

# The Horse Boy method: an alternative movement method for children with autism and other neurocognitive conditions

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## Abstract

**Aims** 'Move the Mind' is a non-profit organisation that offers an alternative treatment for children with autism and other neurocognitive conditions. They employ the 'Horse Boy' method, in which horses are used therapeutically to treat sensory dysfunctions and improve confidence and communication. The purpose of this research was to observe outcomes of this treatment and openly discuss the outcomes with family members and teachers, exploring the option of it being a viable intervention for autistic individuals.

**Methods** Movement theory literature was reviewed and group and one-on-one Move the Mind sessions were observed. During a period of 1 month, short-term effects during the session, as well as lasting benefits once sessions had been completed, were noted.

**Results** The results were overwhelmingly positive with improvements in confidence levels and social functioning being noted. The sessions were child-led, accessible and hugely enjoyable for everyone involved.

**Conclusions** Some autistic children experience substantial and enduring benefits from the Horse Boy method in terms of their ability to socialise, their confidence, integration with education and family relationships. Clinicians could suggest this method to support traditional therapies.

## Introduction

Autism spectrum disorder (ASD) is a lifelong developmental condition<sup>1</sup> affecting the way individuals interact socially. Individuals with ASD may have difficulties communicating, understanding emotions and dealing with unfamiliar situations. They can also experience sensory overstimulation and exhibit repetitive thoughts or behaviours.<sup>2</sup> ASD is present in 1 in 160 children<sup>3</sup> and is considered to be present at birth; however, the cause is not fully understood. It is thought to be multifactorial with a genetic contribution.<sup>1</sup> There is no known association with adverse childhood experiences.<sup>4</sup> Current evidence-based interventions include occupational therapy and social skills training,<sup>5</sup> aiming to increase engagement and communication through play-based strategies.<sup>6</sup>

A potential biological explanation for ASD is disruption of the hypothalamic–pituitary–adrenal (HPA) axis, the system in the body that releases cortisol, a steroid hormone, in response to stress. Chronic stress conditions and prolonged exposure to cortisol can have a harmful effect on a child's brain development. It affects the efficiency of the amygdala and hippocampus, structures in the brain responsible for regulating anxiety and learning emotion.<sup>7</sup> People

with ASD are thought to have increased levels of cortisol, resulting from overstimulation by sensory inputs, and a dysregulated HPA response.<sup>8</sup> They end up in a continuous cycle of distress and an inability to learn.<sup>8</sup>

'Move the Mind' uses horses as an alternative therapy for children with ASD. This therapy, known as the 'Horse Boy' method, was developed by a father, Rupert Isaacson, who saw the beneficial effect horse riding had on his autistic son. He put this down to the rocking movements of the horse helping with his son's symptoms. The rationale proposed is that the therapy breaks the cortisol stress cycle by reducing negative sensory triggers and inducing endogenous oxytocin, a hormone thought to combat the stress response by reducing the activity of the HPA axis.<sup>9</sup> This is believed to induce wellbeing, increase social interaction and decrease anxiety.<sup>9</sup>

The purpose of this research was to assess the outcomes of the Horse Boy method for individuals with ASD and openly discuss the outcomes with the children and their families and teachers.

## Methods

Movement theory literature was reviewed and both group and one-on-one sessions were observed to see the theory in action. During an observation period of 1 month, short-term effects were observed and discussions were had to identify changes noticed during the sessions, as well as lasting benefits once sessions had been completed. Participants gave consent for their data to be used.

## Results

It was demonstrated that a child who is disruptive and aggressive in the classroom may be calm and inquisitive at the farm on which the Move the Mind sessions were held. One child had gone through primary school as a selective mute and, eventually, had to abandon formal education. No other treatment had worked and, although it had been a long journey, at the farm, this individual was now riding, making friends, and helping the younger children. This particular child was now attempting secondary school, something their mother never thought would be possible.

