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Animal-Assisted Therapy: A Program Evaluation of One Substance Abuse Treatment Center

Erin Poore
Medical University of South Carolina

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BY

Erin Poore

A doctoral project submitted to the faculty of the Medical University of South Carolina
in partial fulfillment of the requirements for the degree
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Abstract of Dissertation Presented to the
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Animal-Assisted Therapy: A program evaluation of one substance abuse treatment center
by
Erin Benfield

Chairperson: Jillian Harvey, PhD
Committee: Daniel Brinton, PhD
Michelle Woodbury, PhD, OTR/L

Abstract

Animal-assisted therapy (AAT) has the possibility of enhancing health outcomes for those living

with substance abuse disorders. Previous research primarily focused on individuals with a

diagnosis of dementia and other cognitive related disorders. Prior research that did look at

individuals with substance abuse focused on the use of horses rather than canines and were

limited to small sample sizes. We used an electronic medical record system to identify eligible

patients to volunteer to participate in two weeks of animal-assisted therapy at one substance

abuse treatment center in southeastern United States. Volunteers completed pre and post survey

questions measuring overall satisfaction in the treatment program. It was found that anxiety was

significantly decreased after animal-assisted therapy sessions. Feelings of self-worth,

confidence, and overall satisfaction were trending in the right direction, but did not yield a

positive result.

Table of Contents

List of Figures

List of Tables

1 CHAPTER 1 INTRODUCTION

1.1 Background and Need

Substance abuse, also known as chemical dependency, is the medical term used to describe overuse and abuse of drugs and alcohol that an individual continues despite the development of significant life problems due to the use (Mayo Clinic, 2022). Signs and common behaviors from an individual who may be experiencing chemical dependency include:

- Tolerance or need for increased amounts of the substance to get the desired effect.

- Increase in time spent to get, use, and recover from the use of substances

- Isolation from recreational and social activities

- Isolation from close relationships

- Continued use despite relational conflict with family, friends, and spouse

- A person finds it difficult to cut down or quit

- Withdrawal symptoms that emerged if use is decreased or stopped: nausea, cold sweats, vomiting, etc. (Mayo Clinic, 2022)

Substance abuse has major impact on overall health. Clinical findings show a person's overall health and genetic history affect how substance abuse affects individuals. A person's overall health, age, and genetic history all effect clinical findings of substance abuse. Often, individuals with a substance use disorder will experience chronic fatigue, weight loss of greater than ten pounds, and difficulties falling and saying asleep; with some individuals going consecutive days without sleep. Individuals with substance abuse disorders may have difficulties in completing activities of daily self-care including personal hygiene, feeding themselves, etc. These Individuals may also suffer from serious medical consequences including abnormal lab

results: low potassium, low magnesium, etc. Abnormal lab results can lead to cardiac arrhythmia such as bradycardia, or slow heart rate, tachycardia, or high heart rate. More serious arrhythmias include atrial fibrillation: an irregular, rapid heart rate that causes poor blood flow and puts an individual at higher risk of heart attack and stroke (Mayo Clinic, 2022).

Commonly, individuals with substance use disorders also experience mental health symptoms congruent to depression, anxiety, and psychosis. Symptoms may include feelings of sadness most of the day or all day, reduced ability to concentrate, significant mood swings, isolation, detachment from reality, and auditory and visual hallucinations (Mayo Clinic, 2022).

Substance abuse is a significant problem across the United States. Findings in the National Survey on Drug Use and Health estimated that 7.8% of the United States population over the age of 12 needed substance abuse treatment in 2019. However, only 1.5% received any substance abuse treatment in that same year. There are additional gaps in utilization when examining the completion of treatment plans. Although 1.5% of those with substance abuse disorders sought treatment, the national average shows that 30% of treatment-seeking individuals will drop out of in-person substance abuse (non-methadone) programs within the first 30 days of treatment (Palmer et al., 2009). National average increases to over 50% when looking at dropout rates within 90 days of treatment (Palmer et al., 2009). Completion of ninety days of treatment is the minimum attendance recommendation to see symptom improvements. Individuals who leave treatment before to 90 days are at risk of relapse, increased stress, and emotional reactivity (Palmer et al., 2009).

Animal Assisted Therapies

Animal-assisted therapy is a therapeutic intervention that incorporates a variety of animals in a therapeutic setting such as horses, dogs, cats, pigs, etc.; however, dogs and horses are most frequently included in a person's treatment plan (Nimer, 2007). Not only do animals enhance traditional therapy, but research indicates there are additional treatment outcomes that are also improved by the inclusion of animals in substance abuse treatment. Research has shown that therapeutic animals can decrease cortisol levels, decrease symptoms of anxiety, and increase feelings of self-worth and trust, all high-risk factors for relapse (Nimer, 2007).

