The Impact of Therapeutic Riding:
A Mixed Methods Case Study of Families' Social Connectedness

by

Shelby Bouthillier
B. Ed., University of Victoria, 2015

A Thesis Submitted in Partial Fulfillment
of the Requirements for the Degree of

MASTER OF ARTS

In the School of Exercise Science, Physical & Health Education

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Abstract

In 2018, the Cowichan Therapeutic Riding Association (CTRA) connected with the University of Victoria to initiate a research project focusing on social connectedness. Social connectedness is the psychosocial process of belonging that can be developed within a community context. Feelings of social connectedness can reduce depressive symptoms and suicidal thoughts, lessens violence, health compromising behaviours, and the impact of stress and trauma, and is linked to high self-esteem. The aim of this mixed methods case study was to understand the social connectedness of families participating in a community therapeutic riding program.

An explanatory sequential mixed methods design was used to investigate social connectedness at the CTRA. Three different perspectives were sought to explore social connectedness at the CTRA; guardians, children, and instructors. Participants completed the quantitative Connectedness to Treatment Setting Scale (CTSS) in Phase 1, and qualitative semi-structured interviews in Phase 2 to follow-up and expand upon findings from Phase 1. Fifteen participants (guardians \((n = 12)\) and instructors \((n = 3)\)) participated in Phase 1 of the study whereas five guardians (including a guardian and child dyad) and two instructors participated in Phase 2 of the study.

The CTSS comprised of 10 questions assessed on a 6-point scale (from 1 = Totally disagree to 6 = Totally agree). Frequencies were computed for each question and overall mean scores \((\pm SD)\) were computed for guardians and instructors separately. The
interview transcripts were coded twice. Initially, a deductive orientational approach guided by seven attributes of social connectedness was used. Then, an inductive approach was used to examine how social connectedness was experienced, fostered, or hindered at the CTRA, as well as suggestions for improvement.

The CTSS scores revealed that the vast majority of guardians and instructors felt highly socially connected at the CTRA. The overall mean score of the guardians was 55.3 ($SD = 4.5$) and 56.7 ($SD = 3.1$) among the instructors. All seven attributes of social connectedness were represented in the guardians and instructors’ responses however, trust, caring, and reciprocity were the most evident attributes. Two themes emerged from the inductive analysis: effective communication equates with social connectedness and expectations of services. Guardians reported that communication as a team with their instructor, volunteer(s), and the animals positively influenced their families’ social connectedness. The results suggested that social connectedness might be mediating relationships between negative factors preceding a therapeutic riding session and the experience of that lesson. Although the instructors and majority of families were socially connected at the CTRA, guardians had high expectations of the program and wanted the CTRA to foster connections beyond their son/daughters therapeutic riding lesson by organizing opportunities for peer and family relationships.

The people and animals at the CTRA contributed heavily to family’s sense of social connectedness. Most families had a desire to connect and form relationships with the people and animals at the CTRA. The CTRA provides a community context that supports the development of social connectedness.
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Dedication

This thesis is dedicated to children who face challenges in their life yet continue to inspire those around them.
Chapter 1- Introduction

Introduction

Social connectedness is a psychosocial process of belonging that can be developed within the context of family, community, and school (Barber & Schluterman, 2008; Henderson & McClinton, 2016). Phillips-Salimi et al. (2012) identified seven attributes of connectedness by analyzing definitions and descriptions provided by more than twenty investigators. The attributes they identified were intimacy, sense of belonging, empathy, caring, respect, trust, and reciprocity. Social connectedness begins early in life with the need for belonging and positive relationships (Henderson & McClinton, 2016; Routt, 1996). Furthermore, connectedness to one’s family, school, and community are protective factors for children’s and adults’ well-being and quality of life (Barber & Schluterman, 2008; Lee & Robbins, 1995; Resnick, Harris, & Blum, 1993). Thus, social relationships, connections to family and one’s community has a pivotal role in contributing to an individual’s well-being.

A lack of social connectedness can result in feelings of alienation (Routt, 1996), loneliness (Lee, Draper, & Lee, 2001; Tekinarslan & Kucuker, 2015), and social isolation (Tekinarslan & Kucuker, 2015). Both children and adults may be lonely at some point in their life, but children with special needs experience these emotions more than peers without special needs (Tekinarslan & Kucuker, 2015). Tekinarslan and Kucuker (2015) defined loneliness as the discrepancy between existing and desired social relationships. Loneliness affects both short- and long-term social-emotional well-being. When adolescents and children lack social relationships, it can result in poor academic achievement, poor self-perception, depression, suicidal thoughts, and anxiety (Jose & Lim, 2014; Tekinarslan & Kucuker, 2015). Given that not having strong or sufficient social relationships can result in loneliness, providing opportunities for children with
special needs to build and maintain social relationships and connections to their family, school, and community may reduce social isolation and loneliness, and in turn, may improve their social connectedness (Jose & Lim, 2014; Jose, Ryan, & Pryor, 2012; Tekinarslan & Kucuker, 2015).

Therapeutic riding was introduced to North America in the 1980’s. Since then, many qualitative and quantitative studies have addressed the physical, social, emotional, and cognitive benefits associated with therapeutic riding in both children and adults with special needs (Barr & Shields, 2011; Granados & Agís, 2011; Kemp, Signal, Botros, Taylor, & Prentice, 2014; Stergiou et al., 2017; Tan & Simmonds, 2018). However, researchers have yet to determine the contributions therapeutic riding may have on increasing families’ social connectedness.

To explore families’ social connectedness through therapeutic riding, one data source is not sufficient. Including only one data source would not provide the study with confirmatory evidence nor attempt to investigate rival explanation as does more than two sources. In fact, Yin (2014) suggests that mixed methods research may collect stronger evidence than a single method study. For this reason, mixed methods research was used in this study to identify how the Cowichan Therapeutic Riding Association (CTRA) impacts social connectedness and how the context of therapeutic riding affects riders’ and their families’ social connectedness. An explanatory sequential mixed methods design was used to answer four research questions surrounding the current level of social connectedness at the CTRA.

**Aim**

The purpose of this case study was to understand social connectedness of families participating in therapeutic riding at the CTRA. The primary aim of this research was to determine if, and how, participation in therapeutic riding among children with special needs and their families contributed to feelings of social connectedness. By understanding participants’
experiences of connectedness at the CTRA, potential hindrances to the promotion of social connectedness can be reduced in the future.

**Research Questions**

Four research questions were addressed:

1. What is the present level of social connectedness experienced by children and their families at the CTRA?
2. How do families from the CTRA express social connectedness?
3. How does participation in therapeutic riding at the CTRA influence social connectedness?
4. How can therapeutic riding organizations foster social connectedness in the future?

**Operational Definitions**

- **Case Study** – A case study is an empirical inquiry methodology used most commonly in social sciences to investigate a particular phenomenon (Yin, 2014). Yin (2014) suggests a case study is bounded by three conditions: the type of research question(s), the control an investigator has on the behaviour of events, and the focus on a contemporary phenomenon (Yin, 2014). A case study can use both qualitative and quantitative data collection methods to answer ‘how’ and ‘why’ research questions (Yin, 2014). Although my first questions asked, ‘what’ the present level of social connectedness was, I needed this ‘what’ question before proceeding to the ‘how’ questions. My second, third, and four questions asked ‘how’ social connectedness was expressed, influenced, and fostered, therefore, the type of research questions were explanatory and adequate for a case study (Yin, 2014). In terms of my control over events, a case study was appropriate because I
do not have any control over a therapeutic riding lesson, nor the way families develop social connectedness. Lastly, in terms of a contemporary issue, a case study was appropriate because I interviewed two groups of participants involved in therapeutic riding at the CTRA. Yin (2014) suggests that a contemporary issue should be able to directly observe or interview a person involved in the events/issue as opposed to a historical issue where there is no one to see or interview.

- **Children** – The United Nations Convention on the Rights of the Child define a child as a human below the age of 18 years (United Nations Human Rights, 1989). For this study, the age for a child was anyone under the age of eighteen years.

- **Child with special needs** - A child with a seeing, hearing, mobility, flexibility, dexterity, pain, learning, developmental, mental/psychological, or memory disability is considered to be a child with special needs (Easter Seals, 2018). In this study, a child with special needs was a child with any needs outlined by Easter Seals and who had a referral from a pediatrician, speech language psychologist, occupational therapist, or health professional that the CTRA accepted.

- **Connection** - A bond between a child and another person who holds significance and provides a sense of belonging (Barber & Schluterman, 2008).

- **Explanatory Sequential Mixed Methods Design** - The collection and analysis of quantitative data as preliminary evidence followed by qualitative data that helps to explain the quantitative results (Creswell, 2015).

- **Horse Therapy** - Planned therapeutic interactions and activities between rider and horse (Sulkowski, 2017).
• Social Connectedness - The psychosocial process of belonging developed between family, community, and school (Henderson & McClinton, 2016). In this study, social connectedness was defined as the process of belonging that riders and their family experienced in the community setting of the CTRA.

• Therapeutic Riding - Therapeutic riding can be defined as the act of therapy with the assistance of a horse (Stergiou et al., 2017). Cowichan Therapeutic Riding Association (2018) defines therapeutic intervention as utilizing the horse’s movement and equestrian principles.

Frameworks Guiding the Research

Mixed methods combine both quantitative and qualitative techniques, methods, approaches, concepts, analysis, and data within one study (Creswell, 2013; Yin, 2014). Mixed methods advocates believe that there are situations when using a single method does not adequately explore a phenomenon (Creswell, 2013). To address my research questions, an explanatory sequential mixed methods design was used (Creswell & Plano Clark, 2011). An explanatory sequential mixed methods design uses the collection and analysis of quantitative data followed by qualitative data (Creswell, 2013). This study began with a quantitative questionnaire with a scale to collect participants’ level of social connectedness. Qualitative data were then collected using semi-structured interviews to explore expressions and influences of social connectedness at a therapeutic riding association. The design facilitated my exploration of the degree of social connectedness at the CTRA and to explain the study’s propositions, specifically that 1) the environment, people, and animals contribute to social connectedness, 2) the CTRA provides opportunities to develop social connectedness, and 3) social connectedness emerges because people desire to form relationships and belong.
Assumptions

The researcher assumed the following to be true of this study:

1) Participants (instructors, guardians, and children who participated in therapeutic riding at the CTRA) could articulate, express, and respond truthfully about their experiences. Children with special needs may not be able to contribute their perspective in an interview, therefore, it was assumed that their guardian were able to reflect on their child’s experiences and perspective for them.

2) Mixed methods case study research is an appropriate method for understanding participants’ lived experiences.

Delimitations

This research was delimited by the following:

1) Participants must have attended the CTRA for a minimum of one therapeutic riding lesson per week, for six consecutive weeks or longer between September 2018 and December 2018.

2) Participants were any guardian who had a child with a special need and participated in therapeutic riding at the CTRA during the period defined in point 1 above.

Limitations

The researcher acknowledges that self-reporting and recall of participants’ experiences may limit confirmability.
Chapter 2- Literature Review

Introduction

There are two hundred thousand children with special needs in Canada (Easter Seals, 2018) who may be at risk of experiencing alienation, isolation, and loneliness (Henderson & McClinton, 2016; Lee et al., 2001; Tekinarslan & Kucuker, 2015). However, social connections and relationships to peers, adults, and role models could help to reduce these feelings of loneliness and isolation (Henderson & McClinton, 2016). Educators, parents, and community workers could assist in alleviating feelings of loneliness and isolation by accepting, respecting, valuing, trusting, caring for, and providing a sense of belonging for children in their care (Chams, 2017; Crespo et al., 2016; Henderson & McClinton, 2016; Routt, 1996).

This study examined the extent to which social connectedness was present, how social connectedness was expressed, and what influenced and fostered social connectedness at the CTRA. In this chapter I review the definitions of social connectedness and the tools used to measure social connectedness, define therapeutic riding, review literature on the benefits and methods of therapeutic riding, identify the gaps in the literature, and discuss frameworks of social connectedness.

Social Connectedness

Defining social connectedness.

To understand the definition of social connectedness, one must first identify where the term ‘connectedness’ came from and what ‘connectedness’ means. In 1971 and 1977, Kohut proposed that people have two needs, the need for feelings of self-esteem and the need for others to see positive qualities and attributes in them (Lee & Robbins, 1995). Kohut emphasized the relationship between self and self-objects (cognitive representations of other people and their
actions toward the self). In 1984, Kohut proposed a third component of self-psychology; belongingness. Due to the importance and the lack of belongingness in society, Lee and Robbins (1995) were interested in understanding the components of belongingness and in developing a valid and reliable self-report measure on the aspects of belongingness proposed by Kohut. Lee and Robbins (1995) proposed that belongingness had three aspects: companionship, affiliation, and connectedness. Since then, researchers have clarified the definition and meaning of connectedness. Barber and Schluterman (2008) summarized over thirty studies with the intent of clarifying the parameters of connectedness. At that time, Barber and Schluterman used Barber, Stolz, Olsen, and Collins’ (2005) definition of connectedness: “…a tie between the child and significant other persons that provide[s] a sense of belonging, an absence of aloneness, and a perceived bond” (Barber, Stolz, Olsen, & Collins, 2005, p. 119). Since then, a comprehensive review by Phillips-Salimi and colleagues (2012) provided clarity on the concepts of connectedness and they concluded that “…connectedness most commonly occurs in the context of social relationships” (p. 235). Consistent with Barber and Schluterman, Phillips-Salimi et al. agreed that connectedness develops through social relationships, specifically in four contexts; in relation to parents, family, school, and community. Furthermore, Phillips-Salimi et al. explained that connectedness occurs in the context of a social relationship and therefore, is the degree a person thinks they are close to and have a significant relationship with a person or group of people. Most recently, Crespo et al. (2016) defined connectedness as the person’s own perception or belief that they are cared for, valued, and understood by those around them. In summary, having social relationships may not provide feelings of connectedness; it is the person’s perception and belief that they are cared for, valued, and close to a person or group that provides a significant relationship to them.
Where ‘connectedness’ can be thought of as a person’s perception that they are cared for, ‘social connectedness’ refers to the process by which a person becomes and feels a sense of connectedness (Henderson & McClinton, 2016). Throughout the literature, social connectedness is defined in diverse ways. These definitions, however, often encompass similar core attributes, specifically: a sense of belonging, well-being, respect, trust, acceptance, value, empathy, and reciprocity within an environment (Chams, 2017; Crespo et al., 2016; Henderson & McClinton, 2016; Phillips-Salimi, Haase, & Kook, 2012; Routt, 1996). A lack of these qualities in a relationship could result in feelings of isolation and loneliness (Chams, 2017; Tekinarslan & Kucuker, 2015). Furthermore, social connectedness can be restricted if, or when, a person feels uncomfortable or unsafe in the context (Boström & Broberg, 2018; Phillips-Salimi et al., 2012).

**Importance of social connectedness.**

Children with special needs are at a higher risk of feelings of isolation and loneliness (Tekinarslan & Kucuker, 2015). However, social connectedness may mitigate these feelings. The literature linking social connectedness and a person’s health and development is evident (Jose & Lim, 2014; Jose et al., 2012). Connections to family, school, and community serve as protective factors for both children’s and adults’ well-being, health, and quality of life (Barber & Schluterman, 2008; Crespo et al., 2016; Jose et al., 2012; Lee & Robbins, 1995; Resnick et al., 1993). Jose and Lim (2014) found that, when one perceives they are socially connected, depressive symptoms, suicidal thoughts, and attempts are reduced, and violence and health-compromising behaviours are lessened. Additionally, social relationships with others is linked to higher self-esteem, reduced problem behaviours, and lessens the impact that stress and trauma can have on one’s mental health (Abubakar & Dimitrova, 2016; Full Frame Initiative, 2013; Jose & Lim, 2014).
Measuring social connectedness: Scales.

In 1984, Kohut proposed the third self-need; the need for belongingness. He reported that people want to have a subjective sense of belonging. In 1995, Lee and Robbins created ‘The Social Connectedness Scale’. The authors proposed that there were three aspects of belongingness i.e. ‘being a part of’. The three components were: connectedness, companionship, and affiliation, and were each used in the creation of the scale. Lee and Robbins’ goal was to develop a valid and reliable self-report scale for undergraduate students that assessed the three aspects of belongingness. Validation of the scale included review by expert judges who agreed on an operational definition and the item wording for the scale, factor analysis, and examination of internal consistency. Factor analysis confirmed that the three components of belongingness: connectedness, affiliation, and companionship, were represented in the Social Connectedness Scale (SCS). The internal consistency of the final eight items of the SCS was high (α = .91). Over a 2-week interval, Lee and Robbins’ measure also had strong test-retest reliability (r = .96).

Although the SCS was valid and reliable, Crespo et al. (2016) criticized Lee and Robbins’ scale as too generic. The scale included items not focused on social connectedness; with only 4 of the 8 items exclusively evaluating connectedness. These items were: I feel disconnected from the world around me, I feel so distant from people, I don’t feel related to anyone, and I catch myself losing all sense of connectedness with society. This prompted other researchers to make revisions and create new scales to solely measure social connectedness.

Since the Social Connectedness Scale was originally developed and validated (Lee and Robbins, 1995), it has been modified many times. Although many of the revisions added more questions focusing on social connectedness, the wording of the questions were also changed as the original scale carried negative connotations (Lee et al., 2001). Negative questions focused on
the struggle of emotional distance between a person and their friends, family, and society, rather than on successful connections. Lee and colleagues (2001) argued that the scale failed to capture the full experience of connectedness due to only negative worded items. In 2001, the scale was revised to reflect more positively worded questions, thereby capturing the full experience (i.e. positive and negative) of social connectedness among undergraduate students (Lee et al., 2001). The Lee et al. scale has been revised several times for population and context specific research (Armstrong & Oomen-Early, 2009; Crespo et al., 2016; Lee et al., 2001).

A scale suitable for children below the age of 18 years, was not created until 2005, when Lee and Robbins’ ‘The Social Connectedness Scale’ was revised for children 14 to 18 years of age (YouthRex Research and Evaluation eXchange, n.d.). Additionally, because researchers in the field of social connectedness consistently found that social connectedness was related to a variety of contexts such as family, school, peer-group, health-care system, and community (Jose & Lim, 2014; Karcher, 2005), Crespo et al. (2016) combined Lee and Robbins’ (2005) scale with contexts related to social connectedness, to create the ‘Connectedness to Treatment Setting Scale,’ a context specific scale. Their goal was to assess children’s and parents’ connectedness to a treatment setting, specifically, a pediatric hospital ward. Crespo and colleagues wanted the scale to be understood both by adults and by children aged 7 to 20 years. Pearson correlation coefficients were used to assess test-retest reliability of the total connectedness score. The R-values were .77 for children and .68 for adults, demonstrating adequate reliability (Crespo et al., 2016). The ‘Connectedness to Treatment Setting Scale’ has strong validity established through exploratory factor analysis with children’s and parent’s data separately. Consistent with the theory, three factors were identified and labeled as sense of belonging, comfort, and emotional
care. The scale has been validated for children and adults within a therapeutic setting, and was therefore useful for this study, as the context was specific i.e., therapeutic riding.

Social connectedness has been associated with reduced problematic and violent behaviours, decreased depressive symptoms, improved mental health, enhanced resiliency, protection from isolation, and better overall health (Abubakar & Dimitrova, 2016; Barber & Schluterman, 2008; Jose & Lim, 2014; Jose et al., 2012; Resnick et al., 1993). Providing opportunities for children with special needs to build and maintain social relationships and connections to their family, school, and community may reduce social isolation and loneliness, and in turn, provide opportunities to build social connectedness. This study worked from the presumption that the need to belong is universal. However, since children with special needs are at a higher risk of experiencing isolation than their typical peers, social connectedness is especially salient for them. Furthermore, as social connectedness is so vital for children, staff at therapeutic settings should monitor the impact of the setting on developing social connectedness. The ‘Connectedness to Treatment Setting Scale’ is a useful measure that families’ could complete in the context of a therapeutic riding association to determine their level of social connectedness.

Animal Therapy

Animal therapy is used throughout the world to support children and adults with special needs. The most common animals used for animal assisted intervention (AAI) are dogs and horses; however, other animals used for therapy include guinea pigs, llamas, and rabbits (O’Haire, 2013). Animals provide calming and non-judgmental support which has been shown to facilitate social interaction (Kaiser, Spence, Lavergne, & Bosch, 2004; O’Haire, 2013). Previous studies have shown that animal therapy can provide children the comfort to work
through emotional, psychological, mental, and physical challenges (Granados & Agís, 2011; Sulkowski, 2017). Some of these challenges include: speech and communication, cognitive development, motor-skills, mobility, social interaction, and stress (Heimlich, 2001; Sulkowski, 2017). O’Haire (2013) performed a systematic review of fourteen AAI studies to determine the common benefits of AAI for people with autism spectrum disorder (ASD). Four themes describing benefits of AAI were identified: social interaction, language and communication, ASD severity, and stress and well-being. Social interaction was the most common benefit of AAI, having been observed in 9 of the 14 studies. O’Haire defined social interaction as “the frequency and/or duration of verbal and nonverbal social behaviors” (p.1613). This could be when an animal is present or without an animal present. Fourteen studies reported that a person with ASD had significantly increased social interactions both while working with an animal as well as after a course of therapy sessions (O’Haire, 2013). In 5 of the 14 studies, authors reported an increase in communication and use of language during and after AAI. A decrease in stress and increased well-being were also reported through improved mood, motivation, and energy (O’Haire, 2013). In summary, animal therapy provides opportunities for people with special needs to develop in multiple domains.

**Horse Therapy**

Horse therapy, a subset of AAI, has three slightly different approaches: therapeutic riding, hippotherapy, and equine-assisted psychotherapy (Sulkowski, 2017). My study was solely focused on therapeutic riding, often considered to be a “recreational” form of horse therapy (Sulkowski, 2017). Therapeutic riding originated in ancient Greece where it was used for rehabilitating soldiers returning from war (Granados & Agís, 2011). In 1980, therapeutic riding was introduced to North America and organizations such as the Canadian Therapeutic Riding
Association (CanTRA) and The Professional Association of Therapeutic Horsemanship (PATH) formed. These organizations have been at the forefront of training instructors and certifying associations to provide quality therapy, life skills, and recreation with the use of horses (Canadian Therapeutic Riding Association, 2017; Professional Association of Therapeutic Horsemanship International, 2019). Presently, there are eighty registered facilities through CanTRA in Canada with seventeen accredited centers located in British Columbia. The Cowichan Therapeutic Riding Association is certified through CanTRA and has been operating on Vancouver Island since 1986 (Cowichan Therapeutic Riding Association, 2017).

**Therapeutic Riding**

Stergiou et al. (2017) defined therapeutic riding as the act of therapy with the assistance of a horse. Therapeutic riding is a versatile therapeutic method for children and adults with and without special needs, as the goals are adapted depending on the requirements of the rider (Kaiser et al., 2004; Stergiou et al., 2017). As can be seen in Table 1, the process and objectives of a lesson can differ depending on the rider’s needs, their experience, and their mood that day.
Table 1 A Typical Session of Therapeutic Riding

<table>
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<th>Before, the child may…</th>
<th>During, the child may…</th>
<th>After, the child may…</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sit on a wooden horse to gain experience on positioning</td>
<td>Learn to talk or initiate communication by cueing the horse to slow down with a “woah” or simple cooing sounds.</td>
<td>Ask to get off the horse or signal that they would like off</td>
</tr>
<tr>
<td>Brush or feed the horse</td>
<td>Learn to talk or initiate communication by cueing the horse to walk on.</td>
<td>Walk the horse back to their stable</td>
</tr>
<tr>
<td>Retrieve the horse from his stable with their instructor</td>
<td>Walk alongside the horse.</td>
<td>Feed or brush the horse</td>
</tr>
<tr>
<td>The child will put on a helmet</td>
<td>Lay on the back of the horse.</td>
<td>Child will take helmet off</td>
</tr>
<tr>
<td></td>
<td>Ride the horse in a slow walk.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Ride the horse in a trot.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Communicate with his/her instructor about the horse.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Be asked to play games while riding the horse such as catching or throwing a ball.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Be asked to point things out within the ring while riding.</td>
<td></td>
</tr>
</tbody>
</table>

Therapeutic riding is a recreational way for children to develop strength, mobility, and confidence (AHA Inc., 2016). Many personnel are also involved within a therapeutic riding session, including a certified instructor, ‘side walker(s),’ and a horse handler. Figure 1 shows the sequence of a therapeutic riding session at the CTRA and identifies the personnel needed. Depending on the unique needs of a child with special needs, therapeutic riding sessions may also be supervised by supporting staff such as a licensed horse trainer, speech therapist, occupational therapist, or psychologist.
**Figure 1. Ride Flow Chart:** Visual process of the beginning and end of each therapeutic riding session including the numerous personal involved. Image used with permission and courtesy of Cowichan Therapeutic Riding Association.

At the CTRA, the instructor records each rider’s performance on the following dimensions after each lesson:

1. Physical & motor skill development/functioning, strength, cord, balance, flex, dexterity.
2. Cognitive development/functioning, memory, awareness, recall, counting, measuring.
4. Social development/functioning, engagement, relationships, respect, awareness.

