Effectiveness of Physical Therapy Intervention in Children with Autism Spectrum Disorder Compared to Chiropractic Intervention

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Physical Therapy Treatment of ASD
- Role play Intervention
- Physical fitness addressing the increased incidence of obesity in children with ASD
- Walking, swimming, biking, horseback riding, and weight training used in therapy

Pros of Physical Therapy
- Role-play methods linked to increased social skills and interactions
- Motor behaviors become meaningful to social interactions
- Increases involvement in physical activities with peers while enhancing their social interaction
- Diverse plan of care to lead to improved behavior

Cons of Physical Therapy
- Limited evidence on exercise interventions specific to limiting typical behaviors in patients with ASD
- Does not directly address the stereotypical behaviors of those with ASD

Chiropractor Treatment of ASD
- Most popular and highly utilized CAM approach for children with ASD
- Consists of Spinal Manipulative Therapy (SMT)
- Used for treatment of ASD under claims that SMT can correct or improve sensorimotor integration by improving local neurological function

Pros of Chiropractic
- Reduces spinal dysfunction and subluxation
- Three studies showed improvements in the Autism Treatment Evaluation Checklist (ATEC)- online parent questionnaire

Cons of Chiropractic
- Viery little eddience supporting its use as a beneficial treatment for children with ASD
- Only addresses impairments in spinal dysfunction
- There is no evidence that shows SMT improves sensorimotor integration in children with ASD
- Although rare, pediatric SMT can result in serious adverse events such as subarachnoidal hemorrhage and paraplegia if performed incorrectly

Conclusion
- Exercise interventions led to a social, physical, behavioral, and cognitive improvement in 37% of participants involved
- There is limited evidence on physical therapy and chiropractic intervention and their effects on typical behaviors in children with ASD
- More research needs to be conducted on physical therapy intervention to decrease obesity rates in those with ASD

References

What is Autism Spectrum Disorder (ASD)?
- A group of multisystem neurodevelopmental disorders characterized by:
  - Impairments in social interactions
    - reduced eye contact, problems with social reciprocity, detecting and interpreting facial expressions.
  - Impairments in communication skills
    - Speech appears pedantic with oddities in inflection, volume, pitch and rhythm.
  - Presence of repetitive stereotypical behaviors
    - Hand flapping, body rocking, poorly coordinated gait or trunk movements
  - The ability to integrate movement, cognition, emotion and sensation appears disconnected
  - 1%, or 1 child in every 110 classified as having ASD

PICO Question
- In pediatric patients with Autism, is physical therapy or chiropractic intervention best to minimize the stereotypical behavior (social interactions, repetitive motor patterns, communication barriers) of these patients?