

EQUINE ASSISTED THERAPY: SUPPORTING TREATMENT FOR SUBSTANCE USE  
DISORDERS IN ALASKA

by

Claire Gelvin-Smith, B.A., M.A.

A Project Submitted in Partial Fulfillment of the Requirements

for the Degree of

Masters of Education

in

Guidance and Counseling

University of Alaska Fairbanks

April, 2017

APPROVED:

Dr. Susan Renes, Committee Chair

Dr. Valerie Gifford, Committee Member

Dr. Aldona Jonaitis, Committee Member

Dr. Cindy Fabbri, Chair

*School of Education Graduate Program*

## TABLE OF CONTENTS

Introduction.....	5
Research Question.....	6
Literature Review.....	7
Substance Use and SUD Prevalence in Alaska.....	7
Maltreatment, Mental Illness, and Suicide Rates in Alaska.....	10
Treatment for SUD in Alaska.....	13
Relapse Prevention.....	15
Theoretical Framework: Resiliency Theory.....	15
Equine Assisted Activities and the Human-Horse Bond.....	18
Equine Assisted Activities and Resiliency.....	22
Equine Assisted Activities and SUD Treatment Retention-Completion.....	27
Equine Assisted Activities in Alaska.....	27
Application.....	28
Conclusions and Future Research.....	30
References.....	31
Appendix A.....	43

### Acknowledgements

I would like to personally thank my committee members, Dr. Sue Renes, Dr. Valerie Gifford, and Aldona Jonaitis for their support and feedback throughout the writing and project development process. In addition, my co-workers at Student Support Services (UAF) were key players in my day-to-day survival as I worked full-time and completed graduate requirements concurrently. I want to thank my husband, Josh Smith, who is a constant support at home and encouraged me even when I thought it impossible. To my step-daughter, Spring Smith, thank you for helping me with laughter and sweet, encouraging notes that kept me going. I also want to thank Gunnar Ebbesson and Joseph Nowell at Turning Point, who encouraged me to continue pursuing equine therapy as a reality in Alaska. Finally, I want to thank my mother, Dr. Colleen Gelvin. Without her own obsession with horses I would never have known my first pony, Firelight. I am grateful that at an early age I was afforded the opportunity to develop my own passion for riding, and as a result, have enjoyed a lifetime of companionship with horses.

### Abstract

The State of Alaska demonstrates exceedingly high rates of interpersonal violence, child neglect, depression, and drug related arrests when compared with national rates. Substance use disorder is often linked with instances of interpersonal violence, child neglect, depression and judicial consequences. An equine assisted therapy program could provide support for the treatment of substance use disorders in Alaska. This project asks one basic question, “*What benefits could an equine assisted therapy program provide for individuals in a level II, Intensive Outpatient Program (IOP) in interior Alaska?*” Currently, no residential or level II treatment programs for substance use disorder in Alaska offer equine assisted therapy. Examples of successful equine assisted therapy programs in the contiguous United States are presented as models for an equine assisted therapy program in Alaska. Resiliency theory is introduced as a theoretical framework that balances goals and objectives of both level II substance use treatment and equine assisted therapy. Participants might experience benefits from an equine assisted therapy group related to immediate feedback, opportunities for learning, opportunities for trust-building, healthy relationships, learning new ways of dealing with trauma, relationships, confronting fears, and effectively working through new challenges.

Equine Assisted Therapy: Supporting Treatment for Substance Use Disorders in Alaska

*"Horses forge the mind, the character, the emotions and inner lives of humans. People can talk to one another about all these things and remain distanced and lonesome. In partnership with a horse, one is seldom lacking for thought, emotion and inspiration. One is always attended by a great companion."*

*~ Charles de Kunffy*

Horses are often depicted in literature and imagery as icons of strength, freedom, power, confidence, beauty, or compassion (Bracegirdle, & O'Connor, 2003). The profound relationships that exist between horses and humans are described throughout human history (Kohanov, 2001). The ability for humans to bond and connect with horses is well supported. The connection is so well documented that horses are now regularly utilized in the therapeutic treatment of individuals who have experienced post-traumatic stress disorder, anxiety, depression, and substance use disorder (Burgon, 2011; Kemp, Signal, Botros, Taylor, & Prentice, 2014; Kesner & Pritzker, 2008; Yorke, Adams & Coady, 2008). Therapeutic benefits for individuals who participate in equine assisted activities include a reported increase in sense of well-being, increased self-esteem, and enhanced emotional regulation (Burgon, 2011; Kesner & Pritzker, 2008). These benefits are especially valuable for individuals recovering from substance use disorders (SUD's) (Kaiser, Smith, Heleski & Spence, 2006; Kern-Godal, Brenna, Kogstad, Arnevik & Ravndal, 2016). It is common for those challenged with SUD's to have experienced childhood trauma or trauma in adulthood (Lotzin, Haupt, Schönfels, Wingenfeld, & Schäfer, 2016; Hunter, 2016; Van den Brink, W. 2015), and decades of study indicate that survivors of childhood trauma benefit from equine assisted therapy (Klontz, Bivens, Leinart, & Klontz, 2007; McCullough, Risley-Curtiss, & Rorke, 2015; Yorke, et al., 2008).

In the following discussion, rates of mental illness, substance use, and trauma as they occur in Alaska are presented. A discussion of current SUD treatment follows. Resiliency theory is examined as a possible framework for treatment of SUD, with the application of equine assisted therapy as the experiential practice of supporting resiliency and a protective factor for those who are in treatment (Chalmers & Dell, 2011; Kemp, Signal, Botros, Taylor & Prentice, 2014; Kern-Godal et al., 2016; Kesner & Pritzker, 2008). In addition, a detailed description of equine assisted therapy is outlined, along with the evidentiary benefits of engaging in equine activities.

### **Research Question**

Regarding the evidence that equine assisted activities provide benefits to those with SUD's, this project explores a question,

*“What benefits could an equine assisted therapy program provide for individuals in a level II, Intensive Outpatient Program (IOP) in interior Alaska?”*

A multitude of level III, residential, treatment facilities in the U.S. offer equine assisted programming for their residents. In addition, many of these residential facilities also offer level II (IOP) continuing care with equine assisted therapies. In fact, some of the residential facilities intentionally offer equine assisted therapies in the later stages of SUD treatment as supplemental, experiential, relapse prevention support (The Meadows, 2016; Hazelton Betty Ford Foundation, 2016; Foundations Recovery Network, 2016). Existing equine assisted therapy programs for SUD's vary from participation of 12 weeks to 6 weeks, depending on the facility and level of care. Existing equine assisted therapy programs provide unique benefits, different than traditional talk therapy, for clients in treatment for SUD's. These programs indicate evidence for benefits like:

- Immediate feedback
- Opportunities for learning
- Opportunities for trust-building
- Healthy relationships
- Learning new ways of dealing with trauma, addictions, and relationships
- Confronting fears
- Effectively working through new challenges
- To ask for help in overcoming blocks and obstacles
- To be open and easily access feelings and emotions

(The Meadows, 2016; Hazelton Betty Ford Foundation, 2016; Foundations Recovery Network, 2016). Most equine assisted therapy programs utilize assessments pre, during, and post treatment to provide evidence of efficacy, reliability, and validity. Equine assisted therapy programs for SUD's utilize both one-on-one engagement, and group format for human-horse interactions.

### **Literature Review**

#### **Substance Use and SUD Prevalence in Alaska**

When substance use becomes a problem for the individual, he or she may be assessed by a mental health professional and given a diagnosis of a substance use disorder (SUD) as defined by the *Diagnostic and Statistical Manual of Mental Disorders (DSM-5)* (American Psychiatric Association [APA], 2013). In accordance with the *DSM-5* (APA, 2013), individuals must meet two or more of the following criteria within a twelve-month period for the diagnosis of a substance use disorder,

- Substance is often taken in larger amounts or over a longer period than was intended.
- There is a persistent desire or unsuccessful efforts to cut down or control substance use.

- A great deal of time is spent in activities necessary to obtain substance, use substance, or recover from its effects.
- Craving, or a strong desire or urge to use substance.
- Recurrent substance use resulting in a failure to fulfill major role obligations at work, school, or home.
- Continued substance use despite having persistent or recurrent social or interpersonal problems caused or exacerbated by the effects of substance.
- Important social, occupational, or recreational activities are given up or reduced because of substance use.
- Recurrent substance use in situations in which it is physically dangerous.
- Substance use is continued despite knowledge of having a persistent or recurrent physical or psychological problem that is likely to have been caused or exacerbated by substance.
- Tolerance, as defined by either of the following:
  - A need for markedly increased amounts of substance to achieve intoxication or desired effect.
  - A markedly diminished effect with continued use of the same amount of substance.
- Withdrawal, as manifested by either of the following:
  - The characteristic withdrawal syndrome for substance.
  - Substance is taken to relieve or avoid withdrawal symptoms.

In addition to these criteria or symptoms, SUD's are often described as a cycle of seeking emotional, physical, and/or psychological stress relief with the use of a substance (Lotzin et al., 2016). Current studies indicate that SUD is a brain disease characterized by disturbances in the



normal functioning of the neurotransmitter dopamine (Nichols, 2014; Probst & van Eimeren, 2013). In addition to a diagnosis of and level of severity (mild, moderate, and severe), there are characteristic cognitive, emotional, and psychological features that accompany SUD's (APA, 2013). Individuals are more prone to develop an SUD depending on their experience of childhood trauma, ability to cope with stress, environmental influence, and genetic predisposition (Lotzin et al., 2016; Ystrom, Reichborn-Kjennerud, Neale & Kendler, 2014).

