

THE PERCEPTIONS OF ANIMAL THERAPY IN THE COLLEGE OF NURSING

By

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A Thesis Submitted to The Honors College
In Partial Fulfillment of the Bachelor's Degree

With Honors in

Nursing

THE UNIVERSITY OF ARIZONA

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ABSTRACT

AAT has been used for several decades as a resource for patients in various settings but there is a little research about it in the academic setting, including in a college of nursing. Burnout in the field of nursing is high and it is important to explore more interventions available to retain nurses, as the demand continues to increase. AAT is an intervention that must be researched to provide relief to nursing students.

A qualitative content analysis was performed to understand the perceptions and emotional responses to a therapy dog in a college of nursing setting. The site chosen was the University of Arizona College of Nursing and the population was 20 students in the Bachelor's of Science in Nursing program. Focus groups were used with a semi-structured interview guide.

Results revealed that the perceptions and emotional responses to a therapy dog were overwhelmingly positive. Five benefits, four drawbacks and four suggestions of improvements provided the themes for the perceptions included in the study. The students' emotional responses to the dog included positive emotions and relaxation. These findings indicate that AAT may be an effective intervention for burnout and that further research is needed in this area of AAT.

CHAPTER ONE

Nursing is an emotionally and physically draining career that can lead to burnout in a short amount of time. Receiving a degree in nursing and passing the National Council Licensure Examination (NCLEX) is meant to be difficult because the NCLEX prepares students to provide safe, optimal care and evaluates nursing competency. The process of nursing school can evoke a lot of stress and anxiety in students, which can hinder their ability to learn the material required. There are many strategies identified that can provide relief for this stressed student population, but animal therapy has not been investigated in depth as a potential tactic to handle the emotional strain of nursing school. Chapter one will explain the problem, the background and the purpose of this study, as well as the specific research questions.

Background

Animal therapy has been used in humanitarian programs for centuries, documented first in 1792 by the York Retreat in England. After looking into better forms of treatment for insane persons, the York Retreat introduced gardening, exercise and interactions with birds and rabbits to the patients (Hooker, Freeman & Stewart, 2002). Animal therapy reached the United States in 1919 when dogs were used at St. Elizabeth's Hospital for interacting with psychiatric patients. From there it continued in 1942, when the US military used farm animals in their treatment plan for recovering veterans (Hooker et al., 2002). Even Florence Nightingale, the beloved founder of nursing, wrote, "A small pet is often an excellent companion for the sick" (Willis, 1997, p.78). However, the term "animal therapy" was not coined until the 1960's. Actual investigation into the human-animal bond and the use of animals in a therapeutic manner did not arise until after the book *Pet-Oriented Child Psychotherapy* by Boris Levinson was produced in 1969 (Willis, 1997). Levinson found that when he worked with children, they were far more responsive and

positively interacted with him when his dog attended the therapy sessions. He discovered that the animal was something that could be used to facilitate a relationship between himself and the children (Chandler, 2005). This book inspired more research into the therapeutic effect animals have on human beings and how that could be as a resource in promoting health in individuals.

Animal Assisted Therapy (AAT) became a popular topic nationally in the late 1900's and early 2000's. This is due to the widespread media coverage of the research being done with therapy animals. When this occurred, people from all different fields of work, including teachers and counselors, began to take interest and participate in AAT (Chandler, 2005). There are stories of dogs visiting students and staff traumatized by school shootings, providing relief from stress in grade schools, and being used to comfort those that have been victims of national catastrophe's such as the attack on the World Trade Center. Dogs have been utilized in counseling programs, reading programs and to provide a steady presence in a multitude of healthcare settings (Chandler, 2005).

Animal-assisted therapy training. There are several programs throughout the United States that specialize in trainings for AAT including Animal Behavior Institute, Therapy Dogs Incorporated, and Therapy Dogs International (Young, 2012). One of the programs specific to the area in which the study was conducted is known as the Humane Society of Southern Arizona's Animal Assisted Therapy and Visitation Program. The duration of the program is six weeks starting the first week with an aptitude test specific to the animal. There are three weeks of instruction with each class being three hours long. At the end of the three weeks, there is a final evaluation and then a graduation ceremony (Humane Society of Southern Arizona, 2016).

Suitable animals for this program include cats, dogs, rabbits, hamsters, horses and pigs. The three characteristics that are important for a therapy animal are reliability, predictability and

the ability to be controlled. Therapy animals must have a solid temperament and behave in an expected way in extreme situations. Responding well to a handler's cues in any situation is a hallmark of a well-trained therapy animal. An animal is to have an outgoing personality with a relaxed posture and wagging tail (if applicable) when introduced to clients (Humane Society of Southern Arizona, 2016).

The Humane Society's program provides an outline for their interactions during visits. The first step is the approach, where the client is asked if they would like to interact with the therapy animal and the animal is introduced. The interaction ensues with the client either petting, playing or walking with the animal. Finally, the closure occurs when the client and animal say goodbye. Each of the three steps have specific guidelines set up to create a relaxing experience for the client (Humane Society of Southern Arizona, 2016).

Each program is different and has their own policies and procedures, however universal characteristics can be identified. Animals chosen for therapy must have specific temperaments and have the ability to interact appropriately with the public. The animal must go through a training class and have a final evaluation to become certified. The handler must also be trained, and the human and animal must understand cues from each other in order to work as a team (Humane Society of Southern Arizona, 2016). This carefully constructed team contributes to the therapeutic environment that may be well-suited for a college of nursing setting.

Significance.

Nursing is a very diverse field and the preparation to be successful in this career requires students to achieve at their highest level. However, high expectations in this field of study can create emotional and physical stress that takes an immense toll on each individual. Graduation rates fluctuate across the country due to the difficulty of nursing programs and the stress that can

be related to higher expectations involved in the field. In some areas graduation rates can be as low as 67 percent from an accredited nursing program (Work, 2008). Low graduation rates are becoming a problem for this country because by 2025, there is expected to be a shortage of over 260,000 registered nurses (American Association of Colleges of Nursing, 2014). With graduation rates low and demand for nurses high, colleges need to find better strategies to facilitate success in their students.

Healthcare students, including nursing students, have reported higher levels of stress related to school than other educational majors at a university. Nursing school is different than any previous educational experience because it has the added aspect of clinical, which can create anxiety in students (Jimenez, Navia-Osorio & Diaz, 2009). Clinical sources of stress begin with placement at a certain facility or on a specific unit. Students are challenged to work with populations that are dying or who need an increased amount of care (Gibbons, 2010). Students also feel that their relationship with other nurses and clinical faculty can create a stressful environment. Some students have reported that they have felt demeaned due to their lack of experience by other hospital staff and faculty. They have also felt exposed if a faculty member uses their experience to teach a lesson in post-conference or a nurse reprimands them in front of others on a unit (Melincavage, 2011). Additional clinical stressors include developing clinical skills, time pressures and evaluations by instructors. Students are asked to perform skills on patients that they have practiced only once before on a mannequin or each other. They also have a set amount of time in a clinical setting so doing as much as they can under time pressures is difficult for students as well (Gibbons, 2010). Clinical experience in an undergraduate education is something that is unique to nursing students. This change in learning from the traditional all-theory based work can be a difficult transition for some students. There are several aspects to

clinical that can cause stress in students that can lead to burnout without correct coping skills and support systems.

