

Animal-Assisted Therapy (AAT) as an Adjunctive Treatment for Eating Disorders:  
Exploration of AAT through the lens of Attachment and Affect Regulation

by

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## **Dedication**

*To my Prince William, for helping me heal;*

*To my Dad and Mom, for supporting me unconditionally and inspiring me to follow my  
dreams;*

*To my Grandma Joan and Aunt Maureen, for being my biggest cheerleaders;*

*To Kathleen and James, for helping me out of the darkness;*

*To Michael, for everything;*

*To Joseph, for my motivation.*

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To protect the confidentiality of my subjects, I will not specifically identify resources within the AAT and Eating Disorders communities, however, I am extremely grateful to the networking possibilities that came out of these contacts.

I would also like to thank my therapist, Dr. Stephanie Mattei, who has supported me for 10 years and helped me build a life worth living.

Last but not least, I would like to give overwhelming thanks to my family; to my Mom and Dad for helping with Joseph while I did work and providing me with unconditional support throughout the doctoral process; to my sister, Kathleen, and my brother, James, for always believing in me and making me laugh; to my Grandma Joan and Aunt Maureen for being my biggest cheerleaders; to my fur-babies, Prince William, Gus and Cinderella, for showing me how easy it is to love; to my son, Joseph James, for refusing to sleep which helped with my efficiency in the early hours of the morning and for showing me that I am capable of love beyond my wildest dreams; and to the best husband in the world, my Michael, for his constant support, for putting up with my working and taking care of Joseph while doing so, for pushing me through my doubts, and for his utmost faith in me. Without them, this could not have been done.

## **ABSTRACT**

This research investigated the connection between attachment, affect regulation, eating disorders and Animal-Assisted Therapy (AAT), a connection that has not previously been examined. The conceptual lenses for this research identified eating disorders as one of many possible examples of difficulties in regulatory functioning and attachment. The connection between attachment and affect regulation, combined with the literature on eating disorders that identifies affect dysregulation as a primary factor in the etiology of eating disorders, provided the conceptual grounding for the research. This exploratory study, through intensive interviews, examined 20 adult women's experience of AAT among women who used AAT in their eating disorder treatment.

The results of this exploratory study suggest that the symptoms of ED may have a relational functionality for the individual, even if there are other developmental, cognitive, and physical costs associated with these same symptoms. Through the lens of attachment theory, eating disorders can be seen as having an "attachment function"; a way to maintain connection even if it is an inauthentic interpersonal connection. Then, the eating disorder is an imperfect, or partial solution for the individual who both desires connection but cannot tolerate being "known" authentically for fear of rejection. Therefore, AAT may provide, either within individual or group modalities, potentially reparative experiences that help foster a strong link between affect and body experiences for women struggling with eating disorders. The results of this study may have clinical and treatment implications for eating disorders. In particular, eating disorder treatment may benefit from thinking about the individuals' attachment representations, and the development of creative, sensory engaging, and restorative interventions as an adjunct to other therapies.

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## CHAPTER I

This exploratory study investigates the way in which women with eating disorders experience Animal-Assisted Therapy (AAT) and in particular, whether AAT relates to important aspects of attachment experience and affect regulation ability; two areas also associated with the diagnosis of eating disorders (Bateman & Fonagy, 2012; Illing, Tasca, Balfour & Bissada, 2010; O’Shaunessy & Dallos, 2009). The research proposed here is grounded in the ideas that AAT is a mechanism by which affect may be elicited amongst people with eating disorders *and* that AAT may serve as a tool for reparative experiences for individuals struggling with eating disorders.

This study is novel because ATT has emerged as an adjunctive therapy with other problems (e.g. autism), but has not been studied in relationship to eating disorders. Through the lenses of affect regulation and attachment, there can be a link between eating disorders *and* underdeveloped regulatory skills and attachments. Therefore, for individuals who struggle with interpersonal relationships, such as individuals with eating disorders, the traditional “trusting” relationship that is a common factor in most therapeutic intervention may not be a functional and effective intervention (Tedeschi, Sisa, Olmert, Parish-Plass, & Yount, 2015, p. 305). The presence of an animal can provide a less threatening atmosphere for therapy (Parish-Plass, 2008) and elicit emotions in a less threatening way (Tedeschi et al., 2015). Individuals with insecure attachments may be threatened by the relationship with the therapist (Tedeschi et al., 2015) and the presence of an animal gives the client agency with whom to interact (Parish-Plass, 2008). Also, for individuals who struggle with affect regulation, such as individuals with eating disorders, animals can assist in emotion regulation through tactile stimulation and

supported cognitive awareness of the impact dysregulated affect can have on the animal (Tedeschi, et al., 2015). For individuals with insecure attachments, recovery may be more effective in the context of relationships that include both humans and animals. Though not yet empirically examined, it is thought that the use of AAT may create an environment conducive to addressing the insecure attachment cycles; opening the way for the development of earned security as positive therapeutic relationships are established, regulatory skills are strengthened, and insecure attachment patterns are challenged (Tedeschi, et al., 2015).

### **1.1 Problem Statement**

Exploration of different therapeutic modalities for eating disorders is needed because of the devastating impact the disorder(s) has on individuals and families. Eating disorders have the highest mortality rates of all mental disorders (Crow, Peterson, Swanson, Raymond, Specker, Eckert, & Mitchell, 2009). Approximately every hour at least one person dies as a direct result of an eating disorder (Swanson, Crow, Le Grange, & Merinkangas, 2011). For females between the ages of 15 to 24, the mortality rate for anorexia nervosa is 12 times higher than all other causes of death (Crow et al., 2009). The prevalence of eating disorders in the United States now exceeds 30 million people (Swanson et al., 2011). Even with the mortality rates and prevalence of eating disorders, there is considerable difficulty in accessing treatment (Swanson et al., 2011). Only one in 10 individuals with eating disorders receive treatment (Crow et al., 2009). Of those individuals, only 35 percent receive treatment at a specialized facility for eating disorders (Crow et al., 2009). The financial burden of eating disorder treatment (approximately

30,000/month), combined with the limited financial support from insurance companies, makes it increasingly difficult to access eating disorder treatment (Alderman, 2010).

In recent years, neurobiology and attachment have converged leading to the exploration of affect regulation as an important determinant of wellbeing. The dysregulation of affect is a central component of many mental health diagnoses and likewise, is central to many models of eating disorders. The lenses of this research, affect regulation and attachment, are connected to each other via recent research in both areas (AAT and eating disorders) (Fine, 2015; Petrucelli, 2014).

This study is a qualitative, exploratory study of Animal-Assisted Therapy (ATT) as an adjunctive component to interventions for adult women with eating disorders. Linking AAT with affect regulation and attachments stems from the subject of anthrozoology (a multidisciplinary subject exploring the dyadic and mutual relationship between humans and animals) and is also framed by the theoretical construct of Human Animal Interaction (Kruger & Serpell, 2006). Human-Animal Interaction (HAI) refers to the mutual and dynamic relationships between people and animals and the ways in which these interactions may affect physical and psychological health and well-being (McCardle, McCune, Griffin, & Esposito, 2011). The theoretical construct of HAI proposes that animals can support humans in the de-arousal of anxiety, mediate social stress, regulate affect and emotion, and improve self-efficacy (Souter & Miller, 2007). Therefore, exploring the connection between AAT and affect regulation may yield important information regarding interventions for vulnerable populations. The connection between attachment and affect regulation, combined with the literature on eating disorders that

identifies affect dysregulation as a primary factor in the etiology of eating disorders, provides a rich conceptual grounding of the proposed research.

This exploratory study is needed because of the devastating impact of eating disorders and the current lack of effective treatments. Adolescent women are four times more likely to develop an eating disorder than are adolescent men (Reijonen, Pratt, Patel & Greydanus, 2003), so the focus for this study will be on women. AAT may have therapeutic benefits for a vulnerable population with whom interacting with people is too threatening and inpatient care is not financially accessible. AAT is moving in line with social work values as it represents an alternative treatment option to meet the diverse needs of people. For AAT to be seriously considered as an alternative treatment, however, there must be more systematic research exploring the mechanisms within the modality responsible for any therapeutic change. The burgeoning interest in AAT and the lack of effective treatment models for eating disorders makes this a significant social welfare problem to explore.

The primary research question for this study is to explore how adult women with eating disorders experience AAT and in particular, whether AAT relates to important aspects of attachment experience and affect regulation ability; two areas also associated with the diagnosis of eating disorders.

## **1.2 Conceptual Framework**

The expansion of attachment theory to explore affect regulatory processes has a significant effect on translating the developmental theory into a pragmatic framework for models of both psycho-pathogenesis and the change process in psychotherapy (Schoore & Schoore, 2008). Attachment and affect regulation theories have not been frequently

explored with eating disorders and there are still many questions. This dissertation uses these theoretical lenses to promote more research and develop important practice implications for this population.

Bowlby's conceptual formulation of attachment has sparked research concerning the origins, correlates, and consequences of secure and insecure relationships (Thompson, 2008). Guided by a general expectation that a secure attachment would predict better later functioning, developmental researchers have explored the association between early security and later relations with parents, peers, and other social partners, as well as with self-concept, personality development, and indicators of emergent psychopathology (Thompson, 2008). Recently, researchers have also broadened their inquiry to explore how security predicts later cognitive and affective development, extending the range of predictive correlates far beyond what Bowlby originally envisioned (Thompson, 2008). Schore and Schore (2014) propose that attachment communications are critical in the development of right brain neurobiological systems involved in processing of emotion, modulation of stress, and self-regulation (Schore & Schore, 2014). Therefore, the regulatory processes of affect synchrony that create states of positive arousal, and interactive repair that modulate states of negative arousal, are the fundamental building blocks of attachment and subsequent self-regulatory functions (Schore & Schore, 2008).

As indicated above, neurobiology and attachment have converged leading to the exploration of affect regulation as an important determinant of wellbeing. The dysregulation of affect is a central component of many mental health diagnoses and likewise, is central to many models of eating disorders. The lenses of this research, affect regulation and attachment, are connected to each other via recent research in both areas

(eating disorders and AAT) (Fine, 2015; Petrucelli, 2014). The connection between attachment and affect regulation, combined with literature on eating disorders that identifies affect dysregulation as a primary factor in the etiology of eating disorders, provides a rich conceptual grounding of the proposed research.

### **1.3 Outline**

This dissertation is organized in the following format. In this first chapter, I discussed the conceptual lenses and the significance of this study in furthering knowledge in the field of social work and social welfare. In the second chapter, I will review the definitions of AAT and explore the existing body of research. In the third chapter, I will provide an overview of attachment theory, key concepts in attachment, the renegotiation of attachment during adolescence, and the emerging neuroscience substrate of affect regulation. I will also provide a link between attachment, affect regulation, and AAT. In the fourth chapter, I will provide a brief overview of the regulatory problem of focus, eating disorders, and conceptualize their link to attachment and affect regulation. In the fifth chapter, I will provide details of the methodology. In the sixth chapter, I will discuss the results of this chapter. In the seventh chapter, I will provide a discussion of the results, treatment implications, and conclusions.

## **CHAPTER II**

### **LITERATURE REVIEW**

#### **WHAT IS AAT?**

##### **2.1 Animal-Assisted Therapy: Overview, Definitions, and Adjunctive Use**

Animal assisted interventions are best described as a category of promising practices that are still struggling to demonstrate their validity and efficacy (Kruger & Serpell, 2006). There have been attempts to standardize procedures and terminology, however, there is also a need to establish credibility by valid efficacy studies and controlled clinical trials (Kruger & Serpell, 2006). Animal-assisted therapy (AAT) continues to be applied to an array of programs that would not qualify as therapy in any medical or scientific sense of the word (Kruger & Serpell, 2006). Beck and Katcher (1984) state, “a clear distinction should be made between emotional response to animals, that is, their recreational use, and therapy. It should not be concluded that any event that is enjoyed by the patients is a kind of therapy” (Kruger & Serpell, 2006, p. 22).

##### **Definitions.**

As the field continues to evolve, many terms are utilized to describe the phenomena of the process. Kruger and Serpell (2006) indicate that in LaJoie’s (2003) literature review, 20 different definitions of animal-assisted therapy and 12 different terms of the same phenomenon were reported (Fine, 2015). As an attempt to standardize terminology, Animal-Assisted Interventions (AAI) is now consistently used in the literature as the umbrella phrase to describe any intervention that intentionally includes an animal as part of a therapeutic or ameliorative process (IAHAIO, 2014; Kruger & Serpell, 2006). Within the umbrella of Animal-Assisted Interventions (AAI), there are

three disparate categories: Animal-Assisted Activities (AAA), Animal-Assisted Education (AAE) and Animal-Assisted Therapy (AAT) (IAHAIO, 2013). Although this dissertation focuses on Animal-Assisted Therapy (AAT), I will provide a brief description of the three categories. Animal-Assisted Activity (AAA) is an informal and goal-oriented visitation conducted by a human-animal team for motivational, recreational, and/or education purposes (Fine, 2015; IAHAIO, 2014). An example of an Animal-Assisted Activity is visiting companion animals with residents in nursing homes (IAHAIO, 2014). Animal-Assisted Education (AAE) is a goal-oriented, structured, and planned intervention delivered by an educational service professional (IAHAIO, 2014). An example of an AAE would be a dog-assisted reading program delivered by a special education teacher (IAHAIO, 2014). Lastly, Animal-Assisted Therapy (AAT) is a goal-oriented, planned, and structured therapeutic intervention directed and/or delivered by education, health, and human service professionals (Fine, 2015; IAHAIO, 2014). Since this study focuses on AAT, it is important to highlight what makes AAT different from AAA and AAE. AAT is delivered by a formally trained professional (licensure or credentials for field of practice) with the intentional inclusion of an animal in a treatment plan (Fine, 2015; IAHAIO, 2014; Nimer & Lundahl, 2007). The treatment providers guide interactions between a patient and an animal to achieve specific goals (IAHAIO, 2014). A wide variety of disciplines may incorporate AAT. Possible practitioners could include physicians, occupational therapists, physical therapists, certified therapeutic recreation specialists, nurses, social workers, speech therapists, or mental health professionals (Kruger & Serpell, 2006). Examples of AAT include animal-assisted psychotherapy, animal-assisted social work, animal-assisted physical therapy, and

animal-assisted speech therapy (Fine, 2015). Even with the movement toward standardization of terminology, the application and delivery of AAT services vary greatly depending on the professional identity of the service provider involved, service setting, and goal of services (Fine, 2015).

### **Delivery and adjunctive use.**

The delivery of AAT differs with respect to the animal used, the duration of the intervention, the setting in which the intervention is delivered, and whether the intervention is delivered in an individual or group format (Nimer & Lundahl, 2007). AAT is not generally viewed as a stand-alone treatment. Rather, animals are used as a supplement or in conjunction with other interventions. Despite being an adjunctive treatment, AAT has been applied to a wide array of clinical problems and has been used with individuals across the lifespan including individuals with emotional difficulties (Barker & Dawson, 1998), compromised mental functioning (Kanamori, et al., 2001), undesirable behaviors (Nagengast, Baun, Megel, & Leibowitz, 1997), and autistic spectrum disorders (O’Haire, McKenzie, McCune, & Slaughter, 2013; Redefer & Goodman, 1989).

## **2.2 Animal-Assisted Therapy: Literature Review**

There is limited empirical support and research validating the effectiveness of animal-assisted therapy (Fine, 2001, 2006, 2010; McCulloch, 1984). The lack of thorough investigation leaves a large void in demonstrating the effectiveness of AAT (Fine, 2010). Several narrative reviews have been conducted on AAT. One of the earliest reviews of research on the benefits of human-companion animal interaction was conducted by Beck and Katcher in 1984. Beck and Katcher (1984) noted the multitude of

descriptive studies and identified only six experimental studies published at that time. The six experimental studies reported little or no benefit of pets (Beck & Katcher, 1984). Most of the research continues to be descriptive and lacks the necessary controls to determine whether benefits result from pet ownership or AAT (Fine, Tedeshi, & Elvove, 2015).

Nimer and Lundahl (2007) conducted a meta-analysis and it was the first quantitative review exploring the typical effect of AAT. In their meta-analysis, they conducted a comprehensive search of articles reporting on AAT in which they reviewed 250 studies (Nimer & Lundahl, 2007). The literature search for empirical investigations of AAT was guided by three objectives: to assess the average effect of AAT, to investigate the stability of this average effect, and to evaluate whether variability in the implementation of AAT and/or participants influenced outcomes (Nimer & Lundahl, 2007). Using their search strategies, they identified 250 abstracts, and used four criteria to select studies for inclusion. Studies were included if they a) reported on AAT and not AAA or pet ownership, b) included at least five participants in a treatment group, c) were written in English, and d) provided sufficient data to compute an effect size (Nimer & Lindahl, 2007, p. 227). From the 250 abstracts, 119 studies met the inclusion criteria. These studies were obtained and coded. Of these, 37 studies in peer-reviewed sources and 12 dissertations met eligibility criteria and were included. Studies were grouped into four outcome classes: autistic spectrum disorders, medical symptoms, well-being indicators, and behavioral actions. Independent variables were coded into seven groups: participant age, participants' presenting problems, use of a control or comparison group, type of animal used, length of treatment, location of treatment, and how treatment was

delivered. A codebook was developed and inter-rater reliability was reached across all categories (average kappa = .89). They used a Cohen's *d* as the measure of effect size.

The results from their meta-analysis support the impression that animals can help in healing process, however, future studies are needed to gain further insight into the precise impact of AAT. Overall, Nimer and Lundahl (2007) found AAT was associated with positive moderate effect sizes in improving outcomes in four areas: medical difficulties, autism-spectrum symptoms, behavioral problems, and emotional well-being. Additionally, they found the characteristics of participants and studies did not produce differential outcomes (Nimer & Lundahl, 2007). Limitations of their meta-analysis included broad construction of their dependent variables and variation in the AAT interventions studied. Nimer and Lundahl (2007) did not look at whether AAT was used as the primary or adjunctive intervention. As a result of AAT being used as an adjunct to other interventions, its implementation varies. Although some of the variance was accounted for through moderator analyses, considerable variance still existed (Nimer & Lundahl, 2007). To gain further insight into the precise impact of AAT interventions, studies will need to be designed to control for the potentially confounding effect of using AAT with other interventions (Nimer & Lundahl, 2007).

More recently, Kamioka and colleagues (2014) performed a systematic review of randomized controlled trials (RCTs) exploring the effectiveness of animal-assisted therapy (Kamioka et al., 2014). Studies were eligible if they were RCTs and included one treatment group in which AAT was used. Like LaJoie's (2003) unpublished doctoral research, they could not perform meta-analysis because of heterogeneity by difference of outcome measurement and intervention method (e.g., in dog, and in dog or cat) (Kamioka

et al., 2014). Eleven RCTs were identified but they were determined to be RCTs of relatively low quality (Kamioka et al., 2014). On account of the poor methodological quality and heterogeneity, there was insufficient evidence in the studies of AAT, and they were unable to offer any conclusions about the effects of AAT based on RCTs. Even so, they theorized AAT enhances the benefits of conventional forms of therapy in psychiatric rehabilitation (Kamioka et al., 2014).

The most recent systematic review of animal-assisted interventions (AAI) was conducted by O'Haire, Guérin and Kirkham (2015). They conducted a systematic review of the empirical literature on Animal-Assisted Interventions (AAI) for trauma. For their review, they defined AAI as any intervention that includes an animal as part of the process (O'Haire, Guérin, & Kirkham, 2015). Therefore, AAI encompassed targeted therapeutic interventions with animals (Animal-Assisted Therapy), less structured activities with animals (Animal-Assisted Activities), and the provision of trained animals to help with daily life activities (Assistance or Service Animals) (O'Haire, Guérin, & Kirkham, 2015). In their research, they found 10 studies that qualified for inclusion. These included six peer reviewed journal articles and four unpublished theses. Their aims were to describe the characteristic of AAI for trauma, evaluate the state of evidence base, and summarize the reported AAI outcomes for trauma (O'Haire, Guérin, & Kirkham, 2015).

The most common outcomes were depression, PTSD symptoms, and anxiety. They found a low level of methodological rigor in most studies. This resulted from inconsistency in use of terminology, limited information about both animal and interventionist background, and the level of detail regarding AAI procedures was often

insufficient to enable replication (O’Haire, Guérin, & Kirkham, 2015). In addition, protocols varied widely even across studies with the same species and no studies used fidelity checklists or published treatment manuals. Procedural and sample variability indicated the need for technique refinement and protocol standardization (O’Haire, Guérin, & Kirkham, 2015). Although the review studies were limited and diverse, all reported positive outcomes of AAI for individuals who experienced trauma (O’Haire, Guérin, & Kirkham, 2015). The most common finding was reduced depression and reduced PTSD symptom severity. Reductions in depression may be related to positive perceptions of animals since the presence of an animal has been related to increased smiling and laughing among children (O’Haire, 2013) and positive social engagement among adults (Hunt, Hart, & Gomulkiewicz, 1992; Wood, Giles-Corti, & Bulsara, 2005).

This outcome is consistent with prior research studies which indicated that that AAI can reduce depression among individuals in psychiatric hospitals (Souter & Miller, 2007), and reduce anxiety as well (Shiloh Sorek, & Terkel, 2003). The reduction in anxiety may be due to the comforting contact of stroking an animal (Beetz, Uvnas-Moberg, Julius, & Kotrschal, 2012a) or to the ability of animals to act as a positive focus of attention (Gullone, 2000). Although results have been predominantly positive, showing short-term improvements in depression, PTSD symptoms, and anxiety, their review of the methodology indicates that research is in its very early stages and AAI is not appropriate as the primary intervention for trauma (O’Haire, Guérin, & Kirkham, 2015). Overall, they indicate further research is essential to establish feasibility and compliance, to manualized evidence-based protocols for AAI, and to evaluate

generalizable outcomes in larger community samples (O’Haire, Guérin, & Kirkham, 2015).

While the former studies are highlighted for their systematic research methods, two studies are significant in their relationship with the constructs, content, and objectives of my research. Cumella, Lutter, Osborne and Kally (2014) explored the efficacy of an Equestrian Therapy (EQT) program with eating disorder patients in an inpatient facility. This study targeted previous observations that EQT may influence the eating disorder symptomatology and common co-occurring symptoms of impaired self-efficacy, drive for thinness, interpersonal distrust, impulse dysregulation, depressed mood, and anxiety in ED patients (Cumella, Lutter, Osborne, & Kally, 2014; Cumella, 2003).

Their randomly selected sample included seventy-two female inpatients treated at an inpatient ED facility between December 2005 and April 2008, and they employed a pre-test/post-test design. To measure EQT outcomes, they used the Eating Disorder Inventory-2, the Beck Depression Inventory-II, and a ND Beck Anxiety Inventory. In addition to these scales, they used four EDI-2 subscales: drive for thinness, ineffectiveness as a measure of impaired self-efficacy; interpersonal distrust; and impulse regulation. They measured participation in the EQT by the total number of minutes spent in any EQT activity during treatment (TEM), and the patient’s length of stay (LOS) was used as the logical analogue. To analyze the data, they ran six linear regression models to compare the efficacy of standardized treatment to that of standardized treatment plus EQT in ED patients. In each model, the dependent variable was the discharge score, and the independent variable was TEM, with the control variables (admission score and LOS)

added into the equation. Notably, they found all six models as highly statistically significant. As a result, they interpreted this as a significant relationship between number of minutes of EQT and patients discharge scores on drive for thinness, ineffectiveness, interpersonal distrust, impulse regulation, depression and anxiety. As they hypothesized, all models showed an inverse relationship between TEM and discharge scores. Based on their interpretations of the results, they suggested that an increase of EQT leads to a decrease in patients' discharge scores. For each symptom, Beta coefficients from the regression equations suggested the amount of symptom improvement gained from four one-hour EQT sessions may represent clinically meaningful additions to standard treatment for ED. Instead of using a basic outcome design (comparing non-EQT group to an EQT treatment group), they used an outcome design capable of capturing the effects of different doses of EQT. This was a limitation of their study. Even so, this may suggest a need for further research into EQT as an adjunctive treatment modality for eating disorders.

Although less recent, research conducted by Kunz (2008) is relevant because of its content and qualitative methods. Kunz (2008) used both quantitative and qualitative methods through a psychodynamic lens to study women diagnosed with anorexia nervosa (AN) who participated in equine-assisted psychotherapy/equine facilitated psychotherapy (EAP/EFP). The sample included 30 women with AN and the women were interviewed after 20 therapeutic riding sessions. The activities focused on relaxing exercises, stimulating awareness, and physical balance while on the horse. After the sessions, discussions included the emotional and physical experience of riding and interacting with the horses. The discussions were analyzed and the investigator created a thematic key.

In addition to the discussions, the subjects were given a 31 question written survey. Riding instructors were surveyed to collect demographic data and assess the scope of EFP usage in the three European countries. The results from both groups suggested that EFP helped clients to improve self-esteem, decrease fears, and adopt an outlet for constructive aggression (Kunz, 2008).

Voelker (1995) said the biggest challenge facing advocates of AAT can be summed up in two words: “Prove it” (p.1898). Therefore, AAT is best described as an adjunctive intervention struggling to demonstrate its validity. Most studies in this field are characterized by small, heterogeneous samples, and most studies are using non-experimental designs. The studies using experimental designs are also fraught with problems due to the varied implementation of AAT and lack of formalized structure in the interventions.

Specifically, in the most recent meta-analysis of AAT conducted by Kamioka and colleagues (2014), the 11 studies that met the inclusion criteria varied in the implementation of AAT. Studies were eligible if they were RCTs and included one treatment group in which AAT was used. To highlight the variation and lack of formalized structure in the AAT interventions, some of the AAT interventions included: an animal-assisted activity with 30 adult patients with schizophrenia interacting with two dogs for 50 minutes per week; 30 adult patients undergoing non-palliative radiation therapy participating in 15 minute sessions three times a week for four weeks with two certified therapy dogs; 26 adult patients from a cardiac care unit visiting with a volunteer and a dog for 12 minutes in which the dog would lay on the patient’s bed; 20 adults with depression interacting with (playing and swimming) dolphins for one hour a day for two

weeks; 48 adults with severe ambulatory disabilities using service dogs; 20 adults with depression in a skilled rehab unit had a bird placed in their room for 10 days; adults working with farm animals twice a week for one week with variations of time spent on the farm each day from approximately one to three hours; animal-assisted therapy with 18 adults at a psychiatric hospital involved a variety of animals (dogs, rabbits, ferrets, and guinea pigs) visit the participants each day and participants were allowed to observe or directly interact with the animals (Kamioka et al., 2014). Even within the gold standard of research methods (RCTs), the implementation of animal-assisted therapy was extremely varied.

In the most recent systematic review of Animal Assisted Interventions (AAI), O’Haire, Guérin, and Kirkham’s findings also displayed the considerable variation in the AAT implementation such that AAIs included individual sessions, group sessions, and a combination of both (O’Haire, Guérin, & Kirkham 2015). Furthermore, they highlight the role and activities of the interventionists were inconsistently described with varying levels of detail (O’Haire, Guérin, & Kirkham, 2015). In addition, they did not find any study in which the use of a published or manualized protocol was used. They identified the two main variation factors as the animal species used in the treatment and whether the intervention animal was used as a metaphor for the child’s relationship with his/herself or his/her social partners (O’Haire, Guérin, & Kirkham, 2015). Three of the five studies with dogs integrated them into classical therapy sessions, which included both dog-focused activities such as training the dog as well as talking to the dog about personal traumatic experiences (Hamama, Hamama-Raz, Dagan, Greenfeld, Rubinstein, & BenEzra, 2011; Dietz, Davis, & Pennings, 2012; Murrow, 2013). They found only one

study that compared the effect of the mere presence of the dog versus the integration of the dog through stories told from the animal's perspective (Dietz et al., 2012). In the three studies involving horses as the primary animal, only one included horse riding (McCullough, 2011) while the other two used ground-based activities such as observing horse behavior, grooming, and assessing the body language of the horse (O'Haire, Guérin, & Kirkham, 2015). They found the interventions on farm settings varied greatly and incorporated a wide range of animals (horses, dogs, cats, sheep, chickens, opossums, pigs, and llamas) with no standardization (O'Haire, Guérin, & Kirkham, 2015).

