

MORE THAN JUST HORSEING AROUND: THE THERAPEUTIC EFFECTS OF HORSE-RIDING AND CARRIAGE-RIDING ON INDIVIDUALS WITH COMPLEX NEEDS

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ABSTRACT

Horse-riding and carriage-riding are examples of equine-assisted activities, where the therapeutic benefits of physical activity can be combined with animal-assisted therapy. This investigation used ethnography to identify the therapeutic effects of horse-riding and carriage-riding for individuals with complex needs. Four participants aged between 28 and 63 years, were recruited from a self-contained village that supports adults with complex needs. The horse-riding and carriage-riding sessions took place as normal, whilst being observed by the researcher who worked as a volunteer. Following each session, interviews were carried out with parents, support workers, coaches and where appropriate, the participants. The results were displayed in a narrative format. Some of the therapeutic benefits shown by the participants were improvements in confidence, independence, building relationships, empathy, social-emotional ability, relaxation and overcoming anxiety. This investigation shows evidence that horse-riding and carriage-riding, as forms of equine-assisted activities, can have therapeutic effects on individuals with complex needs. However, the environment needs to be supportive and encouraging, with specific rehabilitative goals set for each individual.

Keywords: equine-assisted, confidence, learning-disability, independence, relaxation

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INTRODUCTION

Policymakers, practitioners and researchers have highlighted the range of physical, psychological and social benefits which can be associated with physical activity for people with a disability (Johnson, 2009). For example, Darcy and Dowse (2013) found that individuals with intellectual disabilities gain socialisation skills, a sense of competency and build confidence from participating in physical activity. In spite of this, there is a tendency for research to focus on the perceived barriers to participation, which include: a lack of adequate transport, awareness, problematic access, consideration by others, timing of sessions and expense (French & Hainsworth, 2001). For policymakers, practitioners and researchers to encourage more individuals with complex needs to engage in physical activity there is a need to appreciate the facilitators and potential barriers. McPhail, Schippers, Marshall, Waite and Kuipers (2014) found that the five barriers for those with complex needs, specifically musculoskeletal disorders, were: 'health conditions, time restrictions, poor physical

condition, emotional, social and psychological barriers, and access to physical activities'. Whilst the five facilitators were: 'improved health state, social, emotional and behavioural supports, access to an exercise environment, opportunities for physical activities and time availability'. The aim of the present study is to identify, through the use of ethnography, the therapeutic benefits that individuals with complex needs gain from engaging in a Riding for the Disabled Association (RDA) programme of horse-riding and carriage-riding.

A number of studies have outlined a range of general benefits associated with interacting with, and the care of, animals. For example, Brodie and Biley (1999) found that the mere interaction with an animal can improve relaxation, social interaction, morale and harmony. Velde, Cipriani and Fisher (2005) expanded this research to focus on the care of an animal (grooming, feeding and exercising), which provided evidence that animals aid individuals to develop social skills, gain responsibility and a sense of belonging. When the interaction with an animal is used for the structured purpose of therapy to improve the health and well-being of an individual this is known as Animal-Assisted Therapy (AAT) (Palley, O'Rourke & Niemi, 2010). A meta-analysis on the effect of AAT by Nimer and Lundal (2007) explored 49 of the previous research studies. It showed strong supporting evidence that animals have a positive effect on psychological well-being, including an improvement in autism spectrum symptoms. The meta-analysis identified the need for more rigorous research that could provide evidence to sceptical funders that AAT is a useful alternative therapy. Breitenbach et al. (2009) investigated AAT, in relation to improvements in communication between children with complex needs and their care-givers, using dolphins. Participants in the experimental group were supplemented with a vocational environment and family counselling. The experimental group reported improvements in social-emotional ability, self-confidence and verbal communication; which lasted for 6 months after the therapy.