Other factors that influence students' stress in addition to clinical include grades, employment, family commitments, extracurricular activities and social engagements (Ashcraft & Gatto, 2015). These multiple demands can compound on one another and leave students feeling like they have no free time. Academic stress comes from the amount of exams and the time allotted for study of certain topics. Nursing students are reported to study for longer hours and be in school or clinical more hours than the average college student, leading to a work-life imbalance (Gibbons, 2010). The amount and factors of stress in a nursing student's life are important to consider because of a phenomenon called burnout. Burnout is defined as "an affective reaction to on-going stress whose core content is the gradual depletion over time of individuals' intrinsic energetic resources" (Shirom, 2011, p. 233). Burnout has been linked to lower mastery of nursing tasks, higher turnover rates and less research-based practice. This can also lead to nurses leaving the profession. Burnout has been found to start in nursing students because of the multiple demands that are placed upon them during the time of educational training (Rudman & Gustavsson, 2012). With the increasing amount of burnout in the nursing student population and the increased demand of nurses in the work force, it is vital that nursing colleges find ways to decrease the amount of stress in their student population.

AAT training and programs have not yet readily reached the college and university level, but since the 1990's, interest in AAT has taken root and there has been an increase in schools that do offer it. Currently, there is little to no literature on how an animal could be utilized to assist nursing student's in their success during schooling. Animal assisted therapy has been used in many other aspects of healthcare including in pediatric wards of hospitals, in nursing homes

and with psychiatric patients (Chandler, 2005). In a systematic review of 11 randomized control trials, the use of animal-assisted therapy has been described as an effective treatment for many disorders and a holistic approach to healthcare for patients (Kamioka et al., 2014). There are a few studies that have shown that animal therapy has helped decrease anxiety for students but research is scarce. Due to this, animal assisted therapy as an avenue to reduce the stress of nursing students should be explored further.

Purpose

The aim of this study is to explain nursing students' perceptions of the presence of a therapy dog in the classroom and college of nursing environment.

Research Questions

- 1). What are nursing students' perceptions of and experiences with a therapy dog in a four-year university, college of nursing environment?
- 2). What kind of emotional responses does interacting with a therapy dog evoke in a nursing student population?

Summary

The purpose of this chapter was to introduce the topic of the study, provide background information and explain the significance of the problem to the field of nursing. The purpose of this study is to explain student nurses' perceptions of, experiences with and emotional responses to a therapy dog in the college of nursing environment. The goal is to provide insight on whether more research focused on animal therapy interactions with nursing student populations is necessary. The aim of this study is to enhance the coping strategies and support systems offered to nursing students from college programs through the use of animal-assisted therapy as a stress reduction tactic.

CHAPTER TWO

Chapter two includes a review of literature regarding nursing students, stress and the use of animal-assisted therapy in various populations. To complete this review, CINAHL, PubMed, the Arizona Health Sciences Library card catalog and Google Scholar were utilized to collect information. Key words and phrases used for searching included “animal-assisted therapy” and “nursing student stress.” Years of publication for the studies were between 2002 and 2016.

Nursing Student Stressors.

Clinical stressors. Clinical practice and the amount of work involved in nursing programs can create ineffective coping strategies within nursing students. Jimenez, Navia-Osorio and Diaz (2009) conducted a study to understand more about what creates stress within nursing students. The study included 357 nursing students in a three-year program in Cordoba, Spain. Students filled out questionnaires on what parts of the program created a stressful experience for them (Jimenez et al., 2009) and they found that clinical was an area of increased stress. Within clinical the three things the students grappled with the most were not being able to help a patient in pain, being unable to answer instructor questions correctly and not knowing how to help their patients with social problems (Jimenez et al., 2009). An index made by Harris (2007) also found that the emotional and social concerns of their patients creating anxiety and that helping patients who were dying was a major source of stress. Two of the most common symptoms related to clinical practice were being worried or nervous and not feeling optimistic about the future (Jimenez et al., 2009).

Additional review of literature on the topic of clinical included several other studies that provided insight into factors that increased anxiety in this setting. Phenomenological studies conducted by Melincavage (2011) and Chesser-Smith (2005) identified several themes in clinical

anxiety. These findings included feeling that the nurses at their facility were inconsiderate of their lack of experience and that the clinical faculty and nurses themselves were sometimes inexperienced (Melincavage, 2011). Lack of experience was one of the main stressors for nursing students in their first clinical rotation. Participants indicated that in the first few weeks of clinical placement, they felt uncomfortable because they did not know anything about the hospital or the expectations placed on them. They also indicated that they felt unwanted by the nurses on the unit at the beginning of the placement (Chesser-Smith, 2005). Evans and Kelly (2004) also found that the participants in their study felt that the staff nurses made them feel inadequate and inferior. The nurses did not include them in tasks and were unwilling to educate them. Some were given tasks that they had not learned in class, which made them feel anxious and useless when they could not perform the tasks (Chesser-Smith, 2005).

The students in one of the studies also reported feeling demeaned, exposed and abandoned (Melincavage, 2011). Physicians, staff nurses and faculty would not take the time to listen to the student nurses or would use offensive language directed at them. The students' experiences would sometimes be used as a teaching lesson to all and would embarrass the students. Some also found that staff nurses were not willing to teach them and their faculty was inaccessible at inopportune moments. These feelings are especially difficult when students also voiced that they felt uncertain of their abilities and did not have the support to try new clinical skills (Melincavage, 2011).

Academic stressors. Clinical demands are one of the major stressors for nursing students, but several other academic stressors exist. Several studies have found many different factors that influence that amount of stress and anxiety in students. One of the most prevalent themes is examinations and the intensity of the workload. Burnard et al. (2008) found in his

study of nursing student stress across five countries that examinations are the biggest stressor for nursing students, and that anxiety is significantly increased when students have to pass assessments in order to continue their programs. A similar study discovered that not only are exams stressful, but the workload is sometimes overwhelming for students. Extreme stress and anxiety ensues due to the large amount of content and the small amount of time the students have to learn and master (Evans & Kelly, 2004). Harris (2007) also found that managing the workload can be very difficult for students because of the insufficient amount of time that is given to them by instructors to complete nursing tasks and assignments. Another frustration with the workload is the theory-practice gap that can sometimes exist between what the students are learning in class and what they are seeing or are being taught in clinical (Evans & Kelly, 2004). Factored in with all the exams and assignments is the pressure to get high grades or risk failing part of or the entire program (Burnard et al., 2008).

Others factors include the scheduling of the classes and the long hours of study. Classroom hours can take away from other activities or obligations expected of the nursing student including time spent with family and friends, or engagement in extracurricular events (Timmins & Kaliszer, 2002). This coupled with the long hours of study outside the classroom can put immense pressure on the nursing student to perform in every aspect at a level that may be too high to manage (Burnard et al., 2008). Another component to the amount of time in the classroom is the relationships that are built with instructors. Some of these relationships can put stress on students if the interactions are not positive (Timmins & Kaliszer, 2002). The amount of time spent with the instructors, and a poor relationship can have negative effects on the student nurses' perceptions of nursing school.

