quantitative data provide concrete evidence for the viability of intergenerational programs. For example, one advantage of reporting the statistical findings related to intergenerational programs and exchanges may be the organization having an increased edge in securing grant funding. When soliciting grant funding, clearly defined objectives and measurable outcomes are imperative components. To measure outcomes effectively, quantitative statistics can provide evidence demonstrating

the impact made by intergenerational programs. Such information also can be used as a strong basis for seeking funds for the initiation or expansion of research.

From a qualitative perspective, data have the potential to provide rich and in-depth information that may elevate understanding of and insight into a particular phenomenon of interest, whether it be an individual person, a program, a disease, a family, or a staff that is targeted. For instance, information generated from research projects regarding Alzheimer's disease may be generalized concerning stages of cognitive decline, behaviors, and caregiver needs, among other aspects of the disease. However, as the present study has illustrated, there are no two individuals affected by Alzheimer's disease in the same manner. The disease manifests itself in unique ways, often surprising even those most educated about and familiar with this type of dementia. Qualitative study allows the researcher to complement statistical findings with descriptive narratives that create better recognition of unique individual characteristics.

Intergenerational program evaluation. Program evaluation research would serve to provide a complete picture of intergenerational programming. Ward and Streetman's (1996) program evaluation study was an example of a comprehensive qualitative and quantitative approach to intergenerational research. For holistic representation of an intergenerational program, a multimethod approach to data collection should focus in turn on participants, administrative and direct care staff, parents and family caregivers, and the environmental setting. For example, program evaluation may include behavioral analyses of older adults and children; surveys or interviews of participants, family members, and staff; and an assessment of the environment. A program evaluation is one example of how the present study may be replicated.

Replication of the present study. If the present study were to be replicated, I would recommend consideration of seven areas: (a) sample size and participant selection, (b) site selection, (c) qualitative design, (d) types of activities, (e) instrumentation, (f) data collection procedures and (g) data analysis. A larger sample size would allow research findings to be generalizable to a broader population of older adults with dementia, especially those in adult day care settings. Selection of those who would be younger participants could include school-age, adolescent, and college-age individuals. Regarding selecting the site, the research could be conducted in assisted living or nursing home facilities serving older adults with Alzheimer's disease and related types of dementia as easily as in an adult day care setting. However, the researcher would need to consider that such individuals may be physically and cognitively lower functioning, especially those in nursing homes.

The qualitative approach employed in the present study could be expanded to include more detailed narrative case descriptions and interviews with both older and younger participants, caregivers and parents, and staff members. However, the depth of the case descriptions partially will be dependent on the existing information that has been collected by the program staff and on file.

Different types of intergenerational activities could be implemented, such as music, cooking, outdoor activities, games, or exercise. Depending on the ages and functional levels of participants, unstructured interactions could be facilitated with participants together choosing their preferred course of activity. Concerning instrumentation, the observational recording sheets used for the present study could be refined further, with more sophisticated operational definitions and behavioral examples.

The number of behaviors could be lessened based on the findings of the present study, omitting the four variables of withdrawing from activity, displaying agitation, anxiety, and aggression/inappropriate behaviors due to their low frequencies. However, until the findings of further research document the effects of children's presence on older adults' behavior in greater numbers of studies with more sophisticated data analyses, those behaviors may be worth keeping for further examination. In addition, the same instrument could be adapted for analysis of children's behavior during activities with older adults and peer children.

Data could be collected over a longer period of time, incorporating longer taping segments per session and/or more activity sessions. However, careful consideration should be given to the threat of participant attrition if the researcher chooses to increase the number of sessions because the health status and care needs of older adults with dementia are subject to sudden change. A lengthier data collection period would mandate close monitoring of the cognitive functioning levels of participants, as the rate cognitive decline with dementia is unpredictable. Finally, a variety of statistical analysis procedures, at least comparable to those in the present study, would be recommended due to the limited number and scope of intergenerational research studies that to date have systematically documented effects on older adults' behavior.

Implications and Recommendations for Practice

From examining the present study, implications and recommendations for both beginning and existing intergenerational programs emerged. Targeted areas for practitioners and program directors to consider include (a) professional development and

education, (b) program participants, (c) program partnerships, and (d) external funding opportunities for intergenerational programs.

Professional development and education. Intergenerational programs typically involve multidisciplinary partnerships between two program staffs, one serving older adults and one serving younger participants. Each program staff brings diverse knowledge and understanding of a particular age group. While acknowledging the unique differences of the older and younger generations, program personnel must look further to recognize participants' shared characteristics and the complementary potential of intergenerational interactions. To facilitate successful intergenerational programming, personnel from both programs must be willing to work together in a supportive, collaborative effort while sharing resources of time, energy, space, and materials.

An important component of intergenerational programs must be initial and on-going professional education and development of all program personnel. Education of program personnel must address developmental characteristics, needs, expectations, and challenges associated with older and younger participants. Furthermore, it is important that those sponsoring and facilitating activities understand the rationale for intergenerational programming. In other words, staff members need to move beyond descriptions of "nice" or "cute" that sometimes are attached to linking older and younger generations. Beyond simply being nice or cute, intergenerational programs focus on the interdependence, as opposed to the discontinuity, among generations.

Education and development efforts need to enhance program planning processes. For example, scheduling, location, and activity planning are considerations. Scheduling should not conflict with either program's daily routines, such as mealtimes, arrivals and

departures; and, if young children are included, nap times. The location of the activities depends on the amount of safe and comfortable space available along with any special needs of program participants. Planning for intergenerational activities requires detailed organization and preparation. Program personnel should agree on the roles and responsibilities of each person during the planning phase. When developing activities, personnel must plan for developmental and functional appropriateness, degrees of simplicity or complexity, amount and availability of materials, and open-endedness versus structure needed by the populations involved. Likewise, there should be a strong emphasis on the activity process (as opposed to product), purpose and meaning attached to the activity (e.g., making Valentine's Day cards with children for family members of participants), interactions between participants, and the forming and nurturing of intergenerational relationships.

