

# The Role of Equine Therapy in an Educational Setting for Visually Impaired Children

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## ABSTRACT

Early intervention programs offer important services for families of young children with visual impairments and disabilities. Equine-assisted therapies are interventions that use the unique qualities of a horse to assist persons with visual impairments and disabilities to improve their language, social, gross motor, and self-help skills. This study is designed to explore parent's perceptions concerning the effectiveness of this form of early intervention services in relation to their child communication, concentration and general behavior. The participants were parents of children with visual impairments (and in some cases multiple disabilities) who have never taken part in this form of intervention before. Parents were asked to take part in pre and post interviews that lasted approximately fifteen minutes. Data collection and analyses are ongoing. Thematic analysis will be used to analysis the data to identify patterns in the data. The results obtained will provide a greater understanding into the parent's perceptions of the intervention and its potential for children with visual impairments.

## 1. INTRODUCTION

Animals and humans have existed in therapeutic relationships with each other for more than 12,000 years [1]. However, involvement of animals as part of a therapeutic process remained absent from the professional literature up until the late 1960s [2]. Levinson [3] was the first to relate professional concepts in this field and contended that a connection to animals, especially during childhood and old age, can positively affect the human personality [2]. For many years, animals have been used for the therapeutic benefit of humans in a variety of settings. For example, domestic animals are used to help medically ill children in hospitals and the elderly in nursing homes [4].

According to Engel-Yeger and Hamed-Daher [5] visual impairments in children can negatively affect their development and participation in the educational and social setting. Yet literature about participation of children with visual impairment is still remains insufficient. Research however, does show that children with visual impairments have encounter a number of difficulties in areas of development. These areas include

concentration, communication, social skills, general behavior and development of concepts [2].

Animal-assisted therapy involves interaction between patients and trained animals, along with its human owner or handler, with the aim of facilitating patient's progress toward therapeutic goals [6]. It aims to improve human, physical, social, emotional and/or cognitive functioning [1]. Although, not directed toward specific therapeutic goals, animal-assisted therapy provides opportunities for motivational, educational, recreational, and/or therapeutic benefits to enhance quality of life [7]. According to the American Dictionary of Psychology [8] 'animal assisted therapy can be defined as 'the therapeutic use of pets to enhance individuals psychical, social emotional or cognitive functioning. Animal-assisted therapy may be used, for example, to help people receive and give affection especially in developing communication and social skills'.

Equine therapy is a subtype of animal-assisted activities, and is a form of therapy assisted by the use of a horse and or its movements [1]. Equine-therapy is said to provide experiences in order to promote emotional growth. It consists of three main approaches. Equine – facilitated psychotherapy which promotes personal exploration of feelings and behaviors by establishing a therapeutic relationship between the horse and patient, and particularly benefits people with emotional and mental health conditions [2]. Therapeutic riding is an equine- assisted activity that is geared towards learning riding and horsemanship while adapting to the riders special needs, while hippotherapy is an equine-assisted therapy that is related to the physical aspects, vocational rehabilitation and speech therapy [2]. The therapeutic alliance in equine- therapy is composed of the client, the therapist and the horse. Corresponding to the therapeutic triangle of Bowen [9], equine therapy presents a single triangle structured in the treatment that is not external and therefore provides an opportunity to address the apparent duality within the therapeutic setting. The presence of the horses creates a completion and enhancement of traditional therapy that comprises of the client and therapist only [2]. According to Schultz, Remick-Barlow and Robbins [10] horses have several characteristics that are similar to humans in their behavior responses and social structures, thus providing a mirror for the client to gain insight in a unique and non-threatening environment. Equine therapy is designed to address self-esteem and

personal confidence, communication and interpersonal effectiveness, trust, boundaries and limit-setting [11].

Equine-assisted therapy has been theorized to be an effective form of therapy and treatment for children [12]. Research has been conducted in the investigation of equine therapy for specific groups of children, adolescence and adults who suffer from a range of different disabilities. Some of these disabilities include cerebral palsy, behavioral disorders, body image, intra-family violence, autism, visual impairment and emotional disorders [1]. However, little research has been conducted into the role of equine therapy for children with visual impairment in an educational setting.