There are times when an activity encompasses more than one of the above subsets. For example, riders are marked on their treatment of horse(s), fellow rider(s), and volunteer(s) (safety,
kindness, quietness, etc.) which encompasses three of the four subsets; cognitive, emotional, and social development. These four subsets are the foundation of benefits seen within therapeutic riding at the CTRA.

Benefits

Benefits of horseback riding have been documented since 1875. Chassaignac, a French neurologist, examined the benefits that horseback riding had on people with physical disabilities (Cusack, 1988). At that time, he established that balance, muscle strength, joint movement, and overall morale improved with riding (Cusack, 1988). Since then, research has demonstrated that horse therapy has the ability to improve many aspects of one’s development (Sulkowski, 2017). This practice is still relatively new to North America and, of the two hundred thousand children who have special needs in Canada (Easter Seals, 2018), many are still unaware of its numerous benefits (Henderson & McClinton, 2016).

Cognitive benefits.

Through interviews, Miller and Alston (2004) sought to understand parent perspectives of their child’s development while participating in therapeutic riding. As perceived by parents, activities during therapeutic riding lessons helped contribute to riders’ cognitive and academic development (Miller & Alston, 2004). Therapeutic riding may assist riders to learn numbers, letters, shapes, sizes, colors, and body parts. For example, the instructor may introduce the rider to a body part when asking the rider to brush the horse (H. Sangret, personal communication, Jan 25, 2019). The rider may count the number of legs, laps, or numbers on the walls in the barn during a session. These types of activities allow the rider to gain cognitive skills and knowledge in an atypical educational setting.
One study in particular used interpretive phenomenology to examine the parents’ perceptions of riders’ outcomes to determine improvements. Parents reported an increase in alertness, focus, compliance, and reduced reactivity (Tan & Simmonds, 2018). However, these authors recognized that their study was limited by a small sample size \((n = 6)\) and accepted that saturation of emergent themes was insufficient. Consistent with Tan and Simmonds (2018), CanTRA (2017) reported that riders experience an increased sense of alertness while riding, which promotes concentration and improves learning skills. In a case study, Rusty-Miller and Alston (2004) interviewed parents on their child’s improvements associated with therapeutic riding. Parents reported increased personal responsibility in regards to academic and social development (Miller & Alston, 2004). There are a variety of methods used in therapeutic riding to allow for learning and cognitive development. Therapeutic riding programs can help children develop academic skills through the active efforts of instructors however we must recognize that parental perception can be biased (Miller & Alston, 2004).

**Social benefits.**

During a therapeutic riding lesson, the rider interacts with the horse, the instructor, and the volunteers. Often, there can be up to four people assisting with a lesson. The rider has the opportunity to communicate and build relationships with the people around them in order to best communicate with the horse (Granados & Agís, 2011).

Studies of therapeutic riding programs have shown improvements in social communication, anxiety, negative affect, and undesirable behaviours (Kemp et al., 2014). In five weeks of equine therapy, youth who were at risk of dropping out of school (based on the Texas Education Agency’s definition) were measured on two scales—New General Self-Efficacy Scale and Makor Depression Inventory—and a self-report measure—Adolescent Domain-Specific
Hope Scale (Frederick, 2012). The results showed that youth at risk of dropping out of school who had intervention in equine-assisted learning; an experimental, therapeutic modality in which horses are used as tools for emotional growth and learning, had an increase in self-efficacy, hope, and a reduction of negative affect (Frederick, 2012).

A study of parents’ perceptions of the psychosocial benefits of therapeutic riding reported that their children were forming positive relationships with their horse and their instructors (Tan & Simmonds, 2018). Additionally, one parent identified that her child started having ‘play dates’ with other children from her group and began to form friendships (Tan & Simmonds, 2017). In this example, the riding facility turned into a place to form relationships as well as to practice and learn social skills. Although Tan and Simmonds (2018) used parents’ perceptions and had a small sample size, it still demonstrated that therapeutic riding can positively influence the formation of relationships. A social environment can be created to contribute to children’s psychological well-being (Tan & Simmonds, 2018).

Small adaptations may be needed when encouraging social inclusion for some riders with special needs. A riding program is unique since it can provide a calm, flexible, non-judgmental, and positive environment for their riders (Tan & Simmonds, 2018). These attributes are not always seen at other therapy programs. One parent in Tan and Simmonds’ (2018) study identified that, in a different context (i.e. a speech language pathology session), the therapy was “too much for her [daughter]” whereas the flexibility of the child-centered approach during a therapy riding session was extremely valuable (p. 764). Similarly, Barr and Shield (2011) provided an example from a mother of a thirteen-year-old girl. The mother reported that the accommodation and adaptation provided comfort, and in turn, her daughter participated in a riding lesson. She stated that “[s]he didn’t want to get on the horse, so she led the horse . . . then
she sat on the horse . . . it’s breaking it right down to the bit that is non-threatening that seems to help” (Barr & Shields, 2011, p. 1027). A therapeutic environment can make accommodations for their riders that support social inclusion and promote emotional well-being.

**Emotional benefits.**

Horse therapy has been shown to improve children’s emotional well-being (Granados & Agís, 2011; Hession et al., 2014). In a study by Harley (2008), pre- and post-test questionnaires were used over a three-month period. Results revealed that people over the age of 16 years who had physical and developmental disabilities, experienced a positive connection with horses during therapeutic riding. These positive connections helped to decrease depression, reduce feelings of loneliness, and lessen feelings of distress. After completing three months of therapeutic riding, the participants completed questionnaires and interviews. These data revealed that they experienced an increase in self-esteem, a connection to the horses, and sense of community at the stable (Harley, 2008). These findings are supported by more recent work by Tan and Simmonds (2018) who examined the benefits associated with therapeutic riding among six children through parent perceptions. Several themes emerged, including improvements in self-concept and emotional well-being, developed self-regulation, enhanced social benefits, and other outcomes. These self-concept benefits were exhibited through an increased sense of pride, feelings of empowerment, and openness to challenges (Tan & Simmonds, 2018). Parents noticed that their children seemed happy and were gaining confidence through therapeutic riding. One parent even commented that their child’s happiness was giving her joy and positively affecting the family as a whole (Tan & Simmonds, 2018).

Literature examining the benefits associated with therapeutic riding often rely solely on qualitative data, such as observations by parents, volunteers, or instructors. For example, Hession
et al. (2014), had parents identify their child’s improvements from therapeutic riding and noted that their self-esteem, confidence, anxiety, flexibility, mood, self-regulation, coordination, motivation, focus, social skills, and self-worth improved. It is “known” that therapeutic riding is beneficial because it makes children laugh, talk, and smile, but these observations are not objective nor empirical (Kaiser et al., 2004). Studies solely using qualitative observations should consider enhancing their studies through the use of mixed methods.

**Physical benefits.**

A recent systematic review and meta-analysis sought to determine whether therapeutic riding and hippotherapy improved balance, pelvic movement, motor function, muscle symmetry, gait, psychosocial parameters, and overall quality of life. The results included eight studies that found therapeutic riding and hippotherapy to improve balance, posture, muscle symmetry, motor function, psychosocial parameter, and an overall improvement in quality of life (Stergiou et al., 2017). Stergiou et al. (2017) found that these physical benefits from therapeutic riding significantly impacted adults with neuromotor disabilities, children with cerebral palsy, and elderly individuals with many health problems and disabilities. Stergiou et al. (2017) indicated that there are a considerable number of studies examining the benefits of therapeutic riding; however, many are limited by small sample sizes and failure to include people with neuromotor, physical, and developmental disabilities. Stergiou et al. measured the methodologic quality of a study using Downs’ and Black’s quality assessment tool. The meta-analysis and review showed that therapeutic riding has positive results however states that these may be of small magnitude.

Children with neuromuscular, developmental, and physical disabilities often have different gait patterns due to a lack of muscle tone, reduced muscle control, lack of coordination, and/or poor equilibrium (Stergiou et al., 2017). Granados and Agis (2011) explain that the
horse’s multidimensional rhythm and swinging movements mirror a normal human gait and is transferred to the rider when the horse is walking or trotting. During a smooth soft walk, riders’ hypertonic muscles relax, whereas, during a trot, the riders’ hypotonic muscles strengthen and trigger movement signals in the brain that mimic walking (Granados & Agís, 2011).

A rider’s flexibility, strength, and balance improved through the horse’s repetitive multidimensional swinging rhythm and temperature (Granados & Agis, 2011). The temperature of a horse’s body is on average 1–5 degrees above a human’s temperature. This assists in keeping the rider warm during a session and allows for massaging motions that would be hindered with the use of a saddle (Granados & Agís, 2011). This higher temperature can help a rider reduced spasticity, increase plasticity, and allow muscles to stretch (Granados & Agís, 2011).

In a study on children with cerebral palsy, results showed improved muscle symmetry, as measured by electromyogram, from eight minutes of hippotherapy on a horse (Benda, McGibbon, & Grant, 2003). Benda and colleagues (2003) conducted a randomized trial of children participating in 8 minutes of hippotherapy compared to 8 minutes on a stationary barrel. These authors found no significant improvement for children astride a stationary barrel, however, after hippotherapy, increased muscle symmetry was noted (Benda et al., 2003). A subsequent study using a similar methodology, increased the time on a barrel from eight to ten minutes of therapy over twelve weeks. Improvements in abductor muscle symmetry, balance, muscle strength, and range of motion were documented (Granados & Agís, 2011). Instead of a stationary barrel, Shurtleff and Engsberg (2010) used a motorized barrel for hippotherapy to determine improvements in head and trunk stability. Using a video system to document movements before and after a hippotherapy intervention, Shurtleff and Engsberg revealed that children with cerebral
palsy improved their head and truck control from the rhythmic movements of the motorized barrel, which were mimicking a horse's swinging rhythm.

Champagne and Dugas (2010) tracked the gross motor skill development of two young children with Down syndrome over 11 weeks of hippotherapy. The physiotherapists assessed the children’s functioning with accelerometry and the Gross Motor Function Measure (GMFM). The GMFM was originally developed for use with children with cerebral palsy, but also later deemed adequate for use with people with Down syndrome (Russell et al., 1998). Following the intervention, the children improved their ability to walk, run, and jump (Champagne & Dugas, 2010). However, this finding should be treated with caution as there was no comparison group. These children were only 28 and 37 months old, and they could have developed these skills through natural growth and maturation rather than with the assistance of hippotherapy.

In summary, there is evidence that participating in therapeutic riding is associated with improvements in cognitive, social, emotional, and physical development. Physical benefits in the form of gait, muscle symmetry, flexibility, and gross motor skills have been documented (Benda et al., 2003; Granados & Agís, 2011; Shurtleff & Engsberg, 2010). Furthermore, Harley (2008), Tan and Simmonds (2018), and Hession et al. (2014) established that therapeutic riding has an impact on a rider’s emotional well-being. Self-esteem, sense of community, sense of pride, feelings of empowerment, and self-regulation were among some of the highlighted emotional benefits (Harley, 2008; Hession et al., 2014; Tan & Simmonds, 2018). Social benefits have also been documented via parent observation and perceptions. Some of the social benefits associated with therapeutic riding include increased interaction with peers which leads to play dates and conversations with instructors, horse handlers, and volunteers (Tan & Simmonds, 2018). Lastly, therapeutic riding can also have an impact on the participants cognitive well-being including
increased alertness and focus, as well as a setting to develop academic skills such as numeracy (Miller & Alston, 2004; Tan & Simmonds, 2018).

**Mixed Methods Research**

Mixed methods research uses both qualitative and quantitative data within a study to gain measurable data and insight into a problem (Creswell, 2015). While qualitative research provides an understanding of opinions and motives of participants, it cannot measure statistical trends. Quantitative data allows researchers to quantify attitudes, opinions, and behaviours within a population, whereas qualitative data reveals patterns in thought or opinion. Mixed methods research can be used to collect data concurrently or sequentially, and these forms of data are ultimately combined during the research process (Creswell, 2015). Qualitative and quantitative data collection and analysis may happen sequentially; over a period of time, or concurrently; at the same time (Creswell, 2015). For this study, quantitative data was needed to measure the behaviours, attitudes, and opinions associated with social connectedness at the CTRA. However, qualitative data was also needed to more fully understand the opinions, thoughts, and feeling of instructors, parents, and children. Therefore, a mixed methods design was most appropriate.

Although mixed methods research has become increasingly popular since 2003 within social sciences (Creswell, 2003), researchers focused on therapeutic riding have primarily used qualitative methods (Stergiou et al., 2017). Limited studies use empirical data and objectively measure benefits of therapeutic riding. However, Harley (2008) used a mixed methods design with two parts to identify self-esteem, anxiety, and depression in relation to therapeutic riding. Part one \( (n = 35) \) included a questionnaire on participants’ psychological functioning before and after treatment. Part two \( (n = 20) \) used interviews with families and participants to further understand the benefits gained through a therapeutic riding program. Using a mixed methods
approach, Harley (2008) quantified participants’ psychological functioning, while also providing data that could be used to uncover patterns though opinion during their interviews. This is one example of a study concentrated on the benefits of therapeutic riding that used both quantitative and qualitative data to provide a more fulsome understanding of the issue.

Research using mixed methods to examine social connectedness in children with special needs is lacking. However, literature using mixed methods to examine social connectedness pertaining to adults and high school students is growing. A study by Whirlock (2007), used a sequential mixed methods design to identify contextual correlates of community connectedness. As Whirlock explained, community connectedness refers to the extent individuals feel that the collective community of adults’ respect, trust, and care for them. Whirlock surveyed 318 youth in grades 8, 10, and 12 using a questionnaire adapted to fit the community context and examined four development supports; safety, community monitoring, creative outlets, and exercising opportunities. Although it was unclear how students were selected, half the students ($n = 108$) were put into eleven focus groups and were asked open-ended questions to clarify results from the quantitative portion (Whirlock, 2007). The focus group data integrated key open-ended questions and semi-structured questions developed from the questionnaire responses to assist with interpretation and trends. A sequential design, as seen within Whirlock’s (2007) study, began research with a quantitative phase of a large sample to develop demographic descriptions and examine the relationship between community connectedness and four developmental supports: creative outlets, meaningful opportunities for exercising influences, safety, and community monitoring. Rather than collecting data at the same time (a concurrent design), a sequential design provided the researchers with data to then guide the following data collection so that data, more specific to the research questions, could be gathered. Similar to Whirlock’s
study, I chose to have quantitative results (present social connectedness levels) as orientation before interviewing the participants. With this sequential design, researchers can use the data from one method to inform and clarify the other. In my study, the quantitative data was used to develop the questions in the qualitative phase. Furthermore, the CTSS provided the level of social connectedness of each participant, which was used to tailor the qualitative data collection. Beginning research with quantitative data collection and analysis allows the researcher to clarify and further explain during qualitative data collection (Creswell, 2015).

Alternatively, a concurrent design can be used. Schell, Hausknecht, Zhang, and Kaufman (2016) investigated the social benefits (i.e. social connectedness) associated with playing Wii bowling with older adults using a concurrent design. Schell et al. used a concurrent design where a questionnaire and interviews were simultaneously administered (right after another), taking place pre- and post- Wii tournaments. The quantitative portion of the study included 78 participants, whereas the qualitative portion included 17 participants. Schell et al. used a mixed methods design to gain a full understanding as to how Wii bowling could enhance the social life of adults. Interviews allowed the researchers to collect data on the perceptions of friendships, social contacts, conversation, and team experiences, while the quantitative aspect provided empirical data supporting the finding of increased social connectedness among participants. However, since Schell et al. used a concurrent design and collected both quantitative and qualitative data right after each other before analysing the data, they could not clarify or build off of the results. A concurrent design can cross-validate or confirm findings at the same time whereas a sequential design can gather quantitative findings and analyze, then further explore the phenomenon using qualitative data collection (Mayoh & Onwuegbuzie, 2015).
Mixed methods can be concurrent or sequential, moreover, if using a sequential design, you can use either an explanatory or exploratory design (Creswell, 2015). An explanatory sequential design involves collecting and analysing quantitative data to provide preliminary evidence, followed by qualitative data to explain the quantitative results (Creswell, 2015). In contrast, an exploratory design does the opposite and first gathers qualitative data followed by quantitative data. Henderson and Greene (2014) used an explanatory sequential design to examine resilience, social connectedness, and re-suspension of middle school and high school students. Participants completed a demographic questionnaire, a Child and Youth Resilience Measure, and the Social Connectedness Scale before and after a community-based alternative-to-suspension program. In this study, the larger sample (n = 102) served as a sampling frame when recruiting for group interviews (n = 15). Following the intervention, the lead author led semi-structured interviews to the smaller group of participants. In Henderson and Greene’s study, an explanatory sequential design allowed the results of the quantitative demographic questionnaire, the Child and Youth Resilience Measure, and the Social Connectedness Scale to guide their questions when interviewing participants on their perspectives, thoughts, and feelings of resilience, social connectedness, and re-suspension; this design was used in my study.

Theoretical Framework

The association between social connectedness and therapeutic riding has not yet been investigated. However, current research on social connectedness has shown that being connected to life contexts is beneficial for children’s and adults’ adjustment, well-being, and quality of life (Barber & Schluterman, 2008; Crespo et al., 2016; Karcher, 2005; Resnick et al., 1993). Children and youth are embedded within many social contexts—school, family, friends, peers, and community—that work together to influence one’s health and adjustment (Abubakar &
Dimitrova, 2016; Jose et al., 2012; Kazak, Simms, & Rourke, 2002). According to Karcher (2005), youths’ activities and affection for people and places around them reflect their connectedness within life. A therapy program has the potential to provide a social context that encourages health and well-being through connectedness. The seven attributes of social connectedness can be used to determine if a therapy program is in fact contributing to feelings of social connectedness for its participants (Phillips-Salimi et al., 2012).

To begin, Phillips-Salimi et al.’s (2012) seven attributes of connectedness, specifically: intimacy, sense of belonging, empathy, caring, respect, trust, and reciprocity, can be used to identify if participants are in fact socially connected. These attributes characterize the positive expressions that are received and reciprocated between people that have social interactions (Phillips-Salimi et al., 2012). Antecedents, attributes, and consequences of social connectedness were developed into a preliminary theoretical framework of a patient-provider relationship (Phillips-Salimi et al., 2012). Phillips-Salimi et al. (2012) suggested three antecedents of social connectedness: consistent interactions with people that are supportive and affectionate, the need and desire to connect, and lastly, similar experiences, interests, or beliefs between people (Barber & Schluterman, 2008; Karcher, 2005; Lee & Robbins, 1998; Resnick et al., 1993). These antecedents precede the attributes of social connectedness. Furthermore, once the attributes of social connectedness are effectively expressed in a reciprocal relationship, the person feeling socially connected may then receive the consequences of social connectedness. Phillips-Salimi et al. suggested six consequence of social connectedness that are present across the literature. The consequences of social connectedness include: higher self-esteem, enhanced psychosocial/emotional adjustment, adaptive interpersonal skills, improved health and well-being, higher academic achievement, and lastly, diminished risk-taking behaviours (Abubakar &
Dimitrova, 2016; Barber & Schluterman, 2008; Crespo et al., 2016; Jose & Lim, 2014; Jose et al., 2012; Richard Lee & Robbins, 1995; Resnick et al., 1993). Figure 2 illustrates the relationship between the antecedents, attributes, and consequences of social connectedness.

**Figure 2. Social Interaction Context (retrieved from Phillips-Salimi et al. 2012, p. 13).**

When participants in contexts such as therapeutic settings, have consistent supportive interactions, experience similar interests or beliefs from those around them, and have a desire to connect, this leads participants to experience the attributes of connectedness which then provide the opportunities of positive consequences of connectedness. Phillips-Salimi et al.’s (2012) attributes were used as an orientational framework (Patton, 2002) to guide the coding of participants’ expressions of social connectedness in this study. I used the attributes of social connectedness from Phillips-Salimi et al. to develop an understanding and opinion around families’ social connectedness at the CTRA.
Summary

Therapeutic riding may be an avenue for riders and their families to develop feelings of social connectedness. Although therapeutic riding programs can provide cognitive, emotional, physical, and social development benefits, they may also be contributing to a child’s level of social connectedness which is associated with feelings of belonging, value, and overall well-being. Therefore, if therapy programs like therapeutic riding can develop positive relationships and connections, they may provide their participants with skills to build, maintain, and improve social relationships.

Social loneliness is due to a lack of relationships with people who share similar interests (Tekinarslan & Kucuker, 2015). Thus, it could be proposed that increasing children’s feelings of social connectedness would, in turn, reduce children’s feelings of social loneliness (Tekinarslan & Kucuker, 2015). The extent to which therapeutic riding programs can increase social connectedness has yet to be identified. However, Henderson and McClinton (2016) identified that social supports within a community-based organization could compensate for a lost or missed relationship in a child’s life. The positive relationship in the community setting could provide protective factors that benefit the children’s well-being. Organizations like the CTRA have the potential to provide a supportive community by validating riders’ strengths, increasing social connectedness, and improving psychological well-being. Identifying the influences of social connectedness at an association like the CTRA could identify the hinderances and provide details of how to further foster social connectedness in the future.
Chapter Three: Method

Introduction

In this chapter I describe the study’s design, context, measures, procedures, and data analyses in accordance with Yin’s (2014) components for case study research design. The five components suggested by Yin are: the research questions, the propositions, the unit of analysis, the logic of linking the data to the propositions, and how the findings will be interpreted.

Design

A case study can be defined as an empirical inquiry within a real-life context or setting (Yin, 2014). Two models are often used in case study research 1) the single instrument case study 2) the collective or multiple case study. A single instrumental study has a concern or issue in which the study selects one case to demonstrate the issue. A collective case study (or multiple case study) also has one issue of concern; however, the inquirer selects multiple cases to examine the issue. This study followed a single instrumental study design as the CTRA wanted to evaluate their programs effect on families’ social connectedness when participating in therapeutic riding at the CTRA. An instrumental case study uses a case (the CTRA) to gain insight into a phenomenon. Therefore, this case focused on learning the relationship between the CTRA and families’ social connectedness. Furthermore, a single instrumental design offers thick description of a particular site, in this case the CTRA.

Mixed methods research design.

A mixed methods approach was selected as it combines both quantitative and qualitative data, therefore broadening the scope of research. Both quantitative and qualitative data are collected and analyzed to provide results that show both empirical data as well as the narrative
behind it (Creswell, 2013). Combining quantitative and qualitative methods is useful when desiring a precise answer(s) to a defined question, but then also wanting detailed information about a person’s perception or attitude. Additionally, two methods provide both objective and subjective results. Therefore, this mixed methods study gained a precise answer to the present level of social connectedness (research question one), the way families expressed social connectedness (research question two), as well as obtained detailed perceptions, examples, and participant experiences on the influences of social connectedness at the CTRA (research question three and four). For this reason, mixed methods research provided an appropriate platform to understand the experiences of families participating in therapeutic riding since it measured both the present level of connectedness and the factors influencing social connectedness.

Mixed methods research can consist of sequential or concurrent designs. An explanatory sequential design was deemed suitable for this study as the quantitative and qualitative portion of the study can build off each other. In Phase 1 of this study the quantitative data, documenting the level of social connectedness felt by guardians and instructors, was collected via an online questionnaire. Interviews in Phase 2 of this study then provided narrative explanations and detailed information about the participants’ perceptions, attitudes, and opinions. These data were then used toward developing an understanding of social connectedness developed through participation in therapeutic riding, as well as how to foster social connectedness in the future. The two phases of the study were connected as they both helped me understand social connectedness present at the CTRA, and participants involved in the quantitative phase had the opportunity to be a part of the qualitative phase.
**Five components of the case study design and implementation.**

In this next section, I will explain each of the five components of case study design as defined by Yin (2014), specifically: the study’s questions; the propositions; the units of analysis; the logic linking of data to propositions; and the interpretation of the findings.

**Component 1. The research questions.**

The intent of this study was to understand how families participating in therapeutic riding experience social connectedness and what can be done by the CTRA to enhance families’ social connectedness. Yin (2014) suggests that “how” and “why” questions are appropriate for case study designs. However, the first research question was a “what” question. This question was needed to establish participants’ current level of social connectedness. Then, “how” questions were asked to determine in what way(s) and why participants felt socially connected or not, as well as how the CTRA influenced children, guardians, and instructor’s ability to connect. In this study, four questions were addressed:

1. What is the present level of social connectedness experienced by children and their families at the CTRA?
2. How do the families at the CTRA express social connectedness?
3. How does participation in therapeutic riding at the CTRA influence social connectedness?
4. How can therapeutic riding associations foster social connectedness in the future?

The creation of the explanatory sequential design involved collecting and analyzing quantitative data and then collecting and analyzing the qualitative data. The preliminary quantitative findings were used to inform Phase 2 of the research. Those who participated in the quantitative phase (Phase 1) and expressed interest in the qualitative interviews were contacted...
and provided the opportunity to be interviewed (Phase 2). For those participants, the quantitative data from Phase 1 allowed me to tailor each interview guide. The opening question of each interview reflected the participants’ level of social connectedness and was reinforced throughout the interview. For example, if the results of the quantitative CTSS showed that a guardian was highly socially connected, a question would be: what are some experiences that you have which contributed to feelings of social connectedness?

