

THESIS

A THEORY-DRIVEN LOGIC MODEL OF EQUINE-ASSISTED PSYCHOTHERAPY FOR
AT-RISK YOUTH

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ABSTRACT

A THEORY-DRIVEN LOGIC MODEL OF EQUINE-ASSISTED PSYCHOTHERAPY FOR AT-RISK YOUTH

Mental health issues among adolescent and young adult populations are highly prevalent. Mental illness can impact long term success and puts individuals at risk of negative quality of life outcomes. Equine-assisted psychotherapy for at-risk youth is intended to support the development of important life skills and mitigate the risk factors one may be facing. The purpose of this study was to assess an equine-assisted psychotherapy program for at risk youth, the Equine Assisted Life Skills Training (EALST) program, using the structure of a theory-driven logic model.

Using a qualitative description approach, I developed a theory-driven logic model to understand the underlying aspects of the EALST program. The aspects included the theoretical assumptions, resources, activities, outputs, outcomes, and impact of the program. I conducted semi-structured interviews with eight program stakeholders, with the questions aimed at explicating stakeholder's conceptualizations of each of these logic model categories.

The results of the analysis of these interviews were mapped into a logic model format. This particular type of logic model focused on elucidating the theoretical assumptions of the program stakeholders in order to develop existing program theory. These theoretical assumptions, along with the other aspects of the logic model, will support the program providers in further developing their working theories and more effectively implementing the program. Next steps include identifying measures of hypothesized outcomes in order to test and further refine the identified program theory.

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DEDICATION

This thesis is dedicated to my mom and dad, as well as my boyfriend, Sawyer Haak. Mom and Dad, thank you for instilling in me a deep curiosity about the world and a desire to ask questions. I have chosen a path that prioritizes caring for others because the examples you set. Sawyer, thank you for supporting me all the millions of times that I couldn't see the light at the end of the tunnel of this project. I often thought I'd never say this, but I made it!

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CHAPTER ONE: INTRODUCTION

The purpose of this thesis is to develop a theory-driven logic model of a novel program of equine-assisted psychotherapy, called the Equine-assisted Life Skills Training Program. This thesis begins with a statement of the necessity to address youth mental health concerns, an overview of equine-assisted psychotherapy and its potential usefulness for youth, and a description of the methods used to analyze a current psychotherapy program for at-risk youth. The results of this thesis include the creation of a theory-driven logic model analyzing the details of the Equine-Assisted Life Skills Training, a psychotherapy program for at-risk youth in Denver.

Statement of the Problem

Description of Adolescent and Young Adult Mental Health

Mental health issues among adolescent and young adult populations are highly prevalent and require timely intervention. According to the World Health Organization (WHO; 2019), an estimated 10-20% of individuals globally ages 10-19 have serious mental health conditions. These conditions can include depression, anxiety, bipolar disorder, eating disorders, post-traumatic stress disorder (PTSD), and others. Each of these conditions comes with its own difficulties. It is necessary to address these conditions early on to help prevent further health issues and less fulfilling lives in adulthood. It is common for behavioral and emotional issues that develop in adolescence to continue into adulthood (Hofstra, et al., 2000). Additionally, the social, mental, and behavioral functional impairments associated with mental illness have an impact on success in school, social relationships, skill building, etc., each of which is integral to meeting important developmental milestones of adolescence and young adulthood. Depression in adolescence has been found, for example, to be linked with higher odds of dropping out of high school, unemployment, teen pregnancy, and long-term socioeconomic consequences (Clayborne et al.,

2019). Thus, to promote success and prevent negative outcomes later in life, it is important to find ways to effectively address adverse mental health conditions.

When compared to their healthy peers, youth with mental illness face greater adversity. Owing to this greater adversity, these teens and young adults are considered *at-risk*, meaning that they are particularly vulnerable to experiencing negative outcomes later in life. The greater adversity that at-risk youths face stems not only from challenges associated with mental health conditions, but also from a variety of other issues. Often referred to as adverse childhood experiences (ACEs), these other issues can include environmental risks such as poverty or low socioeconomic status (SES), decreased access to healthy food, or being of a minority race or ethnicity (Burton, 2011). ACEs can also refer to microsystemic risks, which can include witnessing or experiencing abuse or neglect, having a relative incarcerated, or loss of a parent or caregiver (CDC, 2020). Known as a cumulative risk, as the risk factors individuals are exposed to increase in number, so too does the likelihood that they will experience negative outcomes in an additive or sometimes exponential manner (Masten et al., 1990).

Youth dealing with heightened numbers of risk factors require increased access to resources that serve as protective factors. Protective factors help to moderate the negative effects of an individual's risk factors; these can include access to quality education, quality health care services, supportive social groups, or a supportive adult (Masten et al., 1990). Protective factors can also include more targeted programs that help at-risk youth develop resiliency and emotion regulation skills (WHO, 2019). However, often due to their low SES among other factors, at-risk youth have less access to needed resources than their higher SES and less at-risk peers. It is therefore necessary to develop programs that meet the needs of these at-risk youth to better support them.

Resistance to intervention

To meet the needs of at-risk youth, it is necessary for youth to be fully engaged and willing to participate in intervention. If psychotherapy is mandated, it is often met with ambivalence or resistance (Sommers-Flanagan et al., 2011). Resistance can be defined as any aspect of behavior or thought processes that interfere with a teen or young adult's ability to completely engage with the therapeutic intervention (Leahy, 2012). This resistance could be for a variety of reasons, including difficulty trusting adults due to negative past experiences or a lack of autonomy or control in the therapeutic relationship (Sommers-Flanagan et al., 2011). Many behaviors and thinking patterns that are related to resistance are typical in the developmental stage of adolescence, including creating a sense of autonomy and identity.

Youth who have experienced trauma or been exposed to abuse or neglect may be particularly resistant to intervention and hesitant to interact with and trust adults in general (Ekholm Fry, 2019). This fear-based resistance and hesitancy can adversely impact the therapeutic relationship that youth develop with providers. Because a positive therapeutic relationship is a key to the success of an intervention (Mueller & McCulloch, 2017), providers need to be aware of this tendency to resist, let it be, and try to find ways to increase their engagement (Sommers-Flanagan et al., 2011). A promising way to promote youth engagement in therapeutic intervention may be to incorporate horses into psychotherapy sessions.

Introduction to Equine-Assisted Psychotherapy

Equine-assisted psychotherapy (EAP) is an innovative therapeutic intervention involving the use of horses during psychotherapy sessions. EAP is provided by licensed mental health professionals, including psychologists, social workers, marriage and family therapists, or other types of counselors. When compared to the broad array of therapeutic services involving horses,

EAP has a unique perspective that focuses on the psychological needs of the client (Bachi et al., 2012). EAP can be useful for a variety of psychological concerns and is a dynamic form of therapy that addresses the complexities of each client, not just a single issue at a time.

EAP programs are often provided following the guidelines of EAGALA, a professional association that focuses on EAP. According to EAGALA, horses are an additional member of the psychotherapy team (Thomas, 2011). Team members include the mental health professional, who is responsible for treatment planning and execution, and the equine specialist, who is responsible for ensuring the horse's and client's safety during sessions, and the horses themselves. According to EAGALA, horses in EAP sessions are often used as a metaphor for the experiences clients may be having in their own life, reflecting on the emotions with which they are dealing. Equine-assisted services also commonly implement standards set by the Professional Association of Therapeutic Horsemanship, International (PATH, Intl.). This organization certifies riding instructors that provide therapeutic riding as well as accredits facilities that provide equine-assisted services. PATH Intl. has roots in providing services for those with physical disabilities. Their standards focus on ensuring the safety of participants, providers, and horses involved in equine-assisted services.

Research on EAP has displayed various benefits of including horses in psychotherapy sessions. For at-risk youth, these benefits include increased engagement, self-esteem, internal locus of control, positive affect, among other positive outcomes (Roberts & Honzel, 2020; Trotter et al., 2008; Wilson et al., 2015). Youth participating in EAP have also worked on important socioemotional skills, including empathy, emotion awareness and regulation, creativity, critical thinking, and teamwork (Wilson et al., 2015). Each of these skills is necessary to help promote resilience and increase the likelihood of positive life outcomes. In addition, youth participating in

EAP have demonstrated increased engagement in important life roles. For example, according to Wilson et al. (2015), teachers reported that students in an EAP program displayed increased interest in leadership roles and improvements in reengaging with school.

There are multiple theories as to why EAP is effective. Increasing engagement is one of the most commonly reported mechanisms of change related to EAP. According to Trotter et al. (2008), EAP provides clients with a setting in which they are more motivated to attend, participate, and cooperate. Having a setting that is conducive to full engagement is necessary if a therapeutic intervention is to be effective. The experiential nature of EAP means that clients directly interact and work with horses as an inherent part of the structure of the session. Working with horses directly can provide clients with a unique experience because, as prey animals, it is thought that horses can sense the intentions and emotions of the client based on body language and other cues (Hamilton, 2011). Seeing a horse's reaction to behavior is a simple way to show clients how their behavior affects those around them separate from the social context of human-to-human interaction (Wilson et al., 2015). Interacting with horses does not hold the same meaning to clients as interacting with another human might, therefore generating a less judgmental environment, encouraging participation (Wilson et al., 2015).

The assumption that interactions with horses do not hold the same meaning as interacting with a person stems from attachment theory, a theory of development that may explain some of the underlying functions of EAP (Beetz, 2017). Attachment theory states that during childhood, individuals are developing attachments to their primary caregivers, ideally forming a secure relationship that offers the child protection and support (Bowlby, 1969). Based on the relationship that is developed, a child will generate an internal working model of what to expect when they interact in other close relationships. If a child's attachment to a caregiver has been primarily secure,

meaning they are able to trust the caregiver and use them as a safe base for exploration, then this attachment style is likely to translate to other relationships (Bowlby, 1969).

If a child's attachment with their caregiver is insecure, then this insecure attachment style will carry over to future relationships (Bowlby, 1969). A child is expected to develop an insecure or disorganized attachment if they are exposed to dangerous or stressful environments and their caregiver does not offer effective ways to help decrease the amount of stress the child experiences. The internal working model these children then develop can vary, but they typically have more difficulty trusting adults and finding support in close relationships (Bowlby, 1969). These insecure or disorganized internal working models are thought to be related to the resistance seen in interventions for teens and young adults who have experienced highly stressful events or trauma (Beetz, 2017).

Beetz (2017) hypothesized that internal working models of close relationships do not necessarily translate to relationships with animals. In other words, individuals with insecure or disorganized attachment styles could still be expected to be able to form a secure relationship with an animal, allowing for more vulnerable acts such as trusting and touching. This physical contact can offer a means of reducing stress, necessary for those who have experienced trauma or are at-risk. Interacting with animals in other ways, including caring for them, is another means of stress reduction (Beetz, 2017). The context in which this stress reduction occurs then offers an opportunity to work on a variety of other skills, including building trusting relationships with others (Ekholm Fry, 2019). In the case of EAP, the goal would be to develop a trusting relationship with the therapist, encouraging vulnerability in a safe setting (Ekholm Fry, 2019).