All of these stressors can have an effect on the emotional responses of students. Evans and Kelly (2004) found that students felt exhausted, under pressure, worried, upset, run down, and frustrated with the many aspects of nursing school. Students worry about grades, feel the pressure of performing at a high level, become frustrated with how certain things are organized and are exhausted after the long hours of study and limited amount of sleep. All of this can lead to feelings of being exhausted from the many stresses of life in nursing school (Evans & Kelly, 2004). Another study discovered that self-esteem is a large part of how students respond to the number of responsibilities they accrue in nursing school. As students continue in the program, their self-esteem drops, and their anxiety levels rise because of the increased demands on the students, and the higher level of thinking needed to perform well on exams (Edwards, Burnard, Bennett & Hebden, 2009).

External stressors. In addition to the demands of academics on nursing students, some students face obligations outside of school. Studies suggest finances are the biggest stressor affecting students. Money is necessary for socializing, vacations and holidays, child care, elder support, transportation and tuition (Cuthbertson, Lauder, Steele, Cleary & Bradshaw, 2004). Finances are further complicated by the difficulty finding and keeping work during the duration of nursing school. Having limited time off and long hours of study makes it challenging to find work that is flexible around the schedules of nursing students. Even when they do work, students do not have as many hours and so cannot make as much money (Last & Fulbrook, 2003). Transportation is also a challenge financially, because some clinical sites can be many miles away from the university and students are typically not reimbursed for the money spent getting to the facilities (Last & Fulbrook, 2003).

Another external stressor for nursing students is lack of free time. This is problematic because course work takes away from time spent with family and friends. Many students wish to spend their time with their children or other loved ones (Burnard, et al., 2008). The amount of time spent on assignments, at clinical, traveling to facilities and studying also takes time away from events and activities that students like to participate in. Many students miss out on holidays, weddings and other family obligations because they cannot make it home or they have academic obligations that cannot be completed at another time (Last & Fulbrook, 2003). It is important to note that majority of studies on student nurse stress are about academic-related issues, however extracurricular obligations also play major role in the demands placed on nursing students and more research is necessary to fully understand all aspects of stress within nursing school. All components of academic and external amounts of stress provide evidence of the need for integrative interventions.

Burnout. Burnout in nursing school has become an increasing problem as programs get more competitive and increase demands on students. Reasons for burnout include stressors that students grapple with in school. Studies that have focused on burnout and attrition in nursing students have found that exams, writing assignments and fear of failure increase stress and the likelihood of dropout (Bowden, 2008). Glossop (2002) and Bowden (2008) both found that outside stressors such as family circumstances, financial problems and personal issues can lead to burnout. All of these demands can lead to immense anxiety in nursing students if not the intention to drop out of a program.

Burnout in students who make it through nursing programs is of concern because the consequences of burnout can be damaging to the profession. Rudman and Gustavsson (2012) conducted a study to learn more about the effects of burnout in 1,702 nursing students. They

found that the symptoms of burnout, including disengagement and exhaustion, increase significantly throughout the nursing program. Students who became disengaged through the process of nursing school showed lower occupational preparedness, poorer mastery of nursing skills a year post graduation and a lack of critical thinking (Rudman & Gustavsson, 2012). Due to these factors and the pressure of the career, quality of care was compromised and care became routine instead of patient focused. Study findings also suggest that when students became exhausted during their studies, they had less life satisfaction at the time of graduation, that extend into the first year of their career. This led to higher levels of the intention to leave the profession one-year post graduation (Rudman & Gustavsson, 2012). Stress and burnout can lead to devastating effects on the profession of nursing and with the demand for nurses increasing, programs must find ways to intervene before a student reaches the point of disengagement.

The Effect of Animal Assisted Therapy Within Various Settings.

Psychiatric patients. Animal-assisted therapy has several uses within the psychiatric setting. It has been shown to improve symptoms of many psychiatric illnesses including depression, schizophrenia, and Alzheimer's disease. In regards to depression, two studies found that symptoms subsided and patients found relief in an AAT therapy. Hoffman et al. (2009) conducted a study that discovered after a 30 minute AAT intervention, anxiety in patients with Major Depressive Disorder decreased significantly. Souter and Miller (2007) conducted a meta-analysis of five well conducted studies that provided evidence of relief in depressive symptoms and produced improvements in depression.

Two other studies explored the effect of AAT on schizophrenia and Alzheimer's Disease. Kovacs, Kis, Rozsa and Rozsa (2003) found that patients with schizophrenia formed strong bonds with the therapy dog that motivated them during therapy. The authors researched how

AAT effects areas of life including domestic activities, health, leisure, money management, transportation, eating and grooming. The results provided positive evidence in all areas with the two most prominent advances in domestic activities and health (Kovacs et al., 2003). Other results concluded that AAT improved emotional reactivity and living skills in patients with schizophrenia (Kovacs et al., 2003). Edwards and Beck (2002) found that patients with Alzheimer's disease benefited from AAT because the patients ate more food when undernourished and had increased socialization when animals were present during meal times.

Across the lifespan, AAT was also useful in the psychiatric setting. A study conducted by Martin and Farnum (2002) found that children with developmental disabilities benefited from AAT in several ways. Results of the study found that the children focused more and were more interactive during therapy when a dog was present. The children had more energy and adopted a more playful mood during the interactions. When asked questions, they were more agreeable and their answers were more appropriate than at other times (Martin & Farnum, 2002). In elderly patients, AAT has been shown to reduce loneliness, especially in patients that once had a pet of their own. Patients in this study had an increase in fond memories from when they were younger with their own animal, thus improving their mood after the interaction (Banks & Banks, 2002). Animal therapy has been used in a myriad of psychiatric settings with positive benefits in all areas.

Academia. Limited studies exist that explore animal-assisted therapy in the academic setting. However, the few that are available provide evidence of the positive effects and significant interest in AAT. While there are no large studies about the effectiveness of AAT in the college of nursing environment, three nurses did conduct a study with over 240 freshman college students to obtain data on the interest of having a pet therapy program to support them in

their first year (Adamle, Riley & Carlson, 2009). Over 220 of those students reported having a pet at home and almost all of them indicated that the animal was an integral part of their life. Participants of the study completed a questionnaire followed by a presentation on animal therapy and a visitation by a trained therapy dog (Adamle, Riley & Carlson, 2009). The results of this study found that 96 percent of the study sample indicated that they had interest in a pet therapy program on their campus. One of the themes that was identified provided evidence that students would like the pets to visit them in their residence halls because they missed their pet at home (Adamle, Riley & Carlson, 2009). This study delivers evidence of significant interest in having a pet therapy program to provide support for college students.

Animal-assisted therapy has also been used in the nursing academic setting to relieve test anxiety. A study conducted by a medical librarian found that students achieved higher scores on exams after interacting with a golden retriever before the exam began (Young, 2012). Anxiety levels in students that participated in intervention with the dog dropped between two to 18 points on the Spielberger Test Anxiety Index and several students noted that they got higher grades on exams if stopping by to pet the dog before going into the classroom. One nursing student who did not pass her state boards on the first try scheduled a consultation with the golden retriever before her second attempt and successfully passed the following week (Young, 2012). While the results of this study were not statistically significant, it is important to note the perceptions that the students had about the presence of the therapy dog and the correlation to their test anxiety.