**Component 2. The propositions.**

A proposition is a statement that directs the researchers’ attention to the main parts within a study that should be examined and guides a researcher to relevant evidence (Yin, 2014). The propositions for this study were:

1) The physical environment, people, and animals all contribute to social connectedness.

2) The CTRA provides opportunities for their participants to develop social connectedness through building social networks that support psychological and social well-being.

3) Influenced by Henderson and McClinton (2016), social connectedness emerges from the human desire to belong and form relationships.

**Unit of Analysis and Participants**

**Component 3. Unit of analysis.**

Yin (2014) describes the unit of analysis as defining the case and bounding it. This study was conducted in collaboration with the Cowichan Therapeutic Riding Association (CTRA) on Providence Farm, east of Duncan, British Columbia. The CTRA, as it existed from October 2018 to March 2019, was the unit of analysis. Yin (2014) suggests that time boundaries must be defined when the study is specific to a geographical area. In this case, the CTRA was my
geographical area and time boundaries were limited to families that had children who participated in at least one therapeutic riding program for a minimum of six weeks with at least one session per week between October 2018 and March 2019. Instructors that taught a session of therapeutic riding at the CTRA between October 2018 and March 2019 were invited to participate.

**Description of CTRA.**

In 1986 the Cowichan Therapeutic Riding Association (CTRA) opened its doors as a chapter of Pacific Riding for the Disabled Association. In 1989, it then moved to Providence Farm just south of Duncan, B.C., and became Cowichan Therapeutic Riding Association (H Sangret, personal communication, February 13, 2019). At that time, the CTRA offered therapeutic riding with two borrowed horses. Today, the CTRA offers therapeutic riding, therapeutic horsemanship, para-equestrian sport, adapted equestrian vaulting, stable management, vocational development interventions, and horse camps with fifteen horses in the barn (Cowichan Therapeutic Riding Association, 2018; H Sangret, personal communication, February 13, 2019). Since its opening in 1989, their programs have expanded to now serve over one hundred children and adults of all abilities every week. Staff at the CTRA aim to provide an inclusive community that supports its riders’ social determinants of health. The goal of each rider may be different since the therapy is based upon the needs of each rider. Participants are referred by healthcare professionals including family physicians, physical therapists, or occupational therapists (Cowichan Therapeutic Riding Association, 2018).

Children attend therapeutic riding lessons once or twice a week for about thirty to sixty minutes per lesson (A Muir, personal communication, March 28, 2018). A session of therapeutic riding is comprised of six weeks of therapeutic lessons where the children are marked on a scale
assessing cognitive, social, emotional, and physical development by their instructors. Some students have private lessons with a one-on-one rider to instructor ratio in addition to one to three volunteers. Others are in group lessons, with one horse per rider, one instructor, and up to six volunteers. Although a session only lasts for six weeks, many children attend sessions throughout the entire school year (September – June).

**Participant recruitment.**

Participants were recruited through a letter of invitation delivered via email to families (Appendix A) and staff (Appendix B) by Anne Muir, the former executive director of the CTRA. The letter of invitation contained specific information about the study including the purpose of the study, who was being recruited, expected time commitments, who the researchers were, and benefits associated with their participation. It was then up to the target populations to follow the designated link to give implied consent (Appendices C and D) before completing the online ‘Connectedness to Setting Scale’ (CTSS) (Appendices E and F). The last question on the CTSS asked participants if they would like to participate in the second phase of this study, a semi-structured interview (Appendices G, H, and I). If a participant input their personal information (name and email) at the end of the CTSS, an email was sent (Appendix J) to them and a convenient time and location were determined. At the time of interview, assent for the child (Appendix K) was gained if they were present during the face to face interview; this only occurred once.

**Consent/ Ethics approval.**

The letter of invitation contained a link to SurveyMonkey with the ‘Connectedness to Setting Scale,’ in which informed consent was on the first page. Participants provided informed
consent before moving on to the questionnaire. Written consent (Appendices L, M, and N) was then obtained before interviews and assent was obtained if children participated in Phase 2 of the study. Ethics was obtained on August 22nd, 2018 from the University of Victoria Human Research Ethics Board (Appendix O).

**Participants.**

All families and instructors who had completed six weeks of therapeutic riding lessons at the CTRA were invited to participate in this study. The data was gathered in two phases. All participants from Phase 1 that expressed interest in Phase 2 were contacted and provided the opportunity to participate. The first phase comprised twelve guardians and three instructors whom competed the quantitative participant questionnaire using SurveyMonkey. Of those who participated in Phase 1, five guardians, two instructors, and one child consented to participate in Phase 2.

**Group 1 – Guardians of riders participating in therapeutic riding at CTRA.**

Guardians participated in Phase 1 only (questionnaire) or both Phase 1 and Phase 2 (the questionnaire and the semi-structured interview). Table 2 provides a brief description of the guardians that participated in Phase 1 (n = 12) and Phase 2 (n = 5). To keep participants’ data confidential, each guardian was given the letter “G” for guardian and then followed by a number. It is important to note that although my intention was to include guardians with children (i.e. 5 – 18 years) in therapeutic riding, one guardian had a child who was actually an adult (aged 33 years). This guardian participated in this study as she still had a child participating in the program and I believed her perspective was important to include.
### Table 2 Description of Guardian and Rider in Phase 1 \((n = 12)\) and Phase 2 \((n = 5)\)

<table>
<thead>
<tr>
<th>Guardian Number</th>
<th>Child’s Age (years)</th>
<th>Child’s Sex</th>
<th>Length of Riding at the CTRA</th>
<th>Rider’s Diagnosis</th>
<th>Participation Phase/s</th>
</tr>
</thead>
<tbody>
<tr>
<td>G1</td>
<td>33</td>
<td>F</td>
<td>5 years</td>
<td>Rett Syndrome</td>
<td>1 and 2</td>
</tr>
<tr>
<td>G2</td>
<td>16-18</td>
<td>F</td>
<td>&gt;1yr</td>
<td>Rett Syndrome, intellectual and physical disability</td>
<td>1</td>
</tr>
<tr>
<td>G3</td>
<td>16-18</td>
<td>F</td>
<td>&gt;1yr</td>
<td>Anxiety and depression</td>
<td>1</td>
</tr>
<tr>
<td>G4</td>
<td>16-18</td>
<td>M</td>
<td>&gt;1yr</td>
<td>Cerebral Palsy, anxiety and intellectual disability</td>
<td>1</td>
</tr>
<tr>
<td>G5</td>
<td>13-15</td>
<td>F</td>
<td>&gt;1yr</td>
<td>PTSD</td>
<td>1</td>
</tr>
<tr>
<td>G6</td>
<td>10</td>
<td>M</td>
<td>7 months</td>
<td>Physical disability</td>
<td>1 and 2</td>
</tr>
<tr>
<td>G7</td>
<td>5</td>
<td>M</td>
<td>2 years</td>
<td>Physical disability</td>
<td>1 and 2</td>
</tr>
<tr>
<td>G8</td>
<td>7-9</td>
<td>M</td>
<td>&gt;1yr</td>
<td>ASD, PTSD, intellectual and physical disability, and anxiety</td>
<td>1</td>
</tr>
<tr>
<td>G9</td>
<td>9</td>
<td>M</td>
<td>4 years</td>
<td>ASD, ADHD and anxiety</td>
<td>1 and 2</td>
</tr>
<tr>
<td>G10</td>
<td>10-12</td>
<td>F</td>
<td>&gt;1yr</td>
<td>Developmental Coordination Disorder, physical disability and anxiety</td>
<td>1</td>
</tr>
<tr>
<td>G11</td>
<td>16-18</td>
<td>M</td>
<td>&gt;1yr</td>
<td>ASD and intellectual disability</td>
<td>1</td>
</tr>
<tr>
<td>G12</td>
<td>10</td>
<td>M</td>
<td>6 years</td>
<td>ASD and Cri du Chat Syndrome</td>
<td>1 and 2</td>
</tr>
</tbody>
</table>

*Note.* PTSD= Post-traumatic stress disorder; ASD= Autism Spectrum Disorder; ADHD=Attention Deficit Hyperactivity Disorder

### Group 2 – Children (aged 5 -18 years) participating in therapeutic riding at the CTRA.

Children’s perspectives were of interest as the therapeutic riding sessions are designed for them. They were encouraged to complete the questionnaire with their guardian and were invited to participate in face to face semi-structured interviews. Each child had to have participated in six weeks of therapeutic riding lessons for a minimum of one 30-minute session per week. Only
one child (Child 1) participated in this study. He participated in a joint interview with his
guardian and he could verbally articulate his perspective. His responses during the interview are
included in the guardian’s interview. He wanted to be a part of the interview, however, he
heavily relied on his mother to respond for him and seldom answered on his own. As such, the
interview was included as joint interview, with the child’s voice being represented in his
mother’s interview (Guardian 6).

To keep the children’s data confidential, the letter “C” was assigned for each child and then
followed by a number. Child 1 had experienced therapeutic riding at a previous barn before his
family moved to Duncan, B.C. Since moving, his mother met with their pediatrician and they
were referred to the CTRA. Child 1 was a ten-year-old male who enjoyed trotting and “going
fast” on his horse. He had been participating in therapeutic riding at the CTRA for less than a
year.

**Group 3 – Instructors at the CTRA.**

The instructors’ perspectives were of interest because they could provide insight into the
ways in which they believe social connectedness was fostered at the CTRA. Instructors
participated in Phase 1 only (questionnaire), or both Phase 1 and Phase 2 (questionnaire and
semi-structured interview). Three instructors participated in Phase 1, and Instructor 2 and
Instructor 3 participated in an interview. To keep instructors’ data confidential, each instructor
was given the letter “I” for instructor and then followed by a number. Table 3 provides a brief
description of each instructor that participated.
<table>
<thead>
<tr>
<th>Instructor</th>
<th>Length of teaching</th>
<th>Reason for instructing</th>
<th>Participation phase/s</th>
</tr>
</thead>
<tbody>
<tr>
<td>I1</td>
<td>&gt;1 year</td>
<td>“I help with the well-being of the rider.”</td>
<td>1</td>
</tr>
<tr>
<td>I2</td>
<td>11 years</td>
<td>“Seeing the difference it makes in the participants. See[ing] them reach and exceed goals and accomplish new things.”</td>
<td>1 and 2</td>
</tr>
<tr>
<td>I3</td>
<td>12 years</td>
<td>“Making a connection with a participant who has challenges is very special and rewarding.”</td>
<td>1 and 2</td>
</tr>
</tbody>
</table>

**Measures and Procedures**

**Component 4. The logic of linking data and propositions.**

As deemed important by Yin (2014), case studies should use multiple sources of evidence (evidence from two or more sources, converging on the same finding) such as documents, archival records, interviews, surveys, direct observations, participant-observation and/or physical artifacts. Using multiple sources also improves the credibility of the findings (Shenton, 2004).

Two sources of evidence were used within this case study: a participant questionnaire and interviews with three sources (instructors, guardians, and a child). The first phase consisted of an online quantitative questionnaire, namely the Connectedness to Setting Scale (CTSS), adapted from Crespo et al. (2016), see Appendices E and F. The questionnaire was used to gauge each participant’s level of social connectedness and to provide structure for leading the qualitative semi-structured interviews. This first phase of the study addressed research question one by answering what the present level of social connectedness was by children and their families at the CTRA. This phase also provided information for the first proposition: the physical environment, people, and animals all contribute to social connectedness. Phase 2 used qualitative semi-structured interviews with three different groups of participants from CTRA: a child with special needs who participated in therapeutic riding lessons, guardians, and
instructors. This second phase of the study addressed the second, third, and fourth research questions: *how do families express social connectedness, how do experiences at the CTRA influence social connectedness, and how participation in therapeutic riding can foster social connectedness in the future.* This phase also provided insight into all three propositions. During interviews, I guided, prompt, and probed, to determine what extent the people, environment, and animals influenced social connectedness, as well as constructed interview questions inviting participants to explain their experiences of social connectedness and their yearn to belong. The propositions detailed in Component 2 were addressed throughout each interview. Guardians, instructors, and one child’s perspective were explored and compared in terms of participants’ perceptions of how and why social connectedness was, or was not, experienced at the CTRA.

**Phase 1 – Measure - Connectedness to Setting Scale.**

Crespo et al.’s (2016) Connectedness to Setting Scale (CTSS) was used as the basis of the quantitative evaluation of social connectedness in Phase 1. The CTSS provided questions specific to the setting in which an individual received treatment. This scale, ‘Connectedness to Setting Scale,’ was originally designed and validated for a healthcare setting. I adapted Crespo et al.’s scale to the unique setting of the CTRA. The wording of the ten questions were adapted for use in a therapeutic riding facility. For example, Crespo et al. introduced the scale: ‘In the health setting where my child receives treatment for pediatric cancer: I am comfortable.’ Whereas, I adapted this question to: ‘I am comfortable at the CTRA.’ The CTSS was validated; three connectedness factors and a total score of connectedness provided adequate internal consistent and the final scores showed temporal stability. Furthermore, this scale was a valid scale to use in this research because it was intended for a similar setting and the scale was designed for similarly aged children and their families. The scale included ten questions that reflected
families’ experiences of social connectedness within the CTRA. Participants responded on a six-point Likert scale ranging from Totally Disagree (1) to Totally Agree (6). Data collected from this questionnaire was used to establish if social connectedness was present at the CTRA and as an orientation and foundation when interviewing participants about their social connectedness.

**Phase 1 – Procedures - Connectedness to Setting Scale.**

Anne Muir, the former executive director of the Cowichan Therapeutic Riding Association emailed the University of Victoria’s ‘Invitation to Participate’ letter to registered families in December 2018. Ms. Muir also emailed the University of Victoria’s ‘Invitation to Participate’ letter to all therapeutic riding instructors on the same day. Once participants had received and read the ‘Invitation to Participate’ letter and were still interested in participating, they followed the link given on the letter which took them to the SurveyMonkey questionnaire. Participants read and provided implied consent and completed an online questionnaire focusing on levels of social connectedness during therapeutic riding programs at the CTRA. At the end of the questionnaire, participants had the choice to check a box signifying ‘interested in participating in Phase 2’ along with their name and email for the lead investigator to contact them. At this time, guardians also checked a box to signify if they wanted their child to participate in Phase 2 or not.

**Phase 2 – Measure - Semi-structured interviews.**

I felt comfortable guiding the semi-structured interviews as I had a history of working with children with special needs and their families. The interviews used a face-to-face semi-structured schedule to provide a more intimate setting than a telephone or email interview. Being face-to-face also allowed me to note pauses, facial expressions, and non-verbal language.
Discussing challenging experiences openly may have been emotional for guardians. Therefore, I was prepared to suggest local support organizations (Appendix P) before, during, and/or after the interview for guardians to access if they needed however, no participants needed this.

Interview questions were created to identify how participants express social connectedness, what influences the development of social connectedness and how to foster social connectedness in the context of therapeutic riding. Henderson and McClinton (2016) found that individual factors, relational factors, and the environment impacted social connectedness in an intervention program for youth. These results helped to structure the interview questions in this study. For example, the question ‘What have you experienced in terms of social connectedness?’ provided participants the opportunity to express the influences they thought of, however, through prompting, I would then ask directly about specific people or the environment if they did not address one. Furthermore, the questions were developed to identify the participant’s experiences, perspectives, attitudes, and opinions of the CTRA and its ability to instil social connectedness among its participants.

The interview questions were semi-structured in hopes of guiding the participant along a conversation rather than question and answer. The interviews began by building rapport and background knowledge about the participant including their son/daughters age, sex, length of participation in therapeutic riding at the CTRA, and their reason for participation. Following this, ten- thirteen questions were asked to provide an understanding of the lived. Although there was an interview schedule, as typical during semi-structured interviews, the order of questions changed (Patton, 2002). For example, if the interviewee began discussing part of question five, I continued with that question even if the answers were out of sequence. This gave me the flexibility to probe when wanting to clarify or go deeper into an answer when needed. The semi-
structured interviews were an informal and interactive time for the participant to share their lived experiences in regard to the influences of social connectedness and behaviours that foster social connectedness at the CTRA. These interviews, as Yin (2014) suggests, were one of the most important sources of evidence.

Creswell (2015) stated that reaching a point of saturation is a “…subjective assessment, but most qualitative researchers realize when it occurs” (p.258). I interviewed a total of seven participants. Of the five guardians, four provided positive experiences of social connectedness, and one guardian provided an opposite experience. One guardian interviewed did not feel socially connected and had negative experiences to share about their lack of social connectedness at the CTRA. Although all participants that expressed interest in the study had the opportunity to participate, saturation was not met. Due to limited participation, it is possible that there are other perspectives that this study did not capture. Moreover, it is likely that some families who participate in therapeutic riding at the CTRA, whom lack feelings of social connectedness, did not feel comfortable participating in the study and therefore their perspectives were missed.

**Phase 2 – Procedures - Semi-structured interviews.**

Those who completed the questionnaire and agreed to provide their email address for the semi-structured interviews were subsequently invited to participate in a private, face-to-face interview focussing on social connectedness, at a location of their choice. When I invited them to participate, a consent form was attached to the email for the participant to bring to the interview. Guardians were also emailed a consent form if they wanted their child to participate. I brought extra consent forms with me to each interview for participants who forgot to bring their consent form. Before the interview started, I asked the child for their assent to participate, then I asked their permission to audio record the interview. Two devices (Voice Recorder & Audio
Editor, TapMedia Ltd, London, England; ICR-S700RM Digital Voice Recorder, Sanyo, Chatsworth, CA) were set up to record each of the interviews. All participants agreed for their interview to be recorded. It should be noted that due to the personal questions about potentially challenging experiences, I created a list of supports that were available for participants if the lead researcher deemed necessary; this was never the case.

Data Treatment and Analysis

Component 5. Interpreting the findings.

The analysis of a case study is the least established part of case study research (Yin, 2014). Leech and Onwuegbuzie (2007) stated that the analysis of data is the most important step in research and further suggests seven analysis tools for qualitative data: method of constant comparison, keywords-in-context, word count, classical content analysis, domain analysis, taxonomic analysis, and componential analysis. This study used the method of constant comparison analysis which can be described as “utilizing an entire dataset to identify underlying themes presented through the data” (Leech & Onwuegbuzie, 2007, p. 565). Furthermore, constant comparison analysis, also known as “coding” or “theming,” can be undertaken deductively and inductively (Leech & Onwuegbuzie, 2007). This study first deductively coded the interview transcripts using an orientational approach (Patton, 2002) with a template codebook (DiCicco-Bloom & Crabtree, 2006) that utilized the seven attributes of social connectedness identified by Phillips-Salimi et al. (2012). Then the data was inductively analyzed, allowing the codes/themes to emerge. Consistent with Yin (2014), Leech and Onwuegbuzie (2007) suggested that researchers should find a computer-assisted software. For this study, I used NVivo 12 (NVivo 12, QSR International Pty Ltd., Melbourne, Australia, 2018), a tool designed for use in qualitative research. Yin proposed that to achieve the highest quality of
a case study, a researcher must attend to all the evidence, plausible rival interpretations, address the most important issue, and use the researcher’s prior knowledge. Therefore, both deductive and inductive analyses of the data were completed.

**Phase 1 – Data treatment and analysis**

Anne Muir, the former director of the CTRA sent out the first recruitment invitation in December 2018. Anne then sent a second recruitment invitation approximately one month after the first recruitment. After the second recruitment invitation was sent, two more months were allocated for participants to complete the questionnaire. The results of the online CTSS questionnaire using SurveyMonkey were downloaded into Excel. The mean, standard deviation, and range for the CTSS total score (out of 60) were computed for each group (Guardians and Instructors). Each question of the CTSS was analysed as a frequency on the 6-point scale from Totally disagree (1) to Totally agree (6). These results were converted into percentages. Lastly, an independent t-test was conducted to determine if the CTSS total score of guardians who participated in Phase 1 only were significantly different from guardians who participated in both phases.

**Phase 2 – Data treatment and analysis**

Interviews were administered at a convenient location for participants, most commonly in an office space at the CTRA. During the interviews, I noted pauses, expression, and tone of voice, in addition to recording the interviews on two electronic devices. Interviews lasted between 20-70 minutes depending on the course of the interview and participants’ experiences. To ensure continuity and consistency, I administered, transcribed, and analyzed each interview. After each interview, I reviewed and transferred their interview notes into Microsoft Word. All interviews were stored on a password-protected computer and then transcribed verbatim. The
audio recordings of each interview were transcribed using Transcriber Plug-in, Adobe premiere pro (Transcriber Plug-in, Brisbane, CA., 2008). After the software transcription, my research assistant (a graduate student) and I reviewed the written transcriptions for accuracy and made changes as needed. A final copy of the transcript was sent to each participant for an accuracy check (member check) (Creswell, 2013). Participants had the opportunity to review the transcripts and respond with any additional information or changes to confirm accuracy of their lived experiences (Creswell, 2013). Two guardians responded to the accuracy checks with minor non-substantive changes such as the correct name of a diagnosis.

The interview transcripts were imported into qualitative analysis software (NVivo 12, QSR International Pty Ltd. 2018) and analyzed deductively and inductively using constant comparison analysis (Leech & Onwuegbuzie, 2007). NVivo 12 assisted with the analysis, finding codes present, and organizing the data into nodes, themes, and sub-themes. Each transcribed interview was examined for significant parts which stood out to the researchers. The results of Phase 2 are presented in two parts. Part one used an orientational approach (Patton, 2002) to deductively analyze and determine how participants expressed social connectedness. Part two then inductively analyzed the data without an imposing theoretical perspective to generate new theory on ways to foster social connectedness at the CTRA.

**Part One: Attributes of social connectedness.**

Part one used Phillips-Salimi et al. (2012) seven attributes of connectedness to “orient[ate] in a particular direction or frame[d] from a specific perspective” (Patton, 2002, p.131). An orientational approach (Patton, 2002) was used to organize and effectively determine how the attributes of social connectedness were expressed by the participants. A codebook template was created to code significant statements within each of the interview transcripts
Table 4 Attributes and Definitions of Social Connectedness

<table>
<thead>
<tr>
<th>Attribute</th>
<th>Definition/Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intimacy</td>
<td>-a feeling of closeness or having a unique bond to another person or group of others. &lt;br&gt;-an observed bond between people exhibited by communicative and behavioural expressions of closeness</td>
</tr>
<tr>
<td>Sense of Belonging</td>
<td>-a feeling of fitting in with or part of a group of others</td>
</tr>
<tr>
<td>Empathy</td>
<td>-an expression of openness and sensitivity to the viewpoints of others &lt;br&gt;-the ability to understand and feel compassionate for others</td>
</tr>
<tr>
<td>Caring</td>
<td>-being affectionate towards others &lt;br&gt;-experiencing warmth for others &lt;br&gt;-displaying concern for the well-being of other</td>
</tr>
<tr>
<td>Respect</td>
<td>-feeling valued and/or displaying value for others</td>
</tr>
<tr>
<td>Trust</td>
<td>-being able to believe in or depend on others &lt;br&gt;-a sense of comfort or safety when interacting with others &lt;br&gt;-being able to be open and honest when sharing personal thoughts and feelings with others</td>
</tr>
<tr>
<td>Reciprocity</td>
<td>-mutual affection and interest that people have in one another &lt;br&gt;-characteristics of connectedness are both received and reciprocated by the person.</td>
</tr>
</tbody>
</table>

Note. Adapted from (Phillips-Salimi et al. 2012).

These data were coded deductively against the attributes of social connectedness (defined in the literature as encompassing a sense of: intimacy, sense of belonging, empathy, caring, respect, trust, and reciprocity) (Phillips-Salimi et al., 2012) using an orientational approach (Patton, 2002) at the CTRA. In 2012, Phillips-Salimi et al. (2012) analyzed literature with the purpose of identifying the antecedents, attributes, and consequences of connectedness. They found seven key attributes that this study’s data was thematically analyzed against. There was a
great deal of overlap between the attributes. Therefore, it was imperative that a codebook was used to orientate the research assistant and myself while coding. Table 4 was used as a the codebook while determining which attribute best represented each significant statement (Phillips-Salimi et al., 2012). The research assistant and I worked together collaboratively to read and reread the transcripts and immerse ourselves in these data. We compared our coding throughout the process and we produced similar findings. But, when this was not the case, we discussed the findings to achieve consensus. Many statements retrieved from the interviews could be represented within more than one attribute. When this presented, the significant statement was coded as pertaining to both attributes.

I used the attributes that Phillips-Salimi et al. (2012) established to determine if there was consistency between the CTSS scores and the participants’ expressions of their connectedness to the CTRA. Furthermore, if a participant was 92% socially connected through the CTSS, it would be assumed that the participant would express many of the seven attributes of social connectedness during their interview. In summary, the interview transcripts were first analyzed to determine how participants express social connectedness; answering research question two. Chapter four and five will provide examples of how participants expressed social connectedness at the CTRA.

**Part Two: Theme Clusters.**

After using the orientational approach (Patton, 2002) to determine how social connectedness was expressed at the CTRA, part two, inductively analyzed all interview transcripts. An inductive analysis of all transcripts was completed as a whole to generate new theory about the influences and ways to foster social connectedness in the unique setting of therapeutic riding. Research question 3 i.e. *how does participation in therapeutic riding at the*
CTRA influence social connectedness? And research question 4 i.e. how can therapeutic riding associations foster social connectedness in the future? were answered through inductive constant comparison analysis ‘theming’ overall without any pre-existing theory imposing itself, as opposed to the orientational approach used in part one that used a pre-existing theoretical framework and the implications of that perspective.