Another theory as to why EAP is beneficial is biophilia (Beetz, 2017), which can be defined as the inherent interest of people to engage in natural contexts (Wilson, 1984). This interest in

nature is thought to stem from an evolutionary desire to feel safe and have a sense of security. Feeling secure can be achieved by observing the behaviors of animals in the surrounding area. If an animal is exhibiting calm, resting behaviors, this is a signal to the human that there are no immediate threats in the environment. Research has shown that being in the same space as an animal can have calming effects, with these effects only increasing if the person has the opportunity to interact with and pet the animal (Beetz, 2017). Again, finding ways to reduce stress is important for many at-risk youth.

Limitations of research on EAP

Even with the benefits and theories of action that have been investigated in relation to EAP, the limited research on EAP for older adolescents and young adults dedicates insufficient attention to progressive scientific development. While there is no set line between simple and complex interventions, EAP interventions would likely be considered complex (Craig et al., 2013). The Medical Research Council defines a *complex intervention* as any intervention that has several interacting components and unique characteristics. Some of these characteristics include the number and difficulty of behaviors being addressed or the amount the intervention can be tailored to an individual. According to Craig et al., when developing and evaluating a complex intervention, it is necessary to follow key early tasks to ensure all aspects of the program are sufficiently explicated. One key early task is “identifying and developing theory” which includes “the rationale for a complex intervention, the changes that are expected, and how change is to be achieved” (p. 589). Research on EAP for older adolescents and young adults has often failed to fully elucidate key elements of the intervention, and how those key elements lead to intended outcomes. In the case of the EAP program that is the focus of this thesis, the key intervention elements, hypothesized mechanisms of change, and hypothesized outcomes have not yet been fully

explicated. Therefore, this thesis is situated within the key early stage of scientific development focused on identifying and developing the program theory, in order to support future practice and research of the program.

Introduction of Logic Models

A useful tool to further elucidate details and theoretical underpinnings of an intervention is a logic model. Previous research in the field of mental health has displayed the potential utility of creating a logic model for understanding and developing psychological intervention, pointing to its value in evaluating an EAP program (Lando et al., 2006). According to the W.K. Kellogg Foundation (2004), a logic model can map how a program functions by means of connecting its theoretical assumptions to its desired outcomes.

The elements typically included in a theory-driven logic model are theoretical assumptions, resources, activities, outputs, outcomes, and impact. A necessary aspect of a theory-driven logic model are the underlying *assumptions* of the intervention (W.K. Kellogg Foundation, 2004). Also known as program theory, these assumptions are any beliefs or principles that function as the foundation for why and how a program is provided. These beliefs or principles can include presumed benefits of the program or knowledge about the population of interest (McLaughlin & Jordan, 2015). The goal of this type of logic model is to detail often unwritten theories upon which program stakeholders are functioning and clarify how theory may relate to desired or achieved outcomes. *Resources* include any individuals, organizations, financial input, etc. that is dedicated to creating and running the program. If a program does not have access to a necessary resource, this would be considered a *barrier*. Depending on the resources and barriers a program faces, providers of a program will be able to offer certain aspects of their activities. An *activity* is any tool, event, or action used intentionally in preparation for or during the session with the aim of

achieving certain results. An example of an activity provided by an EAP program could be grooming the horse during the session with the intention of developing a bond with the horse.

The model logically follows from one step to the next, meaning if the program has access to the necessary resources, then the providers will be able to deliver the desired activities. If the activities are done according to the theoretical assumptions of the program, then those activities should be able to achieve their desired outputs. The *outputs* of a program are the direct results, including the number of participants served, the number of sessions provided, etc. Depending on the activities provided and the outputs achieved, a program aims to have specific outcomes. These *outcomes* include any change to the participant behavior, skills, or level of function as a result of the interventions. Outcomes are measured in the short and long-term, with an intervention hopefully having lasting effects. A goal of an intervention is also to have an overall impact. An *impact* is any change to a community or organization that may occur as a result of the programs outcomes.

Developing a logic model provides the necessary clarification of the details of a program, laying a foundation for future studies of efficacy and effectiveness. A logic model for an EAP program tailored to at-risk youth could also help to build a common understanding of how this type of intervention functions, providing a useful roadmap for practitioners.

Program Focus and Research Purpose and Questions

The Equine Partnership Program (EPP) is a non-profit organization that offers EAP in the Denver metro area. Created by Lee Dudley, a licensed professional counselor, EPP provides EAP primarily for at-risk youth, including children who have experienced abuse or neglect. One of the programs that EPP provides is accomplished through a collaboration with the Denver Public Schools (DPS), specifically DPS's Transitions program. The DPS Transitions program was

developed to support students ages 18-21 with an Individualized Education Plan (IEP). A student with an IEP typically has difficulty with some form of disability, whether that be physical, cognitive, emotional, or otherwise. The goal of the DPS Transitions program is to provide students the additional support and skills they require prior to graduating from high school. For individuals with disabilities, the transition out of high school is often considered the shift from adolescence to adulthood (Redgrove et al., 2016).

For the purposes of this paper, the program run collaboratively by EPP and the DPS Transitions program will be referred to as the Equine-Assisted Life Skills Training program (EALST). The EALST aims to provide students with additional skills they will require in their transition into adulthood; these skills include collaboration, communication, emotional awareness and regulation, and other socioemotional skills. While still considered at-risk youth, the individuals participating in the DPS Transitions program are a unique population in that they are older adolescents and young adults, an age group that has very rarely been addressed in research on EAP. The purpose of this study is to develop a theory-driven logic model based on the EALST program to further understand the theoretical assumptions that function as the basis for the program, along with details about how the program functions.

Research Questions

1. What theoretical assumptions does EALST function on?
2. What resources does EALST require to function?
3. What activities does EALST provide?
4. What are EALST's direct outputs?
5. What are EALST's overall outcomes?
6. What impact does EALST have on the community?

CHAPTER TWO: METHODS

The research approach was qualitative description. Qualitative description is a low-interference form of qualitative research that allows the researcher to describe an event or experience as objectively as possible and, thereby, capture the unique aspects of an event that make it what it is (Sandelowski, 2000).

Participants

Participants in this study included eight stakeholders of the EALST program. Stakeholders included two providers of the psychotherapy sessions, one school employee who helps facilitate the relationship of the EALST program with DPS, and five other employees and volunteers at the study site who help to support and manage the program. Recruitment was conducted via email, beginning with stakeholders most heavily involved with the program. A snowball sampling method was used, adding research participants via recommendation from the central program staff. These participants included any individuals the program staff believed to have adequate knowledge about the program and that may have unique perspectives on how the program functions. To be included in the research study, stakeholders needed to have been involved in the intervention program for at least one year. This criterion helped ensure depth of knowledge in the details of the program.

Informed consent was obtained from each stakeholder prior to beginning interviews. Consent and all other methods were done in accordance with the research protocol approved by the CSU Institutional Review Board. All stakeholders are referred to by initials. Initials have been changed for stakeholders who requested confidentiality; stakeholders who requested to be credited for their participation in this study are referred to by their true initials and thanked in the acknowledgement section.

Table 1

Pseudonyms and Brief Descriptions of Stakeholders

-
- LD: primary provider of mental health services for EALST program
 - MS: PATH Intl instructor working with EALST program
 - MW: DPS Transitions program staff
 - DM: Administrative staff at TGEC
 - AW: Administrative staff at TGEC
 - AA: Volunteer for EALST program
 - JY: Volunteer for EALST program
 - KA: Volunteer for EALST program
-

DPS: Denver Public Schools; EALST: Equine-Assisted Life Skills Training; TGEC: Temple Grandin Equine Center

Data Collection

The primary method of data collection was interviews with EALST stakeholders. I also reviewed program documents.

Interview Procedure

I conducted all interviews via Microsoft Teams, a virtual meeting platform, for the safety of the research participants, as interviews occurred during the COVID-19 pandemic. Owing to COVID-19, I began interviewing stakeholders several months after the program had most recently been run. Initial interviews occurred from November 2020-February 2021. Follow-up interviews occurred May-July 2021. Each interview typically lasted approximately 60-90 minutes. Interviews were audio-recorded and then sent to a professional transcription service to be transcribed. Transcriptions were uploaded to NVivo, a qualitative analysis computer program (QSR International, 2020), for analysis.

Initial Interviews

I conducted initial *semi-structured interviews* with stakeholders to understand their perspectives on each aspect of the logic model as it relates to the EALST program (See Appendix A). The interview questions were developed to address each area of the logic model as well as to

understand the relationships between the areas. Questions that are bold in the interview guide are those that I asked every stakeholder. Depending on the expertise of a particular stakeholder, I also asked follow-up questions during the initial interview, in addition to those in bold on the interview guide, to ascertain as much detail as the stakeholder could provide on a given topic. Some of these additional questions are included on the interview guide. I also asked questions ad lib as appropriate in the interview. Interview questions were not provided to the stakeholders in advance unless specifically requested.

Member Checking and Follow-Up Interviews

After completing the first round of coding with each interview, I contacted the stakeholders to schedule a follow-up interview. Seven stakeholders participated in follow-up interviews; one participant declined to participate in the follow-up interview due to scheduling. Follow-up interviews consisted primarily of member checking, offering stakeholders the opportunity to review their previous answers and affirm, alter, or add detail to my initial analysis. I conducted this second round of interviews to ensure that my understanding of their responses was consistent with their understanding, and to capture any changes to their answers that had occurred over time. For each individual, my interview guide consisted of concepts I noted within each category of the logic model that they had described in their initial interview. I then asked for any additional information they could provide about their impressions of community impact and their future goals for the program.

Program Documents

In addition to conducting interviews, I also collected *program documents* from program staff, including the curriculum the program uses and the program proposal written by the staff for the school district. These documents included details of the program purpose and a general weekly

session structure. MS also provided information about “developmental assets” she and LD used in creating their curriculum, which are research-based skills and resources identified by The Search Institute that support children to be “healthy, caring, and responsible” (Search Institute, 2006, p. 1). The developmental assets document includes details about both internal and external supports critical in this developmental stage.

Data analysis

Qualitative content analysis is the data analysis method of choice in qualitative description. For this study, I used one form of qualitative content analysis, known as *theoretical thematic analysis* (Percy et al., 2015). As next described, this analytic method begins with deductive analytic approaches and progresses to inductive analytic approaches.

As outlined by Percy et al. (2015), researchers deductively derive pre-determined categories—or *themes* as that term is used in theoretical thematic analysis—from their study’s a-priori theoretical assumptions and research questions. I accordingly deductively derived the following codes directly from research questions, each of which represents a broad element of a theory logic model: theoretical assumptions, resources, activities, direct outputs, outcomes, and impact on the community of the program. I entered and defined each of these codes in NVivo as *parent codes*, meaning these codes served as categories for related information in the data to be organized under. I then combed through all collected data to find information that corresponded with the parent codes, sorting identified information into the pre-established parent codes as warranted.