The *2015 Annual Drug Report* states that alcohol is the primarily abused substance in Alaska (Alaska State Troopers, 2015). In addition, the 2015 report indicates that alcohol is often involved in many violent, suicidal, and accidental deaths, particularly in rural areas of the state (Alaska Bureau of Investigation Statewide Drug Enforcement Unit, p. 6). In 2014, the alcohol induced mortality rate in Alaska was an astounding 310% higher than the 2013 U.S. average (Alaska Department of Health and Social Services, Division of Behavioral Health, 2015). In a bulletin released July 2015, the State of Alaska Division of Public Health reported that the rate of inpatient hospital discharges coded for heroin poisoning doubled from 2008 to 2012 with heroin-related inpatient and outpatient hospital costs exceeding \$2 million, and heroin-associated deaths tripling from 2008 to 2013 (Alaska Bureau of Investigation Statewide Drug Enforcement Unit, 2015, p. 5). Arrests related to methamphetamine use or distribution has continued to rise in the State of Alaska. The Alaska Bureau of Investigation Statewide Drug Enforcement Unit (SDEU) reported a rise in methamphetamine arrests from 187 in 2013, to 225 in 2015 (2015 Annual Drug Report, p. 11). The rate of illicit drug use in Alaska, as measured in 2013-2014, was 33% higher than the national average (Alaska Department of Health and Social Services, Division of Behavioral Health, 2015). Regarding the misuse of prescription medication, the same 2015 Annual Drug Report states that when abusers of prescription medications in Alaska lose

insurance coverage or cannot afford medications, they often turn to property theft and violent crime in order to gain access to prescription medications or illicit drugs (p. 12). Among Alaska adults ages 18 and older during 2008–2009 to 2012–2013, there was a statistically significant decrease in the perception of great risk of monthly marijuana use (Alaska Department of Health and Social Services, Division of Behavioral Health, 2016). In a 2013–2014 survey, about 9% of respondents ages 12–17, 21% of those ages 18–25, and 10% of those ages 26 and older reported marijuana use in the past month (Alaska Department of Health and Social Services, Division of Behavioral Health, 2016). The use and distribution of marijuana continues to evolve in the State of Alaska, as voters passed Ballot Measure 2 in November of 2014 (Alaska Bureau of Investigation Statewide Drug Enforcement Unit, p. 10). The ballot initiative passed in 2014 legalized the recreational use of marijuana, allowing for regulation and taxation of marijuana in a method similar to alcohol (Alaska Bureau of Investigation Statewide Drug Enforcement Unit, p. 10).

### **Maltreatment, Mental Illness, and Suicide Rates in Alaska**

Children and youth in Alaska are often faced with difficult circumstances. The percentage of maltreated children in Alaska, 13.3%, remains more than 40% above the U.S. rate of 9.4 per 1,000 children aged 0-17. (Alaska Department of Health and Social Services, Division of Behavioral Health, 2015). According to the 2015 Youth Risk Behavior Survey, 33.6% of Alaskan students in high schools reported feeling so sad or hopeless almost every day for two weeks or more that they stopped doing usual activities (Alaska Department of Health and Social Services, Division of Behavioral Health, 2015). In Alaska, 1 out of 10 high school students have attempted suicide (Alaska Department of Health and Social Services, Division of Behavioral Health, 2015). In Alaska in 2015, 23.3% of female high school students reported seriously

considering suicide within the last 12 months (Youth Risk Behavior Survey, 2015). Male high school students who seriously considered suicide are slightly less than female, at 17% (Youth Risk Behavior Survey, 2015). Overall, the suicide rate in 2014 was 72% higher in Alaska than the U.S average, and is highest in individuals between the ages of 15-24 (Alaska Department of Health and Social Services, Division of Behavioral Health, 2015).

Alaska's history contains a painful story of colonization and centuries of missionary activity that permanently altered the traditional Alaska Native way of life (Hixson, 2013). Alaska Native populations continue to struggle with staggeringly high rates of suicide when compared to the national average. In 2014, the rate of Alaska Native males that died by suicide was 50.9 suicides per 100,000, nearly four times the national average (Alaska Department of Health and Social Services, Division of Behavioral Health, 2015). Among American Indians/Alaska Natives aged 10 to 34 years, suicide is the second leading cause of death (Centers for Disease Control and Prevention, 2013). The National Center for Injury Prevention and Control (2015) states that the suicide rate among American Indian/Alaska Native adolescents and young adults ages 15 to 34 (19.5 per 100,000) is 1.5 times higher than the national average for that age group (12.9 per 100,000). The suicide rate statistics are enough to raise significant concern for the Indigenous Populations in Alaska.

Rates of interpersonal violence are also exceedingly high in Alaska, when compared to national averages. The Centers on Disease Control and Prevention (CDC) regularly compiles data to represent incidents of interpersonal violence. In 2010, Alaska ranked highest out of all fifty states in incidents of rape, with 29.2% of the population victimized, and highest in rates of sexual violence other than rape, with 58% of the population victimized (The National Intimate Partner and Sexual Violence Survey, CDC, 2011).

The connection of childhood trauma, and/or trauma in adulthood and a diagnosis of SUD is strong (Lotzin et al., 2016; Ystrom et al., 2014). Alaska has disturbingly high rates for maltreatment of children, mental illness, suicide rates, rates of interpersonal violence, and SUD's when compared to national averages (Alaska Bureau of Investigation Statewide Drug Enforcement Unit, 2015; Alaska Department of Health and Social Services, Division of Behavioral Health, 2015; Centers for Disease Control and Prevention, 2010; The National Center for Injury Prevention and Control, 2015; Youth Risk Behavior Survey, 2015). In a 2009 study conducted in Germany, of the 1,989 participants who had recently underwent treatment for alcohol use disorder, 35% of the female patients and 6% of male patients were sexually abused as a child (Schäfer et al., 2009). The Schäfer et al. study (2009) contained all substance-use treatment data from Hamburg, Germany (45 treatment centers) collected from years 2005 and 2006. The mean age of female participants was 46 years, with mean age for men slightly lower at 44 years (Schäfer et al., 2009). Data analysis revealed that victims of sexual violence had a significantly younger age at onset of the alcohol use disorder than non-victims (Schäfer et al., 2009). In addition, the study found that victims of sexual violence also differed significantly from non-victims concerning the amount of alcohol consumed per day, in that the amount consumed was significantly higher with victims of sexual violence (Schäfer et al., 2009). To reiterate, there are more than a multitude of studies which indicate childhood trauma as a highly correlative factor for later development of SUD's (Dube, Anda, Felitti, Edwards & Croft, 2002; Khoury, Tang, Bradley, Cubells & Ressler, 2010). Individuals who experience childhood trauma are likely to exhibit greater risk for socio-emotional, psychological and coping problems that may perpetuate substance use, suicidal ideation, risky sexual behavior, or mental illness (Rutman, Park, Castor, Taulii, & Forquera, 2008).

### **Treatment for SUD in Alaska**

Resources are available in Alaska for those seeking treatment for SUD's; however, significant issues with state budget deficits and an overburdened mental health system limits the availability and capacity for resources obtained by Alaskans who need it (National Alliance on Mental Illness, 2011; The National Association of State Budget Officers, 2015). Treatment centers available for substance use treatment normally offer varying levels of care, depending on severity of substance use disorder. Level III care, also described as medically monitored intensive inpatient treatment, is for the individual who needs medical and emotional/behavioral support 24/7 for a period of at least thirty days while they cease substance use and experience symptoms of acute withdrawal. Level II care is a reduced level of care, often called intensive outpatient care, which provides similar medical and emotional/behavioral support without the residential aspect. Level II treatment provides support specifically related to relapse prevention, in an effort to reintegrate the individual into a healthy life without substance use and without the need for intensive outpatient treatment. Protective factors like the development of positive social networks, supportive personal relationships, healthy eating habits, and constructive hobbies and interests are key components of successful relapse prevention (Drake, Wallach, & McGovern, 2005).

*The Alaska Department of Corrections Substance Abuse Treatment Approved Provider Referral List (2016)*, outlines six facilities in Alaska that provide level II care, intensive outpatient programs (IOP), for substance use. An IOP for adolescents and/or adults typically consists of 6 to 9 hours per week of therapeutic work. Participation in an IOP provides treatment that effectively addresses substance use and other co-occurring conditions. It typically is an organized outpatient service that administers treatment services before or after work or school, in

the evening, and/or on weekends (American Society of Addiction Medicine, 2016; David, 2013). Treatment goals for participants in the IOP, level II treatment are outlined according to guidelines illustrated by the Substance Abuse and Mental Health Administration (SAMHSA):

- To achieve abstinence
- To foster behavioral changes that support abstinence and a new lifestyle
- To facilitate active participation in community-based support systems (e.g., 12-Step fellowship)
- To assist clients in identifying and addressing a wide range of psychosocial problems (e.g., housing, employment, adherence to probation requirements)
- To assist clients in developing a positive support network
- To improve clients' problem solving skills and coping strategies

(Mee-Lee & Shulman, 2003).