Horse-riding and carriage-riding provide a unique opportunity where an individual can experience the therapeutic benefits of physical activity combined with AAT. Using qualitative and quantitative methods Ewing et al. (2007) examined the therapeutic effects of Equine-Facilitated Learning (EFL) in America. Four children with complex needs, aged between 10 and 13 years old, took part in the 9-week programme. The quantitative measures were the self-perception profile for children, empathy questionnaire, locus of control scale, children's depression inventory and children's loneliness questionnaire. None of the results from these questionnaires were found to be significant. Ewing et al. (2007) suggested the unexpected results were due to the participants low IQ scores and complex needs preventing them from understanding the questions. It could be criticised that questionnaires of 60 minutes in length were inappropriate and exhaustive for children with complex needs. Conversely, the qualitative results, demonstrated through observations and interviews, showed there were improvements in the children's social skills, self-esteem, concentration, trust, empathy and personal hygiene. Consequently, there are therapeutic effects of Equine-Assisted Activities (EAA) for individuals with complex needs, but the data collection should use an appropriate and accessible method. Inclusive research highlights that individuals with complex needs should be included in research through an advisory role (Grant & Ramcharan, 2007). This is not appropriate for all individuals with complex needs as those with profoundly complex needs struggle to make even their basic needs known. In these cases, greater value should be awarded to the perspectives of

those involved in their lives and participant observation (Bigby, Frawley & Ramcharan, 2014).

Favoli and Milton (2010) highlighted some of the therapeutic benefits experienced by adults with complex needs from horse-riding in the south of England. This study interviewed five participants from a local RDA group about their experiences. It is important to take into consideration that the adults included in this study all had horse-riding experience prior to developing their complex needs. Through interpretative phenomenological analysis four themes for therapeutic improvement were identified: physical benefits, psychosocial benefits, social interaction and motivation. The present study builds on this research through employing ethnographic methods.

Ethnography is a field investigation where individuals are studied in their natural environment. Their genuine social interactions and behaviours are depicted by a researcher who is participating in this environment (Brewer, 2000). This will enable those who are unable to consent according to the Mental Capacity Act (2005) to engage and be included in research (Bigby et al., 2014).

The aim of the present study is to identify, through the use of ethnography, the therapeutic benefits that individuals with complex needs gain from engaging in an RDA programme of horse-riding and carriage-riding. The participants with complex needs continued with their programme as normal, whilst the researcher worked as a volunteer assisting with their training and support. This research outcome is to provide coaches, support workers and therapists with an understanding of the benefits that are gained from engaging in EAA, such as horse-riding and carriage-riding.

METHOD

Participants

The research participants were recruited using purposive sampling, from a self-contained village that supports 130 adult residents with a variety of complex needs. For the purpose of this research the village will be known as Heath-lake. On a regular basis 60 of the residents engage in the horse-related activities that are offered within the village. The four participants were recruited, in agreement with parents, support workers and coaches, from those who engage in horse-riding and carriage-riding. Initially, five participants were chosen based upon previous research (Favali & Milton, 2010; Ewing et al., 2007). It was noted that one participant withdrew from the research prior to it starting. To protect their identity all participants for this research have been given pseudonyms. An insight into each of the four participants is now offered.

Norman is a 39-year-old male with learning disabilities, who has been horse-riding at Heath-lake for 11 years. When Norman moved into the village he was given a job at an external stables because of his high standard of horse-riding. After two years this job became unsuitable and he was transferred to working at the internal stables. Through the horse-riding at Heath-lake, Norman has competed in the Special Olympics dressage and last year at a national horse show. He now works a minimum of three days and has at least one horse-riding session per week.

Gerald is a 28-year-old male with autism who began horse-riding as a method of physiotherapy, whilst attending the school at Heath-lake. At 13, Gerald rode a horse to his bar mitzvah, and afterwards as a present, his parents bought him a horse to celebrate. Until the age of 18 Gerald rode once a week. Upon leaving school and moving to day services Gerald began to ride more regularly. Around the age of 18, he also started carriage-riding. Gerald now attends up to three sessions per week of either horse-riding or carriage-riding.

Ronald is a 35-year-old male who has Williams syndrome, tonic clonic seizures and is learning disabled. Williams syndrome is a rare genetic disorder caused by the deletion of approximately 21 genes on one copy of chromosome 7, but not all individuals experience the same symptoms (Udwin, Davies, Howlin, & Stinton, 2007). Some of the symptoms include difficulties with fine motor coordination, reduced concentration due to over activity, excellent verbal communication, forming strong emotional attachment, eager to please and a desire to build social relationships. Individuals with Williams syndrome are happy and affectionate people. Ronald began horse-riding when he attended a school leavers unit aged 15, remaining there until he was 18. The horse-riding was once per month, before moving to Heath-lake where he has now been horse-riding every week for two years. Ronald attends one or two horse-riding sessions per week.