It has also been shown that animal-assisted therapy in various healthcare settings including assisted living facilities, hospitals, and substance abuse and mental health treatment centers, may improve communication skills and emotional self-regulation (Nimer, 2007). Individuals with substance abuse disorders often have a co-occurring mental health disorder. In 2020 6.7% of adult in the United States experienced a co-occurring substance abuse disorder and a mental health diagnosis (Nimer, 2007). Therefore, individuals with substance abuse disorders could experience benefits from animal-assisted therapy in both the substance abuse and in mental health treatments.

1.2 Problem Statement

A great number of individuals do not successfully complete substance abuse treatment, putting them at higher risk relapse and death (Mayo Clinic, 2022). Animal-assisted therapy is one promising way to overcome some of the challenges that may lead patients to leave treatment prior to completion. The intention of this doctoral project is to conduct a program evaluation of the relationship between animal-assisted therapy, and length of stay, and overall client

satisfaction for individuals enrolled in a substance abuse partial hospitalization and intensive outpatient program.

1.3 Research Objective and Population

The key focus of this project is to evaluate the relationship between animal-assisted therapy, program process measures, and outcomes for individuals enrolled in an outpatient level of care treatment program for substance abuse. A program evaluation will evaluate the effectiveness of animal-assisted therapy on patient satisfaction and average length of stay for clients attending partial hospitalization and intensive outpatient level of care at one treatment center over a 14-day period.

2   Chapter 2 Literature Review

This literature review will assess the benefits of animal-assisted therapy across various healthcare settings. With limited research concentrating on mental health and substance abuse treatment centers, this will be an overreaching review of available literature focused on the possible benefits animals can have on human health.

2.1   What is Animal-Assisted Therapy?

Animal-assisted therapy is a highly beneficial addition to traditional therapy but is underutilized, and under-researched. Use of animals for medicinal and therapeutic purposes has been around for much of human history; however, the first formal research looking at pet psychotherapy and its treatment benefits was published in the 1960's (Young and Horton, 2019). Since then, animals have been incorporated into various treatments for mental and physical health; however, there is not a vast amount of literature available that investigates the health benefits.. Though some research focuses on the effects animal-assisted therapy has on individuals with substance abuse disorders, most of the research surrounding animal-assisted therapy focuses on the benefits animals have on the physical and mental health of older adults, specifically older adults with dementia, a chronic condition that progressively affects memory and other cognitive functions, social behavior, and ability to independently complete day-to-day functions (Young and Horton, 2019).

2.2   Outcomes of Animal-Assisted Therapy

Human Health

Unlike animal-assisted therapy, there is plenty of evidence that companion animals have positive benefits on overall human health. Freidman and Krause-Parello (2018) looked at three groups:

1. Companion animal owners vs. individuals who do not own a companion animal
2. Individuals who experience a 'one-off' contact with animals
3. Individuals that review animal-assisted interventions.

Benefits of owning a companion animal demonstrated in this literature included: decrease in depressive symptoms and feelings of loneliness, an increase in overall social interaction and social skills, and a decrease in anxiety and stress reactions. Participants in the study that experienced live, in-person animal interaction saw an increase in physical activity (Friedman & Krause-Parello, 2018).

Although results yielded benefits, there were outlying potential issues and concerns including allergies, asthma, and animal bites. Also stated was the potential for adverse mental health symptoms upon the death of a companion animal. Ultimately, researchers recommended additional research to be conducted to evaluate the efficacy and evidence base to better understand how companion animals enhance human health and well-being (Friedman & Krause-Parello, 2018).

Adults With Dementia

Dementia is a chronic progressive medical condition that affects memory, cognitive functioning, social behaviors, and independent ability to complete activities of daily living. With no effective long-term treatment, most treatment modalities aim to treat symptoms of the disease,

not the core cause. A somewhat new therapeutic strategy to improve symptoms of dementia is animal-assisted therapy (Lai et al., 2019).

Lai and a team of researchers examined the effectiveness of animal-assisted therapy for individuals that have been diagnosed with dementia. Using data extracted from the Cochrane Dementia and Cognitive Improvement Group's Specialized Register, two authors assessed a range of clinical trials for animal-assisted therapy independently and reported results using mean difference, standardized mean difference, and risk ratios. Researchers concluded that there was low-certainty evidence that animal-assisted therapy may slightly reduce depressive symptoms in people with dementia; and, no evidence was found that animal-assisted therapy has an effect on any other outcomes in this population (Lai et al., 2019).