In their findings, the animal-assisted interventions varied with implementation length ranging from one to 12 weeks and contact time with the animals ranging from 20 minutes to 36 hours (O'Haire, Guérin, & Kirkham, 2015). Also, they found interventionists had a range of backgrounds including human-focused (social work and psychology) and animal-focused (veterinary medicine and animal-handler) with limited information regarding the specific AAI training for the interventionist (O'Haire, Guérin, & Kirkham, 2015). Overall, intervention procedures and research designs varied greatly and five different terms were used across the 10 studies reviewed (O'Haire, Guérin, & Kirkham, 2015).

For this dissertation, I employ the approach urged by noted AAT scholar and AAT practitioner, Dr. Aubrey Fine – exploring the adjunctive use of AAT. Since the field is still struggling to find its identity, I would like to pursue a different line of questioning through the exploration of its adjunctive implementation from an attachment/affect framework. To address these gaps in research, we need to further elucidate the process of AAT and how it is integrated alongside traditional

psychotherapies. This qualitative research will provide an opportunity to capture detailed descriptions of the AAT process and how it is used in conjunction with other traditional therapies.

### **2.3 Linking Animal-Assisted Therapy with Attachment and Affect**

Linking AAT with affect regulation and attachments stems from the subject of anthrozoology (a multidisciplinary subject exploring the dyadic and mutual relationship between humans and animals) and framed by the construct of Human Animal Interaction (HAI). Human-Animal Interaction (HAI) refers to the mutual and dynamic relationships between people and animals and the ways in which these interactions may affect physical and psychological health and well-being (McCardle, McCune, Griffin, & Esposito, 2011). Neuroscience may be able to provide explanations for some of the observed effects of HAI, as well as identify underlying neurobiological mechanisms for people's attachment to animals (Gee, Hurley, & Rawlings, 2016). Therefore, exploring the connection between AAT, attachment and affect regulation (the neurobiological substrate of recent attachment theory) may yield important information regarding interventions for vulnerable populations.

The connection between attachment and affect regulation, combined with literature on eating disorders that identifies affect dysregulation as a primary factor in the etiology of eating disorders, provides a rich conceptual grounding of the proposed research. Animal-assisted therapy may provide a less-threatening relational therapeutic intervention with this population (Fine & Beck, 2015). The animal activates the attachment system but in a way that allows authentic feelings to percolate rather than intellectualism or other defensive functions (Tedeschi, et al., 2015; Petrucelli, 2014). The

activation of the attachment system, especially in the presence of attachment figures (both human and animal), may offer new healing relationships and possibly alter previous attachment patterns (Fine, Tedeschi, & Elvove, 2015). Helping eating disorder patients identify their attachment needs and relational worries may set the groundwork for building towards secure attachment relationship and improvements in self-regulation (Petrucci, 2014).

## Chapter III

### LITERATURE REVIEW

#### ATTACHMENT AND AFFECT REGULATION

##### 3.1 Attachment Theory

Attachment theory, as described by Bowlby (1977), is the propensity of human beings to make strong affectional bonds to particular others, and explains the personality disturbance and emotional distress which unwilling separation and loss can create (p. 127). Attachment theory hypothesizes that our experience of early relationships frames our later understanding and use of important relationships (Bretherton, 1992). The attachment system allows children to use their parents as a safe haven for obtaining protection in times of perceived threat and as a secure base from which to explore (Ainsworth, 1967). Bowlby's attachment theory (1969/1982, 1973, 1980) conferred a central role in adaptive human development to supportive interpersonal relationships (Bretherton & Munholland, 1999). He argued, from the cradle to the grave, an individual's mental health is intimately tied to relationships with attachment figures who afford physical protection and emotional support (Bretherton and Munholland, 1999). Therefore, attachment theory, operating from the paradigm of transactional relationships, provides a framework through which to examine the effects of the caregiver system on human developmental processes.

##### **Beginning of attachment theory.**

John Bowlby formulated the basic tenets of the theory drawing on concepts from ethology,<sup>1</sup> cybernetics, information processing, developmental psychology, and

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<sup>1</sup> Bowlby latched on to the concept of critical periods in embryological development when he found an English translation of Konrad Lorenz's (1935) paper on imprinting and began to review ethology for useful new concepts (Bretherton, 1992).

psychoanalysis (Bretherton, 1992). John Bowlby's first formal statement of attachment theory, building on concepts from developmental psychology and ethology, was presented to the British Psychoanalytic Society in London in three classic papers: "The Nature of the Child's Tie to His Mother" (1958); "Separation Anxiety" (1959); and "Grief and Mourning in Infancy and Early Childhood" (1960) (Bretherton, 1992). By 1962, Bowlby completed two more papers that were never published on defensive processes related to mourning. These five papers represent the first blueprint of attachment theory (Bretherton, 1992).

In "The Nature of the Child's Tie to His Mother" (1958), Bowlby reviews and then rejects contemporary psychoanalytic explanations for the child's libidinal tie to the mother in which need satisfaction is seen as primary and attachment as second (Bretherton, 1992). Bowlby borrowed Freud's (1905/1953) notion that mature human sexuality is built of component instincts and proposed that 12 month-olds' attachment behavior consists of component instinctual responses that have the function of binding the infant to the mother and the mother to the infant (Bretherton, 1992). These component responses include sucking, clinging, and following, and signaling behaviors of smiling and crying (Bretherton, 1992). These behaviors mature relatively independently during the first year of life and become both integrated and focused on a mother figure during the second six months (Bretherton, 1992). After discussion of infant development, Bowlby introduced ethological concepts such as sign stimuli or social releasers that cause specific responses to be activated and terminated (Tinbergen, 1951). In addition, Bowlby drew a clear distinction between the old social learning theory concept of dependency and the new concept of attachment. In doing so, he noted

attachment is not indicative of regression but rather performs a healthy and natural function even in adult life (Bretherton, 1992).

Bowlby's second paper, "Separation Anxiety" (1959), builds on observations by Robertson (1953b)<sup>2</sup> as well as on Harlow and Zimmermann's (1958) groundbreaking work on the effects of maternal deprivation in rhesus monkeys (Bretherton, 1992). Per Bowlby, traditional theory could not explain the intense attachment of infants and young children to a mother figure or their dramatic responses to separation.<sup>3</sup> Drawing on ethological concepts regarding the control of behavior, Bowlby maintained infants and children experience separation anxiety when a situation triggers both the desire to escape and attachment behavior but an attachment figure is not available (Bretherton, 1992). In his view, excessive separation anxiety is due to adverse family experiences such as rejection by parents, repeated threats of abandonment, or to a family's illness or death for which the child feels responsible (Bretherton, 1992). Additionally, Bowlby identified that sometimes separation anxiety can be very low giving an incorrect impression of maturity. He attributes this pseudo-independence to defensive processes such as defensive exclusion and, similar to dissociation, segregation of principal systems (Bowlby, 1980; Bretherton, 1992). These ideas later reemerged in Ainsworth's classifications of ambivalent, avoidant, and secure patterns of infant-mother attachment (Ainsworth, Blehar, Waters, & Wall, 1978).

In Bowlby's most controversial paper, "Grief and Mourning in Infancy and Early Childhood" (1960), Bowlby questioned Anna Freud's assertion that bereaved infants

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<sup>2</sup> In 1948, two years before Ainsworth's arrival, Bowlby hired James John Robertson to help him observe hospitalized children who were separated from their parents. Robertson had considerable training in naturalistic observation in Anna Freud's Hampstead residential nursery for homeless children (Bretherton, 1992).

<sup>3</sup> Bowlby cites Robertson's three phases of separation response which include protest (related to separation anxiety), despair (related to mourning and grief), and denial or detachment (related to defense mechanisms) (Robertson & Bowlby, 1952).

cannot mourn because of insufficient ego development and therefore only experience brief stints of separation anxiety if an adequate substitute caregiver is available (Bretherton, 1992). In contrast to Anna Freud, Bowlby claimed grief and mourning processes in children and adults appear whenever attachment behaviors are activated but the attachment figure continues to be unavailable. Bowlby also suggested that if the succession of substitute caregivers is too frequent, the child may be unable to form deep relationships with others (Bretherton, 1992).

### **3.2 Mother-Infant Interaction and Strange Situation**

Ainsworth's Ganda project<sup>4</sup> (Ainsworth, 1963, 1967) provided a rich source for the study of individual differences in the quality of mother-infant interaction – a topic Bowlby had not addressed in his work (Bretherton, 1992). Derived from her interview data, she could evaluate maternal sensitivity to infant signals (Ainsworth, 1963).<sup>5</sup> Notably, babies of sensitive mothers tended to be securely attached, whereas babies of less sensitive mothers were more likely to be classified as insecure (Bretherton, 1992).

In Ainsworth's Baltimore study,<sup>6</sup> she found that maternal sensitivity in the first quarter was associated with more harmonious mother-infant relationships in the fourth quarter (Bretherton, 1992). Babies whose mothers had been highly responsive to crying during the early months now tended to cry less, relying for communication on gestures, facial expressions, and vocalizations (Bell & Ainsworth, 1972). Bell and Ainsworth

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<sup>4</sup> In late 1953 in Uganda, Ainsworth recruited 26 families with unweaned babies (ages 1-24 months) whom she observed every two weeks for two hours per visit over a period of up to nine months (Bretherton, 1992). Within her research, Ainsworth was very interested in determining the onset of proximity-promoting signals and behaviors, noting carefully when these signals and behaviors became preferentially directed toward the mother (Bretherton, 1992).

<sup>5</sup> Three infant attachment patterns were observed: (1) Securely attached infants cried little and seemed content to explore in the presence of mother; (2) Insecurely attached infants cried frequently, even when held by their mothers, and explored little; (3) Not yet attached infants manifested no differential behavior to the mother (Bretherton, 1992; Ainsworth, 1963).

<sup>6</sup> In this project, 26 participating Baltimore families were recruited prenatally, with 18 home visits beginning in the first month and ending at 54 weeks (Bretherton, 1992). Each visit lasted four hours resulting in 72 hours of data collection per family (Bretherton, 1992).

(1972) concluded “an infant whose mother’s responsiveness helps him to achieve his ends develops confidence in his own ability to control what happens to him” (Bell & Ainsworth, 1972, p. 1188). In addition, all first-quarter interactive patterns were also related to infant behavior within in a laboratory procedure known as the “Strange Situation”<sup>7</sup> (Ainsworth & Wittig, 1969). Ainsworth found infants explored the playroom and toys more vigorously in the presence of their mothers than after a stranger entered or while the mother was absent (Ainsworth & Bell, 1970). As a result, Ainsworth became more intrigued with unexpected patterns of infant reunion behaviors, which reminded her of responses Robertson (1953b) had documented in children exposed to prolonged separations, and about which Bowlby (1959) had theorized on separation. Through analysis of home data, she found the infants who had been ambivalent or avoidant of the mother on reunion in the Strange Situation had a less harmonious relationship with her at home compared to those who sought proximity, interaction or contact on reunion (Ainsworth, Bell, & Stayton, 1974). This originated the Strange Situation classification system (Ainsworth, Blehar, Waters & Wall, 1978).

### **3.3 Reformulation of Attachment Theory -- Internal Working Model**

Bowlby reformulated his conceptualization of attachment, building on Ainsworth’s work, and proposed complex behavioral systems can work in organisms that evolved an ability to construct internal working models of the environment and of their own actions in it.<sup>8</sup> Therefore, the more adequate an organism’s internal working model,

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<sup>7</sup> This lab procedure for 1 year old children was originally designed to examine the balance of attachment and exploratory behaviors under conditions of low and high stress (Bretherton, 1992). The Strange Situation is a 20-minute drama with eight episodes (Bretherton, 1992). Mother and infant are introduced to a lab play room where they are later joined by an unfamiliar woman (Bretherton, 1992). While the stranger plays with the baby, the mother leaves briefly and then return (Bretherton, 1992). A second separation follows during which the baby is completely alone (Bretherton, 1992). Finally, the stranger and then the mother return to the room (Bretherton, 1992).

<sup>8</sup> This was a concept taken over from Craik (1943) through the writings of the biologist J.Z. Young (1964).

the more accurately the organism can predict the future (Bretherton, 1992). Furthermore, he applied these ideas to infant-mother attachment (Bretherton, 1992). In doing so, he proposed attachment has its own motivation and is in no way derived from systems such as mating and feeding (Bretherton, 1992). According to Bowlby, if the attachment figure has acknowledged the infant's needs for protection and comfort while at the same time respecting the infant's need of independent exploration of the environment, the child is likely to develop an internal working model of self as valued and self-reliant (Bretherton, 1992). Conversely, if the parent has frequently rejected the infant's bids for exploration or comfort, the child is likely to construct an internal working model of self as unworthy or incompetent (Bretherton, 1992). With the assistance of working models, children predict the attachment figure's likely behavior and plan their own responses (Bretherton, 1992).

### **3.4 Key Concepts in Attachment Theory: Internal Working Models, Secure and Insecure Attachments, and Inhibitors of Secure Attachment**

#### **Internal working models.**

The ability for attachment relationships to fulfill the safe-haven and "secure-base" functions depends not only on the attachment partners' actual behaviors, but on the translation of their interaction patterns into relationship representations (Bretherton & Munholland, 1999). Bowlby termed these relationship representations, "internal working models," and these internal working models of self and other in attachment relationships help members of an attachment dyad to anticipate, guide, and interpret interactions with partners. Per Bowlby (1969/1982), the term "cognitive map" was not adequate as it connotes a "static representation of topography," whereas his conceptualization of an "internal working model" implies a representational system that allows us to imagine

interactions and conversations with others and not a static entity (Bretherton & Munholland, 1999). Therefore, every situation we meet with in life is constructed in terms of the representational models we have of the world about us and of ourselves (Bowlby, 1980).

### **Secure attachment.**

Bowlby suggested the mother's presence, in addition to the correct reading and response to the infant's cues, fostered a secure attachment (Bowlby, 1958; Pearlman, 2005). Under stressful conditions, infants direct certain behaviors toward their caregiver to gain safety and protection (Moretti & Peled, 2004). As a result, parental attunement and appropriate responsiveness give rise to a secure attachment (Pearlman, 2005). The attachment system allows children to use their parents as a safe haven for obtaining protection in times of perceived threat and as a secure base from which to explore (Ainsworth, 1967). A secure attachment is indicated by a view of the self as worthy of care, competent in mastery of the environment, and a view of others as effective and reliable (Moretti & Peled, 2004). In addition, a secure attachment allows the baby, child, and adult to experience him or herself within the world in a mostly trusting and positive way (Pearlman, 2005).

There is evidence that attachment has a critical influence on the success of a child's developmental pathway toward self-reliant adulthood (Carlson & Sroufe, 1995). Early patterns of attachment can shape the individual's expectations in later relationships (Bretherton & Munholland, 1999). Mary Ainsworth and colleagues were the first to develop an attachment classification system (Bretherton, 1992). Based on an extensive observation of infant attachment behavior, Ainsworth and her colleagues developed a

tripartite classification of organized attachments based on the infants' response to a structured separation procedure – the 'Strange Situation' that included secure attachment, insecure-avoidant attachment, and insecure-resistant/ambivalent attachment (Ainsworth, Blehar, Waters, & Wall, 1978). The infants' behavioral responses to separation from the caregiver were seen to represent the infants' attachment strategy and expectations of their attachment figures' availability (Brown & Wright, 2001). "Secure" infants sought contact and proximity with little or no avoidance or angry resistance to the caregiver (Ainsworth, Blehar, Waters, & Wall, 1978). For the securely attached infants, the contact and comfort they received was effective in calming them and they returned to play (Ainsworth, Blehar, Waters, & Wall, 1978). Therefore, secure infants used the caregiver as a secure base from which to explore and turned to her for comfort when distressed (O'Shaunessy & Dallos, 2009). Insecure "avoidant" infants showed minimal displays of affection on reunion with the caregiver (Ainsworth, Blehar, Waters, & Wall, 1978). Also, insecure-avoidant infants showed little response to separation and an avoidance of proximity seeking or interaction with their attachment figures (Ainsworth, Blehar, Waters, & Wall, 1978). Insecure-"resistant" or "ambivalent" mingled contact seeking and proximity to caregiver with angry behavior and continued distress on reunion with caregiver (Ainsworth, Blehar, Waters, & Wall, 1978). As such, insecure-resistant/ambivalent infants responded to separation with immediate and intense distress and were less quickly soothed by their attachment figures. A further category of "disorganized/disoriented" attachment was later added to the classification system for those infants who did not fit into the three categories (Main & Solomon, 1990). Main (1973, 1979) developed the additional category, "disorganized/disordered" following a

realization that many infants were difficult to place in either avoidant, resistant, or secure categories (Main, 1973; Main & Soloman, 1986, 1990; Main & Weston, 1981). These infants appeared to have contradictory intentions and lacked any strategy for dealing with the stress of separation from the caregiver (Main, 1973).

### **Security across developmental changes.**

Bowlby (1980, 1988) stressed that a continuously secure attachment relationship requires an infant's embryonic working models of self and attachment figure(s) to be updated in stride with communicative, social, and cognitive competencies that develop in childhood and adolescence. The same holds for a parent's working models of the child and of self as attachment figure (Bretherton & Munholland, 1999). The renegotiation of attachment during adolescence and the mentalizing processes will be explored in later sections.

Bowlby indicated that young children develop an understanding that their attachment figures have separate (non-child-focused) goals. This cognitive advance allows secure attachment relationships to become "goal-corrected partnerships" (1969/1982, p. 355) in which there is a give-and-take on both sides and in which inevitable conflicts can be resolved through reciprocal adjustment of goals (Bretherton & Munholland, 1999).

Although working models are updated as children develop, Bowlby (1969/1982) described several processes that also ensure their relative stability. First, habitual interaction patterns bias perceptions—a concept borrowed from Piaget's (1952) idea of "assimilation." A child's confidence in an attachment figure's emotional availability is not likely to be crushed by occasional lapses in a caregiver's sensitivity (Bretherton,

1992). Second, there are two individuals' working models and expectations involved in a relationship. When one partner tries out new behaviors, the other may resist, and try to return the relationship to the old pattern. Third, frequently repeated interaction patterns tend to become increasingly "automatized," making lesser demands on attention, but obstructing the conscious revision of working models (Bretherton & Munholland, 1999, p. 105).

In secure relationships, these normal stabilizing processes give way to revisions of the working models as a child (or an adult) realizes that the current models no longer yield adequate predictions. Bowlby (1988) said, "As a securely attached child grows older and his parents treat him differently, a gradual updating of models occurs. This means that, though there is always a time-lag, his currently operative models continue to be reasonably good simulations of himself and his parents in interaction" (p. 130).

**Inhibitors of secure attachment: loss, separation, maternal stress, and environmental stress.**

Bowlby theorized if the attachment process was interrupted by extended separation or loss, the impact on the baby, child and adult could permanently damage the person's sense of safety in intimate human relationships (Bretherton, 1992; Pearlman, 2005). In opposition to parental attunement and appropriate responsiveness, parental unavailability and rejection is associated with insecure anxious-avoidant attachment (Bretherton, 1992; Pearlman, 2005). In contrast to securely attached children, these children view themselves as unable to sustain the care of others. However, they may also view others as able to provide support if their attention is secured and sustained (Bretherton, 1992; Pearlman, 2005). Bowlby did not think literal separation was the only way a baby could experience separation, but instead felt emotional separation or absence

could also inflict damage (Bretherton, 1992; Pearlman, 2005). For Bowlby, emotional damage did not have to come from a mother's indifference but often resulted from a mother's mental health condition or overwhelming preoccupations (Bretherton, 1992; Pearlman, 2005). When an infant is chronically unable to find an attuned emotional connection with the primary caregiver, the infant may try to find comfort through attempts of disassociation involving demands for food or thumb/pacifier sucking (Bretherton, 1992; Pearlman, 2005). As a result, these self-regulatory mechanisms may become imprinted as the primary way for self-care and comfort thereby replacing mutual caring and human attachment as a means for learning self-regulation (Pearlman, 2005).

As Bowlby indicated, emotional damage could result from a mother's mental health condition or overwhelming environmental conditions (Bretherton, 1992; Pearlman, 2005). A growing number of studies have examined the influences of social contextual factors on infant attachment (Belsky & Rovine, 1988; Spieker & Booth, 1988). Factors such as maternal personality characteristics, couple relationship quality, financial instability and chronic family adversity can have a negative impact on maternal sensitivity and responsiveness to infants (Belsky & Rovine, 1988). Also, researchers observed that as maternal depression and mothers' dissatisfaction in their interactions with their children increases, infant attachment security decreases (Creasey & Jarvis, 1994; Teti, Gelfand, Messinger, & Issabella, 1995).

In collaboration with Ainsworth (1967), Bowlby's attachment theory proposed that differences in the security of the infant-mother attachment have significant long-term implications for later intimate relationships, self-understanding, and even risk for psychopathology (Cassidy, 1999). The renegotiation of early attachment patterns in

adolescence and potential disruption can lead to a range of difficulties associated with regulatory processes. Incorporating a neurobiological substrate to this inquiry, disturbances in the attachment system during the renegotiation can be further explored within the affect dysregulation processes. In this dissertation, I will explore the link between attachment insecurity and the subsequent maladaptive affect regulation strategies as a potential contributor to the development of an eating disorder among adolescent females.

### **3.5 Attachment and Adolescence: Renegotiation of Early Attachment Patterns and Emergence of Affect Regulation as an Important Predictor of Outcomes**

The psychosocial development that takes place during adolescence brings profound changes in the expression and meaning of attachment processes (Allen, 2008). Early attachment patterns are not fixed and changes in attachment patterns can result from the tumultuous renegotiation of relationships during the developmental period of adolescence (Allen, 2008). Adolescence triggers the development of primitive neural mechanisms to higher order cognitive functions (Allen, 2008). Therefore, the attachment system is evolving and parent-child attachment relationships need to be reworked during this developmental phase (Allen, 2008). Moreover, even previous secure attachments during infancy and early childhood can be disrupted during adolescence for a variety of reasons. The potential disruption in the attachment relationship can lead to a range of difficulties associated with affect regulation processes (Allen, 2008). This is extremely important since adolescence is when the capacity for affect regulation emerges as an important predictor of many outcomes such as internalizing and externalizing disorders.

### **3.6 Reformulation of Attachment Theory: Developmental Psychopathology Perspective**

#### **Moving attachment theory to affect regulation.**

Bowlby's conceptual formulation of attachment has sparked research concerning the origins, correlates, and consequences of secure and insecure relationships (Thompson, 2008). Recently, researchers have also broadened their inquiry to explore how security predicts later cognitive and affective development, extending the range of predictive correlates far beyond what Bowlby originally envisioned (Thompson, 2008). Schore and Schore (2014) proposed that attachment communications are critical in the development of right brain neurobiological systems involved in processing of emotion, modulation of stress, and self-regulation (Schore & Schore, 2014). Therefore, the regulatory processes of affect synchrony that create states of positive arousal, and interactive repair that modulate states of negative arousal, are the fundamental building blocks of attachment and subsequent self-regulatory functions (Schore & Schore, 2008). The ability to flexibly regulate psychobiological states of emotions through interactions with other humans and auto-regulation in autonomous context are adaptive capacities central to self-regulation (Schore & Schore, 2008). Attachment experiences are imprinted in an internal working model that encodes strategies of affect regulation (Schore & Schore, 2008). Therefore, the developing ability of the child to communicate and regulate both positive and negative emotional states exists within the attachment relationship (Schore & Schore, 2008). As such, attachment theory is a regulatory theory (Schore & Schore, 2008). Exploring the potential disruption in attachment during the adolescent renegotiation of early attachment patterns and subsequent affect dysregulation may address a gap in research with the adolescent eating disorder population.

Schore (1994) theorizes the experiences that fine-tune brain circuitries in significant periods of infancy are embedded in socio-emotional transactions between an adult brain and a developing brain. Thus, the infant's emerging socio-affective functions are fundamentally impacted by the dyadic transactions the child has with the primary caregiver (Schore, 1994). These effects are elucidated by a deeper understanding of the interpersonal neurobiological mechanisms through which the early attachment relationship acts as the germinal matrix of right brain development (Schore & Schore, 2008).

Modern attachment theory focuses on the mechanisms that operate at the unconscious psychobiological core of the intersubjective context; the brain-mind-body-environment relational matrix out of which each individual emerges (Schore & Schore, 2008). Therefore, affect regulation proposes individual development arises out of the relationship between the brain/mind/body of both infant and caregiver held within a culture that supports or threatens it (Schore & Schore, 2008). Therefore, attachment experiences shape the early experience of the right brain – the neurobiological core of the human unconscious (Schore, 2003b).

**Affect regulation emerges in attachment.**

The essential task of the first year is the creation of a secure attachment bond of emotional communication between the infant and the primary caregiver (Schore & Schore, 2008). To enter this communication, the mother must be psycho-biologically attuned to the dynamic shifts in the infant's bodily-based internal states of central and autonomic arousal (Schore & Schore, 2008). During the affective communications embedded in mutual gaze episodes, the caregiver appraises nonverbal expressions of the

infant's arousal and then regulates both positive and negative affective states (Schore & Schore, 2008). The attachment relationship mediates the dyadic regulation of emotion such that the mother co-regulates the infant's developing central and autonomic nervous systems (Schore & Schore, 2008). In moments of interactive repair, the good enough caregiver who has mistuned can regulate the infant's negative state by accurately re-tuning in a timely manner (Schore & Schore, 2008). Therefore, the regulatory processes of affect synchrony that create states of positive arousal, and interactive repair that modulate states of negative arousal, are the fundamental building blocks of attachment and subsequent self-regulatory functions (Schore & Schore, 2008).

Emotion is initially regulated by others, but over the progression of infancy, it becomes increasingly self-regulated because of neurophysiological development (Schore & Schore, 2008). The ability to flexibly regulate psychobiological states of emotions through interactions with other humans and auto-regulation in autonomous context are adaptive capacities central to self-regulation (Schore & Schore, 2008). Therefore, attachment experiences are imprinted in an internal working model that encodes strategies of affect regulation (Schore & Schore, 2008). Bowlby thought the key to the attachment bond was the mother's ability to regulate the baby's negative fear states (Schore & Schore, 2008). As a result of findings in neuroscience, there is strong evidence the secure primary attachment figure not only down-regulates negative fear states, but also up-regulates positive emotions in loving and play states (Schore & Schore, 2008). Therefore, the developing ability of the child to communicate and regulate both positive and negative emotional states exists within the attachment relationship (Schore & Schore, 2008).

Attachment outcomes are the product of the interactions of both nature and nurture, the strengths and weaknesses of the individual's genetically encoded biological predispositions (temperament), and the early dyadic relationships with caregivers embedded within a particular social environment (culture) (Schoore & Schoore, 2008). Attachment, the outcome of the child's genetically encoded biological (temperamental) predisposition and the particular caregiver environment, represents the regulation of biological synchronicity within and between organisms (Schoore & Schoore, 2008).

**Predictors of secure attachment: parents' ability to mentalize about the life of the child as an important predictor of secure attachment and development of affect regulation skills.**

Fonagy and Target (2003) theorize the capacity to understand interpersonal behavior in terms of mental states is a key determinant of affect regulation and is acquired in the context of early attachment relationships (Fonagy & Target, 2003). This capacity is referred to as mentalization and operationalized for research as reflective function (Fonagy and Target, 2003). The theory of affect regulation and mentalization is intended to enrich the arguments advanced by Bowlby about the function of attachment (Fonagy & Target, 2003). Newer research on mentalization has suggested the capacity for the parent to mentalize about the internal life of the child is an important predictor of secure attachment and ultimately of the child's capacity for the development of affect regulation skills (Fonagy & Target, 2003).

