Pilot Study on Pet Therapy and Quality of Life

Kathy L. VanVoorhis
St. John Fisher College

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Abstract
The World Health Organization (WHO) defines quality of life (QOL) as an individual's perception of his or her position in life in the context of their culture and value systems in relation to their goals and expectations. The goal of this pilot study was to determine how pet therapy can influence QOL of residents in assisted living facilities. To measure the anticipated change in QOL, each participant in the experimental group was required to complete the WHO Quality of Life brief questionnaire, WHOQOL-BREF, before the initiation of the pet therapy program and after the session, for a total of two sessions. The experimental group also completed an interview after the therapy sessions regarding their experience. The Results of the pilot study demonstrated that not only did the participants' perceive a change in QOL as measured by the WHOQOL-BREF questionnaire, but they also experienced a decreased sense of loneliness with an increase perception of QOL after completion of the study. The purpose of this study was to explore the relationship pet therapy has on a person's QOL while residing in an ALF.

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St. John Fisher College

April 25, 2010
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Abstract

The World Health Organization (WHO) defines quality of life (QOL) as an individual’s perception of his or her position in life in the context of their culture and value systems in relation to their goals and expectations. The goal of this pilot study was to determine how pet therapy can influence QOL of residents in assisted living facilities. To measure the anticipated change in QOL, each participant in the experimental group was required to complete the WHO Quality of Life brief questionnaire, WHOQOL-BREF, before the initiation of the pet therapy program and after the session, for a total of two sessions. The experimental group also completed an interview after the therapy sessions regarding their experience. The Results of the pilot study demonstrated that not only did the participants’ perceive a change in QOL as measured by the WHOQOL-BREF questionnaire, but they also experienced a decreased sense of loneliness with an increase perception of QOL after completion of the study. The purpose of this study was to explore the relationship pet therapy has on a person’s QOL while residing in an ALF.
Chapter 1: Research Problem Identification

For many people, companionship provided by animals has a calming and therapeutic effect. Companion animals may help individuals cope with emotional issues through physical contact and friendly attention. Residents of assisted living facilities (ALF) are no longer living in their usual surroundings and many have left behind their family and their pets. This life-altering change may result in many feelings of loneliness and alienation for residents. Loneliness in older individuals is influenced by a deterioration of health, loss of a partner, and institutionalization (Tijhuis, De Jong-Gierveld, Feskens, & Kromhout, 1999). Quality of life is defined by the World Health Organization (WHO) as an individual’s perception of his or her position in life in the context of the culture and value systems in which they live and in relation to their goals, expectations, standards and concerns (Harper, Orley, Power, Kuyken, Sartorius, & Bullinger, 1996). Through the introduction of pet therapy into ALF, residents may be able to combat loneliness (Weinberg, Fuchs, Pals, & Call, 2004). In this study, the researcher hypothesized that residents who participate in pet therapy will have a higher quality of life (QOL) score on the WHOQOL-BREF tool, a lower perceived sensation of loneliness and a higher perceived QOL after pet therapy than scores taken from residents prior to their therapy experience. Pet therapy is a simple concept with large rewards.

Nursing as a profession emphasizes caring for the whole person, their health, happiness, and mental stability. As a result of providing pet therapy, a nurse might expect residents to experience a decrease in loneliness, and subsequently experience an increase in QOL. Pets often act as a catalyst for socialization or human to human
interactions. Such an environment can be more therapeutic than a nurse to patient interaction.

Ekwall, Sivberg, and Hallberg (2005) argued that loneliness can be used as a predictor of a person’s QOL and should be investigated to understand the impact of social restrictions. Tijhuis et al. (1999) noted that declining health and major changes in living situation, such as institutionalization, may lead to limited social life among older people. Ekwall et al. (2005) found that feelings of loneliness coupled together with small or nonexistent social networks were significantly associated with low QOL.

Banks and Banks (2002) and Barba (1995) found that companion animals can stimulate socialization or act as a catalyst for socialization between different residents and among residents and the staff. The animals can act as a subject for conversation or they can be a listener to the resident. An increase in socialization can reduce the resident’s perceived loneliness and can provide companionship for the resident during their therapy session. A dog’s presence can be a positive focus in beginning communication, allowing defenses to soften, building a rapport, and initiating therapy (Hooker, Holbrook-Freeman, and Stewart, 2002).

Measuring loneliness grasps only one part of the complex framework that creates an individual’s QOL. Most studies examine the benefits that animal assisted therapy provides between patients and health care workers. Niksa (2007) and Laun (2003) both discussed the positive effects pet therapy has on communication, stress reduction and loneliness on psychiatric patients, stroke survivors, patients with dementia, and on health care workers. There is a lack of research on the QOL benefits that pet therapy provides
to ALF residents. A review in the literature from 1995 to 2009 revealed 11 articles on pet therapy, none of which focused directly on pet therapy and QOL. Because results of previous research indicate that pet therapy provides different advantages that contribute to a person’s QOL, there is a need to determine how pet therapy can increase adults’ perception of their QOL while residing in an assisted living facility.

Moving into an assisted living community is challenging on many levels. The individual’s known way of life is greatly changed and torn apart. People are not only struggling to accept their declining independence, but sometimes also are coping with selling their home, giving away pets, and losing the familiarity of previous surroundings (Tijhuis et al, 1999). Parse’s belief that each human being is an expert on their personal health is known as the theory of human becoming (as cited by Cody, n.d.). The human becoming theory focuses on humanly lived experiences of health. It is defined as an open, unitary process of becoming with the universe (Cody, n.d.). One particular aspect of this theory, transcendence, relates to the sensitive situation individuals face when adjusting to dwelling in assisted living communities. For an individual to transcend, he or she needs to move beyond the present moment and build a unique personal path for themselves despite ambiguity and continuous change (Cody, n.d.). In keeping with the acceptance of the theory of human becoming, and likewise the theme of transcendence, the importance of using a subjective measurement for a person’s QOL can be acknowledged. Only through proper qualitative and quantitative measurements of their perceptions of QOL can adjustments or alterations in residents’ healthcare be made to help them increase their perceived QOL. Therefore, this study included both the brief questionnaire and short individual interviews after the pet therapy sessions to gain
insight into the ALF residents’ experiences with the pets. By applying a practical mixed method research design for this pilot study allowed for a more comprehensive independent analysis of both quantitative and qualitative data (Gilbert, 2006; Lieber, 2009).

It is hypothesized that residents who participate in pet therapy will have a higher QOL score on the WHOQOL-BREF tool, a lower perceived sensation of loneliness and a higher perceived QOL after pet therapy than scores taken from residents prior to their therapy experience.
Chapter 2: Literature Review

This literature review is organized around the variables identified for study: pet therapy, loneliness, and quality of life. Most articles provide information reinforcing the use of pet therapy as a means of providing social opportunities. These articles offered differing views on how pet therapy can increase a resident’s ability to create social opportunities. Literature also revealed that pet therapy allows patients to have uninhibited conversations with the animals. The residents could have these conversations without fear of expressing their emotions or true feelings. The ability of an animal to give and receive love unconditionally is one of the many reasons why people are likely to benefit from pet therapy.