Like the previous study, Maylos et al., 2020 evaluated the effectiveness of animal-assisted therapy in geriatric individuals with cognitive impairment who are institutionalized. Specific variables evaluated were level of communication and changes in gait/balance of individuals. A total of 46 patients from two nursing home centers participated in twelve weekly sessions of physiotherapy with the experimental group participating in animal-assisted therapy during that time. Results indicated statistically significant improvement in communication among those in the experimental group; however, no statistical improvements were found regarding gait in either group (Maylos et al., 2020).

Substance abuse

A study by Gatti et al. (2020) examined the benefits of animal-assisted therapy with individuals with substance abuse disorders as it relates to treatment completion. Using equine-assisted therapy (horses), fifty patients participating in residential level of care were randomly

assigned to treatment services to include equine-assisted therapy, or traditional therapy. Results

yielded no association between the two therapy types regarding treatment retention; however,

this study was small, leading authors to believe the outcome may have been different with a

larger sample size (Gatti et al., 2020).

Kern-Godal et al. (2016) examined the contribution of the therapeutic relationship

between person and horse to success in treatment. Therapeutic relationship historically has been

a strong predictor of success in substance abuse treatment; however, the authors wanted to assess

individual reports from his/her own perspective of the human-animal therapeutic relationship and

its effect on his/her health and well-being. Using semi-structured interviews, authors gathered

information from eight clients about their experiences with animal-assisted therapy while in

treatment. Results indicated that the human-horse relationship was significant for positive self-

construct, emotional support, and overall emotional regulation (Kern-Godal et al., 2016).

Looking at animal-assisted therapy in detained drug users, Contalbrigo el al.(2017)

conducted a pilot study in a prison setting that incorporated canine's in therapeutic services with

the intention of improving overall health and well-being of incarcerated individuals and reducing

the rate of relapse on drugs and alcohol post-release. Contalbrigo and colleagues analyzed the

effect of canine-assisted therapy with twenty-two incarcerated males with substance abuse

disorders. Of those twenty-two, twelve males participated in animal-assisted therapy services

once a week for 20 weeks. Results yielded that those who participated in the treatment group had

significantly improved social skills, decreased cravings, and reduced symptoms of anxiety and

depression compared to the control group.

Mental Health Settings

Jones, Rice, and Cotton (2019) were one of the first to review studies that incorporated canine-assisted therapy into mental health treatment programs serving adolescents ages 10 to 19. A total of seven studies were analyzed across various locations, treatment settings, and treatment models. Overall, canine-assisted therapy had a beneficial impact on adolescents' primary diagnosis such as mood disorders, post-traumatic stress disorder, and anxiety. Canine-assisted therapy also had a beneficial impact on secondary factors such as client engagement in treatment, behaviors and showed a decrease in disruptive/resistant behaviors. There was no evidence suggesting that canine-assisted therapy had any effect on adolescents' self-esteem, subjective wellbeing, or coping skills (Jones et al., 2019).

A team of researchers evaluated the effect of animal-assisted therapy for psychiatric patients that are at high risk of becoming violent during care. Traditionally, coercive measures such as sedation, restraints, and seclusion are used to intervene with psychiatric patients who have become combative. This can often cause further distress for the individual and create mistrust for the healthcare system. With no known historical research of this kind, researchers looked at previous animal-assisted therapy studies in various psychiatric settings. Widmayer and team found that the use of animal-assisted therapy across multiple psychiatric settings reduced anxiety and aggressive behaviors. It was also found that animal-assisted therapy improved patients overall well-being, quality of life, and self-efficacy (Widmayer et al., 2019).

Aimed at looking at the effects animal-assisted therapy, Chen et al., 2021 implemented a randomized control trial with adults greater than forty years of age with a diagnosis of schizophrenia. Randomly assigned to an animal-assisted therapy group or control group, participants went through a twelve-week psychological intervention. The animal-assisted therapy group participated in one sixty-minute session weekly that included a canine. Chen and his team

found that animal-assisted therapy seemed to be effective in reducing psychiatric symptoms consistent with a schizophrenia diagnosis (Chen et al., 2021)

Sahebalzamani, Rezaei, and Moghadam (2020) conducted research on psychiatric patients who live in a residential mental health facility in Tehran, Iran. In this specific facility, patients rarely have visitors and often lead an overall low quality of life. This study aimed to evaluate if animal-assisted therapy influenced happiness and quality of life for residents living there.