Angelis (1992) supported a useful model for intergenerational staff education and professional development and education based on Kanter's (1988a and 1988b) tasks of innovations. Kanter's model includes a sequence of organizational activities: (a) idea generation, (b) coalition building, (c) idea realization, and (d) diffusion of the innovation. The idea-generation stage involves brainstorming of needs, problems, or new ideas in an effort to find solutions or to create new ideas. The coalition-building stage involves presenting and justifying information to leaders and other individuals who will be involved with the intergenerational program. The idea-realization stage introduces the innovation as a new organizational change while seeking support and encouragement. Finally, the diffusion stage involves disseminating the innovation, or, in other words, implementing, evaluating, and promoting the change in programming. In summary, the

creation of intergenerational programs must involve an assessment of need, a program leader or innovator, support from all individuals affiliated with the program, and a clearly defined plan of how the generations will be linked.

Participants in intergenerational programs. Intergenerational programs do not have to be limited to frail older adults and preschool children. A variety of age combinations may link older adults, such as newly retired persons, with younger people, such as infants, adolescents, young and middle-aged adults. Most intergenerational programs will continue to include healthy and independent older adults who live and actively are involved in their community. However, underrepresented populations, such as older adults with dementia, can benefit from intergenerational exchanges as well.

Intergenerational partnerships. Intergenerational exchanges may involve partnerships among a variety of programs. For example, community- (e.g., senior and youth recreation and leisure centers), school-, and hospital-based programs offer choices in composition of age, gender, level of health and well-being, functional status, income level, and geographic location. As the aging proportion of the population increases, shared-site adult day care and child care intergenerational programs will continue to grow as an alternative to separate care facilities. When sharing one building, programs for adults and children typically are separated but provide maximal opportunities for intergenerational interactions are provided on a regular basis for interested participants. Shared-site facilities can be particularly advantageous for families caring for both older and younger dependent family members. An economic advantage of share-sited facilities is the potential savings in sharing the overhead (e.g., maintenance, utilities) costs of one building and the options of easily sharing program resources and materials.

External funding opportunities for intergenerational programs. There exist many grant funding opportunities for intergenerational programs. Charitable foundations across the United States frequently specify the elderly and youth as targeted populations in their grant funding priorities. Intergenerational programs can benefit from having creative and resourceful staff who are committed to initiating and developing grant proposals. Clearly defined program objectives and specific measurable outcomes are essential to the writing of successful grant proposals. Grant proposals may solicit funding for additional staff, resource materials, scholarships for financially-challenged participants, community outreach and education projects, and implementing innovative services ideas, among other things. Although securing external funding is a time-intensive endeavor, it allows for program growth, expansion, and replication. Finally, successful grant writing is one example of furthering the professionalization and recognition of the intergenerational field.

Implications and Recommendations for Professionalizing the Intergenerational Field

Institutions of higher education and continuing education programs can play an important role in professionalizing the intergenerational field. Academic institutions can benefit pre-professional students by offering courses, minors, and even degrees related to intergenerational studies. The potential academic disciplines appropriate for these initiatives include family studies, early childhood education, child development, family and consumer sciences, gerontology, human development, nursing, psychology, and social work. Likewise, continuing education programs for new and established professionals interested in working with intergenerational programs can support the field

by identifying well-defined competencies and providing certification and other credentialing services (Newman, 1997).

Conclusion

Intergenerational programs promote shared responsibilities among professionals who are program planners, developers, administrators, direct service providers, evaluators, researchers, and teachers. Such individuals are "committed to the notion that there is a special synergy between the young and the old, that caring for each other is natural and appropriate, and that problems confronting these populations can be ameliorated by empowering these groups to help each other" (Newman, 1997, p. 176).

From the present study has emerged a clear vision for the potential of intergenerational research and programming as means to connecting older and younger segments of the population. Intergenerational research and programming must specifically target and invest in the underrepresented population of older adults with Alzheimer's disease and related types of dementia. Despite their declining cognitive abilities, those with dementia deserve opportunities to remain actively engaged in society to the fullest extent possible. We can no longer afford to overlook the potential contributions older adults with dementia can provide to young children. Rather than focusing solely on the losses of persons with dementia, researchers and practitioners alike must draw on the wisdom and strengths that remain. In doing so, we can increase our appreciation and understanding of today's moments with older and younger generations by linking yesterday's memories with tomorrow's hopes.

References

References

- Alzheimer's Association. (1998). Alzheimer's disease: Fact sheet. [Brochure]. Chicago, IL: Author.
- Angelis, J. (1992). The genesis of an intergenerational program. Educational Gerontology, 18, 317-327.
- Atchley, R. (1988). Social forces and aging. Belmont, CA: Wadsworth.
- Bowlby, J. (1979). The making and breaking of affectional bonds. New York: Tavistock.
- Bredekamp, S. (Ed.). (1987). Developmentally appropriate practice in early childhood programs serving children from birth through age 8 (Expanded ed.). Washington, DC: National Association for the Education of Young Children.
- Bronfenbrenner, U. (1972). Influence on human development. New York: Dryden.
- Burr, W. R. (1995). Using theories in family science. In R. D. Day, K. R. Gilbert, B. H. Settles, & W. R. Burr (Eds.), Research and theory in family science (pp. 73-90). Pacific Grove, CA: Brooks/Cole.
- Butler, R. N. & Lewis, M. (1977). Aging and mental health: Positive psychosocial approaches (2nd ed.). St. Louis, MO: Mosby.
- Cartensen, L. (1980). Children's attitudes toward the elderly: An intervention. Washington, DC: Southeastern Psychological Association. (ERIC Document Reproduction Service No. ED 192 982).
- Caspi, A. (1984). Contact hypothesis and inter-age attitudes: A field study of cross-age contact. Social Psychology Quarterly, 47, 74-80.

Cohler, B. J., & Altergott, K. (1996). The family of the second half of life: Connecting theories and findings. In R. Blieszner & V. Hilkevitch Bedford (Eds.), Aging and the family (pp. 59-94). Westport, CT: Praeger.

Cohon, D. (1989). Intergenerational program research to refine theory and practice. In S. Newman & S. W. Brummel (Eds.) Intergenerational programs: Imperatives, strategies, impacts, and trends. New York: Plenum Press.

Conrad, K., Hanrahan, P., & Hughes, S. (1990). Survey of adult day care in the United States: National and regional findings. Research on Aging, 12, 36-56.

Costa, P. R., & McCrae, R. R. (1980). Still able after all these years: Personality as a year to some issues in aging. In P. B. Baltes & O. G. Brim (Eds.), Life-span development and behavior (Vol. 3, pp. 65-102). New York: Academic Press.

Cowgill, D. O. (1986). Aging around the world. Belmont, CA: Wadsworth.