Pet Therapy

Pet assisted therapy (PAT) can contribute to good health, psychosocial well-being, and assist in the recovery from serious conditions (Walsh, 2009). Pet therapy is the utilization of trained animals to achieve specific physical, social, cognitive, and emotional goals (Walsh, 2009).

Barak, Savorai, Mavashev, and Beni (2001) conducted a one year study involving 20 geriatric schizophrenic participants, 10 constituting the control group and 10 constituting the experimental group. The experimental group, which interacted with animals, had significant improvements in social functioning, impulse control, and in daily activities when compared to the control group as measured by the Social-Adaptive Functioning Evaluation instrument. Additionally, Stanley-Hermanns (2002) reported that 10 randomly selected patients from a transitional care unit from Trinity Mother Frances...
Health System in Texas, were given the opportunity to touch and embrace dogs for 5 minutes each day over an undefined period of time. Through the use of the *Profile of Mood States-Short Form*, it was discovered patients' experienced a reduction in anger, hostility, tension, and anxiety after their interactions with the therapy dogs (Stanley-Hermanns, 2002).

Hooker et al., 2002, found that patient joy from being with an animal led to an increase in activity participation and elevated the patient’s mood long after the pet visit was completed. Additionally, Hooker and colleagues determined that institutionalized Alzheimer's patients experienced an increase in socialization after interacting with their therapy animal. After a yearlong longitudinal study of independent living older individuals, a correlation was revealed between animal interactions and preservation of activates-of-daily-living (Hooker et al., 2002). Older individuals who maintained pet ownership showed an increased ability to care for their own personal health as well as their pet's health (Hooker et al., 2002). The animals were thought to have helped maintain a daily routine and motivated their owner to complete daily activities such as eating and sleeping.

Walsh (2009) measured and compared the physiologic changes in elderly residents who participated in PAT with those who did not. Walsh (2009) found a strong correlation between positive physiological measures such as decreased blood pressure, triglycerides, and total cholesterol levels and pet therapy. Other measured benefits from animal interactions were a reduction in personal anxiety, depression, loneliness, and an enhanced feeling of social support (Walsh, 2009). Walsh (2009) also determined that the
constant presence of a pet will help elderly individuals to adhere to a daily schedule through engaging them with their environment.

**Loneliness**

Loneliness can have a direct relationship with an individual’s perception regarding their quality of life. For many elderly, loneliness occurs from the death of a spouse or partner, resulting in a disruption of the individual’s social network (Prosser, Townsend, & Staiger, 2008).

Banks and Banks (2002) examined the perception of loneliness in long term care centers within the elderly population. Banks and Banks (2002) used the UCLA loneliness scale in a nursing home to measure a group of 45 participants that formed pet therapy and non pet therapy groups. The researchers found that participants who interacted with the pets had lower loneliness scores when compared to participants who were not interacting (Banks & Banks, 2002). Banks and Banks (2002) also found a noticeable subpopulation within their participant group who had a positive past history of an intimate relationship with a family pet.

Prosser, Townsend, and Staiger (2008) examined the social network disruption that occurs when elderly individuals enter into residential care facilities. They believed that companion animals would minimize feelings of loneliness and assist with age related transitions in the elderly population (Prosser, Townsend, & Staiger, 2008). In this study the researchers, observed 18 participants who were currently residing in an assisted living facility over a 6 week intervention period. The participants were exposed to a variety of companion animals such as dogs, cats, rabbits, and guinea pigs. Participants were
interviewed before and after their 6 week interaction with the companion animals. The results of this pilot study revealed a decrease in feelings of sadness, hopelessness and loneliness in the participants with an increase in perceived satisfaction of social network (Prosser, Townsend, and Staiger, 2008).

**Quality of Life**

The degree to which an individuals’ emotional and social functioning, or loneliness, are affected by aging is thought to compromise a person’s perceived quality of life (Perterman, Rothrock,& Cella, 2009). According to the WHO, QOL is an individual’s perception of their QOL in regard to his or her disease and health (Harper, Orley, Power, Kuyken, Sartorius, & Bullinger, 1996).

Peterman, Rothrock, and Cella (2009) believed that quality of life is directly related to an individual’s physical symptoms, capacity to complete daily activities, emotional happiness, relationships, social participation, and financial stability. According to Peterman, Rothrock, and Cella (2009) the implementation of a quality of life assessment during disease and treatment evaluations will improve communication channels between individuals and their providers. They recommend that quality of life assessments be given specifically to oncologic and palliative clients to help reveal anxiety and depression and to quantify to the extent a person is suffering (Perterman, Rothrock,& Cella, 2009).

Quality of life reflects a multidimensional concept consisting of an individual’s social interaction, physical wellbeing, psychological status, and connection to the environment (McClane, 2006). McClane believes that utilizing a quality of life screening
tool will assist providers in identifying unmet needs of elderly individuals. By identifying unmet needs one can hope to avoid a functional decline and create a more individualized care plan. One screening tool mentioned was the WHOQOL-BREF which is a generic questionnaire that can be used in the aging population (McClane, 2006). The WHOQOL-BREF contains 4 domains: physical health, psychological health, social relationships, and environmental influences with one question directly measuring an individual’s overall quality of life. This questionnaire was regarded as useful because of its multicultural relevance.

The review of the literature revealed a gap related to measuring an ALF resident’s QOL and the effects of pet therapy. Most research studies have focused on one aspect of QOL, such as loneliness, rather than attempting to see what happens to all aspects of QOL (Banks, & Banks, 2002). A person’s QOL is subjective and, as a result, measurement of this is challenging. Loneliness is only one aspect of a person’s QOL. It is essential to expand the focus to determine how pet therapy affects the overall QOL.

Another knowledge gap concerns the negative arguments against developing a pet therapy program due to fear of zoonosis. Zoonosis is the fear of transmission of disease or parasites from animals to humans (Hooker et al., 2002). This concern is significant due to some of the residents’ altered immunological response to disease. It would be beneficial to have statistics regarding the reported annual incidences of disease transmission to humans, and what factors were involved. Many restrictions are placed on the type of residents who may receive pet therapy, as well as restrictions related to which kind of animal can participate. Having knowledge of whether these guidelines were
followed in cases where zoonosis was diagnosed would help facilities that are currently hesitant to implement such a program.
Chapter 3: Methodology

Purpose

The purpose of this study was to explore the relationship pet therapy has on a person’s QOL while residing in an ALF. To objectively measure the effect of pet therapy on an individual’s QOL, the use of the WHOQOL-BREF tool was employed. It was hypothesized that residents who participate in pet therapy would have a higher QOL score on the WHOQOL-BREF tool after pet therapy than scores taken from residents prior to their therapy experience. Since QOL is a subjective perception, interviews took place with the residents after the pet therapy sessions were completed in order to gain insight into the residents’ perceptions of the experience.