I then generated inductively derived codes from the data. These codes took the form of both child codes and additional parent codes. *Child codes* are sub-categories related to any recurring concepts within the previously generated parent codes. These child codes allow for more

efficient organization of the data and help display the most important concepts revealed in the data related to the pre-derived codes. For example, under the “resources” parent code was the child code “facility”. I created new parent codes for information that arose from the data that did not fit with any of the pre-existing parent codes. These inductively derived parent codes were intended to reflect events or concepts that occurred outside the confines of the pre-derived categories, keeping analysis as close to the data’s original meaning as possible.

During my data analysis process, I followed Glaser and Strauss’ (1967) three steps of qualitative coding, including open, axial, and selective coding. Open coding involved breaking apart the text into its component parts and determining what information fit into which categories. I read and re-read stakeholder interviews several times, determining what information could be categorized into the parent codes deductively derived from the logic model. This open coding stage primarily served to place data into the broad parent codes and provide brief descriptions of what existed in the data.

I continued into the axial coding process, which involved making connections as they emerged across interviews and developing themes. I created theme child codes and parent codes and narrowed down the number of concepts, engaging in reflective activities such as writing memos throughout.

I then completed selective coding, which involved connecting the generated categories together and organizing them into a unified format. I did this through creating a concept map, which served as a rudimentary first draft of the logic model figure. This process allowed me to understand the larger picture of how concepts related and narrow down what themes were the most relevant to be included in the model. For example, I was able to consolidate codes about the clinician, volunteers, and other support staff into one code of “personnel”.

Trustworthiness

To ensure the quality and trustworthiness of this research, I followed a variety of strategies. According to Savin-Baden and Major (2013), the four necessary criteria in qualitative research to confirm trustworthiness are credibility, transferability, dependability, and confirmability.

To achieve credibility, results of the research must be believable, accurately reflecting the reality of the participants (Savin-Baden & Major, 2013). In this study, credibility was attained by completing member-checking with the participants, and through triangulation of data. *Member-checking* involves participants in the research study validating the researcher's understanding of the data. I conducted member-checking through follow up interviews. These interviews served as an opportunity for participants to review previous answers to the research questions and offer new perspectives if their answers had changed.

I also used triangulation as a method to ensure credibility. The process of *triangulation* involves cross-examination of multiple sources of data. Using cross-examination, a researcher aims to ensure that any categories generated during analysis are confirmed by multiple data sources. I used triangulation in two ways. I used triangulation of participants, meaning I interviewed multiple participants and cross-examined the information they provided. I also used triangulation of data sources, which included cross-examination of interviews and program documents.

To achieve transferability, research findings ideally have applications to other settings or circumstances (Savin-Baden & Major, 2013). This was accomplished by providing a dense description of the research context. Using the structure of a theory-driven logic model, I described the intervention in detail, outlining the necessary components for others to be able to determine how transferable the findings of the study are to another context.

To achieve dependability, the goal is to have research results that will endure over time (Savin-Baden & Major, 2013). To ensure enduring results, dense description of the context of the research is required. Any changes that occur during the research, including changes to the participants, program, or any other contextual issues must be documented. A method to be more certain about dependability is to experience the research over an extended amount of time. An extended amount of time spent in the research field means the researcher will have had sufficient time to recognize if any changes have occurred or are likely to occur. In this study, I conducted interviews several months apart, giving stakeholders the opportunity to describe any changes that had occurred to the program and their perspective of it across a longer span of time.

To achieve confirmability, a researcher must remain as neutral as possible, meaning the results of the study could be confirmed or agreed upon by others. A method for achieving confirmability is for the researcher to preemptively offer a statement on their position, role in the research, and potential biases. Qualitative research always involves some amount of interpretation, but the goal of a positionality statement is to provide information about how they assume they may be influenced during the research process. I included a positionality statement to detail my previous experience with the population involved in the program and any preemptive assumptions I had about the program at the outset of this research. Throughout the research process, I remained reflective about how my perspective as a student of occupational therapy would affect my interpretation of the data. I consistently asked myself questions about how an occupational therapists perspective may differ from concepts discussed in interviews and asked many follow-up questions in interviews to ensure data would reflect a psychotherapy perspective.

In effect, the trustworthiness strategies employed were intended to develop validity. Two types of validity were priorities in this study, including descriptive and interpretive validity.

Descriptive validity is the accuracy of the factual information being reported by researchers (Johnson, 1997). I used triangulation and rich description of the context of the research to support my descriptive validity in this study. Interpretive validity describes the accuracy of the meaning of participant statements portrayed in the research (Johnson, 1997). I completed member checking in each of my follow-up interviews with stakeholders to ensure the accuracy of my understanding of their original viewpoints.

Positionality Statement

I have been involved in the world of animal assisted interventions since 2012, working primarily with pediatric populations, using both horses and dogs. My motivation to practice in this area is what led me to pursue occupational therapy, after completing undergraduate degrees in equine science and human development and family studies. I have also been passionate for a long time about the concept of prevention of negative outcomes for at-risk youth and how to promote resilience. I began occupational therapy school knowing I was interested in these areas and determined to find a way to learn more about interventions that include animals.

I am a student of occupational therapy. Occupational therapy functions on different frames of reference, models, and perspectives than psychotherapy. Throughout this project, I aimed to understand this program as much as possible. However, I am not a psychotherapist and therefore may have interpreted data differently than an individual in that field would. Developing a logic model about this program can not only support this innovative practice area, but it also helped me develop my understanding of what occupational therapy's role would be with this population in similar interventions incorporating animals. As I came into this study, I was aware that because of my background, I have certain biases about different therapeutic perspectives, programs for at-risk youth, and interventions that incorporate animals. I believe that interventions designed to support

at-risk youth and incorporate protective factors are beneficial. I also believe that animal-assisted interventions can help a wide range of clientele and that youth can benefit from participating in this type of programming. I was continuously aware of these biases throughout the project and employed strategies to minimize this bias where possible.

CHAPTER THREE: RESULTS

Results from the data analysis were mapped into the logic model format (Figure 1), with descriptions of the findings below. The results include details about the six major categories of the theory-driven logic model: theoretical assumptions, resources, activities, outputs, short- and long-term outcomes, and community impact. In addition to these categories, stakeholders also provided information about the program's origination and context, both of which are necessary to understand why the program functions the way it does.

Program Description and Context

This school-based EALST program is provided by EPP in partnership with the DPS Transitions program. The participants are generally high school students at North High School between the ages of 18-21 years old. This program supports students with a wide range of disabilities including Autism Spectrum Disorder, Intellectual or Developmental Disorders, visual impairments, or emotional or behavioral disabilities. The only requirement to engage in the DPS Transitions program is having an IEP within the school system. Students are selected to participate in the EALST program by the school staff. Diagnostic information is not provided to EALST staff by the school. The curriculum for the program is therefore not designed to address any specific diagnosis; rather, it is intended to provide skills that will be supportive to a variety of participants.

In addition to any adverse health conditions these students may have, program participants generally are facing several environmental risk factors in their daily lives. For example, they are often dealing with challenges such as abusive or neglectful home lives, insufficient healthcare, poverty, housing insecurity or homelessness, and many others. These challenges were involved in the

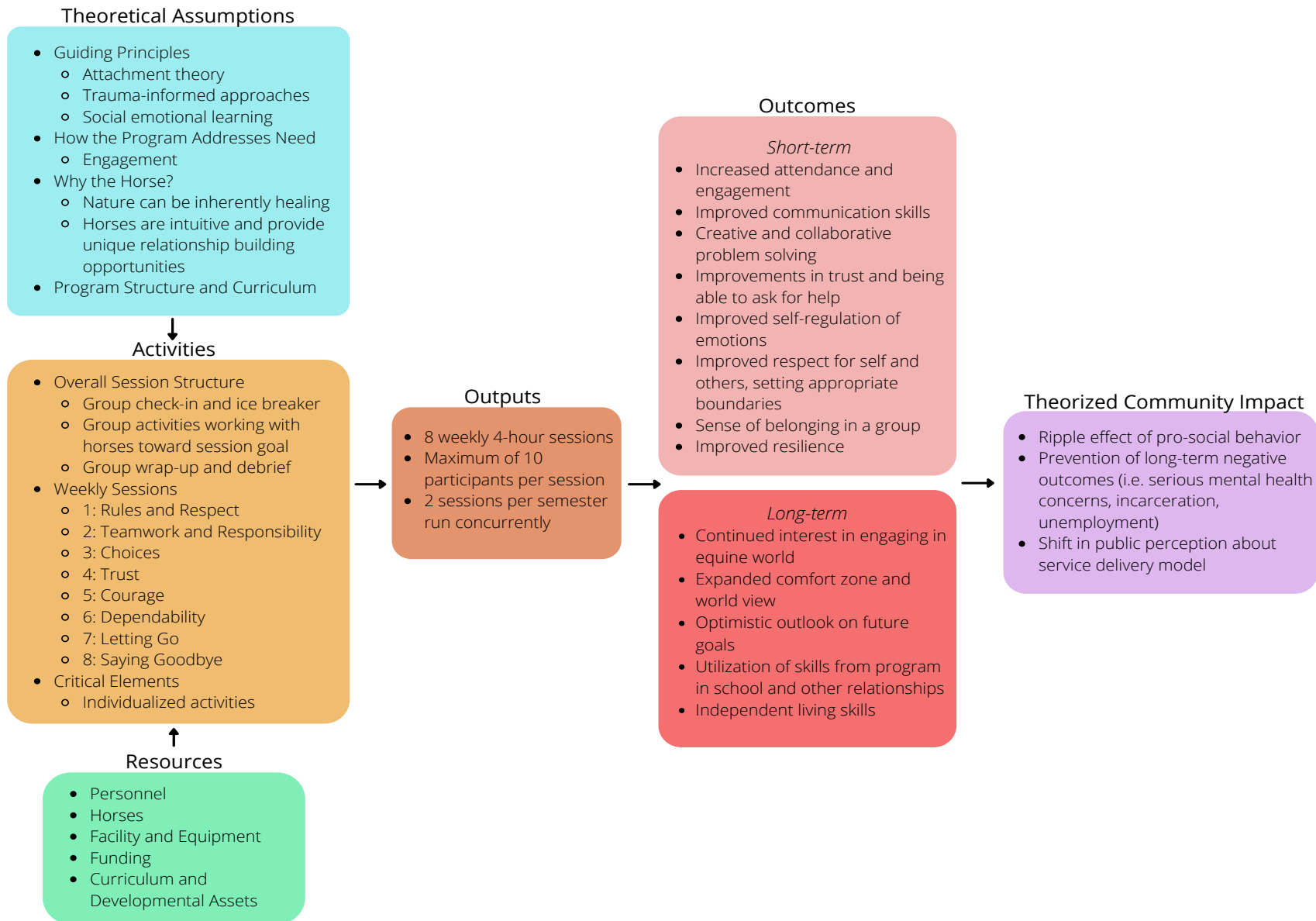


Figure 1. Logic Model of the EALST program

reasoning to prioritize supporting inner-city youth with this program.