Fonagy and Target (2003) understand mentalization as the discovery of affects through the primary object relationships (Fonagy & Target, 2003). According to them, affect regulation is the capacity to modulate emotional states, and is closely related to mentalization, which plays a critical role in the unfolding of a sense of self and agency

(Fonagy & Target, 2003). In this way, affect regulation is a prelude to mentalization (Fonagy & Target, 2003). Once mentalization occurs, the nature of affect regulation is transformed: it allows for adjustment of affects states and regulation of the self (Fonagy & Target, 2003). This is important because it connects the development of a normative process, attachment, with other factors, such as affect regulation and regulatory skills, which are key determinants of developmental well-being or vulnerability.

### **3.7 Disturbance in Attachment can result in Affect Dysregulation**

Disruption of attachment bonds in infancy leads to a regulatory failure expressed in impaired autonomic homeostasis, disturbances in limbic activity, and hypothalamic dysfunction (Reite & Capitanio, 1985). Therefore, in situations where the caregiver does not participate in reparative functions that reestablish homeostasis, the resulting psychobiological disequilibrium is expressed in a dysregulated and potentially toxic brain chemistry (Schore, 2003). The deprivation of empathic care creates growth-inhibiting environment that produces immature, physiologically undifferentiated orbitofrontal affect regulatory systems (Schore, 2003). Furthermore, extensive dysregulating experiences are permanently etched in the cortical-subcortical circuits in the form of right-hemispheric pathological representations of self (Schore, 2003). Thus, they show a limitation in affect regulation strategies and cannot adaptively shift internal states or overt behavior in responses to stressful external demands (Schore, 2003). Such deficits in right-brain relational processes and resulting affect dysregulation underlie all psychological and psychiatric disorders (Schore & Schore, 2014).

### **3.8 Summary and Bringing It All Together: Attachment, Affect, and AAT**

For individuals who struggle with interpersonal relationships, the traditional “trusting” relationship that underpins any therapeutic intervention may not be a functional and effective intervention (Tedeschi, Sisa, Olmert, Parish-Plass, & Yount, 2015, p. 305). Per Parish-Plass (2008), the presence of an animal provides a calm and less threatening atmosphere for therapy with individuals with insecure attachments. She found that the most critical assistance the animal can provide for individuals with insecure attachments, especially children, is to form a working therapeutic relationship. The presence of an animal gives the client agency to choose with whom to interact. This is extremely important because many insecurely attached clients may be threatened by the relationship with the therapist (Tedeschi, Sisa, Olmert, Parish-Plass, & Yount, 2015). Moreover, the presence of an animal in a therapy setting can prompt a range of emotions (Fine & Beiler, 2008; Fine, Lindsay, & Bowers, 2011). Animals can also display emotions or act in ways that may not be professionally appropriate for the therapist to display or act. For example, the animal may climb into the client’s lap or be touched by the client (Tedeschi, Sisa, Olmert, Parish-Plass, & Yount, 2015). Animals can elicit emotions in a less threatening way. Also, animals can regulate excessive emotion through tactile stimulation and cognitive awareness of the impact behavior or affect can have on the animal (Tedeschi, Sisa, Olmert, Parish-Plass, & Yount, 2015). Psychologically speaking, the animal can serve as a rich medium for therapy allowing the expression of the client’s inner world which would otherwise be too frightening to express (Oren & Parish-Plass, 2013). For individuals with insecure attachments, recovery may be more effective in the context of relationships which include both

humans and animals. AAT may create an environment conducive to addressing the insecure attachment cycles, opening the way for the development of earned security as positive therapeutic relationships are established and insecure attachment patterns are challenged (Tedeschi, Sisa, Olmert, Parish-Plass, & Yount, 2015).

## CHAPTER IV

### REGULATORY PROBLEM OF FOCUS: EATING DISORDERS

#### 4.1 Why Eating Disorders?

There are many etiologies postulated for eating disorders. The conceptual lenses for this proposed research identifies eating disorders as one of many possible examples of difficulties in regulatory functioning and attachment. Because AAT has been described as useful in activating the attachment system and providing new opportunities for experience affect regulation in interaction (Fine, 2015), the current study proposes an exploration of AAT with a population of individuals with eating disorders. The exploration of the therapeutic modality of AAT with eating disorders is a creative connection of their shared commonality – the focus on regulatory functionality.

Attachment and affect regulation theories have not been frequently explored with eating disorders and there are still many questions. The proposed research uses these lenses to hopefully promulgate more research and improve practice with this population.

Jean Petrucelli, eating disorder scholar and clinician, proposes several theories regarding attachment, affect, and eating disorders. She theorizes that eating disorder patients are often not adept at communicating in words and have a tendency toward emotional anesthetization (Petrucelli, 2014). These individuals often focus less on their feelings and more on their body-state (Petrucelli, 2014). A common response of eating disorder patients in psychotherapy is to speak of how fat and disgusting they feel or to use highly intellectualized language (Petrucelli, 2014). Therefore, individuals with eating disorders typically do not understand what is being asked of them in traditional psychotherapy and often find the whole process threatening (Bruch, 1978; Petrucelli,

2014; Sohn, 1985). Based on Petrucelli's attachment-framed theories on eating disorders, she advocates to help these individuals break free from the bodily entrenchment and connect with their feeling states using creative treatments (Petrucelli, 2014). In this way, AAT may be a good fit. It can link words and actions. In doing so, the eating disorder patient may discover the capacity to self-soothe, self-regulate, tolerate emotional experiences, and manage appetite and desire (Petrucelli, 2014). Therefore, these techniques may help the individual manage emotions and affect rather than being overwhelmed by them. AAT may be able to access the space between the eating disordered individual's two worlds: the world of food and the world of people (Petrucelli, 2014). In this way, the animal has the potential to become the "symbolic bridge" enabling the individual to link various aspects of self-experience and build skills that regulate affect (Petrucelli, 2014, p. 22).

#### **4.2 What are eating disorders?**

Eating disorders have become the third most common form of chronic illness among adolescent women aged 15-19 years (Reijonen, Pratt, Patel & Greydanus, 2003) although disordered eating is an issue that has plagued humans for centuries (Lucas, 1992). Adolescent women are four times more likely to develop an eating disorder than are adolescent men (Reijonen, Pratt, Patel & Greydanus, 2003). Adolescence (15-19) represents the peak period for the onset of eating disorders among women (Reijonen, Pratt, Patel & Greydanus, 2003).

The *Diagnostic and Statistical Manual of Mental Disorders* (5<sup>th</sup> ed.; DSM-5; American Psychiatric Association, 2013) is the most widely accepted nomenclature used by researchers and clinicians for the classification of mental disorders. The DSM-5's

classifications of eating disorders are divided into three relatively distinct categories: Anorexia Nervosa, Bulimia Nervosa, and Binge-Eating Disorder (American Psychiatric Association, 2013; Mancuso, Newton, Bosanac, Rossell, Nesci, & Castle, 2015). The former Eating Disorder Not Otherwise Specified (EDNOS) diagnosis has been replaced by the ‘other specified feeding or eating disorder’ (OSFED) and ‘unspecified feeding or eating disorder’ (UFED) diagnoses in DSM-5 (American Psychiatric Association, 2013; Mancuso et al., 2015). The broad OSFED category includes five specific examples, including atypical anorexia nervosa, subthreshold bulimia nervosa, subthreshold binge eating disorder, purging disorder, and night eating syndrome (American Psychiatric Association, 2013; Mancuso et al., 2015). According to the DSM-5, eating disorders are characterized by a) severe disturbances in eating behavior, b) disturbance in the perception of body shape, c) fear about not controlling weight, and d) using compensatory behaviors to lose weight or prevent weight gain (American Psychiatric Association, 2013). The etiology of eating disorders is generally accepted as a combination of genetic, developmental, psychological and sociocultural factors (Orzolek-Kronner, 2002). Although this critical inquiry is exploring the attachment and affect regulation links with eating disorder etiology, the etiology of eating disorders can have many pathways.

#### **4.3 Eating Disorders and Attachment Theory: Ozolek-Kronner’s attachment-framed ED symptoms as “proximity seeking behaviors”**

Orzolek-Kronner (2002) provides an example of an attachment-framed conceptualization of eating disorder symptomatology. Ozolek-Kronner’s study expands upon Bowlby’s (1969, 1973) concept of proximity seeking to offer a possible explanation of the function for eating disorder symptomatology (Ozolek-Kronner, 2002). Bowlby

conceptualizes proximity seeking as the infants' attempt to summon the primary attachment figure to protect them from psychological or physical danger (Orzolek-Kronner, 2002). Orzolek-Kronner (2002) theorizes the eating disordered adolescent's refusal to eat or resistance to food results in the parent-adolescent physical and psychological proximity like that of early childhood. Since the attachment system is activated during adolescence, eating disorder symptomology can be viewed as "proximity-seeking behaviors" within the attachment system (Orzolek-Kronner, 2002, p. 422). As such, proximity-seeking behaviors include food restricting, purging behaviors, binge eating, laxative abuse and self-induced vomiting (Orzolek-Kronner, 2002). These behaviors commonly result in or stimulate physical closeness between a mother and an adolescent.

Through this lens, eating disorder symptoms can be interpreted as reenactments of early infantile attempts to maintain parental proximity (Orzolek-Kronner, 2002). The secure base may have been compromised and the eating disorder symptoms provide a reparative function (Orzolek-Kronner, 2002). The adolescent struggling with an eating disorder may be psychologically hungry due to the lack of relational satiation from the primary attachment figure (Orzolek-Kronner, 2002). These theories suggest the eating disorder may serve as a vehicle to bring about closeness between the adolescent and the primary attachment figure (Orzolek-Kronner, 2002). In this way, the eating disorder has become a successful means for the emotionally unsatisfied child to satisfy her hunger for more mothering (Orzolek-Kronner, 2002). Therefore, through the lens of attachment, Orzolek-Kronner suggests that an individual with an eating disorder may be physically, emotionally, and relationally undernourished (Orzolek-Kronner, 2002).

#### **4.4 Eating Disorders and Affect Regulation: State Regulation of Hunger**

Clinical discussions (Beattie, 1988; Stern, 1991) point to the relationships among missed developmental experiences within early attachment contributing to, “affect regulation difficulties” (Stern, 1991, p. 94), “fragile self-organization” (Stern, 1991, p. 81), limited reflective function and eating disorders (O’Shaughnessy & Dallos, 2009). Attachment theory allows us to focus on how eating disorder symptoms may exist in the service of maintaining connectedness while avoiding rejection. As such, the eating disorder patient may develop the schema that she needs to be thin to be assured of the presence of an attachment figure. Therefore, she may use her eating disorder symptoms in the service of containing her separation distress (Armstrong & Roth, 1989).

Bateman and Fonagy (2012) argued problems in early attachment and/or later trauma could disrupt the ability to mentalize which may impair affect regulation (Bateman & Fonagy, 2012). Fonagy compared ED patients to psychiatric patients (and non-clinical controls) and found that inpatients with ED had significantly lower reflective functioning scores compared to both psychiatric and non-clinical comparison groups (Fonagy et al., 1996). The type of attachment insecurity is not necessarily related to a specific eating disorder, however, they suggested attachment insecurity may be related to the severity of the ED symptoms (Fonagy et al., 1996). Research examining the relationship between attachment insecurity and ED symptom severity has indicated that need for approval, an aspect of attachment anxiety, is positively associated with eating disorder psychopathology independent of personality traits, demographics, ED diagnosis, and depression (Illing, Tasca, Balfour & Bissada, 2010). Therefore, preoccupation with relationships and fear of abandonment, especially related to needing others’ approval,

may be a problematic attachment-related insecurity that may put individuals at risk for greater ED symptom severity (Illing et al., 2010).

#### **4.5 Summary**

Jean Petrucelli (2014), eating disorder specialist, advocates for the creative use of “action-oriented tools” in the treatment of eating disorders. Petrucelli (2014) indicates the need for creative therapeutic tools addressing attachment due to the significance of relational interactions for this population. Interaction with the animal is a mechanism by which the attachment system can be activated and, yet, it may be experienced as a more tolerable opportunity for individuals to develop the capacity to modulate, process and manage overwhelming affects (Petrucelli, 2014). Through the lenses of attachment and affect regulation, this study will explore how adult women with eating disorders understood and experienced AAT as part of their treatment for eating disorders. In doing so, this study hopes to gain a deeper understanding of this adjunctive treatment modality and how women with eating disorders experienced AAT.

## **CHAPTER V**

### **STUDY**

#### **SAMPLE, DATA, AND RESEARCH METHODS**

The purpose of this investigation was to do an exploratory study to investigate the connection between attachment, affect regulation, eating disorders and Animal-Assisted Therapy (AAT), a connection that has not previously been examined. This exploratory study is crucial because of the devastating impact of eating disorders, the current lack of known effective treatments and the anecdotally promising nature of AAT. The study was a qualitative, intensive-interview study and self-reported responses were examined in through the lenses of attachment and affect regulation.

#### **5.1 Sample**

The sample was a nonprobability purposive sample. I included women who self-identified as having had an eating disorder within the last 10 years and self-identified as having used animal-assisted therapy in their eating disorder treatment. The sample included 20 women. Although the nonprobability sample will not represent the entire study population, it can provide evidence that is relevant to my study's research questions. Participants (women 21 of age or older) were recruited and selected because of their experience using AAT in their eating disorder treatment. Therefore, the inclusion criteria were: a) diagnosed with an eating disorder in the last 10 years; b) received treatment for the eating disorder which included an animal-assisted therapeutic intervention; c) it has been one year or longer since the participant used an animal-assisted intervention (AAT) in their treatment; d) self-identify as a female; and e) 21 or older years of age. Due to the sensitive nature of the research, several considerations

were made regarding the vulnerability of the subjects through the following exclusion criteria: a) women previously hospitalized for an eating disorder; b) women with an Axis II diagnosis (personality disorder); c) women currently engaged in an eating disorder treatment day program or an eating disorder intensive outpatient program (IOP); d) any individual in or not in treatment experiencing significant and/or overt indication of eating disorder symptomatology based on my clinical judgment during screening and interview. The study is limited to females because my research questions are specific to females. In order to include all people who identify as female and not engage in any systematic discrimination, I made the gender selection criterion to be self-identification as female. The age criterion results from a consideration of participant vulnerability and the developmental stage based on my research question. The likelihood of individuals using different types of animal-assisted therapies is very high given the varied implementation, however, the objectives of my study are focused on exploring the participants' experience of AAT and not examining the effectiveness or outcomes of the practice.

### **Sample demographics.**

A total of 20 women participated in the study. Of the 20 women that participated in the study, 18 were between 21-30 years of age and two women were between 31-40 years of age. Within the sample, 12 of the women were college educated and six were still in college (delayed from finishing because of eating disorder treatment). All 20 of the women indicated they were either a student or employed (part-time or full-time). Two of the women self-identified as a minority, however, this question was not asked and only noted if provided by the woman. The diagnoses varied and 15 women received the diagnosis of Anorexia Nervosa, four women received both the diagnoses of Anorexia

Nervosa and Bulimia Nervosa, and one woman received the diagnosis of Bulimia Nervosa. The type of AAT used included different modalities incorporating either dogs or horses. In the sample, 15 of the women used dogs in their AAT and five women used a combination of dogs and horses. Again, although not asked by interviewer, nine of the women identified being in romantic relationships. Nine of the women have personal pets of their own now. The geography of the sample reflects where the woman was currently residing: 16 of the women were in the mid-west, two were on the west coast, and two women were on the east coast. Sample demographic information is provided in Appendix A.

## **5.2 Methodology**

In May, 2016, this study was reviewed and approved by the Bryn Mawr College Institutional Review Board (IRB). After approval from the IRB, I used several recruitment strategies to advertise my study (see Appendix B: Recruitment Correspondence and Appendix C: Study Flyer). I used a screening questionnaire (see Appendix D: Screening Questionnaire) and intensive interviews (see Appendix E: Interview Guide) for my qualitative methods. I will outline my recruitment strategies, screening process, interview procedure, data storage, and data analysis strategy in the following sections.

### **Recruitment.**

I compiled a list of eating disorder facilities who use AAT in their treatment facilities as well as general AAT practitioners and I sent a recruitment email to these organizations, clinics, and practitioners. I also mailed my recruitment flyer to contacts in the AAT and ED communities. The most successful recruitment method was my contact

with research directors from the eating disorder programs that have known AAT programs such as McCallum Place (St. Louis, MO), Remuda Ranch (Wickenburg, AZ), and Center for Discovery (Los Alamitos, CA). Two of the research directors offered to distribute my study flyer to alumni from their programs. In their outreaches to alumni, they clearly indicated their programs were not involved or connected to the study, and for the interested individual to contact me directly. Additionally, I posted my study advertisement on eating disorder recovery blogs, eating disorder recovery websites, and on the research section of the National Eating Disorder Association (NEDA) website (in the research studies section) through the required NEDA survey.<sup>9</sup>

### **Screening.**

If a person expressed interest in my study via telephone or email, I conducted an initial telephone screening to evaluate if the person met the criteria for the study. During the screening, I provided an overview of the study, reviewed the confidentiality parameters and indicated the necessity for consent prior to the study (see Appendix D: Screening Questionnaire). Using my clinical judgment, I also monitored for overt indication of eating disorder symptomatology upon speaking with the person.<sup>10</sup> During the screening, I informed them about the 50 dollar VISA gift card for the subject's time and inconvenience. If the subject selected to meet for one three-hour interview, the subject will receive the gift card at the end of the interview. If the subject selected to

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<sup>9</sup>[http://neda.nationaleatingdisorders.org/site/Survey?ACTION\\_REQUIRED=URI\\_ACTION\\_USER\\_REQUIREMENTS&SURVEY\\_ID=8681](http://neda.nationaleatingdisorders.org/site/Survey?ACTION_REQUIRED=URI_ACTION_USER_REQUIREMENTS&SURVEY_ID=8681)

<sup>10</sup>Four women were not included in the study after the screening telephone conversation. The reasoning for these exclusions were prior Borderline Personality Disorder diagnosis (exclusion criteria) [two women], extensive and recent (less than one year ago) hospitalizations for suicidality [one woman], and active struggling with symptom use which was getting worse [one woman].

meet for two 90 minute interviews, the subject will receive the gift card after the completion of the second interview. If a subject indicated she would like to withdraw at any time, I made her aware there is no penalty for withdrawal and all her information will be destroyed. If a subject (who has chosen to meet for two interviews) cannot complete the second interview, I will mail a 25 dollar VISA gift card to her preferred address.

If the person was eligible for the study using my criteria and clinical judgment, I asked for their willingness to participate in my study and outlined the details for participation in the study. If the person agreed to participate, I asked if they preferred to speak once (for approximately three hours) or twice (for approximately one and a half hours each time), and we scheduled our interview. After the completion of the telephone call, I emailed the individual the Informed Consent form (see Appendix F: Informed Consent) along with the date and time for our interview. I used the Cisco WebEx videoconferencing platform as it was a password-protected program which also provided the ability for video, however, the video was only used during the conversation and the video was not recorded. I also included information on the Cisco WebEx videoconferencing software and how to download the program on either their mobile device or computer. The Cisco WebEx videoconferencing software provided an option to remind the participant 30 minutes prior to the interview and I used these reminders. If a participant needed to change her interview, she reached out to me via email, text, or telephone, and we made different arrangements.

**Research instrument: intensive interviews.**

My research method is in-depth interview(s) with a semi-structured interview guide (Appendix E: Interview Guide). The interview focused on the participant's experience of

AAT and, specifically, how they experienced AAT as part of their cumulative eating disorder treatment. Most interviews ranged from an hour and a half to two hours (see Appendix F: Length of Interviews). I gave the participant the option to speak once (approximately 3 hours) or twice (approximately 90 minutes each). I conducted 38 interviews – two individuals opted for the one long interview and 18 women opted for two shorter interviews. 18 women were interviewed via Cisco WebEx videoconference software and two women were interviewed on the telephone. The two interviews conducted on the telephone were at the request of the participants due to lack of access to a computer and unfamiliarity with technology. No in-person interviews were conducted because all the participants lived outside of Pennsylvania (mostly in the mid-west and west coast). All participants were mailed a VISA gift card of 50 dollars after the completion of the study. Prior to the start of the interviews, I reviewed the Informed Consent (previously sent to everyone via email) and received the participant's oral consent. In my informed consent, I highlighted the situations in which confidentiality may be compromised such as disclosure of child abuse and indication of imminent harm to self or others. I also outlined the specifics of the audio-recording process, data storage procedure, and commitment to confidentiality. I conveyed that informed consent is an ongoing process and any questions/concerns she has can be addressed at any time during the study. Additionally, I sent a hard copy of the Informed Consent form to their preferred mailing address. I asked the participants to sign the hard-copy of the Informed Consent form and return it to me in the provided return envelope (my address and postage was already affixed on the provided return envelope). I received all 20 consent

forms in the mail. All consent forms were stored in a locked cabinet, separate from my data, within my home office.

After each interview, I wrote a memo containing my reactions, feelings, and thoughts about the interview. This was an opportunity to reflect on my ability as the research instrument and process my reactions to the interview content. The memos were also loaded into NVivo software.

My interviews were transcribed by Speechpad Transcription Service. Prior to transcription, Speechpad signed a Non-Disclosure Agreement (see Appendix H). After transcription, I reviewed the transcripts for accuracy and omitted any identifying material revealed by the participant to the researcher. After reviewing the transcripts, I uploaded the transcripts into NVivo.

### **Interview and data storage.**

As previously indicated, 36 interviews were conducted via Cisco WebEx Videoconferencing software and 4 interviews were conducted on the telephone. All interviews were conducted in a private office. Prior to the start of the interview, I asked permission to audio-record the interview on two audio-recording devices. I recorded the interviews on both my Ipad and Iphone to ensure the interviewed was taped. After the completion of the interview, the interview recording was transferred to my password protected computer and stored on an encrypted external thumb-drive. The thumb-drive was stored in a locked cabinet within my home office. The informed consent documents were also stored in a separate locked file cabinet in my home office.

After I completed the full interview and reviewed it, I removed the names from the raw data (audio and transcripts). Going forward, I used pseudonyms for names of the

women. To further de-identify the individual, I removed the names of facilities and names of the animals. I removed the following information: the animal's name, the animal-handler's name, the facility name, and any names of the treatment staff. For the coding scheme based on the interview transcripts, I assigned a number to each interview. For purposes of writing up my results, I assigned a pseudonym to each number.

After the successful completion of the dissertation, all the materials will be shredded and erased. At that time, the link connecting the individual with the data will be broken. The transcripts, having been stripped of any identifying materials offered by the participant to the researcher, will be destroyed. No photography or video recordings were conducted.

### **5.3 Ethics**

Ethical considerations during the analysis process is crucial. There are several ways I addressed ethical considerations during my analytical process. First, participants for the study were individuals with whom I did not work with in a clinical capacity nor knew in personal capacity. This is important since dual roles can create the potential for coercion and boundary issues with the participants. Second, I provided participants with the informed consent prior to the start of the research study which indicates the subject of the research and the confidentiality boundaries. In my informed consent, I highlighted the situations in which confidentiality may be compromised such as disclosure of child abuse and indication of imminent harm to self or others. Third, my dissertation Chair reviewed my interview guide and I used my research question as the driving force behind the creation of my questions. Fourth, I stored all the interview materials on a password protected encrypted thumb-drive and will destroy the audio-recordings after the

successful completion of the dissertation. Lastly, the inclusion criteria were intentionally designed to be mindful of participants' level of vulnerability. The research is designed to minimize risk by selecting participants in the recovery stage(s) of an eating disorder. According to the National Eating Disorders Association (NEDA), the leading non-profit in the United States advocating for individuals with eating disorders, recovery from an eating disorder takes place over years of mindful application of lessons learned in treatment. Therefore, this research uses the same paradigm in thinking about recovery, and acknowledges that recovery from an eating disorder is somewhat subjective based on the individual's understanding of the eating disorder in her life. Some individuals may feel recovery from an eating disorder is a life-long process whereas other individuals may feel they have recovered from their eating disorder. This research respects the agency of the participants to identify their relationship with recovery and intends to select participants who are no longer acutely symptomatic or entrenched in the eating disorder.

#### **5.4 Refining the Research Instrument: Trustworthiness, Rigor, and Reflexivity**

Since qualitative analysis is inherently subjective because the researcher is the instrument for analysis, it is imperative to employ techniques for evaluating the analytic process and researcher's role to assure trustworthiness and rigor (Starks & Brown Trinidad, 2007). Guba (1981) presented a model of four areas of trustworthiness for qualitative research: truth value/credibility, applicability, consistency, and neutrality. Together, these connoted the trustworthiness of a qualitative study (Padgett, 2008). Guba's concept of trustworthiness (1981) comes closest to capturing the concept of rigor and accountability in qualitative research. A trustworthy study is one that is carried out fairly, ethically, and whose findings represent as closely as possible the experiences of

the respondents (Steinmetz, 1991). Therefore, trustworthiness in qualitative research must be demonstrated (Padgett, 2008).

In my study, I used several strategies to increase trustworthiness and rigor. First, I attended to my neutrality through reflexive exercises (memo-writing and journaling) and discussions with peers about my research. I looked for data that did not fit the patterns (negative case analyses) and updated my themes accordingly. I also highlighted the challenges and lack of effectiveness evidence with AAT. Second, I used the dependability and consistency strategy of including an audit trail (see below in following section). By providing a clear overview of my coding schemes and data analysis, this allows someone not connected with my study to review my work and assess whether the findings, interpretations and conclusions are supported (Padgett, 2008). Lastly, to attend to both dependability and confirmability, I reviewed my findings with peers. I used the inter-rater reliability method by providing portions of my transcripts to peers to assess how reliable my codes were which helped fine-tune my process. Through the inter-rater reliability process, I found that the coding structure I developed was easy to follow with the exception of the codes related to thoughts. This new insight was helpful as it raised my awareness to how codes regarding the impact on thoughts were closely interrelated to feelings, so the disparate coding category was not as helpful in eliciting themes. By reviewing my findings with peers, I processed questions about my methods, meanings, and interpretations of the data. Through speaking about my work with my peers, I was more mindful of feelings and biases that had the potential to influence my work. This provided an opportunity to address any biases in my analysis.

### **Reflexivity statement.**

With the researcher as the instrument, it is necessary to address my use of self in this research. In qualitative research, as noted by Michael Agar (1980), “the problem is not whether the ethnographer is biased; the problem is what kinds of biases exist and how can their operation be documented” (p. 42). Examining my biases was an on-going process throughout the study. My reflexivity statement reflects my vigilant commitment to examining myself in the service of keeping the integrity of my qualitative research.

First, my interest in this topic stems from my own experience with an eating disorder (diagnosed and treated over a decade ago). I experienced hospital, inpatient, and other levels of care for the eating disorder. Sharing this information is relevant in that it conveys the ways in which the eating disorder ravaged both my mind and body, and broke down the meaning previously ascribed to important relationships in my life (ex: my boyfriend, my family, and my friends). During my treatment, there was a suggestion to get a dog, and I did. The way in which the dog helped me distract from the eating disorder was unlike any of the other treatments.

In my experience, talking about food and weight had some helpful effects but it could not adequately address what the eating disorder was helping me hide. In Jenni Schaefer’s book, *Life Without Ed*, she conceptualizes her eating disorder as a relationship rather than a condition (Schaefer, 2009). This book had a profound impact on me and the way I thought about my eating disorder. Therefore, I came to think about eating disorders as a cluster of vulnerabilities encompassing communication, emotion regulation, and relational anxieties, with food and weight as the distraction. This set the

groundwork for conceptualizing my research theoretical framework and pursuing the lens of attachment amongst women with eating disorders.