In this pilot study, an experimental and control group of ALF residents was monitored during visits from the Lollypop Farm Animal Assisted Therapy program. The experimental group was comprised of residents who participated in the pet therapy program provided by Lollypop Farm. Lollypop Farm’s organization visits local ALF with a group of volunteers and their certified therapy pets consisting of dogs and rabbits. The control group contained ALF residents who completed the WHOQOL-BREF questionnaire prior to the PAT and did not participate further with the pilot study.

Setting

The settings of this pilot study were three separate assisted living facilities: Legacy at Park Crescent, Fleming Point and the Gables. These facilities are dedicated to individuals who require additional assistance in their daily activities. The pet therapy visit occurred as follows: The therapy animals were brought to a general area where the
residents could gather freely. This typically occurred in a larger room, such as a library, that could accommodate the animals and the volunteers. The Lollypop Farm Animal Assisted Therapy program normally visits each facility two times a year depending on the demand for their services. The data collection was repeated within the same facility twice while Lollypop Farm visited the facility. It was essential for the data to be gathered from the same group of people each time. After the second data collection a personal interview was conducted with each participant and then transcribed.

Method

This pilot study of pet therapy and its effects on QOL on ALF residents was approved by the Institutional Review Board through St. John Fisher College (Appendix D: IRB Application). The rights of human subjects were addressed via the introductory letter, and through informed consent. To limit any participant inconsistency, timely notification of the residents was critical. A letter of disclosure was distributed that displayed the types of scenarios for which pet therapy would be deemed inappropriate for the residents (Appendix B: Disclosure letter). The notification letter announced the pet therapy study session and requested continued participation from the residents. The assisted living management was asked to distribute letters of disclosure to appropriate individuals who met inclusion criteria. The notification letter contained an explanation of the requirements for participation in two pet therapy sessions as well as a statement that there was no penalty for dropping out of the program. All participants were required to sign a consent form.
Each pet therapy animal went through a thorough selection process to help minimize any dangers to the participating residents. For example, a dog needed to pass a Certified Dog International Test. The requirements for this test are that a dog must demonstrate confidence and control (Weinber, Fuchs, Pals, and Call, 2004). The dog must be able to sit politely for a stranger and allow the person to pet them. The dog cannot show any signs of aggression or nervousness. The handler must keep the dog well groomed and up-to-date with vaccinations and physical exams. Additionally, the dog must have good reactions to distractions and not bark or growl in response (Weinber, Fuchs, Pals, and Call, 2004).

As previously stated, the visit frequency of the pet therapy team to the assisted care facilities is about twice a year. At this rate, residents may form friendships with the handlers of the therapy pets. In order to minimize the effects of this intervening variable, the ramifications of the potential interaction was explained to the pet handlers, and a request was made that they try to minimize their personal interactions with the residents.

The WHOQOL-BREF QOL tool (Appendix A: WHOQOL-BREF tool) which focuses on perceptions of physical health, psychological, social relationships, and environment was used to evaluate the ALF residents’ QOL changes. Nine questions (numbers 1, 2, 5, 6, 14, 20, 22, 23 and 26), specifically relate to QOL aspects that may show measurable increase as a result of a pet therapy program. Residents were expected to complete the WHOQOL-BREF questionnaire in order to measure QOL both before and following interactions with the pet therapy animals. The first questionnaire given to participants and completed before the therapy session was labeled pre-PAT. The completed pre-PAT questionnaires were used to randomly select 10 individuals to form
an experimental group and 10 individuals to form the control group. A second
questionnaire was distributed to the 10 participants in the experimental group directly
following the pet therapy session (1\textsuperscript{st} post-PAT). The pre-PAT data from the control
group’s WHOQOL-BREF questionnaire was compared to the experimental group’s pre-
PAT data to demonstrate the commonality between the groups. The results from the
experimental group’s questionnaire were compared between the first initial pet therapy
session, 1\textsuperscript{st} post-PAT, and with subsequent pet therapy session (2\textsuperscript{nd} post-PAT). Lastly,
after the second pet therapy session the 10 individuals in the experimental group were
interviewed at their convenience regarding their experience with the pet therapy program.
This interview was an opportunity for the participating residents to discuss what pet
therapy meant to them. Participants were asked a series of open ended questions to
prompt a discussion about their experience (Appendix C: Open-ended Questions). Each
interview lasted approximately ten minutes and was transcribed.

Sample

Gaining a sample size of 10 residents for the pilot study was the goal for the
experimental group. Inclusion criteria for participants for this study were those ALF
residents who could read, write, and speak English. Additionally, participants needed to
have a healthy immune system, and free of pet allergies. It was essential to include a
wide range of ALF residents to accurately portray the benefits of pet therapy in ALF.
Each resident who participated in the animal therapy session was requested to complete
the WHOQOL-BREF questionnaire before the therapy session.
Some examples of why a resident would not be able to interact with the animals would be individuals if they had open sores on their skin, or those who were immunocompromised and could become a victim of an opportunistic infection from the animal. One way to eliminate that possibility is through a letter of disclosure (Appendix B: Disclosure letter). Because of repetitive meetings, residents may form friendships with the handlers of the therapy pets. In order to minimize the effects of this intervening variable, the ramifications of the potential interaction was explained to the pet handlers, and a request was made that they try to minimize their personal interactions with the residents.
Chapter 4: Data Analysis

In order to compile the WHOQOL-BREF questionnaire data, the results needed to be transformed according to the provided equations into Domain 1, 2, 3, and 4 raw scores (Appendix A: WHOQOL-BREF Tool). Once the raw scores were computed, the pre-PAT and 1st and 2nd post-PAT results were entered into a Microsoft Excel spreadsheet for data analysis as well as SPSS. The cross sectional data were sequentially collected at two different points of time. Data displayed via frequency distribution and used to create a histogram for a visual comparison on the QOL results between the different pet therapy sessions, between the different domains and between the control and the experimental groups.

It was hypothesized that residents who participate in pet therapy will have a higher QOL score on the WHOQOL-BREF tool after pet therapy than scores taken from residents prior to their therapy experience. The WHO determined that QOL is comprised of four domains defined as physical health (Domain 1), psychological (Domain 2), social relationships (Domain 3) and environment (Domain 4) (Harper et al., 1996). The directional hypothesis for this question stated residents who participated in pet assisted therapy will perceive that they have a higher QOL than those who do not. The results were computed for a percentage change for each participant and within each domain. The relationship between number of times an individual participated in PAT and their perception of QOL was measured using a correlation coefficient. A correlation coefficient is a statistic that represents the strength and direction of a relationship between variables (Holcomb, 2006). An average raw score was computed for the control group (pre-PAT) and the experimental group (1st post-PAT, 2nd post-PAT) within each
domain. The average was used to calculate a Pearson R value for each of the domains. A y formula was also developed that represents a regression line for calculated predictive future trends in the post-PAT results. The results are listed in Table 1 and 2.