“I mean most of these kids are coming from a really impoverished background. I don’t know if you know anything about the [Adverse Childhood Experiences] scale. I’m sure the whole – these kids are impacted on every area from nutrition to healthcare to you know. It’s just kind of across the board so... I would rather be able to bring these programs to kids who are really impacted on all of those scales... To me I feel like the inner-city kids are so much more need based.” – LD

The program is held at the Denver location of CSU’s Temple Grandin Equine Center (TGEC). This partnership began as a result of previous professional networks within the equine industry. Included in the mission of the TGEC is to support the local Denver community. TGEC staff felt there was an opportunity to work towards this goal by including a service aimed towards mental health in addition to other occupational and physical therapies offered at the facility.

Theoretical Assumptions

Stakeholders discussed several theoretical assumptions that influence how the EASTL program is delivered, including: 1) *guiding principles* that inform the providers’ thinking, 2) use of horses to increase participant *engagement*, and 3) providers’ understandings of *why horses* are incorporated into the intervention.

Guiding Principles

The practitioners in this program were informed by practice-based expertise and also drew from several different theories and approaches, including Attachment Theory, trauma informed approaches, and social-emotional learning.

LD reported that attachment theory can be a useful tool to understand the foundational relationship skills an individual may have and how that could carry across different environments. She delineated that the participants are not necessarily assumed to be making an attachment to the horse they are working with; however, the horse can be used as a tool to determine what interaction styles are supportive or hindering to building relationships.

“I come from a really strong attachment-based background because I really believe that attachment and the theories of attachment really apply across the board, especially for kids that are coming out of some somewhat challenging family situations in this demographic.

What we’re working on with the equine piece is not necessarily getting the kid to attach to said animal...They’re practicing the skills that they need to be able to take back home to be able to work on their attachments in the human world. It’s more kind of skill based to be able to pull those skills over into their human relationships.” -LD

LD suggested that carrying out interactions with horses, witnessing the impact the horses have, and being able to reshape behaviors in the moment can be an effective way to help participants generate better relationships outside of the therapy setting.

These concepts are closely tied to social-emotional learning (SEL). AA defined SEL as a framework that aims to support youth in developing a better understanding of their emotions and how to effectively regulate them.

“It’s helping them to adapt their emotional management, and to learn healthier ways to express...It really affects all aspects of their lives because when they’re able to emotionally regulate themselves, then they’re able to have healthier relationships within their family...Then on a community level, it’s very impactful and then even as far as improving their grades because their whole outlook just kind of shifts.” -AA

AA described that SEL is a framework utilized in the program to help develop emotional awareness and regulation skills while interacting with the horses and each other. Several of the goals of the program are closely tied to those of SEL, including building trusting relationships, developing a sense of agency, and making responsible decisions.

Additionally, LD and program volunteers described the necessity of utilizing trauma-informed approaches while working with this population. The participants often come from histories of trauma and may have increased difficulty with aspects of trust and regulation as a direct result. Understanding how trauma may impact behavior within the program is needed to prevent retraumatization, develop therapeutic rapport with the participants, and be able to progress towards goals.

Engagement

In addition to guiding principles, stakeholders also discussed the theoretical assumption that horses are used to increase participants' engagement in the therapeutic process. Stakeholders of this program described the overall aim of utilizing horses with this population as a means to increase engagement in the therapeutic process. Resistance to intervention was described as a challenge with this population and having participants in the equine environment encourages them to engage more fully, meaning they may be more readily able to meet therapeutic goals. LD and TGE staff believed an increase in engagement was related to several factors, both directly involving the horse as well as based upon the general structure of the program. LD felt that in contrast to her office setting, participants were potentially more readily able to develop therapeutic rapport in the equine environment because they were being faced with an immediate challenge aside from their own self-protective mechanisms.

"In an office setting...you're one on one. There's a lot of eye contact. These are all things coming from the trauma perspective as well as the attachment perspective, all of those things are a threat like right the minute they walk in the door..."

"When you hand them a horse...I've handed them something that's kind of a threat to their safety. Now it's this thing that weighs eleven hundred pounds and they don't know what to do. That's a bigger threat to their safety than I am and I'm the person that can help them. It changes the relationship so fast...Now we can start because now the therapeutic relationship is already in a place where [they need help] ...In an office that would take so long to build any sort of trust or rapport that they would actually need my help." - LD

When participants were faced with a horse, they were often inherently driven to engage and find ways to be successful in their interactions with the animal. Stakeholders seemed uncertain as to why participants are more engaged in the equine environment, but provided several hypothesized reasons. It was agreed upon that this setting is generally highly reinforcing for most participants. As alluded to in the quote above, EPP staff and volunteers suggested that for many of the participants, this is the first interaction they have ever had with an animal of this size, hence

why it may feel threatening or challenging. The novelty of this experience supported their interest in interacting as well as their comfort in asking for help, as they did not feel it was an area they were already supposed to understand. They were pushed out of their comfort zone in a setting in which it was made clear that they can make mistakes. Participants were also given the opportunity to choose the horse they would like to work with, offering them a chance to make independent decisions and potentially an increased desire to persevere through challenging situations with their horse.

EPP volunteers referred to the horse as unique in that it can be trained and managed, but it retains a sense of wildness and unpredictability, particularly to those that have not interacted with horses previously. It is therefore impressive to the participants when the staff can help them with challenging situations with the horses. LD also described a common discussion with the participants about how the horse is choosing to engage in the session. The horse is a being with agency. It is able to leave if it so desires, but chooses to stay, therefore warranting respect and engagement from the participants. Each of these factors may contribute to increased participant engagement in the therapeutic process.

Why the horse?

In addition to the details described related directly to engagement, the stakeholders proposed other theoretical assumptions as to why using horses in this type of program can be successful. First, the program practitioners suggested that interacting with animals can have an inherently healing component, particularly for those who live in urban settings who do not typically have opportunities to interact with animals. Although the facility is located within the city of Denver, the equine environment still offers the opportunity to be in a more natural setting and interact with animals.

Five stakeholders suggested that because horses are prey animals, they are highly aware of changes in their environments and often react instinctively or intuitively. This intuition is related to many aspects of successfully working on building relationship skills in this setting. First, the horse picks up on and mirrors the emotional state of the participant, giving them the opportunity to see how their emotions affect those around them. For example, a participant may seem confident on the outside, but is experiencing challenging emotions such as fear or embarrassment internally. A horse will recognize the underlying emotions the participant is dealing with and react accordingly, displaying signs of fear or discomfort themselves.

“I make them talk to me about what they’re afraid of and try to be like, “You guys have to understand to be able to tap into what is happening to you internally. I know you’re afraid, and these things have to have congruency for the horses to be with you. Now, when we have congruency, the horses will be with you, and the people in your life will deal with you better.”-LD

If one is trying to hide their true emotions or is unaware of an emotion they are experiencing, the horse’s reaction to them can be used to help recognize what their true emotional state is.

Additionally, program providers and volunteers expressed that horses do not judge a person’s actions in the same way another person would, providing chances to make mistakes and try again. Horses tend to live in the moment, encouraging participants to do the same and practice skills in mindfulness. All of these in combination make the horse a uniquely qualified animal to integrate into psychotherapy aimed at supporting the social and emotional growth of participants.

Assumptions about Program Structure and Curriculum

Stakeholders also discussed theoretical assumptions that underlie how the program is structured and delivered. The program practitioners chose this population and group size explicitly to be able to work on social-emotional goals most effectively. In their view, the group format challenged participants to engage with their peers and learn to develop bonds with them, including

needing to trust them in this new environment in the various activities provided. Youth in this age group are more readily able to make those peer relationships than a younger group would be capable of, thus the choice of this age group. The practitioners in the program are intentionally generate an atmosphere of acceptance and offer many opportunities to make mistakes. Pre- and post-session discussions about the participants' goals and progress helps to maintain this trust within the group and allow them to learn.

Although there was a set curriculum for each week, what happened in each individual session depended heavily on what was happening with the participants that day and the interactions observed by LD.

"[The program] always had a course outline for every day, and it always changed because of that, but every group of kids was different. Every day was different, and you just had to go with it because you didn't know what was going to be handed to you. Somebody might be in a bad mood and not want to communicate, and you had to just deal with that, let it be okay." -KA

Informed by both practice-based knowledge and population-specific research, the program structure was intentionally created with enough built-in flexibility that each session includes unique conversations with other participants and interactions with the horses to offer a specific participant an opportunity to engage in the most supportive way for them.

Resources

The EASTL program relied on several resources including personnel, horses, facility and equipment, funding, and a curriculum.

Personnel

Several individuals were involved in the development and provision of this program. The primary service provider, LD, is a licensed professional counselor (LPC). Her career background has mostly involved working with at-risk youth, particularly those who have experienced trauma,

giving her ample expertise on the participants in the school-based program. Prior to pursuing a career in mental health services, she worked in the equine industry for several years. She also completed additional trainings in the model of the EAGALA and in an approach called Natural Lifemanship.

TGEC and EPP staff and volunteers described LD's personality as a specific asset. Her confidence with the horses as well as her ability to interact with the participants in a relatable way helped her to gain their trust and develop positive therapeutic rapport. Her practice-based expertise with this population has likely led to strengths in facilitating challenging conversations and engaging resistant participants, readily able to identify what a participant is facing in a given moment. She also was generally described as charismatic and approachable.

The other primary provider in the EALST program, MS, was certified as a therapeutic riding instructor through the Professional Association of Therapeutic Horsemanship, International (PATH Intl.). Her background included experiences with the population served as well. She and LD collaboratively developed the curriculum for the program. Both LD and MS commented several times on the benefits of their combined backgrounds and their ability to support each other during challenges within the program. This working relationship has been supportive of being able to confidently run this program and manage multiple students at once.

The EALST program was offered in partnership with DPS. Staff from the school district established the program in collaboration with EPP practitioners. Social workers, special education teachers, and paraprofessionals from the DPS Transitions program worked together to transport the students to the program, serve supportive roles during the program as needed, and advocate for the program to school administrators. One staff member, MW, was interviewed in this study. Maintaining this partnership with the school district was described as an integral piece of

continuing this program.

Other personnel included staff members and volunteers of the TGEC facility who maintained the health of the horses, managed the facility, and served in administrative roles. There were also volunteers from EPP who provided hands-on support during sessions as well as helped with other tasks such as grant writing and financial management.

Horses

MS and EPP volunteers also described the importance of having access to horses with the right attributes in the program. The horses utilized in equine-assisted services at the TGEC often have met demanding standards of health and behavior.