Over the past 10 years, I experienced intensive therapy in the form of nutritional counseling, individual therapy, group therapy, and psychiatric care. With the profound support of my treatment team and my family, I re-learned how to approach food and developed healthy ways to cope with emotions, anxieties, and trauma. The impact of my treatment had a profound impact on my career aspirations. The ability to hold, support, and revive individuals, which is how I think about my treatment team, inspired me to pursue a career in mental health. With intensive therapy alongside my graduate clinical social work training and subsequent clinical work experience, I developed strong clinical practice skills. After my first two years as a clinician, I started to enjoy working with individuals with eating disorders. Given my interest in working with women with eating disorders, I kept coming back to this curiosity about how to help them break free from the relational entrenchment of the eating disorder or, “the abusive relationship with Ed” (Shaefer, 2009). Once a week outpatient therapy did not seem adequate, however, inpatient treatment also seemed flawed. One client with an eating disorder nonchalantly said the only thing keeping her alive was her dog. This statement was very impactful in the way I thought about eating disorder treatment. I thought about how an animal – who did not have the same expectations as a human – may prompt something different in individuals with eating disorders. Can an animal prompt less relational expectations thereby accessing emotions/affect in a less threatening way but offer the relational unconditionality desired by women struggling with eating disorders? This began the conceptual foundation upon which I built my research.

Although my background is relevant in situating myself in the research, my journey of recovery was far enough along that I felt confident to address these research questions. Even so, I was mindful that conducting the interviews would prompt a lot of emotions and I kept a journal for processing my feelings after each interview. I would use skills such as an Emotion Regulation Worksheet (techniques learned from my individual therapy) to process feelings and thoughts prompted by the interview and spend time honoring those feelings. After the first few interviews, and reflecting on my interview experiences with my mentor, Janet, I decided to only conduct one interview per day. I also was intentional about the timing of the interviews. I conducted most of the interviews during the day and while my son was being watched by a baby-sitter.

Certain clinical practice skills were essential to my qualitative research such as skills of observation, interpersonal communication, empathy, sensitivity, and the ability to provide a nonjudgmental stance. My clinical skills, although applied in a different way, provided a safer experience for my research participants. First, I was very attuned to any symptomatic behavior and maladaptive thought processes during the screening telephone call. If there was any indication of symptom use and/or maladaptive thought processes, I would not invite the individual into my study. During the screening, I was mindful that many of the individuals would want to help, and this would be the sentiment regardless of how well the individual was doing. The awareness of this self-destructive behavior masquerading as helpfulness is something I knew to look for given my clinical familiarity with the manifestations of the disorders.

Second, my clinical skills helped me think about how to ask certain questions and to assess the comfort level of the individual during the interview. These skills provided a

very helpful way to think about what was being said, how it was being said, and what was not being said. This was very helpful in thinking about what questions to ask and how to ask them.

Third, my clinical skill of mindfulness was very helpful, as being present in the moment helped strengthen the rapport with the interviewee. Moreover, my clinical skills made me very comfortable with silence. I did not rush individuals and instead thought about the meaning of the silence instead of trying to eliminate it.

Fourth, my clinical awareness about the varying ways in which individuals think about their eating disorders (example: recovered, in recovery, as a relationship, as an illness, as a part of themselves, etc.) provided for the development of a strong rapport. In a related way, my awareness of comfort levels was also very important. Certain individuals seemed reticent to talk about specific aspects of their treatment and life, and I always reiterated they had the ability to not answer and/or stop the interview at any time.

Lastly, my clinical skills also prepared me for the inquiries about me and my interest in the subject. One of the interviewees quite candidly said, “Oh, well I’m sure you...uh...had an eating disorder, or else why would you be interested in this...” and about a quarter of the other interviewees made less direct comments about me with a similar sentiment. When any of these comments were made, I did not address their comments, but followed up at the end of the interview regarding any questions they had for me. If they had questions about my interest in the subject, I would address my research interests in AAT and the need for more treatment options for eating disorders. None of the participants directly asked me about my personal history. Going into the interviews with an expectation for transference prepared me to respond as a researcher.

Overall, the continued reflection and examination of myself was a critical piece of my research. Coupled with the reflexive efforts, a sense of humor was very helpful in my research. Padgett (2008) writes “a well-developed sense of humor helps enormously in qualitative research, particularly the ability to laugh at oneself” (p. 19). There were moments where I had to laugh – for example: my son getting into my office and my babysitter shrieking “he got his diaper off” which was caught on the recording and transcript; difficulties with the video-conference software; and my intense anxiety over having the correct time zone for the interviewee (most of the interviewees were not in the Eastern time zone). By having a balanced approach of self-reflection and humor provided for a sharper research instrument.

## **5.5 Data Analysis**

I analyzed the data from a modified grounded theory lens. In grounded theory, observation allows the researcher to see how social processes are constrained and constructed by the physical and social environments in which they are practiced (Starks and Brown Trinidad, 2007). In using a grounded theory analytic strategy, the goal is to develop an explanatory theory of basic social processes, studied in the environments in which they take place (Glaser & Strauss, 1967). Starks and Brown Trinidad (2007) posited grounded theory involves a constant comparison method of coding and analyzing data through three stages: open coding, axial coding, and focused coding (Dey, 1999; Strauss & Corbin, 1998). While my coding process was “messier” than the three stages put forth by Starks and Brown Trinidad (2007), it went through several cycles and stages. The following sections will expand on my coding process.

## **First cycles of codes: starting to organize for second cycle.**

After coding the first two interviews, I started grouping certain codes together based on seeing some relationships amongst the codes. I wrote a memo to start outlining some of the relationships I saw emerging within the codes. The memo is included below:

### **AAT Impact on Individual - Orange-1**

- > Impact on Feelings/Emotions O-1A
  - > Impact on Thoughts O-1B
  - > Impact on Relationships O-1C
    - >Impact on ED O-1D
    - > Impact on Treatment O-1E
- > Impact with Handler and other Ppl involved in Animal Tx O-1F

### **Usage of Animal- Orange-2**

- > How individual used it --> strategy?

### **Use of Personal Animal - Orange-3**

- > Usage of Personal Animal - O-3A
- > Impact of Personal Animal - O-3B

### **Details about AAT- Yellow-1**

\*everything tagged can be a child code underneath this parent code: ex: usage, frequency, type, other tx

### **Relationships- Green-1**

- >Animals as part of family
- > Change in Relational Understanding
- >Human Relationships vs Animal Relationships
  - >Animal Touch vs. Human Touch G-1A
- >Impact on Ind's Relationship with Animal's Handler

### **Eating Disorder- Pink -1**

- >experience of it
- >treatment experiences
  - >symptoms
  - >post-treatment?

This was the foundation of my code list. I started to use the color coding option in NVivo to visually depict a Node<sup>11</sup> connection with a certain emerging container/category. Within NVivo, codes are referred to as nodes. As an example, I would select green in Nvivo for the code “Relationships with Mental Health Professionals” as they related to my code bin (emerging category) labeled as

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<sup>11</sup> Within the software program, NVivo, codes are called **nodes**.

relationships. As my coding process continued, I was less satisfied with the visual depiction of colors within NVivo (they only have seven color choices) and there is no way to view all the same-colored nodes together. I found the color coding process within NVivo to be less useful and, instead, started grouping together certain nodes into parent-child nodes.

**Second cycle code organization: parent-child node organization.**

This process of grouping parent-child nodes was more helpful than the color coding process within NVivo. After coding each interview, I would review my list of nodes, and evaluate if there was any relationship between the nodes. If so, I would “drag and drop” a node into a related node thus creating a parent-child node. This was a helpful process not only to organize my codes but also to start thinking about the relationships that were emerging within the codes. As an example of this process, the code “Impact of Animal on Individual” started to become too vague and needed refinement which was accomplished through the parent-child node hierarchy:

Parent Node: Impact of Animal on Individual  
Child Node: Impact of Animal on Treatment  
Sub-Child Node Ability to See Progression

In considering my initial list of codes, it was important to have many “in vivo” codes so the women’s voices could be accurately represented. I kept my use of clinical jargon to a minimum and listened to the interviews several times throughout my coding process. For instance, if I came upon a portion of the transcript that was heavily coded, I would go back to the interview recording to listen to the part again. This was always very helpful as hearing the tonal quality of an interviewee’s voice and the way in which things were said kept me close to the data.

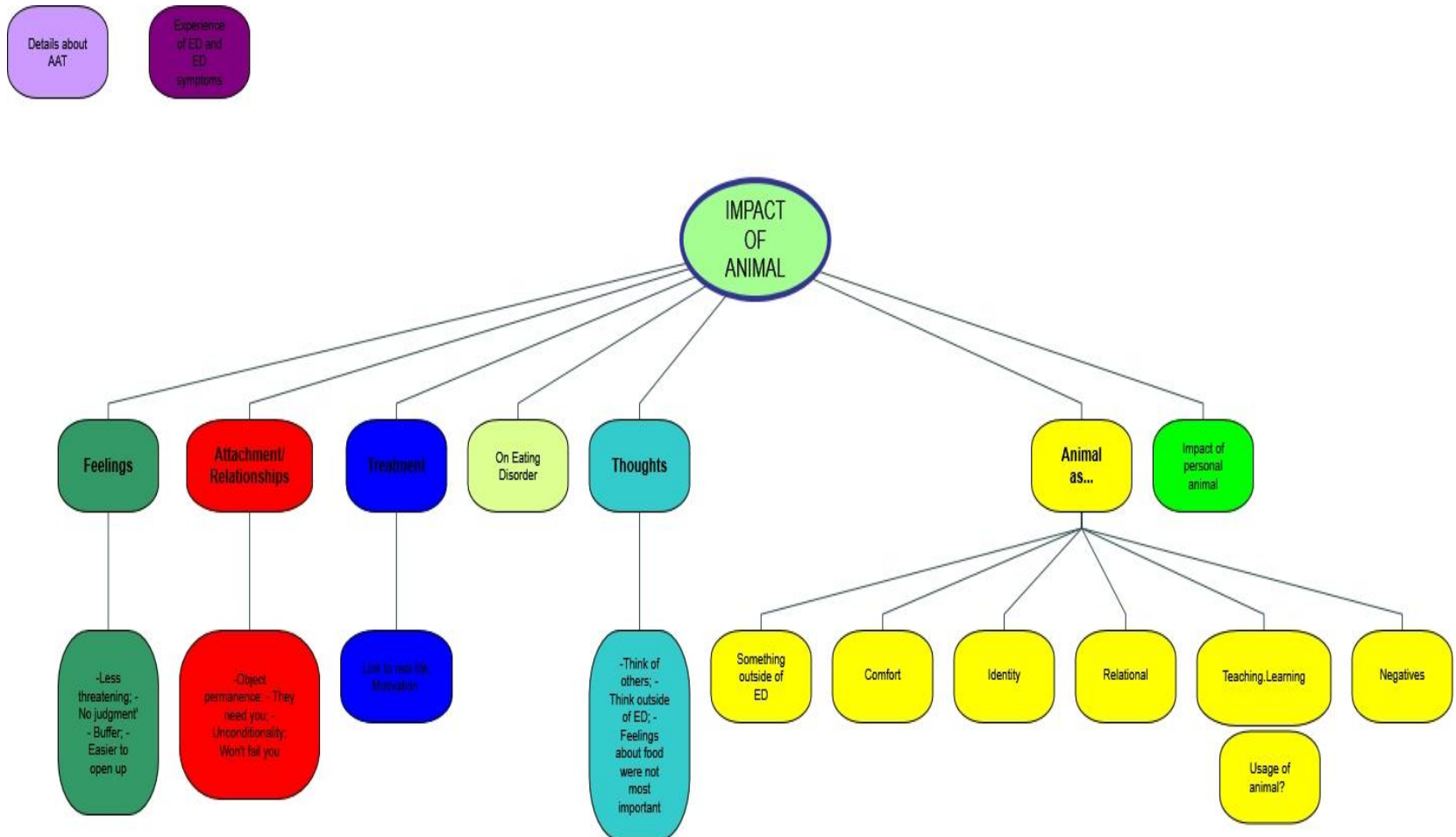
### **Visual coding strategies.**

Based on the structure created by the parent-child node organization process, I created a preliminary group of categories to start connecting my codes to larger themes. I used a concept map in NVivo (see Figure 1) to sketch my initial construction of the preliminary categories emerging from my codes and code organization. One of the meta-codes was the “Impact of the Animal on the Individual” and through the parent-code node organization process I started to break this down into more specific categories. The emerging categories were:

- Impact of Animal on Thoughts
- Impact of Animal on Attachment/Relationships
- Impact of Animal on Emotions/Feelings
- Impact of Animal on Eating Disorder
- Impact of Animal on Treatment
- Details of Animal-Assisted Therapy
- Experience of ED and ED Symptoms
- Animal as... (expanded in Figure 3)
- Negatives of Animal Assisted Therapy
- Impact of Personal Pet

:

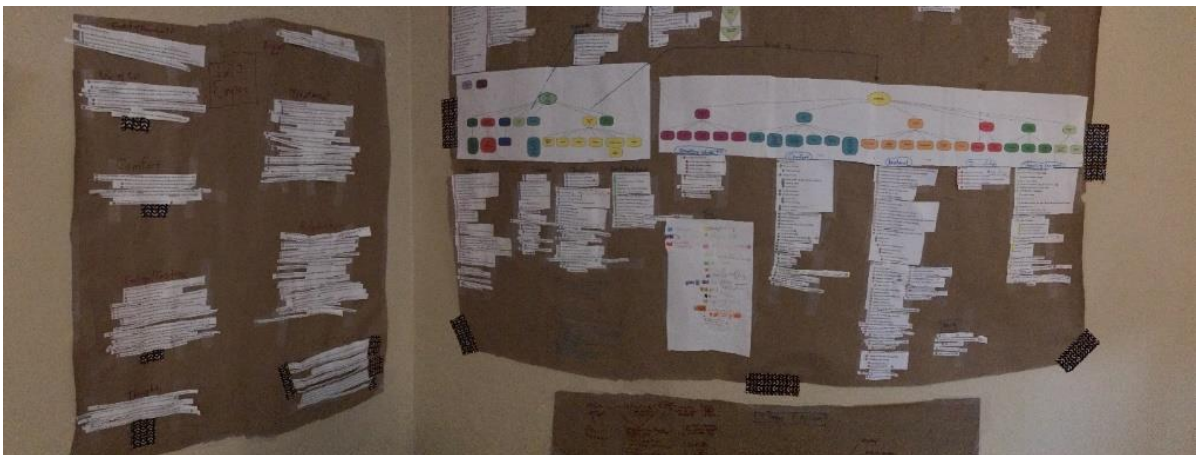
Figure 1: Creating Categories 1



The visual mapping provided an opportunity to nest categories together and was a helpful background for second and third coding cycles. This visual map helped organize and re-organize codes which will be discussed in the following section.

While the organizing function of parent-child nodes was helpful, I found myself needing another way to organize my codes during my second and third coding cycles. During the second and third coding cycles, I used code mapping and code landscaping to organize my codes and connect them to larger themes. This was accomplished by printing out my code list, color-coding the codes with colored pencils, cutting up the focused codes (the parent nodes from NVivo) with my new color attributes, and physically mapping them on large pieces of paper (see Figure 2).

*Figure 2: Photograph of Code Mapping and Landscaping*



I used the Concept Map as a foundation for initially grouping the codes together, however, the physical process of grouping the codes together allowed for a refinement of my categories as well a way to visualize new emerging themes. I was looking at all my codes, however, I was using the NVivo codes as my guiding force. By cutting out the NVivo codes and organizing them into categories, I could visualize the data in an organized way and also not lose touch with what the women were saying and how they

were saying it. I posted my maps in my office and worked right in front of them. This constant visual reminder of the data, codes, and, especially the NVivo codes, helped keep my biases low and limit personal projections onto the data. As a result of the visual strategies, I was able to refine my codes and start to view emerging themes. I included a visual snapshot of the evolution of my second, third, and fourth cycle codes to illustrate this process (see Table 1):

*Table 1: 2<sup>nd</sup>, 3<sup>rd</sup>, and 4<sup>th</sup> Cycle Codes*

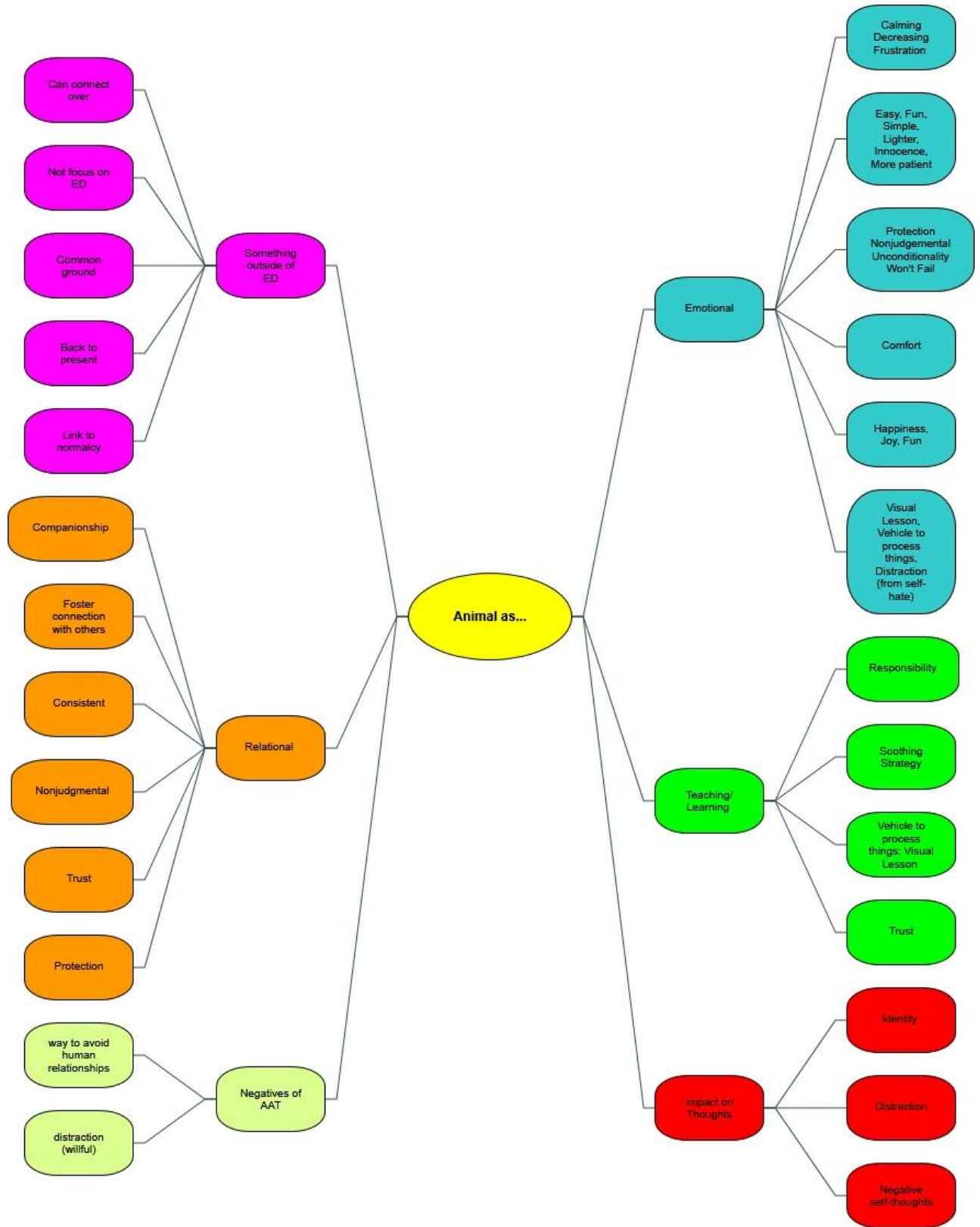
4th level codes; Emerging themes	3rd Level codes; Preliminary categories	2nd level codes
Animal as a way to Reconnect with Emotions and Gradually Experience Them	Impact of AAT on Emotions	Calming, comfort, decreasing frustration, easy, fun, happiness, lightness, alive, innocent
ED usurps Identity – AAT can help with Identity Reconstruction	Impact of AAT on Identity Expansion	Connection to actual age; connection to the person you were before ED; connection to the present; Link to normalcy; Finding things of interest outside of the ED
Animal as Strategy – Emotional, Cognitive, and Relational Strategy to improve Treatment	Teaching and Learning from AAT	Way to experience the good and the bad; Bring back down to earth; DBT skill; distraction; distraction as a way to break free from self-hatred thoughts; effective visual lesson; evident; helping the person be more patient; Natural way to regulate emotions; responsibility
Nonjudgmental and Unconditional Relational Connection through AAT – different from Human Relationships	Relational Impact of AAT	Way to avoid human relationships; way to bond to other patients outside of EDs; common ground; companion; connection; consistent relationship; limitless; not judging; unconditionality; listener
	Something Outside of ED	Makes you engage with the real world, way to bond to other patients outside of ED, way to not focus on the Ed, connection to the person you were before the ED, escape, not sick

### **Refining categories and eliciting themes.**

Emerging from the data and my intentional focus on the NVivo codes, “**Animal as**” became an overarching organizational structure since I was moving many of my codes to that category. Using the NVivo codes and my research questions as my guiding force, I was less interested in the codes related to the details about AAT and more

interested in how AAT was experienced by the women. The “Animal as” paradigm was the bridge to move from mostly descriptive categories to more thematic information. As such, I developed a more complex Concept Map adding depth to my “Animal as” category as depicted below in Figure 3.

Figure 3: Animal As...



The “Animal As...” categories, after constructing and viewing the relationships within the concept maps (Figures 1 and Figure 2), evolved into:

- Something Outside of Eating Disorder
- Emotional Comfort
- Relational Comfort
- Identity (Re)Formation
- Teaching and Learning from Animal
- Negatives of Animal-Assisted Therapy
- Experience of ED (on emotions, thoughts, relationships, etc.)
- Thought (Re)Management

In summary, the coding process went through several cycles and, during this process, I examined the codes for patterns and identified preliminary themes that emerged from the data. The visual strategies helped refine my emerging themes, sub-themes, and categories. After visually mapping the themes, I further refined my categories and infused the thematic/sub-category information (elicited through the concept mapping process) within the categories (see Table 2). The results will be explored in the following section.

*Table 2: Moving from themes(sub-categories) to categories*

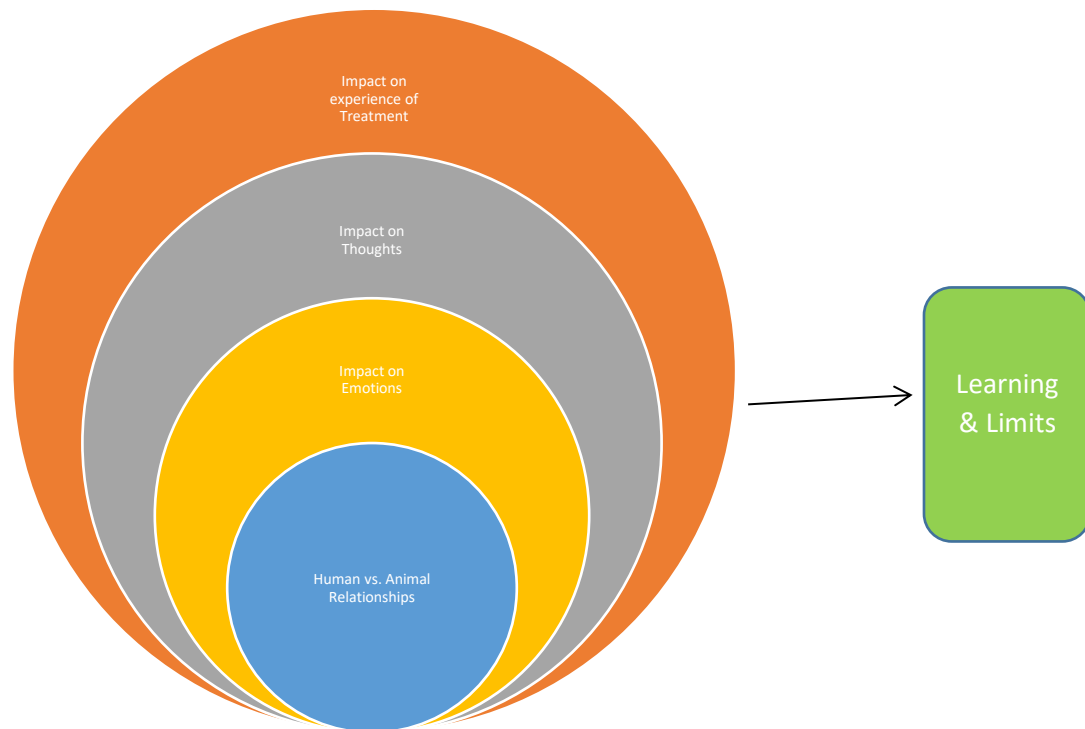
Themes (Sub-Categories)	Categories
Animal as Fun, Motivation, Impact on Relationships with Mental Health Professionals in Tx,	Impact on Treatment Experience
Distraction, Impact of Animal Prompting Thoughts Outside of ED, Impact of Animal on Negative Thoughts about Self, Impact of Animal on Identity	Impact on Thoughts
Physical Touch, Emotional Reconnection (Joining of Body-Mind States), Animal as Emotional Buffer,	Impact on Emotions
Knowing what you need, Nonjudgmental, Unconditionality, Trust and Protection	Human vs. Animal Relationships
Relational and Emotional Learning, Tangible Tool for ReThinking, Fear, Only Temporary, Not Effective, Jealousy	Learning and Limits

## CHAPTER VI

### RESULTS

In this section, I will review themes emerging from the animal's impact on relationships, emotions, thoughts, and treatment. I will also review the subsequent learning and limits of AAT. As a visual roadmap to the analysis, I created Figure 4 highlighting the connections between the themes and the central theme related to the differences between relationships with humans compared to relationships with animals.

*Figure 4: Roadmap to analysis*



#### **6.1 Impact of Animal on Relationship: Human Relationships vs. Relationships with Animals**

The distinctions between what an animal can provide compared to a human emerged as a salient theme. Larissa indicated a distinction she made between the comfort provided by humans compared to the comfort provided by the animals, “The dog

provided comfort, something that people just can't do." In our second interview, she clarifies why she does not think people cannot provide the same type of comfort as a dog, "Like, with people, they have to talk to you and get to know you, but dogs like right away, you just completely like get comfortable around a dog." There were four main subthemes related to the comparisons between human relationships and animal relationships which include: the ability to know what the human(s) needs; the unconditional support, the nonjudgmental stance, and the ability to provide protection. These subthemes will be further explored in the next few paragraphs.

### **Knowing what you need.**

A theme that was touched on by many women was the ability of the animals to know what the individual needed. Alexis said, "He [the dog] would do what he would want but it seemed like he would come to each person...like he knew...like he knew what people needed." This is important as some women described the difficulty in relationships when entrenched in the eating disorder. Samantha conveyed the difficulty she had in relationships,

It was really hard. I'm very close with my parents and we had a lot of really negative...experiences and a lot of um... I think they were just really afraid and didn't know what to do and I just...felt like everyone was the enemy.

Samantha later said, "I don't feel like I had strong relationships because it was hard for me to really...create strong relationships when I was really in the eating disorder."

Larissa also indicated the lack of relationships when entrenched in the eating disorder, "I didn't really have any. I had pushed everybody away. I didn't want relationships."

Another woman, Abigail, described the interpersonal attachment strategies she used when in the eating disorder:

Abigail: And an attachment strategy or how they define it is you are just a push and pull. So you're pushing people away but pulling them at the same time. And it's a manipulative thing to do and everyone does it. People do it without eating disorders. But when I'm in my eating disorder, I know that I act on attachment strategy all the time and... Can you hear the guys cutting the grass outside?

