

# Pelvic Floor Physical Therapy as a Toileting Intervention for Autistic Children: A Review

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## Background

*What is known about the use of pelvic floor physical therapy among autistic children with constipation and/or encopresis?*

- Autistic children experience higher rates of toileting differences including constipation and encopresis (stooling accidents)
- Medications alone often do not resolve constipation
- Pelvic floor physical therapy (PFPT) has shown to have positive effects on constipation among children without a diagnosis of autism
- Little is known about the use of PFPT among autistic children with constipation and encopresis

## Methods

- **Method:** Systematic review of the literature including PubMed, CINAHL, and Embase databases
- **Inclusion criteria:**
  - Autistic children up to 21yo
  - PFPT to target constipation and/or encopresis
  - **PFPT:** muscle training, manual therapy, electrical stimulation, biofeedback, breathing exercises, relaxation techniques
- **Exclusion criteria:**
  - PFPT for urinary outcomes
  - Gray literature
  - Non-English articles
- **Quality and Article Appraisal:**
  - EP and MS screened and reviewed articles for inclusion
  - Johns Hopkins Nursing Evidence-Based Practice Models and Guidelines for level of support for decision making and quality appraisal

## Results

### Included Articles:

#### PRISMA:



### Sample Characteristics:

- PFPT modalities: exercises, biofeedback, electromyography, manual therapy
- Mean age: 8.69-11.1 yo
- Fecal incontinence or straining: 65% (Zar Kessler et al., 2019), 11% (Jacobsen et al., 2021), and 11.5 accidents/week (Muddasani et al., 2017)
- Constipation: 40.6% (Muddasani et al., 2017)

### What Was Reported Among Autistic Individuals?:

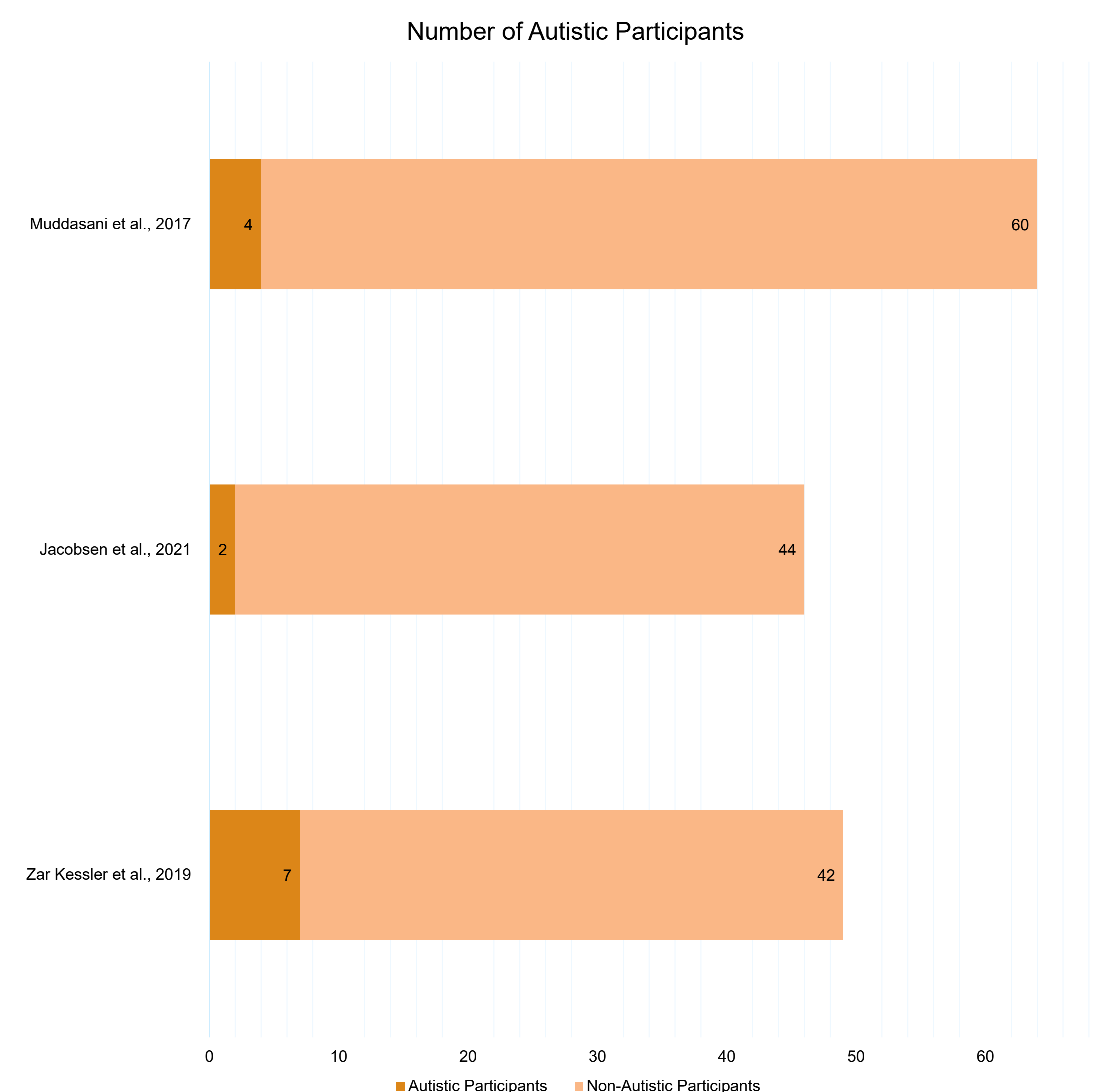
#### What were the Outcomes Among Autistic Participants?:

- **Overall improvement in symptoms:** Most had improvements in fecal incontinence outcomes with PFPT
  - 3/4 in Muddasani et al., 2017
  - 4/7 in Zar Kessler et al., 2019
  - Jacobsen, 2021 did not report results separately for autistic children

#### What were Outcomes Among Children with Other Neurobehavioral Diagnoses?

- **Anxiety:** All participants had improvements in symptoms (7/7) (Zar Kessler, et al., 2019)
- **Learning Disorders:** 3/5 had improvements in symptoms (Zar Kessler, et al., 2019)
- **ADHD:** 9/10 had improvements in symptoms (Muddasani et al., 2017)
- **Other Psychological Diagnosis:** 17/21 had improvements in symptoms (Muddasani et al., 2017)

### How Many Autistic Participants were Included?:



### What were the Overall Results for Participants?:

- Improvements in constipation
  - Decreased use of medications for constipation (Muddasani et al., 2017; Zar Kessler et al., 2019)
  - Bowel movement frequency increased from 1.6 to 6.4/week (Muddasani et al., 2017)
- Improvements in fecal incontinence
  - 2/5 participants in Jacobsen et al., 2021
  - 42.2% of participants had an excellent response (complete continence) (Zar Kessler et al., 2019)
- Improvements surgical and hospitalization outcomes
  - Fewer hospitalizations
  - Fewer patients needing surgical intervention (cecostomy, appendicostomy, diverting ileostomy, colectomy) compared to the control group.

## Conclusions

- Pelvic floor physical therapy (PFPT) has demonstrated some improvements in constipation and fecal incontinence outcomes
- PFPT may be a promising adjunct therapy to manage constipation among autistic children
- Among the available literature, study samples include few autistic participants
- Additional research is needed to understand the association of PFT and toileting outcomes among autistic children

## Implications

- Research is needed to understand use of PFPT among autistic individuals and those with global developmental delay or intellectual developmental disability
- Exploration of current practices to adapt therapy for children with intellectual developmental disability is needed
- Additional specific toileting outcomes (toilet training delays, hospitalizations, surgical outcomes, medications) should be included in future research

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