“Having safe horses was critical. These are all animals that were either owned or donated to the Temple Grandin program and then we would lease them or use them by the hour. But they were consistent animals that we knew, and that was really important to the program to have animals that you knew you could trust. It’s not a horse is a horse is a horse.” – KA

It was necessary the horses be safe and trustworthy when interacting with the participants. If a horse has unmanageable behaviors or is unpredictable, it is unlikely to be used for this type of program in which it interacts so frequently with so many people. Often in equine-assisted services, the toys and other equipment used may be stressful for a horse. Horses need to be trained to handle these items calmly and observed carefully to ensure they are not under high amounts of stress.

The horses involved in EALST came from varied backgrounds and each had unique traits and personalities. The program practitioners used this variety to their advantage in providing the participants the opportunity to choose the horse they want to work with.

“Our first day, we would introduce them to each horse, tell them their backstory, their personality, and each kid would pick which horse they felt a connection to for whatever reason; their color, their personality, whatever.” – MS

Allowing participants to choose their own horse provided unique challenges for each participant. For example, if a participant chose a horse that was pushy and liked to be in people’s

space, it was up to the participant to learn to set appropriate boundaries. This could occasionally become frustrating for the participants, but they often remained with their chosen horse because they felt connected to it.

The horses were generally leased to the facility and then used for several different types of programs with diverse demands. This made finding suitable horses particularly challenging. Demands for a program addressing mental health issues often involve more groundwork with the horses and call for more freedom of movement within the session. The horses needed to provide some challenge to the participants, but not be unsafe around them or other horses.

Facility and Equipment

Program providers also emphasized the importance of the facility as a necessary resource to run the EALST program. Equine facilities require certain critical elements in order to ensure the health and safety of the horses and provide a space that participants can work with these large animals. The Denver location of the TGEC includes outdoor pen spaces where the horses live during non-working hours, indoor pens and grooming spaces, indoor and outdoor arena spaces to work with the horses, a small conference room, offices and private meeting rooms, and a tack room. Each of these spaces serves an important role in being able to facilitate this program. For example, the small conference room served as a meeting space for the participants to come together at the beginning of the session and discuss plans as well as debrief at the end.

Equipment and supplies used in the sessions, including tack, arena obstacles and games, grooming supplies, etc. were stored in the facility. Some of this equipment was provided as part of leasing the facility, such as tack (i.e. saddles, pads, reins), were brought by EPP staff or volunteers to have available during sessions.

The location of the Denver TGEC played an integral role in the initiation and continuation

of this program. When compared to a rural facility, the urban position of the TGEC provided a unique opportunity to interact with horses to an entirely new population of youth. Equine-assisted services are often an experience that is reserved for those that either live rurally or have the resources to be able to travel to rural locations. Approximately 5 miles from the Denver TGEC facility, North High School provided programming for transition age students with disabilities. The ages and needs of these students suited the aim of the equine program.

Funding

Each of the previously described resources rely on one piece of the puzzle: funding. A program involving horses can be expensive to run compared to a typical clinic setting. Funding can also be difficult to obtain, both because these programs are not typically covered by insurance and because there is often an insufficient amount of research to demonstrate the value of a given program. Funding for this program specifically came both from the DPS Transitions budget as well as grants. The costs of the program included salaries of EPP staff, the cost of leasing the facility, horses, and equipment, as well as additional supplies used in the program.

Curriculum and Developmental Assets

Designing the curriculum was an effort done collaboratively among the providers, incorporating both research and professional reasoning. LD and MS built a program that they felt addressed the primary concerns the participants are facing.

“We’ve developed [the lesson plan] over the years and that step-by-step process to get them where we want them to be and hitting all their emotions, and needs, and stuff like that, so a plan is very important in that respect, also...I put in some of the developmental assets, which you can also find on the Search Institute.” - MS

The EALST program utilized developmental assets as a key resource in developing their curriculum, aiming to improve the relationship skills and resilience of the participants. The developmental assets are divided into two categories, offering twenty building blocks for both

internal and external assets. The EALST primarily focused on internal assets, as they are possible to influence in this therapeutic environment. The program curriculum aimed to improve internal assets such as self-esteem, responsibility, and caring; these assets were embedded into the weekly activities, with each week slowly building upon skills learned earlier in the program. Providers, volunteers, and school staff were all able to refer to the curriculum throughout the program to determine if participants were meeting the intended goals. The practitioners also described the curriculum as an evolving tool, often going back to it with new insights or ideas.

Barriers

As is the case in creating any program, the EALST program faced challenges and barriers. As described by the stakeholders, these included difficulty obtaining sufficient funding, the constraints of staffing the program, the challenges related to the facility, a general lack of scientific evidence in this field, and the public's perception about this type of program.

In order for the program to function, funding is a necessity. The continuity of the funding for the program is never certain. School and EPP staff were commonly needing to advocate for the program and reported needing additional external funding to fully support the program long-term. The facility, equipment, and horse costs made this program more expensive to fund than a typical therapeutic setting.

“When you talk about horses and individuals with special needs, it’s an increase in cost and so barrier two definitely is that there is a financial barrier to this. This is expensive and so you have that barrier of you have to convince people to try it and put their money up there so they can receive the effectiveness of it before there’s a true buy in maybe in the long term. I would say that’s a huge barrier to what we’ve experienced is financial.”
– AW

Related to funding, EPP staff also reported challenges surrounding staffing the program. It was commonly discussed that the primary provider of the program is limited in the amount of time and energy she is able to dedicate to this program as a result of the fact that she is the provider as

well as the executive director of EPP. Ideally, the program would like to involve more staff to distribute tasks. However, this is difficult, not only because of limited funding, but also because of the specific training and background an individual must have in order to be able to implement aspects of the program. There were also concerns mentioned about adding too many staff members to the program, as it may make it more difficult for participants to develop meaningful therapeutic rapport.

In addition to constraints with staff, the program had difficulty with constraints related to the facility. Stakeholders described the urban location of this facility as having its pros and cons. Regardless of where the program was located, it would be necessary for the participants to find transportation to access the program. Program providers and school staff reported this as a challenge, with participants often using a combination of public transportation, walking, and getting rides with the school paraprofessionals in order to attend each week. Additionally, the facility had limited space for the horses to live when compared to a program in a more rural setting. LD hypothesized that the limited space and urban feel of the facility may be related to an increase in challenging behaviors from the horses. These horses were also used for a variety of different types of therapy, meaning they have to be versatile and have generally low reactivity. In the EALST program, the provider would prefer to have horse's with highly varied personalities to use in sessions.

Utilizing horses in a therapy setting is an emerging field. As such, evidence for the effectiveness of these programs is limited. This barrier makes obtaining funding more challenging. As a new area, the public's awareness of such programming and how it may support their communities is narrow. Continued advocacy and outreach in the community for these programs is essential to find participants. AW believed that as the evidence base grows, so will the ability of

programs to gain and maintain clientele.

Activities

Overall Session Structure

Each of the four-hour weekly sessions typically included a group check-in to begin the session, activities with horses aimed to address psychotherapeutic goals, and a group check-in at the end. Each session began and ended with a discussion led by LD among the participants including ice breaker activities, ideas about the topic to be covered on a particular day, or any insights they have had in the week prior. During this time, food was often available for the participants, generating a relaxed and sociable environment. It also gave the providers an opportunity to gauge the group's current understanding of concepts and develop more detailed plans to pursue that day. Participants also filled out self-assessment Depression, Anxiety, emotional Pain, and Stress scale (DAPS) at the beginning and end of each session. The majority of each session was spent engaging in planned activities with the horses and interacting with peers. Each week included different activities for these times, aimed at the various goals of the program.

Weekly Sessions

The curriculum for each weekly session included an overarching goal for the week, as well as planned activities and discussion topics for the participants. Below is a brief description of the weekly activities and goals.

Week 1: Rules and Respect

Providers teach “horse zones,” which are different areas of a horse's body that represent different interaction styles. These zones aim to ensure safety of the participant interactions with the horses as well as teaching them to respect boundaries. Participants also work on horse skills such as catching and grooming.

Week 2: Teamwork and Responsibility

Participants work on building a connection and communicating with their horse through trying to lead a horse without a lead rope or halter through cones. They can work collaboratively, but cannot talk, so they must work on other communication skills. They also groom and begin learning to saddle.

Week 3: Choices

Participants lead a horse through an obstacle course with several different route options, making it clear that they are able to make choices about their path. They also learn horse trivia to increase their overall horse knowledge.

Week 4: Trust

Participants work on learning the skills of lunging and driving. Learning to drive begins with working in teams without horses, with one participant as the driver and the other as the one being driven. They take turns and use blindfolds to work on clear and effective communication and trusting their teammate.

Week 5: Courage

Incorporating skills learned in previous weeks, participants groom and saddle horses, play horse trivia, and drive horses. Driving is done through an obstacle course individually as well as in teams. Partners must work collaboratively to communicate effectively with the horse. Each individual must practice remaining focused on a challenging and potentially frustrating task.

Week 6: Dependability

Participants play two truths and a lie. They also begin riding the horses through an obstacle after having saddled them, typically being led by a partner. Teams are working on clear

and concise communication and trusting themselves, their partner, and their horse to make decisions.

Week 7: Letting Go

Providers utilize the metaphor of carrying rocks to represent the emotional weight they are carrying. Participants carry rocks throughout horse activities and are given the opportunity to let them go during the session.

Week 8: Saying Goodbye

Participants paint the horses as a way to symbolize their experiences in the program, what they are choosing to take with them, and what they had been carrying that they are choosing to leave behind.

In addition to the group format, the providers of the program were able to focus on supporting individual participants to reach individualized goals. While the program did not include a time to sit down with each participant and develop a goal collaboratively, the providers were able to get some information about the participant from the school district. They used this information as well as what they observed with a participant in sessions to work on individual relationship skills and provide personalized feedback.

Outputs

This program typically runs during each fall and spring academic semesters for eight weeks. Two groups ran concurrently, one in the mornings and one in the afternoons, each for about four hours. A range of 6 to 16 students from the DPS Transitions program participated each semester, often with one or two students returning from past semesters as mentors.

Outcomes

The program used the DAPS assessments to measure changes to participants' emotional

states at the beginning and end of each four hour session. Using these assessments, it was found that participants were experiencing decreases in symptoms of depression and anxiety during the sessions.

“I ended up just using the DAPS form and then just did a statistical analysis of it...It found was that there was a statistically significant decrease in the depression and anxieties scores.” - AA

Aside from these forms, no formal assessments were utilized in the program to understand what shifts, if, were occurring within participants. The outcomes provided are those observed by the providers of the program throughout a semester or those reported by school staff outside of the sessions.