Sahebalzamani and team conducted a randomized control trial including seventy males with chronic psychiatric diagnosis living in residential care homes. Randomly selected, patients were assigned into animal therapy intervention group and control group. The animal therapy group received animal-assisted therapy with a bird for eight weeks while the control group received no animal interaction. Measuring for happiness and quality of life they used The Oxford Happiness Inventory and the Wisconsin Quality of Life Index. Results yielded that happiness in the intervention group significantly increased, as well as the overall quality of life for those individuals (Sahebalzamani et al., 2020).

Although, as previously mentioned, overall research is limited; however, research that is available indicates that animal-assisted therapy has positive benefits to individuals with substance abuse disorders. Possible benefits include improved social skills, decreased cravings, decreased risk of relapse, and increased success in substance abuse treatment. It is hypothesized that by incorporating canine-assisted therapy in a partial hospitalization level of care for substance abuse, clients seeking services of the same will experience similar results.

3   Chapter 3: Methods

3.1   Research Design

With limited literature focused on animal-assisted therapy in a healthcare setting, specifically with adults under the age of 65, this program evaluation aims to evaluate client satisfaction in individuals under the age of 65 who are enrolled in substance abuse and mental health partial hospitalization and intensive outpatient level of care. A non-experimental, program evaluation study design will be used to measure patient satisfaction and engagement via completion of surveys by clients enrolled in one treatment center located in the United State's southern region. Clients who enter treatment after the implementation of animal-assisted therapy will be excluded from this study. There are two primary research questions we concentrate to answer in this program evaluation:

1. Are participants of animal-assisted therapy satisfied with the program, and do they recommend the program?
2. Do participants of animal-assisted therapy show changes in how the program is perceived to promote motivation and engagement in treatment?

Looking at these outcome measures will allow us to evaluate the potential effectiveness that animal-assisted therapy has on individuals in substance abuse and mental health treatment. This pilot will use a quality improvement method, using a short-rapid cycle evaluation of the program to examine changes in processes and outcomes. Results will be used to enhance the program and for program decision making (AHRQ, 2020). Treatment centers can then use results for future treatment programming, quality improvements, and non-traditional treatment modalities. It is predicted that clients who participate in animal-assisted therapy in conjunction

with other therapy modalities including process group therapy, psychoeducational group therapy, adventure therapy, and individual talk therapy will experience improved overall satisfaction with treatment and motivation for treatment.

3.2   Sample Selection

Clients enrolled at the treatment center in the southeastern United States participating in the substance abuse and mental health partial hospitalization and intensive outpatient level of care were invited to participate in this initiative. The treatment center is an out-of-network treatment center with most clients paying treatment costs out of pocket of $10,000-$18,000 for 30-45 days of treatment. Clients attending the treatment center received the following services:

1. Group therapy: process group, psychoeducational group, adventure therapy group
   a. Partial hospitalization level of care attends 6 hours of group therapy Monday-Saturday
   b. Intensive outpatient level of care attends 3 hours of group therapy Monday-Friday
2. Individual therapy: one, sixty-minute session with a licensed therapist weekly
3. Relapse prevention planning
4. Treatment and aftercare planning: update the plan every two weeks with a licensed therapist.
5. Case management: one, thirty-minute case management meeting weekly.
6. Medication management: a medical team that consists of a medical doctor, physician's assistant, nurse, and medical assistant.
7. Medication-assisted therapy as appropriate.

3.3 Study Setting

Individuals attending this program participate in one of two programs: 1. Partial hospitalization program in which clients participate in 30-45 days of six hours of daily group therapy Monday through Saturday and one hour of individual therapy weekly, or 2. An intensive outpatient program in which clients participate in 30-45 days of three hours of daily group therapy Monday through Friday and one hour of weekly individual therapy.

3.4 Animal-Assisted Therapy Sessions

Clients will volunteer to participate in the animal-assisted therapy group. All clients will be completing satisfaction surveys prior to introducing animal-assisted therapy, and after each session. An animal-assisted therapy curriculum will be implemented twice a week over a 14-day period. Surveys will include Likert Scale type questions regarding anxiety, self-worth, happiness, and confidence in their relapse prevention plan. It is projected that client satisfaction will significantly increase with the implementation of animal-assisted therapy. It is also believed that reported influence of the program on symptoms of anxiety will decrease, and reported feelings of self-worth will increase.

Participants received one ninety-minute session of animal-assisted therapy weekly for two weeks. Sessions included the presence of a four-year-old therapy certified Greyhound named Astro during mental health and substance abuse process groups. Astro was free to roam the group space for the full session unless prompted by facilitator for additional therapeutic intervention with clients. The facilitator also demonstrated animal-assisted grounding techniques as part of psychoeducation related to symptoms of anxiety and depression.