Mary is a 63-year-old female with learning disabilities who has lived at Heath-lake for over 55 years. She has been involved with stable management and horse-related activities at Heath-lake for the last 18 years. Mary had typically attended gardening lessons, but one day opted instead to attend equine husbandry sessions. It was this experience that sparked her interest in horses and carriage-riding. She is a very caring lady who likes to look after 'her' horse, and has been carriage-riding for about 12 years. Mary owns her own hat, boots, jodhpurs, reins and gloves. She currently attends a minimum of one session per week.

Equine-assisted activities (EAA) programme

The EAA programme at Heath-lake consists of adults with complex needs attending a half hour horse-riding or carriage-riding session at least once a week for 43 weeks of the year. The sessions take place in either the sand arena or around the roads within the village and contain between one and six adults. Sessions are based on ability and experience. Those wishing to participate are assessed beforehand for their ability, suitability and whether their needs can be met during the activity. To guarantee safety, the RDA assesses all the horses prior to their use in sessions. The horses used for the sessions are matched to the participant based on the participant's height, weight and ability. All those taking part must be fitted with a hat provided by Heath-lake or wear their own safety checked hat, before mounting the horse or carriage. All sessions are taught by qualified RDA instructors and are carried out under the RDA's health and safety guidelines.

Procedure

In order to obtain a deeper understanding of the therapeutic effects of riding on disabled adults, ethnography was used from the perspective of a volunteering assistant. Becoming accustomed to the RDA culture gave the researcher an in-depth look into the behaviours, personalities, traits and emotions of the adults with complex needs.

Observations were recorded using a semi-structured grid, which had six themes: enjoyment, listening, communication, confidence, empathy and improvements. The semi-structured nature of the grid allowed the researcher to efficiently record observations immediately after each session. The observations were carried out for four weeks, except for one participant who only attended three weeks during the observation period.

Where possible, interviews with the adults who have complex needs were carried out using a semi-structured pictorial format. The aim of the interviews was to gain an insight into what the participants felt were the benefits of them riding. The pictorial interviews were based on Goldbart and Caton (2010) who suggested that pictures, photos and symbols are an accessible technique that can be used to facilitate understanding and expression. Depending on the preference of the participant, this interview either took place in the office at the stables or in their home.

Semi-structured interviews took place with coaches and support workers. At least one interview took place with the parent or support worker and one interview with the coach. Interviews with parents, support and coaching staff were used to find out about the participants' history, horse or carriage-riding experience, and what they felt the participant was gaining from the sessions. At the choice of the participant and with what was appropriate, the interviews took place in the office at the stables, in the home of the adult with complex needs within the village or over the telephone. All interviews with coaching staff took place immediately after the session had been completed. A dictaphone was used to record the interviews.

Before the investigation could begin, approval was obtained from the university's ethics committee. Once ethical approval was given a 34-week familiarisation period was undertaken. This allowed the researcher to gain an understanding of the horse-riding and carriage-riding programme of the RDA group at Heath-lake, along with building a trusting relationship with staff and residents. More importantly, it allowed the adults with complex needs to become habituated to the presence of the researcher. During the familiarisation period a pilot study took place. After consent had been gained from the participant, the observation grid and the pictorial interview were piloted. The unstructured interview was piloted on a coach and support worker. The pilot study tested the pictorial interview to ensure understanding by the adults with complex needs, and tested the workings of the unstructured interview with staff. The observation grid was piloted and provided an opportunity to gauge the information gathered. Following the pilot, the observation grid was adjusted slightly by adding an 'any other information' section. Following the 34-week familiarisation period, including pilot study, data collection was carried out over 9 weeks.

The researcher provided a participant information sheet, and consent was obtained from participants. Consent was obtained taking into consideration the Mental Capacity Act (2005). Individuals who were deemed able to provide informed consent for participation themselves signed the consent form. Individuals who were deemed unable to consent for themselves under the Mental Capacity Act (2005) had a member of their support staff consent on their behalf in accordance with the regulations of Heath-lake.

When one-to-one interviews with a participant or support worker were conducted, a safety procedure was put in place to ensure that the researcher came to no harm. The safety procedure involved agreeing a scheduled time with the coaching staff for the researcher to return to the stables at Heath-lake. As a precaution, the coaches were informed to alert the on-site security team should the time of return not be met by the researcher. As a further precaution whilst carrying out the investigation, for the researcher's and participant's safety the researcher was not left alone with any participant.