Normally, after 6 weeks to 3 months, the level of care is stepped down after a period of observed abstinence and support. During this time, IOP level care may decrease to standard outpatient treatment, level I care, where clients may meet with counselors regularly and actively participate in relapse prevention skills (SAMHSA, 2016). Treatment objectives for participants in standard outpatient, level I care are generally outlined as goals to:

- Solidify abstinence
- Practice relapse prevention skills
- Improve emotional functioning
- Broaden sober social networks
- Address other problem areas

(SAMHSA, 2006).

## **Relapse Prevention**

Relapse is defined as, “1. The act or an instance of backsliding, worsening, or subsiding, and/or, 2. A recurrence of symptoms of a disease after a period of improvement” (Merriam-Webster’s collegiate dictionary, 1999). Regarding treatment for SUD, evidence indicates that relapse prevention plays a critical role in sustained abstinence from substance use (Donovan & Witkiewitz, 2012). The SAMHSA National Registry of Evidence-Based Programs and Practices currently identifies relapse prevention as an evidence-based practice effective for treatment of SUD (Donovan & Witkiewitz, 2012). In order to better predict potential relapse, individuals in the IOP level of care are often provided psychoeducation on three areas of relapse: (a) emotional relapse, (b) mental relapse, and (c) physical relapse (Melemis, 2015). Melemis (2015) states that the goal of treatment of SUD is to help individuals recognize early warning signs of relapse in order to develop coping skills to prevent relapse early in the process. For example, emotional and mental relapse may begin weeks or months before an individual may pick up a drink or physically use a substance (Melemis, 2015). Relapse prevention helps the individual recognize the warning signs that accompany emotional and mental relapse, before physical relapse may occur. In addition, coping tools are presented via psychoeducation and other treatment support methods in an effort to provide the individual new ways to cope with stressors. In the act of adapting to stressors without using substances, individuals begin to develop features aligned with resiliency.

## **Theoretical Framework: Resiliency Theory**

Lee (2012) states that, “developing resiliency is based on the assumption that positive, pro-social, and/or strength-based values inherent in children and youth should be actively and intentionally developed” (p. 45), Flanagan and Briggs (2016) reported that resiliency can also be

developed in adults. As Lee (2002) describes in earlier work, resiliency improvement is a *process* of actively and intentionally developing pro-social, positive, and strengths-based values. The ability to become resilient in the face of challenges is a critical aspect of preventing relapse for those with SUD's, regardless of age of the individual (Flanagan & Briggs, 2016).

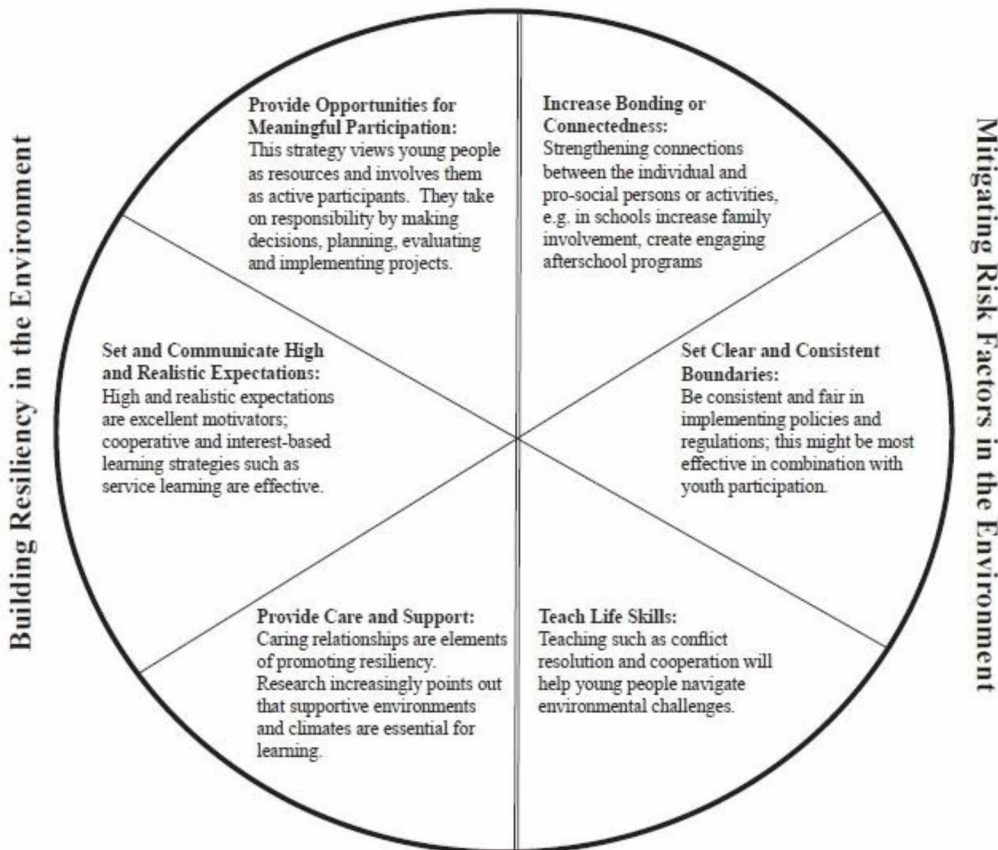
Benard (2004) describes resiliency as the development of personal strengths. Benard notes that resiliency could be separated out into four categories of specific significance: (a) social competence, (b) problem solving, (c) autonomy, and (d) a sense of purpose. Richardson (2002) describes resiliency as the “process of coping with stressors, adversity, change or opportunity in a manner that results in the identification, fortification and enrichment of protective factors” (p. 308). In a manner of speaking, resiliency is the ability to adapt to change in spite of adversity. Richardson states that some level of personal meaning-making may emerge from the development of resiliency, which in-turn could serve as a protective factor in the future. Bolstering the personal strengths of an individual and providing an opportunity to develop social competence, problem solving, autonomy, and sense of purpose may support the development of critical self-confidence and self-esteem (Lee, 2002).

Thompson, Bender, Ferguson, and Kim (2015) state that, “protective factors refer to individual and environmental conditions that decrease the likelihood of problem behaviors or buffer the effects of risk” (p. 69). Taylor, Karcher, Kelly, and Valescu (2003) describe resilience as an internal, dispositional, and attitudinal concept that helps determine how risk factors and protective factors are experienced and dealt with by an individual. Protective factors are unique for each person, individual families, communities, and cultures. Social involvement, secure attachment, and self-esteem are significant protective factors correlated with past trauma from sexual, physical, and emotional abuse (Kidd & Shahar, 2008; Thompson, Bender, Ferguson, &



Kim, 2015) Current treatments for SUD's utilize a variety of resources for support, often with greater resiliency as a predicted outcome of successful treatment (Flanagan & Briggs, 2016). A few mental health resources in Alaska incorporate holistic, culturally appropriate support with long-term implications, with a focus on important protective factors (Allen, Mohatt, Fok, Henry, & Burkett, 2014). Resiliency, which correlates with the cultivation of protective factors, is a particularly important feature of effective treatment for those diagnosed with SUD's (Taylor et al., 2003). Pictured below is a 'resiliency wheel', in relation to environment with a conceptual framework that includes: (a) opportunity making, (b) increasing bonding or connectedness, (c) setting clear and consistent boundaries, (d) teaching life skills, (e) providing care and support, and (f) setting and communicating high and realistic expectations. See figure 1, below:

## The Resiliency Wheel



**Fig 1.** (Henderson et al., 2000; Henderson & Milstein, 2003)

The concepts highlighted in the resiliency wheel are also benefits that may experientially emerge from participation in equine assisted activities and a cultivation of the human-horse bond (Burgon, 2011; Henderson et al., 2000; Henderson & Milstein, 2003; Kesner, & Pritzker, 2008). Engagement with horses provides a natural opportunity to offer care and support, increase bonding and connectedness, engage in meaningful participation, practice boundary setting, and communicate expectations.

### **Equine Assisted Activities and the Human-Horse Bond**

To better appreciate the human-horse bond, a brief discussion of attachment and attachment theory may be helpful. Attachment as it relates to attachment theory, simply stated, is the bond that forms between an infant and the mother (Bowlby, 1969; Perry, 2013). Attachment theory articulates the reality of a biological human need for emotional intimacy and bonding, which normally manifests during very early childhood (Bowlby, 1969; Perry, 2013). Attachment is often defined as a survival mechanism, biologically expressed to purport the success of our species (Perry, 2013). Attachment is also described as a distinctly emotional experience. When an individual experiences traumatic loss during his or her lifetime, this may disrupt attachment and complicate future relationship development skills (de Millán, & Millán, 2004). Those with SUD's often report a history of traumatic loss during childhood and exhibit maladaptive behaviors like reduced ability to cope with stress (de Millán, & Millán, 2004). When psychotherapy is used as a means for individuals to heal from trauma and attachment issues, the relationship between client and counselor is critical (Yorke, Adams & Coady, 2008). In fact, a healthy relationship between client and counselor appears to be one of the best predictive indicators of positive change for a client (Yorke, et al., 2008). A healthy therapist-client alliance

usually includes collaboration, emotional support, and of course, attachment, as essential ingredients (Yorke et al., 2008).

Similarly, the relationship developed between horse and human may simulate features of a positive therapist-client alliance (Yorke et al., 2008). Clearly, the therapist-client alliance versus a horse-human alliance is a different type of relationship. The horse-human alliance provides unique benefits to the client that the therapist-client alliance may not. For instance, the horse may be experienced as an ‘unconditional’ partner and/or cohort by the client. Trauma and attachment issues can be explored differently for a client when working with a horse (Yorke et al., 2008). One individual who participated in a TR study described the human-horse relationship (when compared to human-human relationship) with points like, “they don’t try and analyze you,” and “it has a lot to do with his innocence, he’s completely pure, who he is. There is no second guessing what he is thinking” (Yorke, et al., 2008, p. 23).