3.5 Data Sources

Patient data will be exported from the KIPU, electronic medical records. All identifying information will be removed including patient names, date of birth, address, and phone numbers. Clients will be separated by age group and level of care they are enrolled. Participating clients will complete two surveys over a 14-day period. The first survey will be conducted on day one before the implementation of animal-assisted therapy and the second survey will be completed after participating in 14 days of treatment including animal assisted therapy 90 minutes a week. The pre-survey consisted of five Likert scale questions. The post-survey includes eight Likert scale questions for participants. Survey instruments can be found in Appendix A-B.

3.6   Data Collection

The survey will be administered using pen and paper survey. Surveys will not include any identifying information, but will indicate if they participated in the pet-therapy. Surveys will be collected by the program leaders and kept in a locked office until entered into Microsoft excel. Paper surveys will be shredded after data entry.

3.7   Data Analysis

Data analysis will summarize participant characteristics including: client age, level of care, and number of days in the program. Descriptive statistics including t-tests, Chi-squared and Fisher's exact will be used as appropriate to examine changes in survey outcomes pre-post intervention.

4   Chapter 4: Results

4.1 Program Description

Clients enrolled at the treatment center in southeastern United States are participating in either partial hospitalization (PHP) level of care or intensive outpatient (IOP) level of care. All clients enrolled receive group therapy at either 36 hours weekly or 15 hours weekly, 60 minutes of individual therapy weekly, weekly case management, and medication management services. Group therapy session topics include psychoeducation, relapse prevention, adventure therapy, trauma informed yoga, and traditional process therapy.

Animal-assisted therapy was implemented for two weeks as a pilot for possible program enhancement. Volunteer participants participated in 90-minute pet therapy sessions twice a weekly for two weeks. Sessions included psychoeducation surrounding animal-assisted therapy and its potential benefits it has on human physical and mental health and general interaction with the dog, Astro.

Astro and his handler, Phil are a certified therapy team from Alliance Therapy Dogs and insured through Woolington Agency LLC. Appendix B includes a copy of Astro and Phil's proof of certification (member ID: 91841, expiration: 12/31/2023) and proof of insurance coverage.

4.2 Program Participation

All clients enrolled in the treatment center were allowed to volunteer for animal-assisted therapy by putting their name on a sign-up sheet 7 days before the first pet therapy session. The day before the first session, clients were reminded that they had volunteered to participate and were allowed to opt out of sessions if they had changed their minds. Out of seven clients enrolled

at the treatment center, all seven clients volunteered to participate in animal-assisted therapy; however, Figure 1illustrates that after further screening, one client was not able to participate due to past trauma with the same breed of dog that was used during pet therapy sessions.

Figure 1. Funnel Chart for Animal-Assisted Therapy Volunteers
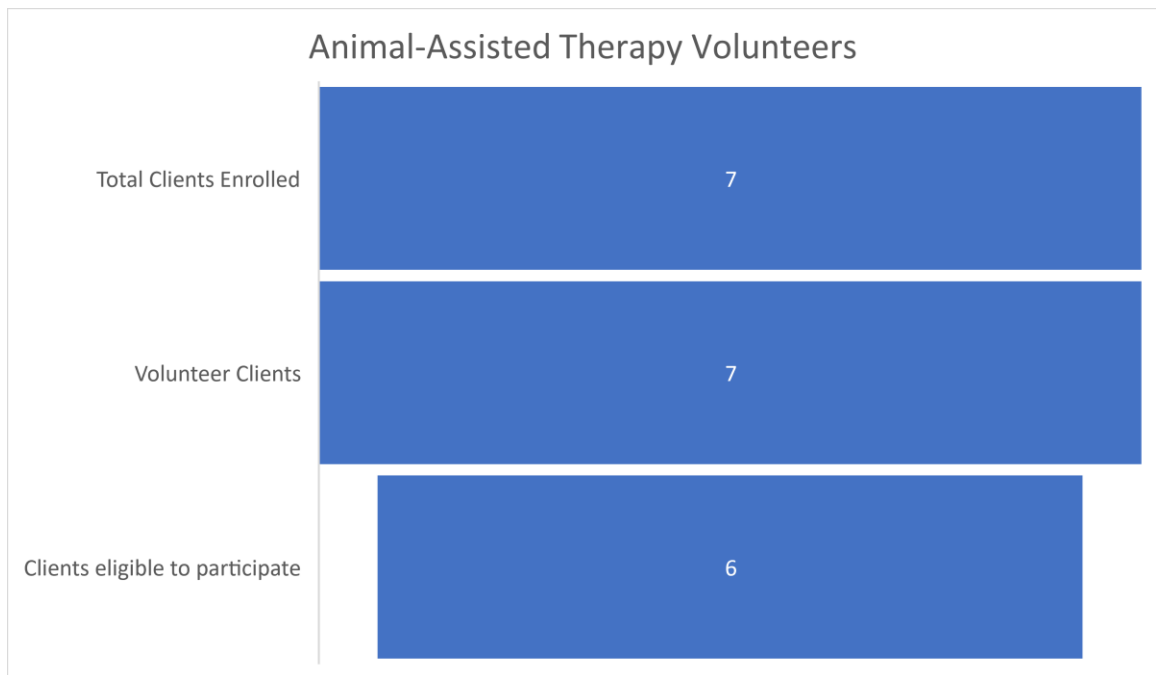
4.3 Results Overview

