

6-2011

# Importance of a Dance Program for Long-Term Care Residents

Siri Rydholm  
*St. Catherine University*

Follow this and additional works at: [https://sophia.stkate.edu/ma\\_osot](https://sophia.stkate.edu/ma_osot)

---

## Recommended Citation

Rydholm, Siri. (2011). Importance of a Dance Program for Long-Term Care Residents. Retrieved from Sophia, the St. Catherine University repository website: [https://sophia.stkate.edu/ma\\_osot/3](https://sophia.stkate.edu/ma_osot/3)

This Thesis is brought to you for free and open access by the Occupational Therapy at SOPHIA. It has been accepted for inclusion in Master of Arts in Occupational Therapy Theses and Projects by an authorized administrator of SOPHIA. For more information, please contact [amshaw@stkate.edu](mailto:amshaw@stkate.edu).

# **Importance of a Dance Program for Long-Term Care Residents**

Siri Rydholm

A thesis submitted in partial fulfillment of the requirements for the degree of Master of Arts in  
Occupational Therapy.  
Saint Catherine University, St. Paul, Minnesota

June, 2011

Thesis Advisor: Kristi Haertl, Ph.D., OTR/L  
Thesis Readers: Catherine Sullivan, Ph.D., OTR/L and Maria Genné, MEd

**St. Catherine University**  
**Master of Arts in Occupational Therapy**  
**Certification of Successful Thesis Defense**

We, the undersigned, certify that

\_\_\_\_\_  
Student Name

has successfully defended the thesis titled

The Importance of a Dance Program for Long-Term Care Residents

\_\_\_\_\_  
Thesis Advisor and Chair of Thesis Committee

\_\_\_\_\_  
Date

\_\_\_\_\_  
Thesis Reader and Member of Thesis Committee

\_\_\_\_\_  
Date

\_\_\_\_\_  
Thesis Reader and Member of Thesis Committee

\_\_\_\_\_  
Date

---

**Certification of Approval for Final Copy of Thesis**

I, the undersigned, approve the final copy of the thesis by

\_\_\_\_\_  
Student Name

\_\_\_\_\_  
Thesis Advisor and Chair of Thesis Committee

\_\_\_\_\_  
Date

### Acknowledgements

The author would like to acknowledge the Kairos Dance Theater and its facilitators for lending their *Dancing Heart*<sup>TM</sup> program for a study on the effect of arts-based programming on older adults. I would also like to acknowledge the participants who volunteered their time to be interviewed for this study. This project could not have been completed without them. I would also like to thank my faculty advisor, Kristi Haertl, and thesis readers, Catherine Sullivan and Maria Genné, for their guidance, support and direction during the completion of this project. Finally, I would like to acknowledge my family for their loving and unconditional support in seeing this project through to completion.

## Dedication

This thesis is dedicated to dementia nurse, published researcher, and my devoted mother: Laura Rydholm, MS, RN. Thank you for being the first person to introduce me to the healing power of the creative arts, and for inspiring me to continue research in this field. You have provided continual support and encouragement throughout the entirety of this project, and have offered many helpful insights from the perspectives of an outside reader, health-care professor, and published author. If ever I began to feel the stresses of the research process, you helped me to remember the fun and excitement involved in this type exploration. For that, I express my sincere gratitude. Thank you, thank you, thank you, thank you!

## Table of Contents

Section	Pages
Introduction.....	1-3
Literature Review.....	4-20
Productive Aging.....	4-6
Exercise Benefits for the Elderly.....	6-8
Linking Physical and Cognitive Exercise.....	9-12
Impact of Dance on Quality of Life.....	12-16
Connection between Dance and Occupational Science/Occupational Therapy.....	16-20
Conclusion.....	20
Methods.....	21-29
Research Design and Questions.....	21-22
Program Setting and Population.....	23-25
Participants and Interviewees.....	25-27
<i>Table 1: Participant Demographics</i>	
Procedure.....	27
Tools.....	28
Data Analysis.....	29
Results.....	30-51
Direct Experience of Nursing Home Residents.....	31-40
<i>Increased Physicality</i>	
<i>Flow</i>	
<i>Arts-Based Programming Effects on Cognition</i>	

Impact of Dance on Quality of Life.....	40-46
<i>Fun and Excitement</i>	
<i>Bonding</i>	
<i>Participant-Centeredness</i>	
<i>Sacredness and Healing</i>	
Impact of Dance on the Culture of the Community.....	47-50
<i>Connection</i>	
<i>Inquisitiveness and Curiosity</i>	
Program Evaluation.....	50-51
Discussion.....	52-68
Direct Experience of the Program for Participants.....	52-56
Linking Dance Programs to Quality of Life.....	56-61
Impact of the Dance Program on the Culture of the Facility.....	61-63
Implications for Occupational Therapy.....	64-66
Study Limitations.....	66-67
Implications for Further Research.....	68
Conclusions.....	69-71
References.....	72-76
Appendix A.....	77-78
Appendix B.....	79-80
Appendix C.....	81-85
Appendix D.....	86-87
Appendix E.....	88-92

## Abstract

The purpose of this study was to explore the impact of a dance program on long-term care residents. The study was part of a larger, mixed-design study, conducted in collaboration with *Kairos Dance Theater*. The sub-questions of this study concerned: (a) the direct experience of the dance program's participants, (b) the perceived impact of the dance program on quality of life, and (c) the perceived impact of the dance program on the culture of the long-term care facility. Semi-structured interviews were performed with 14 staff members, volunteers, or family members of residents from two long-term care facilities. In relation to the direct experience of the dance program's participants, results showed that residents experienced: (a) increased physicality, (b) participant-centeredness, (c) a sense of "flow" during the program, and (d) improvements in memory/cognition. With regard to quality of life, results showed that the program promoted quality of life in the following areas: (a) fun and excitement, (b) social bonding, and (c) sacredness or emotional healing. Finally, results concerning the overall impact of the program on the nursing home showed that the program increased a sense of community among residents and promoted increased curiosity about other forms of arts-based programming. It is hoped that these results will help provide occupational therapists with a greater understanding of the potential benefits of arts-based programming.



## Introduction

It is a widely publicized fact that the number and proportion of elderly people in the United States is rapidly increasing. This is due to a combination of factors, including recent medical advances and the fact that the baby-boomer generation is getting older (Eyigor, Karapolat, Durmaz, Ibisoglu & Cakir, 2007; Hunter & Gillen, 2009). Similar trends are occurring around the world in countries such as South Korea (Song, June, Kim & Jeon, 2004) and Japan (Statistics Bureau of Japan, 2010). Furthermore, public attitudes towards aging and the aging process have undergone significant change. In recent years, people have begun to dispute the idea that physical and intellectual decline are inevitable challenges of aging (Cohen, 2006). Age-related disorders such as arthritis and dementia, which were once considered unavoidable, are now being referred to as “age-associated... modifiable disorders” (Cohen, 2006, p.7). Many elderly Americans are also beginning to place a higher value on “successful aging,” which they define as the ability to maintain functional independence and quality of life through the avoidance of “usual aging” problems (Cohen, 2006; Larson, Wang, Bowen, McCormick, Teri & Crane, 2006; Song et al., 2004). By this definition, “successful aging” is closely tied to maintaining a high quality of life throughout the entirety of one’s lifespan.

There is a strong relationship between chronic, age-related conditions and decreased quality of life among the elderly. While chronic conditions have been found to be the primary obstacle interfering with quality of life in elderly individuals (Orfila, Ferrer, Lamarca, Tebe & Domingo-Salvany et al., 2006), studies have also shown that stress and decreased quality of life can often lead to an increase in these chronic conditions, particularly arthritis (West, Otte, Geher, Johnson & Mohr, 2004). It has also been found that the chronic conditions which are aggravated by stress are often difficult to treat using traditional medical approaches (West et al, 2004). With

this in mind, it is important to consider additional intervention techniques for stress-aggravated conditions, such as the use of creative or arts-based therapies. One such therapy, and the focus of this study, is the use of dance and movement. It has been hypothesized that dance and movement may decrease stress, increase quality of life, and thus reduce symptoms of stress-aggravated conditions. The purpose of this study is to examine the importance of a dance program for long-term care residents. In gathering literature to provide sufficient background information for the study, the research team and I examined the relationship between stress-related quality of life, stress-aggravated chronic health conditions, and creative methods of improving quality of life. We also looked at the literature to investigate how these relationships could be used to improve overall health status while simultaneously decreasing stress. Specifically, in preparation for the following study, this literature review will examine how a person's mood, level of arousal, physical status and/or level of social interaction can be influenced by arts-based therapies such as dance and movement, and how a person's overall quality of life can then be affected by these programs.

The present literature review explored the effects of dance on four aspects of productive aging. These aspects included: dance as exercise for the elderly, the impact of dance on cognition, the impact of dance on quality of life, and the connection between dance and occupational science/therapy. The following research study focused on one particular dance and movement group, *Kairos Dance Theatre* and the *Dancing Heart*<sup>TM</sup> program, and its effect on elderly individuals living in long-term care facilities. On their website, Kairos Dance describes their unique *Dancing Heart*<sup>TM</sup> program in the following way:

*The Dancing Heart* is an award winning, evidence-based arts program and a best practice model for working with frail elders. We invite older adults and their family members and caregivers to help co-create a new vision of dance--one that

is inclusive of all ages, all bodies, and many different ways of moving, exploring the "language of dance" through movement improvisation, the interweaving of dance and story, and the collaborative development of choreography that draws on their memories and life experiences. It is designed to create a sense of community and well-being in participants of all ages, and from all walks of life. (Kairos Dance, 2010).

In the present study, 14 health care providers and family members were interviewed from two of the skilled nursing facilities utilizing the *Dancing Heart*<sup>TM</sup> program at the time of the study. These interviews addressed objective observations and subjective opinions regarding four areas of research interest for the present study. These areas included the impact of the program on resident mood, arousal, social interaction, and overall physical status. In preparation for these interviews, a review of the literature on aging, dance, movement therapy, and quality of life in the elderly was conducted. Literature regarding creative preventative methods and treatment methods for dementia was also reviewed. The results of this literature review are summarized in the following pages.

## Literature Review

This research project set out to evaluate the personal effects of a dance and reminiscence program on the elderly individuals who participated in that program. This literature review will cover: productive aging, exercise for the elderly, the impact of dance on cognition, the impact of dance on quality of life, and the connection between dance and occupational science/occupational therapy.

### *Productive Aging*

Aging “productively” has become an emergent value among many older populations (Cohen, 2006). As the “baby-boomer” generation grows older, they are beginning to place a strong emphasis on maintaining independence, high quality of life, and productivity throughout the duration of the life span (Cohen, 2006). This innovative view of aging has prompted researchers in all realms of the medical field to investigate methods of assisting elders in maintaining high productivity, independence, and quality of life throughout the lifespan (Larson et al., 2006). Some of the personal benefits that elders hope to gain through productive aging include improved physical health, maintenance of high cognitive capabilities, and the maintenance of high overall quality of life (Cohen, 2006; Larson et al., 2006). The question of interest to the present study then becomes: How can health professionals help elders to achieve these productive aging goals?

Gene D. Cohen, director of the Center on Aging, Health and Humanities at George Washington University, stated that his latest research studies have suggested older adults may be in a prime developmental stage for creative expression and the acquisition of new skills (Cohen, 2006). In a recent summary of his research, Cohen claimed that many older adults seem to enter a “liberation” phase of development after they reach retirement age. In this stage, he claimed that

older individuals experience a sense of freedom to express themselves and experiment with new activities. Since these individuals are nearing the end of life, and a majority of their life's work has already been accomplished, Cohen stated that many people over age 70 will adopt a "What have I got to lose?" attitude. They may also begin trying new activities, while thinking "If not now, when?" (Cohen, 2006, p.8). This "liberation" phase of development may thus be an optimal time for experimenting with creative alternative therapies and arts-based programs such as dance. It may also be an optimal time to seek new methods for achieving the physical and cognitive benefits that accompany productive aging. These benefits will be discussed in detail later in this literature review.

In addition to the personal benefits productive aging offers, it is also important to consider the economic implications of productive aging (Larson et al., 2006). Any activity that promotes wellness and productivity among elderly persons also has the potential to decrease risk factors for disease (Song et al., 2004). Thus, activities which promote wellness and productivity may have the potential to significantly reduce the need for expensive medical treatment and long-term care for the elderly. With a rapidly increasing geriatric population, activities that can lower the need for expensive medical care will be an important method of easing the economic impact of this generation as they move past retirement (Cohen, 2006; Larson et al., 2006; Song et al., 2004).

With regard to the physical benefits productive aging has to offer, it has long been accepted that physical exercise promotes strength and endurance, and can contribute to one's overall health. It is often assumed however, that exercise is primarily beneficial for children and young or middle-aged adults. Some may assume that exercise is too strenuous for people in their elderly years. On the contrary, research has shown that exercise can actually have many positive

health benefits for geriatric individuals (Alpert, Miller, Wallmann, Havey & Cross et al., 2009). One might even argue that this population is most in need of the health benefits exercise has to offer. In the following section, the specific benefits of exercise and dance for geriatric populations will be discussed.

### *Exercise Benefits for the Elderly*

Some may believe that physical decline is a normal consequence of the aging process, and that exercise is simply too strenuous for elderly populations. Recent research has demonstrated however, that exercise offers strong benefits for older adults. It appears there is a link between exercise or physical activity and a reduced risk for dementia among aging individuals (Larson et al., 2006). Specifically, one study demonstrated that elderly persons who exercise more than three times per week are diagnosed with dementia significantly less often than those who exercise less than three times per week (Larson et al., 2006). In addition, studies have shown that exercise can have a positive influence on the health and cognitive functioning of older adults who have already been diagnosed with, or are currently experiencing, symptoms of dementia (Alpert et al. 2009). Furthermore, the Alzheimer's Research and Prevention Foundation has cited exercise as one of four main pillars of Alzheimer's prevention (ARPF, 2010).

With relation to physical health and physiological functions, exercise has been shown to lead to improved cardiopulmonary function, lowered blood pressure, increased bone mineral content, increased muscle strength and joint flexibility, enhanced motivation, increased confidence in the ability to perform daily tasks, and a heightened level of energy in older adults (Song et al., 2004). Some researchers have also described a physiological explanation for the

link between participation in exercise and increased cognitive functioning (Larson et al., 2006). These researchers suggested that exercise improves cerebral blood flow and oxygen delivery, and promotes the growth of fibroblasts in the hippocampus. Since previous research has demonstrated that decreased cognitive functioning is strongly related to the loss of hippocampal brain tissue during aging (Comeau, 2002), it seems plausible to suggest that promoting hippocampal growth through exercise would effectively reduce cognitive decline (Larson et al., 2006). Research has also indicated that the atrophy of hippocampal tissue, often responsible for memory loss, is the result of long-term overexposure to the stress-hormone cortisol (Comeau, 2002). It would also seem plausible then, to suggest that any activity which reduces the level of stress in a person's life would also decrease the amount of cortisol in his/her system, and thus decrease his/her risk for memory loss.

In addition, the sense of control that many people experience during engagement in artistic or physical activities, such as dance, has been shown to boost the level of T cells and NK cells in the immune system, leading to improvements in general health for all participants, including those in the later stages of life (Cohen, 2006). This link between exercise and health cannot be understated, since senior citizens have reported medical conditions and related stressors as their most common source of stress (Hunter & Gillen, 2009). Presumably due to the physiological effects listed above, the combination of exercise and recreation components in activities such as dance appear to be an effective method for coping with medical stressors (Hunter & Gillen, 2009).

Thus, extensive research has demonstrated the positive health benefits of exercise. Recently, this research has been broadened to specifically study the effects of exercise on geriatric individuals. In addition, with regard to functional independence, one study has indicated

that moderate exercise programs (which may or may not include dance) for geriatric clients with Alzheimer's can help slow the rate of performance decline in activities of daily living (ADLs) (Rolland, Pillard, Klapouszczak, Reynish, Thomas, et al., 2007). Alzheimer's patients who did not regularly participate in a moderate exercise program lost the ability to perform ADLs independently 33% faster than those who did participate in regular, moderate exercise (Rolland et al., 2007).

Even more than physical exercise however, participating in mentally-stimulating leisure activities (such as reading, playing board games, playing with musical instruments or dancing) has been associated with a reduced risk of dementia. Verghese, Lipton, Katz, Hall & Derby and colleagues conducted a study in 2003 to investigate the relationship between leisure activities and the risk of dementia in the elderly. These researchers examined the frequency of participation in leisure activities among 469 subjects, age 75 or older. Each leisure activity was given a rating on physical-activity and cognitive-activity scales. The results of this study showed that many of the cognitive leisure activities had a clear association with dementia-risk reduction. In contrast, dance was the only physical leisure activity to show the same clear association with reduced dementia-risk. This study suggested that dance is one example of a leisure activity that is both physically and cognitively stimulating, and is highly likely to have an impact on delaying the onset of Alzheimer's disease for high-risk populations. Dance was also shown to be the most preferred activity among elders who were surveyed regarding leisure and physical activities (Song et al., 2004). Although the link between physical exercise and improved cognition is well supported by research, the direct effect of dance on cognition is still under some debate among researchers. This debate will be addressed next.



*Linking Physical and Cognitive Exercise*

While it has been suggested that dance may not improve cognitive functioning in community dwelling, elderly participants without symptoms of dementia (Alpert et al., 2009), dance has been shown to produce improved mental status and behavior in patients diagnosed with moderate or severe dementia (Hokkanen, Rantala, Remes, Härkönen & Viramo et al., 2008). Specifically, participation in dance activities appears to have a positive effect on tasks of visuo-spatial ability and planning for elderly individuals with dementia (Hokkanen et al., 2008). In addition, elderly participants with dementia who consistently attended a Korean dance program reported making fewer mistakes, being less forgetful, and having improved concentration capabilities over time when compared to participants who had dropped out of the same program (Song et al., 2004).