Crites, M. S. (1989). Child development and intergenerational programming. In S. Newman (Ed.), Intergenerational programs: Imperatives, strategies, impacts, and trends (pp. 33-43). New York: Haworth Press.

Cumming, E., & Henry, W. E. (1961). Growing old: The process of disengagement. New York: Basic Books.

Dellman-Jenkins, M. (1986). Old and young together: Effects of an educational program on preschoolers. Childhood Education, 62, 206-208.

Dellman-Jenkins, M., Lambert, D., & Fruit, D. (1991). Fostering preschoolers' prosocial behaviors toward the elderly: The effects of an intergenerational program. Educational Gerontology, 17, 21-32.

Diamond, D. (1988, May). The Pittsburgh story: Filling the grandparent gap. 50 Plus, 42-50.

Dwyer, J. W. (1996). The effects of illness on the family. In R. Blieszer & V. Hilkevitch Bedford (Eds.), Aging and the family: Theory and research (pp. 401-421). Westport, CT: Praeger.

Eisler, R. M., Hersen, M., & Agras, W. S. (1973). Videotape: A method for the controlled observation of non-verbal interpersonal behavior. Behavior Therapy, 4, 420-425.

Erikson, E. H. (1963). Childhood and society (2nd ed.). New York: W. W. Norton.

Erikson, E. H. (1964). Insight and responsibility. New York: W. W. Norton.

Erikson, E. H., Erikson, J. M., & Kivnick, H. Q. (1986). Vital involvement in old age. New York: Norton.

Geller, P. (1994). Taking the next steps in adult day care. Perspective on Aging, 23, 13-15.

Gordon, A. M., & Williams-Browne, K. (1996). Beginnings and beyond (4th ed.). Albany, NY: Delmar.

Green, L. (1991). Humor and lighthearted activities. In D. H. Coons (Ed.) Specialized dementia care unit. Baltimore: Johns Hopkins University Press.

Havighurst, R. J., Neugarten, B. L., & Tobin, S. (1973). Disengagement and patterns of aging. In B. L. Neugarten (Ed.) Middle age and aging. Chicago: University of Chicago Press.

Hersen, M. (1976). Single-case experimental designs: Strategies for studying behavior change. Elmsford, NY: Pergamon Press.

Huck, S., Cormier, W. H., & Bounds, W. G. (1974). Reading statistics and research. New York: Harper & Row.

Issacs, W. L., & Bearison, L. D. (1986). The development of children's prejudice against the aged. International Journal of Aging and Human Development, 23, 175-194.

Kanter, R. M. (1988a). Three tiers for innovation research. Communication Research, 15, 509-523.

Kanter, R. M. (1988b). When a thousand flowers bloom. In B. Staw (Ed.), Research in organizational behavior (pp.169-211). Greenwich, CT: JAI Press.

Kimmel, D. C. (1990). Adulthood and aging. New York: Wiley.

King, D., & MacKinnon, C. E. (1988). Making difficult choices easier: A review of research on day care and children's development. Family Relations, 37, 392-398.

Kingson, E. R. (1989). The social policy implications of intergenerational exchange. In S. Newman (Ed.), Intergenerational programs: Imperatives, strategies, impacts, and trends (pp. 91-99). New York: Haworth Press.

Klein, D. M., & White, J. M. (1996). Family theories: An introduction. Thousand Oaks, CA: Sage.

Kohlberg, S. (1964). Development of moral character and moral ideology. In M. L. Hoffman & L. W. Hoffman (Eds.), Child development research (Vol. 1). New York: Sage.

Kuehne, V. (1989). "Younger friends/older friends:" A study of intergenerational interactions. Journal of Classroom Interaction, 24, 14-21.

Liebman, T. (1984). When will you be back? Young Children, 39, 70-74.

Lindeman, D. S., Downing, R., Corby, N. H., & Sanborn, B. (1991). Alzheimer's day care: Basic Issues. New York: Hemisphere.

Linton, M., & Gallo, P. S. (1975). The practical statistician: Simplified handbook of statistics. Monterey, CA: Brooks/Cole, 1975.

Mead, M. (1971). Coming of age in Samoa. New York: Morrow.

Mersereau, Y., & Glover, M. (1990). A guide to community: An intergenerational friendship program between young people and nursing home residents. Madison, WI: Bi-Folkal Productions.

Moody, H. R. (1998). Aging: Concepts & controversies. Thousand Oaks, CA: Sage.

Moody, H. R., & Disch, R. (1989). Intergenerational programming in public policy. In S. Newman (Ed.), Intergenerational programs: Imperatives, strategies, impacts, and trends (pp. 101-110). New York: Haworth Press.

Neal, M. B., Chapman, N. J., Ingersoll-Dayton, B., & Emlen, A. C. (1993). Balancing work and caregiving for children, adults, and elders: Vol. 3. Family Caregiver Applications. Newbury Park, CA: Sage.

Nee, D. (1989). The intergenerational movement: A social imperative. In S. Newman (Ed.), Intergenerational programs: Imperatives, strategies, impacts, and trends (pp. 79-90). New York: Haworth Press.

Newman, S. (1989). The intergenerational movement and its relationship to children and families: Interview with Margaret McFarland, PhD. In S. Newman (Ed.), Intergenerational programs: Imperatives, strategies, impacts, and trends (pp. 245-249). New York: Haworth Press.

Newman, S. (1995). History and current status of the intergenerational field (Publication No. 142). Symposium conducted at the meeting of the Association for Gerontology in Higher Education, Fort Worth, TX.

- Newman, S. (1997). Rationale for linking the generations (Publication No. 130). Pittsburgh, PA: University of Pittsburgh, University Center for Social and Urban Research, Generations Together: An Intergenerational Studies Program.
- Newman, S., Karip, E., & Faux, R. B. (1995). Everyday memory function of older adults: The impact of intergenerational school volunteer programs. Educational Gerontology, 21, 569-580.
- Newman, S., & Smith, T. (1997). Developmental theories as the basis for intergenerational programs. In S. Newman, C. Ward, T. Smith, J. Wilson, & J. McCrea (Eds.), Intergenerational programs: Past, present, and future (pp. 3-19). Washington, DC: Taylor & Francis.
- Newman, S., & Ward, C. (1993). An observational study of intergenerational activities and behavior change in dementing elders at adult day care centers. International Journal of Aging and Human Development, 36, 321-333.
- Olson, S. (1995). The identification of competencies for intergenerational professional practice. Journal of Family and Consumer Sciences, 87, 45-49.
- Parnell, K. (1980). Young and old together: A literature review. Childhood Education, 56, 184-188.
- Piaget, J. (1964). Development and learning. In R. Ripple & V. Rockcastle (Eds.), Piaget Rediscovered. Ithaca, NY: Cornell University Press.
- Reinke, J. B., Holmes, S. D., & Denney, W. W. (1981). Influence of a "friendly visitor" program on the cognitive functioning and morale of elderly persons. American Journal of Community Psychology, 9, 491-504.

