



# Physical Activity Facilitators and Barriers for Children with ASD: Scoping Review of Methods and Findings

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### INTRODUCTION

- Children with autism spectrum disorder (ASD) do not meet daily physical activity (PA) guidelines (Liang et al., 2020).
- Few studies have explored the facilitators and barriers to the PA participation of children with ASD (e.g., Must et al., 2015; Obrusnikova & Cavalier, 2011).
- A clear picture of PA participation factors is lacking.
- The research methods used to explore PA participation factors need to be analyzed and discussed.

### PURPOSE

To identify facilitators and barriers to the PA participation of children with ASD as well as the associated research designs and methods used.

*Overarching research question:*

- What facilitators and barriers to the PA participation of children with ASD have been identified?

*Sub-questions:*

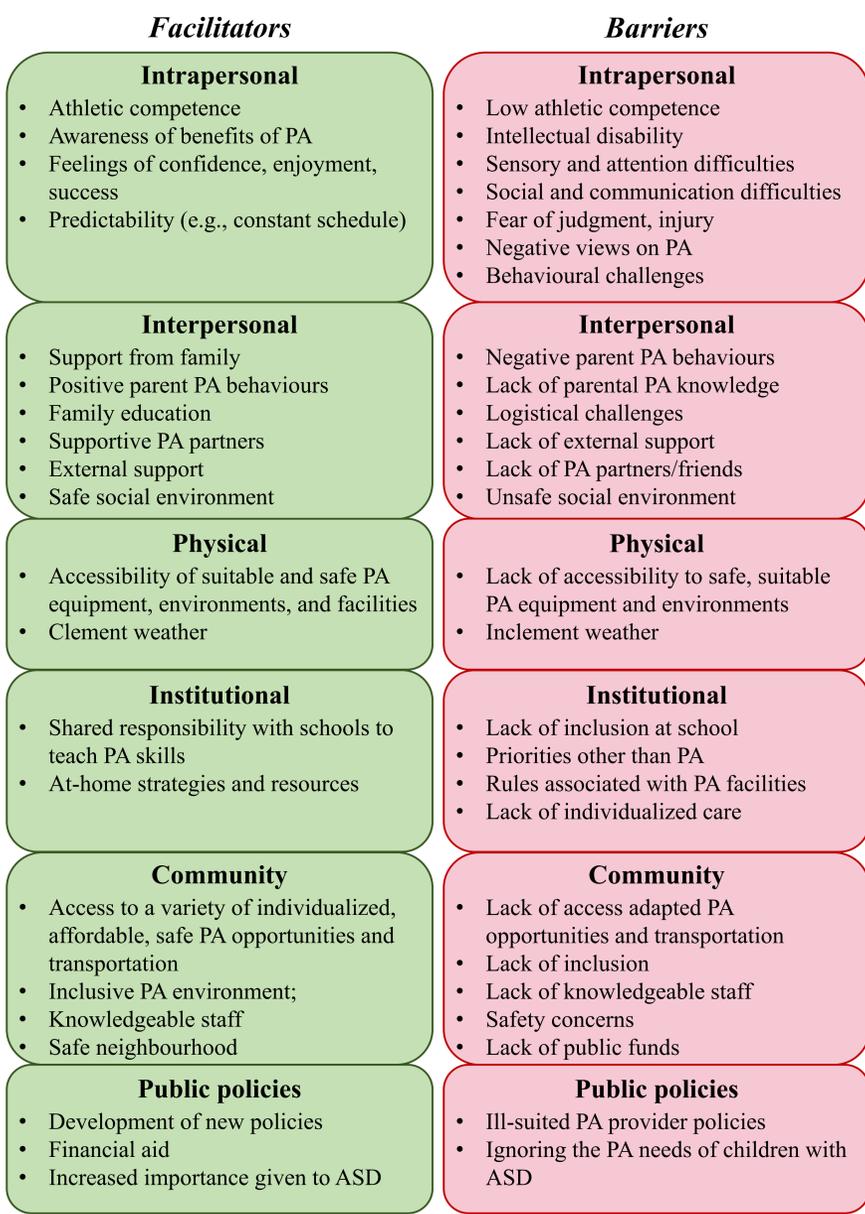
- How have the factors that facilitate or hinder the PA participation of children with ASD been studied?
- What research methods were used to identify facilitators and barriers to PA participation of children with ASD?
- Which groups of people were involved in the data collection process?

### METHOD

- Arksey and O'Malley framework (2005)
- Study identification and selection**
- **Search strategy:** (1) Database, (2) Reference list screens, (3) Hand-searches of key journals.
  - **Inclusion criteria:**
    - Original, peer-reviewed studies published in English (excluding literature reviews).
    - Focus on identification of facilitators and/or barriers to PA participation.
    - Children and adolescents between the ages of 5–18 years.
  - 16,368 studies screened → 29 studies selected.
- Data charting and analysis**
- *Quality Assessment with Diverse Studies* (Harrison et al., 2021).
  - Predefined charting form.
  - Descriptive numerical summaries and thematic analyses.
  - Facilitators and barriers coded and organized based on a socio-ecological model (McLeroy et al., 1988).
  - Stakeholder consultation to be conducted in fall 2022.

### PRELIMINARY RESULTS

- 14 quantitative studies, 12 qualitative studies, and 3 mixed-method studies.
- Diagnoses were confirmed in 10 studies.
- ASD severity or subtype was identified in 12 studies.
- Comorbidities were discussed in 10 studies.
- Objective measures of PA in 7 studies; subjective measures of PA in 9 studies.
- Parents were involved in 27 studies; children were involved in 13 studies.
- Adolescents shared their own perceptions of PA participation factors in 4 studies (3 qualitative and 1 quantitative studies).
  - Specific research methods were used including photovoice, digital storytelling, ASD-specialized questionnaires.



### DISCUSSION – PRACTICAL IMPLICATIONS

- PA participation needs**
- PA that fosters feelings of confidence, enjoyment, and success.
  - Support from the family, PA partners, and community.
  - PA resources and training for parents and families.
  - Safe social environment (e.g., absence of bullying).
  - Access to suitable, safe PA equipment and environments.
  - Shared responsibility with schools to teach and promote PA.
  - Accessibility: affordable, individualized, inclusive, adapted, and safe PA opportunities.
  - Presence of a knowledgeable staff.
  - Improvement of neighbourhood safety.
  - Development of new PA policies and financial aids.
- Research on PA participation**
- Perceptions of children and adolescents with ASD to be directly explored with novel methods and designs.
  - Clarity in the description of the participants with ASD.
  - Discussion of the *individual* factors related to PA participation (e.g., age, sex, impairments, overlapping types of disabilities).

### LIMITATIONS

- Studies were included if the average age of the sample was between 5 and 18 years even if the age ranges partially exceeded the delimitations.
- Unclear and/or omitted information in the reviewed studies may not have been considered in the analysis, even when relevant to this review.

### FUNDING

- Social Sciences and Humanities Research Council of Canada
- Sport Canada Research Initiative

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