Interviewer: No, no.

Abigail: Okay, good. I just wanted to make sure that it wasn't interfering with the video.

Interviewer: No.

Abigail: Good. But I know when I'm my eating disorder, I don't act at all how I act when I'm out of it.

Conceptualizing an eating disorder as changing the relational desires – whether it be acting differently and/or preferring no relationships – led to difficult relationships. For most of the women, relationships with people while they were entrenched in their eating disorders were either full of conflict, tumultuous, inauthentic, or non-existent. Notably, the vilification of other people, which Samantha said occurred with her parents, often related to the failure to be understood by others, which is something that links back to comforting relational quality of the animals. Lily spoke about the way in which the horse could understand her in a way that, sometimes, people could not:

...how can I put this? It felt like the horse just understood you, you know, because it picked up on your energy and it kinda worked with you, it kind...they're smart,

and it just made you feel like the animal understood you because it just sensed your confidence, sometimes your fear. It just made you feel understood. It was really cool. Whereas in life sometimes I don't always feel understood by someone and it's frustrating because you're going through something and it's like some people just don't get you. And when I was there, the horses could feel what you feel.

The process of being understood provided Winona with an ability to think differently about her self and, through the process of knowing what she needed, the animal helped with her feelings of validation and acceptance:

But I also enjoyed the time where it was just us, where I could go and sit by myself and talk with the dog. I know that sounds really stupid but something that I felt I wanted to off my chest and I needed to just get it out and I could just talk and know that, for some reason, it felt like the animal would connect with me and know what I needed. But I felt like more that it was being affirmed, that my thoughts and my feelings were more valid towards that.

Samantha further expanded on the process of the animal knowing what she needs:

Interviewer: Uh alright so ... you said that um [Name redacted] the dog seemed to know when you were upset and kind of knew what you needed

Samantha: Mmhmm

Interviewer: Why do you think this happened or how do you think this happened?

Samantha: I I don't know it feels like a connection with um ... an animal I don't know like its like they can sense something that maybe adults can't other humans can't um ... but I don't know why that it is I don't know if they can just, I mean,

it is the same with my own dog I feel like she knows when something's wrong and um when I need when I need her there.

The animals' understanding of need links to the second emerging subtheme in the relational abilities provided by animals compared to humans: unconditional love and no judgment as a form of protection which may form relational trust.

### **Nonjudgmental.**

Judgment was a very common fear for many of the women when they were in their eating disorders. In a related way, fear of acceptance of one's authentic experience was also a very prominent theme. Unlike humans, the animals offered a way to address these fears since the women felt they were nonjudgmental and provided unconditional support. Lujan explained the way in which she thought about judgment in relation to the horses versus her therapist:

Lujan: So it was kind of like the...I knew they wouldn't judge me or tell me what I needed to do instead. That was a big part of it, and wouldn't be disappointed if I wasn't doing well, or things like that. It was just kind of like they would take me as I was and it was fine, whereas I felt I always had to...I always felt like I was disappointing my therapist if I wasn't been doing well or if I purged that week or whatever it was, I was letting them down or they were losing hope in me or whatever. So I didn't feel like the horses felt that way though..

Interviewer: Yeah, that makes a lot of sense.

The fear of disappointment and judgment was not something Lujan experienced with the animal. Maureen, similar to Lujan, expanded on the fear of judgment within her relationships, specific to other individuals in treatment:

Maureen: Because to me a dog is a dog and it just wants your love and affection and attention. And other than that it doesn't really care who you are or what you look like, or what you do as long as you take care of it and love it. Whereas with the other girls there's kind of this... and it's also hard to separate because it was group therapy. So there were other girls present at the time. But I guess with the girls you always have to kind of be conscious of how you might trigger them. And sometimes I think... and there's kind of this comparison even if it's not said. Even if it's just in your head. And I definitely didn't compare myself to the dog other than saying, thinking about how the dog was so free to choose what it wanted to choose, yet I place so many value judgements on choices before I even make them.

She went on and said:

I guess I don't feel like they judge me. Or like they would judge me... Like when I'm with a friend, I constantly think, "Okay, well if I say this what are you going to think?" Well, I can say whatever I want to the dog or the cat, and they probably don't even know what I'm saying, and could care less. They would rather have me pet them and love on them, and take care of them. So as long as I feed them, and let them out to the bathroom, and pet them when they want to, they're fairly happy with me.

### **Unconditionality.**

Not only was the fear of judgment not present but the added unconditionality of their support provided a safer relational experience. For Josephine, she described the difference between the unconditional relationship with the animal compared to the relationships with mental health professionals:

I feel like they give you more, just love at times than you need and I think that that's something you don't really get from the mental health professional. It's like this feeling of unconditional love. Yea, you may have unconditional positive regard, but you don't have love. And you don't feel love in the same way.

Because you know that person is being paid, you know.

Josephine felt the unconditional love from the animal is significantly different than the “unconditional positive regard” from the therapists. A minute later, she clarified the distinction:

Josephine: And I'm not saying that...I believe there are probably therapists I've had that did love me in a certain way. You know? But it's like at the end of the day they're not gonna have a relationship with you in the future. You know? Like once you're done working through your...Whatever you need to work through they do care about you and you have a relationship but then it's over.

Interviewer: Yeah.

Josephine: And I feel like somewhat with the animals even though [inaudible 00:14:07] and the chance that I moved and all that, you know, you felt while you were there they cared about you and loved you in a different way, I guess.

Felicity also made the distinction between the unconditionality of animals compared to humans:

Felicity: Typically dogs are very, very loyal, um, and they just are always there. And humans just aren't, um, we're all flawed, and we all make mistakes, and they could be the greatest person in the world, but even still, like they're gonna mess up, and not, they're gonna fail you at some point.

Interviewer: Yeah.

Felicity: But I don't feel like a dog will.

### **Trust and protection.**

The different kind of love offered by the animals combined with the lack of judgment provided an interesting relational dynamic which was described by some women as safety, protection, and, for Eleanor, a shield, "It was almost like the dog was like a guard or like a barrier between you and everyone else. So it's like you just kind of was more comfortable because it was like [inaudible 00:15:33] dog like a shield type of thing." Felicity also talked about the relational protective quality of the animal, "the dog was almost a shield even though, I mean technically it's like this little puppy, but like still just felt like, you know, it was a barrier between me and bad things." Elizabeth felt the word "buffer" was the best word to emphasize the protective quality within animal relationships and how that differs from her experience with human relationships:

Like I don't feel especially safe forming relationships with humans. Like, I don't feel like there is enough of a buffer. Now that I think about it, that's a really good word for it. Like, that's what I feel like I don't have with people that I don't have with a dog. Like, I need a buffer. I'm not sure what it is.

The protective barrier, supported by the animal's lack of judgment and unconditional love, led to feelings of trust that were different than the experience of trust with humans. Josephine said, "Like, so I think, um I had more difficulty establishing trust and like feeling like someone believed in me versus I kind of felt like the animals you didn't have....you didn't have that worry." Some women found a relational comfort from the animal that was unlike relationships with people. The relational comfort afforded

through experiencing the animal as unconditional, nonjudgmental, intuitive, and safe may have led to an impression on their emotions.

## **6.2 Impact on Emotions**

Many women described the emotional impact of the eating disorder as having a negative impact on emotions. Sierra said, “a lot of my eating disorder is driven by like a desire to, I mean obviously, a desire to regulate my emotions in an unhealthy way.” Sierra, in her next sentence, indicated the impression of the animal on her emotions, “Um, so the dogs kind of provided another method of doing that that was almost natural. Like it didn’t take a lot of effort.” As indicated by Sierra, the connection between emotion regulation and the eating disorder was very apparent in the conversations with the women. The difficult part was trying to find how the dog regulated the emotions in a different way. The emerging theme was the animal’s sensory engagement and how that connected to some of their emotional experiences.

### **Sensory engagement.**

Elizabeth described how the dogs, since they engaged her senses, was an effective strategy to calm herself down, “I need like, sensational ways to calm myself down and it's very, like tactile things with dogs, and I think it's very much like a sensory thing for me.” Elizabeth said she does not need an intellectual strategy to deal with her eating disorder but she needs, instead, a sensory strategy to manage her emotions. She went on to describe the process in further detail:

I think those are the like visceral, like the sensory thing we were talking about, like I just seem to...I think like maybe the tactile nature of that relationship made it more like it sticks in your memory because it lives in your body, and in your life, physical memory as much as mentally. So like, all the other things like, kind

of become just day-to-day things, but I can still feel [Dog Name redacted]'s like, the way his fur feels. Like, my fingers still know that.

Elizabeth conveyed how the physical touch sticks in her memory in a different way such that it is a more effective way to calm herself down or process emotions. For Abigail, the sensory engagement also led to a way of connecting with her body. The safe connection to her body helped her not stuff or shut down her emotions:

Because I'm sure you've talked to so many people who do this, it's so easy for me to try to shut emotions down and be like, "I'm not going to feel this. I'm just going to shove it away." Instead of distracting or coming back to it or using containment and coming back to it, I will try to shove it and never come back to it ever. Sometimes I do that without awareness. Sometimes, I'll shove it and not be aware that I'm shoving. But when [Name of Dog] jumps up, it makes it clear to me, "You're feeling something," then I can be like okay, "What am I feeling, where am I feeling it in my body?" And that's important to me because of all the trauma, I have become disconnected from my body and I often say, "I feel like a head, just like a floating head." I don't like to feel connected to my body. If I feel anything in my body, it makes me nervous. And so when I feel [Name of Dog] doing deep pressure therapy or feel her licking my hand, that is safe connection to my body. That's connection to my body that I'm not afraid of and that helps facilitate me figuring out, "Where do I feel this anxiety in my body? And how can I address it? Okay. So I feel it in my throat. I feel like I'm choking. How can I address that? I feel it in my stomach. I feel like there are butterflies in my stomach. How can I address that?" So in therapy, she helps me reconnect to my body in a way that gives me clues about what I'm feeling and how I

need to proceed in this session to be able to continue to do the work and feel safe and be connected.

Abigail described how the tactile and sensory stimulation provided a safe connection with her body which then helped her connect with her emotions. In a connected way, Kathleen used the word “alive” to explain the emotional impact of the animals:

Yea I feel like it kind of, especially when you are there for so long, that it kind of made it more um, open when the dog came, not like the thing that like when the dog was there it was just it wasn't like he made all your troubles go away, it wasn't any...but it was like it would definitely wake me up a little bit and when the dog was there like it was more **alive** with him and the group would be more alive you know...you were with the people all day long so it was, um, it was definitely something that brightened me.

Kathleen, while acknowledging it did not make all her problems go away, said it had a way of helping her feel more alive which could be interpreted as a reconnection with affect/emotion. This has important effects for the ability to manage emotions which will be explored in the next paragraph.

### **Emotional (re)connection.**

For some of the women, the sensory connection, and subsequent reconnection with their bodies, led to a different way to manage emotions. For Katarina, she said, “And just the animals, it just kind of brought that out. It brings out that, you know, warm heart.” She expanded on the warming of the heart and how the animal could access something people could not at the time:

Katarina: when I was in my eating disorder I remember before I went to treatment one of my dogs had passed away. And I basically hated life. I hated everyone. I didn't want anything to do with humans. I was just kind of like just done. And then, I don't know, just interacting with these animals again. And then, seeing at my table interact with them too it's just seeing happiness. For that moment of time at least, for that hour that we were eating, or 45 minutes, there wasn't...for most days there wasn't really anything to worry about besides seeing everyone happy for the first time, it was nice to see. And then you, like I said...kind of referring back to the horses and same with the dogs, you create that bond and you learn to kind of...although you weren't taking care of the dogs, still being able to play with them and stuff, it was nice. And it just kind of taught us that responsibility and it reminded me that I still have a heart -- that's good. You still care for animals. You still care for people, so.

Interviewer: Yeah. Yeah. So it seemed like you were able to access something that maybe you couldn't get to because you were so entrenched in the eating disorder, which is what it does. Yeah.

Katarina: Right. And I was so bitter towards people. And just the animals, it just kind of brought that out. It brings out that, you know, warm heart.

Katarina was not the only one that spoke about the impact of the animals on the heart.

For Jeannette, when reflecting on the impact of the animals on her emotions, she referred to the process as, “It’s like, ah, and I can just feel it now. It just flutters, it opens up, it speaks to a deeper self inside you” when she saw the dog in the group therapy. She

provides a more detailed description of how the disconnection from your heart can be reconnected through the experience with the animal:

Jeannette: Yeah, it was very easy to get disconnected from your heart. So you're in your head. You're out of your body, where you're revisiting different centers of your body that's like hard to really go there. It's like you are, but it's the darker side of your heart. It's like a wound inside. So if you would connect...So, when I think of the heart. So it's the love, loving side of the heart.

The process of reconnecting to the heart or, conceptualizing this a way to reconnect to emotions, will be explored in the following paragraph.

**Animal as emotional buffer.**

Many women described the emotional impact of the eating disorder as having a way of stopping emotions. Sierra conveyed the emotional impact of an eating disorder, “just like the, the level at which you wanted to experience the world is usually dialed down, I think, for people with eating disorders.” Katarina further illustrated the absence of emotion as identified by her individual therapist:

she actually had said this to me. She was like, "When you talk about your life and what's happened," she's like, "it's almost like you're just saying it. Like, it comes so..." What's the word I'm looking for? Like, it was just no emotion. I'm just telling my story. And I noticed that was true.

Similar to the interpersonal safety provided by the animals, the animals offered some women a safety with the experience of emotions. The word “buffer” was used by several women to describe the way the animal helped manage emotions. Samantha, in her first interview, said “kind of like having some something there to kind of **buffer** some of the feelings,” and in her second interview further explained the process,

I mean the emotions are still there but it kind of ... There's ... it **lessens the intensity** of the emotions and kind of brings me back to maybe something that I care about like like my dog um... So that I'm not so focused on something like and and so in my head.

Jeannette also used the word “buffer” when she explained her experience with the animal and emotions, “It was like a very pleasant, not distraction...what’s a better word for distraction? Like a pleasant **buffer** for anything that might be going on, like what got brought up.” Therefore, the ability to slowly titrate emotion and have an outlet to process overwhelming emotions provided a safer emotional experience for some of the women.

## **6.2 Impact of Animal on Thoughts**

The animal had an impact on some of the women’s thoughts, and the ways in which it did emerged in three different ways: by way of distraction; by way of accessing thoughts outside of the eating disorder; and using the animal to think in a different way about the self and identity.

### **Distraction.**

The use of the animal as a distraction was cited by most of the women. The ways in which it was used as a distraction varied. The main distinction between the distracting influence was whether the animal was used as a distraction into a more willing or willful frame of mind. The dichotomy of “good distraction” and “bad distraction” is not helpful since the usage of the animal was what the individual needed at the time. It is more helpful to learn about the ways it was used as a distraction.

The impact of an eating disorder(s) on individuals’ thoughts had certain patterns. The obsessive and relentless quality of thoughts related to the eating disorder was an

overwhelmingly common experience. Elsa explained this experience, “Because I just had the constant tape looping through my head of like all the negative thoughts and how awful I was for eating.” In the following sentence, however, she described the impact of the animals on these thoughts, “But when the dogs were there, I wasn’t thinking about that as much.” The experience of intense, negative, relentless, loud, intrusive and food/weight/eating disorder-focused-thoughts were the main thoughts for the women when entrenched in their eating disorder. For Elsa, however, the animal, provided a way to distract from these thoughts:

For me that meant it kind of like, would bring me into the present, like into the current moment as opposed to just like, just spiraling absolutely out of control in terms of like, “Uh, what did I just eat? Well, with the other thing that I have eaten that day and that week and how bad it was and how it was going to get and how horrible everything was and how I wasn’t at school and I was supposed to be at school.” Just like, this overwhelming sense of anxiety and panic about everything that had happened, everything that would happen and all of the ways I screwed up. Being the dogs was more about just like, “Okay, I’m in this room right now and I’m like, physically touching the dog, and that got me again, I guess, I focused on the present.”

Overwhelmingly, the distracting impact of the animal was cited by many of the women, and the way it distracted them depended on what their vulnerabilities were in the moment:

It would be a great group after a meal because, yeah, all of a sudden you’re not focused on the discomfort of the food in your system or whatever. So it brought

out... it put you in a different awareness, the dog. So it was a nice **distraction** to have. (Jeannette, Interview 2).

I guess it was grounding, kind of. But just after meals was always really a hard time that I felt like I was like crawling out of my skin. But when the dogs were there, it was kind of like **distracting** in a way that it reminded me that there were other things outside of what was going on in my head. (Elsa, Interview 1).

I think he just made me feel more calm... like I have a lot of anxiety talking in front of other people...and just, like, talking in general... so having [Dog Name] there it was a helpful **distraction** for me and made me less worried about what other people would think about me. (Alexis, Interview 1).

If people start talking about like things that may have been triggering, that trigger me when I need something right away or like **distract** me. So I was like, "Okay, the dog is here and see what he's doing." So he's playing with, like go up to the dog and start petting it or like get a toy. So like by doing it was like, brought me out of the triggering situations. (Larissa, Interview 1).

It distanced me from the meal emotionally, so it provided that kind of **distraction** component for a long enough period of time that I was able to stay emotionally distant from the meal or anything that came up with it. It just kind of pushed back any of the eating disorder or intrusive type thoughts that might have been there had I not had the **distraction**. (Maureen, Interview 2).

Because I really wanted to play with the dogs. I mean I love dogs and I told you last time they...they just...they like, you know relax you. They **distract** you kind of. (Ariadne, Interview 2).

But I think subconsciously, because I had built up like a new sense of confidence, I could only imagine that it would've kind of poured to other areas in my life, and thinking that "I can do this. I can eat two more bites. I can hold off a few extra minutes with my anxiety. I can **distract** myself." Like I said, I may not have always put two on two together, but I guess I can only imagine that it was like a flower that bloomed in my mind that would never have bloomed had I never done it. (Lily, Interview 2).

Lily, in talking about her experience with the horse, noted the distracting influence of the horse because riding a horse forced her to focus on the task:

Like I said, it didn't cure me from things. But it definitely enabled me to just step outside of the pain for a while, because I had to really focus. When you are on a horse, you can't just like not focus. You have to focus. And so it just pushed me into like a good place in my mind for a while. It was like a vacation. It was kind of like a getaway, you know, from just like the pain that you feel sometimes.

For some women, distraction was a way to calm the mind and slow down their thoughts.

Elsa expands on the process of how the animal calmed the self-negative thoughts:

Interviewer: And so, what would happen to that self-negative, self-critical kind of tape in your head when you were with the dogs? Like what would be happening?

Elsa: The volume would be turned down a lot. I wouldn't be so overwhelmed with it and sometimes it kind of would go away, but mostly it just like decreased the intensity by a lot.

The slowing, calming, and distracting impact of the animal on the individuals' thoughts may have opened space for the individuals to think about things outside of the eating disorder. This will be explored in the next few paragraphs.

### **Impact of animal prompting thoughts outside of eating disorder.**

For some women, the animal was a distraction such that it was a way to think about something outside of the eating disorder in a multitude of ways. For some women, it connected them to thoughts about home, about their personal animal(s), memories, relationships, and many other things. The connecting thread was the animal prompted thoughts about things, whatever they may be, outside of the eating disorder.

Many women spoke about the amount of time talking, processing, and thinking about their eating disorders such that their mind was consumed with “healthy” and “unhealthy” eating-disorder-related thoughts. While some women acknowledged the need for treatment to spend time with eating-disorder-thoughts, many women found the focus of eating-disorder-thoughts to be problematic and not helpful. Jeannette describes the impact of the animals on her thoughts, “You know it felt like there was life outside the walls of the recovery program and it triggered memories and personal thoughts or, you know, just life and happiness.” The animals may provide a way for women to think of things outside of the eating disorder. Thinking about things outside of the eating disorder may have some connections to their self-negative thoughts and the cultivation of their identity.

### **Impact of animal on negative thoughts about self.**

An emerging theme was the impact the animals had on negative thoughts about the self. Felicity said, “because you can’t really think about animals in like a positive way and be thinking about yourself in a horrible way at the same time, it doesn’t really work.”

For some women, like Felicity, the animals provided a new way to think about the way they were treating themselves, “when I think about it, I’m like, “Whoa, what gives me the right to treat an animal with all this gentleness and everything but not take care of myself.” Similarly, Ariadne agreed that the way the animals treated her had an impression on her thoughts about herself:

Interviewer: You have said like familiar, comfort, and innocent in terms of how you would describe the dogs. And, but there is something about how they treated you as if you were the best thing in the world. Like there is something so...

Ariadne: Yeah, for sure. And that’ll make you feel good and you’re like, “Yeah, cool, I’m okay.”

Interviewer: It sort of helps to kind of generate some feelings of like, “All right, I’m not so bad?” If those were in your head.

Ariadne: Exactly.

For Winona, the animal provided a way to counter some of her negative thoughts about herself, even if it was limited to that moment:

For a short period I would say I felt more part of a group or more, "I'm not that bad of a person. The dog will at least spend time with me...I can entertain a dog."

It's like I forget about that they are a dog and I think of it just being as, "I just spent some time with somebody." So it's like, "Somebody that wanted to spend, hang out with me a little bit." So feeling a little bit more accepted in a way.

For some of the women, the animals provided a way to think differently about themselves and challenge some of the existing negative thoughts about the self. This had an impact

on how some of the women thought about their identity which will be explored in the following section.

**Impact of animal on identity.**

For some of the women, the animal provided a new way to think about their self and their identity. Sierra expands on her understanding of identity when in the eating disorder and how the animals provided a way to change it:

Sierra: I didn't know anything about myself besides that I was good at school and that I was good at losing weight.

Interviewer: Mmm.

Sierra: Like I literally could not have identified a single other identity trait. Um, and so dogs were probably the first thing that I identified, like, oh yea, I like dogs.

Elizabeth found the animals provided a different way to think about her identity and offered more dimensions to her previously one-dimensional identity:

I would say it made me realize that I have, or it was one of the things that kind of made me realize that I'm more than a brain. That I have more needs than that.

That, you know, it just like, it kind of reminded me that I'm like a body and a human organism, too. You know, that needs to eat, that needs to like sleep, that needs different things. I'm not like a word factory or whatever.

The animals provided a way to expand their understanding of their identities. Samantha said that AAT had an impression on the expansion of her feelings about food, "It helped me understand that my feelings about food were not the most important thing in my life and there were other things going on around me that could be important to me too." For Samantha, recognizing that other things could be important to her could be an expansion

of her identity. The impression of AAT on thoughts, in general, had some connections with identity formation or reformation.

#### **6.4 Impact of Animals on Treatment Experience**

The overwhelming sentiment from the women was that eating disorder treatment was intense, stressful, draining, and very serious. The experience of AAT and how it related to their treatment experiences emerged in three different ways: AAT as a different and fun experience, AAT as a source of motivation, and AAT as a positive influence on relationships with mental health professionals in treatment. These subthemes will be explored in the following sections.

##### **Animal as fun and restorative.**

Kathleen said, “It’s more fun to be around a dog than to talk about your feelings” and the theme of “fun” emerged from several other conversations. Josephine described equine therapy as feeling fun and not feeling like therapy, “It didn’t feel, ever feel like therapy and I knew that it was equine therapy. I knew it wasn’t just like fun time. But it felt like fun time.” Lujan also described the process with the animals as being therapeutic but in a way that still felt like a break:

Lujan: It was a time where I was calm and I wasn’t thinking about food or hating myself and stuff like that. It was just taking care of this animal. So I think it was really good because I don’t think you need to focus on your emotions 100% of the time, part of recovery is having fun, too, and not focusing on the, you know... You need a break from that therapeutic work. It gets exhausting. So its good to have something that you were... like getting therapy but you didn’t really know that you were, you know what I mean?

Like it was therapeutic in other ways and therapeutic in a way that wasn't in your face. So it seems like a break but really it was still therapy looking back but it seemed like a break for me, you know?

Interviewer: Yeah.

Lujan: Which I needed.

The infusion of fun, silliness, excitement combined with it being something outside of the normal routine of treatment was experienced as a positive treatment experience for all the women.

### **Motivation.**

The animals were often cited as a significant motivating factor for individuals in treatment. There was something different about the animal-therapy motivation which, for some women, proved to be more compelling than anything else. Felicity described this process and said, "I wasn't as willing to do anything else. Um, with the dogs definitely more willing. Um, so, yeah. Any other, any other kind of treatment just is not as, um, easy to do as animal therapy." There were several different levels in which the women experienced the motivating impact of the animals on their treatment.

### ***Motivation for a treatment-specific goal.***

Jeannette referred to the way in which the prospect of equine-assisted therapy would motivate her to finish her dessert, "And so you're like, "It's not really...it's not really worth not eating a cookie to like have to give up your equine." Maureen described how the prospect of seeing the animals provided her with motivation to try a challenging meal:

There was one in particular that I was like, you know I'd like to try, I'd like to do this meal again. But I was like, but I also want to try this because I've never tried something like this before. And it's kind of fear of foods, like it had cheese, and I still don't particularly respond well to cheese. But I was willing to give it a go because it was like, well you know if nothing else if I get really upset by it, you know, seeing the dog will make me feel better even if I eat the cheese.

***Motivation for approaching treatment in a different way.***

While Jeannette and Maureen described the motivation for a specific goal, a few of the women experienced AAT as motivation for more than a specific treatment goal. Josephine provides a detailed description of how the horse impacted her willfulness and her way of rethinking her approach to treatment:

I think the lesson that they were hoping to get me to understand and I think I did understand was that, you know, being stubborn and not listening to what other people want you to do can get yourself hurt or get yourself in a situation that, you know, isn't great or that you're essentially just kind of stuck. And like with [Name of Animal], [Name] was always fighting on everything, so he'd be pulling to go a certain way and I'd be like there's a cliff there. You're going to fall off a cliff, you know? Like, and so, I know that they specifically picked him so that I was seeing like, this is what happens if you don't listen kind of thing and this is what happens if you're always fighting the process and like, it did take me, I would say, multiple treatments before I started like listening 'Cuz in the past it was kind of like, all right, I'll just be compliant, do everything that I was supposed to do, go home to the same environment, have everything fall apart again, need to go back and do the same thing over again. Until finally, it was sort

of like, all right, maybe the way that I'm doing it isn't working. Maybe fighting the process the whole time isn't going to work. So I think that sort of seeing that through his behavior.

For Josephine, seeing the horse's behavior and connecting it with her own behavior had an impression on her willingness in treatment. It also had an impression on Alexis's willingness specific to her eating disorder, "I mean, yeah, like it made me want to definitely not have an eating disorder anymore, you know." While the impression of AAT varied from women to women, all the women cited AAT, through the animals, as connecting with motivation in treatment.

#### **Impact of animal on relationships with mental health professionals in treatment.**

As indicated earlier, relationships with people when an individual is entrenched in an eating disorder are very difficult. The difficulty with interpersonal relationships extends to the relationships with the therapist, psychiatrist, direct care workers, and entire treatment team. If the establishment of trust is not there, the relationship may not be effective. Elsa describes her experience with a therapist and how the eating disorder impacted her ability to form a therapeutic relationship:

It's just like, I didn't trust her at all and I didn't trust that she wanted to make me better. I felt like... oh, this is how my mind worked at the time. It was like, A, she just was like, super into eating disorders because she had one so she just wanted to talk about eating disorders all the time, and B, she wanted to like, fatten me up so that she could be the skinny one. So, obviously not a very therapeutic relationship.

Elsa's mindset, when in the eating disorder, made it difficult to connect with her individual therapist. Adding to the relational insecurity, other women indicated the lack

of consistency in treatment staff due to high turn-over and infantilizing treatment. The experience of AAT, for some women, had an impression on the woman's connection with the therapist. For some women, the animal was a vehicle to connect with the therapist. These women experienced the therapist's demonstration of love for the animal as a non-verbal communication about his/her character. The non-verbal demonstrative love to the animal helped some women feel safer in connecting with the therapist.