Re Ville, S. (1989). Young adulthood to old age: Looking at intergenerational possibilities from a human development perspective. In S. Newman (Ed.), Intergenerational programs: Imperatives, strategies, impacts, and trends (pp. 45-53). New York: Haworth Press.

Rosenblatt, P. C., & Fischer, L. R. (1993). Qualitative family research. In P. G. Boss, W. J. Doherty, R. LaRossa, W. R. Schumm, & S. K. Steinmetz (Eds.), Sourcebook of family theories and methods: A contextual approach (pp. 167-177). New York: Plenum Press.

Rosencranz, H. A., & McNevin, T. E. (1969). A factor analysis of attitudes toward the aged. The Gerontologist, 9, 55-59.

Russell, C. K. (1996). Passion and heretics: Meaning in life and quality of life of persons with dementia. Journal of the American Geriatrics Society, 44, 1400-1402.

Saltz, R. (1971). Aging persons as child-care workers in a Foster Grandparent Program: Psycho-social effects and work performance. Aging and Human Development, 2, 314-340.

Schirm, V., Ross-Alaomolki, K., & Conrad, M. (1995). Collaborative education through a foster grandparent program: Enhancing intergenerational relations. Gerontology & Geriatrics Education, 15, 85-94.

Seefeldt, C. (1987). The effects of preschoolers' visits to a nursing home. The Gerontologist, 27, 228-232.

Seefeldt, C., & Jantz, R. K. (1977). As children see old folks. Today's Education, 66, 70-74.

Seefeldt, C., Jantz, R. K., Bredekamp, S., & Serock, K. (1977). Elderly persons' attitudes toward children. Educational Gerontology, 8, 493-506.

Seefeldt, C., Jantz, R. K., Galper, S., & Serock, K. (1979). Children's attitudes toward the elderly: Curriculum implications. Educational Gerontology, 2, 301-311.

Seefeldt, C., Warman, B., Jantz, R. K., & Galper, A. (1990). Young and old together. Washington, DC: National Association for the Education of Young Children.

Simkins, L. (1971). The reliability of self-recorded behaviors. Behavior Therapy, 2, 83-87.

Skinner, B. F. (1953). Science and human behavior. New York: Macmillan.

SPSS for Windows, Rel. 8.0.0. 1997. Chicago: SPSS Inc.

Stremmel, A. J., Travis, S. S., Kelly-Harrison, P., & Hensley, A. D. (1994). The perceived benefits and problems associated with intergenerational exchanges in day care settings. The Gerontologist, 34, 519-523.

Tice, C., & Warren, B. (1988). Developing and evaluating intergenerational programs. Unpublished manuscript.

Tighe, T. J., & Elliott, R. (1968). A technique for controlling behavior in natural life settings. Journal of Applied Behavioral Analysis, 1, 263-266.

Tombaugh, T. N., & McIntyre, M. J. (1992). The Mini-Mental State Examination: A comprehensive review. The Journal of the American Geriatric Society, 40, 922-935.

Travis, S. S., Stremmel, A. J., & Duprey, P. A. (1993). Child and adult day care professions converging in the 1990s?: Implications for training and research. Educational Gerontology, 19, 283-293.

U. S. Bureau of the Census. (1990). Projection of the population of the United States, by age, sex, and race: 1988-2080 (Current Population Reports, Series P-25, No. 1018). Washington, DC: Author.

Ventura-Merkel, C., Liederman, D. S., & Ossofsky, F. (1989). Exemplary intergenerational programs. In S. Newman (Ed.), Intergenerational programs: Imperatives, strategies, impacts, and trends (pp. 173-180). New York: Haworth Press.

Ward, C. R. (1997). Research on intergenerational programs. In S. Newman, C. Ward, T. Smith, J. Wilson, & J. McCrea (Eds.), Intergenerational programs: Past, present, and future (pp. 127-139). Washington, DC: Taylor & Francis.

Ward, C. R., Los Kamp, L., & Newman, S. (1996). The effects of participation in an intergenerational program on the behavior of residents with dementia. Activities, Adaptation & Aging, 20, 61-76.

Ward, C., & Streetman, H. (1996). Evaluation of Generations. Pittsburgh, PA: Generations Together.

Weiland, S. (1993). Erik Erikson: Ages, stages, and stories. Generations: Journal of the American Society on Aging, 17(2), 17-22.

Weissart, W. G., Elston, J. M., Bolda, E. J., Cready, C. M., Zelman, W. N., Sloane, P. H., Kalsbeek, W. D., Mutran, E., Rice, T. H., & Koch, G. G. (1989). Models of adult day care: Findings from a national survey. The Gerontologist, 29, 640-649.

Whitley, E., Duncan, R., McKenzie, P., & Sledjeski, E. (1976). From time to time: A record of young children's relationships with aged. Research Monograph No. 17. (ERIC Documentation Reproduction Service No. 128 088).

Zgola, J. (1990). Therapeutic activity. In N. L. Mace (Ed.), Dementia Care: Patient, family, and community. Baltimore: Johns Hopkins University Press.