Healthcare professionals. Studies abound on the effect of AAT on hospitalized patients, however an area that continues to be studied is within the population of healthcare professionals. One study conducted by Barker, Barker, Cobb and Schubert (2012) found that in the general workplace, dogs made an impact on decreasing employees' stress levels. The study was

conducted within one company and 75 participants participated. There were three groups including one with employees who brought their dogs to work, one with employees who owned dogs but did not bring them to work, and one that did not own any pets (Barker et al., 2012). Results indicated at the beginning of the day, there was no significant differences in stress level between any of the three groups. However, the levels of stress in people who brought their dogs to work increased the least throughout the day. It was also found that when the group who brought their dogs in every day, did not bring them in for a day, their levels of stress increased at the same level as the group who had a dog but did not bring them in throughout the study. The study concluded that AAT has a stress buffering effect that extends to the workplace (Barker et al., 2012).

This stress buffering effect is also true of healthcare professionals. In a study that investigated the optimal amount of time to take saliva samples for cortisol testing after interacting with a therapy dog, preliminary data supported decreased cortisol levels after only five minutes of AAT (Barker, Knisely, McCain & Best, 2005). This gives strong evidence that AAT can reduce the levels of stress in healthcare professionals almost immediately after seeing a therapy dog. Authors also found that the longer the AAT session, the more workers' cortisol levels were reduced (Barker et al., 2005). The sample size in this study was 20 participants so more research is indicated to assess the true effect of AAT on healthcare professionals' stress level but preliminary results suggest that AAT can decrease stress as measured by cortisol levels in healthcare professionals.

In a qualitative study, Rosetti, DeFabiis and Belpedio (2008) explored the presence of a therapy dog on a group of 10 behavioral health nurses. Several themes were identified including more self-awareness, positive morale, increased innovative strategies, challenges involved with

therapy dogs and future indications. The nurses found that they were more aware of their needs and had a more positive self-image when the therapy dogs were present. They also felt a higher level of energy in the workplace and more appreciation for the job (Rosetti et al., 2008). The theme of increased innovative strategies addressed the feelings of unique ways to provide nursing care. The nurses felt that having the therapy dogs in the workplace increased happiness, their ability to teach the patients, the importance of nonverbal communication and made for a more relaxed atmosphere in the milieu (Rosetti et al., 2008). The participants did recognize the challenges of a therapy dog including the need to bathe them before every visit, vaccinate them, give medications and control any parasites on them. However, even with these added burdens, the participants still indicated that for the future, they desired more visitations and encouraged further education on the use of animal-assisted therapy in the behavioral health setting (Rosetti, DeFabiis & Belpedio, 2008). More research is necessary to understand the perceptions of AAT and how it can benefit healthcare workers but from the literature provided, there is evidence that having an animal in the workplace environment can reduce stress levels and increase levels of happiness during a shift.

Acute and chronic patients. AAT is frequently used within the hospital to provide companionship and as an intervention for stress in patients with acute and chronic illnesses. Children's hospitals, in particular, utilize AAT often with positive results. In a study done by Kaminski, Pellino and Wish (2002), ATT was found to increase the mood and excitement of hospitalized children from the medical, trauma, transplant and surgical units. The patients were less likely to talk about wanting to go home and enjoyed the hospital more after the AAT intervention. The salivary cortisol taken from the patients also indicated a decrease in stress level after interacting with a therapy animal (Kaminski et al., 2002). A study conducted by Tsai,

Friedman and Thomas (2010) indicated that physiologically, hospitalized children with had a reduction in blood pressure after interacting with a therapy animal. Stress and anxiety have been found to decrease in hospitalized children after an AAT session.

Animal-assisted therapy studies on adults with acute and chronic illnesses focused more on the physiological effects of AAT. Wolff and Frishman (2005) conducted a study on cardiovascular patients and AAT. They found that AAT decreases blood pressure, thus decreasing cortisol and increasing dopamine. Patients who experienced AAT as an intervention quickly returned to their heart rate and blood pressure baseline after a stressful encounter. It was also shown that animals can decrease the risk of cardiovascular disease in adults because interactions with an animal lower systolic blood pressure and decrease the amount of triglycerides related to stress in individuals (Wolff & Frishman, 2005). Another study of the effects of AAT on adults has shown that an intervention of AAT can be more effective in decreasing blood pressure than a medication with the same mechanism of action. ACE inhibitors have been shown to effectively reduce resting blood pressure. However, in times of stress an AAT intervention is more effective in lowering blood pressure than an ACE inhibitor can be (Allen, Shykoff & Izzo, 2001).

Finally, AAT has proven to be highly effective in reducing pain levels for adults and children with acute and chronic illnesses. In a study done in an outpatient clinic, visits to patients in the waiting room and especially in the treatment room has been shown to significantly decrease the amount of perceived pain and emotional stress in individuals. Furthermore, patients felt an increase in well-being including feeling calm, pleasant and cheerful (Marcus et al., 2012). In children, pain has been shown to be reduced four times more after an AAT intervention than with the use of quiet relaxation. Evidence has also been provided that shows AAT as comparable

to the use of oral acetaminophen in adult pain reduction (Braun, Stangler, Narveson & Pettingell, 2009). AAT has been shown in many studies with acute and chronically ill patients to increase mood, decrease blood pressure and reduce the amount of pain in both children and adults.

Summary

Chapter two reviewed available literature on the perceived sources of stress in nursing students as well as the use of AAT in a variety of settings. AAT has been used to treat pain in both adults and children, to decrease stress in patients with developmental and mental health diagnoses, to decrease cortisol levels in employees at a workplace with a dog present and to reduce school-related anxiety in college students. Success with AAT in a variety of settings has been high but there has been little research specifically within a college of nursing environment. With nursing burnout rates rising, it is important for researchers to expand their knowledge on how AAT therapy may benefit nursing students during their academic experience.

CHAPTER 3

Chapter three will outline the design, sample, setting and data collection methods of the study. In addition, this chapter will also address how the data will be analyzed.

Setting.

The setting of the study was the University of Arizona's College of Nursing. Permission from the institution was obtained to conduct the study. This nursing college provides education to approximately 1494 students in various professional programs (The University of Arizona College of Nursing, 2016). This site was chosen because a therapy dog's services are already being applied in the setting. Student interactions with the therapy dog occurred previously on the grounds of the college, in a classroom or a courtyard.

Therapy dogs.

One of the canines used in the study is a Golden Retriever, Hannah. Her handler is one of the professors of the BSN program. Hannah and her handler are a certified therapy animal team and have been serving as such for two years. Their certification was obtained through the Humane Society of Southern Arizona. The other canine used in the study is a young German Shepherd, Tzatziki, who has been training through the Complete Canine program and will be certified as a therapy dog when he reaches the age of one year. Both dogs have been present during theory lectures as well as in the courtyard spending time with students outside the classroom setting.

Participants.

The collection of participants was done through convenience sampling. A social media post on Facebook, a recruitment flyer and two five-minute speeches before a class and a club meeting were used to advertise the study and recruit students [See appendix D, G and B]. The

inclusion criteria for participants included: 1). Pursuing a Bachelor's of Science in Nursing degree at the University of Arizona, 2) had prior interaction with either therapy dogs in the College of Nursing environment and 3) English speaking. The first focus group consisted of four participants, focus group two had five, the third focus group had seven, and the final focus group had five participants for a total of 20 people included.

Design.