Table 1.  
Pearson R for Each Domain.

<table>
<thead>
<tr>
<th>Domain Number</th>
<th>Pearson R</th>
<th>Y Formula</th>
</tr>
</thead>
<tbody>
<tr>
<td>Domain 1: Physical health</td>
<td>R² = 0.78</td>
<td>y = 1.25x + 21.43</td>
</tr>
<tr>
<td>Domain 2: Psychological</td>
<td>R² = 1.00</td>
<td>y = 1.90x + 18.57</td>
</tr>
<tr>
<td>Domain 3: Social relationships</td>
<td>R² = 0.94</td>
<td>y = 1.25x + 8.37</td>
</tr>
<tr>
<td>Domain 4: Environment</td>
<td>R² = 0.97</td>
<td>y = 1.15x + 31.27</td>
</tr>
</tbody>
</table>
The hypothesis stated that pet assisted therapy decreased participants’ sensation of loneliness, represented through Domain 3. The directional hypothesis stated that residents who participated in PAT will perceive that they have a decreased sense of loneliness, represented as an increase in Domain 3 score. An average for the pre-PAT 1st post-PAT and 2nd post-PAT session for the experimental group was calculated from the experimental group’s Domain 3 QOL score. The Pearson r value was used to represent the pre-test and the post-test within Domain 3 as the participants gained experience with PAT. The results are listed in Table 3 and 4. Additionally, a paired-sample t test was utilized to investigate the relationship between pre-PAT and post-PAT. The t test can
determine the statistical significance of the difference between two means (Holcomb, 2006). The results are listed in Table 5.

Table 3.

*Pearson r Value for Domain 3: Social relationships.*

<table>
<thead>
<tr>
<th>Pearson r</th>
<th>R² = 0.83</th>
</tr>
</thead>
<tbody>
<tr>
<td>y Formula</td>
<td>y = 0.85x + 8.45</td>
</tr>
</tbody>
</table>

Table 4.

*Mean QOL Score for Domain 3: Social relationships.*

![Domain 3 Mean QOL Score](image)
Table 5.

*Paired-Samples t Test for Domain 3: Social relationships.*

*Social Relationships and Loneliness Means for Pre-PAT and Post-Pat*

<table>
<thead>
<tr>
<th>Social Relationship</th>
<th>Loneliness</th>
<th>t</th>
<th>df</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-PAT</td>
<td>9.80</td>
<td>-3.101*</td>
<td>9</td>
</tr>
<tr>
<td></td>
<td>(3.08)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Post-PAT</td>
<td>12.30</td>
<td>-3.101*</td>
<td>9</td>
</tr>
<tr>
<td></td>
<td>(1.95)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Note.* *p* ≤ .05. Standard Deviations appear in parentheses below means.

The correlation of the pre-PAT and the 1st post-PAT and the 2nd post-PAT for Domain 3 is significant with a Pearson R value of 0.8309. The mean score increased from 9.8 (sd = 3.08401) on the pre-PAT to 12.3 (sd = 1.94651) on the post-PAT. A paired or correlated samples t test indicated that the pre-PAT had on average significantly more loneliness than post-PAT, *t* (9) = 3.10, *p* = .013, *d* = -.98. The difference, although statistically significantly is small at the 0.05 level (Valentine, & Cooper, 2003).

The last hypothesis examined whether the overall perception of an individual’s QOL increased due to pet assisted therapy. The directional hypothesis stated that resident who participate in PAT will perceive that they have an increase in QOL. Overall QOL is represented via question 1 on the WHOQOL-BREF questionnaire. This question asked the participants to rate their overall QOL on a scale from 1 to 5, “1” being the least and “5” being the highest value. The result was averaged for each session, pre-PAT, 1st post-PAT, and 2nd post-PAT. The averages for each session were used to calculate the
Pearson R value. The results are listed in table 6 and 7. Furthermore, a paired-sample $t$ test was used to explore the Question 1 data, results shown in Table 8.

Table 6.

*Pearson r Value for Question 1.*

<table>
<thead>
<tr>
<th>Pearson r</th>
<th>$R^2 = 0.83$</th>
</tr>
</thead>
<tbody>
<tr>
<td>y Formula</td>
<td>$y = 0.22x + 3.70$</td>
</tr>
</tbody>
</table>

Table 7.

*Mean QOL Score for Question 1.*

![Mean QOL For Question 1](image)
Table 8.

Paired-Samples t Test for Question 1.

QOL Score for Question 1 for Pre-PAT and Post-Pat

<table>
<thead>
<tr>
<th>Question 1</th>
<th>Quality of Life Score</th>
<th>t</th>
<th>df</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-PAT</td>
<td>4.10 (.74)</td>
<td>-2.71*</td>
<td>9</td>
</tr>
<tr>
<td>Post-PAT</td>
<td>4.70 (.48)</td>
<td>-2.71*</td>
<td>9</td>
</tr>
</tbody>
</table>

Note. *=p ≤ .05. Standard Deviations appear in parentheses below means.

The result for the correlation of question 1 on the WHOQOL-BREF questionnaire is significant with a Pearson r value of 0.871. The mean score increased from 4.1 (sd=0.7379) on the pre-PAT to 4.7 (sd=0.4830) on the post-PAT. A paired samples t test indicated that the pre-PAT had on average significantly less QOL score than the post-PAT, $t(9) = -2.71$, $p = .024$, $d = -.86$. The difference although statistically significant, is small at the 0.05 level.

It is hypothesized that residents who participate in pet therapy will have a higher QOL score on the WHOQOL-BREF tool, a lower perceived sensation of loneliness and a higher perceived QOL after pet therapy than scores taken from residents prior to their therapy experience. In order to further determine the influence of pet therapy on residents’ perception of loneliness, the researcher met with the residents after the final therapy session. The information gathered from the 10 individuals who participated in the interview was transcribed and summarized for common responses. The interview was
conducted after the 2\textsuperscript{nd} PAT. When a common response was recognized the results were used to create a table as shown in Table 9.

Table 9.