Elizabeth, described the trust she felt with therapist because of the animals:

Interviewer: Could you say more about like what for you did it mean to, that [Therapist Name] had her dogs? That [Therapist Name] had a connection with the dogs? So what did that say to you?

Elizabeth: Like I think I felt like an affinity, like okay, we're the same type of person because we both clearly like these dogs way more than I like anyone else, or any people, any humans. You know, you just like think what can tell that about a person, like you're both around. When you're around a person and around a dog, like you can tell if they're that kind of person.

Interviewer: Yeah. So that affinity that was...

Elizabeth: Like the way she would interact with him and with [Dog Name]. You know, you could just see how much deep love and respect she had for them.

Interviewer: And that made you feel like she's someone you could trust...

Elizabeth: Yeah.

Interviewer: Because you saw her...

Elizabeth: She shared my values.

Interviewer: Interesting. Okay

Elizabeth: And my, like, instincts a little bit.

Other women did not find AAT resulted in a deep connection with the therapist, however, they found it allowed for more interactions with the therapist in an unstructured way.

The unstructured interactions with the therapist led to a more positive impression of the therapist. Kathleen described this process:

But actually it made me like feel like I could approach her better because she was kind of like one of the head honchos and stuff and so, um, like bringing in the dog it kinda like, I don't know why or how, but I was able to maybe like, petting the dog initiated conversation or something or um yea, I guess it was easier to talk to her.

This, though not deep or provocative, may have humanized the therapist in a way that make him/her more accessible.

## **6.5 Learning and Limits**

AAT, through the animals, may have provided opportunities for women to learn different things related to relationships, emotion regulation, and thoughts. There were, however, women who experienced minimal to no effect from AAT on their experience. The learning and limits of the AAT will be explored in the following sections.

### **Relational and emotional learning.**

The relational and emotional learning were very intertwined, and so it is most logical it to review the relational and emotional learning together. The relational and emotional learning may be connected to the woman describing they felt it was “easier to open up” with the animal. The experience of seeing happiness and connecting with an animal may have offered a way for some women to reconnect with their emotions/affective experience. While “connecting with the heart” was a specific phrase, a common theme

was the impact of the animal on making it easier to open up. Samantha said, “we would get into each story little by little and whatnot, I would just kind of like be playing with the animals. And I would kind of notice that it was easier for me to express my emotions when I was doing that.” The theme of it being easier to open up was described by several other women:

I mean, it **definitely taught me how to, like, let me emotions out**, you know, which I think made me... I'd never really done that before, and so I guess it made me feel safer to do it with other people, you know (Lujan, Interview 2).

I think I was so guarded and walled off and so used to having to go through therapy and answer questions that I was very good at wearing masks and stuff.

**But there was times where the horse and the activity that was being done to sort of bring up those emotions that I wasn't able to wear that mask or I wasn't able to keep the wall up** because it... You know, there was a way they they accessed something using the horse that I would have been able to keep away in therapy session. (Josephine, Interview 2).

Having the animals there to pet and, I don't know, just love, was, **it made me feel comfortable enough to... more comfortable to open up**. It just made me feel better (Katarina, Interview 1).

Moreover, the relational and emotional learning possibly facilitated by the animal also had an impression on how some women thought about other women which, in turn, left an impression on their willingness to relate to other women. Felicity said, “I think, um, when you see somebody else around a dog you see how they are towards the dog, I feel like that is kind of an indicator of how they are as a human.” The new thoughts about

humans led to some women being more willing to explore relationships with humans in the presence of an animal. Winona further explained the relational connection with people that the dogs offered:

Even though if I didn't say it, it was like I felt connected in a way. One that I may not approach, she may be petting the dog and I might go up or vice versa where you have that interaction with somebody that you never really would have. So meeting people that you wouldn't necessarily have met or talk to or been more shy with, you were able to connect with a little bit more.

Similar to Winona, Abigail described how the animal had an impression on her willingness to take interpersonal risks and said, "I'm more willing now to try to connect to other people and more willing to put myself out there and take risks because whether or not those risks are successful, I know that I have this base connection to fall back on." Abigail continued to describe the process for her relational learning through her experience with the animal:

I think, "I have this connection with the dog that's amazing and beautiful," and it makes me want more genuine connection because, as beautiful and connected as we are, she can't talk back to me, she can't whatever. And when I feel connected to her in our special way, I want to then feel connected to other people in a deep way too. I want to have relationships with other people where I feel that mutual love. I think it comes back to love and connection. And I told you that's such a frequent conversation for me in therapy, genuine real connection that I can trust. And because I have learned to trust and love her and trust that love that I get from her, I want to feel it with other people too and I want other people to feel

connected to me. I know how special it is to feel truly and genuinely connected. I want to feel that with people and I want to feel that in relationships that can be even more symbiotic and that can be even more deep, even deeper.

Lastly, the process of how the learning happened was unclear to all the women. Even so, Louisa speculated on the process:

I think they're... just the fact that it was a new...this sounds weird but a new species to interact with but at the same time it was so familiar to us. So there was comfort that dogs bring just like always. The fact that it was a break from the normal schedule, routine, type of groups we had, and the different...I guess a completely different type of thing to interact with. So it was new but at the same time so familiar and such a comfortable thing and I think that's what really made me feel happy to be around them.

Although the process is still unclear, some of the women experienced relational and emotional learning through AAT.

#### **Non-verbal and tangible vehicle for (re)thinking.**

For some women, the animals provided a new vehicle to think about and understand their behavior. Josephine shared that seeing behaviors through the horse had a different kind of impact than being told or talking about her behaviors:

One of the therapists I had that I worked with for years always said that I always had a lot of insight into my behavior but like sometimes I just didn't quite make the connections and make the changes. And so it was just more tangible than hearing it...it because we'd talk about that kind of stuff and I was aware that I was stubborn and things like that, but I think having an example in front of my face was more useful than like just being told or talking about it.

Josephine and several other women found the use of the animal could be used as a tangible tool for thinking in a different way. For some women, the use of the animal provided opportunities for (re)learning in several different ways, and Josephine described this process:

The horse is just making it a way so that you weren't thinking like you're hurting yourself in terms of not eating all the calories or something. Like you're making it a little bit more, again, tangible in a different way. So that you can later apply it to your life and the actions you choose when you're outside of treatment.

For Josephine, the animal was a tangible tool that left a different impression on her thoughts. Elsa also indicates how the animal illustrates a point in a different way, "in terms of just like food being fuel, it kind of illustrated that point. It made that point more concrete and less abstract." Jeannette, too, used the animal to think differently and practice the skills she had been learning:

So if you saw the dog, okay, distract yourself or handle this emotion, like instead of just sitting with it and thinking about it in your head, get the ball and redirect where your attention is right now, and see how you can...if you're really practicing what you're learning, see how you can explore and interact with something else and just see where the emotion goes at that point. Throw the ball, laugh, see if the emotion will pass when you start doing these positive things. So, having a dog in that therapy class, if you're talking about something or listening to someone else and having a bad day, helps you see that there's a way to handle your process and handle your emotions in a constructive way, and also when you distract your mind on something positive, the emotions pass. They go away.

They're okay. And you process them and you surprise yourself. And you're like, "Oh," Just opens the upward spiral. You get in that. And that's what they teach a lot.

While used in different ways, AAT left some cognitive impressions for certain women.

## **6.6 Limits and Negatives**

During the interviews, no one said they experienced a negative reaction to the animal or AAT, however, a few of the women had interpretations about the experience of the AAT. It is important to understand the ways in which the animals may not have been helpful and/or may have had a negative impact on the individual. The limits and negatives of AAT relate to the animal prompting jealousy, the animal as a distraction (avoidance and taking focus off the self), the animal prompting fear, and the limited temporal impact of AAT. Before I discuss the limits of AAT, I will begin by discussing an important negative case analysis in the following section. The negative case analysis has important implications for understanding the limits and negatives of AAT.

### **Negative case analysis.**

While the fear of judgment was prominent within the data, Lily provided a different perspective about the relational experience with other women in treatment. She said, "No, I never felt judged. I felt loved." She expanded on this experience with the other people in treatment:

No, I never felt...no. I felt like we were all there and we all had our issues. I felt like finally understood because when I was at home, it was so frustrating, and it can be even today because people don't just get you. They don't understand, you know? And when you're there I finally found people like myself. I finally found

other people that were struggling like me and I finally felt understood. So, no, I did not feel judged.

Lily's insights were helpful because it refined the way I was thinking about fear of judgment and, instead, strengthened my ideas about the power of being understood. In this way, by feeling understood by other women in treatment, Lily felt loved by the other women. Most of the other women, while acknowledging they may have met a few close friends, found the relational experiences with other women in treatment to be mostly eating-disorder based and not prompting feelings of love. The negative case provides a helpful awareness of the diversity in attachment styles, and how this can have an impact on the way in which they attach to other people as well as animals. Therefore, the existing attachment formation may impact the way in which individuals relate to people and animals, and it may not always have beneficial effects.

### **Jealousy.**

A few of the women indicated AAT prompted feelings of not being liked enough or feelings of jealousy:

I mean sometimes I would be... I think maybe I was a little **jealous** if the dog spent more time with one than another, but that wasn't... it didn't make me feel a particular way about a girl (Maureen, Interview 1).

Um... not about when I thought about them as a person I'd say I'd just get umm uh ... I don't know the word cuz like **jealous** is way too big or way too strong of a word I'd be like ahhh I wish the dog would come here with me I wish the girl would stop calling the dog over to her so maybe just like **annoyed** you always

spend time with the dog let me have a chance so that more so like that than like judging them or thinking anything different um...(Kathleen, Interview 1).

Yeah, and the thing is that at the same time, it's somewhat of a distraction. Like I said at first, I started to get that comparing, like, "**The animal likes this person better than me,**" or, "They're going to go towards this person." But I never...I compare a lot and I compare myself to others and it's always less than (Whitney, Interview 1).

It may be helpful to have an idea about the woman's attachment representations prior to attending the AAT. In addition, based on the attachment representations of the women, it may be helpful to spend time in individual therapy addressing any feelings that may have been prompted in AAT.

### **Distraction.**

The idea of avoidance-distraction emerged as a potential negative of the AAT.

Ariadne described the distracting abilities of the animal:

Interviewer: Yeah, um, and was there an element that it would be distracting in not a good way for you?

Ariadne: I think so, yeah. That happens too. I mean, as long, as much as he like calmed me down sometimes I just didn't want to listen, you know? Because it's like, like it's the same old thing, you know?

Interviewer: Yeah.

Ariadne: So kind of just, I'm going to focus on him and kind of be happy for a little bit.

While Ariadne acknowledged her use of the animal may have been a way to disengage from the treatment at times, however, it was something she found for herself to bring happiness which is important. Abigail also acknowledged the distracting power of the animal and how she used it in an ineffective way:

I think that one of the negatives is that I can deflect with her and people would call me out on that in treatment all the time. And I would do it in subtle ways and blatant ways, like I would be in a therapy session and my therapist would ask me a difficult question and then [Animal Name Redacted] would yawn or something. And I'd be like, "Look, how cute she is. Let's talk about that." And my therapist would be like, "[Woman name,] stop." But then I would also do it in subtle ways just like working her into a conversation. And then I also have in the past used caring for her as a way to not care about myself and as a way to focus on, I'm just gonna pour all my energy into caring for her and I don't have to care about myself at all. Now my perspective has changed and now I care about myself so I can care about her. But I have absolutely in the past used her as a way to not think about myself.

Not only does Abigail indicate the deflecting power with the animal but also how she used it as a way to exclusively attend to her animal's needs and not her own.

In a similar way, the issue of distraction and how it would not have been effective in individual therapy was mentioned by a few of the women. While other women experienced the animal as being a helpful buffer to manage talking about emotionally prompting matters, several women did not think it would be helpful. Larissa explained how it would have been a distraction for her in individual therapy and said, "If I wanted

to bring in the dog like into my individual therapy sessions that I could have. But yeah, I just, I don't know... I think I just wanted to focus really on me and not having any distractions in there. She continued to say how the additional “body” in the room would not be helpful in individual therapy and, again, distracting her from the focus, “Yeah. Because it's like another body in the room. So it's just like hard. Like it's different [inaudible 00:33:47], it's like another being in the room kinda changes the mood.” Since the animal may be experienced as a “lightness” to a therapy group, the animal may not always be helpful for everyone when discussing very serious and deep matters. This idea about how the animal can change the mood was also mentioned by Louisa:

I think if there had been a dog walking around in any other group, [inaudible 00:12:29] nutrition group or CBT or something, then it would have made the whole situation much lighter and more...probably people would be more comfortable to just crack jokes and stuff. But I think that in those groups, a dog wouldn't really fit in because they're much more serious topics. Does that make sense?

She clarified by making the distinction that if a group needs to be serious, then the dog may not be useful:

if they think the group should be very serious, then I don't think a dog would be useful in that situation because I feel like it would almost distract us from thinking about very serious things. Unless the dog were very calm and we could just have it without it interacting too much. Maybe if it were asleep or something, then it would be more of a source of comfort. A lot of people would bring blankets to groups as a source of comfort, just have something warm and soft with them. I

think if there were a dog situation like that, it could work, if the group leader were able to still maintain that level of serious conversation. But I think if the dog is more rambunctious or energetic, then that would take away from the seriousness.

Louisa makes an important point about the thoughtful application of the AAT and how training of the animal is important to the functionality of the intervention. Larissa and Louisa connect us back to the idea that the women use the animal in different ways, and this level of awareness is critical to support the women in treatment. Bringing awareness to the different ways in which the animal may be used by the women is important and should be explored prior to the implementation of AAT.

### **Fear.**

Additionally, for the women who used a horse in their treatment, some of them mentioned feelings of fear related to the animal, specifically Katarina and Lily. Katarina said, “But horses you know, it's not my first animal of choice. And so yeah, I didn't really, and they smell. You know and they're really big. Like I said it was scary.” For Katarina and Lily, however, there was important learning that happened as a result of challenging or tolerating the fear related to the animal:

you know you're **like conquering the fear** like you like the control aspect of it really relates to the like recovery and eating disorder (Katarina, Interview 2).

You have to get the **courage**. You have to get the strength to do it. And once you do it, you're just like, whoa, you have like a sense of freedom afterwards. Like I did something I never thought I could do. I mean when it comes to OCD or eating disorder, sometimes you feel like "I can't get over this. I can't do this." But once in

a blue moon, I get like a memory in my head, like I did that with the horses, and I'm so proud I did something I never thought I could do (Lily, Interview 2).

Although the women in the study experienced positive results from the challenging of the fear related to the horses, it is possible that challenges of fear for other women could have yielded some negative effects.

### **Temporality.**

Lastly, the impact of the AAT had varying levels of temporal impact. While not so much a negative, some women found it was only useful during their time in treatment. When asked by the interviewer if she ever thinks about her relationship with the dog now, Larissa said, "No. It was kinda just useful in the time when I was sick and in need." Similar to Larissa, some women found it was mostly helpful while in treatment, and not something they think about in their present experience:

I think **it was just limited to the experience in the group** um...only because like I said earlier you're in your own bubble and I think I got so focused on what I was dealing with that it was hard for me to think outside of that (Samantha, Interview 2).

I mean, it was helpful at the time, but I don't know that it was like the defining, you know, like, "Okay, I'm gonna do this and this is what, you know..." So I think **it was very helpful while I was in there**, but I don't know that it was kind of like a, you, "Okay, something..." I don't know...I wouldn't say it helped with my recovery (Eleanor, Interview 1).

Other women said they will sometimes think about it, if prompted by seeing an animal that looks similar to the therapy animal, or interactions with their personal pet. Elizabeth,

however, shared she still feels she has a relationship with the animals and conjures up the animals in her present-day existence to tolerate distress:

Interviewer: But how do you think about the relationship now?

Elizabeth: Like I still feel like I have it. I feel like it's one of those, or I don't, I haven't felt a sense of loss with it. It's like they, I just don't feel like I will ever lose [Animal name redacted] and [animal name omitted]. Like, I don't feel like, I don't feel sad when I think about them, I don't like, it's like I always know they're there for me and they're constant wells of support even though they're not with me. Like just, like, my memories of being around them.

Elizabeth's experience, however, was unique. That said, the temporal impacts of AAT and the varying length AAT seemed to "stay" with the women has important implications for evaluating this form of treatment as an adjunctive or primary intervention.

## CHAPTER VII

### DISCUSSION, TREATMENT IMPLICATIONS & CONCLUSION

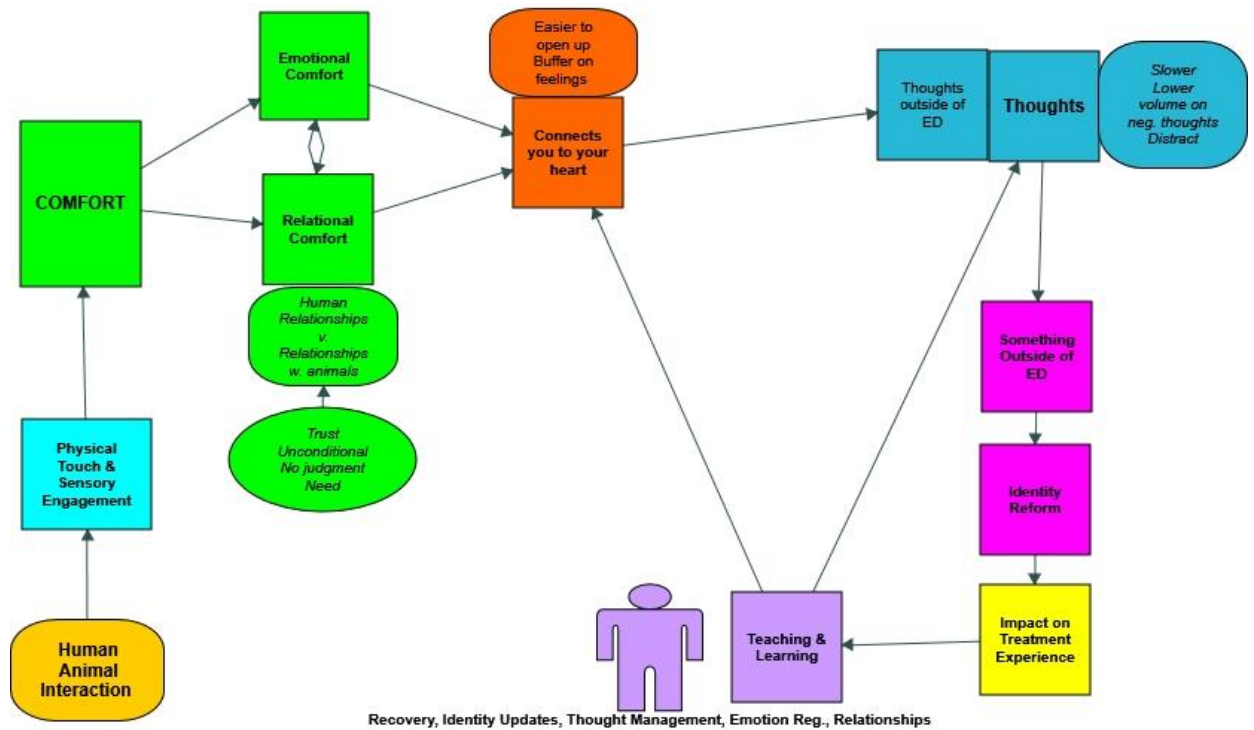
#### 7.1 Discussion

The goal of this research was to explore how adult women with eating disorders experience AAT and, in particular, whether AAT relates to important aspects of attachment experience and affect regulation ability; two areas also associated with the diagnosis of eating disorders. As hypothesized, AAT relates to important affective and attachment strategies, however, the underpinnings of how and why are still to be more fully understood. This exploratory study examined adult women's experience of AAT among women who used AAT in their eating disorder treatment. The hypothesis of the study was that AAT is a mechanism by which affect may be elicited amongst people with eating disorders *and* that AAT may serve as a tool for reparative experiences for individuals struggling with eating disorders. Using the lens of attachment and affect regulation and acknowledging that the study explored the perception of AAT, the data offered some connections with the hypothesis. While exploratory, the data from this study may suggest a connection exists between AAT and both affect regulation *and* the process of attachment reparation among women who struggled with eating disorders.

#### **Roadmap.**

Many of the women described their perception that the animal impacted them from a relational, emotional, cognitive, and treatment perspective. As a visual depiction of my interpretative and analysis process, I created Figure 4 to demonstrate the interpretative connections among themes that emerged from the data:

Figure 4: Map of analysis



In the following sections, I will review my preliminary interpretations of the results which will include: the sensory stimulation as a joining of body-mind states; the cultivation of identity outside of the ED; the similarities and differences between the ED and animal; and the link with attachment, affect regulation, with my interpretations. Overall, my findings suggest that the symptoms of ED may have a relational functionality for the individual, even if there are other developmental, cognitive, and physical costs associated with these same symptoms. My conceptual lens of attachment theory and affect regulation frames how impairments in attachment can lead to deficits in identity formation and affect regulatory experiences. Therefore, AAT may provide, either within individual or group modalities, reparative experiences that help foster a strong link between affect and body experiences.

### **Sensory stimulation – (re)connection with affect and joining of body-mind states.**

One way eating disorders are adaptive is their role in soothing intolerable and unmanageable affects (Barth, 2008). For an individual struggling with an eating disorder, symptoms can truncate emotional experiences, serving both defensive and expressive functions (Petrucci, 2014). The findings of this study suggest that talk therapy often fails to take the time to assess the individual's capacity to symbolically bridge or connect the body and affective states. This is of particular importance for people with eating disorders, because many theories on the etiology of eating disorders point to a particular inability amongst those with eating disorders to recognize affective states and to connect these with psychophysiological/somatic states. In this way, these individuals may focus more on their body-state and less on their feelings (Petrucci, 2014). Therefore, body-state visceral reactions – experiences we feel in our bodies rather than in words – may be needed to access the disassociated parts of the individual struggling with an eating disorder (Petrucci, 2014). Being able to articulate the nonverbal, implicit, communicative aspects of dissociative body-states may have important connections with interpersonal neurobiology, attachment patterns, affect-regulation, and self-regulation issues for women struggling with eating disorders (Petrucci, 2014), and AAT may present a way to join the body and mind states.

The sensory engagement of the animal engages the body, and as Elizabeth described it, "I can still feel [animal]'s like, the way his fur feels. Like, my fingers still know that." Unlike the eating disorder which anesthetizes emotions, the interaction with the animal activates feelings but in a way that may be more tolerable for the individual. Individual or other forms of talk therapy may not be as well tolerated by individuals who

have been disconnected from their affective experiences. Instead, the animal can be the safety valve and slowly titrate the reconnection with feeling through their unbridled, unqualified, and unconditional love.

**Connection with identity: more than an eating disorder.**

The idea that the eating disorders stem from identity impairments is firmly grounded in the theoretical literature (Bruch 1982; Stein & Corte, 2007). Bruch (1982) argued that Anorexia Nervosa is caused by impairments in overall identity development, and the failure to establish multiple and diverse domains of self-definition. Moreover, Bruch (1981) argued that the adolescent turns to body weight, a highly noticeable, culturally valued, and personally controllable domain, as a viable source of self-definition to compensate for the lack of a clear identity and the associated feelings of powerlessness. She suggested that the preoccupation and dissatisfaction with body image that characterize eating disorders reflect a maladaptive ‘search for selfhood and a self-respecting identity’ (Bruch, 1979, p. 255). Since Bruch’s original theoretical speculations about the connection between identity and eating disorder psychopathology, others have similarly suggested that the failure to develop a diverse and stable set of identity is fundamental to the formation of eating disorders (Dakanalis et al., 2014; Malson, 1999; Petrucelli, 2014; Piran, 2001; Stein & Corte, 2007; Strober, 1991).

A secure attachment has important implications for an individual’s identity formation. In attachment and affect regulation theory, a secure attachment allows an individual to view the self as worthy of care and experience him or herself within the world in a mostly positive way (Bretherton, 1992; Pearlman, 2005). Therefore,

attachment and affect regulation theories provides a way to understand the importance for identity redevelopment among women with eating disorders.

The oppressive and all-encompassing nature of the eating disorder on identity was described by many women. Elizabeth described the way in which the ED usurped her identity:

Interviewer: And when you went into treatment, how would you like, treatment at [Treatment Facility redacted], how would you describe your relationship with yourself?

Elizabeth: Ugh. I would say it was like nonexistent. It was either nonexistent or just extremely like, I hated myself with such a passion that I could only articulate to myself through like different forms of behaviors.

Interviewer: Yeah, and then when you left how was it then?

Elizabeth: It's been like, I think like I've changed more than I ever have in the last few years, in a positive way. And I feel like I have a **self** now and I have something like I want to take care of, like I want to plan for. Yeah. Like, I really want to like stay alive now.

Like Elizabeth, some women described AAT as having an impression on their identity formation or reformation. In certain instances, the animal was experienced as a vehicle to reconnect with previous versions of themselves. For others, like Elizabeth, the relationship with the animal was experienced as a vehicle to find a self outside of the eating disorder. Interestingly, Elizabeth attributes most of the identity reformation to her experiences with AAT, through her interactions with the dogs:

Interviewer: That's really, and you had said that you attribute most of that shifting to [animal name redacted] and that relationship, or, and whatever?

Elizabeth: **I really do.** Yeah, like, it's really interesting that I spent like, over a year at [Treatment Facility redacted] and I like don't remember like most people's names and stuff. Like and I don't remember most of what I did there other than eating and being around [animal name], you know. And so I guess that's what tells me, and I haven't relapsed since then. I've struggled, but I think, I didn't attach it to [animal name] until like, now that it's the case that the only thing I think about when I think about [Treatment Facility redacted] mainly is [animal name]. Now, I know that that was mainly it.

Although Elizabeth conveys her experience connecting to the animals with the cultivation of a self, she was not clear how or why it happened. Many of the women in the study felt this way.

Although there was still a lack of clarity as to how AAT worked, my interpretations of the way women experienced AAT and the connection with identity formation is in three main ways: strengthening of intra-psychic processes (confidence, ego-strength, self-esteem); connections with external processes (animal as connection to real life, animal as evident, and animal as tangible skill); and expansion of self-concept (finding something they liked outside of the ED and ED behaviors). This is an exploratory study and my interpretations about identity, while rooted in theory, are preliminary ideas. There is more research needed to better understand the impact of the animals on the reconstruction of identity. This study provides some ideas that may support the connection between AAT and identity development for women struggling

with eating disorders. If the animal can connect with an underdeveloped self, such that it strengthens it in a variety of ways, this has important treatment and practice implications, which will be explored in a later section.

**AAT can offer new interpersonal connections.**

When the infant is chronically unable to find an attuned emotional connection with the primary caregiver, he or she may attempt to comfort and permanently dissociate him or herself from intolerable levels of anxiety through thumb sucking or demands for food (Pearlman, 2005). These self-regulatory mechanisms may become imprinted as the primary means of comfort and self-care, replacing human attachment and mutual caring (Pearlman, 2005). In this way, psychobiological imprinting of early attachment disruptions may connect with eating disorders as the interpersonal cluster of vulnerabilities within eating disorders is rejection and feared loss of connection. From an attachment perspective, the relational functionality of ED is that it anesthetizes the fear of loss and rejection. As a result, individuals with eating disorders often avoid interpersonal interactions and/or engage in an inauthentic way.

The animal not only appeared to have an impression on the individual via the impact of the animal-person interaction, but interestingly it also seemed that AAT created opportunities for some of the women to create relationships with each other. This has important implications for a population for women who may avoid or fear authentic interpersonal interactions. Moreover, for women experiencing the modality of group treatment for eating disorders, much of their interaction may tend to be focused on aspects of eating disorders. The adjunctive intervention of including an animal in the group modality may provide a way for individuals in the group to relate to each other

about something outside of the eating disorder itself. The focus on the animal provides for new interpersonal interactions that may have not arisen had there not been the animal. In some instances, AAT provides an opportunity to practice authenticity and slowly connect with other individuals about matters outside of the eating disorder. This has the potential to positively impact motivation and willingness to be authentically known by other individuals. The practice with authenticity, the use of the animal's assessment of others as a reliable interpersonal assessment, and the potential for connections outside of the eating disorder will be explored in the following two paragraphs.