The design chosen for this study is a qualitative content analysis. Qualitative description is defined as “an empirical method of investigation aiming to describe the informant’s perception and experience of the world and its phenomena” (Neergaard, Andersen, & Sondergaard, 2009. p.52). This design was chosen because it is the appropriate method when a study aims to understand perspectives of persons in their natural environment and seeks to describe participant perceptions in a straight forward, accurate way, that is as close to the actual account as possible. This method was used to answer the following questions:

- 1). What are nursing students’ perceptions of and experiences with a therapy dog in a four-year university, college of nursing environment?
- 2). What kind of emotional responses does interacting with a therapy dog evoke in a nursing student population?

Data Collection Method.

Focus groups, using a semi-structured interview guide, were conducted by the investigator, audio-taped and transcribed to obtain information about the perceptions of, experiences with and emotions that students felt after interacting with the therapy animal. A brief questionnaire was given out to assess demographic information and the amount of interactions with the therapy dog [See appendix C].

Instruments.

The instrument that was used in this study was a semi-structured interview guide with focus groups interviews [See appendix E]. The focus group method was chosen because it uses the dynamics of a group in order to facilitate conversation that can be assessed for information in an economical manner. People usually feel more at ease talking about a topic that others have also experienced, which can lead to more open discussion (Polit & Beck, 2012).

Human Subjects Considerations.

This study was approved by an Institutional Review Board [See appendix F]. Participants were asked to read and understand a disclosure form prior to participating in the study [See appendix A]. No personal identifiers are used throughout this study in order to keep participant information confidential. Audio tapes and transcriptions of interviews were kept in a locked office at the College of Nursing and on a password protected computer.

Trustworthiness.

Member checks were conducted to provide trustworthiness. Results from our analysis was shared with the participants of the study to confirm that the findings were an accurate depiction of their experiences. Data analysis was conducted by both the primary investigator as well as the advisor working on the project to validate findings in the study. After peer-reviewing, the primary investigator and the advisor had a high-level of agreement about the conclusions of the study. Finally, an audit trail was performed to verify all procedures of the study.

Analysis.

Qualitative content analysis was used for this study because it is typically employed to identify patterns and themes from the information obtained during data collection. It is especially useful when information is procured in a narrative fashion (Polit & Beck, 2012). This form of

analysis involves taking large amounts of information and breaking it down into codes and categories that can be analyzed to form patterns of thinking. These codes and categories are coded to develop new ways of thinking about certain data. The codes are then developed into categories to organize data in a way that can be understood. The exact words and excerpts from participants were used to truthfully portray the perceptions and experiences of students. The specific type of content analysis was inductive content analysis as the data was collected and then codes emerged during the data collection process.

Summary

Chapter three outlined the methods of the study. Recruitment of participants, setting, design, data collection and analysis were all outlined and discussed. A qualitative descriptive study, using focus groups will be conducted to explore students' perceptions of and emotional responses to having a therapy dog in the College of Nursing environment.

CHAPTER FOUR

Chapter four will detail the descriptive characteristics of the demographics of the sample, reports of the research, and the analysis of the data.

Sample Characteristics.

The sample consisted of 20 students pursuing a Bachelor's of Science in Nursing (BSN) degree at the University of Arizona. All participants in the study fulfilled the inclusion criteria. A brief questionnaire was presented at the beginning of the focus group and all 20 participants consented to filling it out.

There were 19 participants who identified as a female and one identified as a male. The ages ranged between 20 and 32 years old, with the median age being 22.4 years. Of the 20 participants, one (5%) was from first semester, four (20%) were from second semester, one (5%) was from third semester, and 14 (70%) were from fourth semester. Nineteen (95%) of participants had owned a dog before with only one (5%) who had not. Fourteen (70%) of participants had owned a pet other than a dog. Of the sample, two (10%) participants had allergies to dogs. The amount of interactions with a therapy dog in the college of nursing setting had a wide range. The lowest amount was two interactions and the highest was 30 interactions. The average was around 15 interactions, however many students indicated the numbers of semesters that they had a therapy dog present in the classroom (no more than two) while others indicated just a range.

Research Question One.

Research question one examined what the nursing students' perceptions and experiences were with a therapy dog in a university-based, college of nursing environment. Three themes emerged from the data related to this question including the benefits of interacting with a therapy

dog, the drawbacks of the presence of a therapy dog and suggestions about the handling of the therapy dog. Each one will be examined in further detail.

Benefits. Five main benefits of having a therapy dog in the college of nursing were discovered through the use of the focus groups. The first benefit established was the ability to learn the information presented in lectures better. Seven different comments indicated that having a therapy dog present during long lectures in the College of Nursing helped them to understand the information and that they felt like they were more energized during the hours of theory. They were able to re-focus on the information more efficiently and think about concepts more abstractly. “Jane” comments, “I also think having a dog can help you think outside the box, because it might make you think about more than just the material that’s being presented.” Having a therapy dog in the College, helps the student learn the information while also creating innovation in the way they look at things.

The second benefit indicated that the therapy dog really broke up the long lectures or the day into hours that were more manageable. Having a distraction during those ten minutes breaks helped the students take their mind off the material for a moment and focus on something other than school. “Becky” adds that having the therapy dog in class “causes those little breaks and gives your mind a second to kind of readjust and allow you to then focus back on the material”. The breaks include when the dog was present in lecture as well as when they were hanging out with their handlers in the courtyard. Many fourth semester students mentioned that even though they did not have a therapy dog in their last two semesters, they would always make the effort to go see the dog when they had a chance because it broke up the day for them when they had class for eight hours.

Twenty-two comments were made during the duration of the four focus groups about the benefit of the therapy dog as a stress-reliever. The participants stated several times that nursing school was very stressful for them but the therapy dog helped to relieve the tense atmosphere. The therapy dog made the students laugh during those long lectures that had a more typically serious environment. The therapy dog was able to brighten their mood when they were feeling defeated and they were especially helpful during those testing times. “Robyn Sparkles” remembers a time after a stressful event when a group of students were being evaluated and “all of a sudden Hannah just turns the corner [in the hallway], runs up at us and she just laid down in the middle of the floor, we all just sat there in the middle of the floor [with Hannah] and did not care who came by” because they were so focused on petting the dog.

Several students mentioned that another benefit they perceived from having a therapy dog around was ability to enjoy the advantages of interacting with an animal on a regular basis when they did not have the capacity to own a pet of their own while in school. Many stated that they had pets back at home and they enjoyed playing with them when they were away from school but once they came back from holiday breaks they did not have the benefits of an animal. The therapy dog at school was one of their only outlets of joy that involved any type of pet. The participants said that interacting with the dog felt like they were still getting a little piece of home, even when they were far away from their family.

The final benefit of having a therapy dog present in this setting was the ability of the dog to bring about bonding between classmates and the professors. The students and faculty were able to enjoy the dog together and this brought about the feeling of being on common ground. The students and professors had the ability to converse about something that was not academically related in a professional setting. “Mary” included that the dog created an

environment where the student “is able to engage with the handler-slash-instructor in a way that is more... communal and not the sort of teacher-student role” and that this “is very helpful in sort of humanizing our instructors”. Some comments indicated that the dog also brought bonding between different semesters and as well as within each cohort. The participants indicated that they felt more relaxed and able to speak about personal topics instead of strictly being professional colleagues.

The five benefits found in this study included learning information better, breaking up the day, using the dog as a stress reliever, reminding students of home and the advantages of having a pet, and creating a setting where bonding occurred between all people of the College. Each of these benefits was significant in that several students expressed the same perceptions throughout the four focus groups. However, while there were several benefits identified, there were a few drawbacks discovered as well.