Lentini and Knox [4] conducted qualitative research examining equine facilitated therapy with children and adolescences. Their study found that, equine therapy has a significant effect on children with a range of social and emotional disorders ranging from poor social interaction with peers to severe eating disorders. Their study showed that patients/participants with anorexia benefited hugely from equine therapy by reporting to have more self-confidence, trust perspective and better communication skills. It was also found that participants who had problems relating to physical contact and closeness reported that the closeness and bond between them and the horses benefited them in their ability to relate and connect with other people. Similarly, in a cross sectional study [10] found in their investigation of equine assisted psychotherapy, a mental health promotion/intervention modality for children who have experienced intra-family violence that equine –assisted therapy appeared to be effective for children who had been diagnosed with adjustment disorder, mood disorder and attention deficit disorder. Also within their study and similar to that of Lentini and Knox [4] their results showed that children who had experienced domestic/ intra –family violence shows improved ability to emotionally connected with people at the end of the study. Likewise, Barker & Dawson [6] conducted a pre and post study on the effects of animal –assisted therapy on anxiety rating of hospitalised psychiatric patients. Their study demonstrated that there was a significant reduction in anxiety levels for hospitalised psychiatric patients who took part in animal –assisted therapy when compared to psychiatric patients who had taken part in conventional therapy.

Similarly, Bachi [13] study the influence of equine –therapy on self -image, self-control and trust in adolescents. Like the findings in Lentini and Knox [4] and Schultz [10] studies, there was a higher level of improved self –control and trust in the adolescents at the end of the study. Vidrine, Owen –Smith, Faulkner [14] revealed results similar to those presented with Bachi [13]. Vidrine et al [14] reported and increase feeling of trust, confidence, acceptance and warmth among children who participated in group equine facilitated therapy. This is similar to current findings by McDonald and Cappo [15] who also noted an increase in internal locus of control. The results also showed an increased level of self-image. Self image is a relatively common topic of study in the study of therapeutic riding. Other studies have reported positive change in self –image among

participants who took part in a study around therapeutic riding [16]. Contrary to these findings, Bowers and McDonald [17] did not find a change in self-worth among their participants when they conducted similar research. However, few studies have investigated the improvement of self-worth in participants from the perspective of the therapist, an aspect that perhaps needs further examination.

Another study by Bass, Duchowny, Llabre [18] investigated the effect of therapeutic horseback riding on social functioning in children with autism. The results in their study suggest that therapeutic horseback riding may be an efficacious therapeutic option for children with autism spectrum disorder. More specifically they found, that compared to wait-list participants in the control group, autistic children in the experimental group, improved in critical areas such as sensory integration and directed attention. Researchers found that children engaged in significantly greater use of language and social interaction during the animal occupational therapy relative to the standard occupational therapy. The study showed that participants had a decrease in inattention and distractibility. One of the classic indicators of autism in children is the fixation with object-orientated, rigid routines. The research also indicates that an autistic participant shows greater ability to break away from their sedentary routine in favor of active activities. Likewise Martin and Farnum [12] examined animal –assisted therapy for children with perspective development disorder. Their findings showed that animal – assisted therapy was beneficial. The children within the study showed signs of increased energy and displayed a better and more playful mood. Their study also showed that the children taking part in the study showed increased signs of attention when the researcher interacted with them, as oppose to those who were in the control group.

Snider, Korner-Bitensky, Kammann, Warner and Saleh, [17] conducted research in horseback riding as a therapy for children with cerebral palsy. Their study reported that there were significant positive results including increased muscle symmetry of the trunk and hip abductors and adductors. It also suggests that therapeutic horseback riding maybe beneficial for body function and posture as it seemed to facilitate postural reactions of the trunk and equilibrium reactions leading to improved posture. Likewise, Benda, McGibbon, and Grant [20] found that in their study evaluating the effect of hippotherapy on muscle activity in children with spastic cerebral palsy. The results showed that, significant improvement in symmetry of muscle activity was noted in those muscle groups displaying the highest asymmetry prior to hippotherapy.