There are many different approaches to guide thematic analysis. Thematic analysis is a foundation of qualitative analysis (Braun & Clarke, 2006). Through thematic analysis the researcher identifies, analyzes, and reports findings. Thematic analysis can fit with multiple theoretical frameworks and is therefore flexible and accessible (Braun & Clarke, 2006). Inductive analysis does not seek to fit into pre-existing theoretical constructs, rather, it allows for diverse description and interpretation of the research (Braun & Clarke, 2006).

Braun and Clarke (2006) provided six steps that the research assistant and I used to inductively analyze these data.

1) Familiarize yourself with your data - transcribe the data, read the transcripts multiple times, and listen to the audio recordings of each interview.

2) Generate initial codes –begin coding significant statements in a systematic fashion. Codes were developed and relevant statements were grouped together in the appropriate code.

3) Search for themes –gather codes into potential themes.

4) Review themes – confirm that the themes work across the entire data set and generate a thematic ‘map’.

5) Define and name themes – ongoing analysis that worked to refine and define each theme.
6) Produce the report – use compelling examples that relate back to the research questions to produce a report of the analysis.

These steps outlined by Braun and Clarke (2006) were used not only because the method provides flexibility but also because they are a step by step ‘recipe’ that is theoretically and methodologically sound for beginning researchers. Braun and Clarke also provide potential pitfalls to avoid, and examples of research questions that can be used in thematic analysis.

**Role of the Researcher: Positionality**

As the researcher, I was interested in understanding the lived experience of families and children with special needs in regard to their social connectedness at a therapeutic riding program. The skills and previous experience of a researcher affects the validity of a study. Yin (2014) explained that the researcher is an instrumental tool in qualitative research. My interest in this study stemmed from seeing the influences of social connectedness within a school setting as a teacher and special education case manager. As a classroom teacher, I witness the social isolation and lack of social connectedness that some families face. These experiences enhanced the awareness and knowledge needed to discuss personal and sensitive experiences. My previous experiences, knowledge, and assumptions were disconnected from this study, although they were not abandoned as these experiences contributed to the value of this study.

A researcher’s values, beliefs, and previous experiences can guide the research process. Within qualitative research, the primary researcher has pre-existing assumptions that must be acknowledged; this requires reflexivity (Clancy, 2013). Reflexivity was essential throughout the research process. At the start of the study, I focused on creating research questions that were of interest to a larger academic community rather than my personal interests. To begin, I engaged in a detailed literature review to determine the state of literature in both therapeutic riding and
social connectedness. This allowed me to identify gaps within the literature, so I may verify that my research could contribute to the body of knowledge on social connectedness in a therapeutic setting. Through continuous collaboration with my committee, I often reflected on the progress and direction of my research. At times, this led me to reconfigure, remove, and add to my research process.

There are multiple factors when determining the positionality of a researcher (Clancy, 2013). Factors such as age, education, class, and profession may influence the process. I am a 26-year-old, white, privileged woman. I attended university after high school. I had a passion for children and youth from a young age, which evolved as an interest in supporting children with special needs. After completion of my undergraduate degree in elementary education, I pursued a special education diploma which provided me the skills to work with families and children with special needs within a school setting. My passion for athletics and desire to provide support for families and children with special needs led me to pursue this research. Over the last four years, I have noticed influences and barriers within schools that may affect families’ social connectedness. I had not, however, acknowledged the importance of social connectedness outside of family and school. The opportunity to collaborate with the CTRA in hopes of fostering social connectedness at a community setting was exciting. Yet, I had to carefully design my research to reduce overt biases. For example, before conducting the interviews, I had to reduce bias stemming from my professional role as a teacher. Many guardians shared experiences related to school that were both negative and positive. I had to critically reflect on my preconceptions and experiences of the interaction between teachers, instructors, and families. Further, during data analysis, I tried to suspend assumptions I had from conversations with instructors. Their perspectives were not judgemental however, I felt a sense of obligation to
represent the results positively, as the CTRA contacted the University to initiate this study. I had to reflect on what the instructors meant by their comments and attempt to portray that as truly as possible. While my past experiences certainly contributed to this study, I also tried to remain aware of my biases in order to reduce the risk they may obscure the truth in my results.

**Trustworthiness**

Credibility, transferability, and confirmability are three components that help establish the trustworthiness of a study (Shenton, 2004). Credibility, as explained by Shenton (2004) ensures that a study measures exactly what it was intended to measure. Yin (2014) states that when “…case study’s findings have been supported by more than a single source of evidence” real triangulation of data has occurred (p. 121). In this study, two methods were used; a questionnaire and interviews. The questionnaire sought to obtain two groups of participants’ (guardians and instructors) levels of social connectedness. The interviews then used three groups of people to explain their perspectives, opinions, and experiences associated with therapeutic riding and the impact the program has on developing social connectedness. Triangulation was achieved in this study through using these two sources of evidence and multiple perspectives (Yin, 2014). Member checks are another important step to develop credibility, thus, all interviews were transcribed by myself and sent back to the participant to confirm that their opinions and experiences were accurately expressed. During data analysis, a research assistant and myself worked alongside each other to verify and confirm emerging theories, and confirm that the dialogues were clear within each of the theme clusters (Shenton, 2004). Both the research assistant and myself immersed ourselves in these data by listening to the recorded audio of each interview, reading the transcript multiple times, and meeting regularly over a course of three months to discuss and refine codes, theme clusters, and sub themes.
Transferability seeks to confirm that the findings of one study can be applied to other similar contexts (Shenton, 2004). This study used the CTSS which was an acceptable scale for the setting and intended age group. The CTSS could be used if the researcher feels their study has similar context. The description of case within the methods section can provide other studies with information on similarities of context. The findings and conclusions gained through this study could be applicable to contexts that are similar, such as other therapeutic riding programs. A description of the context of the CTRA and this study was outlined for other programs to compare and determine if this study resembles enough to transfer the lessons and findings this study discovered. The findings of this study, which included 15 participants, is only a small population of the CTRA, however, these findings are transferred to the population of the CTRA, with the understanding that not all riders, guardians, or instructors at the CTRA participated.

Yin (2014) suggested a second principle within a case study; to create a case study database. This contributes to the confirmability of a study. With the assistance of technology, keeping an organized and clearly labeled database of both phases of data were easily attained. Transcription software transcribed each audio recording the I listened to the audio and performed edits to confirm that the transcripts were accurate. Following this step, the transcripts were imported into a qualitative software: NVivo 12. NVivo 12 became the tool that the researcher assistant and I used to organize the coding of each transcript. Yin suggested a third principle to improve the trustworthiness of a case study, maintain a chain of evidence. This principle refers to whether an external observer could trace the steps taken throughout the research (Yin, 2014). If these steps to maintain a chain of evidence are taken, the evidence should exhibit higher quality of research. My study sough to maintain a chain of evidence. I first downloaded the CTSS results from SurveyMonkey into Excel and backed the files onto a password protected computer. Once
in Excel, calculations of frequencies, mean, and SD were obtained. Following, I administered a t-test between Phase 1 and Phase 2 participants. The qualitative audio recordings of each interview were uploaded and backed up onto the same password protected computer. Next, each audio recording was uploaded to Transcripive software (Transcripive Plug-in, Brisbane, CA., 2008). The research assistant and I edit the transcripts from the software and then member checks were completed with the guardians (edits were received by two guardians). Each interview transcript was then uploaded to NVivo 12 where the assistant researcher and I coded each transcript into nodes, sub-themes, and themes. Subsequently, comparison of the CTSS and nodes, sub-themes, and themes were analyzed for triangulation. These steps were taken to provide confirmability.

In summary, I sought to execute a trustworthy study. The credibility of this study was obtained through sampling multiple perspectives while using two research methods, performing member checks, and having a research assistant review the data. The findings of this study can be taken as a lesson and drawn upon for similar setting like the CTRA. Lastly, the confirmability of this study relied on different informants to provide triangulation and reduce bias, using a simple and clear software (Excel and NVivo 12) and creating a trail of evidence.
Chapter Four: Results

Phase 1 - Online Connectedness to Setting Scale (CTSS)

Research question 1 examined whether families participating in therapeutic riding felt socially connected, and if so, to what extent. A total of twelve guardians and three instructors participated in this phase.

Guardians.

The data from the CTSS revealed a strong sense of social connectedness among the guardians. Out of a total possible score of 60, the guardians’ mean score was 55.33 (SD = 4.5, range = 46 - 60). As can be seen in Table 5, most guardians felt comfortable and safe at the CTRA. Guardians also felt a connection to the setting, but when responding to the question ‘There are people I feel close to at CTRA,’ they were somewhat less positive. These findings were followed up with participants during the interviews.

Table 5 Guardians’ (n = 12) responses to each CTSS question as a proportion

<table>
<thead>
<tr>
<th>Questions</th>
<th>Proportion</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Totally disagree</td>
</tr>
<tr>
<td>1. Feel comfortable</td>
<td>0</td>
</tr>
<tr>
<td>2. Feel safe</td>
<td>0</td>
</tr>
<tr>
<td>3. Feel close to people at CTRA</td>
<td>0</td>
</tr>
<tr>
<td>4. Feel at ease</td>
<td>0</td>
</tr>
<tr>
<td>5. Feel understood</td>
<td>0</td>
</tr>
<tr>
<td>6. Feel protected</td>
<td>0</td>
</tr>
<tr>
<td>7. Feel a connection to the setting</td>
<td>0</td>
</tr>
<tr>
<td>8. Feel a connection to the people I meet at CTRA</td>
<td>0</td>
</tr>
<tr>
<td>9. Feel accepted</td>
<td>0</td>
</tr>
<tr>
<td>10. Feel a sense of belonging</td>
<td>0</td>
</tr>
</tbody>
</table>
Instructors.

The data from the CTSS revealed that the instructors have a strong sense of social connectedness. Out of a total possible score of 60, the instructors’ mean score was 56.66 (SD = 3.05, range = 54 - 60). As seen in Table 6, the instructors fully agreed that they were close to the people at the CTRA, have a connection to the setting, and feel as though they belonged. As compared to the guardians’ results, the instructors expressed that they felt less at ease. This was later clarified during Phase 2.

Table 6 Instructors’ (n = 3) responses to each CTSS question as a proportion

<table>
<thead>
<tr>
<th>Questions</th>
<th>Totally disagree</th>
<th>Disagree</th>
<th>Somewhat disagree</th>
<th>Somewhat agree</th>
<th>Agree</th>
<th>Totally agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Feel comfortable</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>33%</td>
<td>67%</td>
</tr>
<tr>
<td>2. Feel safe</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>33%</td>
<td>67%</td>
</tr>
<tr>
<td>3. Feel close to people at the CTRA</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>100%</td>
<td></td>
</tr>
<tr>
<td>4. Feel at ease</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>33%</td>
<td>33%</td>
<td>33%</td>
</tr>
<tr>
<td>5. Feel understood</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>33%</td>
<td>67%</td>
</tr>
<tr>
<td>6. Feel protected</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>33%</td>
<td>67%</td>
</tr>
<tr>
<td>7. Feel a connection to the setting</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>100%</td>
<td></td>
</tr>
<tr>
<td>8. Feel a connection to the people I meet at the CTRA</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>33%</td>
<td>67%</td>
</tr>
<tr>
<td>9. Feel accepted</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>33%</td>
<td>67%</td>
</tr>
<tr>
<td>10. Feel sense of belonging</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>100%</td>
<td></td>
</tr>
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</table>

In summary, both instructors and guardians showed strong social connections at the CTRA. These connections were demonstrated via the participants’ sense of comfort and safety, feelings of protection, understanding, acceptance, and connection to both the people and setting. Figure 2 shows the individual guardian and instructor total scores on the CTSS.
Figure 3. Guardian and Instructor Total Score on CTSS (n = 15).

Note. G = Guardian; I = Instructor

Phase 2 - Semi-Structured Interviews

Five guardians, one child (in a joint interview with their guardian), and two instructors were interviewed for Phase 2. The interview with Child 1 was incorporated into his mother’s interview (Guardian 6). This child wanted to participate, however, he relied heavily on his mother to answer for him. He seldom answered questions on his own. His answers included short responses such as: “I don’t know” “and “Yeah.” Child 1 answered a few simple questions about how long he has been riding and what he liked to do while riding his horse, “I normally trot, go outside, and walking.” He also explained that “when [he] started [he] was in a one[private] lesson, and then [he] came to a group lesson.” He stated that he preferred to be in a group lesson, which was surprising to his mother. Child 1 participated in about the first four minutes of the joint interview and then became disinterested and wanted his mother to answer for him. Child 1 began playing games on his mother’s phone and I proceeded to treat the interview as a one-on-one interview with his mother while also being cognisant that her son was hearing
our conversation. This interview was treated as one of the seven interviews and not as two separate interviews.

Interviews were conducted with all guardians and instructors who agreed to a follow-up interview, regardless of the level of social connectedness they expressed on the CTSS. To provide a sense of guardians who agreed to a follow-up interview \((n = 5)\) compared to those who did not consent to an interview \((n = 7)\), an independent t-test was performed on their total CTSS score. There was no significant difference \(t(6) = .31, p = .77\) between the guardians who participated in Phase 1 only compared to those who participated in both phases. Phase 1 participants had a mean total score of 55.7 \((SD = 3.6, \text{Range 51} – 60)\) while participants in both phases had a mean total score of 54.8 \((SD = 5.9, \text{Range 46} – 60)\).

**Part one – Expressions of social connectedness.**

Part one used both the quantitative data and the qualitative data to answer research question two: *How do families express social connectedness at the CTRA?* Using a codebook template (see Table 4), all seven attributes of social connectedness identified by Phillips-Salimi et al. (2012) were present within the interview transcripts. As highlighted in Table 7, caring, reciprocity, and trust were the most prevalent attributes described, with most interviews providing examples of these attributes. Conversely, respect was not extensively represented.

<table>
<thead>
<tr>
<th>Table 7 Presence of Social Connectedness Attribute in Interviews</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Interviewees</strong></td>
</tr>
<tr>
<td><strong>Attributes</strong></td>
</tr>
<tr>
<td>Trust</td>
</tr>
<tr>
<td>Reciprocity</td>
</tr>
<tr>
<td>Caring</td>
</tr>
<tr>
<td>Intimacy</td>
</tr>
<tr>
<td>Empathy</td>
</tr>
<tr>
<td>Belonging</td>
</tr>
<tr>
<td>Respect</td>
</tr>
</tbody>
</table>
Table 7 also illustrates the breadth of attributes mentioned by each participant to express feelings of social connectedness. Participants were asked to share examples of social connectedness at the CTRA throughout their interview. Some participants expressed social connectedness using all of the seven attributes, while others spoke of experiences that related to only two or three attributes.

**Trust.**

Trust refers to a sense of feeling comfortable, safe, depending on others, and the ability to be honest with others (Phillips-Salimi et al., 2012). The statement, ‘I feel safe during therapeutic riding sessions at the CTRA,’ from the CTSS, and question six, ‘I feel protected during therapeutic riding sessions at the CTRA,’ both captured aspects of trust. One hundred percent of guardians agreed that they and their child felt safe, and 92% agreed that they and their child felt protected. Trust was consistently voiced across both the quantitative CTSS and during the qualitative interviews.

Six of the seven interviewees expressed the attribute trust. One guardian said that she felt fully able to be honest and open when addressing goals with instructors about her daughter. Another guardian felt as though she could depend on the instructors and tell them exactly what mood their daughter was in without judgement. Another guardian explained that therapeutic riding lessons were the only therapy that her son attended where she didn’t have to be in the same area and within ‘eyes reach’. She explained that her son must feel safe and comfortable with his instructor as she has yet to be able to leave his side elsewhere.

Both instructors shared experiences where they were trusting and depending on the other instructors for support. One instructor explained how she can ‘bounce ideas off’ of the other instructor without feeling judged. Rather, she felt safe, supported, and comfortable asking for
help and ideas for her riders. Both instructors expressed that they felt very comfortable with one another. Instructor 3 described the relationship between herself and the other instructors:

…everything is very supportive, very positive, everyone picks up the other … I don’t feel that there’s judgement or anything like that. Like we’re all here for the same reason, that we want to support our riders, our horses, each other.

*Reciprocity.*

Reciprocity refers to mutual affection and interest in one another where characteristics of connectedness are not only received but also reciprocated (Phillips-Salimi et al., 2012). The instructors revealed that they shared a bond and a reciprocal connection with each other. Both instructors that were interviewed explained that they brainstorm strategies and lesson ideas for their riders. Both instructors attested that many of the riders had attended therapeutic riding for many years and the connection to their riders and their families were very strong. As seen in Table 2, all but one rider has attended riding at the CTRA for more than a year. During the interviews, guardians described their experiences at the CTRA, which included opinions about their son/daughters’ instructor. All but one guardian stated that they have had the same instructor since their first lesson. It was evident from the interviews that the more time the instructor spent with the rider, the better the instructor understood them. Guardians were impressed that the instructors often knew what their son/daughter was going to ask or want before they asked.

Guardians also explained that they had developed relationships with other families. Although not all families had the opportunity to meet and build a connection with another family (due to private lessons), a few families did have the opportunity. For example, Guardian 6 and 7’s sons participated in group lessons, where riders shared the instructor but had their own horse and at least one horse handler. Whereas Guardian 12’s daughter, and Guardian 1’s son were both
in private lessons with a one-on-one instructor to rider ratio, with fewer opportunities for families to meet. The decision to be in a private one-on-one lesson rather than a group lesson is based on the needs of the rider. Both instructors explained how if the rider needs a lot of hands-on attention, they will normally be in a private lesson. There are positives and negatives of both a private and group lesson however, all but one guardian wanted their child to be in a group lesson. Guardian 7 said that her enjoyment of therapeutic riding lessons was because she had the opportunity to connect with other families who also have children with similar special needs. She and another guardian would share different techniques, strategies, and support agencies with each other:

I’ve learned about movement therapy from [name of other guardian] … we’ve talked about different issues at school and given each other advice or just a sounding board… so that’s why I like being in the group and being with a positive parent and having parents who are like-minded.

She appreciated that the other family was equally as interested in her child and also wanted to support her.

**Caring.**

Caring refers to feelings of affection, warmth, and concern for others (Phillips-Salimi et al., 2012). In the setting of the CTRA, aspects of caring were extensively discussed within the interview transcripts; and caring was mentioned in six of the seven interviews. Guardians described the instructors as caring. Guardian 9 said “she takes the time to really answer his questions and explain why.” The instructors also expressed that they received joy from helping others and that they cared deeply for their riders, as instructor 3 said: “I just love
seeing...improvements and the difference that it makes in peoples’ lives, whether that’s just maintaining where they are and preventing them from regressing.”

Both the instructors and the guardians talked about the riders caring for their horses. Guardian 7 shared what her son often says, “He will say, ‘I wonder what [horse name] is doing today?’ and ‘I want to know [horse name] was safe during the windstorm’.”

**Intimacy.**

Intimacy can be described as feelings of closeness and/or bonding with another person (Phillips-Salimi et al., 2012). This attribute related to question three of the CTSS: ‘There are people I feel close to at CTRA’. As seen in the quantitative findings presented in Table 5, all the guardians agreed that they felt close to someone at the CTRA, although only three of the guardians expressed feeling close to people at the CTRA (see Table 7). These guardians indicated there were many different intimate relationships at the CTRA, specifically: guardian to guardian, guardian to instructor, rider to instructor, and rider to animal. Guardian 7 expressed attributes of intimacy between herself and another parent whose sons were in a group session together, “it [is] lovely because I look forward to coming on the cold rainy days...we’ve talked about different issues...” Guardian 12 also expressed the intimacy she observed between her son and his horse, “...like as soon as he got on [horse name] that first time it was like even though it was a 10-minute session, it was like probably the best 10 minutes he’s ever had; to be able to get onto that horse.”

**Empathy.**

Empathy is the ability to understand others’ perspectives and viewpoints, and feelings of compassion (Phillips-Salimi et al. 2012). Guardians responded to question five of the CTSS very strongly. As seen in Table 5, all guardians agreed with the statement, ‘I feel understood during
therapeutic riding session’. This was similarly shared throughout the interviews. Guardians shared experiences that exemplified how the instructors understand the perspectives of the children they work with. Guardian 12 explained how she does not have to explain her sons’ actions; their instructor understands him.

I don’t have to explain the why he’s being upset. You know like [name of instructor] knows it’s not necessarily that he’s upset about him doing something wrong, he’s upset because she’s [the instructor] upset… she kind of gets those concepts.

Guardian 9 said that her son’s instructor plans lessons with respect to the rider’s needs:

She has a really good routine with [name of rider] and answers to his questions. She takes the time to really answer his questions and explain why. If you just tell [name of rider] ‘No,’ you can’t do something, he needs to know ‘why,’ or he will keep doing it. And she takes the time to do that, but she also doesn’t let him get away with it.

As expressed within the interviews, empathy was experienced from the instructor towards the rider, and among the children themselves. Moreover, the interaction with the horses seemed to make quite an impact on the riders. One of the instructors shared a story about one boy not coming to his lesson because he was sick and didn’t want to get his horse sick.

**Sense of Belonging.**

A sense of belonging can be described as a feeling of fitting in with, or part of a group (Phillips-Salimi et al., 2012). Question 10 from the CTSS stated, ‘I belong to this group of people at the CTRA’. As seen from the Table 5, 84% of guardians agreed or strongly agreed that this statement reflected their feelings. Families that participated in the semi-structured interviews displayed a sense of belonging in many ways. For example, families expressed feeling a sense of belonging to other families. Guardian 7 explained how she was grateful that her son was in a
group lesson with children who had positive parents. She also stated that her son felt a sense of belonging to the setting and place at the CTRA: “… he calls it his barn.”

**Respect.**

Respect refers to feeling valued and/or displaying value for others (Phillips-Salimi et al., 2012). During the interviews, respect was rarely explicitly mentioned; only three participants expressed respect while giving examples of social connectedness. Yet, this does not mean that respect was not present. Guardian 12 explained that she felt the instructor valued her and her son and demonstrated this when they would arrive. When her and her son arrived at the horse ring, their instructor would make eye contact with them and wave even though she was still with another rider. This action, as Guardian 12 explained, made her and her son feel welcome and that their presence was valued. Volunteers were also described as being respectful and providing feelings of value for their riders. Guardian 12 said that she was lucky to be paired with a volunteer who ‘made an effort’ to keep her son as one of his riders. This volunteer has kept their schedule the same for years to accommodate this specific rider.

**Part two – Influences on social connectedness.**

Research question 3 examined how feelings of social connectedness were influenced by a child’s participation in therapeutic riding. I used inductive analysis to identify the most prominent influences on social connectedness. Question 3 was answered via semi-structured interviews with five guardians, one child, and two instructors. Thematic analysis following Braun and Clarke (2006) six-steps provided a guide to inductively analyze the interview transcripts without pre-existing theoretical constructs.

Two main influences on social connectedness emerged from the inductive analysis of the interview transcripts:
1. Effective communication equates social connectedness
   i. Trusting and caring relationships – teamwork.
   ii. Communication with animals.
   iii. Social connectedness as a mediator for families and services.

2. Expectations of services.
   i. Gap between guardians’ expectations and services.
   ii. Advocating for more.

   The two overarching themes were evident among all seven interviews. Whereas the sub-themes did not always pertain to all participants. For example, all guardians and instructors suggested that effective communication was equated with social connectedness, whereas only Guardians 7, 9, and 12 spoke specifically to the sub-theme ‘communication with animals’. As previously stated, although some participants were more outspoken than others, I ensured that all participants’ voices were represented by reading and rereading the transcripts, coding all transcripts in the same manner, purposively making sure each participant’s voice was included when providing expressions of social connectedness, and returning to the transcripts multiple times for clarification and consistency. The following results present both guardians’ and instructors’ perspectives on the factors influencing social connectedness.

   **Theme one: Effective communication equates social connectedness.**

   It became obvious during data collection and analysis, while interviewing guardians and re-listening to the transcriptions, that effective communication between families and staff at the CTRA critically influenced and fostered social connectedness. Furthermore, having trusting, caring, open, honest, and reciprocal communication between families, riders, and staff, was the
essence of social connectedness. Each of the seven participants shared their perspective on how their relationship with staff at the CTRA facilitated their feelings of social connectedness.

Examples of verbal communication and communication through body language and actions between guardians, riders, instructors, volunteers, and the animals were abundant throughout the text of the transcripts. One guardian explained how surprised she was that her daughter, who did not use words to communicate, responded to her instructor’s verbal prompt. During the interview, Guardian 1 said “…oh [instructors name] that’s sweet of you that you think [rider’s name] is going to follow your command but that’s never going to happen.” She went on to explain that within a few weeks her daughter was responding to her instructor’s prompts physically e.g. by putting both her hands on the saddle.