Horses have also been described as having the ability to give immediate, non-verbal ‘feedback’ to their human counterparts, which has been correlated with significant benefits when treating persons with anxiety, depression, and/or trauma (Edgette, 1996; Ferruolo, 2016; Yorke et al., 2008). Participants in equine assisted activities may be provided the opportunity to adjust intention, behavior, and body language as a result of observing the non-verbal ‘feedback’ from a horse (Ferruolo, 2016). Horses do not have an ‘agenda’ per se, and often participants in equine assisted activities are presented information about their own behavior, experientially, that can be received more openly (Kemp, Signal, Botros, Taylor, & Prentice, 2014).

In a 2014 study, adolescent participants with a history of severe childhood sexual trauma engaged in 10 weeks of EAP treatment, in addition to weekly outpatient therapy. Thirty participants ranging in age from eight to seventeen, from various Indigenous/non-Indigenous

backgrounds who had experienced sexual abuse, were referred to the study (Kemp, et al., 2014). Data was collected before, during, and after EFT treatment. Assessments were administered during these times, labeled 'Time 1,' 'Time 2,' and 'Time 3.' Kemp and colleagues (2014) found that after 10 weeks, the adolescent participants in the Queensland, Australia study, indicated statistically significant reductions in their externalized maladaptive behaviors, depression symptoms, and levels of anxiety. The results from this 2014 study supported the hypothesis with both children and adolescents, regardless of gender or ethnicity, which showed a significant improvement in data collected post-EFT compared to scores collected prior to completing the program (Kemp, et al., 2014).

Horses are also known for providing clear boundaries with approach/avoidant/assertive behavior in response to others in their environment (Butterworth, 2014). Horses have evolved as social animals that function with a hierarchical system within a herd or group. To establish a hierarchy within a group or herd, horses socially engage with each other with specific non-verbal behaviors. 'Approach' non-verbal horse behavior might look like a horse walking toward a horse, person or object. Another example of approach behavior may look like a horse's ears perked forward, at an object of interest. The opposite of approach non-verbal behavior is 'assertive' or 'defensive' behavior that may look like a horse's ears pinned-back and teeth bared. It can also look like a horse swinging her haunch at a horse or person to position for a possible kick-out with the hind legs. 'Avoidant' behavior might be the horse simply walking away from a horse, person, or object and continuing to move away when approached by horse, person, or object. In these examples of non-verbal behavior, horses are able to communicate personal boundaries with the individuals in their environment.

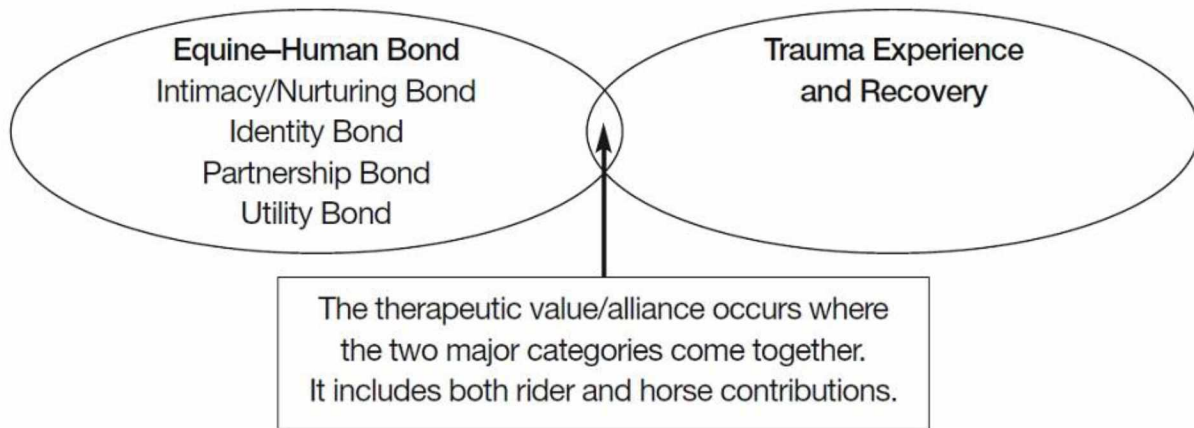
Those with a trauma history, and/or SUD's may exhibit issues with setting or recognizing boundaries (Collinge, Wentworth, & Sabo, 2005). Often, treatment objectives regarding development of interpersonal boundary-setting is included in the level II, IOP treatment, and level I care for those with trauma and/or SUD's. Clear boundary-setting is also a key component of the resiliency framework, and equine assisted activities provide this opportunity in an experiential context.

Only a select few companion animals can be ridden. With training, horses will tolerate a human rider and the securement of a saddle on their back. In addition, with training the horse will also allow a human caretaker to place a bridle around their head and insert a bit, a jointed metal bar, into the horses' mouth. There is a degree of trust implied between the human and the horse in these interactions.

Horses and humans have a long history of co-existence. Horses have been a key piece of human development since approximately 6,000 years ago, around the time they were first domesticated (American Museum of Natural History, 2017). We know that the roots of the modern English style of riding, Dressage, came from Greek origins when horses were used as mounts in the military for warfare (Equine World U.K., 2017). Classical Greek horsemanship incorporated the training of horses for particular movements to evade or attack the enemy while in battle, which evolved into the current practice of Dressage (Equine World U.K., 2017). Besides use for warfare, horses historically were the primary means for human transportation. It was not that long ago that horses were replaced by internal combustion engines, which is why engine 'strength' is often described in terms of horse-power.

Horses, with their capacity for bonding with humans, also provide an opportunity for close and broad body-to-body contact. As a result of the significant physical contact involved in

riding and grooming horses, a type of “physical sign language” develops (Edgette, 1996). The ability of humans to apply human characteristics to non-human animals, or anthropomorphize, may assist with attachment and a sense of an unconditional relationship. This ability to attach human characteristics to non-human animals is powerful, and may also be a critical element for attachment development (Yorke et al., 2008).



\*The nature of the horse-human alliance

**Figure 2.** Adapted from: Yorke et al., (2008).

### **Equine Assisted Activities and Resiliency**

Narrative therapy, music therapy, and art therapy are a few treatment approaches that support experiential, strengths-based, resiliency-focused objectives for children, youth, and adults (Davis, & Pereira, 2014; Duranczyk, 2015; Pasiali, 2012; Saltzman, Pynoos, Lester, Layne, & Beardslee, 2013). Animal Assisted Therapy (AAT) is a relatively recent field of treatment established to capitalize on the positive benefits that develop when bonds form between humans with non-human animals (cats, dogs, horses, pigs, etc.) (Kelly & Cozzolino, 2015).

AAT is a diverse field with many applications. Specially trained therapy dogs for people with various mental health and physical conditions are often recognized as the most popular form

of AAT. Kittens, puppies, and other animals are frequently introduced to children's hospitals and senior residential centers to boost morale and enhance sense of well-being (Fine, 2015). AAT has been shown to positively impact those with depression, developmental disorders, emotional and behavioral problems, anxiety, and physical disabilities (Chandler, 2005). Therapeutic Riding (TR), or hippotherapy, is one application of AAT provided to many individuals with physical disabilities. TR has been utilized for decades, and originally was a tool for the physically handicapped to master balance, movement, and physical health (Professional Association of Therapeutic Horsemanship International [PATH], 2016). TR evolved to become more than physical rehabilitation, but also a means to facilitate social competence, problem solving, autonomy, sense of purpose, self-confidence, self-esteem, relationship skills, emotional regulation, as well as providing opportunity for many other protective factors (Burgon, 2011; Kesner, & Pritzker, 2008).

Following the progression of TR as an application of AAT, equine assisted psychotherapy (EAP) and equine assisted learning (EAL) emerged as a practice, which capitalizes on the therapeutic benefits of the horse-human connection (EAGALA, 2016). The Equine Assisted Growth and Learning Association (EAGALA) developed a model for EAP and EAL that is entirely conducted from the ground, without clients riding the horse. When implemented with the EAGALA model, EAP and EAL are described as an experiential, goal oriented, solution-focused practice that is primarily client-led. (EAGALA, 2016). EAP and EAL is practiced in groups or individually, and with children, adolescents, or adults. In addition, those not physically able to ride also have the opportunity to benefit from participation in equine assisted activities (EAGALA, 2016). Studies indicate similar positive outcomes are evident for those that participate in TR, or EAP/EAL (EAGALA, 2016; Selby & Smith-Osborne, 2013).

Application of equine assisted activities often provide an environment described similarly by the conceptual model of resiliency in the resiliency wheel, i.e.: (a) opportunity making, (b) increasing bonding or connectedness, (c) setting clear and consistent boundaries, (d) teaching life skills, (e) providing care and support, and (f) setting and communicating high and realistic expectations (Burgon, 2011; Henderson et al., 2000; Henderson & Milstein, 2003; Kesner, & Pritzker, 2008). These goals outlined in the resiliency wheel are conceptually similar to treatment objectives of level II, IOP treatment for SUD's, i.e.: facilitation of active participation in community-based support systems, improvement of emotional functioning, the practice of relapse prevention skills, fostering behavioral changes that support abstinence and a new lifestyle, and assisting clients in identifying and addressing a wide range of psychosocial problems.