Appendices

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Appendix A

Mini-Mental State Examination

Patient Name: _____ Date: _____

Examiner: _____

OrientationScore

What is the (year), (season), (month), (date), (day)? 5 pts. _____

Where are we: (state), (county), (town), (place), (floor)? 5 pts. _____

Registration

Name three objects: 1 second to say each, (hat, car, tree). Then ask patient to repeat all three after you have said them. Give one point for each correct answer. 3 pts. _____

Attention and Calculation

Ask to spell the word "world." Then ask to spell "world" backwards d_l_r_o_w_ 1 point for each correct letter. 5 pts. _____

Recall

Ask for the 3 objects repeated above. 3 pts. _____

Language

Name a pencil and a watch. 2 pts. _____

Repeat the following "No ifs, ands or buts." 1 pt. _____

Follow a three stage command: Take a paper in your right hand, fold it in half, and lay it on the floor. 3 pts. _____

(Refer to next page)

Read and obey the following: "Close your eyes." 1 pt. _____

Write a sentence. 1 pt. _____

Copy the design. 1 pt. (See next page.) _____

Total Points _____

30-20: No definite cognitive impairment

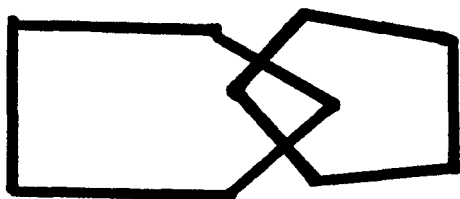
19-17: Cognitive impairment likely

16 or less: Probable significant cognitive impairment

CLOSE YOUR EYES

Write a sentence.

Copy the design.



Appendix B

Alzheimer's Day Treatment Center
Monthly Assessment

Patient: _____ Date: _____
Assessed By: _____

Orientation:

- ☐ No change
- ☐ Oriented x3
- ☐ Oriented date/place
- ☐ Occ. disoriented
- ☐ Confused

Sensory changes:Visual:

- ☐ No change
- ☐ Diminished
- ☐ Photosensitive

Hearing:

- ☐ No change
- ☐ Increased loss
- ☐ Distortion

Memory:

- ☐ No change
- ☐ Increased short term loss
- ☐ Increased immediate loss
- ☐ Increased long term loss

Toileting/hygiene:

- ☐ No change
- ☐ Self/independent
- ☐ Stand-by assist
- ☐ Occ. incontinent
- ☐ Requires protective clothing
- ☐ Total assist

Activity participation:

- ☐ No change
- ☐ Cooperative
- ☐ Requires direction
- ☐ Verbalizes in group
- ☐ Restless/anxious

Gait:

- ☐ No change
- ☐ Self/independent
- ☐ Stand-by assist
- ☐ Assistive device
- ☐ Total assist

Motor/Coordination:

- ☐ No change
- ☐ Apraxia
- ☐ Tremors
- ☐ Aphasia
- ☐ Agnosia

Appetite:

- ☐ No change
- ☐ Increased
- ☐ Decreased
- ☐ Special diet
- ☐ Independent eating
- ☐ Requires assistance

Locus of control:

- ☐ No change
- ☐ Able to follow directions
- ☐ Requires reminders/repetition for tasks
- ☐ Requires assist
- ☐ Unable to follow direction

Level of Activity Participation:

- ☐ No change
- ☐ Active increase
- ☐ Occ. active
- ☐ Inactive

Appendix C

INFORMED CONSENT STATEMENT

Intergenerational Programming: Observed Behaviors of Older Adults with Dementia

INTRODUCTION

You/your family member are/is invited to participate in a research study. The purpose of the study is to observe behaviors exhibited by older adults during art activities with children present and with children absent. Older adults have participated in activities with young children at the Alzheimer's Day Treatment Center for the past 2 ½ years. An example of the types of art activities is as follows: "mosaic flowers" – older adults and children glue small pieces of colored construction paper on to pre-made flowers made from poster board. This research project will serve as a way to observe behavior in a more formal manner.

INFORMATION ABOUT PARTICIPANTS' INVOLVEMENT IN THE STUDY

To record types and frequencies of behaviors exhibited by older adults during art activities with children present and with children absent, participants will be videotaped during activities and observational recording sheets will be completed while viewing the videotaped data. Observable behaviors will include responding, helping, engagement in activity, eye contact, smiling, appropriate touch (e.g., hand holding, pat on the back), extending hands, withdrawal from activity, displaying anxiety, and displaying aggression or other inappropriate behavior (e.g., yelling, derogatory language, not sharing materials with children).

Behavior of older adults will be compared under two different conditions - activities with children present and with children absent. Five activities will be implemented with children present and five will be implemented with children absent. The following conditions will exist for each activity:

1. The children will be paired with the same older adult participants during each activity with children present.
2. The same older adult participants will be paired during each activity with children absent.
3. Activities will occur during the same time of day (10:15 a.m. - 11:00 a.m. and 1:15 - 2:00 p.m.)
4. Activities with the children absent always will follow activities with the children present.
5. Each older adult participant over the course of the ten sessions will be videotaped for 5-minute time periods
6. The same staff member will be present at the same table during each activity.
7. The location (Alzheimer's Day Treatment Center) and environmental arrangement will be identical for each activity.

Two camera operators will videotape adult participants during the ten activities. The activity will be 45 minutes in length. Older adults will be seated at one of two round tables with one camera operator responsible for the three adults seated at each table. Depending on the presence or absence of the children, the camera will focus on the older adults while they interact with a child (children present) or a peer adult participant (children absent). During all activities one staff member of the Alzheimer's Day Treatment Center will remain near each table, intervening on an as-needed basis for safety and assistance purposes. Later in the day after activities with children present, a similar 45-minute art activity will be repeated with the same adult participants, at the same time, and with the same videotaping procedure. At the conclusion of the three-week data collection period, a total of 50 minutes of taped segments will be available for each older adult participant. Intergenerational activities have been videotaped by St. Mary's staff for program use since the onset of the activities in 1996 and the presence of video cameras have not hindered participation in or distraction from the activities.

The videotapes will be stored in the home of the Principal Investigator in a locked file cabinet from May to August 1999. No one will have access to the videotapes except the Principal Investigator. Beginning on September 1, 1999 video tapes and consent forms will be locked and stored at the University of Tennessee, Knoxville. The videotapes may be used in the future to assist in the illustration of presenting the research data from the proposed study. By signing this consent form to participate in the study, I am also giving my permission for tapes to be used for research presentations. Consent of older adult's caregivers and parents will be gained through a signed consent form that explains the context, location and audience involved in the presentation. Written consent would also be gained from the Director of Senior Services and the Director of the Child Care Center at St. Mary's Health System. Conditions under which the tapes would be used include national, state, or local conferences or a St. Mary's in-house presentation. Video tapes in these conditions will be used for an indefinite length of time.