There is also some evidence to suggest that the physical exercise associated with dance may help improve cognitive functioning in older adults, though not all studies on the topic have observed these same findings (Larson et al., 2006). A study by Larson et al. (2006) found that elderly persons with higher physical performance capabilities were more likely to see a reduction in the risk for dementia as a result of physical exercise. Exercise programs such as Tai Chi, which incorporated a meditative cognitive component, were also shown to bring distinctive psychological benefits to practitioners (Lee, Lee, & Woo, 2009). The program currently under study, the Kairos Dance Theatre's *Dancing Heart*<sup>TM</sup> Program, uses a focus on deep breathing and reminiscence opportunities, as well as visualization-based choreography. This physical and cognitive interaction will be of particular interest in the present research study. It may also be possible that physical activities which incorporate a meditative or deep-breathing component, such as Tai Chi and the Kairos Dance program, are effective in decreasing excess levels of

stress-related cortisol in the brain. Excess cortisol has been described above as being a primary contributor to the atrophy of hippocampal tissue in the brain, which then induces memory loss (Comeau, 2002).

Interestingly, the study by Verghese et al., (2003) discussed above suggested that dance is one activity that can lower an elderly person's risk for dementia, not because of the physical exercise required to participate, but rather because of the cognitive reserve required for this particular leisure activity. Cognitive reserve, in this case, refers to the resilience of one's brain when fighting disease or neuropathological damage (Stern, 2002). When examining a long list of both physical and cognitive leisure activities, researchers found that many of the cognitive activities on the list showed a clear association with dementia-risk reduction. On the other hand, dance was the only physical activity on the list that was found to have the same clear association with dementia risk-reduction. Thus, it was suggested that dance may produce mental health benefits as a result of the cognitive stimulation required to participate, as well as the physical exercise involved. It should be noted, however, that increased age and lower levels of education appeared to lessen the effects that dance and other leisure activities had on a person's risk for developing dementia. Alternately, increased frequency of participation in dance or other cognitive leisure activities was proportional to increased mental health and a decreased risk for dementia (Verghese et al., 2003).

The social interaction aspect of dancing may have a significant impact on cognition as well. Earlier research has demonstrated that an increased number of social ties can significantly reduce the rate of cognitive decline in community-dwelling elderly residents (Bassuk, Glass, & Berkman, 1999). A dance and exercise group that offers the potential to increase the number of social ties among elderly individuals may thus have a beneficial impact on their cognition as

well. Social dance also seems to promote memory retrieval in persons with dementia (Ravelin et al., 2006). Ravelin and colleagues (2006) conducted a focus group with mental health nurses who had participated in a weekly dance therapy program with their clients. These mental health nurses cited the “development of cognitive skills” as a perceived consequence of participation in dance activities. Similarly, Palo-Bengtsson, Winblad & Ekman (1998) stated that participation in social dance programs gave long-term care residents with dementia an opportunity to display increased intellectual functioning in the areas of: orientation in space, timing, recent memory, distant memory, wakefulness, and concentration. Researchers hypothesized that the familiar social norms represented in the task of social dancing may have elicited the observable improvements in intellectual functioning.

The artistic aspect of dance may also have a positive impact on the cognition of older adults. Some researchers have found that artistic endeavors such as theater training or art therapy can produce increases in attention span, interest, pleasure, and self-esteem among elderly persons with dementia (Kinney & Rentz, 2005). It is possible that the creative choreographic aspect of dance may also fall under the category of “artistic endeavors” that produce these positive effects. Dance has also been linked to positive psychological outcomes in psychiatric care settings (not just with clients who have dementia). It has been suggested that dance gives psychiatric clients an alternative way to communicate and express themselves (Ravelin, Kylmä, Korhonen, 2006). A review of literature regarding the impact of arts-based programming on the health and well-being of older adults found that participation in creative programming had a positive impact on age-related cognitive functioning, decreased anxiety and hostility, decreased depression, increased feelings of mastery, and increased sense of well-being (Castora-Binkley, Noelker, Prohaska, & Satariano, 2010). These findings illustrate a close tie between improved cognitive

ability and improved mental health, sense of well-being and quality of life. The impact of dance on quality of life has also been studied, and will be discussed further in the next section.

### *Impact of Dance on Quality of Life*

In addition to the physical and cognitive effects dance and exercise can offer elderly participants, it is also important to consider the effect that dancing can have on an individual's overall quality of life. Quality of life is a term used in health care professions, and is defined as "the sum of cognitive and emotional reactions that an individual experiences associated with his/her achievements in the context of his/her culture and values, taking into account his/her goals, expectations, standards and concerns." (Levasseur, Desrosiers & Tribble, 2008, p.31). In relation to the geriatric population, it is also important to consider a more specialized term: health-related quality of life. Health-related quality of life is specifically linked to health status, and can be defined as "optimum levels of mental, physical, role, and social functioning; including relationships and perceptions of health, fitness, life satisfaction, and well-being" (Bowling, 2001, p. 6 as cited in Lee et al., 2009). Some of the domains contributing to quality of life include autonomy, individuality, dignity, privacy, enjoyment, relationships, meaningful activity, comfort, security, functional competence, and spiritual well-being (Kane, 2001). The domains of meaningful activity, enjoyment, individuality, and relationships are of particular interest to the current study.

Quality of life may be a difficult phenomenon to measure correctly and objectively (Gerritsen, Steverink, Ooms, de Vet & Ribbe, 2007; Levasseur et al., 2008), regardless of a person's physical, mental, or emotional condition. When considering the geriatric population, and those experiencing symptoms of dementia, one may wonder if it is even possible to

accurately measure quality of life. However, research on quality of life has suggested that patients experiencing moderate dementia, and lacking insight into their symptoms, may still be able to adequately report on their quality of life (Gerritsen et al., 2007; Kane, 2001), but this finding was inconclusive. Researchers noted that there was reasonable evidence to suggest these individuals can still accurately report their quality of life, but it was stated that more research is necessary to confirm that finding.

It seems intuitive that some of the common stressors with potential to negatively impact quality of life may include grief or loss, financial strain, traumatic events, or a chronic medical condition. All of these stressors have the potential to become more frequent as a person ages. As an individual gets older, he/she potentially faces the loss of loved ones, difficulty paying mounting medical bills, and/or more frequent health problems and emergencies. According to Hunter and Gillen (2009), elderly adults tend to perceive higher levels of stress than the general population due to many of the factors mentioned above. Interestingly, one study suggested that women may be particularly susceptible to decreased quality of life associated with aging (Orfila et al., 2006). Many older adults however, both men and women alike, list medical problems as their number one, most common stressor (Hunter & Gillen, 2009). Thus, increasing quality of life becomes a particularly important healthcare goal, and is actually noted by researchers as the primary healthcare objective for elderly patients (Eyigor et al., 2007; Lee et al., 2009; Levasseur et al., 2008).

In response to these stressors, elderly individuals have also stated that listening to music and talking to friends can be effective coping mechanisms (Hunter & Gillen, 2009). It has been suggested then, that exercise programs which strive to promote friendships and reduce loneliness may be particularly effective in increasing the quality of life among residents of long-term care

facilities (especially if accompanied by music) (Hunter & Gillen, 2009). In addition, dance appears to lead to positive changes in client's attitudes towards themselves, as well as enabling them to release tension and uneasiness (Ravelin et al., 2006). African Dance and Hatha Yoga are other methods of creative, arts-based programming that have been shown to increase positive affect and coping skills in some patients, and have decreased perceived levels of stress (all of which relate to a person's overall quality of life) (West et al., 2004). Admittedly, these results came from a study that followed a healthy group of college students, and it may not be appropriate to generalize these results to the elderly subjects of the current study.

It has been suggested that the loss of ADL (activities of daily living) capability has a substantial impact on a person's quality of life, particularly those with Alzheimer's disease (Rolland et al., 2007). Dance may be one way to improve an older person's ability to cooperate with others in ADLs (Ravelin et al., 2006). Dance may also reduce symptoms of depression and disturbed behavior in persons with Alzheimer's disease (Rolland et al., 2007). Increased cooperation, in combination with reduced symptoms of depression and disturbed behavior could contribute to an increase in independence and performance of ADL tasks, and thus lead to an improvement in overall quality of life.

Interestingly, it appears that the subjective view of one's health has a greater impact on health related quality of life than a person's actual medical status. Programs that encourage elderly persons to focus on their remaining capabilities rather than their deficits are particularly useful in improving psychological well-being of the participants (Lee et al., 2009). Likewise, a person's adaptive capability appears to have a greater impact on quality of life than his/her actual level of physical disability. It is therefore important for any activity program to encourage and reinforce older adults' competence, and their ability to compensate and adapt to changing life

circumstances (Levasseur et al., 2008). It is also important to note here that just as physical status does not seem to directly predict quality of life, neither does a person's level of cognitive functioning (Kane, 2001).

Research regarding the effect of dance on mood in older adults has yielded differing results. While some studies offer evidence to suggest that activities such as jazz dance have no impact on the mood of community-dwelling elderly women, other studies suggest that dance may be particularly effective in improving mood because it decreases social isolation, and is also an enjoyable physical activity (Alpert et al., 2009). Some caregivers have noted that dance has had an obvious impact on the emotional well-being of older participants, and has increased joy and happiness in their lives, consequently improving their overall physical and emotional well-being (Palo-Bengtsson & Ekman, 2000). With regards to decreasing social isolation and depression, participants in one jazz dance program stated that the program simultaneously served as a network of support for processing difficult personal situations faced by the participants during the 16 week program (Alpert et al., 2009). Over the years, it has been well documented that physical activity increases endorphins, lifts mood, and improves overall quality of life (Larson et al., 2006; Levasseur et al., 2008). The importance of exercise for persons of all ages is hard to deny, yet exercise is not always viewed as an enjoyable task. Alpert and colleagues (2009) asserted that participants are more likely to adhere to an exercise program which they enjoy. Dance appears to be a physical activity that has the potential to increase adherence to a regular exercise program, due to the enjoyable nature of the activity.

Tai Chi is another physical activity that has been shown to have positive benefits on the psychological well-being and health-related quality of life of nursing home residents, supposedly due to the combination of physical activity and a cognitive meditation component (Lee et al.,

2009). Other activities that have been shown to improve quality of life include: music therapies which can help calm persons with dementia (Kumar, Tims, Cruess, Mintzer, et al., 1999), and reminiscence therapies which help alleviate depression in people with dementia (Ashida, 2000). The program currently under study incorporates several of these components, and may impact quality of life in a multitude of ways. Kairos Dance strives to use a form of music therapy (by choosing music that is relevant and familiar to the given population), promote artistic expression through movement, and encourage participants to reminisce and share memories that come up during this process.

#### *Connection between Dance and Occupational Science/Occupational Therapy*

Next, we can examine the relevance of dance in relation to occupational science and occupational therapy. Occupational Science is defined as the study of humans as occupational beings. In other words, humans are beings that occupy our times with activity (Clark, Parham, Carlson, Frank & Jackson et al., 1991). Occupational Science is the underlying foundational science that guides occupational therapy practice. It is a basic tenet of occupational science and occupational therapy that humans are most honoring their humanity when engaged in occupation or meaningful activity (Clark et al., 1991). As one might assume, activities that occupy one's time ("occupations") may be as simple as buttoning a sweater, or as complicated as writing and directing a film. Both occupational science and occupational therapy are concerned with what makes a particular occupation meaningful or fulfilling to the individual performing it. One of occupational therapy's founders, William Rush Dunton, emphasized the healing power and necessity of occupation in occupational therapy's first credo. He stated:

That occupation is as necessary to life as food and drink. That every human being should have both physical and mental occupation. That all should have



occupations which they enjoy, or hobbies. These are the more necessary when the vocation is dull or distasteful. Every individual should have at least two hobbies, one outdoor and one indoor. A greater number will create wider interests, a broader intelligence. That sick minds, bodies, and souls may be healed through occupation. (Dunton, 1919, p.10).

These ideals continue to inspire the profession of occupational therapy today. Most occupational therapists believe that meaningful occupation is imperative for maintaining mental, physical, and emotional health.

Although the practice and profession of occupational therapy has existed since the early 1900s, occupational science wasn't formally developed until more recently. Occupational science was named by Elizabeth Yerxa in 1989, and was developed as a way to investigate the adaptive processes humans use to adjust to changes in physical status or environmental surroundings. As a basic discipline, occupational science is free to explore the entire breadth and depth of occupational performance questions without the constraints of having to apply this information directly to occupational therapy practice (Yerxa, 1993). The research developed under occupational science has assisted occupational therapy in becoming a more scientifically grounded and well-informed profession.

Using the literature from occupational science, we can now investigate why dance may be a particularly meaningful occupation for its participants. The American Occupational Therapy Association (AOTA) includes "meeting role expectations" as part of the definition of occupational therapy (AOTA, 2008). This portion of the definition describes the occupational therapist as using therapeutic activities "for the purpose of participation in roles and situations in home, school, workplace, community, and other settings" (AOTA, 2008, p.354). Recent literature has shown that dance is one such occupation that appears to have a significant amount of meaning for many individuals, and also has a positive impact on role expectations (Ravelin et

al., 2007). In addition to the many benefits of dance listed above, dance has also been shown to positively impact psychiatric patient's abilities to meet role expectations within family and community (Ravelin et al., 2007). Therefore, occupational therapists may wish to consider dance as a meaningful occupation that can be used in OT practice. Using the literature gathered above regarding the physical, cognitive, and emotional benefits of dance, it is now possible to examine how the effects of dance in each of those domains can have a direct impact on occupational performance and functional independence. The functional impact of increasing quality of life through the use of dance will be considered next.

A person's genuine health status has only presented a problem in terms of quality of life, when it interferes with functional performance of basic self-care tasks (Damon-Rodriguez, Frank, Enriquez-Haass & Reuben, 2005). Health-related quality of life (HRQOL) is therefore an important concern of occupational therapists (OTs), and it is important for OTs be aware of any interventions that may improve HRQOL. Some studies have indicated that the loss of ADL capabilities has a substantial impact on a patient's quality of life (Rolland et al., 2007), and a primary domain in occupational therapy's scope of practice is to improve or maintain ADL capabilities (AOTA, 2008). Hokkanen and colleagues (2008) specifically suggested that engagement in dance and movement therapy can improve self-care and instrumental activity of daily living (IADL) skills in patients with dementia. Rolland et al., (2007) noted that participation in a moderate exercise program twice a week could slow the rate of progression of ADL decline in the nursing home residents by up to one third. Considering the body of research available to suggest that dance is an enjoyable and effective exercise program for elderly residents to engage in (Alpert et al., 1009), it can then be hypothesized that the Kairos Dance

program may be a helpful contribution to a resident's exercise regimen, aiding in the prevention of ADL decline and promoting the maintenance of functional independence.

In addition, participation in professionally conducted cultural programs has been associated with an increased level of overall activity and occupational engagement among older adults (Cohen et al., 2006). The program currently under study often tries to incorporate culturally relevant music and themes into their dance sessions, in order to promote occupational engagement. An interesting fact to note regarding the effect of cultural programs on the occupational engagement of older adults is that these positive effects can be seen at an age even higher than the average life expectancy (Cohen et al., 2006). This makes these types of programs very important in significantly reducing the risk of developing increased dependence as one grows older.

Another domain of occupational therapy's scope of practice addresses social interaction (AOTA, 2008). Many of the research studies already addressed describe the positive impact that dance can have on social participation and quality of life (Alpert et al., 2009; Hunter & Gillen, 2009). Likewise, activities such as the dance program currently under study, which provide social engagement opportunities, can have a positive impact in the physical health of older adults (Cohen et al., 2006). The positive effects of dance as a social engagement opportunity make dance an important therapeutic activity for occupational therapists to understand.

Finally, occupational therapists are often part of holistic treatment in the medical setting (Cohen, 2006). It has been suggested that dance can be an effective tool for holistic treatment of a patient because it simultaneously involves the body and the mind, leads to a healthier body image, and can lead patients to experience a greater sense of wholeness (Ravelin et al., 2006).

Occupational therapists often strive to create this sense of wholeness in each individual they treat, through any meaningful activity they can discover. It is important to note that the dance program under study is an arts-based program, and was not directly founded under occupational science or occupational therapy. The program does however appear to significantly affect many of the domains that occupational science and occupational therapy have deemed to be important components of healthy living. This makes the arts-based, *Kairos Dancing Heart™* program an important program for occupational scientists to study, and for occupational therapists to learn from.

### *Conclusion*

As has been demonstrated, based on the literature, it appears that dance has the potential to profoundly impact the minds, bodies and spirits of older adults. The focus of this study, the *Kairos Dancing Heart™* program, may have important implications for supporting the emerging value of productive aging described in the beginning of this literature review. The current study sought to uncover the extent to which there may be a relationship between the *Kairos Dancing Heart™* program and the productive aging components of cognition, physical health, social interaction and quality of life among participants. The specific stages of the present study will be discussed in detail in the next section.

## Methods

### *Research Design and Questions*

This research is part of a larger mixed design study, which intended to investigate the effects of a creative dance and story-telling program on long-term care residents of a number of facilities in urban and southern Minnesota. The arts-based programming was implemented by *Kairos Dance Theatre*, a non-profit, intergenerational dance company. The present research was conducted in two of the six long-term care facilities involved in the overall mixed-methods research study. Although data in the overall study included quantitative measures taken from elderly participants themselves, the present qualitative research utilized an interview design to explore perspectives from the staff, volunteers, caregivers and family members of the older adults participating in the program. The over-arching research question was: What is the importance of a dance therapy program for long-term care residents? The sub-questions were: (a) what is the meaning and experience of dance and music for the participants? (b) What is the perceived impact of the dance program on the quality of life of the participants? And (c) what is the perceived impact of the dance program on the culture of the nursing home?