Short Term Outcomes

The most reported outcome and, according to stakeholders overseeing the program, a primary motivator for continuing the program is the participants’ attendance and engagement. As previously discussed, program providers reported that participants can be more readily able to engage in this environment than in a typical therapy setting. Interacting with the horses can be inherently motivating for the participants, leading them to attend the program more often than not, despite the challenges in transportation. School staff utilized the observed engagement of the participants as explanation to administrators for the importance of continuing to fund the program.

Other outcomes are related to the aims of the curriculum: improved communication skills, improved ability to trust and ask for help, increased sense of respect for self and others, increased competence in setting personal boundaries, improved creative and collaborative problem solving, and improved sense of belonging within a group. All of these outcomes are necessary to successfully engage in relationships, the ultimate goal of the EALST program. These skills correlate to the internal developmental assets relevant for this age group, including interpersonal competence, or planning and decision making.

Several stakeholders provided an example of a participant whose communication skills improved markedly during his time in the program. This student was known to not speak with those around him, even when directly addressed.

“We have a student... and he never spoke. You could go up and say “hi, how are you doing, Michael” and he just wouldn’t look...He wouldn’t speak. He was selective mute and he did the horse therapy program and he started speaking...I mean really started speaking... I have to kick him out of my office because he won’t stop talking” – MW

Throughout his time in the equine program, he slowly opened up and trusted the program staff and other participants enough to begin speaking to them. His motivation to be involved in the program remained, leading him to return as a mentor and then continue to be involved at the TGEC after graduating from high school. This is only one example of a student that experienced dramatic improvements; the majority of positive outcomes observed were not quite so noticeable. However, stakeholders agreed that the program has an overall positive impact on the participants during the time they are involved.

With improvements in these various skill areas, AA described an overall increased resilience within participants, which is often an aim of programs designed for at-risk youth. Based on responses on the DAPS assessments as well as participant report, the program was thought to be supportive of the participants’ ability to handle stressful situations. This could then impact their sense of self efficacy, leading them to be able to pursue more challenging paths or engage more fully in academics.

Long Term Outcomes

Stakeholders reported their observed or theorized long term outcomes in participants after completing the program. Some of the participants developed a new interest in engaging with horses or other animals, leading them to find volunteer or employment positions involving the skills they acquired in the program. For several of the participants, providers described a shift in their outlook

on their own lives and opportunities. With this more optimistic perspective, it was theorized that participants would be more likely to branch out and seek new challenges, including succeeding academically, engaging in new relationships, living independently, and finding employment. Other skills obtained during the program could carry over into these challenges, as well, including improved communication skills, resilience, and problem solving.

Theorized Community Impact

To understand the lasting impact a program may have, it is important to zoom out and look at the effect on the community, including families, peers, and the broader Denver area. As with the outcomes, program providers did not have any specific data to point to aside from their own observations and reports from participants and school staff. The majority of stakeholders did believe that the program has a positive impact on the community, describing a ripple effect of the social emotional learning that occurs.

“Well I think their positive experiences definitely get taken home and we don’t get the chance to ask about their home life but when they can go home with some positive energy that has to start at home whether it’s a foster situation or whether they’re living in a group home. Whatever that home is, it’s got to be helpful there and then it becomes exponential. If they can bring some positivity from themselves to where they live that then goes out into the community.” – KA

Stakeholders such as KA and AW thought that if participants were taking new relationship-building skills home or to school with them, not only would they be more readily able to handle their own daily challenges, they would also be able to more easily support others in their community.

Additionally, stakeholders felt that with an increased sense of resilience and self-efficacy, participants would have a reduced chance of negative long-term outcomes such as serious mental illness or incarceration. The skills gained in the program help to mitigate some of the risk factors the participants are facing. With these shifts, the community as a whole may have benefited, as an

additional member of the group may have been able to provide support and give to the community rather than need support from it.

Lastly, a long-term aim of this program is to utilize the public awareness of the TGEC to improve the general understanding of equine-assisted services. A successful, lasting relationship with the school district will help to breed trust within the community for this programming and hopefully lead to a shift in the public's perception.

CHAPTER FOUR: DISCUSSION

The aim of this study, as is recommended by the Medical Research Council for complex interventions, was to perform the critical early research task of defining the components of an intervention and understanding underlying program theory (Craig et al., 2013). One step in intervention theory building involves explicating the personal theories of the providers (Lynham, 2002). Through an iterative process, these personal theories can be further refined and tested, ultimately enhancing the intervention to be more efficient or effective (Lynham, 2002). A theory-driven logic model can support providers in explicating the principles and assumptions on which a program is based (W.K Kellogg Foundation, 2004).

Appraisal of the Theoretical Assumptions

In creating a logic model and digging deeper into stakeholder practice-based knowledge, several theories of change emerged. An increased awareness of these theories will be supportive of the program ongoing, as well as the field of EAP research moving forward. The logic model outlines what is happening within the program and draws linkages as to how and why those program decisions were made. It can serve as a tool for program stakeholders to utilize both in their own internal progression and in presenting to others to demonstrate their thought processes. Understanding the details of this program has multiple potential benefits. As described, explicating the theoretical assumptions the program is based on can help providers of the program better understand and fine-tune their clinical reasoning and decision-making processes, which could lead to a strengthened intervention.

Several of the theories identified in the findings align with those theories that have been proposed as mechanisms of change in EAP, including concepts related to the biophilia hypothesis, attachment theory, and theories about promoting engagement. Wilson (1984) proposed in the

biophilia hypothesis that humans are inherently drawn to natural contexts. Stakeholders such as LD and MW described this concept as a potential explanation for the reduced stress a participant may feel in the equine environment. Interacting with the horses served as a connection to nature in and of itself, meaning that even though the program was held in a more urban setting near downtown Denver, being in the equine environment was still described by stakeholders as a natural and therefore calming setting.

EPP and DPS staff also used concepts from attachment theory in their descriptions of the program. As the primary provider, LD stated that specifically for this at-risk population, she commonly utilized an attachment perspective. Participants in the program were more likely than average for their age group to face relationship challenges related to attachment, which would then impact their ability to develop a positive therapeutic relationship with the provider. Similar to as hypothesized by Beetz (2017), LD described using the horse in the therapy setting as a “bridge” to support relationship building between the participant and the provider.

However, LD did not align with Beetz (2017) in all aspects of her description of attachment theory in EAP. Beetz (2017) stated that the internal working models of those with insecure attachment styles would not necessarily translate into how they would interact with an animal, “approach[ing] animals with an openness to securely relate, including touching and trusting” (p. 144). LD did not describe her thoughts on the internal working models of participants. She did state that the participants’ observable behaviors in their interactions with the horses more often resembled how they would interact with their primary caregiver. LD used her understanding of attachment theory and equine behavior to explain to the participants how the horse was reacting to their behaviors and offering support in finding new interaction styles. Participants had the opportunity to practice new skills and behaviors with the horse, which then could translate into

their other relationships.

Stakeholders often discussed participant engagement in a manner consistent with the existing literature, acknowledging the importance of full engagement from the participants in order to achieve therapeutic goals. Stakeholders recognized the horse as a motivator for participants. Madders and Orrell-Stokes (2019) describe engagement as a necessary aspect to achieve efficient learning. LD compared her experiences in a clinic setting to the equine environment, describing the equine environment as more effective at engaging participants and developing therapeutic rapport. LD and MS believed participants tended to be less resistant to intervention in the equine setting for a variety of reasons, including the novelty of the setting, the distraction and immediacy of interacting with the horse, the positive reinforcement of having successes with the horse, etc. Kendall and Maujean (2015) echo these concepts, stating EAP is engaging because it allows participants to take on a more active role than a more traditional therapy setting, in which one may be more passive and unmotivated. With engaged participants, the providers felt they could achieve therapeutic outcomes more efficiently.

Some additional concepts emerged as theoretical assumptions utilized within the EALST program that are not as commonly addressed in the existing literature on EAP. One of these concepts was SEL. Programs that incorporate SEL often focus on supporting individuals in developing adaptive skills to manage challenging emotions (Moreno-Gomez & Cejudo, 2019). Programming can include working on intrapersonal skills such as emotional regulation or interpersonal skills such as empathy. SEL interventions are often implemented in a school setting, as they translate well to working with groups (Domitrovich et al., 2017). Social emotional competence can be linked with several outcomes, including improved academics, social participation, and employment (Domitrovich et al., 2017). For at-risk youth specifically,

programming to support SEL is related to an increase in resilience, meaning youth are more readily able to handle challenges in their daily lives (Domitrovich et al., 2017). Several of the goals and activities in the EALST program are geared towards SEL outcomes, including learning to collaborate with others and gaining skills in regulating difficult emotions. AA also discussed her perspectives on how incorporating these skills could support program participants in developing resilience.

Another theory that emerged from stakeholders was the importance of implementing trauma-informed approaches with the EALST program participants. Program providers, particularly LD, have extensive clinical experience with individuals that have experienced trauma. Participants in the EALST program are often coming in having been through several ACEs which have likely impacted their physiological and psychosocial development (Putnam, 2006). Trauma-informed approaches, at their most basic definition, are interventions that recognize the impact trauma may have had on an individual (Cutuli et al., 2019). Providers are responsible for creating a space in which skills directly impacted by that trauma, such as emotional regulation, can be worked on safely and with minimal risk of retraumatizing the individual (Cutuli et al., 2019). LD has engaged in trainings specifically aimed at developing skills in trauma-informed care. She generated an environment within the program that acknowledged the traumatic experiences the participants may have had, incorporating that perspective in how she interacted within sessions and developed activities.

Appraisal of Outcomes

Along with theoretical assumptions, stakeholders also identified several outcomes they are aiming to achieve in the program. Many of these outcomes align with the existing literature on EAP, particularly in the areas of engagement and SEL. As previously described, engagement is

commonly an aim of EAP programming, with the incorporation of the horse serving as a means to increase motivation to participate in therapy (Trotter et al., 2008). LD's description of her perspectives on utilizing the horse to increase engagement reflect other literature. She describes participants as inherently motivated to interact and succeed with the horse, mitigating the resistance to intervention one might see in a typical clinic setting. Working with the horse provides many unique ways to participate, increasing the opportunities in the environment to engage. Additionally, LD and other stakeholders stated that the novelty of interacting with such a large animal, often for the first time, likely plays a role in the participants' level of interest and engagement. Emotions such as fear or worry come up in these novel interactions, leading participants to more readily ask for help. This concept as it relates to engagement was not reflected elsewhere in the literature discussing engagement in EAP and could be related to the specific population of participants involved in the EALST program.

Additionally, the EALST program emphasizes SEL and relationship skill building. In an EAP program addressing social competence skills for a younger group of at-risk youth, Pendry et al. (2014) describe a significant treatment effect for participants in skill areas such as confidence in interactions and positive social behavior. Pendry et al.'s (2014) program had several session goals that were similar to those of the EALST program, including exercises in trust, setting boundaries, respecting others, and being responsible for one's actions. Though the EALST serves older youth, this reflection of similar aims achieving similar outcomes as the EALST program is promising, meaning the utilization of the horse in this type of programming can lead to positive SEL outcomes.