After data construction was completed, six volunteers were eligible and approved to participate. A breakdown of participant demographics can be found in Table 1. The population was split between male and female, four males (66.6%) and two females (33.3%). Participant ages ranged from 23 to 58 (M=34.8) with 83.3% of participants between the ages of 18- 41.

Table 1. Participant Demographics

Characteristic		%
n		6
Gender	Male	4 (66.6)
	Female	2 (33.3)
Age Group	18-25	2 (33.3)
	26-33	2 (33.3)
	34-41	1 (16.7)
	42-49	0
	50-57	0
	58-65	1 (16.7)

Table 2 illustrates the pre and post-survey results of clients who participated in pet therapy. Measuring for overall program satisfaction, 25% of pre-pet therapy surveys indicated individuals were partly satisfied with overall care provided at the treatment center, 45% of participants were satisfied and 20% of individuals were more than satisfied with care they had received. Post-survey results indicated a 10% increase in participants who felt more than satisfied with overall care provided at the treatment center. Overall satisfaction results were not significant ($p=0.366$); however, trending in a positive direction.

Table 2. Satisfaction with Overall Care

How satisfied are you with the overall care provided at the treatment center?	Not at all Satisfied	Partly Satisfied	Satisfied	More than Satisfied	Very Satisfied	
Pre	0	5 (25%)	9 (45%)	4 (20%)	2 (10%)	
Post	0	2 (10%)	7 (35%)	6 (30%)	5 (25%)	p=0.366

Results for self-worth (Table 3) and self-confidence (Table 4) were similar to overall satisfaction as results were trending in a positive direction, but not significant findings. Pre-pet

therapy session, 40% of individuals felt neutral regarding the treatment program helping with

their self-worth and 50% of individuals were neutral regarding the treatment center helping to

improve their self-confidence. Post-pet therapy results for self-worth increased from 35% of

individuals who agreed that their feelings of self-worth were improving to 65% who felt their

feelings of self-worth had improved (p=0.162). Percentages for those who strongly agreed

remained the same. Self-confidence increased by 20% post-pet therapy in the agree category and

5% in the strongly agree category (p=0.414).

Table 3. Self-Worth Pre-Post

The treatment center programs help me enhance my self-worth	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	p=0.162
Pre	0	2 (10%)	8 (40%)	7 (35%)	3 (15%)	
Post	0	0	4 (20%)	13 (65%)	3 (15%)	

Table 4. Self Confidence Rating pre-post

The treatment center programs help me improve my self-confidence	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	p=0.417
Pre	0	1 (5%)	10 (50%)	7 (35%)	2 (10%)	
Post	0	0	6 (30%)	11 (55%)	3 (15%)	

The majority of participants felt prior to participating in animal-assisted therapy that the

treatment program helped with developing a relapse prevention plan (60%) (Table 5). Post-pet

therapy session, those who felt the same increased by 10% to 70%. (p=0.704). The percentage of

those who strongly agreed had no change and those who initially disagreed agreed after

participating in pet therapy.

Table 5: Prevention plan rating pre-post

The treatment center programs help me with a relapse prevention plan	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	p=0.704
Pre	0	2 (10%)	3 (15%)	12 (60%)	3 (15%)	
Post	0	0	3 (15%)	14 (70%)	3 (15%)	

Managing anxiety results were significant (p=0.020) with 65% of individuals who felt that the treatment program helped to manage their anxiety post-pet therapy session, compared to the 35% of participants who felt the same pre-pet therapy session (Table 6).