This particular study utilized a qualitative interview-based design to collect subjective observations about the program. Predetermined open-ended questions were designed based on the literature review, current *Kairos Dance* program objectives, and the identified research questions for the study. The design was prospective in nature, since interviewees were still involved with the program when the interviews were conducted. Framework Analysis was used to analyze the interview transcripts. *Framework Analysis* is an approach to qualitative analysis that provides outcomes or recommendations through inductive and emergent concepts. The term *inductive* refers to research that aims to uncover themes, explanations, and new hypotheses from

within the data gathered during early phases of the research process (Lacey & Luff, 2009).

Framework Analysis also aims to make the stages of analysis explicitly clear to readers (Lacey & Luff, 2009).

Framework Analysis assumes that any system for organizing information requires four elements. The first of these elements is the *purpose* or intention of the framework. In other words, why does the information need to be organized in the first place? The second element is *predication*, in which the actual organization of information is put into operation. The third element is *function*, or the actions that are made possible by the framework. The final element is *context*, or the environment in which the framework exists, and the way in which this environment influences the framework itself (Tennis, 2006).

The actual process of Framework Analysis consists of five linear stages. Lacey & Luff, (2009) outlined these five stages in a Trent focus group for research and development in primary health care. *Familiarization*, the first step, involves the completion of verbatim transcriptions and the reading and re-reading of the data. The next step is *identifying a thematic framework* which consists of developing codes from *a priori* issues (pre-set research questions) and from emergent concepts derived during the familiarization process. The following step is called *indexing*, also known as “coding.” This refers to the application of the coding framework to the transcripts. Numerical or textual codes identify data that correspond to different themes in this process. The fourth stage, *charting*, is the creation of charts to arrange the coded data. Charting organizes data so that it may be read easily. The final stage is *mapping and interpretation* which consists of determining the associations, patterns, explanations, and concepts in the data. These patterns, associations, and relationships may then be examined under the lens of the original research questions.

*Program Setting and Population*

This study was conducted in two long-term care facilities in Minnesota. These sites were selected from the six sites that Kairos Dance Theatre served at the time of the study. These sites were selected based on their diverse locations and populations. One long-term care facility was located in an inner-city neighborhood of a metropolitan area and the other was located in a mid-sized, rural town. The rural nursing home was small, holding 84 beds. Approximately 80 of these beds were filled at the time of the study. The individuals who resided at this long-term care facility ranged in age from 53 to 103 years old, with the average age at the time of the study being 80 years old. There is not one specified health concern that brought the individuals to the rural facility, but most of them tended to be frail elders. Some of the more common diagnoses at the facility during the time of the study included stroke, heart attack, Parkinson's, and Alzheimer's disease. The urban long-term care facility was larger than the rural facility, and held nearly 150 beds. The average age of residents in this skilled nursing facility at the time of the study was also approximately 80 years old. Some of the common diagnoses experienced by residents at the urban setting were similar to those in the rural setting, such as dementia and stroke. In addition, the urban facility also had a higher prevalence of psychological disorders (such as schizophrenia or bipolar disorder) than the rural facility. While both facilities were primarily long-term care facilities, approximately 1/5<sup>th</sup> of the beds in the urban facility were Medicare beds, specifically allotted for short-term rehab stays.

Residents were selected for participation in the creative arts program by the staff at the long-term care facility and also by Kairos staff members. The residents were selected based on his/her ability to tolerate a ninety minute activity session. Despite this consideration, residents were welcomed to join the program regardless of functional abilities, as the program is designed

for individuals of all physical, cognitive and mental health levels. Kairos also established a wait-list for any additional residents in the facility who wished to participate in the program. It was the wish of the staff at Kairos Dance to make their program available to as many elderly individuals as possible.

Kairos Dance is described above as a non-profit, intergenerational dance theatre company. This dance theatre has an award-winning program called *The Dancing Heart*<sup>TM</sup>, which serves to engage residents of long-term care facilities in the meaningful activities of reminiscence and dance. On their website, Kairos states that their mission is “to share the joy of dance and unleash its power to nurture and heal”. They believe there are many ways of dancing and that “each person has his or her own dance to share and story to tell” (Kairos Dance, 2010). At the time of the study, Kairos provided dance programs once per week at six long-term care facilities in both metropolitan and rural areas of Minnesota, under a grant-funded quality improvement project. The contract between Kairos and each facility stated that Kairos would provide 90 minute dance sessions, once weekly, for 12 months. Prior to each 90 minute dance session, a theme was chosen for that session. For example, the theme of one session might be “trains.” During the 90 minute dance session, the chosen theme would then be explored through music, choreography, reminiscence, and story-telling. Kairos emphasized the use of visualization to help residents perform dance movements in the context of the chosen theme. For example, if the theme for the session was “trains,” residents may be encouraged to lift one arm up and down, as if they were trying to pull on the horn of the train. The example session would also be accompanied by music that related to trains. Likewise, residents would also be given an opportunity to share stories of their experiences with trains.



A unique culture was established within these dance groups due to the high amount of interest in participation from both residents and volunteers. Along with 20-30 residents participating in each session, it was not uncommon to have approximately four Kairos staff members, two or three nursing home staff members, two or three volunteers, and several family members also participating in the group. The dance group is intended to provide a safe and fun environment for people of all stages in life to enjoy the benefits dance can offer. This includes the staff members, volunteers, and family members who join the program. The current study however, sought to focus specifically on the benefits that the dance program offered for long-term care residents in particular.

### *Participants and Interviewees*

It is important to note that the residents who participated in the Kairos Dance Program were not the direct participants in this study. Due to the cognitive impairments common among Kairos participants, this study interviewed caregivers and volunteers or staff members directly involved in the dance program. Interviewees were people who had participated in the program and directly witnessed the effects of the program on the residents. For clarification, the remainder of this paper will refer to the residents who directly participated in Kairos as “participants,” and the providers and family members interviewed by the researchers as “interviewees.” Researchers conducted in-depth interviews with eight staff members, three volunteers, and three family members between the two previously identified sites. Staff members and volunteers were interviewed by student researchers, and family members were interviewed by faculty researchers. In addition, faculty members conducted follow-up interviews with three of the volunteers previously interviewed by the students. A table of participants’ demographic information is presented on the following page. Table 1 displays each participant’s pseudonym,

Table 1

*Kairos Dance Study Participant Demographics*

Pseudonym	Category Title	Facility
Ariel	Provider-nursing home staff	Rural
Beth	Provider-nursing home staff	Rural
Carol	Provider-nursing home staff	Rural
Dianne	Provider-nursing home staff	Urban
Eliza	Provider-nursing home staff	Urban
Frances	Provider-nursing home staff	Urban
Greta	Provider-nursing home staff	Urban
Hannah	Provider-volunteer	Rural
Julie	Provider-volunteer	Rural
Kelly	Provider-Kairos staff	Urban
Lori	Provider-Kairos staff	Urban
Michelle	Family member	Rural
Nathan	Family member	Rural
Olivia	Family member	Urban

their categorization as provider (staff or volunteer) or family member, and which facility they were associated with.

Participation in this study was entirely voluntary. In order to meet the inclusion criteria for participation in this study, interviewees had to be a provider, volunteer, or caregiver that directly participated in the Kairos program. It was required that interviewees had been present for at least one Kairos session, but all interviewees included in the final sample had regularly participated in the Kairos program for at least six months. Interviewees were grouped into one of three categories: Kairos staff or volunteer members, nursing home staff, or family members of residents who participated in the program. The first two categories were combined under the heading of “Provider”.

### *Procedure*

Prior to the initiation of this study, the Institutional Review Board (IRB) at Saint Catherine University reviewed and approved the study. Interviewees were recruited by the placement of volunteer sign-up sheets in the two long-term care facilities. The sign-up sheets consisted of brief information describing the study and the researcher’s desire to interview staff, volunteers and caregivers who were familiar with or involved in the *Dancing Heart*<sup>TM</sup> program with the residents. Interviews were arranged based on a specified date that researchers would visit the long-term care facility. Prior to initiation of the interview, participants were given both a short, verbal summary and a written explanation of the study. This was followed by a consent form, which can be found in Appendix A. Interviewees were also given the opportunity to ask questions or express concerns prior to signing the consent form. In addition, researchers explained that the information would be anonymous and kept strictly confidential. They also indicated that participants had the right to refuse answering specific questions and/or to stop the interview at any time.

### *Tools*

Interview guides (Patton, 2002) were developed based on the study questions established by the research team, purpose of the Kairos grant, and information from the literature. Samples of the interview guides may be found in Appendix B. The questions were designed to elicit observations regarding the experience and impact of Kairos' *Dancing Heart*<sup>TM</sup> program on several areas of personhood. The personal domains of particular interest were: physicality, cognition and memory, quality of life, social interaction, and occupational engagement.

All interviews were conducted individually. Although it was not always possible to conduct interviews in a private setting, they were conducted with the maximum amount of privacy available. Most initial interviews were conducted face-to-face by the student, except for the interviews with the family caregivers and one additional staff member. These interviews were conducted by the faculty advisors, either over the phone or in person. All of the follow-up interviews were conducted over the phone by the faculty advisors. Interview guides were followed closely but the open-ended questions allowed for elaboration and clarification as needed during the interview. Conversations were recorded using the Hi-Q<sup>TM</sup> computerized recording system. The Express Scribe<sup>TM</sup> program was then used to play back the interview and allow for verbatim transcription. Initial interviews ranged in length from twenty to forty-five minutes. Following transcription of the provider interviews, the researchers developed follow-up questions based on unclear and/or inaudible interview information. Three follow-up interviews were then conducted by the faculty researchers. These interviewees were selected for follow-up interviews based on need for clarification and also on availability of the interviewee. Interviewees were given no external incentives to volunteer for this study. Researchers expressed appreciation and gratitude for each person's involvement.

### *Data Analysis*

In order to analyze the data, researchers followed the five steps of Framework Analysis. In the *familiarization* stage, researchers transcribed interviews and read these transcripts multiple times in order to familiarize themselves with the data. Next, in *identifying a thematic framework*, researchers developed a preliminary coding framework based on the combination of pre-determined issues and issues that emerged within the interview transcripts. A copy of the coding framework can be found in Appendix C. Researchers triangulated the codes through a sample coding process between the students and faculty researchers in order to identify areas needing modifications. Following refinement of the coding framework, the two graduate students independently coded two transcripts to establish inter-rater agreement. The coding framework agreement between researchers was ninety-four percent for the category codes, which constitutes a highly reliable tool.

Line by line *coding* of the data was then completed by the student researchers with the use of the coding framework. Coding was immediately followed by the *charting* stage in which textual excerpts corresponding to each code were sorted into tables across all participants. One representative quote was selected for each participant, but the lines identifying other instances of that code for each participant were included in a separate column. This allowed researchers to read what was said about each code and also view information about the number of times each code appeared for each participant. Finally, during the *mapping and interpretation* phase, researchers identified themes for each code and coding category. They then used the charts to identify patterns, associations, or relationships that appeared within the data. Those patterns were formulated into themes that were developed by taking into account the original research questions. Results of this analysis are described next in this study.

## Results

This thesis was part of a larger mixed-design study aimed at investigating the effect of a creative dance and story-telling program on residents of long-term care facilities in Minnesota. One facility was located in an urban setting, and the other was located in rural, south-eastern Minnesota. Researchers interviewed a total of 14 participants regarding their perceptions of the Kairos Dance program and its impact on residents in long-term care facilities. These 14 interviews consisted of eight direct care providers, three volunteers (who were included in the “provider” category), and three family members. Semi-structured interviews allowed for interviewees to describe their observations of the program in detail. These interviews were then analyzed using the *Framework Analysis* approach described earlier.

Both graduate students in the present study sought to review participant interviews and determine subjective effects of the dance program on physicality, cognition, quality of life, and occupational performance. In contrast to other portions of the larger mixed-methods study, the current thesis aimed to focus specifically on the impact of dance and movement on the residents, rather than the impact of music and melody on these participants. As with all multi-dimensional programs, it was not possible to completely separate the movement and music components of the program, but the current thesis wished to emphasize the impact of movement, choreography and dance over the impact of music and melodies. For more information regarding the impact of music on participants, please see the thesis written by Schafer (2011).

The interview transcripts of the current study were examined by both graduate students in the context of the original research questions, and revealed that family members and providers had noticed many positive changes in the participants since they began the Kairos *Dancing*

*Heart*<sup>TM</sup> program. Interview participants also offered a few suggestions for improving the program. Primarily, interviewees expressed a desire to expand the program in various ways.

*Framework Analysis* was used to identify common themes across interview transcripts. As participants discussed their observations of the dance program and its effects, many commonalities were identified. The common themes mentioned in relation to the Kairos dance program included a sense of enjoyment and fun experienced by the residents and staff, a sense of belonging and connection amongst the entire group, and increased physical performance capabilities. They also noted increased motivation to perform physical activity. A few participants mentioned that the Kairos dance experience appeared to be healing for the residents, the staff members, and the volunteers involved. Some of the participants even described the Kairos dance program as promoting experiences that were “sacred” to the residents and staff or volunteers. These emergent themes will now be discussed in relation to the research questions of the initial study design.

#### *Direct Experience of Nursing Home Residents during the Dance Program*

The first research sub-question in this study concerned the direct experience of long-term care residents who participated in the Kairos Dance program. Specifically, the research question was stated in this way: What is the meaning and experience of dance and music for the participants? The themes that emerged under this category were: (a) participants displayed increased physicality during and after the program, (b) participants experienced a sense of flow, or time flying by during the program, and (c) the dance program appeared to facilitate memory retrieval and the formation of new memories.

*Increased Physicality.* Interviewees reported that residents displayed improved physical performance capabilities over the course of the program. There were several interview questions that addressed the dance program's impact on the physicality of participants. Components of physicality may include strength, endurance, range of motion, balance, standing tolerance, or other signs of physical health. In response to these questions, every interviewee reported noticeable improvements in the physical involvement of residents in the Kairos Dance program. For some residents this change was considerable. For others, it was a little less definitive, but all residents seemed to show at least minor physical improvements over the course of the program. Since the present thesis sought to evaluate the impact of dance and movement on participants, this theme concerning increased physicality was of distinct importance to this particular thesis.

Interviewees observed that the Kairos Dance program helped to promote physicality in several ways. First, the dance program provided a safe and supportive environment, where residents felt encouraged to move, dance, and push their physical limitations. Several interviewees stated that they encouraged each resident to participate physically in any form which he/she was capable. This participation could be as simple as tapping a foot or waving a finger, and could be as difficult as getting up and dancing on their feet with a partner, or mimicking stories told by others in the group. All movement was encouraged and praised, and this seemed to help motivate residents to push themselves physically and express themselves artistically during the program.

In addition to providing an environment where residents felt safe and encouraged to move, the program also promoted physical participation by seemingly tapping into instinctual drives for movement. One interviewee reported that the use of different props during the dance



program seemed to greatly increase the participants' desire to move. She specifically described her experience playing catch with one of the residents:

Lori- We'll have music going, and then you're playing catch—I don't know if it's an instinct for humans or if it's something that's just ingrained in us—but they will be trying to get it (the ball) off the floor, and these are people who you can't get to bend over and touch their toes! (19)

Interviewees mentioned several other examples of props increasing the inner-drive for movement. For example, the dance group often brings in a large parachute for the residents to use as a group. Residents will each be given a portion of the parachute to hold, and it is their responsibility to work with the group and keep several balls in the air at once by lifting their side of the parachute up and down. One of the sites also uses a dog to help motivate movement among participants. When the dog joins the dance group, interviewees described residents reaching for the dog and trying to pet him, or clapping their hands to get his attention. In addition to the use of props to motivate movement, Kairos also attempts to contextualize movements by creating visualizations that will make movement more meaningful. For example, rather than asking residents to reach forward and touch their toes, the program's facilitators may ask participants to visualize walking along a sidewalk, and reaching down to pick flowers from the grass. This contextualization also seems to help promote physical participation among residents.

Interviewees also mentioned how the music and its properties helped encourage movement among participants. The beat of the music and the rhythmic, repetitive movements used during dances gave participants extra time to get used to the steps, and appeared to also tap into more instinctive and emotional areas of the brain. Readers may refer to Schafer (2011) for additional information regarding the brain's relationship with music, and the motivational qualities music may possess.

Encouragement from staff and other participants was also important in eliciting increased movement during the dance sessions. Interviewees often described encouragement as the primary role of staff and volunteer members associated with the program. Interviewees reported that throughout the Kairos Dance sessions, staff and volunteers are constantly moving around the group, making eye contact or physical contact with each resident, and verbally encouraging them to participate. Interviewees also report the importance of affirmation as encouragement. Whenever a resident displays an effort towards physical participation, whether it is as small as tapping his/her finger or as difficult as actually standing up and dancing, the staff and volunteers make it a priority to praise the resident's effort, and therefore encourage him/her to continue participating.