RISKS

These types of intergenerational art activities have been on-going each month for more than two years and, to date, a problem, neither large nor small, has occurred once. The staff of the Alzheimer's Day Treatment Center and the Principal Investigator are highly trained and experienced in their work with older adults with dementia. One staff person remains near each activity table during the entire time to ensure the safety of older adult participants and children. Before choosing the older adult participants for the proposed study, the staff and Principal Investigator will have reached an agreement that the behavior typically exhibited by the older adult is not frightening or endangering. This agreement is based on staff's daily interaction and observation of patients, review of patient charting notes, and on past successes (free of behavior problems) of these types of activities. The child care classroom teacher is also trained and experienced with dementia based on prior caregiving experience. The children who will participate in the art activities have been involved with the older adult participants for seven months. The children are familiar with the older adults, the routine, the setting, and the staff. Based on these conditions, the nature and amount of potential risk, stress, and discomfort is minimal and highly unlikely.

Risk, stress, or discomfort factors would include heightened levels of agitation or anxiety on the part of the older adult participants. Such agitation or anxiety may be caused by a variety of factors including a change in routine or structure or confusion and forgetfulness. Anxiety is a common behavior of those with dementia and may be exhibited through such ways as constant repeated questions, getting in and out of a chair, or nervous behaviors (e.g., constantly wringing hands or touching face). Older adults and/or children may also choose not to participate in the activities - an individual may verbalize this choice through words or through behaviors. All staff and the Principal Investigator are familiar with words and behaviors that would suggest an unwillingness to participate. There is an extra staff person available at all times in the event that an older adult participant or a child chooses not to participate in the activity or displays behavior that is inappropriate during the activity (e.g., increased agitation or anxiety, aggression). That staff person would accompany the nonparticipatory individuals to an adjoining room during the intergenerational activity time. To date, there has not been one individual, older or younger, who has chosen not to participate or whose behavior was inappropriate during the activity.

BENEFITS

The risks to participants are minimal. Anticipated benefits include formal documentation of increased frequencies of positive behaviors (e.g., smiling, engagement in activity) displayed by older adults during activities with children present. The potential for increased frequencies and types of positive behavior would contribute to the gap in research focusing on the effectiveness and success of intergenerational programming that include those with dementia. Other researchers and practitioners in long-term care programs focusing on the Alzheimer's and dementia population may replicate or modify this study. In addition to the academic benefits of the proposed study, the Alzheimer's Day Treatment Center staff would know with greater certainty that the intergenerational activities are making a difference in the behavior of older adult participants. Therefore, a stronger rationale for continuing the intergenerational programs would exist.

CONFIDENTIALITY

The information in the study records will be kept confidential. Data will be stored securely in a locked file in the home of the principal investigator from May to August 1999 and stored and locked at the University of Tennessee, Knoxville after September 1, 1999. The video tapes will be made available only to persons conducting the study unless participants specifically give permission in writing to do otherwise. No reference will be made in oral or written reports which could link participants to the study.

EMERGENCY MEDICAL TREATMENT

The University of Tennessee does not "automatically" reimburse subjects for medical claims or other compensation. If physical injury is suffered in the course of research, or

for more information, please notify the investigator in charge, Kathleen O'Rourke, at 545-8153 (work).

CONTACT INFORMATION

If you have questions at any time about the study or the procedures, (or you experience adverse effects as a result of participating in this study,) you may contact the researcher, Kathleen O'Rourke, at The University of Tennessee, 1215 W. Cumberland Avenue, Jessie Harris Building 115, Knoxville, Tennessee 37996. If you have questions about your rights as a participant, contact the Compliance Section of the Office of Research at The University of Tennessee.

PARTICIPATION

Your/your family member's participation in this study is voluntary; you/your family member may decline to participate without penalty. If you/your family member decide(s) to participate, you/your family member may withdraw from the study at anytime without penalty and without loss of benefits to which you/your family member are otherwise entitled. If you/your family member withdraw(s) from the study before the data collection is completed your data will be returned to you or destroyed.

CONSENT

I have read the above information. I have received a copy of this form. I agree to/allow my family member to participate in this study.

Older Adult Caregiver _____ Date _____

Investigator's signature _____ Date _____

Appendix D

INFORMED CONSENT STATEMENT

Intergenerational Programming: Observed Behaviors of Older Adults with Dementia

INTRODUCTION

You/your family member are/is invited to participate in a research study. The purpose of the study is to observe behaviors exhibited by older adults during art activities with children present and with children absent. Older adults have participated in activities with young children at the Alzheimer's Day Treatment Center for the past 2 ½ years. An example of the types of art activities is as follows: "mosaic flowers" – older adults and children glue small pieces of colored construction paper on to pre-made flowers made from poster board. This research project will serve as a way to observe behavior in a more formal manner.

INFORMATION ABOUT PARTICIPANTS' INVOLVEMENT IN THE STUDY

To record types and frequencies of behaviors exhibited by older adults during art activities with children present and with children absent, participants will be videotaped during activities and observational recording sheets will be completed while viewing the videotaped data. Observable behaviors will include responding, helping, engagement in activity, eye contact, smiling, appropriate touch (e.g., hand holding, pat on the back), extending hands, withdrawal from activity, displaying anxiety, and displaying aggression or other inappropriate behavior (e.g., yelling, derogatory language, not sharing materials with children).

Behavior of older adults will be compared under two different conditions - activities with children present and with children absent. Five activities will be implemented with children present and five will be implemented with children absent. The following conditions will exist for each activity:

1. The children will be paired with the same older adult participants during each activity with children present.
2. The same older adult participants will be paired during each activity with children absent.
3. Activities will occur during the same time of day (10:15 a.m. - 11:00 a.m. and 1:15 - 2:00 p.m.)
4. Activities with the children absent always will follow activities with the children present.
5. Each older adult participant over the course of the ten sessions will be videotaped for 5-minute time periods.
6. The same staff member will be present at the same table during each activity.
7. The location (Alzheimer's Day Treatment Center) and environmental arrangement will be identical for each activity.

Two camera operators will videotape adult participants during the ten activities. The activity will be 45 minutes in length. Older adults will be seated at one of two round tables with one camera operator responsible for the three adults seated at each table. Depending on the presence or absence of the children, the camera will focus on the older adults while they interact with a child (children present) or a peer adult participant (children absent). During all activities one staff member of the Alzheimer's Day Treatment Center will remain near each table, intervening on an as-needed basis for safety and assistance purposes. Later in the day after activities with children present, a similar 45-minute art activity will be repeated with the same adult participants, at the same time, and with the same videotaping procedure. At the conclusion of the three-week data collection period, a total of 50 minutes of taped segments will be available for each older adult participant. Intergenerational activities have been videotaped by St. Mary's staff for program use since the onset of the activities in 1996 and the presence of video cameras have not hindered participation in or distraction from the activities.