In a 2008 study, a culture-based resiliency model was applied with the practice of an EAL program in Canada for First Nation youth with SUD's (Dell, Chalmers, Dell, Sauve, & MacKinnon, 2008). The 2008 study focused on female youth who were in treatment for six months at a residential treatment center for inhalant use. The White Buffalo Youth Inhalant Treatment Center is in Sturgeon Lake First Nation, near Prince Albert, in Saskatchewan, Canada. The treatment program at White Buffalo Youth Inhalant Treatment Center is based on the concept of living therapy which parallel the teachings of the medicine wheel with four aspects of treatment: spiritual, mental, emotional, and physical (Dell et al., 2008). This particular study explored the complementary nature of a cultural-resiliency framework with a 'health promotion' approach to treatment of SUD (Dell et al., 2008). The study proposed a model that includes seven areas of resiliencies, which are viable to development with the application of an EAL specific intervention. These seven areas of culture-based resiliencies are: (a) morality, (b) humor,



(c) creativity, (d) initiative, (e) relationships, (f) independence, and (g) insight (Dell, Hopkins & Dell, 2005). The White Buffalo Youth Inhalant Treatment Center incorporated the use of equine assisted therapy into the treatment of SUD's for adolescent females, which also honored the importance the Horse within their First Nations culture. In the 2008 study, First Nations Elder stories describe the importance of the animal spirit,

“The animal spirit is integral to survival and therefore this devout relationship with the animal spirit is viewed as personally significant to each individual. The horse spirit is a friend and teaches about sharing and the profound sacredness found within the act of sharing (p. 95-96).”

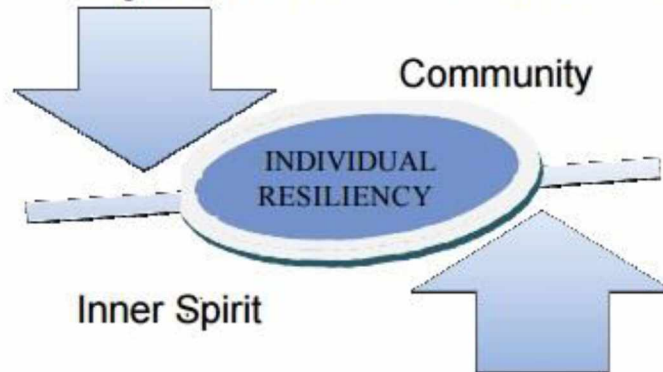
The 2008 study examined the overlap in culture-based resiliencies and the benefits of active participation in EAL programs, and found significant correlations of EAL with cultural resiliencies. In the 2008 study, adolescent girls with SUD's were provided the opportunity to explore their cultural values (protective factors) of morality, humor, creativity, initiative, relationships, independence, and insight while engaging in activities with horses. In a prior study, the resiliency experience is described as, “in the First Nations perspective, the attachment to a Creator and ways of accessing the Creator through spiritual ceremonies and practices are important factors in building resilience” (Dell, Hopkins, and Dell, 2005, p. 7). The youth at White Buffalo demonstrated increased self-nurturance through self-care after participating in EAL sessions that required they be physically present with the horses and engage in nurturing, supportive behaviors (Dell et al., 2008). In addition, the White Buffalo youth participants often indicated a background with instances of trauma. After participating in the EAL sessions, the adolescent participants expressed an increased capacity to bond and build trust with others, and engaged in community activities (Dell et al., 2008).

**Table 1: Wolins' Resiliency Traits**

<i>Wolins' Resiliencies</i>	<i>Traditional Teachings</i>
Morality	Interconnectedness; respect; humility; faith
Humour	Teasing as acceptance and welcome; balances the seriousness of life; facilitates learning
Creativity	Survival; tool making; continuance of life
Initiative	Personal courage; integrity; freedom; autonomy; promotes wholeness and quality of life for all
Relationships	Kinship; sharing; unconditional love; generosity; community
Independence	Mastery; taking on of adult roles; courage; non-interference; reciprocity
Insight	Vision quest/fast; strength; knowing self in relation to all else; identity development in relation to gender, spirit name and clan

(Dell, Hopkins, and Dell (2005, p. 6).

**Figure 1: YSAC's Culture-Based Model of Resiliency**



**Fig. 3.** (Dell, Hopkins & Dell, 2005).

In addition, the other known benefits of participation in equine assisted activities, like facilitation of social competence, problem solving, autonomy, sense of purpose, self-confidence, self-esteem, relationship skills, emotional regulation, and opportunity for development of protective factors are complementary to the objectives of level II and level I treatment for SUD's, and the resiliency theory framework (Burgon, 2011; Henderson et al., 2000; Henderson & Milstein, 2003; Kesner, & Pritzker, 2008; SAMHSA, 2006). One equine assisted therapy study in Canada focused on the increased well-being of adolescent girls with SUD's, providing evidence that EAL programs do indeed increase general sense of well-being with those who are diagnosed with SUD (Adams et al., 2015).

### **Equine Assisted Activities and SUD Treatment Retention-Completion**

Leaving SUD treatment early, or not completing SUD treatment is a common challenge that many individuals face when in IOP level care. In fact, an extensive review of treatment for SUD over a period of 40 years and 500 studies found that patient failure to complete treatment often exceeds 50%, and that completion of treatment is associated with successful outcomes (Brorson, Arnevik, Rand-Hendriksen & Duckert, 2013). Numerous studies examine the correlation of animal or equine assisted activities and improved patient completion rates and motivation for treatment (Atherton, Dunbar Jr. & Baker, 2016; Chandler, 2005; Holcomb & Meacham, 1989; Kern-Godal, Arnevik, Walderhaug & Ravndal, 2015). In a 2015 study in Oslo, Norway, half of the 108 participants in treatment for SUD were randomly assigned to a supplemental equine assisted therapy group (Kern-Godal, Arnevik, Walderhaug & Ravndal). Participants ranged in age from 17 to 33, with 78 males and 30 females at the outset of treatment. At the time of discharge, 43 (39.8%) of the 108 patients in the study completed treatment and 65 (60.3%) had dropped out (Kern-Godal, Arnevik, Walderhaug & Ravndal, 2015). The only significant association for treatment completion was participation in equine assisted activities. 95% of the participants who participated in the equine assisted therapy group completed treatment in entirety to the recommended discharge date in accordance to their treatment plan (Kern-Godal, Arnevik, Walderhaug & Ravndal, 2015).

### **Equine Assisted Activities in Alaska**

Of the many programs outside of Alaska that utilize equine assisted therapy for SUD's, a few are fairly well known and largely successful. Some of these facilities are: The Ranch in Nunnely, Tennessee; Hazelton, Betty Ford Foundation in Minnesota, Oregon, California, Florida, Illinois and New York; Foundations Recovery Network in Georgia, Tennessee,

California, Illinois and Minnesota; The Meadows in Wickenburg, Arizona; Timberline Knolls in Lemont, Illinois; Cirque Lodge in Sundance, Utah; and Promises Treatment Center in Malibu, California. Many other equine assisted therapy programs are dispersed throughout the U.S. and offer encouraging examples of how horses positively impact the lives of those in treatment for SUD's. Within Alaska, there are limited opportunities for those in SUD treatment to engage in equine activities, or equine therapy. Two certified TR programs are available for the entire state of Alaska: STRIDE Inc., based in Wasilla, and Equine Assisted Therapy Alaska, located in Anchorage ([stridealaska.org](http://stridealaska.org), 2016; [equineassistedtherapyalaska.org](http://equineassistedtherapyalaska.org), 2016). Neither programs are available as a SUD treatment option. Both organizations primarily cater to those who are physically handicapped and are limited to summer months. A program that offers equine assisted activities for SUD's in the state of Alaska would be the first of its kind.

### **Application**

The history of TR and EAP/EAL in Alaska is relatively short. Alaska offers a difficult climate during winter and demands a particular level of horse-care and toughness unlike any other geographical area. Owning horses in Alaska is exponentially more expensive than other parts of the U.S., as cost of feed, import and transportation of horses, veterinarian services, cost of tack and riding gear, and limited seasons for outdoor riding, are each costly aspects of horse-care in this state (Firmin-Lindner, 2015). In addition, much of the Alaskan population is spread throughout the vast expanse of the state, and those who are interested in riding and interacting with horses may be required to travel long distances. For the practice of TR and EAP/EAL, a heated indoor arena is necessary for year-round application. A handful of heated indoor arenas are available in Alaska. In addition to the high cost and utilities necessary for TR and EAP/EAL programs in Alaska, information about the therapeutic benefits, cost, client-fit, and the referral

process are constrained. It is no surprise that physical and financial barriers exist for both clients and prospective practitioners of equine assisted therapy programs in the state of Alaska.

In addition, a lack of awareness regarding benefits of equine assisted therapy for SUD's is a significant hurdle to overcome. The absence of access to equine assisted therapy in Alaska leaves a gap in context, understanding, and mental health practitioner experience of the significant benefits that an equine assisted therapy program may offer those with SUD's. A handful of EAGALA certified practitioners reside in Alaska, but because of the sparse practice of equine assisted therapy activities, the number of individuals who benefit from the therapy is minimal compared to the need.