Trotter, Chandler, Goodwin-Bond and Casey [21] studied another area of equine therapy. Their study demonstrates the efficacy of equine-assisted counselling compared it to class room -based counselling. Participants were identified as being at high risk for academic and /or social failure. Their research shows that Participants in the (EAC) treatment groups demonstrated a statistically significant decrease in negative behaviours and a statistically significant increase in positive behaviours. The study also showed an improvement in

other aspects of the participant's life. The results suggest that there was a considerable improvement in hyperactivity, aggression, anxiety and depression for the children who took part in the study. Likewise, Klontz [22] explored equine-assisted experimental therapy. Participants completed psychological measures prior to treatment, immediately following treatment, and 6 months after treatment. Their research reported that reductions in psychological distress. Enchantments in psychological wellbeing were significant immediately following treatment and appeared to be stable at the six month check-up. Participants reported fewer psychological symptoms and reductions in the intensity of their psychological distress. They reported being less burdened by regret, guilt and resentments, less focused on fears related to the future and more self-supported. Their research showed that equine therapy has a significant positive effect on patients within the study.

Evidence suggests that equine as a therapy has the ability to enhance emotional/psychological feelings of trust, comfort and relaxation within the participant [4] but it also suggested that it plays a vital role in the physical rehabilitation of individuals within certain physical ailments [19]. The number of children with physical and intellectual disabilities in Ireland, availing of equine therapy has significantly increased in the past number of years. [23] Currently in Ireland there is four main centers that specialised in this form therapy, these include, Tory hill, Child Vision, equine-assisted growth and learning association (EAGALA) and Heals.

On completion of the literature review, it is evident that there is limited research in the area of equine therapy and its role for children with visual impairments. It is essential to gain a better understanding in to the potential role of the therapy in an educational setting for children with visual impairments.

### 1.1 The Present Study

In order to gain a better understanding in to this area the present study conducted qualitative research using semi-structured interviews to investigate visually impaired children's concentration, general behavior and communication ability. The semi structure interviews were carried out before and after the children engaged in the therapy. The interviews aim to give a clear understanding of each child's ability in terms of the specific variables of interest from the parent's point of view. They also aim to highlight if there are any changes or improvements in the children's ability in school or at home on completion of the therapy.

## 2. METHOD

### 2.1 Research Design

This ongoing study is being conducted as part of the principal researcher's Master's Thesis.

A qualitative design was used in this research. Semi-structured interviews were conducted. The interviews

occurred over the phone and lasted approximately fifteen minutes. During this time the participants (the parents) were asked questions around their child's ability in school in terms of their concentration, communication and overall behavior. Semi-structured was chosen as it was the most effective way to collect data on the parent's thoughts on their children's ability in an educational setting. The interviews were based around a guide of questions which were formulated to cover the main areas of interest to the researcher but still left the researcher free to vary the order and phrasing of the questions and to follow up on the topics raised by the therapists. The interviews were reordered with the participant's permission for later transcription. There was a note taker present for each interview that occurred. The note taker reordered notes based on the topics and information discussed in the interviews. The dataset for these pre therapy interviews presented in this paper are part of a larger evaluation of the effectiveness of equine therapy for children and young people with visual impairments.

### 1.2 Participants

The participants were parent of visually impaired children who are attending National school in Ireland. Both parents and children had no previous experience in equine therapy. There was no gender or age restriction for participants to take part in the study. Participation in the research was open to any parent who had a visually impaired child attending the national school and has never engaged in equine therapy before. All participants have been recruited by specific details cannot be reported until all interviews have taken place.

Participants were recruited through the national school. Contact information was obtained and potential participants were then emailed and asked to join/participate within the current research. Each participant was provided with a detailed information sheet. It included information on why they had been chosen to take part and their rights once they had taken part. It also included information on what the research involved, the length of time needed to take part, and the possible benefits of the research.