Drawbacks. Four drawbacks were identified through 11 comments made during the duration of the focus groups. The first drawback was mentioned by one participant about the physical ailments related to having a therapy dog in the College. Two out of the 20 participants had allergies to dogs so having them in the classroom could cause a flare up of symptoms. “Mo” stated, “I’m allergic to dogs, so I enjoy spending time around them, but if I’m around dogs too much or if there’s too much dog hair, it kind of causes some personal health issues for me”. This could be seen as a distraction because the students felt sick and had more trouble paying attention.

The largest drawback, mentioned eight times during data collection, was the distraction the dog presents when in the classroom setting. Some participants expressed specifically during testing times if the dog was allowed to roam, it took their attention away from the task at hand.

Other students conveyed that during lecture the dog got into the students' bags or knocked things over. An important point to recognize is that many participants also added that sometimes this was a good distraction because it made the students laugh and they were able to take a break from the material. However, some students did disclose that at some points it took away from their main objective of learning the information. "Cindy" reported, "I want to pet the dog more than I want to pay attention and I kind of find myself calling Hannah over to me". So in some cases, the dog can be a more of a distraction than is appropriate.

One participant also reported that the fear of large animals or dogs in particular could be a drawback for having the therapy dog in this setting. While the experience was not one of their own, "Jane" related "I know some students are afraid of dogs, so that kind of changed the student atmosphere". While majority of the students stated the positive environment that a therapy dog adds to, there can be a drawback for students with a fear of the animal.

Finally, one student commented on the training of the dogs. One of the dogs at the College is in training and is not old enough to pass certification yet. A participant mentioned that when she was playing with the therapy dog during a break the dog did scratch her. She added many other positive attributes to the discussion but this was something that would be a drawback from having the therapy dogs at the College.

The four drawbacks of having a therapy dog in the College of Nursing setting include allergies, distractions, fear of the animal and training issues. Several advantages and disadvantages have been presented that correlate with the perceptions of the BSN students. Now, the theme of suggestions for improvement will be analyzed based on the information relayed during the focus groups.

Suggestions for Improvement. Four suggestions for improvement were identified during the focus groups sessions. The first suggestion was that there should be a schedule of days and times that the therapy dog should be available throughout the week. Students indicated that they would love to have two to three chances to see the dog on various days to accommodate everyone's schedules. They would especially like to see this done during lunch time when many semesters are not in class at the same time so that there is more communal bonding between different semesters. "Becky" commented "I also think it's beneficial to have the dogs, maybe in the courtyard during times like a majority of all semester's classes are done and it can be just like a communal thing." Many students agreed with this statement and included that they would like to the therapy dogs more often in general.

Another suggestion made by the participants was to continue having the dogs during lectures. Many indicated that they liked having the therapy dog roam around the room so that they could pet them and take a very small mental break from class before refocusing. Others suggested having the dog in the classroom near the instructor until breaks when the dog could roam around and they could interact with them. While there were differing opinions on how this should be done, there were eight responses suggesting that having the dog in lectures was something that the students wanted to happen.

Six participants conveyed that they would love to interact with a therapy dog before and after testing, especially during finals week. During data collection, a participant suggested that during testing the dogs are taken out of the room to avoid distraction but that they would love to have the stress relief before and after tests out in the hallway. Many students indicated that the dog provided relief from test anxiety and that they appreciated the times they were able to see the dog around testing time. "Kim" remembers, "I know I personally took time during finals, they

had one scheduled time and I left the library to go see the dog.” Other participants agreed that having the dogs available during finals would be a great way to relax.

The final suggestion from the focus group participants was that the therapy dog program should be continued throughout all of the four semesters of nursing school. Fourteen of the participants did not have interactions in the classroom setting after their second semester and some disclosed that they were upset after spending time with the dog that they no longer had that outlet. “Lola” mentioned, “” I was kind of bummed when that class was over and we no longer had a therapy dog”. Many students concurred with this statement and suggested that there be more times to enjoy the company of the therapy dog.

The four suggestions identified during focus group interviews included more scheduled time with the therapy dog including at lunch, having the dog there during lectures, interacting before and after testing and continuing the program through all four semesters.

The three themes discovered during data collection for research question one include benefits, drawbacks and suggestions for improvement. While four drawbacks were identified, the majority of the students identified several benefits and suggested that their time with the therapy dogs increase in the future.

Research Question Two.

Research question two examined the emotional responses a therapy dog evokes in the student nursing population. Two main themes were identified from data collection including positive emotions and relaxation. Both of these themes will be discussed in further detail.

Positive emotions. For the purpose of this analysis, positive emotions include happiness, joy and excitement. There was an overwhelming number of responses about the positive emotions that the students felt after interacting with a therapy dog. Twenty-two comments

indicated that many students felt very happy after interacting with the therapy dog and wished to see them more. Several students also conveyed that the therapy dog made them excited to go to class and learn the information. “Tom Brady” commented that “it’s like the highlight of my day” when the therapy dog was able to visit class or in the courtyard and “Tanya” added that when the students were told ahead of time that the dog would be in class it was “something to look forward to other than just the four-hour long lecture”.

Another interesting finding from data collection was that almost every participant said that when the therapy dog was in the courtyard, they would go interact with the dog every chance they were offered. Some mentioned that they may have been detracted from interacting if they were on their way to somewhere specific or if there was a large group but overwhelmingly, the students relayed that having the therapy dog in the courtyard made them so excited that they immediately went to interact. After having a hard day in class and seeing the therapy dog in the courtyard, “Tom Brady” commented that “it was just like, yes, ready, beeline, like I said, to Hannah” and that this interaction was a really positive memory for him. Overall, every participant was very willing to interact with the therapy dogs when they were given the chance.

Almost every student throughout the focus groups expressed positive emotions including happiness, joy and excitement. Many participants were willing to interact at every opportunity and many commented that seeing the therapy dog made their day better. Positive emotions were expressed throughout much of data collection, however there was one other emotion that was also very prominent and that was how the dog was used for relaxation purposes.

Relaxation. The final theme of the study is relaxation. Seven participants reported that when the therapy dog was around, they felt much calmer and more relaxed. They conveyed that at times the difficulty of the program is frustrating and that they can feel very down about grades.

However, “AJ” commented that having the dog there “lightens the mood and environment in the classroom” and Robyn Sparkles” added that “the repetitive motion of petting a dog is also very calming”. This ties back with the benefit mentioned above as using the therapy dog as a stress-reliever. The therapy animal can evoke a sense of calm during very stressful time for the students including long theory lectures, exams and final competencies.

The emotional responses to a therapy dog in the College of Nursing setting include both positive emotions as well as a relaxing effect. The therapy dog is something that the students look forward to interacting with and can be an incentive in coming to class. They also have a relaxing effect that may be used for students during stressful times throughout nursing school. From the responses in the focus groups, it is clear that the therapy dog evokes strong emotion in the nursing students.

Summary

Chapter four included the demographics of the sample, data collection and analysis. The three themes included to address the first research question were the benefits of the therapy dog, the drawbacks of the program, and suggestions for improvement. The five benefits of a therapy dog program include included learning information better, having breaks during the day, stress relief from the presence of the dog, reminding students of home and the advantages of having a pet, and increasing bonding between student cohorts and faculty. The drawbacks included allergies, a fear of dogs, distraction and improper training. The suggestions included more schedules times specifically at lunch, interaction during lectures, presence before and after testing, and continuation of the program throughout all four semesters of nursing school. The two themes identified in the second research question was positive emotions and relaxation. Both of these were emotional responses to the therapy dog found in nursing students.

