Dr. Achar received the 2015 Academy of Clinician Scholars Faculty Development Award for the project proposal entitled “Positive Effects of Team Sports on Neurodevelopment, Social Skills, Communication Skills, Quality of Life, Coordination, Agility, and Speed for Children with ASD” (Pilot Study).

The objective of Dr. Achar’s study is to determine if team sports participation with extra practice sessions improves the developmental outcomes of children with ASD as well as typically developing children.

Research about the effects of team sports on children with autism has never been done before. Only 10% of children with ASD participate in team sports. We hypothesize that our studies utilizing various sports including basketball, hockey, and soccer will demonstrate improvements in social skills, flexibility, social responsiveness, and peer interaction in all children. We hope these findings will encourage more parents of typically developing children and children with ASD to enroll them in team-based sports.

The plan is to integrate children with ASD into a recreational sports league with typically developing children. The first part of this project will focus on a youth basketball team of 3rd and 4th graders in the Master Sports League in Carmel Valley. The next part of the project is a hockey study with the San Diego Gulls, and then a soccer study to follow shortly. We hope to create inclusive teams made up of typically developing children and children diagnosed with Autism Spectrum Disorder to provide an environment that promotes integrated social interactions.

There will be pre-study and post-study data collected to determine effects on social functioning and play skills, functional and spontaneous communication skills, speed and agility, adaptive skills, and coordination for study participants. Parents of children with ASD will also be requested to provide input on their expectations and experiences with the team sport before and after the study.
**Why team sports?**

It is expected that children will improve in multiple areas, including gross motor and agility outcomes, improved peer awareness, and social reciprocity. Working with other children through a team-based sport will help children improve conversation skills, increase ability to follow directions, and fulfill a specific team role set by rules. Children will learn to overcome obstacles, build sportsmanship, learn to play with pressure of competition, and deal with loss.

**Tests**

The following tests will be administered before, & after the sport season to measure progress:

- ALPHA-FIT Battery Test for Children and Adolescents
  - Cardiorespiratory fitness - 20 Meter Shuttle Run
  - Musculoskeletal fitness - Standing Long Jump
- BESS - Balance Error System
  - Assessing baseline balancing abilities
- Agility T-Test
  - Testing for speed, footwork and agility

Several tests will also be administered to all children before & after the season to monitor development in communication, speaking and social skills.

**Why integrate Autistic children?**

Children with ASD are typically bound by social impairments, communication difficulties, and stereotypical behaviors. Also, they often have limited coordination, agility and speed.

**To help children with ASD:**

- We will test for improvements in ability to initiate and sustain conversation, and fulfill a specific role on a team
- We anticipate that the benefits will be long-lasting and should translate to improvements in other social situations and in school

**To help typically developing children:**

- By participating in a team sport with children with some communication difficulties, typically developing children will improve their leadership, language, and social skills

**To help all children:**

- An inclusive team sport environment with excellent and supportive coaches should lead to improvements in quality of life for all children.
- Speed, agility and coordination should improve in all children