Guardian 9 provided a different perspective from the other four guardians interviewed. Guardian 9 did not feel socially connected to the CTRA, nor did she describe experiences that signified social connectedness. She felt a lack of communication with the instructor, volunteers, and office staff, which in turn, made her feel uncomfortable, unwelcome, and not connected to the CTRA. These negative forces on social connectedness were consistent, albeit opposite, to those expressed by the other guardians. Thus, all five guardians described how good communication with the instructors and the volunteers helped develop social connectedness, but concomitantly, how a lack of communication can leave families feeling distant. While effective communication between guardians, instructors, volunteers, riders, and other families was the essence of social connectedness, three sub-themes also emerged.

*Sub-Theme One: Trusting and caring relationships - Teamwork.*

At the start of each interview, guardians were asked to describe their son or daughter’s strengths and challenges. It was evident that each rider had their own needs, which both the
family and the child’s instructor needed to know to be able to tailor their plans accordingly.

Instructor 3 indicated that the riders attending the CTRA were very diverse therefore, instructors needed to be flexible and tailor their plans to suit each rider’s attitudes, moods, cognitive functioning, and verbal abilities. Additionally, a rider’s state could fluctuate from day to day. Guardian 1 explained that the cognitive functioning, such as attention, of her daughter could change:

You know [rider’s name] fluctuates dramatically from day to day. And that's just part of the miss wiring of her nervous system. And some days you know she's much more focused…Other days not so good and needs a little bit more time to be able to focus and become more settled into the ride.

Instructor 3 agreed and said that “every student could be different every day.” Both guardians and instructors expressed how beneficial it was to have a relationship where they could explain the mood, needs, or events in their rider’s day that may affect their lesson. For example, Guardian 6 explained that she could tell their instructor that her son had a bad day and their instructor would take that information, without judgement, and begin the lesson.

There were many examples provided to illustrate how the instructors cared about their riders. The guardians described the instructors as understanding. They did this by listening to their riders’ worries and answering any questions the riders might have - even if it required more time. For example, Guardian 9 stated that “she has a really good routine with [rider’s name] and answers to his question. She takes the time to really answer his questions and explain why.”

Instructors also created set routines specific to each rider. For example, Guardian 7 explained how their instructor tailored their lesson specifically to her son. She said that her son always wanted to go outside, so their instructor explained exactly what they must do before they could
go outside. Multiple guardians explained how instructors tailored each lesson to the specific rider’s needs. For example, a rider might need to know why they are doing each activity in a lesson (Guardian 9), or need to be very hands on (Guardian 1), or the instructor may need to “lay down the law” if a rider isn’t following direction (Guardian 12), or even knowing what a rider wants even before they ask for it (Guardian 7). As Guardian 7 explained, “… she knows what the kids like. Which I don’t know how she does that because, how many kids [are] here? And she remembers week to week.”

Instructors’ actions toward the guardians and their riders were caring. Instructor 3 explained that over time she began to understand what each of her riders needed. Some riders needed routine and patience, whereas others could be pushed. Notably, Instructor 2 communicated that the rider’s needs were more important than the needs of the program. For example, Instructor 2 described a lesson when one of her riders attended a lesson and wouldn’t even talk to her. She then explained that her lesson plan ‘went out the window’ as she was more concerned about the rider’s feelings. She altered the lesson so they could just walk and talk. Instructor 3 recognized what her rider needed in that moment and cared for her the best way she could.

… one of my older teenage riders just the other day had a horrible day at work… I immediately changed my lesson plans to…first we are going to let the horse walk around in a circle and we’re going to chat. Then we will go for a trail ride and keep chatting because it’s good. It’s actually a breakthrough. Not at all what I had planned for today, but this is what we need to do right now.

She continued to explain that it wasn’t about what they needed to do in the lesson; it was recognizing what the rider needed in that moment and caring for her the best way possible. A
unique aspect of the trusting and caring relationships was teamwork. Both guardians and instructors commented that a team working together is needed to promote lesson success and to foster social connectedness. As Guardian 12 said, “We strategize when things are really not working. We start to put into play you know new ideas ... [the instructor] is really open to that.”

Sub-theme Two: Communication with animals.

Many of the guardians told stories that symbolized the connection their child had with their horse(s) and other animals in the barn. Most commonly, guardians described their child having empathy towards their horse. Guardian 7 recounted her son saying “I wonder what [horse name] is doing today... I want to know [horse name] was safe during the windstorm.” However, the connection with animals was not necessarily with their horse. Guardian 12 explained how her son named their cat, the same name as one of the barn cats. Guardian 9 said that her son has a difficult time developing relationships; however, he built a connection to an instructor’s dog. She has a dog, and that’s his one connection. He goes up and trains [dog’s name]. He gets two milk bones and he gets her to do tricks. That’s usually what gets him there… Is [dog’s name] going to be there? So, we try to go a little bit early and see the dog.

Both guardians and instructors highlighted stories about families visiting the barn on weekends or other days when the child does not have a lesson. Guardian 7 described visiting the barn when they didn’t have lessons, “sometimes we have to come to the barn to check on his horse...it was [horse name] birthday in November, and he really wanted to come to the barn on [horse name] birthday.”

It was evident during the interviews that the relationship between a rider and their horse supported the rider’s social connectedness by trusting the horse, developing empathy, intimacy,
reciprocity, and feeling as if they belonged. Furthermore, many of the riders have the same horse for several months, and even years in some cases, which helped strengthen the relationship.

Both instructors interviewed described a boy who struggles with reading. This boy wouldn’t read to anyone; however, he will read bedtime stories to his horse. Instructor 3 said “for him ... it’s not just a riding lesson. He will come in, you know, other times during the week just to read [horse name] his bedtime story.” However, not all the children gravitated primarily toward the animals. Guardian 12 mentioned that her son really enjoys the connections with the people at the CTRA and the horses are an added bonus. “[Rider’s name] about the people, and [horse name] is a good bonus.”

Sub-theme three: Social connectedness as a mediator for families and services.

This sub-theme reflected families who feel socially connected with the people or animals which acts as a mediator that can mitigate situations that may threaten social connectedness at the CTRA. Guardian 9 whom did not feel socially connected, frequently could not resolve issues as easily as those families who did feel socially connected. Nevertheless, once a family feels socially connected, a shield against possible threats to social connectedness is formed.

Instructors explicitly described a number of aspects surrounding discrepancies preceding and during therapeutic riding that can affect a lesson and threaten one’s social connectedness including: weather, absence of their horse, an instructor being away or sick, inconsistent volunteers, time change, and new faces in the barn. Guardians also described that their child’s state and traits can sometimes be challenging. A trait is a quality that is consistent and stable that is independent of a person’s environment, whereas a state is a temporary characteristics cause by external factors and influenced by their environment (Gardiner & Adams, 2018). Children with special needs often require extra support yet, the state that a child can be in any given day can
also change. Furthermore, each guardian explained their child’s specific traits; such as low functioning and slower sensory nervous system (Guardian 1) or low muscle tone (Guardian 9), can also contribute to challenges during a lesson. However, feelings of social connectedness can mitigate these challenges and help families have a positive experience during therapeutic riding lessons.

The people and animals involved in a lesson, specifically the consistency of their presence, can affect an individual’s social connectedness. Guardian 6 agreed and said that her son has not had a consistent volunteer. She found the lack of consistency sad and felt it contributed to a lack of social connectedness. The instructor’s presence also contributed. However, one guardian mentioned that if their instructor is away or sick, her son already knows the other instructor that will fill in for her. Because her son felt socially connected to the other instructor, that connection seemed to provide a ‘buffer’ for the success of their lesson. Equally, having a strong connection with their horse seemed to help some riders when their instructor was away. If ‘their’ horse was present and they knew the replacement instructor, their feelings of social connectedness appeared to lessen any adverse effect on the rider. The relationship with their volunteer(s) could also be protective of the experience of a lesson. Guardian 12’s son had a huge connection with his volunteer, they are ‘best buddies’. This relationship was protective when his instructor was away. The rider had such a connection with his volunteer that it didn’t matter if his instructor was away, or if the weather was poor and they couldn’t go outside, he could continue to have a successful lesson because of his connection with his volunteer (Guardian 12).

Theme Two: Expectations of services.
Guardians’ expectations of the services at the CTRA varied. While some guardians liked seeing volunteers working as they walked through the barn, others expected volunteers to initiate a conversation with riders as they walked to their lesson. Furthermore, the expectation that guardians had for the volunteers was portrayed as a missed opportunity to develop social connectedness. This gap between guardians’ expectations and the services developed as the first sub-theme. The second sub-theme discusses the desire for more. Guardians specifically highlighted their desire for more opportunities to connect and communicate with the staff of the CTRA and with other families.

*Sub-theme One: Gap between guardians’ expectations and services.*

Guardians had substantial expectations of the CTRA. Primarily, the guardians felt that volunteers have the opportunity to contribute to social connectedness. They explained a gap between what was being done and what would help families to develop social connectedness. Guardians thought that if volunteers were greeting, initiating in conversation, and providing orientation to new families this might close the gap that presently exists between volunteers and families. Furthermore, guardians clarified that this was not just ‘their’ child’s volunteer, they want all volunteers and the CTRA staff in the barn to purposely engage in ways that would help develop social connectedness. Guardians perceived that not engaging with families and riders created a gap between achieving a connection with volunteers and feeling distant with the staff at the CTRA.

The CTRA barn has a long corridor that each rider walks down to get to their lesson, which passes each horses’ stall where volunteers are often cleaning. Guardians were under the impression that while they were walking their child through the barn it could be a time for volunteers to say hello or start a conversation with them. Guardians 7 explained how she
thought volunteers who greet riders walking through the barn contributed to her son feeling socially connected.

It also helps when he walks through the barn and people say hello to him because it makes him feel welcome… he had one volunteer who would greet him before we got here. ‘How is your week at school?’ … and not all of them do that. Some of them just come and grab the horse… they're just some adult standing next to them.

Guardians 6 and 7 felt very strongly that it should be the volunteers who are initiating conversation with the riders before and during a lesson. However, it was not mentioned why guardians were not initiating the conversation themselves.

Before a lesson, Guardian 6 wanted and expected that the volunteer would “*chat a little bit and say okay you will be with me today, my name is, how are you?*” However, this volunteer said nothing and proceeded to guide the horse. She also recounted how a new volunteer didn’t introduce themselves to the rider. “*Today [the rider] didn’t have the same [volunteer] as before. And I observe[d] when he came in and he didn’t say ‘ahh hello’.*” Guardian 6 explained how uncomfortable this made her feel. She expected the volunteer to introduce themselves before the lesson. This demonstrates the gap between expectations of the family and perhaps the expectations that the volunteer has on them from the association.

Guardians also discussed the volunteer’s opportunity to have a conversation during the lesson. Many guardians suggested that the volunteer(s) talk to the rider(s) while they are riding; however, Guardian 9 proposed that the volunteers are not meant to be chatting with the riders during a lesson, as the rider should be focused and listening to the instructor. “*From my observation I don't think they really talk to [name of rider], like I think they purposely try to be quiet so he's only listening to the instructor.*”
Instructors, however, suggested that the volunteers were at the CTRA for different reasons. While some volunteers enjoy connecting with riders, many are here specifically for the horses and enjoy cleaning stables. The instructors were later prompted about the consistency of their volunteers and how it may impact the families. Instructor 2 explained that it is difficult to keep volunteers consistent, but they try their best. Instructor 2 said:

People move away, actually one of our awesome volunteers this is her last day. She's moving. So we try to keep it consistent. But it's definitely an ongoing struggle. A lot of people come to [the CTRA] between jobs. They're looking for something to do… they go and get a job…So it's hard.

Both instructors agreed that the volunteers contributed to social connectedness. They explained how some families have had the same volunteer for years and they created a connection with their rider just as strong as the connection to their instructor. For Guardian 12, this was true. She explained how her son and his volunteer are ‘best buds’. She continued to explain that they have a special relationship where they joke with each other and the volunteer will often help her son through challenges. She expressed how fortunate she felt that their volunteer “had taken a shine” to her son. Yet, as described by the other guardians, most families were not so lucky. When asked about their volunteer, Guardian 6 explained that they do not have a consistent volunteer and she finds this disappointing.

I think it is a bit sad for him (her son) and us because I would like to say ‘Oh thank you for taking care of my child for one year. Wow thank you’. But I mean it's changing all the time. And even sometimes [the volunteers] don’t say hello to us.

Sub-theme two: Advocating for more.
During each interview, guardians and instructors were asked how social connectedness could be improved at the CTRA. Beyond having volunteers and the CTRA staff initiate conversations more with riders, guardians also suggested more opportunities for the whole family to connect with other families, staff, and volunteers at the CTRA.

The expectation that the CTRA is a place for families to meet each other was mentioned. One guardian expected the association to take responsibility for connecting families to each other and wanted the CTRA to acknowledge that their programs are a place for families to connect with other families. However, some guardians naturally developed relationships with fellow guardians on their own. Guardian 7 spoke of meeting another family during their son’s group lesson. She explained that, during the lesson, she would sit and chat the entire time with another mom who had a similar ‘mind set’. She talked about looking forward to riding lessons herself, as she enjoyed chatting with the fellow parent(s). This relationship developed into a friendship where the families talked about issues at school, shared strategies like movement therapy, gave each other advice, and went to events like the Halloween train together.

[Name of parent] is just amazing, and all the moms are amazing, and dads, and we stand and talk for the whole hour. And so, we've shared resources. We've, ‘oh we've tried this. Have you tried that?’ or, ‘we've had a bad week with something at the school’ and we just are completely open with each other.

Yet, like guardians having the personality to initiate conversation with volunteers, some guardians felt that the staff at the CTRA should be introducing families when they are in a group lesson. Guardian 6 suggested that such introductions may support the start of a positive relationship. Additionally, Guardian 6 felt that “the association doesn’t help to create this connection between the children.” Moreover, Guardian 1 expressed that it would be “so nice if
[rider’s name] could link up with another rider...and then they kind of become buddies.”

However, not all guardians agreed. One guardian shared that she liked their small circle and her private lesson with their volunteer, instructor, herself, and son. She was not interested in meeting other families.

It was evident that some families expected the CTRA staff to initiate conversations with and between each family. Initiating a conversation or greeting the rider and their family were mentioned as experiences that families felt influenced social connectedness; however the expectations that families have may not be the expectations placed on the volunteers by the association. Guardian 12 explained how welcoming it was when their instructor acknowledged them upon arrival by giving them a quick wave, or hand movement to signal that she saw them come in.

While interviewing the guardians, a conversation around how the CTRA could foster social connectedness arose. Guardian 7 specifically brainstormed multiple ways that she felt the association could provide opportunities for families to connect.

1. A Christmas tea - people could buy tickets to a ‘Quiet Santa’. This specific family explained the challenges associated with malls and pictures with Santa for children with special needs. This guardian explained how they tried to get a picture with Santa three times, but the setting was over-stimulating. A quiet Santa (which she stated is not yet available in Cowichan Valley) would be an opportunity for families to book a certain time where they can have a picture with Santa in a quiet setting while also connecting with other families from the CTRA.

2. Social skating - families could go to skate, meet, and chat with other families from the CTRA.
3. Potluck – families bring whatever they want/can and meet other families.

4. Pumpkin patch and hayride – families from the CTRA could donate and come during a set time for a hayride and picking out a pumpkin. This would also be an opportunity to meet other families that attend the CTRA.

5. Christmas wagon ride – team up with Providence farm which already has a wagon and provide families of the CTRA the opportunity to meet, connect, and celebrate Christmas together.

Guardian 1 also had a suggestion that she experienced at a different therapeutic riding barn, “*We had that lovely circle time before we actually got on the horses.*” She recommended having a meeting circle either at the start or end of a lesson with the volunteer(s), instructor, guardian(s), and rider(s). Guardian 1 explained that a meeting circle could be a time for the instructor to prepare the rider for the lesson. The meeting circle was a time for the instructor, all the volunteers including horse handler(s) and side walker(s), riders and families to gather and discuss what was going to happen during the lesson. Guardian 1 said that this was her favourite time as her daughter was with peers that were paying attention to her. This was also a time for the family to tell the instructor about the week or anything that might be affecting the mood or behaviour of the rider. Guardian 6 noticed that often when there was a new volunteer, they would not introduce themselves. Guardian 1 and Guardian 7 also suggested that there is often not enough time after the lesson to communicate with the volunteer or the instructor. Guardian 12 agreed that lessons start and end abruptly, as the instructor proceeds to prepare the subsequent horse for the next rider. Guardian 1 suggested that a meeting circle before or after the lesson could provide some closure to a lesson, in addition to preparing the team for the next lesson. This
could increase communication between the rider, instructor, guardian(s), and volunteer(s) and may contribute to the riders’ social connectedness.

Fostering Social Connectedness.

Research question four examined how social connectedness could be fostered at the CTRA and other therapeutic riding associations in the future. The qualitative results revealed that there were some gaps present in developing and maintaining social connectedness. Yet with the identification of gaps, recommendations to foster social connectedness were provided. Ultimately, there were three key components identified that contribute to the development of social connectedness. Not all these components were currently being used at the CTRA, however, details from the study showed that a lack of some of these components limited the development of social connectedness. These three components were: compassionate and open communication, opportunities for family engagement, and commitment to social connectedness by the entire association.

Guardians and instructors identified that having open and compassionate communication between guardians and staff was the key to foster social connectedness. Guardians expressed that this was particularly important in their communication with instructors when dropping off a rider that was having a challenging day. They mentioned that being able to confide in the instructor with regard to the difficulties the child had that day, and in turn receive a compassionate and understanding response, helped them feel safe to share with the instructors. This ensured that guardians felt socially connected, as there were open lines of communication between them and instructors.
During interviews, some families expressed that they wanted more opportunities to develop relationships and connections with like-minded individuals. One guardian said that everyone she met at the CTRA supports each other, however, she did not get the chance to develop many connections since her son was in private lessons. One way that the CTRA already attempts to foster social connectedness is through their end of the year fundraiser. The barn staff put on a ‘Ride-A-Thon’ to raise money for food and hay for the horses. This provides families the opportunity to connect and form relationships with one another. All families that had attended the Ride-A-Thon stated that this was a memorable and enjoyable time with their family. One guardian even suggested having more gatherings like this, so families could further interact, connect, support, and share with each other. Some of her suggestions included: a Christmas tea, Christmas wagon ride, social skates, Pumpkin patch and hayrides, and potlucks. More events like this may help to foster social connectedness among riders and their families that do not have the opportunity to meet due to private lessons. All but one guardian expressed that they would be interested in attending more events with other families from the CTRA. Another guardian also suggested having a meeting circle where all volunteers, guardians, riders, and the instructor would meet to greet and introduce the lesson. In the past, the CTRA has held focus group sessions in hopes of establishing ways to better their services for families. However, Instructor 2 said that “what we found in general is that our families are so much in crisis that adding anything extra just doesn’t happen. Even for them just to get there for their lesson weekly doesn’t always happen.”

Lastly, associations can foster social connectedness by encouraging all staff and volunteers to engage in its development. It is not only the instructor’s responsibility to develop social connectedness, the responsibility is shared across an association. As identified in part 2,
one of the influences of social connectedness was the amount that volunteers interact with riders and their families. Guardians expressed that when volunteers engaged or interacted with a rider, it was seen as positively contributing to their connectedness. Unfortunately, this was also often seen as a missed opportunity, as many guardians felt that engaging with the volunteers was a rare occurrence. Those that had a consistent volunteer who developed a relationship with their rider, reported that this contributed to their social connectedness. All staff and volunteers should be encouraged to help develop social connectedness in their role at the association.
Chapter Five: Discussion and Conclusion

Presence and Expression of Social Connectedness

Many studies have demonstrated that children can become socially connected within a community context (Abubakar & Dimitrova, 2016; Barber et al., 2005; Kazak, 1986; Richard Lee & Robbins, 1998; Resnick et al., 1997) and this was certainly the case in this study, where both guardians and instructors indicated they felt socially connected to the CTRA. Guardians voiced their children’s perspectives of social connectedness on their behalf. Guardians revealed, through both the CTSS and interviews, that the CTRA setting contributed to the riders’ and their families’ sense of social connectedness. Likewise, the instructors’ overall CTSS scores were very positive, albeit their scores were slightly higher (1.3 points higher on a 60-point scale) than the guardians’ scores. However, the items that most strongly represented guardians’ and instructors’ social connectedness differed somewhat.

Data from the CTSS demonstrated that the majority of guardians (92%) experienced strong feelings of comfort and safety. According to Phillips-Salimi et al. (2016) trust is defined as a sense of comfort or safety when interacting with others. Therefore, it can be assumed that if guardians were primarily feeling a sense of comfort and safety at the CTRA (as demonstrated by the CTSS), they would also express the attribute ‘trust’ in their interview, this was the case. As Moore and McArthur (2017) discovered, children and youth conceptualize safety in multiple dimensions: safety is identified and experienced as a set of feelings, trusting relationships are the foundation of safety, familiarity helps children feel safe, and safe environments are those that are orderly. The children and youth in Moore and McArthur’s study expressed that they felt safe when no unsafe people, things, or experiences were present. More so, children felt safe when things, people, or behaviours were ‘protecting,’ ‘looking after,’ and providing emotions of
‘comfort’. This is evident from the interview transcripts in this study. Guardians explained that the setting of the CTRA provided a sense of comfort, perhaps because of the familiarity that children develop with the CTRA over time (Moore & McArthur, 2017). Trust was one of the top three attributes of social connectedness that was demonstrated within six of the overall seven interviews. As children and youth identified in Moore and McArthur’s (2017) study, trusting relationships were a key to feelings of safety. Moore and McArthur found that children did not automatically think an adult was safe. A child must get to know the adult before fully trusting them. Although trust was an attribute of social connectedness that was consistently mentioned across six interviews, it did not seem that children who had been participating in therapeutic riding for a long time trusted their instructor more than a child who had been with their instructor for less than a year. Guardian 6, who had only been attending the CTRA for 7 months, expressed that her and her son trusted the instructor and felt comfortable that the instructor had her sons’ best interest in mind. Similarly, familiarity with a setting also contributed to children feeling safe (Moore & McArthur, 2017). Throughout the interview transcripts, guardians explained how their instructors have set routines that are specific to the rider’s needs (Guardians 7 and 9). These routines and familiarity of a therapeutic riding lesson could be one of the contributing factors providing feelings of safety and trust at the CTRA. Based on children in Moore and MacArthur’s (2017) study, for a child to feel safe in a setting the child needs time to ‘get to know’ the adult(s), the environment needs to be familiar and set up for them, and there should be order and consistency. In comparison, unfamiliar and different people, settings, or things make children feel discomfort and at times unsafe (Moore & McArthur, 2017). Therefore, for children at the CTRA to develop feelings of safety and trust, they must have time to get to know the staff, have a sense of familiarity within a lesson and consistency.
I can only directly compare this study’s CTSS scores, with CTSS scores from the Crespo et al.’s (2016) study. In that study, guardians also demonstrated that they felt safe within the setting of their children’s cancer treatment program, however, this item did not receive the highest score. Rather, ‘I feel protected,’ and ‘I feel I am accepted,’ received the highest average scores on the CTSS-Pediatric Cancer. Although, the scores differed with respect to the highest scored item(s), guardians in Crespo et al. and guardians from this study both scored lowest on the item ‘there are people I feel close to,’ (5.29 and 5.25, respectively). Besides this one item, overall, guardians’ sense of social connectedness to the CTRA was considerably higher across all items (see Appendix Q).

The differences between guardians score from this study in relation to Crespo et al. (2016) could be because of the families’ level of choice, families’ stress levels, and the nature of the setting. Consistent with established outcomes of therapeutic riding (AHA Inc., 2016) riders were likely attending therapeutic riding as a recreational way for children to develop strength, mobility, and confidence. While in Crespo and colleagues’ study, the children were attending a cancer center to receive treatment and attending follow up appointments, rather than recreation-based therapy. The level of choice involved in these two therapy setting were quite different. Families that are having their child participate in therapeutic riding are doing so as a therapy to benefit their child, however, there is the choice not to attend. In comparison, the families in Crespo et al. (2016) study did not have the same level of choice when taking their child for cancer treatment. It can be assumed that the level of imperative to get cancer treatment is not the same as participating in therapeutic riding. Moreover, options for treatment for children with cancer involve very difficult decisions for parents (Tomlinson et al., 2011) with different pressures on parents’ choices.
The stress level associated with receiving medical treatment versus therapeutic treatment is also very different. Guardians in Crespo et al. (2016) were dealing with an ill child receiving critical treatment in pediatric oncology settings that were “distinct from others in several ways, including the design and arrangement” (p. 1467). Thus, their levels of stress and the severity of their child’s sickness may have heightened their emotions. These tensions were seen in a Canadian study among health care providers at four pediatric oncology centers (Klassen, Gulati, & Dix, 2012). Klassen et al. (2012) found that close relationships with families could be developed, but the ‘cancer journey’ was difficult and could involve challenges and conflicts between staff and families despite the use of family-centered care approaches. Conversely, equine-assisted interventions are often characterized by a lack of stress (Tan & Simmonds, 2018). Guardians in Tan and Simmonds’ (2018) study articulated that their child could be “herself, there’s no anxiety, there’s no stress” (p. 6). Therefore, the more positive findings in my study, compared to the available literature on children’s social connectedness (i.e. Crespo et al., 2016) are perhaps not surprising.