The videotapes will be stored in the home of the Principal Investigator in a locked file cabinet from May to August 1999. No one will have access to the videotapes except the Principal Investigator. Beginning on September 1, 1999 video tapes and consent forms will be locked and stored in the Office of Research and Compliance (404 Andy Holt Tower) at the University of Tennessee, Knoxville. The videotapes may be used in the future to assist in the illustration of presenting the research data from the proposed study. By signing this consent form to participate in the study, I am also giving my permission for tapes to be used for research presentations. Consent of older adult's caregivers and parents will be gained through a signed consent form that explains the context, location and audience involved in the presentation. Written consent would also be gained from the Director of Senior Services and the Director of the Child Care Center at St. Mary's Health System. Conditions under which the tapes would be used include national, state, or local conferences or a St. Mary's in-house presentation. Video tapes in these conditions will be used for an indefinite length of time.

RISKS

These types of intergenerational art activities have been on-going each month for more than two years and, to date, a problem, neither large nor small, has occurred once. The staff of the Alzheimer's Day Treatment Center and the Principal Investigator are highly trained and experienced in their work with older adults with dementia. One staff person remains near each activity table during the entire time to ensure the safety of older adult participants and children. Before choosing the older adult participants for the proposed study, the staff and Principal Investigator will have reached an agreement that the behavior typically exhibited by the older adult is not frightening or endangering. This agreement is based on staff's daily interaction and observation of patients, review of patient charting notes, and on past successes (free of behavior problems) of these types of activities. The child care classroom teacher is also trained and experienced with dementia based on prior caregiving experience. The children who will participate in the art activities have been involved with the older adult participants for seven months. The children are familiar with the older adults, the routine, the setting, and the staff. Based on

these conditions, the nature and amount of potential risk, stress, and discomfort is minimal and highly unlikely.

Risk, stress, or discomfort factors would include heightened levels of agitation or anxiety on the part of the older adult participants. Such agitation or anxiety may be caused by a variety of factors including a change in routine or structure or confusion and forgetfulness. Anxiety is a common behavior of those with dementia and may be exhibited through such ways as constant repeated questions, getting in and out of a chair, or nervous behaviors (e.g., constantly wringing hands or touching face). Older adults and/or children may also choose not to participate in the activities - an individual may verbalize this choice through words or through behaviors. All staff and the Principal Investigator are familiar with words and behaviors that would suggest an unwillingness to participate. There is an extra staff person available at all times in the event that an older adult participant or a child chooses not to participate in the activity or displays behavior that is inappropriate during the activity (e.g., increased agitation or anxiety, aggression). That staff person would accompany the nonparticipatory individuals to an adjoining room during the intergenerational activity time. To date, there has not been one individual, older or younger, who has chosen not to participate or whose behavior was inappropriate during the activity.

BENEFITS

The risks to participants are minimal. Anticipated benefits include formal documentation of increased frequencies of positive behaviors (e.g., smiling, engagement in activity) displayed by older adults during activities with children present. The potential for increased frequencies and types of positive behavior would contribute to the gap in research focusing on the effectiveness and success of intergenerational programming that include those with dementia. Other researchers and practitioners in long-term care programs focusing on the Alzheimer's and dementia population may replicate or modify this study. In addition to the academic benefits of the proposed study, the Alzheimer's Day Treatment Center staff would know with greater certainty that the intergenerational activities are making a difference in the behavior of older adult participants. Therefore, a stronger rationale for continuing the intergenerational programs would exist.

CONFIDENTIALITY

The information in the study records will be kept confidential. Data will be stored securely in a locked file in the home of the principal investigator from May to August 1999 and stored and locked in the Office of Research and Compliance (404 Andy Holt Tower) at the University of Tennessee, Knoxville after September 1, 1999. The video tapes will be made available only to persons conducting the study unless participants specifically give permission in writing to do otherwise. No reference will be made in oral or written reports which could link participants to the study.

EMERGENCY MEDICAL TREATMENT

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CONTACT INFORMATION

If you have questions at any time about the study or the procedures, (or you experience adverse effects as a result of participating in this study,) you may contact the researcher, Kathleen O'Rourke, at The University of Tennessee, 1215 W. Cumberland Avenue, Jessie Harris Building 115, Knoxville, Tennessee 37996. If you have questions about your rights as a participant, contact the Compliance Section of the Office of Research at The University of Tennessee.

PARTICIPATION

Your/your family member's participation in this study is voluntary; you/your family member may decline to participate without penalty. If you/your family member decide(s) to participate, you/your family member may withdraw from the study at anytime without penalty and without loss of benefits to which you/your family member are otherwise entitled. If you/your family member withdraw(s) from the study before the data collection is completed your data will be returned to you or destroyed.

CONSENT

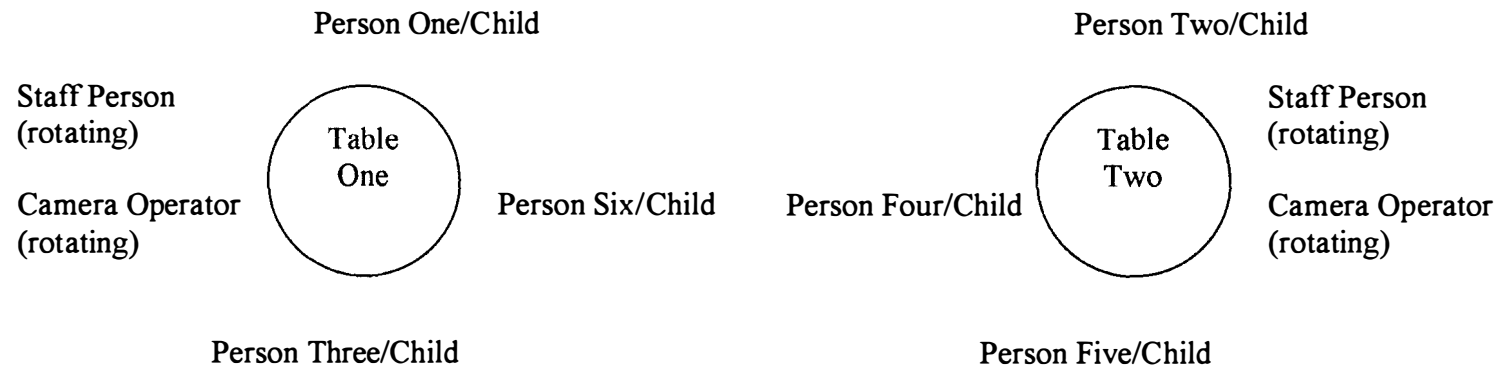
I have read the above information. I have received a copy of this form. I agree to/allow my family member to participate in this study.