Several interviewees also described the encouraging effects of watching others dance. It seemed that the observation of other participants getting up and dancing, or tapping their feet to the music, or pushing through physical limitations, helped motivate everyone in the dance group to participate. Often, interviewees described the positive direct effect of "joint-movement" or imitation, which refers to the concept of performing movement simultaneously with someone else. Interviewees reported that several Kairos participants would not initiate movement on their own due to dementia or other cognitive impairments, but would imitate movements performed by staff, volunteers and other participants. For some residents, simply observing the movement of others was enough to help motivate physical participation. For others, physical contact was necessary to help initiate movement, but after that initial contact, residents often continued to mimic the remainder of the movement independently. One interviewee described an example of this initial contact promoting continued participation from a resident. She stated:

Julie- We did an exercise and the woman next to me wasn't lifting her hands at all and I took one woman's hand and initially she didn't move but then started moving. And we brought our arms together and lifted our hands up and down. And you know, she started moving and it became something totally different for her. That contact made a difference. (13)

While all of the above effects were primarily observed during the dance sessions themselves, interviewees also reported that some residents displayed improved physical performance from week to week, and between sessions. In this instance, one must be careful not to assume that physical improvements were a direct result of the Kairos Dance program. Interviewees did state however, that several residents had shown significant gains in physicality since beginning the Kairos program. One interview provided a summary of this effect by stating:

Kelly- There's just some people that, when I started, getting up and dancing was just not really a possibility... or if they did, they kind of just would rock side to side. And now a lot of them are just getting up and really able to actually engage in partner dancing and moving their feet a lot, and really showing a lot of progress physically. (51-52)

In addition to the observations of staff and volunteers, family members also expressed gratitude for the physical benefits they perceived to be resultant from participation in the dance program. The benefits of exercise seemed to be commonly understood among all interviewees, and approximately two-thirds of the individuals interviewed mentioned that dance was an enjoyable way for residents to experience the benefits of movement and exercise. One family member described the physical benefits of the program by saying:

Olivia- This is one of the ways each week that she actually gets some exercise, and that's going to be healthy for her circulation. (296)

Overall, the physical benefits of the program were one of the most commonly mentioned observable effects among interviewees. Several interviewees also emphasized the unique motivation for movement offered by the dance program. To summarize the general theme of physicality, the Kairos Dance program seemed to provide enjoyable and motivating opportunities

for participants to exercise. Sometimes, the dance program may have been the only form of exercise that participants were willing to perform. As a result of increased participation in the program, many of the participants seemed to experience the physical benefits of exercise.

*Flow.* Participants appeared to become so absorbed in the program's activities that they lost track of the time. The concept of "flow" is described by Nakamura and Csikszentmihalyi (2002) as a complete absorption in activities of the present moment. Although this theory was not included in the original literature review, the concept of flow clearly emerged as a relevant theme across interview transcripts. Flow research addresses activities that are intrinsically motivating due to the pleasure of their performance, regardless of the results or final product of the activity. Interviewees in this study made several references to the illusion that time seemed to "fly by" during the Kairos dance program. One volunteer described her amazement that, despite physical and cognitive impairments, the residents were able to engage in the program for an hour and a half.

Julie- [One of the program administrators] said that when they went in the first time with their program they said, the staff said, 'we think you can probably keep their attention for ten or fifteen minutes'—and an hour and a half later [laughs.] they're all happy and smiling and they've been totally engaged for that amount of time. (90)

Many interviewees echoed the perception that residents appeared to be completely engaged in the activities of the present moment, and thus time seemed to pass very quickly.

Other interviewees described a sense of diversion that residents felt during the program. They described this as a positive redirection from every-day trials and complications faced during the resident's stay at the long-term care facility. Similar to the feeling that many people experience when watching a movie or reading a book, participants in the Kairos Dance program

seemed to feel a positive removal from the daily stresses they experienced outside of the program:

Dianne- They tell stories about their life and they feel like they're in another world for an hour or so. (119)

In all of the interviews, providers and family members made numerous references to the fact that residents seemed more alert and more responsive during the dance program. This increase in alertness and responsiveness that residents displayed during the dance program's activities may provide additional evidence that residents were experiencing a sense of "flow," or absolute engagement, in the activities of the current dance session.

It was also mentioned that participants seemed to engage in the program in ways they would not otherwise engage outside of the program. For example, residents were reported to make eye contact with one another, reach for one another's hands, clap or stomp to the beat of the music etc., and display overall evidence of sincere engagement in the Kairos *Dancing Heart*<sup>TM</sup> experience. This seems to provide additional evidence of complete captivation in the activities of the present moment. Interviewees felt that there was a definitive change in most residents' overall state of arousal during the sessions, and believed that this explained why time seemed to pass so quickly for participants in the program.

*Arts-Based Programming Effects on Cognition. The Kairos program appeared to promote retrieval of long-term memories, the formation of new memories, as well as improvements in other areas of cognitive functioning.* Additional components of cognitive functioning included alertness, attention, and coherence. While memory is an important component of cognitive functioning, it was not the primary focus of this thesis. The effect of music on memories will be briefly mentioned here, as it relates to overall cognitive functioning.

The primary focus of this paper however, is to discuss the impact of dance, movement and the arts on cognition as a whole, rather than the impact of music on memory. Readers may refer to Schafer (2011) for a more comprehensive description of the unique relationship between memory and music.

Aside from the music used during the sessions, some of the arts-based components of the program included rhythm, choreography, visualization and movement. During the Kairos Dance program, interviewees reported that specific dances, songs or visualizations were often able to stir up certain memories in the residents. These memories were often very powerful, and may have been memories the resident hadn't recalled in several years. According to interviewees, it seemed that these recollections were a display of increased cognitive functioning, because these types of detailed memories were not often, if ever, recalled outside of the dance session itself. Interviewees mentioned several examples of detailed memories that were triggered by particular songs or dances. These memories may have been positive or negative in nature, but the experience of recalling and sharing these memories was generally observed by staff and family to be a positive experience for the participants. The ability to share memories with the group even appeared to help one resident think more clearly afterwards. One interviewee described the effects on this particular resident:

Kelly- I believe that it was healing for him to be able to share that (his memory), and I think that it helped him to be able to think more clearly, once he was able to release that... because I've seen him be a little more articulate and present, and be a little more able to connect with us since that time. (42)

After sharing his powerful story with the group, this resident was able to display signs of increased cognitive functioning. Particularly, his ability to remain attentive and to articulate himself appeared to improve after sharing his memory.

Another interviewee mentioned several examples of the way specific contexts and themes in the program seemed to prompt reminiscence among the participants. She described how certain musical styles or musicians could stimulate long-term memory retrieval among residents in a positive way.

Frances- Well, it brings them back to a certain time, generally a very happy time. They'll play Louis Armstrong and it'll bring one resident back to her times in the dance hall. We've played 'New York, New York' and it'll bring another resident back to the times she would go to New York to get her hair done in the Bronx. It's certain things like that. (38)

Another interviewee re-iterated this effect of the program. She described how powerful and detailed some of the resident's stories were.

Kelly- I have definitely witnessed specific songs and especially with music, conjuring up memories, triggering memories, and they then are able to express those memories, essentially, from what's triggered. And it's the memory, which could have been 50 or 60 years ago is extremely present, as if it has just happened. (15)

This interviewee described her surprise that such detailed stories could be told by residents who were otherwise assumed to have relatively low cognitive functioning. It seemed that the level of articulation and coherence associated with these stories gave the impression of increased cognitive functioning, at least for the moment.

In addition to the impact on long-term memory recollection and retrieval, the dance program also seemed to promote the formation of new memories. Over two-thirds of the interviewees described the participants' ability to learn new songs during the group, to remember the theme of last week's dance program, and to remember the names or faces of the other members of the program. Again, this ability to create new memories seemed to be stronger within the group than outside of the group. Interviewees would describe their amazement that participants with relatively low cognitive function were still able to remember the words to a

song they had just learned during the Kairos dance program. This seems to be additional evidence for the unique relationship between music, dance and memory. Again, refer to Schafer (2011) for additional details on the relationship between music and memory.

This relationship between music/dance and memory retrieval and improved cognition was the second most frequently and consistently mentioned theme throughout the entirety of all transcripts. One-hundred percent of residents mentioned something about the program's relationship with improved cognition or increased memory retrieval, and several interviewees placed particular emphasis on this relationship. The number of references to this theme was second only to the "Fun and Excitement" theme which will be discussed in relation to this study's second research question.

#### *Impact of Dance on Quality of Life*

The second research question asked: What is the perceived impact of the dance program on the quality of life of the participants? This question aimed to discover how participation in the Kairos Dance program might affect a resident's life beyond the program. The four themes identified in regards to this research question were: (a) participants experienced a sense of fun and excitement during the dance program, (b) participants established bonds with the staff members and with one another during the dance program, (c) participants felt that the program was participant-centered and individualized and (d) interviewees often described a sense of healing or sacredness that residents seemed to experience during the dance sessions.

*Fun and Excitement.* Interviewees described the Kairos program as being an enjoyable experience for everyone involved. "Fun" was one of the most commonly used descriptors throughout every interview performed during this study. One-hundred percent of interviewees



repeatedly mentioned that the program was fun and amusing for everyone involved. Interviewees also described a sense of excitement and anticipation that the residents felt with regards to attending the weekly Kairos Dance sessions. Many residents would look forward to the dance sessions and ask the volunteers “When can I come back?” Interviewees reported that residents often set their weekly schedule in relation to the Kairos dance sessions. Many of the statements interviewees made in relation to this theme were as brief as: “They love Kairos. They love the dance program. And they say it’s one of the best things.” (Dianne, line 76). These brief statements however, were frequently repeated throughout each and every interview. In addition, interviewees reported that each resident’s mood was often improved during the course of the dance session.

Eliza- It just feels like night and day sometimes, seeing residents before and after. It’s really a feeling; you can definitely tell people are happier when they’re in there. They’re more alive. They get a lot out of it. (104)

Fun is one of the most important determinants of quality of life (Kane, 2001). This theme will probably be one of the easiest themes for readers outside of the dance program to understand. As humans, we are generally driven to participate in activities which we enjoy. All interviewees described the Kairos program as being an enjoyable experience for almost everyone involved. The idea of “fun” may seem simple, but it was an undeniable theme that appeared in small, but frequently repeated ways throughout the interview transcripts. It was also cited as the primary reason that residents returned to the program week after week. Some interviewees reported that this was the most enjoyable time of the week for many participants, and they often asked when they could go to the dance group again.

*Bonding. The Kairos program appeared to promote relationship-building among participants. Approximately two-thirds of the interviewees in this study discussed the*

relationship-building that seemed to occur during the Kairos program. These relationships could be amongst the residents themselves, between residents and staff or volunteers, or amongst staff and volunteer members. All of the family members interviewed also discussed the importance of the dance program for maintaining and strengthening their familial relationships.

Some of the references made to relationship-building and bonding were as simple as “We’re all just kind of one big happy family when we’re in there” (Carol, 30). On the other hand, one interviewee was quoted in two different instances, describing a more powerful connection being facilitated by the program:

Kelly- It’s only been six months that I’ve known them (the other Kairos participants) and I feel like I’ve known these people forever because we share so little time each week, but the time is just loaded with so much meaning. (68)

And,

I think that there’s an authenticity and sincerity about their (the residents) connection when they’re in the group. I think they really, truly see the beauty in each other, because of whatever’s connecting with their heart through the music and dance. I think their hearts are opened up and they can then connect with these other hearts. (46)

Interwoven within this theme, interviewees once again mentioned the importance of a safe and supportive environment. They described the dance program as a place where participants and staff members or volunteers alike felt free to open up and share their stories, and to establish relationships with one another. They described the sense that each person was respected, validated, and emotionally safe.

While evidence of bonding was not stated quite as frequently as other themes (mentioned by approximately two-thirds of the participants), the previous literature review states that relationship building is a key component in developing and maintaining a high quality of life (Kane, 2001). Thus, bonding is an important emergent theme to consider in response to the

research sub-question that addressed the impact of dance on participant's quality of life.

Additional information on emotionally safe environments is also described by Schafer (2011).

*Participant-Centeredness. Residents seemed to feel that the program was centered around their individual wants and needs.* Although the Kairos Dance program was performed in a group setting, many interviewees described a sense of individuality that was felt during the program. Interviewees spoke to the importance of encouraging residents to participate to the best of their individual abilities. The program emphasized the unique abilities and special gifts that each person had to offer the group, and highlighted that any form of participation was appreciated. In addition, they emphasized the importance of giving everyone a chance to speak, dance, and share their individual gifts and stories.

Several interviewees spoke specifically to the importance of helping residents participate in any form which they are able. One volunteer described her role in this way:

Lori- You're just going around, encouraging and affirming. I mean, if somebody's moving their finger, you're like "Right on! You're dancing!" And just encourage and affirm. (42)

Another participant echoed the importance of emphasizing individual abilities. She also described the general attitude of acceptance expressed toward each and every participant in the program.

Hannah- The wonderful thing about this program is it doesn't matter. If they're alert and feel like moving, they can do it to the best of their ability. And for we that volunteer, like [the Kairos administrator] always says, "there's no right or wrong way [to dance]." (10)

Other interviewees described the importance of choosing music based on participants' individual interests. They stated that the goal was to select music that would appeal to specific residents, and also to create a mix of music that appealed to different members of the group.

They mentioned that this helped provide each participant with an opportunity to feel motivated or inspired by a particular song or musical style, and also kept residents from feeling left out. If one song did not appeal to an individual resident, that person would likely find another song more appealing. One interviewee specifically mentioned the intentionality of the music selection process.

Julie- The variety of music used by the Kairos dance program seems to maximize participation. The types of music and props are designed to involve both the residents and volunteers. (5)

Finally, several interviewees made powerful statements about the sense of validation and affirmation that seemed to be experienced by residents as they were given an opportunity to share their stories and contribute to the group. One volunteer stated:

Beth- They actually have an opportunity to be acknowledged in a way, at their age, that they probably wouldn't be acknowledged- for their past gifts and for who they are now as a person. (28)

Overall, each of the volunteers, staff members, and family members interviewed made at least one statement regarding the individualization of the program, and the overall participant-centeredness of the group. This helped each resident feel welcomed, validated, and important. Consequently, this seemingly increased the resident's desire to participate in the program.

*Sacredness and Healing.* Interviewees described a positive spiritual component of the program. One of the more abstract themes that appeared in the present data was linked to spiritual well-being. Several interviewees presented spiritual descriptions of the Kairos Dance program. A couple of the most direct words used to describe the spiritual experience were "healing" and "sacred." Before proceeding, it is important to make a distinction between spirituality and religion. In this paper, spirituality refers to the activities or experiences that affect a person's soul, and are distinct from material, physical, or tangible effects. This can be, but is

not always, religious in nature. No mention of religion was made in any of the current interviews under analysis, but spiritual experiences were frequently described.

Interviewees most often discussed spirituality in relation to the story-telling aspect of the Kairos Dance program. When certain songs triggered distinctive memories, residents were then able to share their memories with the group. This sharing was often described as a very powerful and/or healing experience. One interviewee recounted a story that one gentleman shared about coming home from the war and finding that everything around him had changed. She described this memory as being triggered by a specific song, and also described it as being a very emotional story for the man. In fact, the interviewee was brought to tears when describing the experience, because she stated that it had been such a powerful and touching moment. She then stated:

Kelly- I believe that it was healing for him to be able to share that, and I think that it helped him to be able to think more clearly, once he was able to release that— Because I've seen him be a little more articulate and present, and be a little more able to connect with us since that time. (42)

The power of story-telling described in this example is not tangible or material in nature, but it is closely linked to the human soul. Thus, it is an example of the spiritual experience this section aims to describe. In other accounts of the program's spiritual effects, one interviewee specifically described the experience of dance and story-telling as being "sacred" for many of the participants.

Kelly- It's sharing something almost sacred, something from a deep, deep place when they share this stuff. I think sacred is probably the best word for it. (17)

In addition to describing the program as a sacred or healing experience for the residents, it was often described as also having healing potential for the volunteers and staff members involved with the program. Many of the volunteers had a personal history with dance or music,

and this history was often tied to powerful emotional memories. These emotional memories were often recalled and re-enacted through creative and artistic expression during the Kairos Dance experience. Again, these personal histories with dance or music were often spiritual in nature and could not be described in concrete, tangible, or physical terms. In addition, the creative and artistic experience of movement and story-telling during the program provided an outlet for a unique type of spiritual expression. One volunteer described her history as a dancer, and stated that she sees incredible beauty and power in the ability of these elderly individuals to continue dancing throughout the course of their lifespan. Another volunteer described her history of dancing with her mother near the end of her mother's life. This woman began volunteering for the Kairos Dance program shortly after her mother's death, as a way to continue dancing and honoring their relationship. She spoke about her spiritual relationship with the Kairos Dance program in this way:

Julie- I just think it is so wonderful what they are doing, and it is just a healing part of my week. There is something wonderful that happens for me. (18)

There seems to be a positive energy that is experienced by everyone involved in the program, and this energy seemed to be hard to name. The words "sacred" and "healing" were only mentioned a handful of times in the transcripts, but the themes represented by these words were consistently mentioned throughout the transcripts. Approximately three-fourths of the interviewees made reference to the indefinable and spiritual effects of the program, as described above. Although spirituality and sacredness were not often explicitly mentioned, those abstract concepts stood out as an important inductive theme across transcripts.

*Impact of Dance on the Culture of the Community*

The final research sub-question aimed to address a bigger picture: What is the perceived impact of the dance program on the culture of the nursing home? In other words, how do the effects of the dance program extend beyond the residents? Two primary themes emerged in relation to this question: (a) The Kairos program seemed to facilitate a greater sense of connection and community among all residents and staff in the long-term care facilities, and (b) the Kairos dance program appeared to spark a sense of curiosity or inquisitiveness about arts-based programming.

