

Toe Walking in Young Children with Autism: Prevalence and Clinical Associations

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The Background

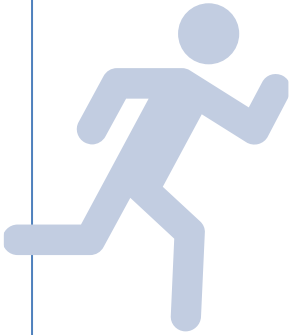


Toe walking (TW) is a motor finding associated with Autism Spectrum Disorder (ASD)

Clinically, it is a common “red flag” for ASD among the young children

Few studies have looked at findings associated with ASD in children who toe walk vs those who do not

Objectives



To assess prevalence rate of toe walking in a clinical population of young children receiving an initial ASD diagnosis and



To examine the association of toe walking with age of ASD diagnosis, clinical features, and autism severity, in an ethnically diverse population

The Bronx

- It's the poorest, most diverse, youngest *urban* population in the US
- The US Census considers the Bronx to be “the most diverse area in the country.”



Design & Methods

Review of children
with diagnosis of
ASD

Data included
demographic and
clinical
characteristics

Toe walking was
assessed by clinical
observation

Statistic Analysis
was conducted

Results

512 children received an initial diagnosis of ASD

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graph TD; A[512 children received an initial diagnosis of ASD] --> B[Toe walking (TW) observed in 155 children (30%)]; B --> C[Differences Found];
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Toe walking (TW) observed in 155 children (30%)

Differences Found

Clinical Results

TW had
more
sensory
sensitivities:
19% vs 10%
($p=.03$)

TW had
greater
Autism
Severity

No
differences
in cognition,
language
regression,
Family
History of
ASD,
seizures

Key Take Away #1

- In this ethnically diverse population, children with ASD who engaged in toe walking were **diagnosed earlier and demonstrated greater severity of social impairment.**
- In this population toe walking may serve as a **clearly observable sign that helps children find their way to an earlier diagnosis.**

Key Take Away #2

- The association of toe walking with **greater autism symptom severity and sensory sensitivities** may help to identify a meaningful clinical subgroup of children with autism for further study from etiologic and treatment perspectives.

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Thank You



Q & A

- How can we get the word out to parents and referral sources to refer children with TW for assessment to check their social functioning and rule out autism?
- What do we think the toe walking may be due to in ASD?
- How is toe walking managed?
- What further potential etiological and treatment research questions should be explored in this population/subgroup?
- What other confounding factors may be impacting this subgroup?