*Follow up Responses to the PAT interview summary.*

<table>
<thead>
<tr>
<th>Interview Question</th>
<th>Common Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Describe past experience with pets.</td>
<td>70% Previously owned a dog.</td>
</tr>
<tr>
<td>2. Describe the PAT experience.</td>
<td>90% reported the PAT was a pleasant experience.</td>
</tr>
<tr>
<td>3. How did PAT make you feel?</td>
<td>70% reported feeling positively after the PAT session.</td>
</tr>
<tr>
<td>4. After 1\textsuperscript{st} post PAT, how did you feel the next day?</td>
<td>50% felt positively the day after the PAT.</td>
</tr>
<tr>
<td></td>
<td>40% reported feeling no change the day after the PAT.</td>
</tr>
<tr>
<td></td>
<td>10% felt worse the day after the PAT.</td>
</tr>
<tr>
<td>5. What did you enjoy most?</td>
<td>60% enjoyed the pets most.</td>
</tr>
<tr>
<td></td>
<td>40% enjoyed interacting with the pets most.</td>
</tr>
<tr>
<td>6. What did you enjoy least?</td>
<td>10% felt worse the day after the PAT.</td>
</tr>
<tr>
<td></td>
<td>60% regretted that the pets had to leave.</td>
</tr>
<tr>
<td></td>
<td>30% were worried about exposure to the pets.</td>
</tr>
<tr>
<td>7. What happened after the PAT session?</td>
<td>50% discussed the PAT session with others.</td>
</tr>
</tbody>
</table>

As indicated, about 70% of the interviewees felt positively after the session with 50% feeling more positive the day after the PAT session. Forty percent contributed feeling better to their direct interaction with the animals. Fifty percent of the interviewees reported discussing their experience with others.
Chapter 5: Interpretation and Discussion of Findings

To report the effects of pet therapy on the perceptions of QOL among ALF residents, one must acknowledge the inherent limitations in the design. The necessity to maintain continuity of residents between the two therapy sessions was essential. This was difficult due to the residents’ different daily schedules. Many of the residents who live in an ALF may not be present each day due to previous engagements, and health care appointments. Another limitation affecting consistency involved the consistent availability of pet therapy trainers. To ensure that study results were comparable, it was necessary to employ the same therapy group for each session. One tactic utilized was to enroll participants who were able to commit to return for the second therapy session. Individuals who were unable to commit were not invited to comprise the experimental group.

In order to have a safe interaction between the participant and the animal, a handler was required. It was difficult to determine whether the perceived increase in QOL was due only to the contact between the participant and the animal, or whether the presence of the handler has some bearing on the outcome, thus creating a second limitation. For the purpose of this study the handlers were permitted to tell the group the animals’ names, age, and breed. The handlers were asked to limit further conversation with the residents. This was important to minimize outside interference and to allow for the development of a connection between the participants and the pets.

As a result of the introduction of pet therapy in ALF there was an increase in participant’s perceived QOL, thus resulting in decreased perceived feelings of loneliness. When residents perceive that their QOL is acceptable, they may be more apt to engage in
daily activities and foster relationships with other individuals. Both of these characteristics are important in maintaining an acceptable level of perceived QOL.

According to the WHO, QOL is comprised of multiple factors such as an individual’s physical health, psychological health, social health and environmental health (Harper et al., 1996). A percentage change was computed for each participant within each domain the results are shown in Table 10.

Table 10.

Domain Percentage Change for Participants.

<table>
<thead>
<tr>
<th>Participant</th>
<th>Domain 1: Physical health</th>
<th>Domain 2: Psychological</th>
<th>Domain 3: Social relationships</th>
<th>Domain 4: Environment</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Control</td>
<td>Pre-PA</td>
<td>1st Post-PA</td>
<td>2nd Post-PA</td>
</tr>
<tr>
<td>1</td>
<td>2</td>
<td>5</td>
<td>23</td>
<td>17</td>
</tr>
<tr>
<td>2</td>
<td>1</td>
<td>4</td>
<td>20</td>
<td>28</td>
</tr>
<tr>
<td>3</td>
<td>2</td>
<td>1</td>
<td>27</td>
<td>27</td>
</tr>
<tr>
<td>4</td>
<td>2</td>
<td>4</td>
<td>20</td>
<td>23</td>
</tr>
<tr>
<td>5</td>
<td>1</td>
<td>7</td>
<td>22</td>
<td>24</td>
</tr>
<tr>
<td>6</td>
<td>1</td>
<td>8</td>
<td>19</td>
<td>22</td>
</tr>
<tr>
<td>7</td>
<td>2</td>
<td>2</td>
<td>32</td>
<td>23</td>
</tr>
<tr>
<td>8</td>
<td>2</td>
<td>1</td>
<td>24</td>
<td>27</td>
</tr>
<tr>
<td>9</td>
<td>2</td>
<td>4</td>
<td>20</td>
<td>24</td>
</tr>
<tr>
<td>10</td>
<td>2</td>
<td>2</td>
<td>21</td>
<td>23</td>
</tr>
<tr>
<td>Mean Result</td>
<td>2</td>
<td>0.8</td>
<td>22</td>
<td>24.3</td>
</tr>
</tbody>
</table>
Domain 1 represents physical health and includes such aspects as activities of daily living, dependence on medicinal substances and aids, energy and fatigue, mobility, pain and discomfort, sleep and rest, and work capacity (Harper et al., 1996). The mean score for the control group was 20.8 while the experimental group’s pre-PAT at 22.3. The 1st post-PAT mean score was 24.7 with the 2nd post-PAT session at 24.8. Overall there was a 13% change in the perceptions of the experimental group after their second therapy session with PAT. The highest percent change was 45% with the lowest percent change at -17%. After the second pet assisted therapy session the participants perceived that their level of physical health was more acceptable than before they joined the therapy session. Since the Pearson r was 0.78 one can acknowledge that the participants’ perceptions of their physical health would improve and it would likewise be represented through their increase in the Domain 1 score. Through using the y formula one is able to demonstrate the predicted direction the experimental group’s scores will take. After 9 sessions y = 32.683 demonstrating that the domain 2 score may continue to increase if the intervention were to continue.

The second factor, or Domain 2, symbolizes the psychological aspects that are required to maintain a QOL. The psychological category includes an individual’s bodily image and appearance, negative feelings, positive feelings, self-esteem, spirituality, thinking, learning, memory and concentration (Harper et al., 1996). The mean score for the control group was 20.5 with the experimental group’s pre-PAT score at 20.4. The post-PAT mean score for the first session was 22.5 and the second session was 24.2. The overall percentage change was 19%. The highest percent change was 47% while the lowest percent change was 10%. After the second PAT session the participants perceived
that their psychological health was more acceptable than before they participated in the therapy. The Pearson r was 0.9963 signifying that the participants might continue to perceive their psychological health as improving. After 9 sessions of PAT, the y formula indicates that \( y = 35.667 \), demonstrating that the Domain 2 scores may continue to improve if the intervention were to continue.

The QOL character, social health and relationships are represented in Domain 3. The social relationship category includes an individual’s personal relationships, social support, and sexual activity (Harper et al., 1996). This category was acknowledged to encompass the aspect of loneliness. The mean score for the control group was 9.7 with the experimental group’s pre-PAT score at 9.8. The post-PAT mean score for the first session was 10.5 and the second session was 12.3. The overall percentage change for the individual participants was 42%. The highest percentage change was 38% with the lowest percentage change at –9%. After the second PAT therapy session the participants perceived that their social health was more acceptable than before they started the initial PAT session. Since the Pearson r was 0.9394, this indicates that the participants may continue to perceive their social health as improving, if the intervention were to continue. According to the y formula, after 9 sessions \( y = 19.6267 \) which indicates that the domain 3 score will continue to increase, if the intervention were to continue.