Parent's signature_____ Date_____

Investigator's signature_____ Date_____

Appendix E

Environmental Arrangement with Children Present



Appendix F

Environmental Arrangement with Peer Older Adults (Children Absent)



Appendix G

OBSERVER RECORDING SHEET - CHILDREN PRESENT

DATE: _____
TIME START: _____

PARTICIPANT INITIALS: _____
TIME STOP: _____

<u>BEHAVIOR</u>																	<u>TOTAL</u>
1	Responds to child																
2	Talks spontaneously to child																
3	Offers help to child																
4	Participates in activity																
5	Looks at child																
6	Smiles																
7	Appropriately touches child																
8	Laughs																
9	Withdraws from activity																
10	Displays agitation																
11	Displays Anxiety																
12	Displays aggression/ other inappropriate behavior*																

*Examples of inappropriate behaviors might be pushing, pulling, hitting with an open hand or closed fist, kicking, biting, pinching, or loud verbal outburst.

Appendix H

OBSERVER RECORDING SHEET - CHILDREN ABSENT

DATE: _____
TIME START: _____

PARTICIPANT INITIALS: _____
TIME STOP: _____

BEHAVIOR

TOTAL

1	Responds to peer																	
2	Talks spontaneously to peer																	
3	Offers help to peer																	
4	Participates in activity																	
5	Looks at peer																	
6	Smiles																	
7	Appropriately touches peer																	
8	Laughs																	
9	Withdraws from activity																	
10	Displays agitation																	
11	Displays anxiety																	
12	Displays aggression/other inappropriate behavior*																	

*Examples of inappropriate behaviors might be pushing, pulling, hitting with an open hand or closed fist, kicking, biting, pinching, or loud verbal outburst.

Appendix I

April 12, 1999

Dear Sister Elizabeth,

The intent of this letter is to inform you of a proposed research project in the Alzheimer's Day Treatment Center. I have been affiliated with St. Mary's Senior Services since May 1996 as a University of Tennessee graduate intern and currently as a contract employee. I am pursuing my Ph.D. at the university in Child and Family Studies and my dissertation research involves intergenerational art activities with participants in the Alzheimer's Day Treatment Center and a four- and five-year-old classroom from St. Mary's Day Care. I have worked with the ADTC and Day Care staff since October 1996 on planning and implementing activities between the two age groups and we have had many positive reactions from participants and staff.

To date, all observations have been on an informal basis. Staff members have observed a variety of positive behaviors exhibited by older adult while in the presence of children – behaviors that otherwise do not appear to occur as frequently (e.g., smiling, eye contact, offering assistance with an activity). Data will be collected via videotaping and stored in a locked file in my home. I have discussed my plans with Becky Dodson and Janice Wilson who are supportive of the research project. The activities will follow the same format as the past 2 ½ years and the only difference is formal observation of older adult behaviors. The older adults, children, and staff are familiar and at ease with the activity structure and I do not foresee any risk or undue stress to participants.

We are looking forward to learning the results of the research project in Senior Services and at the conclusion of the project I would be happy to share the results with you and others who may be interested. If you have any questions, please contact me.

Sincerely,

Kathleen O'Rourke

Appendix J

April 12, 1999

To Whom It May Concern:

Kathleen O'Rourke has discussed with me the proposed dissertation research project entitled "Intergenerational Programming: Observed Behaviors of Older Adults with Dementia." The intergenerational activities have been a success since October 1996 when Ms. O'Rourke first initiated such interactions and I look forward to learning of the results of the study. Formal observation of older adult behaviors will provide more credibility to such activities and I believe both the participants and the staff will benefit from this research experience.

I have no reservations about Ms. O'Rourke's research project and she has my full cooperation in working with participants and staff in the Alzheimer's Day Treatment Center at St. Mary's Senior Services. If you have any questions or I may be of further assistance, please contact me.

Sincerely,

Becky Dodson, MSSW, LCSW
Director, Senior Services

Appendix K

April 12, 1999

To Whom It May Concern:

Kathleen O'Rourke has discussed with me the proposed dissertation research project entitled "Intergenerational Programming: Observed Behaviors of Older Adults with Dementia." The intergenerational activities have been on-going since October 1996 when Ms. O'Rourke first initiated such interactions and I look forward to learning of the results of the study. I believe the participants and the staff will benefit from this research experience.

I have no reservations about Ms. O'Rourke's research project and she has my full cooperation in her work involving St. Mary's Day Care participants and staff. If you have any questions or I may be of further assistance, please contact me.

Sincerely,

Janice Wilson, Director
St. Mary's Day Care

Vita

Kathleen O'Rourke was born in Chicago, Illinois, on August 1, 1972. She graduated from Eastern Illinois University in Charleston with a Bachelor of Science in Home Economics-Family Services in May of 1994 and a Master of Science in Home Economics-Human Development and Family Life in August of 1995. While a student at Eastern Illinois University, she worked as a graduate assistant in the Child Development Laboratory and was on staff at the University's Child Care Resource and Referral. For a 2-year period Kathleen worked as an intern for the Illinois Department of Children and Family Services. Kathleen entered the Ph.D. program in Child and Family Studies in the College of Human Ecology at The University of Tennessee, Knoxville, in August of 1995. During her program she worked as a graduate assistant for the Early Childhood Teacher Licensure Program in the Department of Child and Family Studies. In addition, she taught the Introduction to Early Childhood Education course as a graduate teaching assistant and the Development in Infancy and Early Childhood course as an adjunct instructor. At Carson-Newman College in Jefferson City, Tennessee, Kathleen taught the courses of Human Development through the Lifespan and Family Science Theories as an adjunct instructor in the Division of Family and Consumer Sciences. She is presently employed at St. Mary's Medical Center in Knoxville, Tennessee, as a Geriatric Consultant in Senior Services and as a Geriatric Case Manager in Behavioral Health Services.