A poster, developed and implemented to spread awareness of the benefits of equine assisted therapy for those with SUD's in Alaska, offers the opportunity to create a tangible product. A poster may be used as a training aid for mental health professionals interested in equine assisted therapy, as a research poster at EAGALA and PATH conferences, and a method to communicate benefits of equine assisted therapy in a succinct and clear manner. Specific information appears on the research poster, including: the research question, a description of need for treatment of SUD's in Alaska, definitions of EAL, EAP, and TR, the role of resiliency in equine assisted therapy, the unique benefits that EAL, EAP and TR offer to those with SUD in an IOP, and direction for future research.

The intended audience for this project are individuals participating in an IOP in interior Alaska, and mental health practitioners. Social workers, psychologists, counselors, clinical interns, clinical directors, and community organizers are all potential referral sources for a TR or EAP/EAL program for IOP clients.

### **Conclusions and Future Research**

Alaska is an extreme and breathtakingly beautiful landscape. Alaska also presents crisis-levels of opioid abuse, SUD's, interpersonal violence, depression, and mental health concerns overall. The individuals who live in Alaska should be afforded the best treatment available. Equine assisted therapy is an opportunity for the residents of Alaska to participate in an experiential, unique, and effective support to level II treatment for SUD's. The benefits of an equine assisted therapy program would present an empowering experience for those in treatment for SUD's in Alaska. A pro-bono equine assisted therapy program for those in treatment may provide an alternative resource for support, resiliency, and potentially help prevent future relapse. If the benefits of the pro-bono, 10-week equine assisted therapy group in Fairbanks are found to be robust, the program may be expanded to become an ongoing opportunity for those in treatment for SUD's. In addition, the unique population in Fairbanks, Alaska may provide opportunity for future research of equine assisted therapy as an effective, evidence-based, IOP supplementary treatment intervention for SUD.

## References

- Adams, C., Arratoon, C., Boucher, J., Cartier, G., Chalmers, D., Dell, C. A., & Wuttunee, M. (2015). The helping horse: How equine assisted learning contributes to the wellbeing of First Nations youth in treatment for volatile substance misuse. *Human-Animal Interaction Bulletin, 1*(1), 52–75.
- Alaska Department of Health and Social Services, Division of Behavioral Health. (2015). *Statewide suicide prevention council: Alaska suicide facts and statistics*. Retrieved from <http://dhss.alaska.gov/SuicidePrevention/Pages/statistics.aspx>.
- Alaska Department of Corrections (2016). *Alaska Department of Corrections substance abuse treatment approved provider referral list*. Retrieved from <http://www.correct.state.ak.us/>.
- Alaska Department of Health and Social Services, Division of Behavioral Health. (2016). *Data & statistics: Marijuana use in Alaska and the United States*. Retrieved from <http://dhss.alaska.gov/dph/Director/Pages/marijuana/data.aspx#nsduh>.
- Alaska Department of Health and Social Services, Division of Behavioral Health. (2016). *Youth risk behavior survey*. Retrieved from <http://dhss.alaska.gov/dbh/Pages/default.aspx>.
- Alaska State Troopers. (2015). *Alaska Bureau of Investigation Statewide Drug Enforcement Unit: 2015 annual drug report*. Retrieved from <http://www.dps.state.ak.us/ast/abi/docs/SDEUreports/2015%20Annual%20Drug%20Report.pdf>
- Allen, J., Hopper, K., Wexler, L., Kral, M., Rasmus, S., & Nystad, K. (2014). Mapping resilience pathways of Indigenous youth in five circumpolar communities. *Transcultural Psychiatry, 51*(5), 601-631. doi:10.1177/1363461513497232

- Allen, J., Mohatt, G., Fok, C., Henry, D., & Burkett, R. (2014). A protective factors model for alcohol abuse and suicide prevention among Alaska native youth. *American Journal of Community Psychology, 54*(1/2), 125-139. doi:10.1007/s10464-014-9661-3
- American Museum of Natural History. (2017) *Domesticating horses: The domestication timeline*. Retrieved from <http://www.amnh.org/exhibitions/horse/domesticating-horses/domestication-timeline/>
- American Psychiatric Association. (2013). *Diagnostic and statistical manual of mental disorders* (5<sup>th</sup> ed.). doi: 10.1176/appi.books.9780890425596.910646
- American Society of Addiction Medicine (2016). *What are the ASAM levels of care?* Retrieved from <http://asamcontinuum.org/knowledgebase/what-are-the-asam-levels-of-care/>.
- Atherton, W.L., Dunbar Jr., E.T. & Baker, S.E. (2016). Animal-assisted therapy as a complementary intervention for mindfulness-based therapies. *VISTAS Online: American Counseling Association, 92*. 1-12.
- Bachi, K. (2013). Application of attachment theory to equine facilitated psychotherapy. *Journal of Contemporary Psychotherapy, 43*, 187-196.
- Bachi, K. (2013) Equine-facilitated prison-based programs within the context of prison-based animal programs: State of the science review. *Journal of Offender Rehabilitation, (1)*, 46-74, doi: 10.1080/10509674.2012.734371
- Benard, B. (2004). *Resiliency: What we have learned*. San Francisco, CA: WestEd.
- Bowlby, J. (1969). *Attachment and Loss: Vol I*. New York, NY: Basic Books.
- Bracegirdle, H. & O'Connor, P. (2003). *The essential horse*. London, England: Philip Wilson Publishers Lt.



- Brandt, C. (2013). Equine-facilitated psychotherapy as a complementary treatment intervention. *The Practitioner Scholar: Journal of Counseling and Professional Psychology*, 2, 23–42.
- Brorson HH, Ajo Arnevik E, Rand-Hendriksen K, Duckert F. (2013). Drop-out from addiction treatment: a systematic review of risk factors. *Clinical Psychology Review*, 33(8). 1010–1024. doi: 10.1016/j.cpr.2013.07.007.
- Burgon, H. L. (2011). 'Queen of the world': Experiences of 'at-risk' young people participating in equine-assisted learning/therapy. *Journal of Social Work Practice*, 25(2), 165-183.  
doi:10.1080/02650533.2011.561304
- Butterworth, J. (2014). Equine behaviour. *Veterinary Record: Journal of the British Veterinary Association*, 174(12), 308. doi:10.1136/vr.g2233
- Centers for Disease Control and Prevention (CDC). (2011). *National intimate partner and sexual violence survey—2010 summary report (NISVS)*. Violence Prevention. Retrieved from <https://www.cdc.gov/violenceprevention/nisvs/summaryreports.html>
- Centers for Disease Control and Prevention (CDC). (2013) *Web-based injury statistics query and reporting system (WISQARS) [Online]*. National Center for Injury Prevention and Control, CDC (producer). Retrieved from <http://www.cdc.gov/injury/wisqars/index.html>
- Chalmers, D., & Dell, C. A. (2011). Equine-assisted therapy with First Nations youth in residential treatment for volatile substance misuse: Building an empirical knowledge base. *Native Studies Review*, 20(1), 59-87.
- Chandler, C.K. (2005). *Animal assisted therapy in counseling*. New York, NY: Taylor & Francis Group.

- Collinge, W., Wentworth, R., & Sabo, S. (2005). Integrating complementary therapies into community mental health practice: An exploration. *Journal of Alternative & Complementary Medicine, 11*(3), 569-574. doi:10.1089/acm.2005.11.569
- Corring, D., Lundberg, E., & Rudnick, A. (2013). Therapeutic horseback riding for ACT patients with schizophrenia. *Community Mental Health Journal, 49*(1), 121-126. doi:10.1007/s10597-011-9457-y
- Dell, C., Chalmers, D., Dell, D., Sauve, E., & MacKinnon, T. (2008). Horse as healer: An examination of equine-assisted learning in the healing of First Nations youth from solvent abuse. *Pimatisiwin: A Journal of Aboriginal and Indigenous Community Health, 6*(1), 81–106.
- Dell, C., Hopkins, C., and Dell, D. (2005). Resiliency and holistic inhalant abuse treatment. *Journal of Aboriginal Health, 2*(1). p. 4-12. Retrieved from <http://www.naho.ca/journal/2005/03/14/resiliency-and-holistic-inhalant-abuse-treatment/>
- David, M.L., (2013). The ASAM criteria: Treatment for addictive, substance-related, and co-occurring conditions. Chevy Chase, MD: American Society of Addiction Medicine.
- Davis, E. S., & Pereira, J. K. (2014). Child-centered play therapy: A creative approach to culturally competent counseling. *Journal of Creativity in Mental Health, 9*(2), 262-274. doi:10.1080/15401383.2014.892863
- de Millán, S. G., & Millán, S. (2004). Hidden meaning of an early loss. The common ground of attachment and social character assessments and their clinical applications. *International Forum of Psychoanalysis, 13*(3), 157-163. doi:10.1080/08037060410018471

- Donovan, D., & Witkiewitz, K. (2012). Relapse prevention: From radical idea to common practice. *Addiction Research & Theory*, 20(3), 204-217.  
doi:10.3109/16066359.2011.647133
- Drake, R.E., Wallach, M.A. & McGovern, M.P. (2005) Future directions in preventing relapse and abuse among clients with severe mental illnesses. *Psychiatric Services*, 56, 1297–1302.
- Dube S.R., Anda R.F., Felitti V.J., Edwards V.J. & Croft J.B. (2002) Adverse childhood experiences and personal alcohol abuse as an adult. *Addict Behavior*, 27, 713–725.
- Duranczyk, D. (2015). Using art therapy to nurture resiliency in teens. *Reclaiming Children & Youth*, 24(2), 21-23.
- Edgette, J.S. (1996). *Heads Up!: Practical sports psychology for riders, their trainers, and their families*. New York, NY: Doubleday.
- Equine Assisted Growth and Learning Association (EAGALA). (2016). *About EAGALA*. Retrieved from <http://www.eagala.org/>.
- Equine Assisted Therapy Alaska (EATA) (2017). Retrieved from [equineassistedtherapyalaska.org](http://equineassistedtherapyalaska.org)
- Equine World U.K. (2017) *History of dressage*. Retrieved from [http://www.equine-world.co.uk/horse\\_sports/history\\_dressage.asp](http://www.equine-world.co.uk/horse_sports/history_dressage.asp).
- Ferruolo, D. M. (2016). Psychosocial equine program for veterans. *Social Work*, 61(1), 53-60.  
doi:10.1093/sw/swv054
- Fine, A. (2015). *Handbook on animal-assisted therapy: Theoretical foundations and guidelines for practice*. London, UK: Elsevier/Academic Press.