For some women, the animal provided "training wheels" or "a safety blanket" for authenticity practice. Elsa described this process:

In terms of the sense of it was kind of like **training wheels**, because we talked a lot about how the dogs weren't judgmental. So I felt like I could kind of be more authentic with them and that was kind of like practice for being more authentic with people if that makes sense.

In a similar way, Abigail described the animals as acting like a "safety blanket" for interpersonal relations:

it was easier to connect to people and even the owners of the dogs, I wanted to talk to them and engage with them. And, of course, I wasn't like, "Here's my life story. Let's do some therapy." But I was like, "Tell me about your dog. I'll tell you about my dog." We could have this basic connection and it made me more willing to open up even a little bit and trust them just because I have that dog there as a **safety blanket** kind of. And then after the dogs left, we were all in such a good mood, we were also happy that we've gotten to see the dogs, that those Friday

nights were the nights that we also felt closest and that we did the most community stuff.

In this way, the animal was a safe exposure to vulnerability and authenticity. Instead of avoidance based out of fear, the women could practice vulnerability without the potential for rejection from the animal. In this way, it provides the primer these individuals may need to develop trust in the self to connect with other people.

Secondly, some of the women found the animal was a reliable way to assess other people. The women may not feel confident in their assessments of people based on their previous interpersonal experiences, so the reliance on the animal's assessment of a person can be a support while they are rebuilding their internal working models. This projective or reality-based function is important to understand as the attachment representations of women with eating disorders may be extremely varied. Felicity expands on this, "because the dogs have better judgment, I feel, than people. So they kind of have that initial reaction of is this person good or bad?" She later said, "I trusted a dog, like opinion or like senses, over my own." While Felicity and a few of the other women used the animal as a reliable replacement object to assess the safety of other women, most of the women described the animal as being a simple object that created new interpersonal opportunities with the other women. The interactions with the animal facilitated new interpersonal interactions which, although the interactions were varied they were interpersonal interactions without the primary focus being the eating disorder. Interacting with other people in a safe way, without the eating disorder as the focus, may start to decrease the fear of interpersonal relationships and possibly start to rebuild trust in

human connection. Therefore, the animal, through AAT, helped some women to practice authenticity and create new interpersonal connections with other women.

**Connecting the pieces: functionality of ED, animal as substitute for ED, and links with attachment/affect regulation theory.**

***Functionality of ED.***

By conceptualizing an eating disorder as having both a relational function and providing a mechanism to modulate affect, we connect back to attachment theory. Because eating disorders are associated with such a broad array of negative outcomes, it can be difficult to articulate the “relational functionality” that can be provided for the individual by some of the symptoms of the disorder itself. This is important for practitioners to understand and to keep in mind. Throughout the study, some of the women characterized the eating disorder as providing attachment function(s) and affective function(s). Sierra sums up the relational and affective protection provided by the eating disorder:

But like, it felt like there was something that I could, like, put on and it would be, like, mine and it would protect me. I could go to, like, whatever, a [redacted] party or whatever, and like I wouldn't have any hopes or expectations because not eating, if I did that I was succeeding and so nothing else could really hurt me.

In a different though related way, Louisa's interpretation about her parents' comments also expose a relational function of the eating disorder:

My parents, I remember, would sometimes...like when I'd say that I felt like I gained weight abroad they would say, give me little tips to lose weight or something. So I thought that I had let them down because I wasn't as...Like they

were sort of trying to improve me and I should have already been, like I guess, been perfect for them.

Instead of processing the relational anxiety prompted by the fear of disappointing her parents, the eating disorder may have been a replacement outlet so Louisa did not have to address authentically attending to her experience (fear of not being perfect; fear of letting down her parents). Instead, the eating disorder becomes an (imperfect) solution for dealing (and, in Louisa's experience, avoiding) her fear. Instead of exploring the accuracy of the fear and potentially being rejected by her parents, she stays with the relational safety of the eating disorder and avoids the risk of rejection.

Through the lens of attachment theory, eating disorders can be seen as having an "attachment function"; a way to maintain connection even if it is an inauthentic interpersonal connection. Then, the eating disorder is an imperfect, or partial solution for the individual who both desires connection but cannot tolerate being "known" authentically for fear of rejection.

***Animal as substitute for qualities provided by ED.***

The protective quality of the ED was strikingly similar to the affective and relational protection provided by the animals. Some women described the animals as protection, a shield, a sense of safety, and a buffer for both their emotion regulation and for their attachment needs, which was similar to the descriptions of the protective qualities of the eating disorder. Within that frame, AAT, through the animal, may offer the protective barrier previously provided by the eating disorder. The animal may then become a substituting protective barrier that offers comfort, unlike the ED, in a way that

is safe, unconditional, nonjudgmental, and healing for women struggling with eating disorders.

*Linking to attachment and affect theory.*

The underpinning of this research is that attachment theory is, in essence, a regulatory theory such that the developing ability of the child to communicate and regulate both positive and negative emotional states exists within the attachment relationship (Schoore & Schoore, 2008). The developing infant's variable states of psychophysiological arousal produce important cues for caregivers and the ways in which caregivers respond shapes the developing attachment within the infant-caregiver dyad. During this psychobiological affective communication, the caregiver appraises nonverbal expressions of the infant's arousal and then regulates both positive and negative states (Schoore & Schoore, 2008). The animal, in a way, may be doing a similar thing. If the attachment relationship mediates the dyadic regulation of emotion such that the primary caregiver co-regulates the infant's developing central and autonomous systems (Schoore & Schoore, 2008), then the affective communications embedded in the mutual gaze and non-verbal episodes between the animal and woman may also be a way to co-regulate. Therefore, just as a good enough caregiver who misattuned can regulate the infant's negative state by accurately re-attuning in a timely manner (Schoore & Schoore, 2008), the animal may be the caregiver addressing previous misattunement and re-attuning in that moment. This interactive and non-verbal repair between the woman and animal may, like the primary caregiver and infant, set into motion the rebuilding of the self-regulatory functions. The critical piece is that the animal provides *both* pieces needed for effective self-regulatory functions – the animal can provide the affect synchrony (by knowing what

the individual needs) that creates states of positive arousal, and the interactive repair (co-regulating in a safe relationship) that modulates states of negative arousal. These two together are the building blocks of attachment and self-regulatory functions (Schoore & Schoore, 2008).

*Interpretations guided by attachment and affect regulation theories.*

Even though most of the women described the eating disorder as an effective way to solicit attention, it also provided an interpersonal barrier from the attention. The eating disorder may create a way to get attention but does so in a way that is still protected and does not feel too vulnerable. Samantha described how she thought about her relationship with her parents when in the eating disorder, “Yea, um, whether they cared about me or not was based on if they worried about me.” In this way, the eating disorder is a relational strategy such that an individual can get attention, which may be interpreted as concern, care, and/or worry, but avoid having to tolerate the fear regarding being authentically known. The effusive demonstration of concern by the attachment figures, emerging from the concern over the eating disorder, may provide temporary relational validation for the individual struggling with the eating disorder. Connecting back to affect regulation theory, mentalization and reflective functioning is an ability that allows one to maintain the soothing function of an internalized attachment figure in the absence of the attachment figure (Fonagy & Target, 2003). It seems possible that the eating disorder could be a catalyst for future relational engagement with attachment objects, however, the relating is centered around the eating disorder such that it is removed from the authentic self. In this way, it addresses the relational anxiety that may be present if the ability for mentalization and reflective functioning is limited, and prevents the

individual from being authentically seen. Now in recovery, Samantha describes the way she prefers her parents to act toward her now, “I actually prefer them to not worry about me um it makes me uncomfortable now....um...I think they show they care by just expressing their their love and support.” In this way, the eating disorder may have prevented Samantha from accepting love and support as the way to connect with her primary attachment figures.

AAT may be a way to achieve connection, which seemed to be highly desired by the women, but in a non-threatening, unconditional, and nonjudgmental relationship. The lack of verbalization, the unconditional nature of the animals, the simplicity of the interaction, and the lack of expectations within a relationship is the perfect place for them to start the healing. As described by Jeannette, AAT is, “it's almost like neosporin on the wound. It's just like healing it.”

## **7.2 Clinical and Treatment Implications**

The treatment implications from the study are important. If the animal can replace the relational and affective functions previously provided by the ED, then the exploration of using AAT in ED treatment is needed. Jeannette provides a rich description of what is missing from her experience with eating disorder treatments:

Interviewer: Now what would you say made the [Facility redacted] a place that just wasn't doing it for you?

Jeannette: The big focus on eating disorder programs, the two that I visited, I've been in three times and the two that I visited, is on the eating, which is understandable. And I kind of felt like...I would say my eating disorder went deeper than just the food. It was like the food was definitely...but I used my eating

disorder as an emotional release and a way to get out toxicity, to get out negative thoughts, a form of control. It wasn't necessarily about weight management.

Several women provided ideas for treatment which focused on the bringing an animal into the treatment experience:

But I mean I feel like **every treatment center should have a dog** (Lucinda).

Yea if they would have a **house dog** there that would be the coolest thing **like if they had a dog like just walks around and just hung out with us** I mean that would be the coolest thing (Lily).

So if they can incorporate that, [inaudible00:26:30] **take the dogs on a walk** and get outside yourself and provide happiness for another human being, it's a give and take relationship (Jeannette).

**I would've loved if the dog could have been part of the house**, or we could **have like a house cat** or something that would, you know. Because I really missed cuddling at night (Maureen).

**I wish that they would you know give an animal to you know everyone that went in**, you know like at every treatment center (Katarina).

And if I were to open a treatment center, I would say that it **[the animals]** be a large part of treatment (Sierra).

The insights from the women about how to improve treatment, women who experienced ED treatments spanning two months to 10 years, are extremely important. For many of them, increasing the opportunities for interacting with animals was a promising treatment idea.

Based on the experiences shared with me, and the multiple times women had been in eating disorder treatment centers, there is something being lost in translation during the transition from treatment to the real world. Rather than blaming the women with eating disorders as being resistant, it is imperative to critically analyze the current treatments for women with eating disorders. The prevailing theoretical lens guiding most ED treatment is cognitive behavioral therapy (CBT) with the recent addition of dialectical behavioral therapy (DBT). It may be worth expanding the theoretical lenses that guide eating disorder treatment. Understanding a patient's attachment representations may be helpful for clinicians on how to personalize therapy and to support patients in treatment. From an attachment lens, individuals with attachment avoidance may be at risk for experiencing a decrease in the therapeutic alliance and dropping out of treatment (Tasca, Balfour, Ritchie, & Bissada, 2006, 2007) and pressures to self-disclosure, bond with the therapist or group, and express emotions may not be effective or helpful. Instead, they may need a gradual approach to affective expression and relational connection which could be accomplished with AAT or other treatments. For individuals with greater attachment anxiety, however, they may require an early and ongoing sense of group cohesion or therapeutic alliance (Tasca, Balfour, Ritchie, & Bissada, 2006, 2007; Tasca et al., 2006; Tasca, Taylor, Bissada, Ritchie, & Balfour, 2004). For these individuals, it may be helpful to distance from their emotions to strengthen their mentalizing capacities. Although all patients are unique and it is important to not assume that all ED have the same attachment histories or representations, thinking about the attachment representations may help inform clinicians on effective therapeutic stances that are specific to patient attachment insecurity.

Petrucci (2014) theorizes that individuals with ED are not adept at communicating in words, and that this awareness must be considered in choosing the most appropriate intervention strategies when working with individuals with eating disorders. This study supports a refinement of that theory and has particular implications for the treatment of eating disorders. Rather than viewing women with eating disorders as not able to communicate in words, the findings of this study suggest that perhaps **how** they are asked to communicate in words is the problematic and ineffective link for treatment. Traditional talk therapy often fails to take the time to assess the individual's capacity to symbolically bridge or connect, the body and affective states. This is of particular importance for people with eating disorders, because many theories on the etiology of eating disorders point to a particularly inability amongst those with eating disorders to recognize affect states and to connect these with psychophysiological/somatic states. If one "function" of the eating disorder is that it turns down the volume on the experience of the world, there must be a gradual process of turning the volume on in a reliable, loving, and non-threatening way.

Since eating disorders can create life-threatening conditions, family relationships and treatment sometimes limit the capacity of the individual with the eating disorder to exert self-determination and agency. Even so, whether it is through the use of AAT or not, there needs to be a way in which there is space provided for individuals in treatment so they can begin to assert agency. The infantilizing of individuals in eating disorder treatment is contraindicated. Instead, there needs to be a strengthening of self with the primer (possibly being a non-verbal and sensory process) of establishing safety and affective reconnection. Treatment may need to support individuals in building a multi-

dimensional identity – promoting agency and confidence such that these individuals feel they **can** use the skills and strategies when they transition back to the real world.

AAT may be useful because it provides ways to access a broader range of feelings, including the potentially lost feelings of “fun” and “lightness.” The affective experiences of AAT could be an avenue for rich discussions within individual or group therapies. Most the women in the study described not speaking about AAT with their individual therapist. Yet, the women had such rich descriptions of the AAT process in our conversations. I think it could be an avenue for rich discussions within the therapeutic relationship, too. I think strengthening the connection between individual therapy and AAT could help address any feelings that may be more complicated that get prompted within the individual by AAT.

Lastly, there needs to be more of a connection to life outside of treatment. This could be accomplished in a variety of ways—home visits, volunteer opportunities at local animal shelters, book clubs, day trips, career counseling, etc. These individuals need to be supported not only to develop an awareness of their eating disorder but also of their ability to live, feel, and tolerate the distress of the unregulated world. The goal of treatment should be supporting women to thrive in an unregulated, volume on, “feeling all the feels” kind of life.

### **7.3 Limitations**

There were several limitations to this study. Firstly, the sample size is small. Secondly, the sample is fairly homogeneous. The results, therefore, are not generalizable. Thirdly, to protect the research subjects and to not impact the implementation of AAT, the women were only eligible if they had been out of treatment

with AAT for at least a year. Therefore, the women were talking about experiences that ranged from one to five years ago. The time elapsed since the woman used AAT combined with relying exclusively on self-report is a limitation. That said, the measurement instrument was appropriate given the research question and the vulnerability of the population. Fourthly, while it was not the aim of this study to evaluate the AAT intervention, it is worth noting the variation in AAT among the subjects. While there was a screening process to evaluate the form of AAT used by the individual, there was a large range which included the following:

- Structured Equine-Assisted Therapy which included an Equine Therapist with some structured activity (both individual and group)
- Unstructured Equine-Assisted Activities in the form of grooming and taking care of the horse (both with or without the presence of a therapist)
- Unstructured Horse Riding (trail rides)
- Structured Dog Therapy with a Therapist present with formal measures to evaluate pre and post Dog Therapy
- Unstructured Dog Therapy such that the dog (or dogs) were present in different Groups (community meetings)
- Meal Therapy with the Presence of a Dog
- Informal Dog Therapy – individuals seeking out and playing with the dog in the office of the dog's owner (individually and with others)
- Unstructured Dog Activity in which volunteers (not therapists) brought in the dogs for visitation and to play with the patients
- Use of a Personal Service Dog

While it was not the goal of this research to study the intervention, the variation in the AAT could be a limitation for the study.

#### **7.4 Long Term Goals and Future Research**

My long-term goals include continued research on the impact of animals and AAT on women with eating disorders. I would be interested in conducting a study exploring the impact of personal pets on women recovering from eating disorders. I

think this could provide more information on the unstructured interactions with an animal and how that relates to eating disorder recovery.

I am also interested in exploring the relationships that may be possible through local animal rescues, humane societies, and the connection with eating disorder recovery programs, such as SoulPaws. SoulPaws is a nonprofit organization dedicated to offering holistic and therapeutic support to sufferers of eating disorders, while also rescuing shelter animals.. In speaking with SoulPaws founder, Shannon Kopp, we are in the process of brainstorming ways to expand supportive resources, using shelter animals and the educational model put forward by SoulPaws, to the East Coast. In this way, I am also interested in expanding the clinical practice applications of AAT for not only women with eating disorders but other vulnerable populations. My long-term career goal is to open a treatment center for women with eating disorders where animal-assisted therapy is an integral part of the treatment process.

## **7.5 Conclusion**

The primary research question for this study is to explore how adult women with eating disorders experience AAT and in particular, whether AAT relates to important aspects of attachment experience and affect regulation ability; two areas also associated with the diagnosis of eating disorders. The research rested on the conceptual foundation that AAT is a mechanism by which affect may be elicited amongst people with eating disorders *and* that AAT may serve as a tool for reparative experiences for individuals struggling with eating disorders. Although this study was exploratory in nature, there was a connection between AAT, affect regulation, and attachment reparation among women who struggled with eating disorders. The findings of this study suggest that talk therapy

often fails to take the time to assess the individual's capacity to symbolically bridge or connect the body and affective states. This is of particular importance for people with eating disorders, because many theories on the etiology of eating disorders point to a particularly inability amongst those with eating disorders to recognize affect states and to connect these with psychophysiological/somatic states. If one "function" of the eating disorder is that it turns down the volume on the experience of the world, there must be a gradual process of turning the volume on in a reliable, loving, and non-threatening way, which could be accomplished through AAT. Using the conceptual lenses of attachment and affect regulation theories, AAT, through the animal, may provide the pieces for self-regulatory functions. Therefore, the animal may provide the affect synchrony (by knowing what the individual needs) that creates states of positive arousal, and the interactive repair (co-regulating in a safe relationship) that modulates states of negative arousal. In this way, AAT may have some connection with the building blocks of attachment and self-regulatory functions (Schoore & Schoore, 2008).

*Appendix A: Sample Demographic Information*

<b>Pseudonym</b>	<b>Age</b>	<b>Dx</b>	<b>Education</b>	<b>Relationship</b>	<b>Culture/Ethnic</b>	<b>Employed</b>	<b>Personal Pet</b>	<b>Type of AAT</b>
Samantha	21-30	AN; Exercise	College	Married to man	Unknown	Y – Teacher	Yes- Dog	Dog
Katarina	21-30	AN	Graduate degree rehab counseling	Unknown	Unknown	Y - IHOP	Yes - Dogs and Cats	Dog and Horses
Felicity	21-30	AN	College	No	Religious, Christian	Y	Yes - Dog	Dog and Horses
Sierra	21-30	AN	College	No	Unknown	Y- Psych lab	Yes - Dog	Dog
Larissa	21-30	An; BN	Finishing college	Unknown	Unknown	Y - fitness instructor	No	Dog
Josephine	21-30	AN	College; Masters in Counseling/Psych	Married to man; 1 child and pregnant	Unknown	Student	No	Dog and Horses
Ariadne	21-30	AN; Exercise	College *college athlete	Relationship with female	Czech	yes - TSS	Sort of - girlfriend's cat	Dog
Maureen	21-30	AN; Exercise	College	Married to man	Unknown	Yes - Zumba instructor	Yes - 2 dogs and 2 cats	Dog
Jeanette	21-30	AN; BN	College	Relationship with male	spiritual	Y- Yoga instructor	Yes - dog	Dog
Winona	30-40	AN	College, Graduate School	No	Unknown	Physical therapist	No	Dog
Alexis	21-30	BN	College	Relationship with male; 1 newborn child	Unknown	Yes - hair dresser	Yes-Cat	Dog
Kathleen	21-30	AN	Finishing college (delayed) *college athlete	Unknown	Unknown	unknown	No	Dog and Horses
Elsa	21-30	AN	Finishing college (delayed)	no	Unknown	unknown	No	Dog?
Elizabeth	21-30	AN	College; starting PhD in political science	no	Unknown	unknown	No	Dog
Lujan	21-30	AN; BN	College, Graduate School counselor	Married to man	Christian	D&A Counselor	Yes- dogs	Dog
Lily	30-40	AN	College	No	Christian	Dairy Queen	No	Dog and Horses
Louisa	21-30	AN	Finishing college (senior)	No	Unknown	unknown	No	Dog
Esmerelda	21-30	AN	College	Relationship with male; 1 child	Unknown	unknown	No	Dog
Eleanor	30-40	AN; BN	College, Grad?	Married to man	Unknown	Yes - admin at treatment center	No	Dog
Abigail	21-30	AN; BN	Finishing college (delayed)	No	Unknown	Student	Yes – Serv.Dog	Dog

*Appendix B: Recruitment Correspondence*

Hello,

My name is Patricia Flaherty Fischette and I am a doctoral student at the Bryn Mawr College Graduate School of Social Work and Social Research in Bryn Mawr, PA. As part of my dissertation research, I am conducting a research study that explores the experiences of women with eating disorders who used animal-assisted therapy as an adjunctive form of treatment. The participant can select one 3 hour in-person interview or two 90 minute in-person interviews depending on what is most convenient for the participant. The interviews will focus on the individual's experience of the animal-assisted therapy.

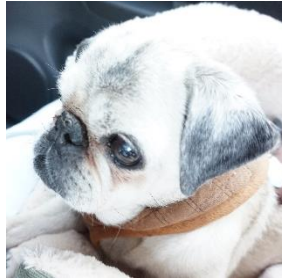
This email is to inquire about the possibility of advertising for research participants through your organization/group/clinic. The attached Recruitment Flyer indicates the research is not connected to any treatment providers and none of the advertisement sites are connected to the study. Please let me know if this might be possible and if there are any guidelines for advertising research studies within your organization/group/clinic. I am happy to speak in further detail if you have any questions or concerns. My email address is [pflaherty@brynmawr.edu](mailto:pflaherty@brynmawr.edu) and my phone number is 484-792-1618. Additionally, I included a flyer that can be distributed to any members of your organization who may be interested in participating in the study. Please feel free to forward the flyer to anyone who may be interested. Thank you for your time and consideration.

Sincerely,

Patricia Flaherty Fischette

## Animal-Assisted Therapy and Eating Disorders

***Have you used an animal in the treatment of your eating disorder?***



My name is Patricia Flaherty Fischette and I am a doctoral student at the Bryn Mawr College Graduate School of Social Work and Social Research in Bryn Mawr, PA. As part of my dissertation research, I am conducting a research study that **explores the experiences of women with eating disorders who used animal-assisted therapy as an adjunctive form of treatment.**

I am seeking participants who meet the following criteria:

- a) at least 21 years of age or older;*
- b) diagnosed with an eating disorder within the last 10 years*
- c) used animal-assisted therapy in their treatment*
- d) self-identify as a female*
- e) been out of animal-assisted therapy for at least one year.*

Participants will be **excluded** if *previously hospitalized for an eating disorder; currently engaged in an eating disorder day program or intensive outpatient program (IOP); diagnosed with a personality disorder; or overt indication of eating disorder symptomatology.*

The research will entail one or two in-person interviews (based on participant's preference) lasting three hours in total hours regarding the individual's experience of the animal-assisted therapy. The individual will be provided compensation of \$50 (VISA gift card) for participation in the study upon completion of both interviews.

This study is being conducted by Patricia Flaherty Fischette, LCSW and Ph.D. candidate, under the supervision of Dr. Janet Shapiro, Ph.D. and received IRB approval.

**None of the advertisement sites are connected to this study.** Your participation (or decision not to participate) in this research has absolutely no bearing on treatment you

may be receiving or will receive in the future. This study is the sole research of the Primary Investigator, Patricia Flaherty Fischette, and only the Primary Investigator will know about your participation in the study. This study is the sole research of the Primary Investigator, Patricia Flaherty Fischette and not affiliated with any treatment providers and/or facilities.

If interested in receiving more information about the study, please feel free to contact me via email: [pflaherty@brynmawr.edu](mailto:pflaherty@brynmawr.edu) or via phone: 484-792-1618.

## *Appendix D: Screening Questionnaire*

Hello, my name is Patricia Flaherty Fischette, and I am the doctoral student researcher in a study that explores the experiences of women with ED who have used AAT in their treatment. First, I would like to thank you for taking an interest in the study, and for your time. This study is being conducted as part of my Ph.D. in Social Work from the Bryn Mawr College Graduate School of Social Work and Social Research and supervised by Dr. Janet Shapiro.

As this study is exploring the experiences of women who meet specific criteria, I would like to ask you some questions to assess whether you fit the criteria to participate in this study. Some of the questions are of a sensitive nature and if you would like to stop at any time, please let me know.

### **[Inclusion Criteria Questions/Checklist and Script]**

#### **1. Are you 21 years of age or older? YES or NO**

[If **NO (not 21)**]: Thank you very much. Unfortunately, you are not eligible for my study because you are not 21 or older. I appreciate the time you have taken to speak with me, and please let me know if I can answer any other questions. Thank you. [End phone call.]

#### **2. Is your gender-identity female? YES or NO**

[If **NO (not female)**]: Thank you very much. Unfortunately, you are not eligible for my study because you do not identify as a female and my research questions are specific to females. I appreciate the time you have taken to speak with me, and please let me know if I can answer any other questions. Thank you. [End phone call.]

#### **3. Have you been diagnosed with an Eating Disorder within the last 10 years? YES or NO** If yes, what disorder? Who made the diagnosis (doctor, psychologist, clinical social worker)?

[If **NO (not diagnosed with ED)**]: Thank you very much. Unfortunately, you are not eligible for my study because you have not been diagnosed with an eating disorder within the last 10 years and my research questions are specific to individuals who have received an eating disorder diagnosis within the last 10 years. I appreciate the time you have taken to speak with me, and please let me know if I can answer any other questions. Thank you. [End phone call.]

#### **4. Have you used Animal-Assisted Therapy in your treatment? YES or NO**

If yes, what kind?

[If **NO (not used AAT)**]: Thank you very much. Unfortunately, you are not eligible for my study because you have not used animal-assisted therapy in your treatment and my research questions are specific to individuals who have used AAT. I appreciate the time

you have taken to speak with me, and please let me know if I can answer any other questions. Thank you. [End phone call.]

**5. Have you been out of Animal-Assisted Therapy for at least one year? YES or NO**

**[If NO (not been out of AAT for at least one year)]:** Thank you very much. Unfortunately, you are not eligible for my study because you have not been out of animal-assisted therapy for at least a year or more. I appreciate the time you have taken to speak with me, and please let me know if I can answer any other questions. Thank you. [End phone call.]

**6. Can you read, write, and speak in English? YES or NO**

**[Exclusion Criteria Questions/Checklist and Script]**

**1. Have you ever been hospitalized for the eating disorder? YES or NO**

**[If YES]:** Thank you for taking the time to speak with me. Unfortunately, you are not eligible for my study as I have a set of criteria for eligibility and previous hospitalization is an exclusion criteria. I appreciate the time you have given to speak with me, and please let me know if I can answer any questions.

**2. Are you currently engaged in an eating disorder day program? YES or NO**

**[If YES]:** Thank you for taking the time to speak with me. Unfortunately, you are not eligible for my study as I have a set of criteria for eligibility and active participation in an eating disorder day program is an exclusion criteria. I appreciate the time you have given to speak with me, and please let me know if I can answer any questions.

**3. Are you currently engaged in an eating disorder intensive outpatient program (IOP)? YES or NO**

**[If YES]:** Thank you for taking the time to speak with me. Unfortunately, you are not eligible for my study as I have a set of criteria for eligibility and active participation in an eating disorder intensive outpatient program is an exclusion criteria. I appreciate the time you have given to speak with me, and please let me know if I can answer any questions.

**4. Have you ever been diagnosed with a personality disorder (Axis II) diagnosis? YES or NO**

**[If YES]:** Thank you for taking the time to speak with me. Unfortunately, you are not eligible for my study as I have a set of criteria for eligibility and a personality diagnosis is an exclusion criteria. I appreciate the time you have given to speak with me, and please let me know if I can answer any questions.