Domain 4 encompassed the QOL environmental category. This domain measured such things as an individual’s perception of their financial resources, freedom, physical safety and security, health and social care: accessibility and quality, home environment, opportunities for acquiring new information and skills, participation in and opportunities for recreation and leisure activities, physical environment, and their access to
transportation (Harper et al., 1996). The mean score for the control group was 29 with the experimental pre-PAT score at 32.3. The first post-PAT score was 33.8 and the second post-PAT score at 34.6. The overall change of the participants’ individual Domain 4 score was 8%. The highest percent change was 26% while the lowest was -6%. Following the second PAT session the participants perceived that their environmental health had improved. The Pearson r value is 0.97, indicating that the experimental group participants may continue to perceive their environmental health as improving, it the intervention were to continue. When applying the y formula, after 9 sessions \( y = 41.617 \) thus indicating that the Domain 4 score will continue to increase if the intervention were to continue.

As mentioned previously Domain 3 represents the construct of loneliness. When analyzing the changes that occurred within Domain 3 the Pearson R value was 0.8309. The y value according to the formula after 9 sessions of PAT \( y = 19.038 \) thus indicating that there will continue to be an increase in the Domain 3 score representing a decrease in the participant’s sensation of loneliness if the intervention were to continue.

This finding demonstrates that the directional hypothesis is has been supported: that individuals involved in pet assisted therapy will have a lower perception of loneliness. This was further validated by the interview response that 50% of the participants acknowledged discussing the PAT session with others. Through increasing their communication, residents were able to actively decrease their sensation of isolation. Interacting with others allowed the participants to foster relationships with other residents and staff bringing them together via a common experience.
In order to examine how the participants felt their QOL changed as a result of PAT, Question 1 was examined. One can presume to measure QOL through each aspect or domain that is believed to comprise total QOL. When an individual is asked to rate his or her own QOL each person may have a different perception.

Out of a 5 point scale with “5” as the highest score the mean QOL for pre-PAT was 4.1 while the post-PAT was 4.7 ($r=0.8345$). According to the $t$ formula, in order for participants to perceive that their QOL score was 5/5, they would need to join in a total of 5 pet assisted therapy sessions. This trend also was represented in the interview session in which 50% of the participants reported they felt more positively the day after their PAT session, and 70% reporting that they felt more positive the day of the PAT session. The data derived from question 1 supports the directional hypothesis that residents who engage in PAT perceived an increase in QOL as a result.

Results of the pilot study PAT and QOL, demonstrate that not only will one perceive a change in QOL as measured by the WHOQOL-BREF questionnaire, but also will perceive a decreased sense of loneliness with an increase perception of QOL. It also may be appropriate to posit that over time, with a continuation of PAT, there will be a continued increase in each domain, and consequently, in QOL.

Further evaluation as to the effects of PAT on ALF residents is needed. Despite the evidence that PAT has an influence on QOL, future research may involve an examination of whether there are differences to be found when one particular animal or another is used for PAT. Additionally, an examination of whether an individual’s past experience with animals will affect their perception of PAT may be warranted.
The results of this study supported the researcher’s hypothesis that ALF residents who participate in pet therapy will have a higher QOL score on the WHOQOL-BREF tool, a lower perceived sensation of loneliness and a higher perceived QOL after pet therapy than scores taken from residents prior to their therapy experience. There are many other benefits to pet therapy besides an increase in socialization and an increase in QOL. Animals provide outstanding companionship, and they do not care how people look or if they are wealthy or poor. Pets are great listeners and they can make residents laugh and improve our morale. Pets can reach patients and residents in ways that people cannot. Some residents may feel isolated, and the animals can provide a sense of companionship and help remind them just how wonderful unconditional love between humans and animals can be.
References


Appendix A: WHOQOL-BREF Tool.

WHOQOL-BREF

The following questions ask how you feel about your quality of life, health, or other areas of your life. I will read out each question to you, along with the response options. Please choose the answer that appears most appropriate. If you are unsure about which response to give to a question, the first response you think of is often the best one.

Please keep in mind your standards, hopes, pleasures and concerns. We ask that you think about your life in the last four weeks.

<table>
<thead>
<tr>
<th></th>
<th>Very poor</th>
<th>Poor</th>
<th>Neither poor nor good</th>
<th>Good</th>
<th>Very good</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. How would you rate your quality of life?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Very dissatisfied</th>
<th>Dissatisfied</th>
<th>Neither satisfied nor dissatisfied</th>
<th>Satisfied</th>
<th>Very satisfied</th>
</tr>
</thead>
<tbody>
<tr>
<td>2. How satisfied are you with your health?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

The following questions ask about how much you have experienced certain things in the last four weeks.

<table>
<thead>
<tr>
<th></th>
<th>Not at all</th>
<th>A little</th>
<th>A moderate amount</th>
<th>Very much</th>
<th>An extreme amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>3. To what extent do you feel that physical pain prevents you from doing what you need to do?</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>4. How much do you need any medical treatment to function in your daily life?</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>5. How much do you enjoy life?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>6. To what extent do you feel your life to be meaningful?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Not at all</th>
<th>A little</th>
<th>A moderate amount</th>
<th>Very much</th>
<th>Extremely</th>
</tr>
</thead>
<tbody>
<tr>
<td>7. How well are you able to concentrate?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>8. How safe do you feel in your daily life?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>9. How healthy is your physical environment?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>
The following questions ask about how completely you experience or were able to do certain things in the last four weeks.

<table>
<thead>
<tr>
<th></th>
<th>Not at all</th>
<th>A little</th>
<th>Moderately</th>
<th>Mostly</th>
<th>Completely</th>
</tr>
</thead>
<tbody>
<tr>
<td>10.</td>
<td>Do you have enough energy for everyday life?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>11.</td>
<td>Are you able to accept your bodily appearance?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>12.</td>
<td>Have you enough money to meet your needs?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>13.</td>
<td>How available to you is the information that you need in your day-to-day life?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>14.</td>
<td>To what extent do you have the opportunity for leisure activities?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Very poor</th>
<th>Poor</th>
<th>Neither poor nor good</th>
<th>Good</th>
<th>Very good</th>
</tr>
</thead>
<tbody>
<tr>
<td>15.</td>
<td>How well are you able to get around?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Very dissatisfied</th>
<th>Dissatisfied</th>
<th>Neither satisfied nor dissatisfied</th>
<th>Satisfied</th>
<th>Very satisfied</th>
</tr>
</thead>
<tbody>
<tr>
<td>16.</td>
<td>How satisfied are you with your sleep?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>17.</td>
<td>How satisfied are you with your ability to perform your daily living activities?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>18.</td>
<td>How satisfied are you with your capacity for work?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>19.</td>
<td>How satisfied are you with yourself?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>
20. How satisfied are you with your personal relationships?  
   | 1 | 2 | 3 | 4 | 5 |
21. How satisfied are you with your sex life?  
   | 1 | 2 | 3 | 4 | 5 |
22. How satisfied are you with the support you get from your friends?  
   | 1 | 2 | 3 | 4 | 5 |
23. How satisfied are you with the conditions of your living place?  
   | 1 | 2 | 3 | 4 | 5 |
24. How satisfied are you with your access to health services?  
   | 1 | 2 | 3 | 4 | 5 |
25. How satisfied are you with your transport?  
   | 1 | 2 | 3 | 4 | 5 |

The following question refers to how often you have felt or experienced certain things in the last four weeks.

