

# RESEARCH AT DREAM CATCHERS

## THERAPEUTIC RIDING AND AUTISM

### Why it matters...

The angst that Alex feels every time he changes his routine by getting on a bus and coming to Dream Catchers is hard for some people to understand. But everyone can see that once Alex is riding his horse, "Nobie", that angst is replaced with smiles. The routine is still different, but Nobie is a new safe place for Alex.



Getting a hug from Robby was not expected because as part of his diagnosis of autism, Robby only gives hugs to his family and his teachers at school. But after riding for six weeks, he did hug – not only his instructor, but his volunteers and his horse, "Indy" too! Surprises happen often at Dream Catchers and bring unique joy each time.

Sam frequently avoids visual input by averting his eyes – a characteristic common in children with autism spectrum disorders. Imagine the surprise when, during the eighth lesson, Sam looked directly at his riding instructor when she called his name. He held her eye contact and then immediately followed her prompt to ask his horse, "Nobie" to "walk on".

### The Beginning

The research team at Dream Catchers was started by board member and retired psychiatrist, Wade Johnson, MD and executive director, Nancy Paschall in the spring of 2007. Wade heard a parent's testimonial about how her daughter with autism spoke her first words at age 11 on the back of a horse. He then discovered that Dream Catchers had received at least five other letters citing similar occurrences.

In January of 2009, Dr. Sandy Ward joined the board of directors and learned about Wade and Nancy's vision for research. Later that year, Dream Catchers partnered with faculty in the School of Education at The College of William and Mary to develop a research agenda to provide evidence that supports the effectiveness of therapeutic riding.

The funding for this project has been generously provided by the Williamsburg-James City County Public Schools, Williamsburg Community Health Foundation, Ford's Colony Ladies Golf Club, Dream Catchers and anonymous donors. We are seeking additional funding to continue documenting the statistically significant improvements in children with autism.

### The Research

Autism Spectrum Disorders affect 1 out of 150 children. Most children diagnosed with autism have trouble communicating, display poorly developed social skills, exhibit repetitive behaviors, and avoid eye contact.

Dream Catchers is one of the first centers to begin to look beyond the physical benefits of therapeutic riding and delve into the social and emotional improvements that have been recognized for years by parents, instructors, and volunteers alike.

The "voice" for children with autism is found in the saddles of our horses.



# The Results

## The Pilot Study

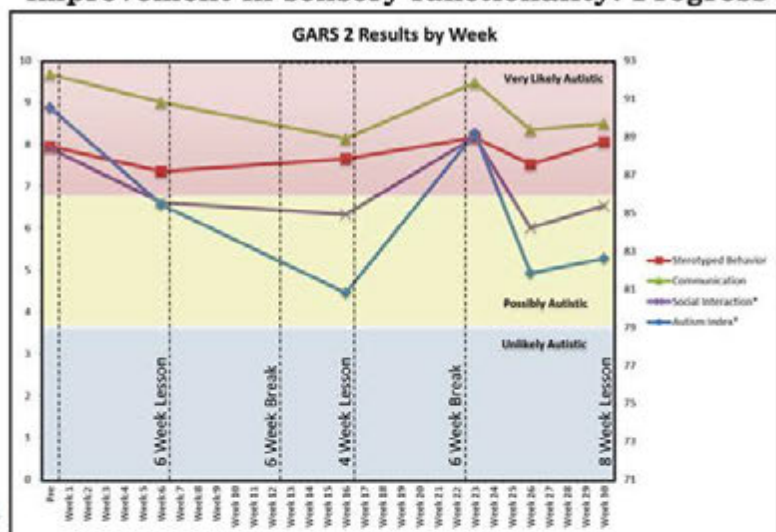
- Qualitative observation of four students with autism during their regular lessons at Dream Catchers.
- Audio recordings of each lesson & field notes were analyzed for rider/instructor behavior.
- Interviews with riding instructors and parents about their goals and procured achievement of goals for the riding lessons.
- Data indicated that the horse/rider matching process contributes to the success of the lesson in that riders with autism responded better to horses with more movement.
- Data indicated that instructor knowledge and experience with the behaviors and characteristics of autism positively impacted the success of the lesson.
- Data also indicated the potential for incorporating verbal and/or non-verbal communication & social interaction as a beneficial focus for future research.

## The Expanded Study

- 21 children with autism from four self-contained autism classrooms at Matoaka Elementary School identified through the established "school group" program at Dream Catchers.
- 30 week study initiated with three sessions of weekly lessons separated by two 6 week breaks.
- Mean scores on the Gilliam Autism Rating Scale – 2nd Edition (Autism Index & Social Interaction Subscale) fell from the "Very Likely Autistic" range to the "Possibly Autistic" range. Behavioral manifestations of these changes included: increased eye contact, less fear, more confidence, less repetitive behaviors, more appropriate social responses, and less discomfort with physical contact.
- Mean scores on four aspects of the Sensory Profile School Companion suggested significant improvement in sensory functionality. Progress illustrated by a willingness to touch horses and objects, fewer repetitive behaviors, more appropriate social responses, less discomfort with physical contact, active engagement in activities, relaxed and happy affect, unprompted attempts at communication, unexpected displays of affection, and increased independence in completing assigned tasks.

## The Goals

- Increased Attention & Focus
- Increased self-confidence
- Increased communication both verbal & non-verbal
- Increased comfort level
- Consistently communicates verbal & signed commands
- Decreased sensory behaviors



objects, fewer repetitive behaviors, more appropriate social responses, less discomfort with physical contact, active engagement in activities, relaxed and happy affect, unprompted attempts at communication, unexpected displays of affection, and increased independence in completing assigned tasks.

- The findings of this study not only support the effectiveness of therapeutic riding for children with autism, but also indicates that the positive impact generalized to the school classroom. The data also suggests that consistent therapeutic riding lessons are important to sustain benefits. The improvement in behaviors was not maintained during a treatment withdrawal period, but gains were recouped quickly in a follow-up therapeutic riding session.

## The Research Team

- Wade Johnson, MD, retired psychiatrist
- Sandy Ward, PhD, Professor of Education, College of William and Mary
- Tom Ward, PhD, Associate Dean for Academic Programs, College of William and Mary
- Kelly Whalon, PhD, Associate Professor of Education, College of William and Mary
- Kim Wendell, BS in Special Education, School Group Coordinator & PATH Intl. Instructor
- Kat Rusnak, BS in Psychology and Kinesiology & Health Sciences, Research Coordinator
- Nancy Paschall, B.S. in Psychology, Dream Catchers Executive Director
- Nancy Hawfield, MBA, MA, CCC-SLP, speech pathologist & PATH Intl. Therapist
- Ed Hawfield, MBA, President of the Dream Catchers Board of Directors

## DREAM CATCHERS

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