*Connection. The program appeared to facilitate a greater sense of unity and connection among all members of the community in the long-term care facility.* Any time a particular group of people gathers for a certain purpose in a specific setting, there is an opportunity to establish a unique and distinctive culture. Culture, as discussed in this paper, refers to collective feelings, experiences, beliefs and social norms among a given group of people. Many of the interviewees described a distinctive culture forming within the Kairos Dance group. They also described changes in the culture of the long-term care facility as a result of the weekly Kairos Dance programs. It appears that the positive cultural effects experienced during the Kairos sessions may continue after the group is over, and affect the sense of connection experienced between all members of the long-term care facilities' communities. One of the staff members interviewed felt that the weekly dance program helped to improve her interaction with residents outside of the dance sessions. She described feeling an increased sense of ease in developing relationships with the residents in the program.

Greta- When we can share part of ourselves, then we have more to go on with each other. More of a common bond or base... (21)

She also described an observable difference between residents who participated in the Kairos program and those who did not.

Greta- The people that participate in Kairos are generally the more active, engaging ones on their floors and communities. (10)

Some interviewees described additional effects of the dance program's songs and music on the overall culture of the nursing home. It was reported that the music learned during the dance program could be used to brighten the moods of other residents throughout the week. It seemed as if the music and the positive feelings associated with the group tended to be infectious throughout the rest of the nursing home. One interviewee recounted a song from the Kairos program helping one resident become more cooperative with her staff members during morning self-care activities:

Beth- One of the staff members had told me they were talking about how hard it was to get this person [dressed]. She was very slow. And I hear another staff member say "well I just asked her to sing me a song and the next thing you know, we're all dressed and she's singing away and she's so happy." (88)

Interviewees summarized the positive energy established during the Kairos program, and stated that it was carried over throughout the rest of the day or week and seemed to facilitate a friendlier, more cooperative, and more connected atmosphere throughout the long-term care facility. In effect, the culture created within the Kairos dance group appeared to positively affect the larger culture of the long-term care facilities as a whole. One interviewee summarized this effect on her facility particularly well. When asked if she felt that the nursing home was supportive of the program, she responded by saying:

Hannah- Well another way of asking that is "do you think the staff and the people (here) would miss it?" and I can truthfully say I think they would miss it... I just think it adds a lot. (79)



*Inquisitiveness and Curiosity.* Members of the community in the long-term care facility expressed a desire to learn more about the Kairos program and to explore opportunities for similar programs. When asked how staff and administrators at the long-term care facility were responding to the dance program, many interviewees described a sense of curiosity or inquisitiveness that seemed to surround the dance group. Several interviewees stated that the Kairos Dance group was unlike anything the facility had previously offered, and thus the staff, volunteers, residents, and administrators all seemed to be curious about the program and what it had to offer. One volunteer described this curiosity by stating:

Kelly- I just know that whenever I see anyone walk by, whether it's a visitor or a nurse, or a staff person, or a custodial person, they always stop and watch, every single time. (74)

It also seems that this curiosity is positive in nature. One interviewee stated that the rural site needed to establish a wait-list in order to accommodate all of the residents who were interested in joining the program. Another interviewee reported that staff members were inquiring about options for establishing additional arts-based programs in the facility. A third interviewee stated that interest and participation in the dance group has steadily increased since the initiation of the program. She said:

Lori- I understand that in all of the sites there are more staff helping now with *Dancing Hearts*<sup>TM</sup> than there were originally. (56)

Some interviewees attributed this rising interest in the program to the nature of the environment established within the Kairos dance sessions. Interviewees described a safe, comfortable and family-like environment which encouraged and motivated the residents, volunteers and family members to participate. In most interviews, the description of increased interest in the program was followed by a desire to investigate other, similar forms of arts-based programming. Many interviewees also followed this description of interest and curiosity with a desire to expand the

Kairos program, and offer it more frequently to more people. This desire to broaden the effects of the dance program will be discussed next.

### *Program Evaluation*

In addition to interview topics related to the research sub-questions, interviewees were also given a chance to express their overall perceptions of the program and to voice any suggestions they had for changing or improving it. When asked “do you have any suggestions for improving the program?” interviewees generally responded with one of two answers. The most common answer was “No.” The second most common answer was related to the amount of carryover performed throughout the week, between the Kairos dance sessions. Interviewees expressed a desire to see the effects of the dance program continue further outside of the dance session itself. After witnessing the positive effects the program had on cognition, arousal, social interaction, quality of life, and physicality, staff and family members expressed excitement and curiosity regarding how profound these benefits could potentially be. They expressed a desire to try offering the most positive pieces of the dance program more frequently and to more people. It was hoped this would increase the positive effects of the program accordingly. One family member expressed her wish that staff at the long-term care facility could be more informed about the dance program. She wanted all of the facility’s staff to be able to bring up pieces of the program throughout the week, in order to help her mother’s cognition remain strong:

Olivia- The care people that work with her don’t go to that (Kairos), so then they wouldn’t know the songs. Or they wouldn’t know about the train theme this month or whatever, which is too bad. It’d be great if they knew a little bit about it. They could talk about it and remember back to what had happened in class together—some little conversations like that would be really good for her. (685)

Similarly, other interviewees expressed a desire for staff education and training on the methods used by Kairos. Since Kairos is often under one-year, time-limited agreements with the facilities

they serve, interviewees relayed a desire to continue performing similar arts and music-based programs after the Kairos artists are no longer serving the site.

Beth- Maybe a suggestion would be little by little edging them out. The residents love them as individuals but they have to know that it's not the individuals that make the program. We can and we have done it here by ourselves without them and we had some very successful times. So that would probably be the only thing.  
(134)

Overall, staff members, volunteers, residents and family members described feeling very positive about the dance program, and consistently expressed their wishes to see it continue to grow and expand. The general wish was to see how far the positive effects of this program could span. Some participants mentioned other areas for improvement by addressing the smaller details of the program, but these suggestions were few and inconsistent across transcripts. Interviewees all expressed a belief that more frequent participation in the program, or more frequent discussion and reminders about the program throughout the week, would help increase the program's benefits exponentially. There was also a common desire to see this program offered to as many individuals as possible, as it appeared to be helpful to nearly every individual who participated.

## Discussion

This study sought to explore the impact of a creative dance program on long-term care residents. Specifically, this study focused on the direct experience of the participants, as well as the impact of the program on participants' quality of life and the program's impact on the overall culture of the long-term care facility. The results of this study lend support to the hypothesis that dance and related arts-based programs can have positive effects on physical fitness, cognition, and quality of life in the elderly. These results also suggest that an arts-based dance and reminiscence group, such as the Kairos dance program, can have a positive impact on the culture of the long-term care facility as a whole. The purpose of this discussion is to link the results of the current study to previous research findings and existing literature.

### *Direct Experience of the Program for Participants*

Many interviewees mentioned the Kairos Dance group as a fun and enjoyable way for long-term care residents to experience the physical benefits of exercise. These physical benefits were discussed in relation to the first research sub-question; the direct experience of participants in the program. Interviewees reported that many of the Kairos participants displayed signs of improved physical capabilities since the initiation of the program. Interviewees described increased range of motion, greater standing tolerance, improved balance, and enhanced functionality as evidence of increased physicality among participants. These descriptions are consistent with previous research findings, which have shown increased balance scores (Alpert et al., 2009; Eyigor et al., 2007), and functional performance of daily tasks (Palo-Bengtsson & Ekman, 2000; Rolland et al., 2007) as a result of participation in dance or related exercise programs. Quantitative research regarding the Kairos dance program's effect on balance scores

is currently being conducted as a portion of the larger, mixed-methods study associated with this research. The greater physicality observed in the present qualitative study leads us to predict that researchers performing quantitative studies on the Kairos dance program will likely find evidence on increased strength and balance to support previous research findings regarding the effects of dance programs on these areas.

In addition to the dance program's effects on balance and functional performance of activities of daily living, previous research has also found that dance programs may have a positive impact on long-term care residents' overall health-status (Cohen, et al., 2006). The interviewees in the current study did not feel capable of accurately speaking to the effect of the *Kairos Dancing Heart*<sup>TM</sup> program on overall health-status specifically, but did believe that the dance program was an opportune way for residents to experience all of the overall health benefits exercise has to offer. Interviewees also referred to the program as an enjoyable way to motivate long-term care residents to participate in increased movement, and thus promote the benefits of dance through exercise and increased physical activity. This echoes the results of a study by Song et al. (2004), which found that elderly participants were more likely to adhere to a dance program than any other exercise routine, due to the enjoyable nature of the activity.

Interestingly, results of the current study also emphasized the importance of observing movement and dance, even when the residents themselves were not able or motivated to physically participate. Interviewees described the motivation that seemed to be gained by watching others participate in the program, and stated that this generally led all members to make greater attempts at physical participation. A previous study by Van't Leven & Jonsson (2002) provides a possible explanation for these results. When researching resident satisfaction with occupational performance, Van't Leven & Jonsson found that "being in the atmosphere of

doing” a given activity was often just as important to residents as the actual act of “doing” itself. Being surrounded by peers who are participating in meaningful activity often helped residents feel that they were involved in the activity themselves, and thus increased their satisfaction with their own occupational performance.

Another significant theme to appear across transcripts, in relation to participants’ direct experience of the program, dealt with Nakamura and Csikszentmihalyi’s (2002) concept of “flow.” Flow research asserts that people can become so absorbed in activities they find intrinsically rewarding, that they may lose sense of time and become completely captivated by the activity at hand. This captivation or absorption in pleasurable and intrinsically rewarding activities also provides a positive diversion from everyday stressors in the outside world. The results of this study indicated that participants did experience a sense of “flow” during the program, and often were surprised by how quickly the 90 minute sessions seemed to pass. It is possible that the intrinsically rewarding experience of “flow” that participants felt during the Kairos Dance program may also help explain why dance programs similar to Kairos have been cited as the most preferred form of physical activity among elderly individuals (Song et al., 2004). In addition, since the rewarding experience of “flow” helps motivate participants to continue participating in the dance program, and thus reap the physical benefits the program has to offer, “flow” may be an important motivating factor to consider when researching other exercise programs. Based on the interview transcripts, it seems that the arts-based components of the Kairos Dance program, such as visualization and choreography, may be the primary factors responsible for the intrinsically rewarding and motivating feeling experienced by participants during the program. This makes arts-based programs a particularly interesting and important area for future research on exercise for the elderly.

The other significant theme to appear across transcripts, in relation to participants' direct experience of the program, dealt with the dance program's impact on memory and other cognitive functions. Interviewees felt that the program's effects on memory and cognitive functioning were seemingly undeniable. Interviewees consistently reported the facilitation of long-term memory retrieval during the program, and also referenced participants' improved ability to create new memories in relation to the program. Examples of creating new memories included the ability to learn new songs, remember new choreography, and also remember names and faces of other members in the group. Several interviewees also felt that participants became more articulate and attentive during the Kairos sessions, particularly when given a chance to share their memories in the form of story-telling. These reports seem to provide evidence for increased cognitive functioning, particularly memory-related cognitive functioning, during the dance sessions.

While there are a plethora of research studies regarding the relationship between music and memory (See Schafer, 2011), research on the relationship between dance and memory/cognitive functioning is less abundant. Several studies have found that dance, and music-related exercise can produce significant gains in measures of mental status behavior (including memory and attention) among patients with dementia in skilled-nursing facilities (Alpert et al., 2009; Hokkanen et al., 2008; Van de Winckel, Feys, & De Weerd, 2004). In addition, Hagen, Armstrong-Ester, and Sandilands (2003) found similar improvements in cognitive functioning among long-term care residents who did not have a diagnosis of dementia. Similarly, elderly participants (with or without dementia) who consistently attended a Korean dance program reported making fewer mistakes, being less forgetful, and having improved concentration capabilities over time when compared to participants who had dropped out of the

same program (Song et al., 2004). Since the Kairos Dance group consists of both participants with and without dementia, the results of the current study would support previous research findings in the assertion that dance programs can have positive influences on the memory and cognitive functioning of all older adults, regardless of the presence or absence of dementia. As qualitative research is unable to establish causal effect however, further quantitative research would be necessary to confirm a cause and effect relationship between dance and cognitive functioning.

In this section, it is also important to mention the dual opportunity for both physical and cognitive exercise provided during the Kairos dance sessions. Previous research has found that exercise programs which incorporate meditative or other cognitive components are often able to decrease excess levels of the stress-related hormone cortisol in the brain (Lee et al., 2009). The Kairos program incorporates deep-breathing and visualization-based choreography into their dance sessions, thus providing cognitive stimulation and meditative practice. Considering these factors, it seems plausible that the dance program may also have the cortisol-reducing and stress-relieving effects of cognitive activity mentioned by previous researchers. Since excess cortisol has been linked to the atrophy of hippocampal tissue in the brain, and resultant memory loss (Comeau, 2002), any program that can help to reduce excess cortisol in the brain, including the Kairos Dance program, may also have the potential to reduce memory loss in elderly individuals.

### *Linking Dance Programs to Quality of Life*

In relation to the second research sub-question, many interviewees spoke with particular emphasis on issues regarding the dance program's effect on the participants' quality of life.



Several research studies have linked dance and other arts-based programs to improved quality of life among elderly individuals (Cohen et al., 2006; Eyigor et al., 2007; Lee et al., 2009; Levasseur, 2008). When studying quality of life in long-term care residents, several researchers have attempted to identify specific domains that contribute to an elderly individual's quality of life. Kane (2001) identified eleven quality of life domains. Several of the domains identified by Kane are particularly relevant to the current study. His domains included, but were not limited to, enjoyment, individuality, relationships, spiritual well-being, and safety/security. Researchers studying quality of life in long-term care settings in Ireland also identified several similar quality of life domains, including participation in meaningful activities or therapies, personal identity, and connectedness to family and community (Murphy, O Shea, & Cooney, 2007). The themes described in the results of the current study show that the Kairos Dance program had an impact on quality of life through domains that paralleled those found in previous research. The current study found that the dance program impacted quality of life through themes such as: excitement and fun, participant-centeredness, bonding, and sacredness/healing. These themes can be closely linked to many of the quality of life domains listed above. In addition, the fifth of Kane's relevant domains—safety and security—was not listed specifically as a theme in the current study, but interviewees consistently cited a safe environment as a part of the experience of the *Dancing Heart*<sup>TM</sup> program. Thus, it could be viewed as an over-arching theme, or one that was interwoven across all themes. Previous research has supported the assertion that safety and security are important components of all programs in a long-term care setting, by emphasizing the motivating and liberating effects that a safe, comfortable, and less-restricted environment can offer residents (Reimer et al., 2004). Without the feelings of safety and security established within the Kairos Dance environment, residents would not have been as willing to participate,

and thus would not have been able to reap as many of the benefits that participation in the dance program had to offer.

To more closely relate the quality of life domains previously established by researchers to the results of the current study; let us examine the current study's theme regarding "excitement and fun." Interviewees in the current study described excitement and fun as the most positive and most consistent benefit offered by the Kairos Dance program. One-hundred percent of interviewees believed that the dance program was an excellent way for long-term care residents to have fun, and stated that a majority of residents seemed to sincerely enjoy their time in the dance sessions, thus promoting improved quality of life. These reports closely echo previous researchers' assertions that pleasurable activity can have significant positive effects on quality of life in elderly persons (Eyigor et al., 2007). It also echoes Kane's (2001) description of enjoyment as a necessary component for increasing quality of life. He depicted enjoyment as the opportunity to exhibit or express pleasure and delight, which is evident in the descriptions of fun and excitement throughout the transcripts in the current study. Similarly, Murphy and colleagues (2007) described the importance of engaging in meaningful activities, by stating that long-term care residents have reported a need to participate in activities which are fun, interesting and meaningful in order to maintain a high quality of life during long-term care stays. Finally, research on stress and coping in older adults has emphasized that participation in fun, recreational activities can serve as a buffer for stress by initiating the body's stress-coping response systems, thus decreasing symptoms of stress and improving overall quality of life (Hunter & Gillen, 2009).

Next, we can examine the current study's theme regarding "participant-centeredness" in relation to previous literature on quality of life. Interviewees in the present study often described

the Kairos program as honoring the individuality of every person in the group. Staff members and volunteers sought to respect the needs and interests of every participant, and also continually encouraged every individual to participate and express themselves in their own unique way. Correspondingly, Murphy and colleagues (2007) also emphasized the need for long-term care residents to maintain personal identity in order to maintain high quality of life. In order to achieve this personal identity, Murphy and colleagues reported that residents need to be provided with opportunities for individualized and artistic self-expression. Interviewees in the current study seemed to feel that the Kairos Dance program offered participants these types of opportunities by encouraging story-telling, individualized choreography, and personalized music selection. Researchers Palo-Bengtsson & Ekman (2000) also supported the importance of promoting and maintaining a sense of individuality. They found that awareness of residents as individuals was important in helping staff members select dance programs as a potentially effective form of recreational activity for increasing quality of life among residents.

Third, let us link the current study's theme regarding "bonding" to the results of previous research on quality of life in elderly individuals. It was clear throughout the interview transcripts that participation in the Kairos *Dancing Heart*<sup>TM</sup> program often facilitated the establishment and growth of close relationships between various individuals within the program. These relationships took many forms. Some were between the residents and other residents. Some were between residents and staff or volunteers. Some were between the staff and volunteer members themselves. Other interviewees even reported that joint participation in the Kairos Dance program often helped strengthen familial relationships as well, especially during a time when these relationships were susceptible to strain. Through the establishment of these relationships within the group, participants were able to feel connected to other people and to the Kairos and

long-term care communities as a whole. Anderson (2002) found that social isolation was a strong contributor to the development of depression in older individuals, and stated that social relationships were vitally important for maintaining quality of life in this population. Murphy and colleagues (2007) again reiterated the importance of relationship-building in relation to maintaining high quality of life by asserting that residents need to preserve connectedness to others through internal resident interactions, family relationships, companionship and general links to the community of the residential facility in order to maintain quality of life and an overall sense of well-being.