Accompanying teachers bringing children from local schools to the farm spoke of how, by trying new things and socialising in an environment tailored to individual needs and free of adverse sensory triggers, the children were able to develop the ability to express themselves. Parents were finally able to see their child open up socially and make relationships with other children and animals. For one family, witnessing their child's laughter was their first ever social interaction they had seen them make. There was discussion of parents' frustration when their child's sessions had come to an end. However, even after children could no longer attend sessions due

to class rotation, they approached daily activities with new-found confidence.

One parent said, "[My Daughter] has never had a hobby for herself due to lack of confidence and social skills but now she does! When she's at the farm her face completely changes, and she's relaxed and happy."

Another said, "Having children with complex needs can be very isolating when finding places to take them where they are able to be fully themselves and accepted. My son loves the animals and watching his confidence grow whilst riding has been amazing for him and, as a parent to witness, very special!"



**Move the Mind sessions using the Horse Boy method.** The collage shows horses being used therapeutically to help children with ASD. These photos are taken from [www.movethemind.net/](http://www.movethemind.net/), with permission.

## Discussion

The purpose of this experience was to get an insight into the overall impression of the Horse Boy method. Observation and informal discussion revealed that Move the Mind offers multiple benefits and has worked for some children with ASD as a therapy when other methods have failed to improve core symptoms. For the children observed, it improved their confidence and ability to form relationships, enabling some parents to interact with their children for the first time. It is an accessible, natural environment, free of troubling stimulation that has allowed children to open up and explore.

Explaining why the Horse Boy method can have such profound and lasting benefits for children with a complex, resistant and little-understood condition is difficult. We know that children with ASD have been found to have a disruption in their HPA axis.<sup>7</sup> There is evidence that oxytocin can combat this disruption<sup>9</sup> by increasing the number of alpha-2 adrenoreceptors in the amygdala. Alpha-2 adrenoreceptors inhibit the action of noradrenergic neurons that, in turn, influence the HPA axis. The more noradrenaline that is released by noradrenergic neurones, the more corticotrophin-releasing hormone is released with a corresponding rise in cortisol. If an oxytocin-mediated increase in alpha-2 adrenoreceptors can reduce the amount of noradrenaline, it can limit the activity of the HPA axis<sup>9</sup> and, therefore, decrease the stress response. With regards to the evidence behind the use of horses for ASD therapy, oxytocin release is thought to result from rocking movements, such as a mother rocking her baby<sup>8</sup> or sexual activity.<sup>9</sup> Given this, although there is no definitive proof, it seems plausible that oxytocin release might be stimulated by a similar rocking movement such as that created by riding a horse. Given that oxytocin release is also thought to result from stimulation of the skin and increased social interaction,<sup>9</sup> it follows that interacting with horses might stimulate oxytocin release. A structured study is needed to test the oxytocin hypothesis in the context of the Horse Boy method. This would require taking blood, urine or, possibly, saliva samples<sup>10</sup> from children before and after sessions. However, a trial this invasive in children who struggle socially would be ethically questionable.

A strength of this study was that observations were made first-hand and by talking to many individuals; there was a good sense of the impact in most areas of the children's lives, both immediate and long-term. In addition, the data collection was conducted over a 1-month period, offering greater exposure to the effects, rather than a day's snapshot. A weakness of the study is that, when asking for opinions, people are likely to only tell of the success stories and, although it was apparent that every child was engaging and enjoying being there, if the method had not worked for them, they would not have returned or been able to report their experience.

In conclusion, observations would suggest that some autistic children experience substantial and enduring benefits from the Horse Boy method in terms of their ability to socialise, build confidence, integrate with education and have family relationships. If future studies support these benefits, this intervention could become more widely accepted and influence future practice, encouraging clinicians to suggest it to support traditional therapies. Limited availability might benefit from a raised awareness of the work of Move the Mind, which could increase funding from charities or local communities and help create a larger workforce through volunteers and training programmes. Funding would also help families that were unable to pay for the sessions themselves.

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