Data analysis

The data collected from the participant observations, pictorial grid and interviews was transcribed. To ensure reliability all transcriptions were checked at least twice. This process of transcription and checking provided the researcher with the opportunity to become increasingly familiar with the data. After the transcription, coding took place and a list of themes from the data was collated (Rich, 2012). These themes were identified based upon the researcher's interpretation of the benefits of horse-riding and carriage-riding. The narrative was constructed through storytelling using the themes to identify 'what' and 'how', whilst providing direction to the narrative (Ellis, 2004). Direct quotes from the interviews and pictorial grid were included within the narratives to remain as true as possible to the individual's lived experience (Smith & Sparkes, 2008).

The personal narratives enabled the researcher to display the extensive benefits that had been identified using ethnography, without losing the personal aspect (Smith & Sparkes, 2008). To understand and gauge the benefits of horse-riding and carriage-riding it is important to consider the history of the individual, the changes that it had made to their lives and how psychosocially they have progressed. The personal narratives give the reader an indication of the relationship between the participant and the coach, support worker, other adults with complex needs and the environment. The narratives were subjected to member checking and small alterations were made based on the feedback.

Participant 1 – Norman

Norman is a very capable and balanced horse-rider, who has a very calm and empathetic relationship with the horses. He was aided, shortly after moving to Heath-lake, by his support workers, to work at an external stables. Unfortunately this did not provide the right support for Norman and he became ostracised. "He didn't have the support he has with us... they [staff] didn't include him. His self-esteem went right down" (coach). Heath-lake has provided Norman with the opportunity to build up his confidence and provide a sense of belonging. "We include everyone here... The clients here are valued as people" (coach).

Norman now has the support he needs to progress and learn; whilst being given the freedom to be independent and organise himself. "When he comes up for his breakfast he's already up in his jods [jodhpurs] and his boots; and he's got all his riding gear in his bag... He gets himself ready, he takes himself off, he comes back, he tells us... I'm going to the stables today, I'm working or I'm riding... It's one of the few things that he's never really late for" (support worker).

Norman's horse-riding is a group session with five other adults who are of a similar level of ability and age. "Everyone [in the group] gets to know each other... interact... and know each other's moods" (coach). During the period of observation, Norman, the coaches, staff and volunteers were encouraging the group to work towards achieving the RDA achievement badges. This was followed by an end of term dressage test and picnic to celebrate their achievements. In the past, Norman has been a member of the Special Olympics team competing in national level dressage and he rode at a national horse show last year. "He was part of the Special Olympics equestrian team, so when that comes around he gets quite excited about making sure he's got his uniform right and it's all clean" (support worker). Horse-riding has given Norman the opportunity to work towards goals, gain a sense of achievement and be proud of his talent.

Horse-riding utilises Norman's caring personality, by providing an opportunity for him to gain a sense of responsibility for his horse-riding kit, other less able individuals and the horses. "He is very helpful with...some of the less able residents that live in others homes" (support worker). When Norman was asked how does horse-riding and carriage-riding make you feel? His response was "Enjoyed helping different clients and help[ing] with carriage-riding." "If that [horse-riding] was taken away from him, or he couldn't do it anymore..., I think we would notice a difference in him" (support worker). For Norman, in order for him to continue his progression he needs to be in an encouraging and supportive environment. "He's become a lot more confident, a lot more outgoing, [and] a lot more confident of doing things on his own" (support worker).

Participant 2 – Gerald

Gerald moved to Heath-lake when he began attending school at the age of 10. He has the typical symptoms of an autistic young man, with a fun-loving personality and a passion for horses. Gerald started horse-riding regularly at an external stables during his attendance at school. At the age of 13, Gerald celebrated his bar mitzvah. As an element of the celebrations and due to his passion for horses, his bar mitzvah included Gerald riding a horse through crowds of onlookers up to the village synagogue. "All the people who were coming to his bar mitzvah were in two lines, and he rode down the middle of them, where he got off, and went to the synagogue" (coach). As a present to celebrate Gerald's bar mitzvah, his parents bought Gerald a horse, which was called Garfield. In an agreement with Gerald's parents, it was arranged that his horse would be cared for by the staff at the Heath-lake stables. This provided Gerald with the opportunity to develop a close relationship with his horse.