<table>
<thead>
<tr>
<th></th>
<th>Never</th>
<th>Seldom</th>
<th>Quite often</th>
<th>Very often</th>
<th>Always</th>
</tr>
</thead>
</table>
26. How often do you have negative feelings such as blue mood, despair, anxiety, depression?  
   | 5     | 4      | 3           | 2          | 1      |

Do you have any comments about the assessment?

---

[The following table should be completed after the interview is finished]

<table>
<thead>
<tr>
<th></th>
<th>Equations for computing domain scores</th>
<th>Raw score</th>
<th>Transformed scores*</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>4-20</td>
</tr>
</tbody>
</table>
| 27.   | Domain 1 (6-Q3) + (6-Q4) + Q10 + Q15 + Q16 + Q17 + Q18  
         | a + a + a + a + a + a + a + a | a = b: c:  |
| 28.   | Domain 2 Q5 + Q6 + Q7 + Q11 + Q15 + (6-Q26)  
         | a + a + a + a + a + a + a | a = b: c:  |
| 29.   | Domain 3 Q20 + Q21 + Q22  
         | a + a + a | a = b: c:  |
| 30.   | Domain 4 Q8 + Q9 + Q12 + Q13 + Q14 + Q23 + Q24 + Q25  
         | a + a + a + a + a + a + a + a | a = b: c:  |
Appendix B: Disclosure Letter.

Kathy VanVoorhis BSN
961 Winton North Road
Rochester NY, 14609

January 19, 2009
Residents of Legacy at Park Crescent
Legacy at Park Crescent
1000 Providence Circle
Greece, NY 14616

To Whom It May Concern,

On January 20, 2009 Lollypop Farm Animal Assisted Therapy program will be available in your library from 1:30 to 3:30. During this visit there will be a study conducted that will analyze the effects of pet therapy on residents of assisted living facilities. Your participation is appreciated, but certainly not required. In order to participate in this research study one needs to not have an allergy to animals, be able to read, write, and speak in English. If you do not fall in this category, or do not want to participate in the study, you are still welcome to come and enjoy the visiting therapy animals. If you choose to participate in the study come to the library at 1:00 pm.

Before the pet therapy session a short questionnaire needs to be completed and returned to the volunteer. Then interactions with the therapy animals will occur for a total of one hour. After the session is complete, a second questionnaire needs to be answered and returned to the volunteer. If at any point during the study you choose to no longer participate please notify the volunteer and they will remove your name from the participation list.

The Lollypop Farm Animal Assisted Therapy group will return on August 18, 2009 and we request for participants to return for a second session. A reminder notification will be sent out 2 weeks prior to our return. Questionnaires will again be completed before and after the one hour pet therapy session.

After August 18, 2009, the study will be complete. Information regarding the questionnaires is confidential and your name will not appear in conjunction with this study. Lollypop Farm Animal Assisted Therapy program can be contacted for future requests for pet therapy sessions.

Thank you for your interest and participation.

Sincerely,

Kathy VanVoorhis BSN
To Whom It May Concern,

On April 6th Lollypop Farm Animal Assisted Therapy program will be available from 1:00 pm to 2:00 pm. During this visit there will be a study conducted that will analyze the effects of pet therapy on residents of assisted living facilities. Your participation is appreciated, but certainly not required. In order to participate in this research study one needs to not have an allergy to animals, be able to read, write, and speak in English. If you do not fall in this category, or do not want to participate in the study, you are still welcome to come and enjoy the visiting therapy animals. If you choose to participate in the study please come to the library at 12:30 pm.

Before the pet therapy session a short questionnaire needs to be completed and returned to the volunteer. Then interactions with the therapy animals will occur for a total of one hour. After the session is complete, a second questionnaire needs to be answered and returned to the volunteer. If at any point during the study you choose to no longer participate please notify the volunteer and they will remove your name from the participation list.

The Lollypop Farm Animal Assisted Therapy group will return on August 4th, 2009 and we request for participants to return for a second session. A reminder notification will be sent out 2 weeks prior to our return. Questionnaires will again be completed before and after the one hour pet therapy session.

After August 19, 2009 the study will be complete. Information regarding the questionnaires is confidential and your name will not appear in conjunction with this study. Lollypop Farm Animal Assisted Therapy program can be contacted for future requests for pet therapy sessions.

Thank you for your interest and participation.

Sincerely,

Kathy VanVoorhis BSN
Kathy VanVoorhis BSN
961 Winton North Road
Rochester NY, 14609

March 18th 2009
Residents of Fleming Point
Fleming Point
720 Latta Road
Greece, NY 14612

To Whom It May Concern,

On March 18th Lollypop Farm Animal Assisted Therapy program will be available from 11:30 am to 12:30 pm. During this visit there will be a study conducted that will analyze the effects of pet therapy on residents of assisted living facilities. Your participation is appreciated, but certainly not required. In order to participate in this research study one needs to not have an allergy to animals, be able to read, write, and speak in English. If you do not fall in this category, or do not want to participate in the study, you are still welcome to come and enjoy the visiting therapy animals. If you choose to participate in the study please come to the library at 11:00 am.

Before the pet therapy session a short questionnaire needs to be completed and returned to the volunteer. Then interactions with the therapy animals will occur for a total of one hour. After the session is complete, a second questionnaire needs to be answered and returned to the volunteer. If at any point during the study you choose to no longer participate please notify the volunteer and they will remove your name from the participation list.

The Lollypop Farm Animal Assisted Therapy group will return on August 19, 2009 and we request for participants to return for a second session. A reminder notification will be sent out 2 weeks prior to our return. Questionnaires will again be completed before and after the one hour pet therapy session.

After August 19, 2009 the study will be complete. Information regarding the questionnaires is confidential and your name will not appear in conjunction with this study. Lollypop Farm Animal Assisted Therapy program can be contacted for future requests for pet therapy sessions.

Thank you for your interest and participation.

Sincerely,

Kathy VanVoorhis BSN
Appendix C: Open-ended Questions.

1. What kind of past experience did you have with pets?

2. What kind of experience did you have with pets?

3. How did the therapy sessions make you feel?

4. After the first pet therapy session, how did you feel the next day?

5. What aspects of the pet interactions did you enjoy most?

6. What aspects of the pet interactions did you enjoy least?

7. Have you talked about the pet visitation with any other resident or staff?
   a. If yes, ask for a detailed explanation.
Appendix D: IRB Application

St. John Fisher College Chair, Signature Date

Institutional Review Board

Application For Full Review of Research

Please submit fifteen (15) copies of this form; fifteen (15) copies of the complete Research Description (see Section IV C. of the IRB Policies and Procedures for the Protection of Human Subjects) for a description of issues to be addressed in the Research Description) and fifteen (15) copies of the consent form to the Office of Academic Affairs, K-202, Attention: Jamie Mosca.