**5. Currently, how do you think about your eating disorder? For example, do you feel you are “in recovery”; acutely symptomatic; “recovered,” etc.**

**[If ACTIVELY STRUGGLING with ED:** *If someone is clearly struggling with an eating disorder at the time of the screening, I will use the following script]:*

I am mindful of the sensitive nature of this study, as reflecting on one's previous treatment can prompt a range of reactions and feelings. It seems as though you are still working on your recovery, and I would not want the subject matter of my study to interfere with the work you are doing on yourself. I am only able to include individuals who meet a certain set of criteria and, unfortunately, I cannot include you in my research study. However, your feedback today has been helpful and will assist in my exploration of animal-assisted therapy and expanding treatment modalities for women struggling with eating disorders. I appreciate your time and willingness to be a part of my study.

Are you interested in speaking with someone in a clinical capacity about your experience? I can help you get connected to resources through the National Eating Disorder Association (NEDA). The *National Eating Disorder Association (NEDA)* has a toll free, confidential Helpline at 1-800-931-2237 and Helpline volunteers are available every Monday-Thursday from 9:00 am - 9:00 pm and Friday from 9:00 am - 5:00 pm (EST). The NEDA helpline volunteers will be there to offer support and guidance with compassion and understanding. In addition, NEDA has a Treatment Referral List containing resources across the United States if interested. Again, I appreciate the time you have given to speak with me, and please let me know if I can answer any questions. Thank you for your contribution today and willingness to be a part of my study.

**[If EXTREMELY DISTRESSED:** *If someone is extremely distressed during the screening, I will use the following script]:*

It seems as though talking about this has prompted some distress for you. I am mindful of the sensitive nature of this study, as reflecting on one's previous treatment can prompt a range of reactions. It seems as though you are still working on your recovery, and I would not want the subject matter of my study to interfere with the work you are doing on yourself. I am only able to include individuals who meet a certain set of criteria and, unfortunately, I cannot include you in my research study. However, your feedback today has been helpful and will assist in my exploration of animal-assisted therapy and expanding treatment modalities for women struggling with eating disorders. I appreciate your time and willingness to be a part of my study.

Are you interested in speaking with someone in a clinical capacity about your experience? I can help you get connected to resources through the National Eating Disorder Association (NEDA). The *National Eating Disorder Association (NEDA)* has a toll free, confidential Helpline at 1-800-931-2237 and Helpline volunteers are available every Monday-Thursday from 9:00 am - 9:00 pm and Friday from 9:00 am - 5:00 pm (EST). The NEDA helpline volunteers will be there to offer support and guidance with compassion and understanding. In addition, NEDA has a Treatment Referral List containing resources across the United States if interested.

Again, I appreciate the time you have given to speak with me, and please let me know if I can answer any questions. Thank you for your contribution today and your willingness to be a part of my study.

*If the participant **does** meet the inclusion criteria, I will use the following script:*

Thank you very much for your interest in this study and for taking the time to speak with me today. I am able to include you in my research study. You have the option to select one 3 hour interview or two 90 minute interviews. The interview(s) will be conducted in-person at a mutually agreed upon location. [If location is an issue, use the following script: If you agree to participate in the study, I would like to set up a videoconference interview, with advisement that there are some limits to confidentiality while using online technology. The Internet is not a completely secure medium and information discussed over the Internet can be intercepted. However, I will use a password protected Internet connection which is known only to me, and I will conduct the videoconference in my private office where no one else is around. I will use Cisco WebEx for the videoconference in which I will be able to see you but I will only save the audio from our call.] With your permission, I will make an audio recording of the interview and may take written notes. Please let me know if there are any special needs and I will work to accommodate them. The information you share will be kept strictly confidential and will only be reviewed by me. All digital materials will be password-protected, stored in a locked cabinet in my home office, and stored on the secure Bryn Mawr College network (H Drive). The notes and recordings will be destroyed after I have successfully completed my dissertation. While there are no significant foreseeable risks in participating in this interview, you might find the interview upsetting by discussing your previous treatment experiences; however, if at any point you are uncomfortable, you may stop the interview.

If you are interested in participating, a consent form will be [if via telephone conference: READ TO YOU] given to you prior to the start of the first interview. I will also review the consent form with you at the beginning of the interview, and can address any issues related to the consent form during the entirety of the study. [If VIA TELEPHONE CONFERENCE: I will read the consent to you and then include all of the items in the signature block and ask for your name for the consent form. I will then send you a copy of the consent for your safe-keeping.] The signed consent form will be collected by me at the beginning of our first interview and I will keep the signed consent forms in a separate locked cabinet in my home office. Participation is voluntary, and you may refuse to participate at any time. You can refuse to answer any questions that you do not want to answer, and you can stop the interview at any time. At any time, you can withdraw from the study by contacting me and indicating your intent to withdraw from the study. There will be no penalty for withdrawing from the study.

Although being interviewed may not help you directly, it is possible that having a chance to share your experience will be interesting to you and may give you the chance to

raise awareness about issues that need to be addressed. You will be talk about background information about the animal-assisted therapy, interaction with the animal as part of your treatment process, affect elicited through interaction with the animal, your relationship with the animal, how the animal connects to the eating disorder, and how the animal compared to other forms of treatment.

Does this sound like something you might want to participate in? YES or NO

[If NO]: I appreciate your willingness to consider this project. Is there any reason in particular that has contributed to you not wanted to participate? Thank you. If you have any questions, feel free to call me back. Otherwise, I wish you the best.

If YES: Great. Thank you for agreeing to participate. Are you interested in scheduling our first interview at this time?

If YES, would you prefer to meet for two 90 minute interviews or one 3 hour interview?

If not, is there a telephone number that would be best for contacting you to discuss scheduling? Finally, do you have any questions for me?

I will give you my contact information in case you have any additional questions before our meeting. My name again is Patricia Flaherty Fischette, and I can be reached by phone at 484-792-1618 or email at [pflaherty@brynmawr.edu](mailto:pflaherty@brynmawr.edu). Thank you again for your time and interest in the study. [End call.]

*Appendix E: Interview Guide*

**Big Q Question:**

**How do adult women with eating disorders perceive their experience of Animal-Assisted Therapy (AAT) as an adjunctive aspect of their past treatment?**

**Conceptual framework: AAT as an adjunctive intervention in affect regulation and attachment with eating disorders being an example of struggles in regulatory strategies**

**Description:**

I am doing a study of how animal-assisted therapy is used in the treatment of eating disorders, and I'd like to talk you about your experience. Before we begin talking in depth about your experience, I would like to gather some information about you and factual information about the AAT used in your eating disorder treatment. Some of these questions may be revisited in our conversation.

**Factual Questions about AAT Intervention:**

What type of treatment(s) were you receiving while also receiving AAT?

Some examples would be drug therapy/psychotropic medications, individual psychotherapy, group therapy, music therapy, art therapy, and nutritional counseling.

How would you describe the type of AAT you received?

*Prompts for this question:* was it group or individual therapy; ongoing or time- limited; variation of animals or same animal, etc.

How long ago did you receive this treatment?

What kind of animal(s) were involved?

Do you know if the animal(s) had any type of certification?

Was the animal accompanied by any handler?

How many times was the animal present in your session?

Where would the animal be located during your session?

How did it come to be that you started with AAT? Was there a referral? If so, from whom? If no, did your treating clinician discuss the presence of the animal with you?

Was there any recommendation(s) to get an animal of your own after the treatment (ATT) ended?

Thank you for addressing these questions. As I mentioned earlier, we will revisit some of these questions in our conversation. I would like to talk in detail about your experience with AAT. I know that an animal was part of the work that you did “fill in the blanks with the name of the program.” I’d like to know more about what it was like for you to have an animal included in your work. To get us started, what is the name of the animal? What kind of animal is “insert name of the animal”?

*\*I will use the animal’s name during the interview but will use the term “animal” for this interview guide.\**

## **INTERACTION WITH ANIMAL AS PART OF THE TREATMENT PROCESS**

I'm trying to learn more about the role of "animal" in your therapy.

Where is the therapy with "animal" held?

Where does the "animal" sit during a session?

What was it like for you to have "animal" in your therapy session?

What is a session like when "animal" is part of the process?

How did your therapist address the "animal"?

Did your therapist offer insights about the animal as a way to connect to you?

Do you recall your therapist talking about your response to the animal? If so, what was said?

What else can you tell to me to help me to visualize/understand your experience of working with "animal"?

I want you to think about the experience of the "animal" in your work – what was the animal's experience? *\*a "displacement" question\**

What do you think the animal thought of you? Did this change over time? How so?

## **AFFECT AND AFFECT ECLICITED THROUGH INTERACTION WITH ANIMAL**

How do you think "animal" affected your feelings in session?

How you think “animal” affect your thoughts in session?

## **RELATIONSHIP**

Did you feel you had a relationship with “animal?” Do you feel you have a relationship with “animal” now?

How do you think about your relationship with “animal”?

Take a moment and think about the “animal.” Please choose five descriptive words that reflect your relationship with the animal and tell me why you chose these words. *\*This may be a way to break it down if it is difficult for the interviewee to mentalize and/or verbalize.\**

How is this different/similar to other relationships that you have had?

How is this different/similar to your relationship with the therapist?

How do you think the presence of the animal affected your relationship with the therapist? How about the relationship with yourself? And others?

## **INSIGHT IN TO CONNECTION BETWEEN AAT AND SYMPTOMS OF ED**

Did you notice any ways in which “animal” had an impact on your ED? If so, what were they? Do you still feel the impact? If yes, how do you think that is possible?

When “animal” is part of your session, do you notice anything different about how you feel or what you think about? If yes, what do you notice? If no, why do you think you do not feel any different?

For some people, holding a person in their mind when the person is not present can be helpful to get through distressing moments. Has this ever happened for you with thoughts about the “animal?” If so, what were the thoughts? How did they coincide with your current distress?

I’d like to hear more about “animal” and your eating disorder. How do you think about the “animal” in relation to your eating disorder?

Have you experienced any shifts in your attitude or behavior around food? If so, in what ways has the animal affected any of these shifts?

How did the animal affect your symptoms? If there was an effect, why do you think it affected you in that way? If there was not effect, why do you think there was no effect?

Do you think your work with the animal had an impact on the animal? How does the interaction affect the animal? *\*projective question\**

### **ADJUNCTIVE USE**

How do you think about the AAT in relation to the other treatments you were receiving at the same time?

### **CLOSING**

Do you have any questions for me?

How was it for you to be talking to me in this way?

*Appendix F: Informed Consent*

**Informed Consent Form**

**Animal-Assisted Therapy (AAT) as an Adjunctive Treatment for Eating Disorders:  
Exploration of AAT through the lens of Attachment and Affect Regulation**

My name is Patricia Flaherty Fischette and I am a Ph.D. student at the Graduate School of Social Work and Social Research at Bryn Mawr College. You have agreed to participate in at least one interview as part of the study on the experience of Animal-Assisted Therapy (AAT), which I am conducting as part of my doctoral studies at Bryn Mawr College. I am interviewing females 21 and older who have been diagnosed with an Eating Disorder in the last 10 years, and I want to learn about your experience of using an animal in your treatment. This study hopes to promulgate more research of AAT and improve treatment for individuals struggling with eating disorders. You have agreed to an in-person [OR videoconference] interview on [date] at [time] at [location]. As a participant in this study, you should be aware of the following:

**1. What is involved?**

- You have the option to select which interview format (one interview or two interviews) works best for you. Depending on what works best for your schedule, *the one interview will last about 3 hours or consist of two 90 minute interviews.* With your permission, I will make an audio recording of the interview and may take written notes. I will ask you questions about your experience with animal-assisted therapy.
- During the interview, we will discuss *background information about the animal-assisted therapy, interaction with the animal as part of your treatment process, affect elicited through interaction with the animal, your relationship with the animal, how the animal connects to the eating disorder, and how the animal compared to other forms of treatment.*
- If you would like to meet in your home or another place, please make sure there is a *private* space to meet where we will be undisturbed. This will help to protect confidentiality and allow more freedom in talking about these sensitive areas.
- You will receive a small monetary gift card (\$50) for your time and inconvenience. If you selected to meet for one 3 hour interview, you will receive the gift card at the end of the interview. If you selected to meet for two 90 minute interviews, you will receive the gift card after the completion of the second interview. If you cannot complete the second interview, I will mail a \$25 gift card to your preferred address.

**2. Will the information be confidential?**

- Yes, the information you share will be kept strictly confidential. I will never use your name or any personally identifying information revealed to me in any written or oral reports on this study. The information collected will only be used in

combination with other females' interviews. Your name and contact information will be stored in a locked cabinet in my office, available only to me, and will be destroyed after the successful completion of the dissertation. The signed consent form will be collected by me at the beginning of our first interview and I will keep the signed consent forms in a separate locked cabinet in my home office. If the interview is being completed via videoconferencing, I will do an oral consent. This means I will read you the consent form, ask for your name, and send you a copy of the consent form for your safe-keeping.

- With your permission, I will be *audio-recording* the interviews so that I have an exact record of what you say for purposes of accuracy. Any personally identifying information revealed to me during the interviews will be removed from the transcriptions. Once I have analyzed your interview responses and successfully completed my dissertation, I will destroy the audio recording and interview notes.
- If the interview is being completed via videoconferencing, it should be noted that there are additional limits to confidentiality that come with using the Internet, but precautions will be utilized to decrease issues. The Internet is not secure and information discussed over the Internet can be intercepted in transit. I will work to decrease these issues by using a password-protected Internet connection which is known only to me, and I will conduct the videoconference in my private office where no one else is around. I will use the highly secure Cisco WebEx for the videoconference: <https://www.webex.com/>. The videoconference allows us to see each other during the interview since we are not able to have the interview in person. However, *only the audio portion of the videoconference will be recorded* with your permission.
- There are some limits to confidentiality to be aware of: 1) If you disclose something to suggest imminent intent to harm yourself or someone else; 2) Any reports of abuse or neglect of a minor. Under these circumstances, I am legally bound to report as to help keep the safety and wellbeing of you and others.

### **3. What are the risks and benefits of participating?**

- There are *no significant foreseeable risks* in participating in this interview. There may be some psychological risks associated with discussing your treatment and recovery. However, if at any point during the interview you are uncomfortable, you may stop at any time.
- I will also help *connect you to resources* should you need or want them. The *National Eating Disorder Association (NEDA)* has a toll free, confidential Helpline at 1-800-931-2237 and Helpline volunteers are available every Monday-Thursday from 9:00 am - 9:00 pm and Friday from 9:00 am - 5:00 pm (EST). The NEDA helpline volunteers will be there to offer support and guidance with compassion and understanding.
- Although being interviewed may not help you directly, it is possible that having a chance to share your experience will be an interesting and validating experience. Also, the research may give you the chance to raise public awareness about issues that need to be addressed.

#### 4. Do I have to participate?

- Participation is *voluntary*, and *you may refuse* to participate at any time. You *can refuse to answer any questions* that you do not want to answer, and you can stop the interview at any time. You *may withdraw from the study at any time* by letting me know that you no longer wish to participate, and you *will not be penalized in any way*.

#### 5. What if I have questions?

- If you have any questions about the research, you can call me at 484-792-1618 or email at [pflaherty@brynmawr.edu](mailto:pflaherty@brynmawr.edu). You may also contact my supervising faculty member, Professor Janet Shapiro at the Graduate School of Social Work and Social Research, Bryn Mawr College at 610-520-2618 or via email at [jshapiro@brynmawr.edu](mailto:jshapiro@brynmawr.edu).
- If you have questions about your rights as a research participant, please be in touch with Leslie Alexander, Professor and Chair, Bryn Mawr College IRB ([lalexand@brynmawr.edu](mailto:lalexand@brynmawr.edu); 610-520-2635)

Thank you,

Patricia

Patricia Flaherty Fischette, MSS, MLSP, LCSW  
PhD Candidate, Bryn Mawr College, GSSWSR  
Clinical Social Worker  
Licensed in PA (LCSW)

**Signed Informed Consent Form**

Please check either yes or no.

I give you permission to digitally record the audio content of the interview.  
Yes \_\_\_\_\_ No \_\_\_\_\_

I give you permission to contact me after the interview for follow up and to clarify responses, check my interpretation of the data, and evaluate the use of your quotes, if necessary. I acknowledge that I can decline to talk with you during any follow up.  
Yes \_\_\_\_\_ No \_\_\_\_\_

I give you permission to use direct quotes from my interview for use in professional settings such as publications and conference presentations. There will be no identifying information with these quotes. Yes \_\_\_\_\_ No \_\_\_\_\_

I acknowledge that I have read, understand, and been given a copy of the consent form. All my questions have been answered. Yes \_\_\_\_\_ No \_\_\_\_\_

I acknowledge that I can withdraw from the study at any time.  
Yes \_\_\_\_\_ No \_\_\_\_\_

I understand the risks/benefits, and I agree to participate in this research.  
Yes \_\_\_\_\_ No \_\_\_\_\_

\_\_\_\_\_  
Participant's Printed Name

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date

\_\_\_\_\_  
Interviewer's Name

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date

Appendix G: Length of Interviews

Interview	Length	Date of Interview
1.1	1:20:43	July 6
1.2	46:49	July 27
2.1	1:01:42	July 8
2.2	46:27	July 28
3.1	1:06:58	July 9
3.2	57:21	July 23
4.1	59:43	July 10
4.2	44:16	July 19
5.1	49:52	July 11
5.2	26:38	July 15
6.1	1:22:42	July 12
6.2	52:40	August 11
7.1	56:33	July 12
7.2	38:43	July 22
8.1	1:18:06	July 13
8.2	40:15	August 10
9.1	46:21	July 25
9.2	1:14:21	July 26
10.1 (complete)	1:06:00	July 27
11.1	50:48	August 1
11.2	27:35	August 18
12.1	1:02:37	August 3
12.2	35:28	August 11
13.1	59:41	August 3
13.2	40:56	August 10
14.1	1:09:51	August 16
14.2	32:12	August 20
15.1	1:06:13	August 20
15.2	24:51	August 28
16.1	1:01:42	August 24
16.2	46:32	August 26
17.1	59:40	August 31
17.2	32:47	Sept 1
18.1	54:46	Sept 6
18.2	1:11:33	Sept 29
19.1 (complete)	1:44:54	Sept 10
20.1	1:13:45	Oct 17
20.2	45:49	Oct 18

Range: 24:51 – 1:44

Median: 46:27

Mean: ~56

*Appendix H: Non-Disclosure Agreement with SpeechPad Transcription Services*

**SPEECHINK, INC.**

**MUTUAL CONFIDENTIALITY AGREEMENT**

This agreement (the "Agreement") dated July 8, 2016 (the "Effective Date") is made by and between Speechink, Inc. d/b/a Speechpad ("Speechink") a Delaware corporation with principal offices located at 260 King St #1309, San Francisco CA 94107 and Patricia Flaherty Fischette (the "Company"), a PhD Researcher from Bryn Mawr College company with principal offices located at Bryn Mawr College Graduate School of Social Work & SR, on its behalf and on behalf of its affiliates. 300 Airdale Road, Bryn Mawr, PA.

1. Background. Speechink and the Company (hereafter referred to individually as a "Party" and, collectively, as "Parties") intend to engage in a business relationship in which Speechink will provide transcription services to the Company. It is anticipated that each Party may disclose or deliver to the other certain of its confidential or proprietary information during the business relationship.
2. Proprietary Information. As used in this Agreement, the term "Proprietary Information" shall mean all confidential information of the Party disclosing such information (the "Disclosing Party") that either has been identified in writing as confidential or of such a nature, or has been disclosed in such a way, that it is obvious to the Party receiving such information thereof (the "Recipient") that it is claimed as confidential by the Disclosing Party. Proprietary Information shall include, but is not limited to call recordings, audio files, video files, transcripts, transcription documents and other documents that contain Proprietary Information.
3. Disclosure of Proprietary Information. The Recipient shall hold in confidence, and shall not disclose (or permit or allow its personnel to disclose) to any person outside its organization or consultants, any Proprietary Information of the Disclosing Party. The Recipient, its personnel and consultants shall use such Proprietary Information only for the purpose for which it was disclosed and shall not use or exploit such Proprietary Information for its own benefit or the benefit of another without the prior written consent of the Disclosing Party. Without limitation of the foregoing, the Recipient shall not cause or permit reverse engineering of any such Proprietary Information or decompilation or disassembly of any software programs which are part of such Proprietary Information. The Recipient shall disclose Proprietary Information received by it under this Agreement only to persons within its organization and consultants who have a need to know such Proprietary Information in the course of the performance of their duties, who are informed of the confidential nature of the Proprietary Information and who are bound by a written agreement to protect the confidentiality of such Proprietary Information. The Recipient is responsible for any breach of this Agreement by its employees, other personnel and consultants and will make all reasonable and appropriate efforts to protect the Proprietary Information from disclosure to anyone other than permitted under this Agreement.
4. Limitation on Proprietary Information. Proprietary Information shall not include any information which:
  - (a) is generally known to the public at the time of disclosure or becomes generally known to the public through no act or omission on the part of the Recipient;
  - (b) is already in the Recipient's possession at the time of disclosure by the Disclosing Party, as can be properly documented;

- (c) becomes known to the Recipient through disclosure by sources other than the Disclosing Party having the legal right to disclose such Proprietary Information and having no obligation of confidentiality to the Disclosing Party, as can be properly documented;
  - (d) is required to be disclosed by the Recipient to comply with applicable laws or governmental regulations, provided that the Recipient provides prior written notice of such disclosure to the Disclosing Party so that the Disclosing Party may take reasonable and lawful actions to avoid and/or minimize the extent of such disclosure, and provided further that the Recipient exercises commercially reasonable efforts to cooperate with the Disclosing Party in such actions;
  - (e) is independently developed by Recipient without any use of Proprietary Information, as can be properly documented.
5. Ownership of Proprietary Information. The Recipient agrees that the Disclosing Party is and shall remain the exclusive owner of its Proprietary Information and all patent, copyright, trade secret, trademark and other intellectual property rights therein. No license or conveyance of any such rights to the Recipient is granted or implied under this Agreement.
  6. Injunctive Relief. The Recipient acknowledges that a breach of any of the provisions hereof may have a material adverse effect upon the Disclosing Party and that damages from such breach may be difficult to determine or quantify. Accordingly, the Parties hereby agree that in addition to any other remedies that may be available, the Disclosing Party shall have the right to an immediate injunction enjoining such breach.
  7. Return of Documents. The Recipient shall, at the request of the Disclosing Party, return to the Disclosing Party all drawings, documents and other tangible manifestations of Proprietary Information received by the Recipient pursuant to this Agreement (and all copies and reproductions thereof and all documents prepared by the Recipient incorporating the Proprietary Information). In addition, upon a Disclosing Party's request, a senior officer of the Recipient shall certify in writing, on behalf of Recipient, that all of Disclosing Party's Proprietary Information required to be returned or destroyed pursuant to this Agreement has been returned or destroyed, as applicable.
  8. Independent Development. It is understood by the Disclosing Party that the Recipient may perform or have performed independent development relating to the information to be disclosed by the Disclosing Party hereunder. This Agreement shall not limit the independent development by the Recipient of any technology and/or products involving technology or information of a similar nature to that disclosed hereunder.
  9. Governing Law. This Agreement shall be governed in all respects by the laws of the United States of America and by the laws of the State of California, the County of San Francisco without regard for any choice or conflict of laws, rule or provision that would result in the application of the substantive law of any other jurisdiction as such laws are applied to agreements entered into and to be performed entirely within California between California residents.
  10. Confidentiality of the Transaction. Neither Party shall, without the prior consent of the other Party, disclose to any third party the fact that Proprietary Information of the other Party has been and/or may be disclosed under this Agreement; that discussions or negotiations are taking place between the Parties; or any of the terms, conditions, status or other facts with

respect thereto, except as required by law and then only with prior notice as soon as possible to the other Party.

11. No Warranties Regarding Accuracy of Proprietary Information. Neither Party makes any representation or warranty, express or implied, as to the accuracy or completeness of the Proprietary Information. Each Party agrees that Proprietary Information is not intended to provide, and will not be relied upon as, the sole basis for any decision made relating to the possible business relationship contemplated herein.
12. Notices. All notices and other communications required or permitted herein shall be in writing and shall be delivered personally (which shall include delivery by courier or overnight delivery service); sent by prepaid certified or registered mail, return receipt requested; or sent via facsimile or email to the address for either Party set forth below. Items delivered personally are deemed delivered on the actual delivery date. Items sent electronically or via facsimile shall be deemed delivered on the date of transmission. Items sent by certified or registered mail shall be deemed delivered three (3) business days after mailing. A written notice of change in address by either Party shall be delivered in accordance with this Section.
13. Successors and Assigns. The terms and conditions of this Agreement shall inure to the benefit of and be binding upon the respective successors and assigns of the Parties, provided that Proprietary Information of the Disclosing Party may not be assigned without the prior written consent of the Disclosing Party. Nothing in this Agreement, express or implied, is intended to confer upon any party other than the Parties hereto or their respective successors and assigns any rights, remedies, obligations, or liabilities under or by reason of this Agreement, except as expressly provided in this Agreement.
14. Miscellaneous.
  - (a) This Agreement supersedes all prior agreements, written or oral, between Speechink and the Company relating to the subject matter of this Agreement.
  - (b) Nothing in this Agreement shall impose any obligation upon either Party to consummate a transaction, to enter into discussions or negotiations with respect thereto, or take any other action not expressly agreed to.
  - (c) If any part of this Agreement is held to be unenforceable, invalid or illegal, then it shall be severable and deemed to be deleted and the remaining provisions shall remain valid and binding.
  - (d) This Agreement shall be effective for three (3) years from its signing date and the obligation of confidentiality shall survive for three (3) years from the date of first disclosure of the Proprietary Information.
  - (e) Each Party agrees that no technical information, including Proprietary Information, disclosed by the Disclosing Party hereunder nor any direct products of such technical information shall be exported or re-exported, directly or indirectly, to any destination restricted or prohibited by applicable export control regulations issued by applicable governmental authorities without obtaining authorization from such authorities. This provision shall survive any expiration or termination of this Agreement.

- (f) This Agreement may be executed in two or more counterparts, each of which shall be deemed an original and all of which together shall constitute one instrument. This Agreement may be transmitted by facsimile, and the Parties may close the Agreement by exchanging facsimile signatures. However, the Parties agree to promptly exchange, by courier or first class postal mail, duplicate originals signed by both Parties.
- (g) Each Party further agrees that any intellectual or other property owned by the other remains the sole and exclusive property of the owner unless a written agreement between the Parties provides to the contrary.
- (h) Neither Party the authority to bind or make representations regarding products or services of the other to any third Party absent a written agreement signed by both Parties to the contrary.

IN WITNESS WHEREOF, the Parties have executed this Agreement as of the Effective Date first written above.

<b>SPEECHINK, INC.</b>   (Signature)		<b>[COMPANY]</b>   (Signature)
<u>Linda Khachooni</u> Name  <b>CFO</b> Title		<b>Patricia Flaherty Fischette</b> (Print Name)  <u>Phd Researcher from Bryn Mawr College</u> (Print Title, if signing on behalf of an entity)
Address: <u>260 King St #1309</u> <u>San Francisco, CA 94107</u>		Address: <u>Bryn Mawr College Graduate School of Social Work &amp; Social Research</u> <u>300 Ardale Road, Bryn Mawr, PA</u>  <u>Researcher's Personal Address:</u> <u>325 Greenview Lane</u> <u>Havertown, PA 19063</u>
Telephone: <u>415-852-0324</u>  Facsimile:  Email: <u>linda@speechpad.com</u>		Telephone: <u>484-792-1618</u>  Facsimile:  Email: <u>pff117@gmail.com</u> <u>pflaherty@brynmawr.edu</u> <u>pettyfphd@gmail.com</u>

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