Gerald is now 28 years of age and has been using adult day services for about 10 years, this includes horse-riding at the stables within Heath-lake. Gerald continued to horse-ride as an adult not only due to his passion, but it was suggested that horse-riding could be used as physical therapy to improve his posture. Gerald has a routine, where he horse-rides or carriage-rides up to three times per week. Staff encourage Gerald where possible, to be involved with the care of his horse. There is a mutual belief by his coach and support worker that he has a preference for carriage-riding over horse-riding; "He likes [to] carriage-ride more than horse-riding" (support worker). His support worker went on to say that his love for horse-riding and carriage-riding may be related to his passion for going out on bus rides. The motion of the bus rides has a soothing effect on Gerald; this is similar to the relaxing effect of horse-riding and carriage-riding. Conversely, during the researchers observations, when horse-riding Gerald appeared to create a bond and show empathy towards the horse. This is

something he struggles to do with people. “He’s more connected... when he’s [horse-] riding” (coach). Gerald never demonstrated any malicious behaviour towards the horse; for example, hitting or kicking the horse. Similarly, even though Garfield was known for expressing his feelings through biting, he would never cause harm to any of the individuals with complex needs. It was as if there was an unspoken mutual agreement to care for each other.

Horse-riding provides the opportunity for Gerald to develop his organisational skills and independence. When the support workers say horse-riding, “He’ll go and find his hat. He’ll pick his hat up, and he’s got his boots on” (coach). Gerald not only gains the benefit of physical therapy when horse-riding, but he is able to develop many skills through carriage-riding and horse-riding, with the added bonus of enjoyment.

Participant 3 – Ronald

Ronald is a happy young man who loves horses. “He was born with that smile on his face” (mother). At first, when Ronald began horse-riding with his parents, he wouldn’t wear the protective hat. This slowly began to change. “When he went to [the] school [leavers unit]... it made a difference. I suppose because everyone else was putting the hat on... he went along with it” (mother).

Ronald has lived at Heath-lake for over two years. After moving to the village, Ronald had one half an hour horse-riding session every week and he always wished to stay longer.

At the time of the interview, his coach had been working with him for a month. At first, “He was very unbalanced and... didn’t concentrate” (coach). Despite him “Not having a great range of movement in his legs” (coach) and suffering from epilepsy he was determined to go horse-riding. Right from the beginning of the sessions at Heath-lake, Ronald had a natural bond with the horses he rode. “He gels... and moves well with the horse... [he] will talk to the horse” (coach). During the sessions that the researcher observed, the coach was working on Ronald’s communication skills and empowering him to make decisions. With the help of his parents, coach and support staff, the horse-riding has, “Added another dimension which we... would not otherwise have known about” (mother). Ronald has gained the confidence to be assertive with the horse, and learnt that he has the ability to control the horse. “He obviously felt confident because... the people were there to support him” (mother). He has the freedom when horse-riding to go where he chooses. “He knew how to say walk on and whoa, and all of that. The horse would do it when he said it, which gives you [as the horse rider] confidence” (mother). Although Ronald was never scared or fazed by riding, Ronald did initially find concentrating for the whole half an hour to be a challenge.

Over the four weeks of observations, the researcher saw his concentration improve so he knew the names of the staff and horses, and could concentrate for much more of the session. Ronald, whilst horse-riding, would practice his numerical skills by counting cars and horses. Ronald gained an awareness of other horse-related activities that were going on in the outside environment. An example of this was his awareness that a famous horse race was taking place and he wished to take part. Unfortunately, the coaching and support staff did have to inform him that this was not possible.

After the horse-riding sessions, Ronald further listened to staff and had learnt some aspects of stable management, for example, with support he was able to tidy away his stirrups. He is conscious of the sensitivity of a horse so in order to say thank you for his session, he would gently and empathetically pat the horse. For Ronald, horse-riding has become a part of his regular routine. It has provided an opportunity to spark a passion, excitement, independence and pride in himself that otherwise may not have been seen. "He always comes back from the stables in a fantastic mood" (support worker).

The EAAs for Ronald provided an opportunity where he could progress and learn new skills, but was fun and enjoyable. Ronald had been working with his coach to improve his concentration and decision-making skills. He has learnt how to say where he wants to go during his horse ride. Ronald with support and practice was able to improve his concentration during his horse-riding sessions. Through this process of learning and improvement, Ronald has become more confident and empowered.