CHAPTER FIVE

Chapter five will outline the discussion of the study including the conclusions related to the research questions, the implications for practice, the strengths and limitations of the study, and the recommendations for future research.

Conclusions

The first research question examined the perceptions and experiences of nursing students regarding a therapy dog in the College of Nursing. The three themes identified were the benefits, drawbacks and suggestions for improvement. Overall, majority of the comments were very positive. All participants agreed that they would like to see this type of program continue in the future. Almost all of the comments were related to the benefits or suggestions for improvement, with only eleven comments total about the drawbacks of therapy dogs. This suggests that the program is perceived as a positive advantage to the learning and emotional well-being of the students. However, the drawbacks should be taken into account in the future and may be used with the suggestions to create a better environment for the therapy dogs and students. The main conclusion drawn for this research question is that the students overwhelmingly approve of the use of therapy dogs in the College of Nursing environment and would like to continue to utilize them as a resource in the future.

The second research question investigated the emotional responses by the students to having a therapy dog in the College of Nursing setting. The two themes identified were positive emotions and relaxation. The majority of the students indicated that they were always happy and excited to see the therapy dogs both in the classroom and courtyard setting. The participants also stated that the dog is used as a huge stress-reliever and can be a great relaxation technique for them. It is important to recognize these feelings because the emotional well-being of nursing

students is being examined closely, specifically due to increasing rates of burnout. With so much going on in the life of a student, it is important to examine their emotional well-being and create strategies, such as animal therapy to increase their positive emotions while reducing negative ones.

In regards to comparing these findings to those in the literature, the closest setting that this study is similar to is in the area of academia. Research about animal therapy in this setting is very limited and few studies have been produced on the subject. However, from the literature available, the findings of this study are consistent with those from other studies. The study done by Adamle, Riley and Carlson (2009) found that 96% of the participants were interested in an animal therapy program on a college campus. The findings of this study are in support of this due to the overwhelmingly positive perceptions of the therapy dog program and the desire for the program to continue. Another study created by Young (2012) found that test anxiety can be reduced in medical students and in some cases, the students perform better after an animal therapy session. This is consistent with the findings of this study because many participants indicated that the dog provided stress relief and that they felt much better before and after tests if they were able to interact with the therapy dog. Both of these studies are supported by the data from this research.

Interventions are being researched thoroughly to reduce the rate of burnout and the findings from this study indicate that animal therapy would be a great resource to use for the students in the academic setting, where they are the most stressed. Conclusions about this study focus primarily on the positive impact that a therapy program in a college of nursing can have on the students. Any drawbacks should be addressed when evaluating the effectiveness of the program but there is a general desire for animal therapy to continue in future years.

Implications for Practice

This research indicates that animal therapy is perceived positively in the College of Nursing environment and that efforts should be made to continue and improve on the process. The therapy dogs should be available to all semesters and should be used as a resource more often. It is especially important to include them before and after exams, during finals, clinical competencies and any other times when the stress levels in students higher than normal.

From the study findings, it is clear that the benefits of animal therapy in this setting far outweigh any drawbacks. However, the drawbacks should be considered seriously when reevaluating and improving the use of animal therapy in the College of Nursing. The suggestions made by the students should also be examined when considering how animal therapy should be used in the future.

Another implication from this study is that the College might consider either increasing faculty certified with a dog as a therapy team or asking for volunteer therapy teams to come at different times throughout the week. Students expressed that they wish to see the dog more but the dog must be with a handler so schedules can be difficult. A volunteer therapy team may be able to resolve this issue because they could work with semesters that do not have a faculty member certified with a therapy dog.

From the overwhelmingly positive response from the students, animal therapy is something that is very important to them. Their perceptions are that the integration of a therapy dog has not only helped them relax and brought them joy but also helped them continue through the difficulty of nursing school. This type of program should be offered to all degrees of nursing as an intervention to prevent burnout.

Strengths of the Study

The major strength of this study is the lack of research about animal therapy in an academic setting, specifically in a college of nursing. This research is being done in an area that has never been truly focused on and can increase the knowledge base about animal therapy so that further studies may create reason to use therapy dogs in this type of setting.

Another strength is the number of participants and the data saturation that was reached for this qualitative study. The repeated responses from several participants indicate that the findings are significant and that many people feel strongly about this type of program.

Limitations of the Study

One limitation is that interactions with dogs inside the classroom only take place in two semesters of the BSN program and it is only done in one setting. Increasing the number of nursing programs involved would give a better understanding of the perceptions.

Another limitation was that majority of the students have owned a dog either in the past or presently. If more participants had not owned a dog before, the results may have been different. Along with that, there may have been selection bias because students who have strong feelings about dogs may be more inclined to participate in the study.

Finally, 70% of the students who participated were in their fourth semester of nursing school and had only interacted with a therapy dog during one semester. Other semesters had interacted with two therapy dogs in more than one semester so if more of these students had participated the responses may have been different.

Recommendations for Future Research

This qualitative study on the perceptions of animal therapy in the college of nursing should be used as a basis for further research into the best practices of this type of program in this setting. From this study, many students stated that the therapy dogs bring them stress relief

and suggested that they wanted to interact with the dogs during stressful times such as when testing. Research should include randomized control trials about biochemical markers, such as cortisol, that indicate the stress levels of a group of students who interact with a therapy dog before and after testing to determine any test anxiety relief that animal therapy may bring them compared to a control group.

Many students also indicated that they were able to learn the information better, were more focused and felt re-energized after breaks that included interacting with a therapy dog during lecture. Research should also be focused on comparing students' performance on tests or evaluations with these therapy dog breaks compared to just a normal break to see if this is also a quantifiable benefit of a therapy dog program.

There have been many studies that have pronounced the effectiveness of animal therapy both physically and emotionally in various settings. With more knowledge about animal therapy in all disciplines, including academia, programs that use therapy animals can be expanded on as a resource. Through long term studies about animal therapy in a college of nursing setting, it can be determined if students are performing better in class, are more mentally and emotionally healthy, and have a less stressful experience in nursing school through the use of therapy dogs.

Summary

Chapter five included the conclusions of the study, the implications for practice, the strengths and limitations of the study, as well as any future recommendations for research on this topic. The general conclusion of this study is that animal therapy is a celebrated program in the College of Nursing setting. There are suggestions for improvement but it is a program that many students desire to be continued. The findings from this study are consistent with what little literature is available. The strengths of this study are that it is one of the first studies to look at

animal therapy in a college of nursing setting and that data saturation was fulfilled. Limitations of the study include that it was only done in one setting, the majority of the students had previously owned a dog and that 70% of the participants were from fourth semester.

Recommendations for future research include a randomized control trial to measure test anxiety with animal therapy and a study on the test scores of nursing students in regards to animal therapy. From the findings of this study, the benefits outweigh the drawbacks, and future research should be done to understand the full effectiveness in increasing knowledge, promoting emotional well-being and decreasing burnout for students in the College of Nursing.