Finally, let us examine the current study's theme of "sacredness and healing." Kane (2001) stated that residents need to have an outlet for spiritual expression in order to maintain high quality of life. One of the more powerful themes that appeared in the present study involved the concept of sacredness, and the ability of the Kairos dance program to affect participants in a spiritual way. Residents, volunteers, staff members and family members all reported that the music utilized by Kairos, in addition to the story-telling and miming components of the program, allowed participants to experience emotions that were often described as healing or sacred. The opportunity to express these feelings thus fulfilled the need for spiritual reflection and expression.

This theme is particularly interesting and important to mention because it would have been a difficult theme to identify or measure through quantitative research methods. As previously stated, spirituality is a key component in quality of life. This component however, is not easily measurable. Important quality of life components such as spirituality are more readily described through the interviews and subjective accounts of a person's direct experience with the program.

In addition to the quality of life domains identified above, the results of the present study are consistent with many other previous research studies regarding quality of life in elderly individuals. One research study claimed that increased participation in activities, alongside the perception of a safe environment led to increased quality of life in older adults (Levasseur, 2008). The results of the present study have echoed this idea that a safe environment is important for facilitating story-telling and artistic expression through dance and participation in the dance program, and that resultant participation in the program has led to a significant and positive impact on quality of life. These results can also lend support to the hypothesis that dance programs may help improve short-term mood in elderly participants during the program, and thus increase their sense of well-being and quality of life, at least for the moment (Eyigor, et al., 2007). Finally, the results of the present study regarding relationship-building and bonding echo previous research findings that social dance programs may improve quality of life through increasing the number of social ties among older adults (Alpert et al., 2009). It is clear from the literature that quality of life is a complicated concept, with many domains or components. It can also be a difficult phenomenon to measure definitively, particularly in elderly individuals with lowered cognitive abilities (Gerritsen et al., 2007). Results of the current study however, in combination with previous research findings, indicate that the Kairos Dance program may be a holistic way to promote well-being and quality of life among elderly residents in long-term care facilities.

#### *Impact of the Dance Program on the Culture of the Facility*

Interviewees in the present study reported that the Kairos Dance program developed a distinct culture within itself, and also produced a significant effect on the culture of the long-term care facility as a whole. One of the ways in which these cultural effects were represented

involved the increased amount of curiosity and interest in the Kairos Dance program since its introduction to the facilities. Interviewees from both facilities reported that there had been a steady rise in the number of residents and volunteers who wished to participate in the program. One of the facilities had to establish a wait-list for residents because the facilities were not big enough to support the number of individuals interested in participating. Other interviewees mentioned that the Kairos program was distinct from other programs in the long-term care facility because of the high level of inter-generational interaction, and the large amount of facilitator involvement. It is interesting to note that inter-generational interaction has previously been associated with positive quality of life outcomes in older adults (Murphy et al., 2007). In order to better understand the unique inter-generational communication that takes place during Kairos, let us refer to any staff, volunteer or family member who participates in the program as a facilitator in the following discussion. In a single dance session with approximately 20-30 residents, it is not uncommon to have three or four Kairos staff members, two or three volunteers, one or two nursing home staff members and several additional family members helping to facilitate the group. Thus, the facilitator to resident ratio can often be as low as 1:2 or lower. This seemingly indicates a level of interest and dedication to the Kairos Dance program that is unlike any other activity program offered by the long-term care facilities. This high staff and volunteer involvement could be considered as an asset to the program, since previous research has found that low staff to resident ratios in long-term care facility programs helped facilitate more positive outcomes in resident satisfaction and overall quality of life (Murphy et al., 2007).

Interviewees also describe the culture of the dance group as being similar to a tight-knit, family. They attribute the high interest in the program to people wanting to join this family-like

community, and interviewees expressed a desire to offer this program more frequently and to a greater number of individuals. Another hypothesized reason for increased interest in the group is the unique environment that is created within the Kairos Dance sessions. This environment is described as a very supportive and open environment that pushes people to give their best efforts when participating in the program. Research on long-term care facility environments has suggested that open, supportive and home-like environments, such as the environment created within the *Dancing Heart*<sup>TM</sup> sessions, can often provide residents with a freedom for self-expression that is uncharacteristic of more institutionalized settings (Reimer, Slaughter, Donaldson, Currie & Eliasziw, 2004). As discussed in the quality of life section, this freedom for self-expression has been identified as a key component in maintaining high quality of life (Kane, 2001; Murphy et al., 2007).

Another possible reason for the high interest and curiosity surrounding the Kairos program may involve the atmosphere of “doing” that is created through the dance session. As mentioned in the discussion on physicality, the “atmosphere of doing” (Van’t Leven & Jonsson, 2002) created when groups of peers gather for meaningful physical activity can often generate feelings of productivity and satisfaction among all members of the group, even those who are not physically participating. Thus, the concept of simply being present to witness the dancing of one’s peers may be an additional motivator for many participants who wish to join the program. Reports from interviewees in the present study suggest that some residents may enter the dance sessions with the intention of simply observing and enjoying the atmosphere of doing, but these residents are often motivated to physically participate by the end of the session. Thus, the atmosphere of doing not only provides satisfaction for the residents, but also motivates them to attempt physical performance to the best of their abilities.

### *Implications for Occupational Therapy*

Occupational Therapists are constantly looking for creative and meaningful ways to help clients participate in their chosen occupations, and to live life to the fullest. A portion of the American Occupational Therapy Association's definition of occupational therapy states:

Occupational therapy addresses the physical, cognitive, psychosocial, sensory, and other aspects of performance in a variety of contexts to support engagement in everyday life activities that affect health, well-being, and quality of life (AOTA, 2008, p. 2).

Results of the current study indicate that the Kairos Dance program addresses nearly all of these performance aspects, and in turn, impacts the health, well-being and quality of life of the program's participants. In this way, the methods used by the Kairos Dance program fall into the general realm of occupational therapy's scope of practice. It is important to re-iterate here that the Kairos Dance program is an arts-based program and is not based in occupational therapy. The methods used by Kairos however, benefit individuals in ways that are of particular interest to occupational science. As occupational science strives to understand what makes specific activities and occupations meaningful to their performers (Clark et al., 1991), the Kairos Dance program may be able to offer helpful insight regarding that subject. The methods used by Kairos are also relevant to the general goals of occupational therapy, as these methods have also been shown to influence the domains of physicality, cognition, socialization, and quality of life, which are all included in occupational therapy's scope of practice (AOTA, 2008).

For example, occupational therapy's scope of practice identifies the improvement or maintenance of ADL (activities of daily living) capabilities as a primary domain for occupational therapists to assess and treat (AOTA, 2008). Interviewees in the present study reported that the use of songs learned during the Kairos Dance sessions could sometimes help cognitively-



impaired residents become more cooperative with their caregivers when performing ADL tasks. Occupational therapy's scope of practice also identifies social interaction as an important domain for occupational therapists to consider and address. Results of the current study provide evidence that the Kairos Dance group promotes social interaction and the establishment of social relationships, and consequently has a positive impact on quality of life.

The geriatric population under study in the current thesis also makes this research an important topic for occupational therapists to consider. It is the responsibility of occupational therapists to serve clients in all stages and walks of life. In addition, it is a well-documented trend that the general population is getting older (Eyigor et al, 2007; Hunter & Gillen, 2009). This suggests that there will be a greater requirement for occupational therapy methods to serve the needs of geriatric populations in the coming years. The aging baby-boomer generation places a high priority on maintaining high productivity and quality of life throughout the lifespan (Hunter & Gillen, 2009), and the Kairos Dance program appears to provide several methods for accomplishing this goal.

Ultimately, when examining the results of the current study, there is evidence to suggest that the use of components such as dance, rhythm, music, or story-telling could be a therapeutic way to help clients achieve their occupational therapy goals. It may be suggested that occupational therapists could expand on their existing practice to incorporate arts-based programming and similar methods into current intervention strategies. Since occupational therapy was founded under the concept that arts-based media could be used to enhance feelings of productivity and overall mental health (Reilly, 1962), the profession is uniquely poised for continued partnership with arts-based programs. This partnership would help provide a more holistic, multi-disciplinary approach to intervention.

To clarify, it may be helpful to provide an example of using therapeutic methods from the Kairos Dance sessions in an occupational therapy context. When performing ADL training (such as baking a cake), it may be useful for the occupational therapist to ask his/her client about the last time they baked, or if they remember when they first learned how to bake etc. This opportunity for story-telling may provide therapeutic gains in memory and cognition (such as those reported by interviewees in the current study). Some occupational therapists may already be utilizing similar methods, in which case the current study lends scientific support to those intervention strategies. Of course, further research would be required to provide a direct correlation between variables such as story-telling and memory.

### *Study Limitations*

Despite a strong mixed methods design in the present study, the qualitative portion of this study has limitations common to all qualitative methods. Given the specific nature of the program provided and the limited number of participants, one must be cautious not to over-generalize results. Another limitation of the study was concerning participants' gender diversity. Due to the voluntary nature of participation, selection was not highly controlled. The final sample consisted of 13 women and only one man. While there are a significantly larger number of women involved with the program, a ratio of 13:1 was not entirely representative of the staffing and volunteer patterns in the program. An estimated representative ratio would be closer to 4:1. There was also an unequal distribution between providers and family members. The final sample in this study included 11 providers and only three family members. This however, is a more accurate representation of the actual provider to family member ratio in the current program. The uneven distribution of participants across genders and roles may have affected the

nature of observations reported. The majority of participants were reporting from the perspective of a female in the “provider” category.

Another limitation in the current study concerned the amount of privacy available during some of the interviews. Due to constraints in availability of space at the facilities where the interviews were conducted, it was not always feasible to conduct interviews in a private one-on-one setting. During several interviews, people were occasionally walking in and out of the room which may have affected participants’ willingness to speak openly or honestly about the program. It may also have provided distraction, causing participants to devote less attention to the interview questions.

The current study also fell under the realm of field research, in that researchers were observing and studying an existing program as it was taking place. This limited the ability to control for many variables. Since researchers were studying multiple outcomes of a multi-faceted program, it is difficult to draw any direct or causal relationships between particular facets of the program and specific results of the current study. For example, although the Kairos dance program used dance as a way to facilitate story-telling, and the residents seemed to be more physically active during the program, we cannot draw a direct correlation between the dancing or story-telling and physical activity, due to the presence of other variables such as music, social interaction, etc. Due to the complicated nature of studying a program in-progress using qualitative methods, attempts were made to maximize reliability and validity of the results through triangulation of participants and data analysis. Despite limitations, it is hoped that results from other portions of the larger, mixed-methods study will be able to supplement results from the current study, and vice-versa, in order to provide a comprehensive understanding of the Kairos program and its effects on long-term care residents.

### *Implications for Further Research*

Due to the fact that it is difficult to draw specific relationships between particular facets of the Kairos program and specific results of the current study, further research may wish to isolate certain components of the program and limit the number of outcomes being measured or observed. This study was a broad exploration of the holistic effects of the program, but because of this, no direct or causal relationships can be drawn from the data. Isolating relationships such as the effects of story-telling on memory, or the effects of music on motivation for physical performance, for example, would strengthen the results of the current study and lend insight into the nature of the program's effectiveness.

Further research may also wish to explore the effects of arts-based programming methods in an occupational therapy setting. As previously stated, the Kairos Dance program is not based in occupational therapy, nor initially founded in occupational science, but the program has been shown to positively affect many domains of life that are important to occupational therapists. Future research could attempt to use music, dance or other components of the Kairos program in an occupational therapy context, and then measure outcomes in relation to occupational therapy goals.

Finally, as mentioned in the previous discussion on "flow," future researchers may wish to investigate other forms of arts-based programming. Future researchers may be able to isolate the components of the current study, and elaborate on the beneficial mechanisms of programs similar to the Kairos dance program. Once these components have been identified and isolated, these components may then be helpful in identifying additional forms of activity, in addition to dance, which may have the potential to promote beneficial experiences similar to those listed in the present paper.

## Conclusions

Due to the rapidly increasing number of elderly citizens in the United States, it is important to investigate innovative methods for maintaining health, wellness and quality of life throughout the lifespan. Dance and reminiscence groups such as the Kairos Dance program have been shown to positively impact many facets of happy and healthy aging. The current study displayed evidence that an arts-based dance and reminiscence group can have a positive impact on multiple elements of personhood for elderly, long-term care residents. Specifically, the qualitative evidence gathered in this study suggests that the dance program had a positive impact on three distinct levels of the long-term care experience for residents: (a) the program had a positive effect on the direct experience of the elderly participants, (b) the dance program seemed to positively influence several aspects of the residents' quality of life, and (c) the positive outcomes of the program carried over to the larger culture of the long-term care facility.

When discussing the direct experience of the dance program for long-term care residents, it was found to help improve physicality through improving balance, range of motion, and strength. It also appeared to increase opportunities for socialization by providing an environment for residents to interact with peers, staff, family members and volunteers in a fun, safe and supportive environment. The dance sessions also appeared to support memory retrieval through reminiscence and story-telling opportunities, and also facilitated the creation of new memories in relation to the songs, choreography, and stories learned during the sessions.

In relation to quality of life, the dance program provided residents with an opportunity to enjoy themselves, through the creative and entertaining nature of the dance activities. It also provided residents with an opportunity to establish and strengthen relationships with other

members of their community. This community interaction has previously been identified as a key component for promoting and maintaining high quality of life (Kane, 2001; Murphy et al., 2007). Finally the dance sessions appeared to provide an outlet for spiritual and artistic expression, through story-telling opportunities and freedom of movement and interpretation. These factors all appeared to increase overall satisfaction and quality of life.

The dance program was also shown to have positive impact on the larger culture of the long-term care facility, by increasing socialization among residents and also socialization between residents, staff and family members. This led to a happier, friendlier environment throughout the facility. The dance program also appeared to increase cooperation between residents and staff members in several instances, through the use of familiar songs and dances. Finally, the program appeared to increase overall interest in arts-based programming throughout the facility. Interviewees expressed a desire to explore and expand the number of arts-based programs offered to residents of the long-term care facilities.

This study provides evidence that it is important to continue investigating the effects of arts-based programming on long-term care residents. The methods utilized through this type of programming may provide a more holistic, inter-disciplinary approach to intervention than many conventional therapeutic methods. Thus, incorporating arts-based programming into therapeutic intervention programs could be a useful means for occupational therapists to provide clients with the most efficient and comprehensive form of care. One interviewee in the present study summarized her perception of the holistic effects offered by the Kairos dance program by stating:

Greta- cognitively they're being stimulated by facts and poems and songs and rhythms. And socially, they're being stimulated by interacting with staff, interacting with others, interacting with leaders, interacting with nurses who might pop by that, spiritually there is openness for their spiritual faith to be

expressed, and physically that they're moving, and they're moving parts of their body that they might not normally move (71).

In summary, the Kairos dance program appears to be an effective way to simultaneously benefit long-term care residents in mind, body, and spirit. This makes the Kairos *Dancing Heart*<sup>TM</sup> program and similar arts-based programs an excellent role-model for occupational therapists and other medical professionals to consider incorporating into future practice.

## References

- Alpert, P.T., Miller, S.K., Wallmann, H., Havey, R., Cross, C., Chevalia, T., et al. (2009). The effect of modified jazz dance on balance, cognition, and mood in older adults. *Journal of the American Academy of Nurse Practitioners*, 21, 108-115.
- Anderson, D.N. (2002). Treating depression in old age: the reasons to be positive. *Age and Ageing*, 30, 13-17.
- AOTA (2008). Scope of practice. *American Journal of Occupational Therapy*, 63(6), 353-360.
- ARPF (2010). Introduction to: the 4 pillars of Alzheimer's Prevention, an holistic medical approach. *Alzheimer's Research and Prevention Foundation*. Retrieved February 13, 2011, from [http://www.alzheimersprevention.org/intro\\_4\\_pillars.htm](http://www.alzheimersprevention.org/intro_4_pillars.htm)
- Ashida, S. (2000). The effect of reminiscence music therapy sessions on changes in depressive symptoms in elderly persons with dementia. *Journal of Music Therapy*, 37 (3), 170-182.
- Bassuk, S.S., Glass, T.A. & Berkman, L.F. (1999). Social disengagement and incidence of cognitive decline in community-dwelling elderly persons. *Annals of Internal Medicine*, 131, 165-173.
- Castora-Binkley, M., Noelker, L.S., Prohaska, T. & Satariano, W.A. (2010). Impact of arts participation on health outcomes for older adults. *Journal of Aging, Humanities, and the Arts*, 4, 352-367.
- Clark, F.A., Parham, D., Carlson, M.E., Frank, G., Jackson, J., Pierce, D., et al. (1991). Occupational science: academic innovation in the services of occupational therapy's future. *American Journal of Occupational Therapy*, 45, 300-310.
- Cohen, G.D. (2006). Research on creativity and aging: The positive impact of the arts on health and illness. *Generations*, 30 (1), 7-15.