- Firmin-Lindner, T. (2015). The challenges (and benefits) of horse ownership in Alaska. *The Horse Collaborative*. Retrieved from <http://www.horsecollaborative.com/challenges-benefits-horses-alaska/>.
- Flanagan, M. W., & Briggs, H. E. (2016). Substance abuse recovery among homeless adults in Atlanta, Georgia, and a multilevel drug abuse resiliency tool. *Best Practice in Mental Health, 12*(1), 89-109.
- Foundations Recovery Network. (2016). *How equine therapy is used in addiction treatment*. Retrieved from <http://www.foundationsrecoverynetwork.com/how-equine-therapy-is-used-in-addition-treatment/>
- Grandin, T., & Johnson, C. (2005). *Animals in translation: Using the mysteries of autism to decode animal behavior*. New York, NY: Scribner.
- Holcomb, R. & Meacham, M. (1989). Effectiveness of an animal-assisted therapy program in an inpatient psychiatric unit. *Anthrozoos, 2*, 259-264. doi: 10.2752/089279389787057902
- Hauge, H., Kvalem, I. L., Berget, B., Enders-Slegers, M.-J., & Braastad, B. O. (2014). Equine-assisted activities and the impact on perceived social support, self-esteem and self-efficacy among adolescents – an intervention study. *International Journal of Adolescence and Youth, 19*(1), 1–21. doi: 10.1080/02673843.2013.779587
- Hazelton Betty Ford Foundation (2016). *Equine therapy*. Retrieved from [https://www.hazelden.org/web/public/vc7equinetherapy\\_page](https://www.hazelden.org/web/public/vc7equinetherapy_page)
- Henderson, N. & Milstein, M. (2003). *Resiliency in Schools: Making it Happen for Students and Educators*. Thousand Oaks, CA: Corwin Press.
- Henderson, N. Bernard, B. & Sharp-Light, S.N. (2000). *Schoolwide Approaches for Fostering Resiliency*. 9-16. San Diego, CA: Resiliency in Action, Inc.

- Hixson, W. (2013). *American settler colonialism: A history*. New York, NY: Palgrave Macmillon.
- Hunter, A.C. (2016) A phenomenological investigation of women's experience of recovering from childhood trauma and subsequent substance abuse. *Indo-Pacific Journal of Phenomenology*, 16, 1-21, doi: 10.1080/20797222.2016.1164990
- Kaiser, L., Smith, K.A, Heleski, C.R., Spence, L.J. (2006). Effects of a therapeutic riding program on at-risk and special education children. *Journal of the American Veterinary Medical Association*, 228(1), 46-52.
- Kelly, M. A., & Cozzolino, C. A. (2015). Helping at-risk youth overcome trauma and substance abuse through animal-assisted therapy. *Contemporary Justice Review*, 18(4), 421-434. doi:10.1080/10282580.2015.1093686
- Kemp, K., Signal, T., Botros, H., Taylor, N., & Prentice, K. (2014). Equine facilitated therapy with children and adolescents who have been sexually abused: A program evaluation study. *Journal of Child & Family Studies*, 23(3), 558-566. doi:10.1007/s10826-013-9718
- Kern-Godal, A., Brenna, I.H, Kogstad, N., Arnevik, E.A, Ravndal, E. (2016) Contribution of the patient–horse relationship to substance use disorder treatment: Patients' experiences. *International Journal of Qualitative Studies on Health and Well-being*, 11(1), 31636, doi: 10.3402/qhw.v11.31636
- Kern-Godal, A., Arnevik, E. A., Walderhaug, E., & Ravndal, E. (2015). Substance use disorder treatment retention and completion: a prospective study of horse-assisted therapy (HAT) for young adults. *Addiction Science & Clinical Practice*, 10, 21. doi: 10.1186/s13722-015-0043-4

- Kesner, A., & Pritzker, S. R. (2008). Therapeutic horseback riding with children placed in the foster care system. *Revision, 30*(1/2), 77-87.
- Kidd, S., & Shahar, G. (2008). Resilience in homeless youth: The key role of self-esteem. *American Journal of Orthopsychiatry, 78*(2), 163-172. doi:10.1037/0002-9432.78.2.163
- Klontz, B., Bivens, A., Leinart, D., & Klontz, T. (2007). The effectiveness of equine-assisted experiential therapy: Results of an open clinical trial. *Society & Animals, 15*(3), 257-267. doi:10.1163/156853007X217195
- Kohanov, L. (2001). *The tao of equus: A woman's journey of healing & transformation through the way of the horse*. Novato, CA: New World Library.
- Khoury, L., Tang, Y. L., Bradley, B., Cubells, J. F., & Ressler, K. J. (2010). Substance use, childhood traumatic experience, and posttraumatic stress disorder in an urban civilian population. *Depression and Anxiety, 27*(12), 1077–1086. <http://doi.org/10.1002/da.20751>.
- Lam, S. K. (2010). Life beyond sobriety: A developmental framework to restore normal development during recovery from substance addiction. *Journal of Family Psychotherapy, 21*(4), 299-304. doi:10.1080/08975353.2010.529409
- Lee, R. S. (2012). Invitational theory and practice applied to resiliency development in at-risk youth. *Journal of Invitational Theory & Practice, 18*, 45-48.
- Lotzin, A., Haupt, L., Schönfels, J., Wingenfeld, K., & Schäfer, I. (2016). Profiles of childhood trauma in patients with alcohol dependence and their associations with addiction-related problems. *Alcoholism: Clinical & Experimental Research, 40*(3), 543-552. doi:10.1111/acer.1299

- O'Brien, B. (2014). Nonprofit charity impacts wounded combat veterans and children facing adversity. *Nursing Economic\$, 32(5)*, 270-274.
- McCullough, L., Risley-Curtiss, C., & Rorke, J. (2015). Equine facilitated psychotherapy: A pilot study of effect on posttraumatic stress symptoms in maltreated youth. *Journal Of Infant, Child & Adolescent Psychotherapy, 14(2)*, 158-173.  
doi:10.1080/15289168.2015.1021658
- Mee-Lee, D., and Shulman, G.D. (2003). The ASAM placement criteria and matching patients to treatment. *Principles of Addiction Medicine*, 453–465. Chevy Chase, MD: American Society of Addiction Medicine.
- Melemis, S. M. (2015). Relapse prevention and the five rules of recovery. *The Yale Journal of Biology and Medicine, 88(3)*, 325–332.
- Merriam-Webster's collegiate dictionary (10th ed.). (1999). Springfield, MA: Merriam-Webster Incorporated.
- National Alliance on Mental Illness. (2011). *State mental health cuts: A national crisis*. Retrieved from <http://www2.nami.org/ContentManagement/ContentDisplay.cfm?ContentFileID=126233>.
- National Center for Injury Prevention and Control, Division of Violence Prevention. (2015). *Suicide: Facts at a glance*. Retrieved from <http://www.cdc.gov/violenceprevention/pdf/suicide-datasheet-a.PDF>.
- Nichols, E. H. (2014). Understanding addiction: Dopamine and brain Function. *MD Conference Express, 14(8)*, 6-8. doi:10.1177/155989771408001

- Nurenberg, J., Schleifer, S., Carson, S., Tsang, J., Montalvo, C., & Chou, K. (2013). Equine-facilitated group psychotherapy with chronic psychiatric inpatients: two controlled studies. *European Psychiatry, 28*(1), 1. doi:10.1016/S0924-9338(13)75923-6
- Pasiali, V. (2012). Resilience, music therapy, and human adaptation: nurturing young children and families. *Nordic Journal of Music Therapy, 21*(1), 36-56.  
doi:10.1080/08098131.2011.571276
- Perry, B.D. (2013). Bonding and attachment in maltreated children consequences of emotional neglect in childhood. *The Child Trauma Academy*. Retrieved from <http://childtrauma.org/>.
- Professional Association of Therapeutic Horsemanship International (PATH). (2016). *Certifications*. Retrieved from <http://www.pathintl.org/resources-education/education>.
- Probst, C. C., & van Eimeren, T. (2013). The functional anatomy of impulse control disorders. *Current Neurology and Neuroscience Reports, 13*(10), 1-10.  
doi:10.1007/s11910-013-0386-8
- Pruett, J. M., Nishimura, N. I., & Priest, R. (2007). The role of meditation in addiction recovery. *Counseling & Values, 52*(1), 71-84.
- Richardson, G. (2002). The metatheory of resilience and resiliency. *Journal of Clinical Psychology, 58*(3), 307-321.
- Rosenberg, M. (1965). *Society and the adolescent self-image*. Princeton, NJ: Princeton University Press.
- Rutman, S., Park, A., Castor, M., Taulii, M., & Forquera, R. (2008). Urban American Indian and Alaska Native youth: Youth risk behavior survey 1997–2003. *Maternal & Child Health Journal, 12*, 76-81. doi:10.1007/s10995-008-0351-3