Name of Investigator(s): Kathy L. VanVoorhis

Address/City/State/Zip: 961 North Winton Road, Rochester NY, 14609

Telephone: 585-315-2213 Day 585-315-2213 Evening 585-315-2213

E-mail Address: Kathy.vanvoorhis@gmail.com FAX: None

Faculty/Staff Sponsor (if different): Dr. Lynn Nichols and Dr. Cynthia McCloskey

Title of Project: Pilot study on pet therapy and quality of life.

Type of Investigator and Nature of Activity (check as appropriate):

_____ Faculty or staff at St. John Fisher College

_____ Project to be submitted for extramural funding: Agency:
All applications from students and from persons outside of the College must be signed by the faculty, staff person or administrator supervising the research activity.

Please answer the following questions with regard to the proposed research activity proposed.

Does the research involve:

<table>
<thead>
<tr>
<th></th>
<th>YES</th>
<th>NO</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. drugs or other controlled substances</td>
<td></td>
<td>√</td>
</tr>
<tr>
<td>b. payment of subjects for participation?</td>
<td></td>
<td>√</td>
</tr>
<tr>
<td>c. access to subjects through a cooperating institution?</td>
<td>√</td>
<td></td>
</tr>
<tr>
<td>d. subjects taking internally or having externally applied any substance?</td>
<td></td>
<td>√</td>
</tr>
<tr>
<td>e. removing any fluids (e.g., blood) or tissue from subjects?</td>
<td></td>
<td>√</td>
</tr>
<tr>
<td>f. subjects experiencing stress (psychological or ________________) above a level that would be associated with their normal everyday activities?</td>
<td></td>
<td>√</td>
</tr>
<tr>
<td>g. misleading (deceiving) subjects about any aspect or purpose of the research?</td>
<td></td>
<td>√</td>
</tr>
<tr>
<td>h. subjects who would be judged to have limited freedom of consent (e.g., minors, mentally retarded or ill, aged)?</td>
<td>√</td>
<td></td>
</tr>
</tbody>
</table>
i. any procedures or activities that might place the subjects at risk (psychological, physical, economic or social)?

   — √

j. a written consent form?

   √

Certification

1. I am familiar with the policies and procedures of St. John Fisher College regarding human subjects. I subscribe to the standards described in the document, *IRB Policies and Procedures for the Protection of Human Subjects*.

2. I am familiar with the published guidelines for the ethical treatment of subjects associated with my particular field of inquiry (e.g., as published by the American Psychological Association, American Sociological Association).

3. I am familiar with and will adhere to any official policies in my department concerning research with human subjects.

4. I understand that upon consideration of the nature of my project, the IRB may request a full application for review of my research at their discretion and convenience.

5. If changes in procedures involving human subjects become necessary, I will submit these changes for review before initiating the changes.

__________________________________________
Date & Signature - Investigator(s)

__________________________________________
Date & Signature - Collaborator(s) and/or Student Investigator

__________________________________________
Date & Signature – Faculty/Staff Sponsor

*All student applications and applicants from outside the College must have a College sponsor.*
Date & Signature - Research Sponsor

Decision of Institutional Review Board

☐ Approved  ☐ Not Approved

Comments:

☐ No Research  The proposed project has not research component and does not need be in further compliance with Article 24-A.

☐ Minimal Risk  The proposed project has a research component but does not place subjects “At Risk” and need not be in further compliance with Article 24-A.

☐ Research & Risk  The proposed project has a research component and places subjects at risk. The proposal must be in compliance with Article 24-A.

_______________________________________________  ___________________________________
Chairperson, Institutional Review Board  Date
Appendix E: Consent Form.

St. John Fisher College
INFORMED CONSENT FORM

Title of study: Pilot study on pet therapy and quality of life.

Name of researcher: Kathy L. VanVoorhis RN BSN

Faculty Supervisor: Dr. Lynn Nichols Phone for further information: (585) 385-8246

Purpose of study: To measure the effects of pet therapy on the quality of life in assisted living care residents.

Approval of study: This study has been reviewed and approved by the St. John Fisher College Institutional Review Board (IRB).

Place of study: Legacy at Park Crescent Length of participation: 4 hours; 2 therapy sessions lasting 2 hours each over the course of 6 months.

Risks and benefits:

Participants may have an allergic reaction to the animals and in rare instances, physical injury may occur due to animal bites/scratches. Participants may benefit from the therapy session through interactions with the animals. You will be able to interact and spend time with the therapy animals.

Your interview and survey responses will be kept confidential and available only to the research team for analysis purposes. The interview may be stopped at any time without consequence to you.

Method for protecting confidentiality/privacy:

Participant’s names will not be released with the results of the questionnaire or with the interview. Names and addresses will not be linked with the study and will be available only to the research team.

Your rights: As a research participant, you have the right to:

1. Have the purpose of the study, and the expected risks and benefits fully explained to you before you choose to participate.
2. Withdraw from participation at any time without penalty.
3. Refuse to answer a particular question without penalty.
4. Be informed of appropriate alternative procedures or courses of treatment, if any, that might be advantageous to you.
5. Be informed of the results of the study.

I have read the above, received a copy of this form, and I agree to participate in the above-named study and if selected participate in a tape recorded interview.

Print name (Participant) Signature Date

Print name (Investigator) Signature Date

If you have any further questions regarding this study, please contact the researcher listed above. If you experience emotional or physical discomfort due to participation in this study, please contact the Office of Academic Affairs at 385-8034 or the Wellness Center at 385-8280 for appropriate referrals.
Title of study: Pilot study on pet therapy and quality of life.

Name of researcher: Kathy L. VanVoorhis RN BSN

Faculty Supervisor: Dr. Lynn Nichols Phone for further information: (585) 385-8246

Purpose of study: To measure the effects of pet therapy on the quality of life in assisted living care residents.

Approval of study: This study has been reviewed and approved by the St. John Fisher College Institutional Review Board (IRB).

Place of study: Fleming Point: 4 hours; 2 therapy sessions lasting 2 hours each over the course of 6 months.

Risks and benefits:

Participants may have an allergic reaction to the animals and in rare instances, physical injury may occur due to animal bites/scratches. Participants may benefit from the therapy session through interactions with the animals. You will be able to interact and spend time with the therapy animals.

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St. John Fisher College
INFORMED CONSENT FORM

Title of study: Pilot study on pet therapy and quality of life.

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Place of study: The Gables: 4 hours; 2 therapy sessions lasting 2 hours each over the course of 6 months.

Risks and benefits:

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Print name (Participant) ___________________ Signature ___________________ Date ______________

Print name (Investigator) ___________________ Signature ___________________ Date ______________

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