Participant 4 – Mary

Mary is an independent woman, who becomes anxious around times of change and uncertainty. It was by accident that Mary began engaging in horse-related activities. She had been attending gardening lessons at Heath-lake for some time, but decided she would prefer the activities at the stables. Mary has now been involved with the stables for over 18 years. When Mary first began participating in activities at the stables, she would only engage in activities that were related to one particular horse. Mary had an exceptional fondness for this horse, Peggy and "She was regarding... [Peggy as] her own horse" (coach). "[Mary] would do lots of little jobs for the horse; like getting buckets of water, grooming the horse, also taking the horse [walking in hand] around the village, under staff supervision" (coach). This gave Mary an opportunity to take ownership and responsibility for the care and welfare of an animal. Mary was able to offer love and care to an animal that would unconditionally love her back.

About 14 years ago, Peggy unfortunately died of old age. Around this time another horse arrived at the stables, his name was Garfield. Mary believed that "You have a succession of horses...death isn't a part of it, because the horse reincarnates as...another horse" (coach). This belief protects Mary from any grief or loss, as when one horse dies Mary transfers her love, care and affection for that horse to another one, "It is still the same horse, in Mary's eyes" (coach). A couple of years after gaining Garfield, the stables began offering carriage-rides within the village. At first Mary declined a carriage-ride, possibly through fear and uncertainty. "She put it off, put it off and put it off, until one day we persuaded her to get on board, and then we went for a ride round the village. And she loved it! Absolutely loved it!" (coach). Since that day, Mary has continued to carriage-ride at least once a week. Mary has built up her confidence, reduced her anxiety levels and improved her abilities. As part of the activity, "We encourage them to get their own hat, gloves, riding boots, and in Mary's case as well her own reins... it gives her that sort of sense of...this is a bit special... I'm not getting a hat off the peg, I've got my own. And also part of the fun is going to, a local tack shop with a member of staff from the chalet [their home], and then getting fitted for the hat is all part of the...ceremony... of doing the driving [carriage-riding]" (coach).

The EAAs provide Mary with a place to relax and forget about her anxieties. “From our point of view, she’s anxious about just about everything, except the stables” (support worker). During the observations, Mary would always arrive at the stables on time and with the relevant kit. Mary’s carriage-ride was never that long, nevertheless she thoroughly enjoyed it. She would be giggling and laughing hysterically throughout. It appeared that Mary was always anxious and worrying about most aspects of her life. When Mary sat on the carriage for her short ride, her anxiety seemed to disappear. Her support worker explained: “Whatever goes on in Mary’s life, the stables are there... the [carriage-] riding’s there, [and] the horses are there... That seems to be the anchor”. The majority of Mary’s other activities cause her anxiety. For example: “If it’s a theatre trip she’ll be excitable about it and yes she wants to go, and then she’ll be finding any excuse not to. I’m too ill, [or] it’s too hot” (support worker).

For Mary, carriage-riding provides an opportunity for her to learn new skills, such as learning the correct technique for how to drive the carriage. It provides an opportunity for Mary to gain independence, self-pride and gain responsibility. Mary finds the stables a place of security and relaxation, where her anxieties can be forgotten. Mary was described as being anxious about all the other activities in her life, except carriage-riding. Mary will laugh hysterically when on the carriage as if her anxieties have disappeared. Moreover, carriage-riding for Mary presents an opportunity for her to be independent and organised.

DISCUSSION

This investigation used qualitative research to explore the therapeutic effects that individuals with complex needs could gain from engaging in horse-riding and carriage-riding. A range of benefits were highlighted including: improvements in self-confidence, independence, more outgoing responses, organisational skills, verbal communication, empathy, trust, concentration, social-emotional ability, relaxing effect and reduced anxiety.

Scully et al. (1998) found that low to moderate levels of aerobic exercise reduced levels of anxiety and increased psychological well-being. For Mary the EAAs used during this investigation reduced her levels of anxiety. Mary was often very anxious, which increased considerably during times of change and uncertainty. Nevertheless, when Mary was engaging in carriage-riding the anxiety appeared forgotten and she would laugh hysterically.