- Saltzman, W., Pynoos, R., Lester, P., Layne, C., & Beardslee, W. (2013). Enhancing family resilience through family narrative co-construction. *Clinical Child & Family Psychology Review, 16*(3), 294-310. doi:10.1007/s10567-013-0142-2
- Selby, A., Smith-Osborne, A. (2013) A systematic review of effectiveness of complementary and adjunct therapies and interventions involving equines. *Health Psychology, 32*(4), 418-432. doi: 10.1037/a0029188.
- Schäfer, I., Verthein, U., Oechsler, H., Deneke, C., Riedel-Heller, S., & Martens, M. (2009). What are the needs of alcohol dependent patients with a history of sexual violence? A case-register study in a metropolitan region. *Drug & Alcohol Dependence, 105*(1/2), 118-125. doi:10.1016/j.drugalcdep.2009.06.020
- South Central Therapeutic Riding, Inc. (STRIDE) (2017). Retrieved from [stridealaska.org](http://stridealaska.org).
- Substance Abuse and Mental Health Administration (2006). *Treatment improvement protocol* (TIP) Series, No. 47. Rockville, MD: Center for Substance Abuse Treatment.
- Taylor, E. R., Karcher, M. J., Kelly, P. J., & Valescu, S. (2003). Resiliency, risk, and substance use among Hispanic urban juvenile detainees. *Journal of Addictions & Offender Counseling, 24*(1), 46-64. doi: 10.1002/j.2161-1874.2003.tb00181.x
- The National Association of State Budget Officers. (2015). *Summaries of fiscal year 2016 proposed executive budgets*. Retrieved from <https://www.nasbo.org/sites/default/files/pdf/FY16%20Proposed%20Budget-Summary.pdf>.
- Thompson, S.J., Bender, K., Ferguson, K.M. & Kim, Y. (2015) Factors associated with substance use disorders among traumatized homeless youth. *Journal of Social Work Practice in the Addictions, 15*(1), 66-89, doi: 10.1080/1533256X.2014.996229

The Meadows (2016). *Types of therapy: Equine therapy*. Retrieved from

<https://www.themeadows.com/about/types-of-therapy/equine-therapy>.

Van den Brink, W. (2015) Substance use disorders, trauma, and PTSD. *European Journal of Psychotraumatology*, 6(1), 27632, doi: 10.3402/ejpt.v6.27632

Yorke, J., Adams, C. & Coady, N. (2008) Therapeutic value of equine/human bonding in recovery from trauma, *Anthrozoös*, 21(1), 17-30.

Ystrom, E., Reichborn-Kjennerud, T., Neale, M., & Kendler, K. (2014). Genetic and environmental risk factors for illicit substance use and use disorders: Joint analysis of self and co-twin ratings. *Behavior Genetics*, 44(1), 1-13. doi:10.1007/s10519-013-9626-6

Appendix A:

Equine Assisted Therapy: Supporting Treatment for Substance Use Disorders in Alaska

Claire Gelvin-Smith

University of Alaska, Fairbanks



Abstract

The State of Alaska demonstrates exceedingly high rates of interpersonal violence, child neglect, depression, and drug related arrests when compared with national rates. Substance use disorder is often linked with instances of interpersonal violence, child neglect, depression and judicial consequences. An equine assisted therapy program could provide support for the treatment of substance use disorders in Alaska.

Resiliency theory is introduced as a theoretical framework that balances goals and objectives of both level II substance use treatment and equine assisted therapy. Participants might experience benefits from an equine assisted therapy group related to immediate feedback, opportunities for learning, opportunities for trust-building, healthy relationships, learning new ways of dealing with trauma, relationships, confronting fears, and effectively working through new challenges.

Diagnostic Codes

Substance Use Disorders:

- Alcohol Use Disorder
  - 305.00 (F10.10) Mild
  - 305.90 (F10.20) Moderate
  - 305.90 (F10.20) Severe

Opioid Use Disorder:

- 305.50 (F11.10) Mild
- 305.40 (F11.20) Moderate
- 305.40 (F11.20) Severe

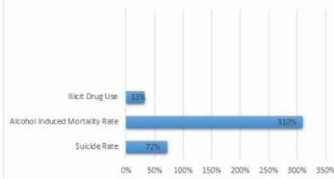
Stimulant Use Disorder:

- Mild
  - 305.70 (F15.10) Amphetamine-type substance
  - 305.80 (F14.10) Cocaine
- Moderate
  - 305.70 (F15.10) Other or unspecified stimulant
- Severe
  - 305.40 (F15.20) Amphetamine-type substance
  - 305.20 (F14.20) Cocaine
  - 305.40 (F15.20) Other or unspecified stimulant

Introduction

Alaska rates of suicide, interpersonal violence, depression, and arrests related to substance use are highest in the nation.

Alaska Rates % Higher Than National Avg.



Substance use disorder is often linked with instances of interpersonal violence, child neglect, depression and judicial consequences.

% of Alaska Population



References: Alaska Department of Health and Social Services, Division of Behavioral Health (2015). Substance abuse prevention council: Alaska suicide facts and statistics. Retrieved from <http://dhs.alaska.gov/submit/behavioral-health-services/2015-01-01-1175-app-book-97559042056.pdf>; American Society of Addiction Medicine (2016). What are the ASAM levels of care? Retrieved from <http://www.asam.org/ASAM-Levels-of-Care>; Bernard, B. (2004). Resiliency: What we have learned. San Francisco, CA: WestEd; Bohn, K. (2013). Application of abstinence theory to equine facilitated psychotherapy. *Journal of Contemporary Psychotherapy*, 43, 181-186; Kowitz, B., Bivens, A., Lenz, D., & Kowitz, T. (2007). The effectiveness of equine-assisted experiential therapy: Results of an open clinical trial. *Society & Animals*, 15(3), 257-267; doi:10.1163/156853207x217195; Yonke, J., Adams, C. & Coak, N. (2005). Therapeutic value of equine-human bonding in recovery from trauma. *Anthrozoö*, 21(1), 17-32.

Treatment for Substance Use Disorder

Level II care, often called intensive outpatient care, provides medical and emotional/behavioral support for individuals with a substance use disorder (SUD) without a residential aspect. Level II treatment provides support specifically related to relapse prevention, in an effort to reintegrate the individual into a healthy life without substances and without the need for intensive outpatient treatment.

Goals of the Level II care, Intensive Outpatient Program (IOP):

- To achieve abstinence
- To foster behavioral changes that support abstinence and a new lifestyle
- To facilitate active participation in community-based support systems (e.g., 12-Step fellowship)
- To assist clients in identifying and addressing a wide range of psychosocial problems (e.g., housing, employment, adherence to probation requirements)
- To assist clients in developing a positive support network
- To improve clients' problem solving skills and coping strategies

Research Question

What benefits could an equine assisted therapy program provide for individuals in a level II, Intensive Outpatient Program (IOP) in interior Alaska?

**Equine Assisted Psychotherapy:** On-ground activities with psychotherapeutic goals, guided by a mental health professional, horse specialist, and collaboration with equines.

**Equine Assisted Learning:** On-ground activities with personal development and/or learning goals, guided by a mental health professional, horse specialist, and collaboration with equines. Not necessarily classified as therapy.

**Therapeutic Riding:** Mounted activities with physical, psychotherapeutic, and/or learning goals. Guided by riding instructor, and/or horse specialists.

Equine Assisted Therapy and Resiliency

Resiliency is described as a "process of coping with stressors, adversity, change or opportunity in a manner that results in the identification, fortification and enrichment of protective factors" (Bernard, 2004).

- Equine assisted therapy facilitates social competence, problem solving, autonomy, sense of purpose, self-confidence, self-esteem, relationship skills, emotional regulation, as well as providing opportunity for other protective factors.
- Horses are known for providing clear boundaries with approach/avoidant/assertive behavior in response to others in their environment.
- Therapeutic benefits for individuals who participate in equine assisted activities include a reported increase in sense of well-being, increased self-esteem, and enhanced emotional regulation.
- Horses have been described as having the ability to give immediate, non-verbal "feedback" to their human counterparts, which has been correlated with significant benefits when treating persons with anxiety, depression, and/or trauma.
- Engagement with horses provides a natural opportunity to offer care and support, increase bonding and connectedness, engage in meaningful participation, practice boundary setting, and communicate expectations.
- Participants in equine assisted activities are presented information about their own behavior, experientially, that can be received more openly.

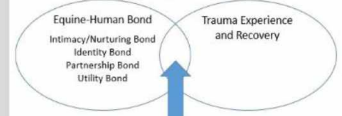
Resiliency Wheel

Building Resilience and Mitigating Risk Factors in the Environment (Adapted from Henderson et al., 2000; Henderson & Milstein, 2003)



Nature of the Horse-Human Alliance

(Adapted from: Yonke et al., 2008)



The therapeutic alliance occurs where the two major categories come together. It includes both human and horse contributions.