Program Recommendations and Logic Model Utility

As the EALST program continues and aims to improve, details in the logic model,

including the resources, activities, and outcomes, could lead to more efficient and effective implementation of the program. Aside from the effects the logic model may have on the EALST program directly, a logic model about this type of EAP program could add to the current body of literature on EAP programs for older adolescents and young adults. Findings from this study about the necessary pieces to implement this type of intervention could be applied to other similar programs, increasing the availability of programs of this nature to address the mental health needs of at-risk youth, a population that require additional access to resources. Finally, this research study could lay the foundation for future studies of the EALST program; for instance, the resulting logic model can guide selection of outcome measures and development of intervention fidelity measures in future studies of this program.

As the existing literature on EAP programs grows, experts aim to carefully define the roles of the therapist and of the horse. Ekholm Fry (manuscript in development) emphasizes a conceptualization of EAP that maintains the core identity of psychotherapy, with the incorporation of horses as an enhancement to typical therapeutic practices. This conceptualization asserts “it is the skill of the mental health therapist that facilitates the potentially enhancing benefits of equine interactions” (Ekholm Fry, manuscript in development, p. 12). Elucidating underlying practitioner theories and priorities supports keeping the therapist rather than the horse at the center of EAP treatment. It also reinforces the necessity for rigor in understanding the functions of these types of programs.

There was a consensus among the stakeholders that this program was successful, and each stakeholder would like to see it continue to grow and evolve. As stakeholders described the program, they also often offered their views about how the program could progress and continue to improve in the future. Acknowledging areas of growth can be supportive to continued theory

building, recognizing that current logic-in-use is not sufficiently addressing a problem (Lynham, 2002).

EPP staff and volunteers discussed the importance of incorporating more assessments into the program to gain a better understanding of the outcomes being achieved. Participants in the program completed the DAPS forms each weekly session, which provided useful information about their mental state short term. Data from these forms shows participants experienced a statistically significant reduction in symptoms of depression and anxiety within program sessions (Zaker et al., 2021). AA recommended, in addition to the DAPS forms, for the school staff or program practitioners to complete a formal assessment with participants at the beginning and end of the program. The list of outcomes in the logic model outlines what the stakeholders already believe they are accomplishing. The logic model could be a jumping off point to determine what outcomes are important to assess. Adding outcome measures could support the practitioners in better understanding what they are achieving, as well as serve to demonstrate to grant committees and additional schools the value of the program.

In addition to guiding future outcome selection, this logic model may aid in expanding this program to other schools, a concept several stakeholders expressed interest in. Understanding the context of the program and the resources required to run the existing program will help the staff to determine what steps are necessary to expand. Also, as the practitioners' time is already limited, an expansion would likely need to include hiring and training additional providers. The logic model could serve as a tool in this process, helping practitioners to understand their underlying assumptions about the program. They could then more readily translate these perspectives to new staff.

Directions for Future Research

The current study defined the critical components of the EASTL program, one of many critical early research steps. According to the medical research council, next research steps include identifying measures to test the theoretical assumptions and the hypothesized outcomes, assessing if the EALST program has an effect on the identified outcomes, developing an appropriate control group and fidelity measures, and finally assessing the efficacy of the EALST program (Craig et al., 2013).

To continue the research process, the EALST program can utilize the theories and outcomes identified in the logic model to guide their selection of process and outcome measurement. Process measurement could include examining how concepts of engagement, SEL, or other theories are integrated into session planning and implementation. Outcome measurement would include identifying which of the hypothesized outcomes are occurring and to what extent. After these outcome measures have been identified, they can be incorporated into the program to assess the program's effect. Several of the stakeholders discussed the utility of expanding the outcome measurement of the program as they move forward. These outcome measures could be used both for the purposes of honing the program and continuing the research process, as well as to demonstrate the effects of the program to potential funders and additional schools.

Furthermore, the current study can inform creation of a fidelity measure to be used in future research of the program (Craig et al., 2013). Such a fidelity measure should include a clear description of the intervention as well as set limits to how much variability is acceptable. Fidelity of program implementation strengthens an assessment of the program's efficacy by ensuring certain aspects of a program are consistently included. Upon identification of outcome measures and creation of an intervention fidelity measure, future research can compare the efficacy of the

EASTL program to an appropriate control group.

Another potential area for future research could include looking more closely at equine behavior and details of how horses are monitored during sessions. LD provided some description of behavioral variances she has noticed between horses she utilizes at different facilities. Future research could aim to understand if there are behavioral differences and if they could be related to factors like living conditions, the types of clients participating in programs, etc. Supporting the wellbeing of animals utilized in animal-assisted services is a core focus of professional organizations such as PATH Intl. and EAGALA, so this could be a beneficial track of research as well.

Limitations

Several limitations impacted the results of this study. This project was done amidst the COVID-19 pandemic, which significantly shifted the methods as we were no longer able to engage with one another in person. Planned field observations did not occur because the EALST program was not conducted during the 2020-2021 school year. Interviews with past program participants were not possible because participants became inaccessible, due to a lack of technological access, among other reasons. These changes resulted in a narrower data set and decreased opportunities for triangulation of data, with information only coming from program stakeholders.

In addition to the changes related to COVID-19, all potential stakeholders were not included in the study. There were other recommended stakeholders such as other members of the school staff or members of the EPP board that were not interviewed. These stakeholders were not included either because they did not reply to recruitment contact or they were not contacted due to time constraints of the study.

Conclusion

Research about EAP programs is still in the early stages, particularly for older at-risk youth populations. Providing interventions for these populations can be integral to the mitigation of risk factors and supporting positive outcomes. As psychotherapy programs incorporating horses continue to expand into new populations, it is important that the research on these complex interventions follow the recommended steps to determine the efficacy of EAP programming, including identifying key intervention elements and guiding theory. Stakeholders of the EALST program agree that it is promising and are passionate about its continuation and growth. The theory-driven logic model can serve as a tool to guide program delivery, and to inform future research of the program.

CHAPTER FIVE: REFLECTION

The Research Process and My Development

The process of completing this project was nothing like I could have imagined. The majority of the project occurred during an unprecedented global pandemic, meaning each step included learning how to navigate a world we had not yet experienced. There were several points during the process that it looked like it might not be possible to continue. I had many classmates that were not able to complete their projects due to COVID-19. However, it was possible for us to adapt and shift directions in order to make this project happen. My perspective about what it would mean for this project to feel complete changed several times. But, in the end, learning about the EALST program and digging deeper into the perspectives of the stakeholders was worth it.

I began this project in January of 2020, a couple of months before the world began to shut down. At the time, we thought it would be short lived and we would be back to our normal lives in a few months. So, I structured my methods for this project assuming I would be able to attend EALST program sessions and speak to the participants in person. As time went on, we began to recognize the severity and longevity of the pandemic. The EALST program was cancelled for the semester and everyone was navigating the ways in which the pandemic was impacting their own lives. I was no longer able to go to sessions and, due to the nature of the population of the program, we were not able to get access to them for interviews when they were not physically present for the program. Many of them did not even attend school during that time. All my interviews shifted online, which was a learning process for everyone. Overall, each step was significantly different and took longer than we originally anticipated.

With all the changes, one thing remained steadfast throughout this process: my passion for supporting at-risk youth and utilizing animal-assisted interventions to do so. I entered into

occupational therapy school already knowing that I would like to pursue the area of equine-assisted services. I had taken several classes and spent countless hours volunteering to learn more about how these interventions work. I have not yet had the opportunity to work as much with at-risk groups, but I feel strongly this is a population I will spend a lot of time with in the future. In each of these volunteering opportunities, I watched participants light up when they arrived at the barn and knew there was something special happening there. My goal in completing this project was to learn more about incorporating horses in services for at-risk youth.

My interviews with the stakeholders of the EALST program offered me some perspective as to why I had been seeing these participants light up for all these years. This unique therapeutic setting offers participants an opportunity to engage in activities they may never have experienced before. For the at-risk youth in the EALST program, not only are they working on social emotional skills, but they are also getting to experience an environment significantly different from their everyday lives. They could interact with the horse and learn from their mistakes with less concern of being judged. These perspectives about equine interaction were consistent across my interviews with the EALST program stakeholders, increasing my confidence in their validity and applicability to my own future practice.

Throughout the research process, I also learned the importance of grounding a new program in theory. There were several times when talking to a stakeholder that I could see they felt strongly about the program being effective, but could not quite put their finger on why. Taking these steps to understand and develop the program theory will help support the EALST program moving forward, including continuing to evolve their curriculum, as well as obtaining the funding necessary to do so. Outlining the working theories of a program identifies what their priority areas are and how they want to move forward. Building program theory has been especially important

because the research is slow to catch up to practitioners' intuitions about how to successfully support clients in the context of different equine-assisted services.

This project served as my contribution to the existing information about equine-assisted services. I believe most practitioners in this type of setting would agree that there is an intuitive sense of the interventions being beneficial. It can be difficult, however, to determine why these successes occur and if it is truly related to the incorporation of horses or not. In addition to supporting the area of practice, I feel I have grown immensely from completing this project, both professionally and personally. As an occupational therapist interested in the world of mental health, I plan to incorporate many of the perspectives I learned from the stakeholders, interpreting them through my occupational therapy (OT) lens.

Relation to Occupation

Supporting mental health is within the OT scope of practice, though it is not the same as psychotherapy. There can be crossover in the concepts and theories used in psychotherapy and OT, including some of the theories discussed in relation to the EALST program, such as SEL or engagement. So what makes OT different? OT puts the emphasis on occupation, or the daily, goal-directed pursuits in which people engage (Yerxa, 1990). For youth, these occupations often include schoolwork, play, employment, sports, chores, etc. In treatment, occupations can both be used as a means to achieve other goals or as an end in and of themselves. Psychotherapy focuses more on personal factors, specifically looking at mental functions. Occupational therapy incorporates these personal factors, but also focuses on environmental factors and the occupation itself.

Theories Related to OT

A foundational concept of OT is that engaging in occupations can be transformative to health and quality of life; therefore, engagement is often central to OT practice. Occupational

therapists commonly focus on occupations that are meaningful and motivating. In an equine environment, OT includes similar activities to the EALST program, including grooming, tacking, and riding the horses, but these activities are done with the goal of challenging a participant to engage a specific skill. For example, a client's goal may be to participate in social interaction with the side-walkers, therapists, or peers while riding the horse. The horse is used to provide the participant with opportunities to practice a skill while doing an activity that is fun or motivating. The OT is focusing on the individual participating in certain occupations to gain competence.

In addition to engagement, SEL is a framework commonly used in OT mental health interventions. Researchers in the field of SEL advocate for universal programming to support the skill development of all children (Domitrovich et al., 2017). The SEL competencies promoted by the Collaborative for Academic, Social, and Emotional Learning (CASEL) are self-awareness, self-management, social awareness, relationship skills, and responsible decision making (Anderson & Grinder, 2017). Each of these areas were addressed in one way or another by the EALST program, further confirming their utilization of SEL theories in their program development. Occupational therapists also address SEL, but from a different perspective.