Animals also have a unique presence that benefits the rider which includes reducing stress, lowering heart rate and blood pressure, reducing loneliness and isolation, and increasing social interaction and connection (O’Haire, 2013). As demonstrated through the interviews in this study, the connection riders develop with their horse, the barn cats, and dogs, could be one of the leading reasons a child and their guardian felt connected at the CTRA. Guardians and instructors both mentioned how the ‘horse aspect’ of therapeutic riding provided opportunities for the riders and their families to develop social connectedness. Many of the interviewees spoke to the connection that a rider and horse shared, such as wondering how the horse was during a windstorm (Guardian 7) or going to the barn at night to read the horse a bedtime story (Instructor
3). The connection to the horse influenced some riders’ sense of social connectedness in this study. This type of connection and positive affect of the horse is consistent with research from Germany where a schooldog was present one day per week in a third grade class compared to a third grade class without a schooldog (Beetz, 2013). Children in the class with the schooldog had significantly more positive attitudes toward school and positive emotions related to learning compared to the control class.

Instructors had strong levels of social connectedness as documented on the CTSS and during the interviews. Somewhat in contrast to the guardians, instructors felt socially connected through feeling close to others, a connectedness to the setting, and feeling as though they belong. The instructors that participated in this study experienced stronger levels of social connectedness than guardians in this study and the guardians in Crespo et al. (2016) study. During interviews, as anticipated based on the CTSS data, instructors provided extensive examples of how social connectedness was expressed. These primarily involved trusting the people they work with, valuing their job, caring for the families and riders, and feeling close to the volunteers and staff at the CTRA.

It is likely that the instructors experienced stronger levels of social connectedness than the guardians did because they were at the CTRA more than the families and riders as it is their workplace. The workplace can expose an individual to many opportunities to develop their sense of social connectedness (Kaplan et al., 2014). Kaplan et al. (2014) identified six strategies to increase social connectedness within the workplace to increase employee’s well-being. The first of the Kaplan et al. strategies was: instead of e-mailing someone, call him or her, or go to his or her desk to discuss the topic you were going to e-mail about. This strategy was fully in effect among the instructors at the CTRA. Instructor 3’s interview was completed in her office, which
has two desks, one for herself and the other for Instructor 2. These instructors work side by side. Instructor 3 indicated that she could ask the other instructors for advice, bounce ideas off them, and support one another because they are all there for the same reason, “to support our riders, our horse, and each other.” The second strategy suggested by Kaplan et al. is to do something social outside of work hours with a co-worker. Instructor 3 explained that their vaulting team, which both Instructor 2 and 3 are on, “has really brought a lot of the instructors together,” because they have practiced for a demo (a set choreographed routine with a team) over the past three years. Instructor 3 continued to explain that they “practice[d] almost daily, every second day... [they] build a team... [and have] fun times, silly times, practice time.” The vaulting team that the instructors participate in complements strategy five outlined by Kaplan et al. as well: start or join a team or group activity with your coworkers. The interviews suggested that the instructors at the CTRA were using four of the six strategies outlined by Kaplan et al. that increase social connectedness. Although the other two strategies: talk with one co-worker who you do not normally talk to and ask around to see if you live close enough to carpool with colleagues, could be strategies that the instructors do use however, these were not identified during their interviews. It can be understood why the instructors have a higher sense of social connectedness compared to the guardians; they are actively engaging with their co-workers to increase their social ties (Kaplan et al., 2014).

Although it was not difficult to understand why instructors experienced a greater sense of social connectedness than the guardians did, the instructors at the CTRA felt less at ease than the guardians. This was explained during interviews. Instructor 3 explained that “work[ing] with so many different entities, like you’ve got the volunteer, side walkers, or sometimes horse handler, the rider, the students, the horse, the environment, the weather,” that can all play into the day.
She suggested that having all these components can be challenging and may affect the lesson going as planned. Additionally, Instructor 3 highlighted that the horse needs to be watched all the time for its body language and signs of tension. The instructor continued to explain how the horse can have a bad day just like the rider. Furthermore, Instructor 2 described a lesson where the instructor was rightfully uneasy: “We had one lesson for a while... there were four children [each with] one horse handler, three side walkers, so 12 volunteers for [a] one-hour spot. It was like a circus down there.” It is clear how this may detract from the instructors’ sense of ease.

**Communication**

Guardian respondents clearly said that effective communication was the key to social connectedness. This is not surprising as communication is “widely considered to be essential for successful interventions for children with disabilities and their families” (King, Servais, Bolack, Shepherd, & Willoughby, 2012, p.459). As was evident from the interviews, communication between the rider and instructor, family and instructor, family and volunteers, and within the entire team, influenced feelings of social connectedness. Guardian 9, who did not feel strongly socially connected to the CTRA, felt that the lack of communication between her family and the staff was the top barrier to experiencing feelings of social connectedness. In Guardian 9’s experience, the communication between the family and the instructor was lacking which left the family feeling unsure of what was going on during lessons. For Guardian 9, she and her family did not feel understood nor welcome, thereby limited a sense of social connectedness. In comparison, other guardians whom felt socially connected experienced aspects of respect, understanding, and safety that contributed to their families’ social connectedness. Surprisingly, although Guardian 9 didn’t feel socially connected she emphasised that her son might: “he is connected enough to feel safe that I [don’t] have to be there” in the horse ring when he is riding.
This was specifically important to this guardian as during other therapies/interventions she must always be beside him.

Therapy services have important roles that require the service provider and the client to communicate to optimize the services. King et al. (2012) advocated that in the delivery of rehabilitation services to children, clients, and service providers need listening and communication skills, “without these listening and communication skills, client situations cannot be appreciated, client desires cannot be understood, common ground about priority issues cannot be reached, and shared decision making about best courses of action cannot occur” (p.459). King et al. used a 24-item Effective Listening and Interactive Communication Scale with multiple rehabilitation therapists to assess and reflect their listening/communication skills. Although the majority of guardians and instructors at the CTRA expressed they can effectively communicate with each other, this scale could be used by instructors and even volunteers as a professional development activity to assess their listening and communication skills. This is a relevant tool for the CTRA as families need to be comfortable communicating their desires and priorities for their child’s therapy as well as feel that they are being understood. Furthermore, listening and communication is especially important for the CTRA because effective communication is an aspect of quality care and linked to client satisfaction (King et al., 2012).

King et al. (2012) suggested that good communication is clear for the client, has mutual meaning, establishes a sense of direction for the intervention, and provides affirmation for the client. This is consistent with guardians who did feel socially connected at the CTRA. Guardian 12 explained that she felt that the instructors understood her needs and could talk to them if she had a problem. For example, Guardian 12 said, “…if I was having an issue... I could actually go in and I can be like, hey, this is what is happening.” She added that she has a mutual
understanding with the instructor “I don’t have to explain the ‘why’ he’s being upset.”

Comparably, Guardian 6 said that she can tell the instructor how her son is feelings and the instructor will respond “OK, no problem.” Guardian 6 felt safe and accepted, therefore she believed she could tell the instructor her child’s state, knowing that they were working together to support her son. Furthermore, the instructors at the CTRA indicated communication as an important aspect of their job, especially when interacting with their riders. Instructor 2 stated that “it's really important for us to talk to [the riders], not about them, even if they don't cognitively comprehend that.” Even if the rider does not respond using words, both instructors that were interviewed expressed how important it was to talk to them.

Social Connectedness as a Mediator

A mediator is an intermediary variable between two (or more) other variables that have a relationship (Hayes, 2013). For example, there is a relationship between the desire to buy a product and actually buying a product. However, this relationship can be influenced (or mediated) by the cost of the product. The findings of my study suggested that social connectedness might be mediating relationships between negative factors preceding a therapeutic riding session and the experience of that lesson. Instructors and guardians explained that many factors could affect the therapeutic riding lesson experience including both child’s state, and lesson components at the CTRA.

1. The child’s state and their experiences.

Each rider that attended the CTRA had both strengths and challenges. These strengths and challenges (riders’ traits) were discussed with guardians during their interview. A riders’ traits are unique and requires the instructor to plan accordingly, however the state that a rider comes to a therapeutic riding lesson may differ day to day. As Instructor 2 recounted, a rider that was
having a terrible day at work resulted in the instructor changing the lesson plan and simply focusing on the rider’s emotional needs. Similarly, Guardian 12 stated that some days are good, others are not, often pertaining to her son’s mood. Guardian 9 also acknowledged that her son is a ‘tough customer’ as he has a lot of needs and his state can change day to day.

2. Lesson components and the impact on rider’s experiences.

A therapeutic riding lesson is not easy to organize, there are many components that have the potential to threaten the success of a lesson. Instructors emphasized that the weather, presence or absence of the rider’s usual horse, instructor, and/or volunteer, and time changes could each threaten the success of a therapeutic riding lesson. At the setting of the CTRA, rider’s come in contact regularly with their instructors, volunteers, other riders and their families, and animals such as horses, dogs, and cats. The relationship with the people and animals has an impact on the experience at the CTRA. Furthermore, the weather and time of a lesson affects the riders’ experience.

Guardians also suggested that other families being present could also have an impact on their experience of a lesson. Families at the CTRA found that child enjoyed the riding more when they (their parent(s)) were actively involved during their son/daughter’s lesson. Guardian 7 believed that her connection with a fellow riding mother contributed to her social connectedness and was yet another influence to the success of a riding lesson. Guardian 7 said that even when it was a wet and cold day, when she really did not want to sit outside and watch her son, she still looked forward to riding as much as her son, because it was a time where she got to interact with ‘like-minded individuals’ and parents who look out for each other. This connection between the guardians appeared to protect against negative influences on lessons, ultimately producing more positive overall experiences.
Lesson components and a child’s state both could reduce feelings of social connectedness, however, my results suggest the social connectedness to people and animals could be mediating a positive experience at the CTRA. These two thoughts from the instructors and guardians, signaled that two different mediating relationships may have been evident, see Figure 4. As seen in Figure 4, the first preceding factor is between the lesson components and the riders’ experience of therapeutic riding, and the second was between the child’s state and their experience of therapeutic riding.

![Figure 4. Social Connectedness as a Mediator of Relationships between Preceding Factors and CTRA Experiences](image)

Both the rider’s state and the lesson components that a rider comes in contact with can affect the experience a rider and their family have at the CTRA. However, it seems that social connectedness may mediate these challenges to support the experience at the CTRA. Guardians explained that when their child was connected to either the people (instructors and/or volunteers)
or the animals at the CTRA, these connections protected against disruptions or potential threats to their experiences at the CTRA. Moreover, the familiarity that children and youth have with the setting, people, and animals can support children and youth in feeling safe (Moore & McArthur, 2017). Guardians 12 explained that her son has been lucky to have a long-time volunteer where her son and the volunteer have developed an exceptional connection. The relationship between the rider and their volunteer contributes to the rider’s feeling of social connectedness and in turn, the rider can cope when a disruption occurs, such as his instructor being away, or an absence of his horse. In other words, his feelings of social connectedness with his volunteer served as a protective influence when there were factors that had the potential to negatively affect his lesson. Furthermore, having familiar people and a familiar setting can help children feel safe (Moore & McArthur, 2017). Social connectedness to the people and animals at the CTRA suggests that the connection families have may be mediating the relationship between a child’s state and/or the lesson components and the rider’s experience at the CTRA.

The literature shows that social connectedness is associated with decreased violence, depressive symptoms, suicidal thoughts, and health-compromising behaviours, a reduction in the impact of stress and trauma, higher academic achievement, and increased self-esteem (Abubakar & Dimitrova, 2016; Jose & Lim, 2014; Phillips-Salimi et al., 2012). As such, it is not surprising that social connectedness is associated with therapeutic riding experiences. What is unique about this portion of my findings is that social connectedness appeared to mediate, or provide a buffer, between things that were ‘going wrong’ such as a child having a really bad day or their regular instructor being absent and the families’ experiences of the CTRA. Conversely, guardians that did not feel as socially connected were more affected by things ‘going wrong’.
Social connectedness as a mediating variable has been documented in the context of school. Loukas, Suzuki, and Horton (2006) found that students’ feelings of school connectedness mediated the relationships between students’ perceptions of school climate and subsequent conduct problems and depressive symptoms. Although the Loukas et al. study occurred in a different setting and the constructs were somewhat different i.e. school connectedness rather than social connectedness at a therapeutic setting, it does provide a foundation to suggest that connectedness can serve as a mediating variable. Moreover, my study revealed that when families were connected to the instructor, setting, or animals, disruptions such as an inconsistent volunteer did not threaten their pre-existing connection, and could actually help reduce the impact of these threats on social connectedness.

**Expectations**

Guardians had high expectations of the services offered through the CTRA. Expressly, the interviews revealed that guardians had three particular expectations of the CTRA: 1) volunteers’ roles 2) building peer relationships, and 3) providing opportunities for families to connect.

Prevalent within guardian interviews was the difference between the guardians’ expectations of volunteers and the volunteers’ actions. Guardians felt that this gap between expectations and actions hindered social connectedness at the CTRA. In her dissertation examining the impact of horse therapy for children with special needs, Sulkowski (2017) found that volunteers who work with children with special needs have an important role, as they provide external support, trust, and socialization that many riders do not get outside of their own family members or immediate friends. Similar to what guardians expressed during my interviews, Sulkowski also found that horse therapy centers were primarily composed of
volunteers, and those volunteers chose to work in the field because they wanted to help and enjoyed what they do. Although I might assume that the CTRA volunteers enjoyed working with horses and wanted to help in the barn, I do not know whether volunteers considered themselves having a role in helping riders develop social connectedness at the CTRA because I did not interview them. In hindsight, interviewing the volunteers would have helped me understand the relationship between volunteers and riders/families more fully. I will discuss this in the Limitations and Recommendations for Future Research section. While guardians in this study were amazed by the volunteers, appreciated their commitment, and wanted to thank them, guardians wanted volunteers to contribute to their son or daughter’s social development as well.

To resolve this discrepancy between guardians’ expectations of volunteers and reality, a quality service model may be useful. Vaughan and Shiu (2000) created a service quality model specifically for both the function (the manner that service is delivered) and technical quality (what the service user actually receives from the service) as perceived by the service users within a voluntary service delivery sector. This quality service model, called ARCHSECRET, provides an assessment of service quality by measuring what service users perceive as shortfalls of an organization and to track performance quality on 27 distinct features (Vaughan, Liz and Shiu, 2000). These 27 distinct features are grouped into ten service quality dimensions that make up this service quality scale outlined in Table 8 that can be given to service users to assess the volunteer service delivery at an organization.
Table 8 ARCHSECRET service quality model

<table>
<thead>
<tr>
<th>Dim</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>A - Access</td>
<td>Accessibility of facilities, personnel, communication materials, information, advice, and support for funding.</td>
</tr>
<tr>
<td>R - Responsiveness</td>
<td>Prompt and timely serves, willingness to help with concerns and problems.</td>
</tr>
<tr>
<td>C - Communication</td>
<td>Polite, willingness to listen to service users’ point of view, communicates in a way that can be understood by service users.</td>
</tr>
<tr>
<td>H - Humaneness</td>
<td>Respecting customers’ feelings, being sympathetic to client’s point of view, being friendly and considerate, showing respect for privacy, and reassuring client’s personal anxieties.</td>
</tr>
<tr>
<td>S - Security</td>
<td>Service users feel safe, respected, and confidentiality is provided.</td>
</tr>
<tr>
<td>E - Enabling/Empowerment</td>
<td>Opportunities for individuals to take responsibly for their development, providing training and support.</td>
</tr>
<tr>
<td>C - Competence</td>
<td>Expertise, knowledge and skills, ability to deliver services to meet service users’ needs.</td>
</tr>
<tr>
<td>R - Reliability</td>
<td>Consistently serves, appropriate service, trusting behavior.</td>
</tr>
<tr>
<td>E - Equity</td>
<td>Capability to deliver equitable service for individuals and groups.</td>
</tr>
<tr>
<td>T - Tangibles</td>
<td>Up-to-date physical facilities and equipment.</td>
</tr>
</tbody>
</table>

Guardians at the CTRA could complete this ARCHSECRET scale to determine the shortfall(s) and quality of service they experience at the CTRA. The results would demonstrate what aspects guardians perceive as lacking, and then the CTRA could begin a conversation around these perceived shortfalls and take action to address the family’s concerns. Guardians have already articulated that they want volunteers to engage more with the riders at the CTRA, such as saying ‘hello’ or asking how their day is when riders passed through the barn, thereby expressing that they are interested in them. Although guardians identified that they want volunteers to interact more with their child, this scale may help the CTRA see exactly what aspects guardians perceive as the association’s shortfalls in terms of the ten dimensions specific to volunteers. The interview transcripts spoke to a few of the dimensions such as communication and reliability however, this scale could determine if there are other aspects and see if a larger population also experiences the same dimensions. However, before a model such as the ARCHSECRET is implemented, the
CTRA should identify if volunteers cleaning stales, and volunteers working directly with riders in a position such as a sidewalker or horse handler have the same expectations. Providing guardians with these expectations may be sufficient to resolve their concerns, and the implementation of a service quality model may not be needed.

Guardians expected the volunteers to contribute to their family’s social connectedness, by interacting and talking to families while at the CTRA. However, this was not the only expectation that guardians had for improving the program. As demonstrated within the interview transcripts, guardians wanted more opportunities for their son/daughter to develop connections with fellow riders. Parents in Tan and Simmonds (2018) study on their perceptions of equine-assisted intervention, reported that their children with ASD began forming relationships with peers that were in their equine-assisted group. However, whether this happened or not at the CTRA seemed to depend on whether the rider was in a private lesson or a group lesson. Group lessons have one instructor that is shared among a small group of riders each with their own horse whereas a private lesson includes one instructor per rider. At the CTRA riders are either in one-on-one lessons or group lesson. Only Guardian 7 and Guardian 6’s child were in group lessons. Guardian 7 had a strong relationship with another family that had a rider in a group lesson with her son, whereas Guardian 6 had the opposite feeling. She did not make any connections, nor did she feel that her son had made any relationships with peers. She reflected that the peers, who were paired with her son, a girl and then two younger boys, were not close enough in age. Furthermore, Guardian 1 was in a private lesson but wanted her daughter to be in a group lesson, as she was hoping to find a group atmosphere that would encourage participation and help her daughter develop ‘buddies’ at riding. It is harder for children with special needs to develop friendships than typically developing peers (Sisk, Chitiyo, & Akenson, 2018) and
therefore it is understandable why Guardian 1 wanted her daughter to develop peer relationships at the barn. For her daughter, developing friendships with peers could impact her cognitive, emotional, and social development (Sisk et al., 2018). As demonstrated in the CTRA vaulting summer camps (Temple, Achtem, Sangret, Bouthillier, & Stuart-Hill, in press), the instructors facilitate peer interactions, however the CTRA may want to consider the importance of creating opportunities to develop friendships among peer riders in their therapeutic riding programs.

The results have demonstrated that the majority of families want more, expect more, and are advocating for more opportunities to connect. However, this is not to say that all families feel this way; one guardian that was interviewed was extremely happy with their ‘small’ group of individuals and liked coming to the CTRA once a week for their therapy, leaving without connecting to other families. Yet, four of the five families expressed that the CTRA should contribute heavily toward developing connections among families.

The expectation that CTRA is a place for families to meet each other was discussed among the guardian interviews. One guardian believed it was the association’s responsibility to acknowledge that the CTRA is a place for families to connect with other each other. Although Guardian 7 naturally developed a relationship with a fellow guardian on her own, yet some guardians may not be comfortable doing so until an instructor introduces the families. Guardian 6 suggested that the staff at the CTRA introduce families to each other when they are in a group lesson, like Guardian 6, they may find this supports the start of a positive relationship.

The CTRA has a parent survey that they invite guardians to complete at the end of each session (6 weeks of lessons). This survey asks families to report on their son/daughter’s physical, intellectual, emotional, behavioural, and social outcomes. Within the section on social outcomes, the CTRA asks if guardians have seen their son/daughter maintaining, improving, or
increasing many aspects of social connectedness as outlined by Phillips-Salimi et al. (2012). They included: sense of belonging, awareness/consideration of others, trust building, consideration and respect for others/horse, expressions of empathy, relationship with instructor/volunteers/teammates, communication with others, and opportunities for mentoring. This survey that the CTRA has is one way that they are actively trying to better their service quality for their participants. However, with respect to the expectations that guardians expressed through this study, the CTRA may want to add to their survey and ask what families want from a session of therapeutic riding. This question might invite guardians to express what opportunities they want for their children such as, to make friends, and for their family to connect with others. Furthermore, this may also invite families to bring forth their ideas about volunteers’ position to positively impact riders’ sense of social connectedness.

Although the CTRA already has a parent survey they may want to consider incorporating aspects of a service quality model. Good service quality is difficult to consistently deliver (Zeithaml, Berry, & Parasuraman, 1988) and is often depended on six distinct dimensions within an organization. The CTRA may want to consider their programs reliability, tangibles, responsiveness, competences, security, and communication when assessing their service quality.

**Suggestions to Support Social Connectedness**

The CTRA is already supporting their riders in many ways. The CTRA works with families to schedule a routine at the CTRA that includes the same day and time each week, a lesson with the same horse, same instructor, and tries to have a consistent volunteer(s). Furthermore, the CTRA offers both private and group lessons depending on the needs of the rider. The instructors work collaboratively to support the traits and states that riders come to therapeutic riding with. The CTRA also hosts a Ride-A-Thon each year as a fundraise for the
association but also provides an opportunity for families to make connections. In the past, the CTRA has hosted focus groups to “help [the CTRA] improve the way that [they] offer services,” yet it was found that families were already struggling to attend their one lesson each week and didn’t want other events in their schedule (Instructor 2). However, guardian and instructor interviews suggested that there are ways that the CTRA can further support the development of social connectedness.

There are four main suggestions for the CTRA that emerged from this study: support staff in becoming aware of the importance of social connectedness, continue to communicate with families, clarify volunteers’ roles and encourage consistency.

Social connectedness is important for children’s well-being (Barber & Schluterman, 2008; Crespo et al., 2016; Karcher, 2005; Resnick et al., 1993). Feelings of social connectedness were seen to protect families’ relationships with the CTRA when the lesson components were destabilized, or the rider’s state was not optimal for a successful riding lesson. Guardians and instructors both experience high levels of social connectedness at the CTRA confirmed through all of the seven attributes of social connectedness. The most prominent attributes expressed throughout the qualitative interviews were trust, reciprocity, and caring. These three attributes of social connectedness were expressed by 86% of the participants from Phase 2 ($n = 7$). Whirlock (2007) concluded similar findings in a study of community connectedness with youth in high school. In Whirlock’s study, focus groups recognized that trust, care, and respect were linked to connectedness indicators. Demonstrated in this study, Philips-Salimi and colleagues’ study, and Whirlock’s study, trust and caring are two of the key attributes of social connectedness that have a great impact on the ability to socially connect in a community setting.
As identified in the parent survey that the CTRA gives to families after a session of therapeutic riding, the CTRA is aware that families have the opportunity to develop a sense of social connectedness. However, I suggest that the CTRA staff, including instructors, office staff, and volunteers, have a conversation discussing the importance of contributing to a riders’ social connectedness and how they can continue to support riders developing feelings of social connectedness. For example, to encourage a sense of belonging, instructors and staff could describe the barn as ‘his/her’ barn or the horse ‘his/her’ horse, in relation to the rider. As Guardian 7 mentioned, her son already refers to the barn as ‘his’. Instructors could encourage other riders to refer to the barn as ‘theirs,’ thereby developing a sense of belonging in the same way. The instructors, animals, and some volunteers are highly contributing to riders and their families’ social connectedness, however some discrepancies emerged through guardian interviews.

Phillips-Salimi et al. (2009) revealed that “having a continuity of care created a trustful and familiar environment and fostered a sense of connectedness” for their patients (p.1474). The consistency of instructors and volunteers at the CTRA was demonstrated as having a positive impact on rider and family’s sense of social connectedness. Guardians with a consistent volunteer described a trusting bond between their rider and volunteer (Guardian 12). Whereas other guardians, who did not have a consistent volunteer, expressed feelings of disappointment due to the lack of a relationship between volunteers and riders. As instructors mentioned, volunteers often come to the CTRA in between jobs and it is challenging to ensure consistency, but they work hard to do so as well as provide enough volunteers for all rider’s needs.

Communication was seen as a crucial component to the development of social connectedness. Most guardians explained that they trust and feel open to tell the instructors the
state that their child was in. Four of the five families interviewed explained the communication between instructors and families as a positive contribution to social connectedness, however, this was not the case between volunteers and families. Guardians were advocating for volunteers to talk to the riders and get to know them. Studies have found that when adults listen and spend time getting to know a child, it contributes to fostering social connectedness (Gibson, Aldiss, Horstman, Kumpunen, & Richardson, 2010; Phillips-Salimi, 2009). Consistent with the guardians from this study, Phillips-Salimi (2009) suggested that for adolescents to foster social connectedness they need to be included in conversations. The CTRA may want to have a discussion with volunteers to see if they are comfortable having conversation with families while they are working in the barn. There are many different roles that volunteers have at the CTRA from side walkers, to cleaning stalls, to gardening. Therefore, I suggest that the CTRA clarifies the role volunteers have with families relative to each volunteer position. Subsequently, guardians should be made aware of the expectations that the association has of volunteers as some may not be comfortable nor have that expectation placed on them by the association.