### 2.3 Procedure

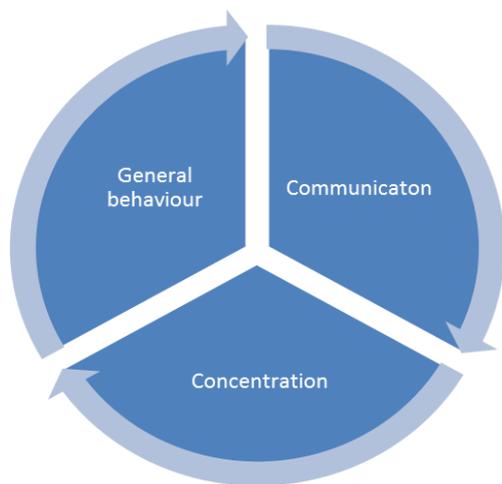
Parents of the children were invited to discuss their children's ability in school and also there thoughts around equine therapy in the educational setting. There were asked to take part in a pre and post semi-structured interview that could occur either face to face or over the phone.

The researcher contacted the National Education Centre for visually impaired children in Ireland. Contact information for the parents of children attending the school and who were considered eligible for the therapy was obtained. Participants were then emailed and asked to participate within the current research and each participant was provided with a detailed information sheet. It included information on why they had been chosen for this study and their rights. It also included

information on what the research involved the length of time need to take part and the possible benefits of the research. On agreeing to take part a consent form was issued to each participant. This form confirms that the participants had read and understood the information sheet they were given for the study had the opportunity to ask questions if they did not understand anything within the information sheet. It also explained that their participation was voluntary and that they were free to withdraw at any time, with their data returned providing that it is identifiable. It was also explained that the data may be used again in other studies or publications but that their identity will remain anonymous.

### 3. RESULTS

The main attempt of the current study was obtain a greater and more comprehensive understanding into the role of quine therapy for children with visual impairments in an educational setting. It did so by conducting pre and post interviews with the parents which allowed the research to investigate and analysis if there was an improvement in the child's communication, concentration and general behaviour after engaging in the therapy. Analysis of the data is still on going at the present time but the researcher hope to have preliminary results within the coming weeks. However the main topics there were discussed are presented below.



**Figure 1:** Over View of the Topics Discussed

#### 3.1 Data Analysis

The recordings of the interviews will be transcribed. Thematic analysis [24] will be conducted in order to identify some of the themes and patterns emerging within the data collected. 'Thematic analysis is used for identifying, analysing and reporting patterns, or themes, within the data', [25] and has been described as a flexible

and useful research tool which can potentially provide a rich, detailed, and yet complex account of [25]. The thematic analysing process, as suggested by Braun and Clarke [25], will begin by continually reading the interview transcripts in order to get familiar with their content's. The analysis process will be conducted by hand; the data will be examined paragraph by paragraph and interesting themes will giving a code. A coding frame will be designed by identifying the main topics and themes that emerged within the data. When these topics will be identified and specific themes that emerged from the data will be then placed under the appropriate topics. The topics will then assigned a specific coding label. The data will then be re-examined, and as each topic and corresponding theme emerges it was giving a unique coding label.

### 4. CONCLUSIONS

Research in equine therapy is still in its infancy [27] but great progress has been made in the area of equine therapy in recent years. There is significant evidence to suggest that there a numerous benefits of equine therapy for certain populations or groups within society. It demonstrates that as a form of therapy it is extremely versatile and can be applied as a therapeutic approach in many areas, many of which were reviewed in this study. The present study conducted qualitative research using semi-structured interviews to investigate the role of equine therapy in an educational setting for visually impaired children. The interviews aimed to investigate the impact that equine therapy may have on children communication, concentration and general behavior from the perspective of their parents. It hoped to explore the potential role equine therapy in schools for visually impaired children. This paper aimed to present a comprehensive review of the literature on animal and equine therapy. It endeavored to analyse and evaluate the current research within the specified area, paying particular attention to research highlighting the aspects that could be beneficial to visually impaired children in an educational setting. As research is limited into the role of equine therapy for children with visual impairments it critically compared and contrasted current research within the area of equine therapy. It looked at the areas where equine therapy was seen to be beneficial; it explored what groups or individuals the research suggested to be most beneficial to. It aimed to explore how equine therapy may be useful in an educational setting for visually impaired children.

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