- Cohen, G.D., Perlstein, S., Chapline, J., Kelly, J., Firth, K.M., & Simmens, S. (2006). The impact of professionally conducted cultural programs on the physical health, mental health, and social functioning of older adults. *The Gerontologist*, *46*, 726-734.
- Comeau, S. (2002). Stress, memory and social support. *McGill Reporter*, *35*. Retrieved on February 13, 2011, from <http://www.mcgill.ca/reporter/35/02/lupien/>.
- Damon-Rodriguez, J., Frank, J.C., Enriquez-Haass, V.L., & Reuben, D.B. (2005). Definitions of health among diverse groups of elders: Implications for health promotion. *Generations*, *29*(2), 11-16.
- Dunton, W.R. (1919) *Reconstruction Therapy*. Philadelphia: Saunders
- Eyigor, S., Karapolat, H., Durmaz, B., Ibisoglu, U., & Cakir, S. (2007). A randomized controlled trial of Turkish folklore dance on the physical performance, balance, depression, and quality of life in older women. *Archives of Gerontology and Geriatrics*, *48*, 84-88.
- Gerritsen, D.L., Steverink, N., Ooms, M.E., Vet, H.C.W., & Ribbe, M.W. (2007). Measurement of overall quality of life in nursing homes through self-report: the role of cognitive impairment. *Quality of Life Resources*, *16*: 1029-1037.
- Hagen, B., Armstrong-Esther, C., & Sandilands, M. (2003). On a happier note: validation of musical exercise for older persons in long-term care settings. *International Journal of Nursing Studies*, *40*(4), 347-357.
- Hokkanen, L., Rantala, L., Remes, A.M., Härkönen, B., Viramo, P. & Winblad, I. (2008). Dance and movement therapeutic methods in management of dementia: a randomized, controlled study. *Journal of the American Geriatrics Society*, *56*, 771-772.

- Hunter, I.R. & Gillen, M.C. (2009). Stress coping mechanisms in elderly adults: an initial study of recreational and other coping behaviors in nursing home patients; report. *Adultspan Journal*, 8(1), 43-54.
- Kane, R. (2001). Measurement, indicators, and improvement of quality of life in nursing homes. *University of Minnesota School of Public Health*, 1-6.
- Kinney, J.M. & Rentz, C.A. (2005). Observed well-being among individuals with dementia: Memories in the Making, an art program, versus other structured activity. *American Journal of Alzheimer's Disease and Other Dementias*, 20(4), 220-227.
- Kumar, A.M., Tims, F., Cruess, D.G., Mintzer, M.J., Ironson, G., Loewenstein, D., et al. (1999). Music therapy increases serum melatonin levels in patients with Alzheimer's disease. *Alternative Therapy Health Medicine*, 5(6), 49-57.
- Lacey, A. & Luff, D. (2001). Trent focus for research and development in primary health care: An introduction to qualitative analysis. *Trent Focus Group*. Retrieved February 15, 2006, from <http://www.trentrdsu.org.uk/cms/uploads/Qualitative%20Data%20Analysis.pdf>.
- Larson, E.B., Wang, L., Bowen, J.D., McCormick, W.C., Teri, L., Crane, P., et al. (2006). Exercise is associated with reduced risk for incident dementia among persons 65 years of age and older. *Annals of Internal Medicine*, 144, 73-81.
- Lee, L.Y.K., Lee, D.T.F., & Woo, J. (2009). Tai chi and health-related quality of life in nursing home residents; clinical scholarship. *Journal of Nursing Scholarship*, 41(1), 35-44.
- Levasseur, M., Desrosiers, J., & Tribble, D.S. (2008). Do quality of life, participation, and environment of older adults differ according to level of activity? *Health and Quality of Life Outcomes*, 6, 30-38.

- Murphy, K., O Shea, E., & Cooney, A. (2007). Quality of life for older people living in long-stay settings in Ireland. *Journal of Clinical Nursing*, 2167-2177.
- Nakamura, J. & Csikszentmihalyi, M. (2002). The concept of flow. In C.R. Snyder & S.J. Lopez (Eds.), *Handbook of positive psychology*, 89-105. Oxford: Oxford University Press.
- Orfila, F., Ferrer, M., Lamarca, R., Tebe, C., Domingo-Salvany, A., & Alonso, J. (2006). Gender differences in health-related quality of life among the elderly: the role of objective functional capacity and chronic conditions. *Social Science and Medicine*, 63, 2367-2380.
- Palo-Bengtsson, L. & Ekman, S.L. (2000). Dance events as a caregiver intervention for persons with dementia. *Nursing Inquiry*, 7, 156-165.
- Palo-Bengtsson, L., Winblad, B. & Ekman, S.L. (1998). Social dancing: a way to support intellectual, emotional and motor functions in persons with dementia. *Journal of Psychiatric and Mental Health Nursing*, 5, 545-554.
- Patton, M.Q. (2002) *Qualitative research and evaluation methods* (3<sup>rd</sup> ed.). Thousand Oaks, CA: Sage Publications.
- Ravelin, T., Kylmä, J. & Korhonen, T. (2006). Dance in mental health nursing: a hybrid concept analysis. *Issues in Mental Health Nursing*, 27, 307-317.
- Reilly, M. (1962). Eleanor Clarke Slagle lecture: Occupational therapy can be one of the great ideas of 20<sup>th</sup> century medicine. *American Journal of Occupational Therapy*, 16, 87-105.
- Rolland, Y., Pillar, F., Klapouszczak, A., Reynish, E., Thomas, D. Andrieu, S., et al. (2007). Exercise program for nursing home residents with Alzheimer's disease: A 1-year randomized, controlled trial. *Journal of the American Geriatric Society*, 55, 158-165.

- Schafer, K. (2011). *Importance of a dance program for long-term care residents*. Unpublished master's thesis, Saint Catherine University, Saint Paul, Minnesota.
- Song, R., June, K.J., Kim, C.G., & Jeon, M.Y. (2004). Comparisons of motivation, health behaviors, and functional status among elders in residential home in Korea. *Public Health Nursing, 21*, 361-171.
- Statistics Bureau, Japan (2010). Statistical Handbook of Japan 2010. Retrieved March 3, 2011, from [www.stat.go.jp/english/data/handbook/index.htm](http://www.stat.go.jp/english/data/handbook/index.htm).
- Stern, Y. (2002). What is cognitive reserve? Theory and research application of the reserve concept. *Journal of the International Neuropsychological Society, 8*, 448-460.
- Tennis, J.T. (2006). Social tagging and the next steps for indexing. *17th SIG/CR Classification Research Workshop*, 1-15.
- Van de Winckel, A., Feys, H., & De Weerd, W. (2004). Cognitive and behavioural effects of music-based exercises in patients with dementia. *Clinical Rehabilitation, 18*, 253-260.
- Van't Leven, N. & Jonsson, H. (2002). Doing and being in the atmosphere of the doing: Environmental influences on occupational performance in a nursing home. *Scandinavian Journal of Occupational Therapy, 9*, 148-155.
- Verghese, J., Lipton, R.B., Katz, M.J., Hall, C.B., Derby, C.A., Kuslansky, G., et al. (2003). Leisure activities and the risk of dementia in the elderly. *New England Journal of Medicine, 348*, 2508-2516.
- West, J., Otte, C., Geher, K., Johnson, J. & Mohr, D.C. (2004). Effects of hatha yoga and African dance on perceived stress, affect, and salivary cortisol. *Annals of Behavioral Medicine, 28*(2), 114-118.
- Yerxa, E. (1993). Occupational science: A new source of power for participants in occupational therapy. *Occupational Science: Australia, 1*, 3-9.

## Appendix A

**INFORMATION AND CONSENT FORM****(Providers)****Importance of a Dance Therapy Program for Long-term Care Residents****Introduction:**

You are invited to participate in a research study investigating the therapeutic benefits of a dance therapy program on long term residents. This study is being conducted by St. Catherine University in collaboration with the Kairos Dance Program. The study will be conducted under the supervision of Catherine Sullivan, Ph.D., OTR/L and Kristine Haertl, Ph.D., OTR/L in conjunction with two graduate student researchers, Siri Rydholm, OTS, and Kelsey Shafer, OTS. You were selected as a possible participant in this research because you are a provider of services or a volunteer for the Kairos dance program and/or one of the long-term care residences hosting the dance program (Names of facilities inserted here) . If you are interested in the study, you will be asked to participate in an interview exploring the importance of the dance therapy program for the participants. Please read this form and ask any questions you have before you agree to participate in the study.

**Background Information:**

The purpose of this study is to examine the importance of the Kairos dance program for long-term care residents. Approximately ten individuals are expected to participate in this research. The study is being conducted at two sites: (Names of facilities inserted here). Interviews will be conducted with providers and caregivers associated with the participants of the Kairos dance program in order to explore the impact of the program on physical and emotional status and quality of life.

**Procedures:**

If you are interested in being included in the study, you will be asked to participate in an interview with the student researcher, Siri Rydholm. The researcher will contact you and ask for a convenient time and location to conduct the interview; if you desire, a copy of the consent form may be provided to you in advance. The interview will last approximately 45 to 75 minutes and will ask questions regarding your personal experience with the Kairos dance program and your observations of the impact on resident participants of the program. Interview questions will focus on the impact of the dance program on the participants, the group culture and the impact on the nursing facility. No names will be used in the coding, transcribing, or reporting of the information. You will be asked to sign a consent form at the time of the interview. You may discontinue the study at any time.

**Risks and Benefits of being in the study:**

The study has minimal risks. Some questions may be perceived as personal and/or sensitive in nature as they inquire of your observations and perceptions of the impact of the dance program on the participants. You may choose not to answer any question or questions that you wish without affecting your participation in the study. Confidentiality will be maintained throughout the study; no participant's name will appear in the final written research report. At any time during the study, you may request that information be withheld from use. You may also request that the tape recorder be stopped or paused for any reason during the course of the interview. At any time prior, during, or after the interview, you may discontinue participation in the study.

There are not direct benefits to you as a participant for being in the study. An external benefit is an opportunity to share your unique opinions and perspectives on therapeutic properties of the Kairos dance program. This is an opportunity to give personal insights on the effects of the program on long-term

residents. It is hoped that information from this study will lead to academic and practical knowledge regarding the efficacy, meaning and impact of the dance therapy program.

**Confidentiality:**

Any information obtained in connection with this research study that can be identified with you will be disclosed only with your permission; your results will be kept confidential. In any written reports or publications, no one will be identified.

The research results will be password protected on the computer and only the faculty advisors and student researchers will have access to the records while we work on this project. Data analysis should be completed by December of 2010. We will then destroy all original reports and identifying information that can be linked back to you. The tape from the interview will be kept in the locked file cabinet and only the students and advisors will have access to them. The tape will be destroyed by December 2010.

**Voluntary nature of the study:**

Participation in this research study is voluntary. Your decision whether or not to participate will not affect your future relations with the Kairos Dance program, the affiliated Long-term care residences or St. Catherine University. If you decide to participate, you are free to stop at any time without affecting these relationships.

**Contacts and questions:**

If you have any questions, please feel free to contact the student researchers Siri Rydholm at (phone #), Kelsey Schafer (phone #) the faculty advisors, Dr. Kristine Haertl at (phone #) and Dr. Catherine Sullivan at (phone #). If you have other questions or concerns regarding the study and would like to talk to someone other than the researcher, you may also contact Dr. John Schmitt, Chair of the College of St. Catherine Institutional Review Board, at (phone #).

You may keep a copy of this form for your records.

**Statement of Consent:**

You are making a decision whether or not to participate. Your signature indicates that you have read this information and your questions have been answered. Even after signing this form, please know that you may withdraw from the study at any time.

---

I consent to participate in the study and agree to be audio-taped.

---

Signature of Participant

Date

---

Signature of Researcher

Date

## Appendix B

**Interview Guide- Providers**

**Concepts from the Literature for the effects of dance and exercise on the elderly:** Motivation- Affect/Mood- QOL- Movement- Follow through with Health Related Activities-Balance/ Physical-ADLs- Behavior-Cognition-Social Interaction

**Background/ General Questions:** (Student introduces self and the general purpose of the study without guiding the answers <e.g., do not say, “We want to see if the dance therapy program improves balance and cognition”>)

1. In what capacity are you affiliated with the Kairos Dance program and the program sites?
2. How long have you been involved with the program?
3. In general how do the dance program participants respond to the program?

**Sub Question: What is the meaning and experience of dance and music for the participants?**

1. From the client interactions and behaviors within and outside the dance therapy group, what meaning or importance do you believe the dance program has for them?
2. Do you believe that personal or cultural experiences with music and dance influences their individual response to the group? Why or why not?
3. Do clients ever discuss personal stories in relation to the dance therapy group? **Follow up-** What is the effect of these stories (e.g., does it influence mood, interaction, response to the group?)
4. Describe the social culture of the group. **Follow up-** Do clients socialize with each other? ...

**Subquestion: What is the perceived impact of the Kairos’ program on quality of life for the participants?**

1. How does the state of the client coming into the group on a particular day influence his/her participation in the group? Does the group seem to affect mood, energy level or interaction?
2. Do you notice any effects of the group on client or group mood? Please describe. **Follow up-** Do these mood effects continue outside of the group?
3. Do you notice any effects of the group on client arousal? Please describe. **Follow up-** Do these arousal effects continue outside of the group?
4. Do you notice any effects of the group on client’s memory and thinking? Please describe. **Follow up-** Do these effects continue outside of the group?
5. Do you notice any effects of the group on client’s social interaction? Please describe. **Follow up-** Do these effects on social interaction continue outside of the group?
6. Do you notice any effects of the group on the client’s physical status (this may include mobility, overall health, energy level, etc.) **Follow up-** Do these effects continue outside of the group?

**Subquestion: What is the perceived impact of the Kairos program on the culture of the long-term care facility?**

1. Describe the staff/ volunteer interaction with the clients within the group.

2. Are there particular qualities that seem to influence the staff effectiveness within the group?  
Please describe.
3. Do you believe the group influences the staff/ client interactions outside of the group? Why or why not?
4. Do you believe the program has influenced the staff/ volunteer perceptions of art based programming? Why or why not?
5. Have administrators been supportive of the program?
6. Please describe any additional observations of how the program has affected the culture of the nursing home/ long-term care facility.

**Closing:**

1. What is the meaning of the dance therapy program for you?
2. Do you believe it is an effective program and enhances services to the clients? Why or why not?
3. What general benefits of the dance program do you see for the participants? (Expand on any specifics)
4. Are there any suggestions you would have for the dance program? (Expand on any specifics)
5. Is there anything further you believe would be important for us to know in relation to the dance therapy program?

**Thank you for your participation!**



## Appendix C

**Qualitative Data- Preliminary Coding Framework**

Category Name	Code	Description
<b>Category #1</b>		
EMOTION		
EM		
Description: Emotions experienced by residents resulting from engagement in Kairos Dance Program.		
Love/Enjoyment/Fun	EM-LENJ	includes any time the interviewee states a positive emotion felt in relation to the program, or observation of other participants enjoying the program or having fun. This includes any time the fun is used as a descriptor of the program. May also include participant quotes such as “I love this program.” Or “This program is so much fun. Excludes description of non-verbal expression of emotions.
Anticipation	EM-ANT	Resident expressions of “looking forward” to the next Kairos Dance session or expressing a desire to return to the Kairos program again in the future.
Validation	EM-VAL	Kairos participants feeling recognized, acknowledged, or validated as a unique individual with unique gifts to offer. This also includes the notion that resident’s lives are meaningful regardless of their age or ability.
Improved Mood In	EM-IM-IN	This includes descriptions of evidence that resident’s mood was lifted or improved during the course of the dance session(s). Note: has to include statement denoting “change” or “improvement” otherwise code as EM-LENJ above
Improved Mood Out	EM-IM-OUT	This includes descriptions of evidence that resident’s mood continued following the dance session.
<b>Category #2:</b>		
ENGAGEMENT		
ENG		
Description: Includes all references to participants actively engaging in the dance program.		
Non-Verbals	ENG-NV	Participants displaying eye contact, smiling, or spontaneously reaching out a hand are non-verbal signs of engagement in the Kairos Dance activity. Include only non-verbal for emotional expression or interpersonal contact. Excludes physicality from participation in the program (see code below)

Response to Different Forms of Stimuli	ENG-RSTM	Includes increased participation due to music, movement, physical touch, props, or a specific combination of these stimuli.
Increased Physicality	ENG-PHYS	Includes participants displaying increased physical ability or participation in the Kairos Dance group. Such as toe-tapping or standing to dance when they don't often stand otherwise.
Increased Arousal/Alertness	ENG-IA	Includes any references to _ increased energy, wakefulness, or alertness as a result of participation in the Kairos Dance group that has not been mentioned in the "Non-verbal" and "physicality" code above. Also refers to effects lasting after the end of the session.
Decreased Participation	ENG-DP	Refers to signs that residents are being over-stimulated or fatigued by the dance group, or display decreased participation on a given day (possibly due to extraneous factors).
One-on-one interaction	ENG-OINT	Refers to staff-volunteer/resident one-on-one interaction with residents in the Program.
<b>Category #3:</b>		
MEMORY		
MEM		
Description: Includes any references to client memories in association with the Kairos Dance group.		
Story-Telling	MEM-ST	This refers to residents sharing stories from their past during the Kairos Dance sessions.
Creating New Memories	MEM-CRT	Includes any reference to evidence that residents remember previous Kairos Dance sessions or activities, and/or are creating new memories from participation in the Kairos Dance program. Examples include recognizing members of the group, remembering new songs or new routines learned during the Kairos groups, anticipating the sessions etc.
Accessing Memories via Songs/Music	MEM-MMUS	Includes references to certain types of music or songs facilitating memories from the resident's past. Excludes memories of songs or routines learned in the program
Emotional Memories	MEM-EM	Includes descriptions of powerful emotional memories shared by residents during the Kairos dance group. These memories may be tied to strong emotions that are either positive or negative.
Memories Out of Group	MEM-OUT	Includes memories formed during the Kairos group that are retrieved outside of the group.