The discrepancy between guardians’ expectations of volunteers and what is presently being done at the CTRA should be addressed. After determining the expectations the CTRA has of volunteers and their involvement with families, the CTRA could then implement a service quality model or add on to their pre-existing parent survey. A quality service model such as ARCHSECRET could help the CTRA determine what families attending the CTRA are expecting specifically of their volunteers, how to further improve their services, and establish if the families’ expectations are attainable given the associations goals, staff, and budget.
Limitations and Recommendations for Future Research

This mixed-methods study examined if and how therapeutic riding contributed to social connectedness. While this study included guardians’ and instructors’ voices, future research should include children and volunteers’ perspectives. It is extremely valuable to include the voice of children with disabilities in research (Goodwin & Watkinson, 2000). Although it was my intent to include the children’s perspectives, I was not able to recruit and therefore hear from them. Only one child agreed to participate in a joint interview with their guardian. The lack of children’s participation resulted in their guardians expressing their perspective for them. However, as demonstrated in Phillips-Salmini et al. (2012) study, the children’s mean scores were lower than their parents’ scores on the CTSS-Pediatric Cancer. Therefore, I cannot assume that the guardians in my study were able to fully provide their child’s views and perceptions of social connectedness.

To improve participation among children, researchers may want to consider attending therapeutic riding lessons and being present after lessons for a one-on-one verbal scale of the CTSS and a short interview. Additionally, finding and using a ‘gatekeeper’ that is trusted by the participants may provide easier access and recruitment of participants (Rimando et al., 2014). A gatekeeper is a person that facilitates the relationship between the data collector and respondents (Lavrakas, 2008). Rimando et al. (2014) discussed that collaborating with community gatekeepers, using face-to-face recruitment with participants, using word of mouth, and building trust are four strategies for successful recruitment. Although recruiting children can be challenging, having a stronger and more sustained presence in the context and finding a local collaborator in the future may contribute to increased child participation in the research process.
Guardians were asked to complete the CTSS with the thought that their responses were to represent their own and their son/daughters’ feelings of social connectedness. This thought was supported by my exploration of the nexus between CTSS scores and guardians’ interview responses of guardians with the highest and lowest CTSS scores. I found the guardians’ degree of social connectedness from the CTSS was consistent with their expressions of social connectedness during their interviews. Guardian 6 had the lowest CTSS score and she mentioned many times that she didn’t feel socially connected to the CTRA. This guardian also struggled to provide examples of experiences that represented attributes of social connectedness, expressing only a few of the seven attributes during the interview. Conversely, Guardian 7 and Guardian 12, who had the highest scores on the CTSS, could provide many examples of how the seven attributes of social connectedness were demonstrated at the CTRA. This suggests that the scale did reflect participants’ true level of connectedness, as there was consistency between their quantitative score from the scale and how social connectedness was exemplified throughout the interview. Although the scale and interviews were reflective of guardians’ social connectedness, this study did not capture children’s experiences and was therefore limited to their guardians’ perception of their sense of social connectedness.

Volunteers were mentioned in all of the interviews as being an integral part of the therapeutic riding environment. One guardian described a connection between her son and his volunteer as a positive connection that increased her son’s feelings of social connectedness. Other guardians whose children did not have a consistent volunteer felt that having a steady volunteer could facilitate their family’s social connectedness. The instructors explained that there was a variety of volunteer jobs, including helping in the tack shop, gardening, clearing trails, cleaning stalls, grooming the horses, and/or being a horse handler or side walker. It would be
valuable to speak with the volunteers in different roles in the barn, as it appears many play a role in contributing to social connectedness (Söderhamn, Flateland, Fensli, & Skaar, 2017).

This study was limited to one therapeutic riding association. Patton (1990) suggests that qualitative inquiry typically has a small sample size that focuses in-depth on a few participants, even some cases with just one participant. Furthermore, qualitative sampling depends on what the research wants to know, the purpose, and what will be useful (Patton, 1990). Quantitative research on the other hand, typically depends on larger samples (Patton, 1990). Although having participants across multiple associations might increase the participant number to a standard adequate for quantitative research, the purpose of this study was to determine the influences of social connectedness at the CTRA and determine how to foster social connectedness in the future. Therefore, Patton (1990) suggests that you can learn more by focusing in depth on understanding the needs, interests, and incentives of a small number rather than gathering standardized information on a large sample. In this study, I used a small sample that focused on understanding participant’s in-depth perspectives (Patton, 1990). Additionally, I wanted to increase this study’s transferability and therefore have details of the context to provide those in similar environments the opportunity to justify the applicability of these results in their setting (Shenton, 2004).

Given guardians high expectations and advocacy for the CTRA to create more opportunities to connect with adults and peers, future studies may want to clarify what guardians expect out of a therapeutic riding program. Established through guardian interviews, guardians were wanting not only therapeutic riding lessons for their son/daughter, they were also wanting to be a part of an association that supports connecting families and developing their riders’ social connectedness. Furthermore, a conversation between guardians and the association on the roles
of staff members and the association’s role in contributing to social connectedness may help relieve this tension.

Summary

This study examined the impact that therapeutic riding has on riders’ and families’ social connectedness. Consistent with research suggesting that children with and without special needs can exhibit feelings of social connectedness within their community, family, and school, this study established that the CTRA contributed to families’ social connectedness. Both guardians and instructors completed the CTSS and semi-structured interviews on their perspectives of social connectedness. Furthermore, both groups of participants expressed social connectedness in relation to the seven attributes of social connectedness, however, they expressed connectedness differently. Guardians expressed being comfortable, safe, cared for, and trusting the people at the CTRA. Whereas instructors felt close with, connected to the people, and felt as though they belonged at the CTRA. Guardians felt that communication was the most critical aspect that increased social connectedness. Instructors and volunteers were seen as having pivotal roles when communicating with families. If families felt socially connected, this seemed to mediate, or serve as a protective factor, when preceding issues occurred at the CTRA such as the riders’ state or a change in the lesson’s components. Feelings of social connectedness supported families and riders during their lessons, and appeared to foster successful experiences at the CTRA, even when things went wrong. Although guardians spoke about a discrepancy between their expectations and the services at the CTRA, overall guardians were very positive about the services they received. However, there were some gaps and a lack of clarity about the roles of volunteers, which is something that could be pursued to improve the experience of families.
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Publications.


Appendix

Appendix A: Recruitment Materials: Invitation to Participate for Group 1. Guardians

Letter 1: From Executive Director of Cowichan Therapeutic Riding Association to families with children participating in therapeutic riding: initial invitation

Dear families of CTRA,

This letter invites you to participate in an examination of social connectedness of the participants at Cowichan Therapeutic Riding Association. You are being asked to participate in this study because one of your children attends therapeutic riding at CTRA.

Ms. Shelby Bouthillier and Dr. Viviene Temple from the University of Victoria will be conducting a research study examining how participation in therapeutic riding at CTRA affects the social connectedness of its participants. They are interested in knowing the present level of social connectedness as well as what CTRA does in order to impact the social connectedness of its participants and their families. You are invited to participate in one or both phases of the study. The first phase involves a brief (10 minute) online questionnaire to determine the present level of social connectedness at CTRA. After completion of the questionnaire, you may then agree to participate in the second phase of the study. The second phase involves a face-to-face interview with Ms. Shelby Bouthillier and Dr. Viviene Temple at a location of your choice (approximately 20-45 min). The interview will involve questions associated with your families experiences of therapeutic riding, social connections, friendship, acceptance, and ways to improve social connectedness.

Your participation in this research must be completely voluntary. Choosing not to participate in this study will in no way effect your access to Cowichan Therapeutic Riding Association. Cowichan Therapeutic Riding Association will not be made aware of whether you agree to participate or not. A report will be provided to Cowichan Therapeutic Association as summarized data only, no individuals will be identifiable.

If you are willing to participate, please follow the link below that will take you to the intended consent form, 10 minute questionnaire and more information about the project.

[https://www.surveymonkey.ca/r/socialconnectednessG](https://www.surveymonkey.ca/r/socialconnectednessG)

If you require further information about this opportunity, you can contact Shelby Bouthillier by email, [shelby.bouthillier@uvic.ca](mailto:shelby.bouthillier@uvic.ca), or Viviene Temple at the University of Victoria [vtemple@uvic.ca](mailto:vtemple@uvic.ca) or at [250-721-8841457](tel:250-721-8841457).

Thank you for your consideration of this request.

Shelby Bouthillier B.Ed.
School of Exercise Science, Physical and Health Education, University of Victoria
Appendix B: Recruitment Materials: Invitation to Participate for Group 3. Instructors

Letter 2: From Executive Director of Cowichan Therapeutic Riding Association to instructors of CTRA: initial invitation

Examine how participation in therapeutic riding at Cowichan Therapeutic Riding Association (CTRA) affects the social connectedness of its participants and their families.

Dear instructors of CTRA,

This letter invites you to participate in an examination of social connectedness of the participants at Cowichan Therapeutic Riding Association. You are being asked to participate in this study because you work with families during therapeutic sessions.

Ms. Shelby Bouthillier and Dr. Viviene Temple from the University of Victoria will be conducting a research study examining how participation in therapeutic riding at CTRA affects the social connectedness of its participants. They are interested in knowing the present level of social connectedness as well as what CTRA does in order to impact the social connectedness of its participants and their families. You are invited to participate in one or both phases of the study. The first phase involves a brief (10 minute) online questionnaire to determine the present level of social connectedness at CTRA. After completion of the questionnaire, you may then agree to participate in the second phase of the study. The second phase involves a face-to-face interview with Ms. Shelby Bouthillier and Dr. Viviene Temple at a location of your choice (approximately 20-45 min). The interview will involve questions associated with your experiences of therapeutic riding, social connections, friendship, acceptance, and ways to improve social connectedness.

Your participation in this research must be completely voluntary. Choosing not to participate in this study will in no way effect your employment at Cowichan Therapeutic Riding Association. Cowichan Therapeutic Riding Association will not be made aware of whether you agree to participate or not. A report will be provided to Cowichan Therapeutic Association as summarized data only, no individuals will be identifiable.

If you are willing to participate, please follow the link below that will take you to the intended consent form 10 minute questionnaire and more information about the project.

https://www.surveymonkey.ca/r/SocialConnectednessInstructors

If you require further information about this opportunity, you can contact Shelby Bouthillier by email, shelby.bouthillier@gmail.com or at 250-884-1457, or Viviene Temple at the University of Victoria vtemple@uvic.ca or at 250-721-7846.

Thank you for your consideration of this request.

Shelby Bouthillier B.Ed.
School of Exercise Science, Physical and Health Education
University of Victoria

*Please retain a copy of this letter for your reference*
Appen
dix C: Letter of Information for Implied Consent Phase 1. Group 1. Guardians

Faculty of Education | School of Exercise Science, Physical and Health Education
McKinnon 120 PO Box 1700 STN CSC Victoria BC V8W 2Y2 Canada
T 250-721-8373 | F 250-721-6601 | uvic.ca/education/exercise/

Examining the Social Connectedness Present Through Therapeutic Riding at Cowichan Therapeutic Riding Association: Phase 1. Guardians

You are invited to participate in a study entitled an Examining the Social Connectedness Present Through Therapeutic Riding at Cowichan Therapeutic Riding Association: Phase 1. Guardians that is being conducted by Ms. Shelby Bouthillier and Dr. Viviene Temple.

Shelby is a graduate student and Viviene is a faculty member in the School of Exercise Science, Physical and Health Education at the University of Victoria and you may contact them if you have further questions. Shelby can be contacted by email at shelby.bouthillier@gmail.com or telephone 250-884-1457 and Viviene can be contacted at vtemple@uvic.ca or telephone 250-721-7846.

Objective
Recently, Cowichan Therapeutic Riding Association reached out to the University of Victoria. Cowichan Therapeutic Riding Association is interested to know whether therapeutic riding at their facilities affects the social connectedness of its participants and their families. The primary aim of this study is to determine the present level of social connectedness at CTRA. The secondary aim of this project is to determine what CTRA does in order to impact the social connectedness of its participants and their families with the intent to inform CTRA and increase social connectedness among participants.

This project will assist in determining if therapeutic riding contributes to social connectedness and what the present level of social connectedness is at CTRA. Subsequently, higher levels of social connectedness may result in a reduction of social isolation and loneliness among children with special needs and their families.

Participants Selection
You are being asked to participate in this study because you have a child participating in therapeutic riding at Cowichan Therapeutic Riding Association.

What is involved?
If you consent to voluntarily participate in this research, your participation will involve the completion of a questionnaire. The online questionnaire will ask some basic information about your family and then ten questions focused on social connectedness experienced at the setting of CTRA.

After completion of the questionnaire you may then choose to participate in phase two. You may agree to participate a face-to-face interview. The face-to-face interview will be held in the fall of
2018 at a location and time convenient for you and your family. The interview will involve questions associated with your experiences of therapeutic riding, social connections, friendship, acceptance, and ways to improve social connectedness. This portion of the research will take approximately 20 to 45 minutes to complete. Researchers will take notes as well as record the audio to analyze post interview.

Please be advised that information about you that is gathered for this research uses an online program (SurveyMonkey). The data collected through SurveyMonkey will only be stored in Canada.

**Risks**
Participation in this study may cause some inconvenience to you, specifically: being contacted by the University of Victoria by email after the questionnaire to invite you to participate in the face to face interview; and the time commitments associated with the questionnaire and interview. There are some potential risks to you by participating in this research and they include; the possibility that questions during the interview may reflect upon challenging or upsetting experiences and thus may cause some degree of emotional or psychological discomfort. To prevent and to deal with these potential risks the following steps will be taken; researchers will be educated on multiple community supports and organizations in the community of Cowichan that can provide resources and support for the effected participants.

**Benefits**
The potential benefits of your participation in this research is to better understand the present level of social connectedness during therapeutic riding at CTRA, thereby giving a starting point in determining what contributes, promotes, and develops social connectedness in the community of Cowichan Therapeutic riding association. This work in important as it will help parents, instructors, therapists and organizations like CTRA understand what the present levels of social connectedness are and how to improve social connectedness in a therapy setting.

**Voluntary Participation**
Your participation in this research must be completely voluntary. If you do decide to participate, you may withdraw at any time without any consequences or any explanation. Choosing not to participate in this study will in no way effect your access, involvement or services to Cowichan Therapeutic Riding Association. Cowichan Therapeutic Riding Association will not be made aware of whether you agree to participate or not. If you do withdraw from the study your data will be erased. If you do want to withdraw, please contact either researcher (Shelby Bouthillier or Viviene Temple) through email or phone.

**Anonymity and Confidentiality**
Your confidentiality and the confidentiality of the data will be protected by removing the identifying information from the database. Data will be stored in a password protected files at the University of Victoria. Only Shelby and Viviene will have access to the raw data. The information delivered to Cowichan Therapeutic Riding Association will not contain individuals personal information, nor will be identifiable.

**Dissemination of Results**
It is anticipated that the results of this study will be shared with others in the following ways: an information report to Cowichan Therapeutic Riding Association, a thesis, a published article as well as the findings may be presented at a conference. At the end of the data collection period the questionnaire and associated data will be removed from the online survey site and in 5 years the electronic files of the questionnaire, stored at the University of Victoria, will be erased. Please note, the online data are all stored in Canada.

**Contacts**
In addition to being able to contact the researcher at the above email addresses and phone numbers, you may verify the ethical approval of this study, or raise any concerns you might have, by contacting the Human Research Ethics Office at the University of Victoria (250-472-4545 or ethics@uvic.ca).

By completing and submitting the questionnaire, **YOUR FREE AND INFORMED CONSENT IS IMPLIED** and indicates that you understand the above conditions of participation in this study and that you have had the opportunity to have your questions answered by the researchers.

Examsining the Social Connectedness Present Through Therapeutic Riding at Cowichan Therapeutic Riding Association: Phase 1. Instructors

You are invited to participate in a study entitled Examining the Social Connectedness Present Through Therapeutic Riding at Cowichan Therapeutic Riding Association: Phase 1. Instructors that is being conducted by Ms. Shelby Bouthillier and Dr. Viviene Temple.

Shelby is a graduate student and Viviene is a faculty member in the School of Exercise Science, Physical and Health Education at the University of Victoria and you may contact them if you have further questions. Shelby can be contacted by email at shelby.bouthillier@gmail.com or telephone 250-884-1457 and Viviene can be contacted at vtemple@uvic.ca or telephone 250-721-7846.

Objective
The Cowichan Therapeutic Riding Association is interested to know whether therapeutic riding at their facility affects the social connectedness of its participants and their families. The primary aim of this study is to determine the present level of social connectedness at CTRA. The secondary aim of this project is to determine what CTRA does in order to impact the social connectedness of its participants and their families with the intent to inform CTRA and increase social connectedness among participants.

This project will assist in determining if therapeutic riding contributes to social connectedness and what CTRA does to promote and maintain social connectedness for its participants. Subsequently, higher levels of social connectedness may results in a reduction of social isolation and loneliness among children with special needs and their families.

Participant Section
You are being asked to participate in this study because you instruct therapeutic riding sessions at Cowichan Therapeutic Riding Association.

What is involved?
If you consent to voluntarily participate in this research, your participation will involve the completion of a questionnaire. The online questionnaire will ask some basic information about your experience instructing therapeutic riding and then ten questions focused on social connectedness experiences at the setting of CTRA.

After completion of the questionnaire you may then choose to participate in phase two. You may agree to participate a face-to-face interview. The face-to-face interview will be held in the fall of 2018 at a location and time convenient for you and your family. The interview will involve questions associated with your experiences of therapeutic riding, social connections, friendship,
acceptance, and ways to improve social connectedness. This portion of the research will take approximately 20 to 45 minutes to complete. Researchers will take notes as well as record the audio to analyze post interview.

Please be advised that information about you that is gathered for this research uses an online program (SurveyMonkey). The data collected through SurveyMonkey will only be stored in Canada.

**Risks**
Participation in this study may cause some inconvenience to you, specifically: being contacted by the University of Victoria by email after the questionnaire to invite you to participate in the face to face interview. Additionally, the time commitments associated with the questionnaire.

There are no known or anticipated risks to you by participating in this research.

**Benefits**
The potential benefits of your participation in this research include the possibility of improving the social connectedness provided during therapeutic riding at CTRA. The opportunity to reflect on contributions toward social connectedness as well as the interactions and effects of those interaction with your students and their families. The results may lead to improve the contributions, promotion, maintenance, and development of social connectedness in the community of Cowichan Therapeutic Riding Association. This work in important as it will help parents, instructors, therapists and organizations like CTRA understand what the present levels of social connectedness are and how to improve social connectedness in a therapy setting.

**Voluntary Participation**
Your participation in this research must be completely voluntary. If you do decide to participate, you may withdraw at any time without any consequences or any explanation. Choosing not to participate in this study will in no way effect your employment at Cowichan Therapeutic Riding Association. Cowichan Therapeutic Riding Association will not be made aware of whether you agree to participate or not. If you do withdraw from the study your data will be erased. If you do want to withdraw, please contact either researcher (Shelby Bouthillier or Viviene Temple) through email or phone.

**Anonymity and Confidentiality**
Your confidentiality and the confidentiality of the data will be protected by removing the identifying information from the database. Data will be stored in a password protected files at the University of Victoria. Only Shelby and Viviene will have access to the raw data. The information session to Cowichan Therapeutic Riding Association will not contain individuals personal information, nor will be identifiable.

**Dissemination of the Results**
It is anticipated that the results of this study will be shared with others in the following ways: an information report to Cowichan Therapeutic Riding Association, a thesis, a published article and the findings may be presented at a conference. At the end of the data collection period the questionnaire and associated data will be removed from the online survey site and in 5 years the
electronic files of the questionnaire results, stored at the University of Victoria, will be erased. Please note, the online data are all stored in Canada.

**Contacts**
In addition to being able to contact the researcher at the above email addresses and phone numbers, you may verify the ethical approval of this study, or raise any concerns you might have, by contacting the Human Research Ethics Office at the University of Victoria (250-472-4545 or ethics@uvic.ca).

By completing and submitting the questionnaire, **YOUR FREE AND INFORMED CONSENT IS IMPLIED** and indicates that you understand the above conditions of participation in this study and that you have had the opportunity to have your questions answered by the researchers.
Appendix E: Word Version of Online Questionnaire for Group 1. Guardians

Connectedness to Treatment Setting Scale.
Adapted from: (Crespo et al., 2016)

This scale is designed to help us gain a better understanding of the social connectedness present during therapeutic riding sessions through the Cowichan Therapeutic Riding Association. Please rate the accuracy of the statement on a six-point scale.

Mark the star that reflects *yours and your child’s feelings* related to the setting in which your child receives therapeutic riding sessions.

1= Totally disagree, 2= Disagree, 3= Slightly disagree, 4= Slightly agree, 5= Agree, 6= Totally agree.

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<tr>
<td>1. I am comfortable during therapeutic riding sessions at CTRA</td>
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<td>2. I feel safe during therapeutic riding sessions at CTRA</td>
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<td>3. There are people I feel close to at CTRA</td>
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<td>4. I am at ease during therapeutic riding sessions at CTRA</td>
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<td>5. I feel understood during therapeutic riding sessions at CTRA</td>
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<td>6. I feel protected during therapeutic riding sessions at CTRA</td>
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<td>7. I have a connection to the setting at CTRA</td>
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<td>8. I feel connected to the people I meet at CTRA</td>
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<td>9. I feel I am accepted during therapeutic riding sessions at CTRA</td>
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<td>10. I belong to this group of people at CTRA</td>
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About you:

1) Who in your family participates in therapeutic riding?

2) How old is your child that participates in therapeutic riding at Cowichan Therapeutic Riding Association? 4-6 7-9 10-12 13-15 16-18

3) What is the gender of your child? Female/ Male/ Prefer not to disclose

4) Did they have experience in riding before attending Cowichan Therapeutic Riding Association? Yes/ no

5) How long has your child been attending Cowichan Therapeutic Riding Association?

Less than 6 months 6 months- 1 year over a year

6) Has your child been diagnosed with any of the following:
- Autism Spectrum Disorder
- Anxiety
- Depression
- Intellectual Disability
- Attention Deficit Disorder
- Learning Disability
- Physical Disability
- Visual impairment
- Hearing impairment
- Other, please specify.

7) Who referred or suggested therapeutic riding at CTRA to you? Check all that apply:

- Counselor
- Social worker
- SLP (Speech Language Pathologist)
- OT (Occupational Therapist)
- PT (Physio therapist)
- Teacher
- Educational Assistant
- Friends
- Other ____________________.

8) Why does your child participate in therapeutic riding? Check all that apply:

- Likes Horses
- Physical development
- Social development
- Cognitive development
- Emotional development
- Build connections
- Friends
- Fun/ enjoyment
- Exercise
- Other ____________________.

**Face-to-Face Interview**

Following this questionnaire, the research team at the University of Victoria will be looking for participants to clarify and explore deeper into social connectedness present at CTRA.

The face-to-face interview will be held at a location and time convenient for you and your family. This interview will focus on what you think Cowichan Therapeutic Riding Association is doing to contribute to the social connectedness of your child and family. This portion of the
research will take approximately 20 to 45 minutes to complete. Researchers will take notes as well as record audio to analyze post interview.

Please check the appropriate box:
- [ ] I am interested in participating in an interview.
- [ ] I am interested in my child participating in an interview.
- [ ] I am not interested in participating in an interview.

Please only complete this part if you are interested in participating in phase two of the research.

If you are willing to participate in the interview portion of the study, please provide your name and email address (this will only be an option if they checked that they were interested in an interview).
Name _________________________________________
Email Address __________________________________

Thank you for your time and cooperation in completing this questionnaire. At the end of this study, an information report will be given to Cowichan Therapeutic Riding Association to provide feedback on the social connectedness present at their facility.
Appendix F: Word Version of Online Questionnaire for Group 3. Instructors

Connectedness to Treatment Setting Scale.
Adapted from: (Crespo et al., 2016)

This scale is designed to help us gain a better understanding of the social connectedness present during therapeutic riding sessions through Cowichan Therapeutic Riding Association. Please rate the accuracy of the statement on a six point scale.

Mark the star that reflects your feelings related to the setting in which you instruct therapeutic riding sessions.

1= Totally disagree, 2= Disagree, 3=Slightly disagree, 4=Slightly agree, 5= Agree, 6=Totally agree.

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About you:
1) How long have you been working as a therapeutic riding instructor at Cowichan Therapeutic Riding association?

Less than 6 months 6 months- 1 year over a year

2) What do you like about instructing therapeutic riding?

__________________________________________________________.

3) What do you find challenging when instructing therapeutic riding?

__________________________________________________________.
Face-to-Face Interview

Following this questionnaire, the research team at the University of Victoria will be looking for participants to clarify and explore deeper into social connectedness present at CTRA.

The face-to-face interview will be held at a location and time convenient for you. This interview will focus on what you think Cowichan Therapeutic Riding Association is doing to contribute to the social connectedness of its members. This portion of the research will take approximately 20 to 45 minutes to complete. Researchers will take notes as well as record audio to analyze post interview.

Please check the appropriate box:

☐ I am interested in participating in an interview.

☐ I am not interested in participating in an interview.

Please only complete this part if you are interested in participating in phase two of the research.