The American Occupational Therapy Association (AOTA) encourages practitioners to utilize an SEL perspective in their practice with children and youth (Anderson & Grinder, 2017). Occupational therapists analyze the environment and context an individual is functioning in and offer ways to infuse SEL components into said environment. OTs role in supporting SEL in a school setting, for example, would be to collaborate with other staff to determine the ways in which the curriculum could be modified to include SEL competencies in the daily learning of students (Anderson & Grinder, 2017). It could also include intervening with groups of at-risk students, developing programs with an emphasis on SEL. Similar to the EALST program, in an equine

environment, an occupational therapist could work on SEL by doing activities related to differentiating between various emotions and providing strategies for how to regulate them. The horse could be used in examples of different emotions, with the therapist describing to participants the meaning of the horse's behaviors and body language. The goal for the occupational therapist would be for a participant to gain competence in social skills and improve performance in the occupations that support social participation.

OT Intervention Tiers and Process

Theoretical frameworks of engagement and SEL can be used across tiers of OT practice. When addressing mental health, OT utilizes a three-tiered model of intervention (Arbesman et al., 2013). The first tier covers universal mental health interventions. These interventions are aimed to address mental health concerns of an entire group or community. For example, a universal intervention in a school setting could include emotion regulation programming for the entire student population. The second tier of intervention includes targeted programs for populations that have been identified as at-risk of experiencing negative outcomes. Several studies have provided strong evidence for the success of targeted OT social skills programming for at risk adolescents, leading to improvements in attention, peer interaction, and prosocial behaviors, as well as reducing aggressive, delinquent, and antisocial behaviors (Arbesman et al., 2013). These programs are targeted at specific individuals that were displaying behaviors that would put them at risk for decreased social participation, but do not include any kind of specific diagnostic criteria for participants to be included (Arbesman et al., 2013). The third tier is intensive services for those with a specific diagnosis. This can include any program designed to address specific concerns related to a diagnosis. For example, a social skills intervention for children with ASD involved self-management strategies, changes in instructional content, and differential reinforcement

(Arbesman et al., 2013). It led to improvements in social behavior, social competence, and self-management. All three tiers had moderate or strong evidence supporting OT interventions.

The EALST program is an example of a second-tier intervention. The program is not tailored to any one diagnosis; it is intended to support the general social and emotional growth of a population of at-risk students. Occupational therapists are well equipped to develop these types of targeted interventions. Utilizing the Occupational Therapy Intervention Process Model (OTIPM), an occupational therapist planning to provide a targeted program would begin by understanding the relationship between the participants' occupational participation and their environment and context (Fisher & Martella, 2019). This focus on the context and environment offers occupational therapists a perspective on how to achieve a desired occupational outcome, recognizing that a person's context may not have provided an opportunity to engage in certain occupations. The therapist could then determine what environmental modifications would be supportive to occupational participation. For example, they could determine what aspects of the equine environment could be used to provide opportunities for participation.

After assessing the environment and determining discrepancies between current and desired occupational performance, the therapist could use an acquisitional model, aiming to acquire or redevelop a performance skill, to address performance concerns (Fisher & Martella, 2019). If the goal is to encourage social participation, a key area of occupation for youth, the equine environment offers unique opportunities for participants to engage socially. In the equine environment, the participants have structured opportunities to work on new skills that they would not typically engage in. Similar to the attachment perspective described by LD, skills acquired within the equine environment would then need to be translated to other areas of the participants' lives. For targeted interventions to have a lasting preventative impact, it is necessary for the skills

to carry over into an individual's other contexts, particularly if these are skills that are not supported in their typical environment.

Occupational Justice

According to Arbesman et al. (2013), there is evidence of the success of OT intervention at the universal and targeted levels, with the aim of preventing negative outcomes. Populations that are at-risk of experiencing negative outcomes are commonly experiencing occupational injustice. Occupational injustice can be defined as an inequity of access to desired or meaningful occupations. Issues of inequity and access look specifically at one's context and environment. According to Nilsson & Townsend (2014), factors such as deprivation, alienation, imbalance, or marginalization are related to occupational injustice, which are described as a restriction of autonomy or access to various occupations. This restriction results from social policies or environmental structures that determine who has the power to engage in certain activities, either supporting or constraining occupational performance. Nilsson and Townsend (2014) encourage occupational therapists to work collaboratively with other health professionals to generate systems that work for individuals as well as populations, enabling participation.

It is important to acknowledge the injustice at-risk youth face in their occupational participation and to develop interventions that support their ability to participate in those occupations that are meaningful to them. OT interventions in the equine environment can be supportive of occupational justice, providing at-risk individuals with opportunities to engage in meaningful occupations outside of their typical context. Issues of occupational injustice are often larger than one program would be able to address, but developing these resources and recognizing injustices are first steps in the direction of reducing occupational injustice for at-risk populations.

With participation in meaningful occupations at the center of intervention, the OT perspective about mental health is different from psychotherapy. There is commonly overlap in the theories used in practice, with concepts such as engagement and SEL informing both groups. These services can be complementary, offering different pieces of a puzzle to support those with mental health concerns. Occupational therapists addressing mental health can intervene at any level of the three-tiered model, always maintaining focus on the intersection of the person, environment, and occupation.

Conclusion

As I complete this project, I am recognizing how much I have grown and how my perspectives about animal-assisted interventions have changed. I still hold true that animal-assisted interventions can be supportive of positive outcomes for a wide variety of populations. This practice area is versatile and engaging for participants, making it a worth-while venture. It will be necessary for me moving forward as a practitioner, however, to remember that in these novel interventions, I need to be asking myself what my underlying theoretical assumptions are and taking steps to objectively track outcomes. This research process of delving into the theoretical assumptions of experienced practitioners has provided me with a framework to remain reflective in my own practice. It has also offered me a chance to understand professional perspectives outside of OT, which has supported me in grounding myself in what it means to be an occupational therapist. I plan to carry these skills with me in my career and further progress the understanding of animal-assisted interventions through my practice.

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APPENDIX A

Semi-structured Interview Guide

General

- **Can you tell me about your experience with the equine partnership program? What is your role?**
- **How did this program first get started?**
 - What entities were involved in that process?

Resources

- **What resources are necessary for the program to occur?**
 - This can include more than monetary resources; think about the building, equipment, technology, etc. It can also mean resources in the community that help the program run.
- **What staff are involved with the program? What are their roles? Is there any training different staff members receive to be involved in this program?**
 - Is there anyone else involved in making this program possible that is not staff? Volunteers?
- **How is the equine partnership program funded?**
- **What are some challenges the program has run into? How has this affected the ability to provide the planned services?**
 - Describe prior to COVID
 - Describe since COVID

Outputs

- **How many sessions occur each semester? How long is each session?**
- **How many participants are served each semester?**

Transition: Thank you so much for all of the information you have provided so far. That helps me have a better understanding of the background of the program. Now let's dive into a bit more detail of what the program looks like during the sessions.

Intervention Techniques and Outcomes

- **Can you tell me about the basic structure of activities included in the equine partnership program?**
 - What does a typical session include from start to finish?
 - Can you provide examples of activities you would use from a psychotherapeutic perspective?
 - Do you believe this specific activity leads to any particular outcomes? If yes, what are those outcomes?
 - Why do you think that activity led to that outcome? (Assumptions)

- **Are there any additional core activities you use in the program that you have not yet discussed?**
- **What outcomes do you generally see in participants of the equine partnership program?**
 - **Why do you think that is?**
- If the program had access to all the necessary resources, what activities would be included that have not been so far?
- How are outcomes measured in participants?
- What outcome measures would you like to implement, but have not yet?
- What effects does the program have on participant performance outside of the sessions?
 - What changes, if any, do you see in the participant's daily lives as a result of participating in the program?
 - What, if anything, have you heard from participants, parents, family members, school staff, or other individuals about behavioral changes in the participants related to the program?
- What negative outcomes could result from participating in this program?

Impact

- **In your opinion, has the equine partnership program had any impact on the community? If so, what has that impact been?**
 - Has there been an impact on the Denver Public School System?
 - If this program no longer existed, what impact would that have on the participants and other members of the community?

Assumptions/Application of Professional Knowledge

- **Why incorporate horses into psychotherapy practice? Why specifically for at-risk youth?**
 - Why was the program created? What were you hoping to accomplish?
- What is your process in developing the activities you plan to provide?
 - Are there any theoretical models that have influenced your practice with this population in this setting?
 - Are there times during sessions that you decide to go a different route than had been originally planned for that day? What drives those decisions?
 - Are there moments that you see an opportunity to try something different with a participant? Or are there moments that you recognize that what you had been doing isn't working?

Overview

- **What aspects of the program have you been satisfied with? Dissatisfied with?**
- **Is there anything else you would like to tell me about this program?**
- **Are there any individuals that you feel have a unique perspective about this program that you think I should ask to participate in an interview?**

GLOSSARY

1. ACE: Adverse Childhood Experiences; various forms of abuse, neglect, or household dysfunction occurring during childhood that have the potential to negatively impact development and long-term quality of life.
2. DAPS: Depression, Anxiety, emotional Pain, and Stress scale; modified, self-report assessment the program uses to track outcomes related to these symptoms of mental illness
3. DPS: Denver Public Schools; the school district that houses the Transitions program associated with EALST program
4. EAGALA: Equine-Assisted Growth and Learning Association; certifying and supporting body for mental health treatment model incorporating horses.
5. EALST: Equine-Assisted Life Skills Training; name for the program run by Equine Partnership Program and Denver Public Schools that is the focus of the current study
6. EAP: Equine-Assisted Psychotherapy; a type of therapy provided by a mental health professional that incorporates horses and aims to address mental health goals
7. EAS: Equine-Assisted Services; umbrella term for interventions or activities that incorporate horses.
8. EPP: Equine Partnership Program; non-profit organization that runs equine-assisted psychotherapy sessions, including the EALST program
9. IEP: Individualized Education Plan; a plan developed for a child with a disability in school to ensure they receive necessary special education or other support services.

10. LPC: Licensed Professional Counselor: A licensed mental health practitioner able to provide services to individuals, families, or groups in treating mental, emotional, or behavioral disorders or issues.
11. PATH, Intl.: Professional Association of Therapeutic Horsemanship, International; credentialing organization and certifying body for therapeutic riding centers and professionals.
12. SEL: social emotional learning; focus on supporting individuals in developing adaptive skills to manage challenging emotions (Moreno-Gomez & Cejudo, 2019).
13. SES: socioeconomic status; measure of an individual's standing in society based on a combination of economic and social aspects.
14. TGEC: Temple Grandin Equine Center; organization run by CSU with aims to progress research and programming in equine-assisted services. The EALST program under investigation occurs at a TGEC facility.