Johnson (2009) concluded that physical activity has a positive effect on social interaction and motivation. Similarly, Norman’s participation in horse-riding, supported confidence, independence and more outgoing responses. Norman found that the external stables were not appropriate for him and he became ostracised. This contradicts Johnson (2009), as in order to create a therapeutic environment it must be appropriate for the individual, where they can enjoy engaging in the activity and remain socially involved. In support of Breitenbach et al. (2009), Norman showed improvements in his self-confidence and verbal communication. Norman was included and supported by the staff to progress and develop his horse-riding ability. Norman

demonstrated improvement to his independence and empowerment (Burke & Sabiston, 2010).

A meta-analysis demonstrated that AAA do have a therapeutic effect on psychological well-being, including an improvement in autism spectrum symptoms (Nimer & Lundal, 2007). In this study Gerald showed a reduction in his autism spectrum symptoms, which was attributed to the EAA. For example, during the horse-riding and carriage-riding, Gerald created a bond with the horse which is something he struggled to do with humans. The activities had a soothing and relaxing effect on Gerald, where he would display a bright smile.

With the use of EAA, it provided Ronald with the opportunity to progress his empathy towards animals. Ronald would be encouraged to stroke the horse and he would do so with great care, compassion and affection. During his horse-riding sessions, the coaches would promote the growth of his social-emotional ability by expressing preferences for the route used during the horse-ride. Ronald would verbally and physically communicate with the horse advancing his self-confidence (Breitenbach et al., 2009).

The narratives provide a richness and personal aspect that otherwise would have been lost. As an example, Mary created a unique ownership and bond with one particular horse, which in return gave her unconditional love. This quest for unconditional love and stability may be one possible reason why Mary finds the activity calming. As a consequence, the narrative is beneficial in producing a personal insight into how participation occurred, the participant's psychosocial development, progression and history. In order for therapeutic benefits to be created during EAA the environment must be supportive and encouraging, where practical goals are set for each individual (the Professional Association of Therapeutic Horsemanship International, 2013).

It was important for the participants, coaches, support workers and parents to be open and honest with the researcher to gain the most accurate and detailed information possible; from which the narratives could be created (Burke & Sabiston, 2010). It was vital to build rapport with the participants to avoid any false or unnatural behaviour from the participants during the observations. Ethnography was also advantageous, for the researcher to understand the participants' behaviour prior to starting horse-riding or carriage-riding. This helped to highlight the progression that had been made and the therapeutic effects of the progress. Ethnography provided the researcher the opportunity to gain an operational awareness and understanding of the RDA programme that could be a contributing factor to the therapeutic effects developed by individuals with complex needs.

CONCLUSION

This study has shown that EAAs can have therapeutic benefits for individuals with complex needs. The four participants showed a range of therapeutic benefits including: improvements in self-confidence, independence, more outgoing responses, organisational skills, verbal communication, empathy, trust, concentration, social-emotional ability, relaxing effect and reduced anxiety. In contrast to Johnson (2009) it was found that the environment needs to be appropriate for the individual, as the

external stables that Norman attended was not a therapeutic environment for him. The therapeutic effect may have been shown during this investigation due to it running over a four week period, compared with the one week used by Breitenbach et al. (2009). This investigation used participants from one location (Heath-lake), which controlled for location as an influencing factor and allowed the easy comparison of participants. Using ethnography for this investigation allowed for the advocacy of individuals with complex needs and for them to be collaborated with throughout the research process (Bigby et al., 2014). Furthermore, it gave an insight into the social interaction of individuals with complex needs, the coach and the horse (Brewer, 2000). The personal narratives with direct quotes captured a true story of the benefits that each individual gained from horse-riding or carriage-riding (Smith & Sparkes, 2008). This investigation provides useful evidence for practitioners who work with individuals with complex needs who are looking for an alternative method of therapy. It may be an alternative form of therapy for those who may find conventional therapy a challenge.

There is a need for future research to contain more participants and use multiple locations. This will aid the strength of the findings and reduce the ethnocentrism of this investigation, as all the participants were from one self-contained village. There needs to be further research into the therapeutic benefits to examine in more depth how the therapeutic benefits are created. Future questions for research include; are the therapeutic benefits created as a result of the physical activity? Are the therapeutic benefits developed due to the relationship with the horses?

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FIRST AUTHOR BIOGRAPHY

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