If you are willing to participate in the interview portion of the study, please provide your name and email address (this will only be an option if they checked that they were interested in an interview).

Name _________________________________________

Email Address ________________________________

Thank you for your time and cooperation in completing this questionnaire. At the end of this study, an information report will be given to Cowichan Therapeutic Riding Association to provide feedback on the social connectedness present at their facility.
Appendix G: Interview Schedule for Group 1. Guardians

Hello, ______________. Thank you for consenting to participate in this interview. I am hoping to clarify a few answers from your scale as well as dig deeper into yours and your child’s experiences with social connectedness at Cowichan Therapeutic Riding Association. If I ask a question that makes you uncomfortable in any way, please stop me. You do not have to answer any questions that make you emotional or psychologically uncomfortable. It is okay if we begin?

NOTE for researcher: This participant received (please circle) high, medium, low, levels of social connectedness received from the Connected to Treatment Setting Scale.

Thank you for completing the survey, this interview is about…
1) From your completion of the online questionnaire, I see that your ___________(son/daughter) participates in therapeutic riding.
   o Can you tell me about your child’s strengths?
   o What strengths does he/she have cognitively, socially or physically?
   o Can you tell me about some challenges that he/she faces?
   o What challenges does he/she have cognitively, socially or physically?
   o Would you mind sharing the condition in which your son/daughter has? (Autism, anxiety, ADHD, etc.)

2) I noticed that he/she has been attending for (less than 6 month, 6 months – 1 year, over 1 year) when did _______ (name) start?
   o Private session?
   o Paired session?

3) What made you bring ________(name) to therapeutic riding?
   o Prompts: Who suggested? Referral?

Social Connectedness:
   1) I noticed that you and your child experience (strong, moderate, no) social connectedness at CTRA. Can you tell me more why you or your child might feel this way?
   2) How connected do you think your child feels?
      o What makes your child feel connected to CTRA?
      o Why does your child feel connected to CTRA?
   3) Do you feel the same way as your child?
      o What makes you feel connected to CTRA?
      o Why do you feel connected to CTRA?
4) Can you take me through your child’s first day of therapeutic riding?
   o Who did you meet?
   o What happened (before, during, and after) the lesson?

5) What contributes to a more positive session at CTRA?
   o Prompts: Environment, Routine, People, Other

6) What contributes to a less positive session at CTRA?
   o Prompts: Environment, Routine, People, Other

7) What have you experienced in terms of social connectedness?
   o What impact does the instructors have?
     ▪ Can you tell me a bit about ____ (name) your instructor?
   o What impact do the other families have?
     ▪ Do you know any other families from CTRA?
     ▪ Have you had the opportunity to meet other children or families that ride at CTRA?
   o What impact do the volunteers have?
     ▪ Have you ever met one of the volunteers?
   o What impact does the environment have?
   o Are there any other elements that have an impact on social connectedness?

8) What contexts or situation have typically influenced or affected your experiences of social connectedness at CTRA?
   o What is helpful?
     i. What is helpful at (the start, during, the end) of a therapeutic riding lesson?
   o What is lacking?
     ii. What is lacking at (the start, during, the end) of a therapeutic riding lesson?

9) How do you think your families and your child’s social connectedness could be improved?
   o Before, during, and after a lesson

10) Are there any other thoughts or experiences you would like to share about CTRA?

(Name) thank you so much for taking the time to meet with me and share your experiences. I will use this information when I write a report for CTRA to share with instructors and families.
Appendix H: Interview Schedule for Group 2. Children

Hello (name of child), can I talk to you about riding horses?

- What do you like about riding horses?
  - How do you feel when you are at CTRA? Before, during, and after riding?
  - Do you look forward to riding your horse?

- When you come to ride your horse, what do you do?
  - What do you do (before, during, and after) riding your horse?
  - What is your favourite thing to do when riding horse? (playing games, trotting, brush horses, feed horses, etc)
  - What do you not like doing when riding horses?
  - Do you take care of your horse?
    - What are some of the barn chores that you do?

- Can you tell me about the horse you ride?
  - What is the name of the horse you ride?
  - How do you feel when you are riding your horse?
    - Do you feel happy, excited, or scared?

- Who do you see when your come to ride your horse?
  - Does anyone help you ride your horse?
  - Do you know anyone else that rides horses?
  - Have you met anyone at the barn?
  - Who do you want to see when you come to riding your horse (name if known)?

- Do you want to tell me anything else about riding horses?

(Name of child), thank you for talking to me about horses. I very happy we could talk about riding horses.
Appendix I: Interview Schedule for Group 3. Instructors

Hello, _______________. Thank you for consenting to participate in this interview. I am hoping to clarify a few answers from your questionnaire as well as dig deeper into your experiences with social connectedness at Cowichan Therapeutic Riding Association. If I ask a question that makes you uncomfortable in anyway, please stop me. You do not have to answer any questions that make you uncomfortable. It is okay if we begin?

From your completion of the online questionnaire, I see that you have worked at CTRA for ________ (less than 6 month, 6 months – 1 year, over 1 year) When did _______ start?

1) What do you like about being a therapeutic riding instructor?
   - Love of horse
   - Caring for children and youth
   - Seeing growth

2) I noticed that you experience (strong, moderate, no) social connectedness at CTRA. Can you tell me more why you might feel this way?
   - What makes you feel connected to CTRA?
   - Why do you feel connected to CTRA?

3) How connected do you think the children that come to CTRA feel?
   - What might make them feel connected to CTRA?

4) Can you take me through a typical session of therapeutic riding?
   - What happens (before, during, and after) the lesson?

5) What contributes to a positive session at CTRA?
   - What does it look like?
   - Environment
   - Routine
   - People

6) What contributes to a bad session at CTRA?
   - What does it look like?
   - Environment
   - Routine
   - Other

7) What have you experienced in terms of social connectedness?
   - What impact do the other instructors have?
   - What impact do the families have?
   - What impact do the volunteers have?
What impact does the environment have?
Are there any other elements that have an impact on social connectedness?

8) What contexts or situation have typically influenced or affected your experiences of social connectedness at CTRA?
   What has helped you or your child feel more connected?
   What is lacking in terms of helping you or your child feel connected?

9) How do you think yours and the families from the CTRA connectedness could be improved?
   Before, during, and after a lesson

10) Are there any other thoughts or experiences you would like to share about CTRA?

(Name) thank you so much for taking the time to meet with me and share your experiences. I will use this information when I write a report for CTRA to share with instructors and families.
Examining the Social Connectedness Present Through Therapeutic Riding at Cowichan Therapeutic Riding Association: Phase 2

Dear members of CTRA,

Thank you for your time and participation in Examining the Social Connectedness Present Through Therapeutic Riding at Cowichan Therapeutic Riding Association: Phase 1.

I am emailing you now as you expressed interest in participating in phase two of the research. This phase involves a 20-40 minute interview with the lead investigator; Shelby Bouthillier. This phase is important as we will discuss what factors affect social connectedness based on your experiences at CTRA.

Please read the attached consent form(s) and email or phone if you need clarification or more information.

After reading the consent form, please email [redacted] to set up a location and time for an interview. You will bring a signed copy of the consent form to the interview.

Thank you for your time,
Shelby Bouthillier (lead investigator)
Appendix K: Assent: Phase 2. Children

Examining the Social Connectedness Present Through Therapeutic Riding at Cowichan Therapeutic Riding Association: Phase 2. Children

Today I will be talking to Shelby Bouthillier from the University of Victoria. She is a researcher and wants to talk to me about riding horses. She will ask me what I like about riding and what I don’t like. She will record what I say so she can listen to it later.

I decided I would like to be in this study. If I decide I do not want to talk to Shelby, I can stop. I just have to tell her and she will stop asking me about riding horses. I know that if I stop talking to Shelby I can still ride horses.

My instructor will not know if I talked to Shelby. What I tell Shelby will be confidential – that means no one (except Shelby and other researchers) will be able to know my name, or know that it was me who talked to her. Instead of using my name they will use a code. After five years, all of the data and anything with my name will be destroyed.

If I have any questions, my parents or I can call Shelby or Viviene at 250-884-1457. My parents also have a letter that has more information about whom to contact if I have more questions about the study.

Name: ______________________________. Date: ____________________
Appendix L: Consent Form Interview Phase 2. Group 1. Guardians

Examsining the Social Connectedness Present Through Therapeutic Riding at Cowichan Therapeutic Riding Association: Phase 2. Guardians

You are invited to participate in a study entitled Examining the Social Connectedness Present Through Therapeutic Riding at Cowichan Therapeutic Riding Association Phase 2. Guardians that is being conducted by Ms. Shelby Bouthillier and Dr. Viviene Temple.

Shelby is a graduate student and Viviene is a faculty member in the School of Exercise Science, Physical and Health Education at the University of Victoria and you may contact them if you have further questions. Shelby can be contacted by email at shelby.bouthillier@gmail.com or telephone 250-884-1457 and Viviene can be contacted at vtemple@uvic.ca or telephone 250-721-7846.

Objective
The Cowichan Therapeutic Riding Association is interested to know whether therapeutic riding at their facility affects the social connectedness of its participants and their families. The primary aim of this study is to determine the present level of social connectedness at CTRA. The secondary aim of this project is to determine what CTRA does in order to impact the social connectedness of its participants and their families with the intent to inform CTRA and increase social connectedness among participants.

This project will examine children and their families experiences of social connectedness at CTRA. This project will determine how social connection is developed or underdeveloped at CTRA as well as how CTRA may better support their families in hopes of improving social connectedness. Subsequently, higher levels of social connectedness may results in a reduction of social isolation and loneliness among children with special needs and their families.

Participant Section
You are being asked to participate in this study because you have a child who participates in therapeutic riding sessions at Cowichan Therapeutic Riding Association.

What is involved?
If you consent to voluntarily participate in this research, your participation will involve a face-to-face interview discussing your child’s and families experiences with friendship, social connections, community supports, acceptance, and social connectedness. The interview will be held in the fall of 2018 at a location and time convenient for you and your family. The interview is estimated to take approximately 20 to 45 minutes to complete. Researchers will take notes as well as record the audio to analyze post interview.

Risks
It is possible that during the interview you may experience some emotional discomfort. There is a risk that guardians could feel emotional discomfort with some of the personal interview questions. Some families may feel disconnected to society, loneliness, and have a lack of social supports. Therefore, discussing social connection, social connectedness, relationships, interactions, and friendships, may trigger memories and/or experience that are less than pleasant to discuss. Furthermore, the research team will be prepared to suggest organizations that offer support for families from CTRA.

**Benefits**
The potential benefits of your participation in this research include the possibility of improving the social connectedness experienced during therapeutic riding at CTRA as well as giving families of CTRA a voice. The opportunity to reflect and speak to the experiences your child and family have at CTRA with horses, instructors, volunteers, and barn community could contribute to improve the development and maintenance of social connectedness in the community of Cowichan Therapeutic Riding Association. This work in important as it will help parents, instructors, therapists and organizations like CTRA understand what the present levels of social connectedness are and how to improve social connectedness in a therapy setting.

**Voluntary Participation**
Your participation in this research must be completely voluntary. If you do decide to participate, you may withdraw at any time without any consequences or any explanation. Choosing not to participate in this study will in no way effect your access, involvement or services to Cowichan Therapeutic Riding Association. Cowichan Therapeutic Riding Association will not be made aware of whether you agree to participate or not. If you do withdraw from the study your data will be erased.

If you do want to withdraw, please contact either researcher (Shelby Bouthillier or Viviene Temple) through email or phone.

**Anonymity and Confidentiality**
Your confidentiality and the confidentiality of the data will be protected by removing the identifying information from the database. Data will be stored in a password protected files at the University of Victoria. Only Shelby and Viviene will have access to the raw data. The information delivered to Cowichan Therapeutic Riding Association will not contain individuals personal information, nor will be identifiable.

**Dissemination of Results**
It is anticipated that the results of this study will be shared with others in the following ways: an information report to Cowichan Therapeutic Riding Association, a thesis, a published article as well as the findings may be presented at a conference. In 5 years the electronic files of the interview results stored at the University of Victoria will be erased.

**Contacts**
In addition to being able to contact the researcher at the above email addresses and phone numbers, you may verify the ethical approval of this study, or raise any concerns you might
have, by contacting the Human Research Ethics Office at the University of Victoria (250-472-4545 or ethics@uvic.ca).

Your signature below indicates that you understand the above conditions of participation in this study, that you have had the opportunity to have your questions answered by the researchers, and that you consent to participate in this research project.

___________________________  ___________________________  ______________
Name of Participant          Signature                      Date

A copy of this consent will be electronically emailed to you and a copy will stay with the researcher.
Appendix M: Consent Form Interview Phase 2. Group 2. Children

Exercising the Social Connectedness Present Through Therapeutic Riding at Cowichan Therapeutic Riding Association: Phase 2. Children

You are invited to participate in a study entitled Examining the Social Connectedness Present Through Therapeutic Riding at Cowichan Therapeutic Riding Association Phase 2. Children that is being conducted by Ms. Shelby Bouthiller and Dr. Viviene Temple.

Shelby is a graduate student and Viviene is a faculty member in the School of Exercise Science, Physical and Health Education at the University of Victoria and you may contact them if you have further questions. Shelby can be contacted by email at shelby.bouthillier@gmail.com or telephone 250-884-1457 and Viviene can be contacted at vtemple@uvic.ca or telephone 250-721-7846.

Objective
The Cowichan Therapeutic Riding Association is interested to know whether therapeutic riding at their facility affects the social connectedness of its participants and their families. The primary aim of this study is to determine the present level of social connectedness at CTRA. The secondary aim of this project is to determine what CTRA does in order to impact the social connectedness of its participants and their families with the intent to inform CTRA and increase social connectedness among participants.

This project will examine children and their families experiences of social connectedness at CTRA. This project will determine how social connection is developed or underdeveloped at CTRA as well as how CTRA may better support their families in hopes of improving social connectedness. Subsequently, higher levels of social connectedness may results in a reduction of social isolation and loneliness among children with special needs and their families.

Participant Section
You are being asked to allow your child to participate in this study because you are the guardian of a child who is participating in therapeutic riding at CTRA.

What is involved?
If you consent to allow your child to voluntarily participate in this research, your child’s participation will involve a face-to-face interview discussing your child’s experiences including what they like and dislike during therapeutic riding sessions. The interview will be held in the fall of 2018 at a location and time convenient for you and your family. The interview is estimated to take approximately 5 to 10 minutes to complete. Researchers will take notes as well as record the audio to analyze post interview.

Risks
Participation in this study may cause some inconvenience to you, specifically that we would need to set up a time with you and your child to meet and have the interview. There are no known or anticipated risks to your child by participating in this research.
Benefits
The potential benefits of your participation in this research include the possibility of improving the social connectedness experienced during therapeutic riding at CTRA as well as giving your child a voice. This work is important as it will help parents, instructors, therapists and organizations like CTRA understand what the present levels of social connectedness are and how to improve social connectedness in a therapy setting.

Voluntary Participation
Your child’s participation in this research must be completely voluntary. If you decide that your child may participate, your child may withdraw at any time without any consequences or any explanation. Choosing not to participate in this study will in no way affect your child’s access, involvement or services to Cowichan Therapeutic Riding Association. Cowichan Therapeutic Riding Association will not be made aware of whether you or your child agree to participate or not. If you do withdraw from the study your data will be erased.

If you do want to withdraw, please contact either researcher (Shelby Bouthillier or Viviene Temple) through email or phone.

Anonymity and Confidentiality
Your child’s confidentiality and the confidentiality of the data will be protected by removing the identifying information from the database. Data will be stored in a password protected files at the University of Victoria. Only Shelby and Viviene will have access to the raw data. The information delivered to Cowichan Therapeutic Riding Association will not contain your child’s personal information, nor will be identifiable.

Dissemination of Results
It is anticipated that the results of this study will be shared with others in the following ways: an information report to Cowichan Therapeutic Riding Association, a thesis, a published article as well as the findings may be presented at a conference. In 5 years the electronic files of the interview results, stored at the University of Victoria, will be erased.

Contacts
In addition to being able to contact the researcher at the above email addresses and phone numbers, you may verify the ethical approval of this study, or raise any concerns you might have, by contacting the Human Research Ethics Office at the University of Victoria (250-472-4545 or ethics@uvic.ca).

Your signature below indicates that you understand the above conditions of participation in this study, that you have had the opportunity to have your questions answered by the researchers, and that you consent to allow your child to participate in this research project.

___________________________  ___________________________  _________________
Name of Guardian  Signature  Date

___________________________  ___________________________  _________________
Child’s Name  Child’s Age  Date

A copy of this consent will be electronically emailed to you and a copy will stay with the researcher.
Appendix N: Consent Form Interview Phase 2. Group 3. Instructors

Examining the Social Connectedness Present Through Therapeutic Riding at Cowichan Therapeutic Riding Association: Phase 2. Instructors

You are invited to participate in a study entitled Examining the Social Connectedness Present Through Therapeutic Riding at Cowichan Therapeutic Riding Association: Phase 2. Instructors that is being conducted by Ms. Shelby Bouthillier and Dr. Viviene Temple.

Shelby is a graduate student and Viviene is a faculty member in the School of Exercise Science, Physical and Health Education at the University of Victoria and you may contact them if you have further questions. Shelby can be contacted by email at shelby.bouthillier@gmail.com or telephone 250-884-1457 and Viviene can be contacted at vtemple@uvic.ca or telephone 250-721-7846.

Objective
The Cowichan Therapeutic Riding Association is interested to know whether therapeutic riding at their facility affects the social connectedness of its participants and their families. The primary aim of this study is to determine the present level of social connectedness at CTRA. The secondary aim of this project is to determine what CTRA does in order to impact the social connectedness of its participants and their families with the intent to inform CTRA and increase social connectedness among participants.

This project will assist in determining if therapeutic riding contributes to social connectedness and what CTRA does to promote and maintain social connectedness for its participants. Subsequently, higher levels of social connectedness may results in a reduction of social isolation and loneliness among children with special needs and their families.

Participant Section
You are being asked to participate in this study because you instruct therapeutic riding sessions at Cowichan Therapeutic Riding Association.

What is involved?
If you consent to voluntarily participate in this research, your participation will involve a face-to-face interview discussing your experiences of social connections, acceptance, friendships and support for families at CTRA. The interview will be held in the fall of 2018 at a location and time convenient for you. The interview is estimated to take approximately 20-45 minutes to complete. Researchers will take notes as well as record the audio to analyze post interview.

Risks
There are no known or anticipated risks to you by participating in this research.
Benefits
The potential benefits of your participation in this research include the possibility of improving the social connectedness provided during therapeutic riding at CTRA. The opportunity to reflect on contributions toward social connectedness as well as the interactions and effects of those interaction with your students and their families. The results may lead to improve the contributions, promotion, maintenance, and development of social connectedness in the community of Cowichan Therapeutic Riding Association. This work in important as it will help parents, instructors, therapists and organizations like CTRA understand what the present levels of social connectedness are and how to improve social connectedness in a therapy setting.

Voluntary Participation
Your participation in this research must be completely voluntary. If you do decide to participate, you may withdraw at any time without any consequences or any explanation. Choosing not to participate in this study will in no way effect your employment at Cowichan Therapeutic Riding Association. Cowichan Therapeutic Riding Association will not be made aware of whether you agree to participate or not. If you do withdraw from the study your data will be erased.

If you do want to withdraw, please contact either researcher (Shelby Bouthillier or Viviene Temple) through email or phone.

Anonymity and Confidentiality
Your confidentiality and the confidentiality of the data will be protected by removing the identifying information from the database. Data will be stored in a password protected files at the University of Victoria. Only Shelby and Viviene will have access to the raw data. The information session to Cowichan Therapeutic Riding Association will not contain individuals personal information, nor will be identifiable.

Dissemination of the Results
It is anticipated that the results of this study will be shared with others in the following ways: an information report to Cowichan Therapeutic Riding Association, a thesis, a published article and the findings may be presented at a conference. In 5 years the electronic files of the results, stored at the University of Victoria, will be erased.

Contacts
In addition to being able to contact the researcher at the above email addresses and phone numbers, you may verify the ethical approval of this study, or raise any concerns you might have, by contacting the Human Research Ethics Office at the University of Victoria (250-472-4545 or ethics@uvic.ca).

___________________________  ____________________  ________________
Name of Participant          Signature                      Date

A copy of this consent will be electronically emailed to you and a copy will stay with the researcher.
Appendix O: Ethics

Modification of an Approved Protocol

<table>
<thead>
<tr>
<th>PRINCIPAL INVESTIGATOR:</th>
<th>Shelby Boothillier</th>
</tr>
</thead>
<tbody>
<tr>
<td>UVic STATUS:</td>
<td>Master's Student</td>
</tr>
<tr>
<td>UVic DEPARTMENT:</td>
<td>EPHE</td>
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<tr>
<td>SUPERVISOR:</td>
<td>Dr. Vilene Temple</td>
</tr>
<tr>
<td>ETHICS PROTOCOL NUMBER:</td>
<td>18-276</td>
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| ORIGINAL APPROVAL DATE: | 22-Aug-18 |
| MODIFIED ON:            | 16-Dec-18  |
| APPROVAL EXPIRY DATE:   | 25-Aug-19  |

PROJECT TITLE: A Case Study of Social Connectedness at Cowichan Therapeutic Riding Association

RESEARCH TEAM MEMBER: Co-Investigator/Supervisor: Vilene Temple, Supervisory Committee: Dr. John Meindrum

PROC ASID PROJECT FINDING: None

CONDITIONS OF APPROVAL

This Certificate of Approval is valid for the above term provided there is no change in the protocol.

Modifications
To make any changes to the approved research procedures in your study, you must submit a "Request for Modification" form. You must receive ethics approval before proceeding with your modified protocol.

Renewals
Your ethics approval must be current for the period during which you are recruiting participants or collecting data. To renew your protocol, please submit a "Request for Renewal" form before the expiry date on your certificate. You will be sent an email reminder prompting you to renew your protocol about 90 days before its expiry date.

Project Closures
When you have completed all data collection activities and will have no further contact with participants, please notify the Human Research Ethics Board by submitting a "Notice of Project Completion" form.

Certification

This certificate indicates that the UVic Human Research Ethics Board has examined this research protocol and concluded that, in all respects, the proposed research meets the appropriate standards of ethics as outlined by the University of Victoria Research Regulations Involving Human Participants.

Dr. Richard Sherlock
Associate Vice-President Research Operations

Certificate Issued On: 18-Dec-18
Appendix P: Support

Supports available for participants before, during, and after interviews

**Cowichan Valley Youth Services Society**
554 Trunk Rd. Duncan, BC
Phone: 250-748-0232
Monday – Friday 9am – 4:30pm
Offers:
Free Counselling for youth aged 13-19
Free Counselling for parents of youth aged 13-19
Art Group – Wednesdays 3:30-4:45 for youth 13-19 years of age.
Free Parenting Group – call to be added

**Canadian Mental Health Association – Cowichan Valley Branch**
201-5878 York Road. Duncan, BC. V9L 3S4

**Phone:** 250-597-1372  
**Fax:** 250-746-0844

Offers:
Affordable Counselling to support people with relationship issues, grief, loss, trauma, depression, anxiety, body images and more.
Family Capacity Program – contact Chloe McKinley at (250) 746-5521
Counselling for children & Youth and their Families – contact Dave Ehle at (250) 746-5521

**Autism BC**
[https://www.autismbc.ca/](https://www.autismbc.ca/)

**Ministry of Children and Youth Services**
[https://www2.gov.bc.ca/gov/content/family-social-supports/youth-and-family-services/special-needs-supports-for-families](https://www2.gov.bc.ca/gov/content/family-social-supports/youth-and-family-services/special-needs-supports-for-families)
Appendix Q: Comparison of scores in relation to the CTSS

<table>
<thead>
<tr>
<th>Setting</th>
<th>Cowichan Therapeutic Riding Association</th>
<th>Crespo et al., Pediatric Cancer</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Participants</strong></td>
<td>Instructors</td>
<td>Guardians</td>
</tr>
<tr>
<td><strong>M/SD</strong></td>
<td>Mean</td>
<td>SD</td>
</tr>
<tr>
<td>1. I am comfortable</td>
<td>5.67</td>
<td>0.47</td>
</tr>
<tr>
<td>2. I feel safe</td>
<td>5.67</td>
<td>0.47</td>
</tr>
<tr>
<td>3. There are people I feel close to</td>
<td>6.00</td>
<td>0.00</td>
</tr>
<tr>
<td>4. I am at ease</td>
<td>5.00</td>
<td>0.82</td>
</tr>
<tr>
<td>5. I feel understood</td>
<td>5.33</td>
<td>0.47</td>
</tr>
<tr>
<td>6. I feel protected</td>
<td>5.67</td>
<td>0.47</td>
</tr>
<tr>
<td>7. I have a connection to this setting</td>
<td>6.00</td>
<td>0.00</td>
</tr>
<tr>
<td>8. I feel connected to the people I meet</td>
<td>5.67</td>
<td>0.47</td>
</tr>
<tr>
<td>9. I feel I am accepted</td>
<td>5.67</td>
<td>0.47</td>
</tr>
<tr>
<td>10. I belong to this group of people</td>
<td>6.00</td>
<td>0.00</td>
</tr>
</tbody>
</table>