Table 6: Anxiety rating pre-post

The treatment center programs help me manage my anxiety	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	p=0.020
Pre	0	2 (10%)	9 (45%)	7 (35%)	2 (10%)	
Post	0	0	2 (10%)	13 (65%)	5 (25%)	

Overall, 90% of survey results indicated that participants felt like participating in animal-assisted therapy contributed to their overall improvement in treatment (Figure 1). 10% of participants felt participating in AAT had no effect on their improvement in treatment. When asked how likely participants would be to recommend animal-assisted therapy to others on a scale of 1 to 10, 0 being not likely at all and 10 being extremely likely, the average score was 8.4 with a StD of 1.3 and a range of scores from 5 to 10 (Figure 2).
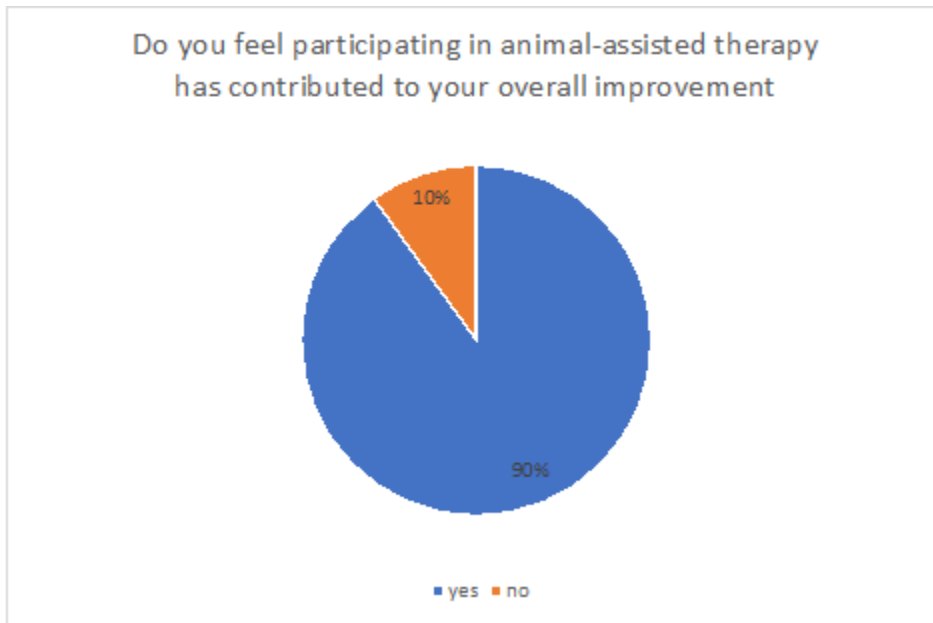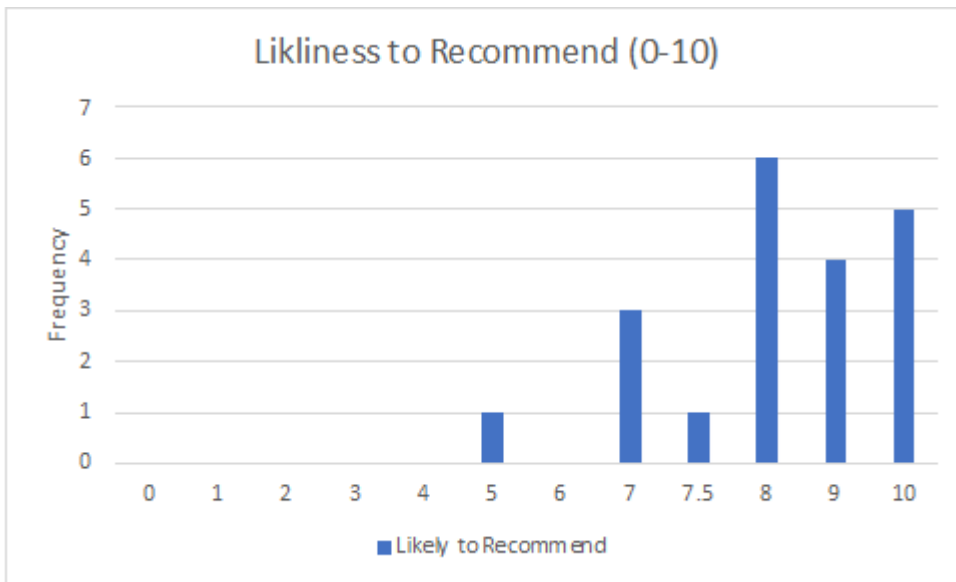
Figure 1: Participation and Overall Improvement

Do you feel participating in animal-assisted therapy has contributed to your overall improvement

10%
90%

■ yes ■ no

Figure 2: Likeliness to Recommend

Likliness to Recommend (0-10)

■ Likely to Recommend

Qualitative comments indicated that those participants who would recommend the

program perceived the following benefits: 1. Reduced feelings of anxiety; "Having dogs around

me made me feel calmer," 2. Increased feelings of calmness; "Had a calming effect while processing," and 3. Positive distraction from negative emotions;" It got my mind off things I'm struggling with." According to one patient, "Dogs are so friendly. They bring happiness and joy into the room and they don't pass any judgement." However, participants who would not recommend the program stated the following reasons: 1. Being a pet owner, and 2. Being nervous around animals; specifically dogs. For example, one participant commented, "I already have a dog and cat I love on."