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Appendix A

The Perceptions of Animal Therapy in a College of Nursing**Ashley Alexander**

The purpose of this study is to understand the perceptions of having a therapy dog at the College of Nursing from a student's perspective.

If you choose to take part in this study, you will be asked to take part in a focus group where you will share your thoughts and feelings about having a therapy dog at the College of Nursing, it will take approximately one hour to complete this session. There are no foreseeable risks associated with participating in this research except the potential for a breach in confidentiality during the audio recording process and you will receive no immediate benefit from your participation. However, your feedback will broaden the research that is available about the participation of therapy dogs in a college of nursing setting. In order to be eligible to participate in this study, you must have prior experiences with a therapy dog in the college of nursing setting, be 18 years or older and be in the Bachelor's of Science in Nursing program at the University of Arizona. Light snacks will be available at the time of the focus group, however there is no other form of compensation.

If you choose to participate in the study, you may discontinue participation at any time without penalty. In addition, you may skip any question that you choose not to answer. By participating, you do not give up any personal legal rights you may have as a participant in this study. An Institutional Review Board responsible for human subjects' research at The University of Arizona reviewed this research project and found it to be acceptable, according to applicable state and federal regulations and University policies designed to protect the rights and welfare of participants in research. For questions about your rights as a participant in this study or to discuss other study-related concerns or complaints with someone who is not part of the research team, you may contact the Human Subjects Protection Program at 520-626-6721 or online at <http://rgw.arizona.edu/compliance/human-subjects-protection-program>.

For questions, concerns, or complaints about the study, you may call Ashley Alexander, Student Nurse at 480-277-0165 or email at aalexander14@email.arizona.edu.

By participating in this focus group, you agree to have your responses used for research purposes. These responses will be anonymous through the use of pseudonyms to protect subject confidentiality. Furthermore, if you choose to participate in the study, you agree to keep all information shared in focus groups sessions confidential. If participants request a copy of the study, it will be provided to them.

Appendix B

Perceptions of Animal Therapy in a College of Nursing Recruitment Script

Hello, my name is Ashley and I am a fourth semester student working on my honors thesis on the perceptions of animal therapy in the College of Nursing. The study is based on the interactions students have had with the two therapy dogs in the College, Tzatziki and Hannah. The purpose is to gain insight on the perceptions of having the therapy dogs within the College through the use of focus groups. Each focus group will be between 6-12 people and the session will be an hour long. The requirements to join the study include participation in any semester of the BSN program, have had a prior interaction with at least one of the two therapy dogs in the College of Nursing setting, over the age of 18 and English speaking. This study is done on a completely voluntary basis and participants are able to drop out at any time. The IRB has also approved this study and the risks associated with it are minimal. Every care will be taken to protect the participants' rights and confidentiality. There will also be light snacks provided at the focus group sessions so please consider joining! The groups will take place on Monday the 10th at 6pm in CON room 105, Tuesday the 11th at 5pm and 6pm in CON room 105 and Wednesday the 12th at 5:30pm in CON room 115! Your thoughts and perceptions are highly valued and I would really like to capture the perceptions of having a therapy dog at the College of Nursing for possible future research! If you have any questions, you can contact me at aalexander14@email.arizona.edu. Thank you!

Appendix C

Questionnaire

- 1). What semester are you in the College of Nursing?

- 2). Do you own or have you ever owned a dog?

- 3). Do you own or have you ever owned a pet other than a dog?

- 4). Are you allergic to dogs?

- 5). How often have you been exposed to a therapy dog at the College of Nursing?

- 6). What gender do you identify with?

- 7). How old are you?

Appendix D

Social Media Post

Hello everyone!

My name is Ashley and I am a fourth semester at the College of Nursing. I am conducting a study for my thesis that aims to describe the students' perceptions of having therapy dogs at the College. I will be holding focus groups at the College on [insert days here and times here] for an hour each where students may come and express their views! There will be snacks provided and it is also a great opportunity to meet with other students as well. If you are interested, please email me at aalexander14@email.arizona.edu. I hope to hear from you! Thanks!

*An Institutional Review Board at the UA has reviewed this project and deemed acceptable according to all policies and regulations to protect the rights of participants.

Appendix E

Semi-Structured Interview Guide

- 1). When a therapy dog is present in the classroom setting, how do you feel or respond?
- 2). When there is a therapy dog present in the common areas, do you go interact or want to interact with the dog?
- 3). What do you feel the benefits are of having a therapy dog at the college to you personally?
- 4). What do you feel the drawbacks are of having a therapy dog at the college to you personally?
- 5). Is there anything else you would like to add?

Appendix F

IRB Approval



Research
Office for Research & Discovery

Human Subjects
Protection Program

1618 E. Helen St.
P.O. Box 245137
Tucson, AZ 85724-5137
Tel: (520) 626-6721
<http://regw.arizona.edu/compliance/horse>

Date: March 27, 2017
Principal Investigator: Ashley Lynn Alexander
Protocol Number: 1703253675
Protocol Title: Perceptions of Animal Therapy in the College of Nursing
Level of Review: Exempt
Determination: Approved

Documents Reviewed Concurrently:

Data Collection Tools: *Brief Questionnaire.docx*
Data Collection Tools: *Interview Guide.docx*
Data Collection Tools: *Sign up sheet for study.docx*
HSPP Forms/Correspondence: *final appendix f.docx*
HSPP Forms/Correspondence: *Final IRB.docx*
HSPP Forms/Correspondence: *Final Verification.doc*
HSPP Forms/Correspondence: *Signature page.pdf*
HSPP Forms/Correspondence: *site authorization.pdf*
Informed Consent/PHI Forms: *Disclosure Form Revised v2017-03-27.docx*
Informed Consent/PHI Forms: *Disclosure Form Revised v2017-03-27.pdf*
Recruitment Material: *Facebook post.docx*
Recruitment Material: *Perceptions of Animal Therapy in a College of Nursing Recruitment Script.docx*
Recruitment Material: *Recruitment Flyer Revisions.jpg*

This submission meets the criteria for exemption under 45 CFR 46.101(b). This project has been reviewed and approved by an IRB Chair or designee.

- The University of Arizona maintains a Federalwide Assurance with the Office for Human Research Protections (FWA #00004218).
- All research procedures should be conducted according to the approved protocol and the policies and guidance of the IRB.
- Exempt projects do not have a continuing review requirement.
- Amendments to exempt projects that change the nature of the project should be submitted to the Human Subjects Protection Program (HSPP) for a new determination. See the Guidance on Exempt Research information on changes that affect the determination of exemption. Please contact the HSPP to consult on whether the proposed changes need further review.
- You should report any unanticipated problems involving risks to the participants or others to the IRB.
- All documents referenced in this submission have been reviewed and approved. Documents are filed with the HSPP Office. If subjects will be consented, the approved consent(s) are attached to the approval notification from the HSPP Office.

Appendix G

Recruitment Flyer

University of Arizona College of Nursing

Animal Therapy Student Study

Volunteers needed!

Date: [Insert Date]

Time: [Insert Time]

Location: [Insert Location]

Join a focus group of fellow nursing students to offer your perspective on animal therapy within the College of Nursing as part of an honors thesis. Snacks will be provided!

Contact Ashley Alexander at aalexander14@email.arizona.edu

An Institutional Review Board responsible for human subjects research at The University of Arizona reviewed this research project and found it to be acceptable, according to applicable state and federal regulations and University policies designed to protect the rights and we