<b>Category #4:</b> RELATIONSHIPS			REL
Description: Descriptions of relationship forming/building with other individuals in the Kairos Dance Group.			
Sense of Belonging	REL-BEL	Includes statements that participants experience a sense of belonging to something/a particular group.	
Relationships Among Residents In Group	REL-RR-IN	Includes mention of residents building relationships with other residents in the Kairos Dance group.	
Relationships Among Residents Outside of the Group	REL-RR-OUT	Includes mention of residents who have formed relationships in the Kairos group displaying continued relationships outside of the group.	
Relationships Between Residents and Staff/Volunteers In the Group	REL-RSV-IN	Includes references to relationship building among residents and the staff or volunteers that facilitate the Kairos Dance program each week.	
Relationships Between Residents and Staff/Volunteers Outside the Group	REL-RSV-OUT	Includes mention of residents and staff members or volunteers who have formed relationships in the Kairos group displaying continued relationships outside of the group.	
Socialization	REL-SOC	Includes references to socialization benefits of the Kairos Dance program. Does not include specific references to a feeling of belonging. (Ex: meaningful conversation, singing/humming music together).	
<b>Category #5:</b> MEANING			MEAN
Description: This code includes anything that conveys particular meaning to the resident, client, or volunteer. This code may overlap some others but includes the importance of spirituality, self-hood, and areas that resonate with personal interest.			
Spirituality	MEAN-SPIR	This code includes items that speak to the spiritual, personal, and collective nature of the group. This is not specifically linked to religious references, but may include religious references.	
Personhood	MEAN-PERS	This code relates to the comments that validate the individual's sense of personhood, belonging, and personal meaning. Includes mention of individual feelings of self-worth.	
Creativity	MEAN-CRT	This code includes mention of opportunities for residents to express creativity. Examples may include storytelling, choreography, etc.	

<b>Category #6:</b> ENVIRONMENT ENVT		
Description: Includes descriptions of the environment that the Kairos Dance Program takes place in.		
Supportive	ENVT-SUP	Descriptions of residents feeling that the Kairos Dance program takes place in a supportive environment that encourages their participation. This may include physical or emotional support of participation. (Support residents in freedom of self expression)
Culturally Sensitive	ENVT-CLT	Includes references to considering resident's specific cultural backgrounds when choosing music/themes/activities for the dance program.
Safe	ENVT-SF	Includes references to an environment that reduces the threats or risks of participation in the Kairos Dance program. This is closely related to, but distinct from the supportive environment code. Support encourages participation. Safety reduces the barriers to participation. (Ex: can participate regardless of physical/singing abilities).
Individualized	ENVT-IND	Includes one on one interaction with clients, and adjustment of activities/themes/music based on individual preferences and abilities. Refers to the feeling that each resident can participate in/benefit from the program at a level appropriate for them. (Just right challenge).
<b>Category # 7:</b> THERAPEUTIC INTENT THER		
Description: Includes the elements of the group and qualities important in the volunteers and staff in order to promote the groups desired positive effects. For example, qualities important in a volunteer, use of individualized music, etc.		
Physical Elements	THER-PHYS	This would include the use of props, items, balls, etc., that seem to encourage the desired effects of the group.
Personal Qualities	THER-PERS	This code includes personal qualities such as ability to engage the client, willingness to work one-on-one and overall positive mood and disposition, etc. that contribute to the desired effects of the group.
Cultural Elements	THER-CUL	The inclusion of elements that resonate with the clients own culture and develop unique collective culture of the group. (Note: this may also include the influence of the culture at the site.)

<b>Category # 8:</b> STAFF/VOLUNTEERS/FAMILY			SVOLF
Description: Includes all non-resident participants of the Kairos Dance Program.			
Effects for staff/volunteers	SVOLF-EFF	Includes descriptions of personal effects that staff and volunteers experience from their participation in the Kairos Dance Program.	
Effects on Family	SVOLF-FAM	Includes Kairos participant's family member's response to the program. This includes positive or negative family reports and support of the Kairos Dance Program. If an interviewee is both a family member and a volunteer for the Kairos Dance Program, their comments should be included in this section, rather than SVOLF-EFF section.	
Staff/volunteers/family suggestions for Kairos improvements	SVOLF-IMP	Includes suggestions made to improve the Kairos Dance Program. Ex: Expand within the facility and to other facilities and decrease length of time (resident fatigue).	
Evaluation	SVOLF-EVAL	Includes evaluative responses about the program. Examples may include what they like or do not like it.	

## Appendix D

## Charting Example for the Category Code: ENG-NV

Category	Code	Participant	Quote	Line	Additional Lines
ENG	NV	Olivia	She didn't sing a songs but she did all the other things that all of us did in the little skit	383	130, 215, 226, 289-290, 335-336, 350, 353, 368, 380, 403, 472
ENG	NV	Greta: Initial	When we play music from their country, they really, they can really feel the beat, and you really see it in their bodies and in their faces	12	23
ENG	NV	Greta: Follow-Up	None	---	-----
ENG	NV	Frances	we do have some that will get up on their own without any encouragement to participate and to be the center, and will walk around	36	34
ENG	NV	Kelly	None	---	-----
ENG	NV	Lori	I think most often the light in their eyes is a big thing and then the smile and then the physical participation	64	30, 64
ENG	NV	Eliza	But this time it was amazing. She was awake for, you know, really the whole time and looking around and she couldn't move much but she was still engaged and moving her fingers and doing a little finger dancing and so I definitely see that happening	49	6, 22, 23, 25, 34, 64
ENG	NV	Dianne	And they're smiling. It's a smiling thing up there.	37	51, 74, 82, 86, 119
ENG	NV	Hannah	Sometimes the whole group is laughing. They say belly laughing is good for you. And when we sing "Oh what a beautiful morning" there's a part in there where everyone can laugh, so we hold our tummies and we laugh.	48	
ENG	NV	Julie: Initial	I've seen people break out in smiles like two thirds through the, through the morning, ya know? And it's very, there'll be a sudden change in their face, all of a sudden they're smiling, yeah.	38	12, 32, 44, 76, 90
ENG	NV	Julie: Follow-Up	then as the group goes on their face lights up and they smile	9	6, 7, 13
ENG	NV	Carol	Sometimes, I'm, lots of times we hang onto hands and they'll put their hand out to the next person, you know, someone you wouldn't think would	30	28, 82

			even do that, well when they see us all hanging onto hands will actually put their hand out to the person next to them.		
ENG	NV	Beth	K.S: So you can see from her body language and her expressions that she's definitely upbeat and lifted. MR: Oh definitely.	43/44	34
ENG	NV	Ariel	Like several times we have a resident who is can't speak but completely understands everything around him. And one of the boys during the program put his arm around him. And the gentleman just responded with a huge smile.	26	12, 24, 35, 57, 73, 118
ENG	NV	Michelle	Some will move but it just seems like they are all smiles in there you know.	13	13, 17, 22-23, 27, 55, 57
ENG	NV	Nathan	I have noticed that he smiles even when they bring him in	12	5, 16, 21, 26, 31, 44, 45, 51, 53, 59

## Appendix E

## Compiled Category-Code Themes and Overall Category Themes

ENG	NV	THEME	Faces light up with smiles, and people will often get up or initiate physical contact with one another.
ENG	RSTM	THEME	Everyone seems to respond to the music (different songs/beats reach different people), and there are also physical props that seem to elicit increased engagement.
ENG	PHYS	THEME	Many residents have displayed increased movement capabilities throughout the course of the program, and many of them seem more motivated to move/dance/exercise when there is music to accompany them.
ENG	IA	THEME	Many residents (not all) seem to display increased arousal levels, or are described as “more awake/alert” during the program than when they first came in. There are a few observations to suggest they may even remain more alert after the program is finished.
ENG	DP	THEME	There were fewer mentions of this category, but not all residents actively engage in the program. Some are too sleepy, or too medicated, or too sick to engage in the Kairos activities. Some residents also display signs of becoming overwhelmed by the stimulation in the group, and withdraw or request to leave.
ENG	OINT	THEME	The importance placed on one-on-one interaction is mentioned several times, as well as the importance of eye contact or physical contact with one individual at a time. This one on one interaction seems to increase arousal and participation among the residents.
ENG	OTH	THEME	Sometimes it is difficult to observe how engaged a resident may actually be. Also, there are extraneous factors like age and medical condition that affect engagement. It is important to note that engagement levels also vary among individuals.
ENG	<b>CATEGORY</b>	<b>THEME</b>	<b>Overall, there seem to be several things that elicit increased engagement among the residents during Kairos. Through music, eye-contact, physical props, physical contact, and movement, the majority of residents seem more alert and engaged with their surroundings after they leave than before they came in. This is not true for ALL residents, however.</b>
REL	BEL	THEME	There seem to be positive reactions when the residents feel that they are a part of a group. Many people reference a feeling of connection among everyone involved.
REL	RR-IN	THEME	Residents seem to display evidence of relationships with each other, either by talking, reaching out for one another’s hand, or actually dancing together if they are able. These bonds have been observed and mentioned by approximately ¾ of the interviewees.
REL	RR-OUT	THEME	A few of the residents seem to be continuing relationships formed within the group, even when they are out on their floors. This has been observed less with residents who have dementia, and many of the interviewees caution that they haven’t been able



			to personally witness evidence of these relationships outside the group.
REL	RSV-IN	THEME	Many interviewees report a positive relationship is formed between the residents and the young men who volunteer with the group. They also describe a stronger bond that seems to be established between the residents and Kairos staff or volunteers, presumably due to the emotion involved with sharing personal stories during the group.
REL	RSV-OUT	THEME	This group does seem to facilitate relationships between residents and the Kairos staff/volunteers even outside of the group (particularly between residents and nursing home staff who are involved in the Kairos program). It gives them a common experience to refer to in conversations throughout the week (between Kairos sessions).
REL	SOC	THEME	Almost all interviewees mentioned observations of positive social interaction that occurs during the group, and they believe that particular opportunity to interact with peers in a fun and positive environment is helpful in improving mood and quality of life among the residents.
REL	OTH	THEME	There are a few times that participants mention music or dance being a way to encourage continued relationships among residents and their family members.
<b>REL</b>	<b>CATEGORY</b>	<b>THEME</b>	<b>It was frequently mentioned that this group seems to facilitate relationship building among various types of people (volunteers and residents, residents and residents, residents and their families, volunteers and other volunteers etc.) Every time relationship building was mentioned, it was in a very positive context, and seemed to be one of the most appreciated outcomes of the program.</b>
ENVT	SUP	THEME	Many references to encouraging residents to participate to the best of their ability, and assisting them to participate in any way that they are able.
ENVT	CLT	THEME	Only half of the participants mentioned anything about culture in their interview, but those that did definitively stated that they have noticed that songs from certain cultures resonate with people from that culture, and elicit more movement and participation from those individuals. There is an effort to use songs from various cultures.
ENVT	SF	THEME	This category was a little “iffy,” but overall, there were several references to residents feeling that this is a safe environment, where they will not be judged or injured for trying to participate, and they will be allowed to sit back and rest when they need to. Their boundaries are respected.
ENVT	IND	THEME	Many references to finding music that resonates with individual residents, and then creating a nice mix of music so that each individual will feel that their interests and requests have been noticed.
ENVT	OTH	THEME	No participants mentioned anything that would fall into the “OTHER” Environment category.

ENVT	CATEGORY	THEME	<b>The environment seems to be positive overall. It seems to encourage residents to participate, by providing a mix of musical themes that will reach a variety of residents on a personal level. The staff is also very encouraging, wanting the residents to participate to the best of their abilities.</b>
SVOLF	EFF	THEME	Many participants state that this is a very rewarding program to be a part of. They also mention that they learn a lot from this program (whether that be learning what life was like in the 50s, or learning how much people are actually capable of, or learning how much the residents have to offer with their stories, etc).
SVOLF	FAM	THEME	Half of the participants did not mention anything that would fall into this category/code. The other half mentioned that Kairos is always open to family members and encourages family member participation. Family members have also stated that they appreciate Kairos, and they think it has been very beneficial for their loved ones.
SVOLF	IMP	THEME	Many said they had no suggestions. Others thought it should keep growing and expanding. Some suggestions refer to preparedness, decreased length, and helping the site to conduct this program on their own.
SVOLF	EVAL	THEME	Numerous mentions of this being a very “positive” program. Participants frequently praise the program all throughout the interview and say they are happy that it is happening.
SVOLF	OTH	THEME	Very limited instances of this code appearing. One referring to the importance of observation, and one referring to the medical attention paid to a resident (by staff, who also happen to be associated with the Kairos program).
SVOLF	CATEGORY	THEME	<b>It appears there are intrinsic rewards for everyone involved: staff, volunteers, residents, family etc. Overall, everyone seems to express a lot of appreciation for the program and the people involved, and would like to continue to see it grow and expand.</b>
EM	LENJ	THEME	Comments of love, fun, joy, enjoyment, and happiness as emotions experienced as a direct result of the Kairos dance program or some aspect of the program. A sense of positive emotions in the resident’s day for at least the duration of the Kairos dance program. Also, many expressed excitement within the program. (Excitement)
EM	ANT	THEME	Comments of looking forward to participating in the Kairos dance program. Residents will express their desire to return and request reminders of when Kairos takes place.
EM	VAL	THEME	Comments of feeling genuinely cared about, special, worthwhile, individually recognized and acknowledged in the Kairos program. Addressing resident’s by their name is significant in the individual feeling recognition and validation. Each resident is viewed as unique and deserving of recognition of past and present gifts and contributions in the Kairos group.
EM	IM-IN	THEME	Residents are consistently noted to be happier with increased positive emotions in the Kairos group than they are outside of the program. Even if individuals are not having a good day or

			are in a negative mood prior to entering the Kairos program, their mood will improve as a result of Kairos.
EM	IM-OUT	THEME	The resident's enhanced positive mood resulting from the Kairos dance group continues following the program for various amounts of time for each unique individual. Many residents leave the Kairos group and proceed with their day by singing, smiling, and discussing their positive emotions experienced in relationship to Kairos.
EM	OTH	THEME	Each resident is unique and thus, individuals may have good or bad days in the Kairos program. Kairos dance program promotes positive attitudes within the residents, and residents seem to be in a better mood when they leave the program than when they arrived.
EM	CATEGORY	THEME	<b>Through participation in Kairos, residents experience increased positive emotions and improved mood both in, and following, the program. Residents are validated as unique individuals with valuable gifts to contribute. Overall, participants love the Kairos program and look forward to attending each Kairos dance program.</b>
MEM	ST	THEME	Residents often share personal and meaningful life stories and memories in the Kairos group. When a topic is initiated, residents contribute by sharing their individual memories/stories and it is common for time to elapse quickly on that topic and for other topics/sharing of memories to evolve through the original discussion subject.
MEM	CRT	THEME	There is evidence that residents are creating new memories through learning new songs, recognizing individuals who also participate in Kairos, knowledge of the date and time the program occurs, continuation of conversations initiated in Kairos the previous week, and discussions of what occurred within the Kairos group.
MEM	MMUS	THEME	Music is significant in facilitating the resident's recall of memories. Residents demonstrate music memory (musical tune of songs) and the ability to sing songs that they have not thought of since childhood. Specific musical ensembles stimulate resident's memories of the past, typically very positive and happy memories.
MEM	EM	THEME	Residents in the Kairos dance program share nostalgic past memories of their lives. These shared stories are often memories that the residents have not thought of or discussed for many years.
MEM	OUT	THEME	Many residents who participate in the Kairos dance program have memories of the music, conversations, and activities outside of the scheduled program. They may bring these memories up themselves, or they may respond when someone else solicits that memory from the group.
MEM	OTH	THEME	The memory ability of residents is unique for each individual but overall long-term memory appears to be more intact than short term memory. Kairos promotes memory retrieval and engages the mind.

MEM	CATEGORY	THEME	<b>Music in the Kairos group enhances the residents past memory retrieval of music, words to songs, and of nostalgic memories. Those who participate in Kairos are creating new memories through their engagement in the program and participants are sharing their emotional memories from the past with others in Kairos through storytelling.</b>
MEAN	SPIR	THEME	Kairos is a spiritually open program in which residents can experience their individual faith, sacred, and spiritual beliefs. Some believe that while participating in Kairos they have/share/feel a spiritual connection to some higher entity.
MEAN	PERS	THEME	The Kairos program helps residents feel needed, special, cared for, worthwhile, and validated for who he or she is as a person.
MEAN	CRT	THEME	In the Kairos group, residents are free to use their imaginations, be playful, and be spontaneous. The music helps stimulate the creative part of the mind.
MEAN	OTH	THEME	Kairos is a holistic program that engages the entire body.
MEAN	CATEGORY	THEME	<b>The Kairos program is viewed as holistic, Ecumenical, and provides participants with a sense of connection and spirituality. Each unique individual is viewed as a worthy, special, and needed person whom is free and encouraged to be creative and imaginative in the Kairos program.</b>
THER	PHYS	THEME	Props such as scarves, whistles, costumes, balls, maracas, and tambourines are incorporated into the Kairos group. A dog is often brought to the group and other props are brought based upon the resident's unique preferences and meaningful associations with items such as specific cooking supplies.
THER	PERS	THEME	Personal qualities that staff and volunteers bring to the Kairos group include: outgoingness, listening skills, compassionate, encouraging, supportive, and sensitive to resident's needs and moods, friendly and welcoming, and the willingness to provide positive touch such as hand holding and hugging.
THER	CUL	THEME	Kairos affects the culture of the nursing homes. Music and dance specific to a resident's culture, such as African music, is incorporated into the Kairos group.
THER	OTH	THEME	Kairos begins each group with high energy. Hand holding is encouraged.
THER	CATEGORY	THEME	<b>Tangible props (such tambourines and a pet dog) and personal qualities (such as friendly outgoingness and listening skills) positively impact the residents who participant in the Kairos dance program. Resident's unique cultural backgrounds are acknowledged through cultural specific music and dance during the Kairos group. The overall culture of the nursing home is positively impacted by the Kairos dance program.</b>