5   Chapter 5

5.1 Results Summary

Overall, participants appeared satisfied with the treatment center and mostly recommended animal-assisted therapy to others, and significantly perceived the program was impacting anxiety symptoms during the two-week pilot. Measurements of self-worth, self-confidence did not yield significant results, but showed to be trending in the right direction. Participants mostly agreed that the treatment center helped them with a relapse prevention plan before animal-assisted therapy; however, post-survey results indicated a small increase in participants who agreed.

5.2 Recommendations

Further research in animal-assisted therapy at this treatment center will benefit from adjustments in the QI progress. For example, a screening question to filter out participants who have past trauma with dogs, or anxiety surrounding animals. Presenting participants with psychoeducation on animal-assisted therapy prior to pet therapy sessions may also be a benefit. This can provide participants with a clear idea of what pet therapy is in order for each person to make an informed decision on whether or not they would like to participate, reducing the risk of a participant having a negative experience.

5.3 Limitations

The biggest limitation of this program evaluation was the small sample size (N=6). Small sample size, while results were trending in a positive direction the small sample size may have limited our ability to detect statistical significance pre-post. However, 90% of participants did attribute their improvements to the pet therapy program. Not having a control group due to

the voluntary nature of the initiative was also a limitation to this evaluation. All participants wanted to participate, eliminating our ability to have a comparison group of non-participants. Finally, this was a pilot in one center, so results may not be generalizable to other settings. Future studies should examine the effects of animal-assisted therapy as it compares to a control group, further effects pet therapy has on self-worth and self-confidence, and further benefits animal-assisted therapy has on overall relapse prevention strategies.

5.4 Conclusion

Considering the small sample size, benefits of increased self-worth, self-confidence moved in a positive direction, but did not yield a significant result. Measurement of overall satisfaction also trended in the right direction but was not significant and feelings that the treatment program helped with a relapse prevention plan slightly increased, but overall remained steady. Feelings of anxiety significantly decreased post animal- assisted therapy, indicating that with continued pet therapy sessions, participants would experience continued benefit of reduced anxiety.

Further research is needed with adjusted QI process and sample size to gain better insight to the   benefits of implementing animal assisted therapy in treatment centers with mental health and substance abuse populations.

Appendix A

Pre-Intervention Survey Questions

1. On a scale of 1-5, where 1= not at all satisfied and 5=very satisfied, how satisfied are you with the overall care provided at this treatment center? (response choices Not at all Satisfied," "Partly Satisfied," "Satisfied," "More than Satisfied," "Very Satisfie

2. The treatment center programs help me manage my anxiety (strongly disagree to strongly agree).

3. The treatment center helps me enhance my self-worth (strongly disagree to strongly agree).

4. The treatment center programs help me improve self-confidence. (strongly disagree to strongly agree).

5. The treatment center programs help me with a relapse prevention plan. (strongly disagree to strongly agree).

6. Participating in pet therapy y/n

Appendix B

Post Intervention Survey Questions

Participating in pet therapy y/n

1. On a scale of 1-5, where 1= not at all satisfied and 5=very satisfied, how satisfied are you with the overall care provided at this treatment center? (response choices Not at all Satisfied," "Partly Satisfied," "Satisfied," "More than Satisfied," "Very Satisfied,")

2. The treatment center programs help me manage my anxiety (strongly disagree to strongly agree).

3. The treatment center helps me enhance my self worth (strongly disagree to strongly agree).

4. The treatment center programs help me improve self-confidence. (strongly disagree to strongly agree).

5. The treatment center programs help me with a relapse prevention plan. (strongly disagree to strongly agree).

6. Do you feel that participating in animal-assisted therapy has contributed to your overall improvements? Yes/no [only given if participating in pet therapy]

7. If yes, why. If no, why not [open text] [only given if participating in pet therapy]

8. On a scale of 0-10, where 0 is not at all likely, and 10 is extremely likely, how likely are you to recommend animal-assisted therapy to others? [only given if participating in pet therapy]

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