

## The Effectiveness of Parent-Mediated Interventions in Reducing Aggression and Self-Injury in Autism: A Systematic Review and Meta-Analysis

INPLASY202630106

doi: 10.37766/inplasy2026.3.0106

Received: 28 March 2026

Published: 28 March 2026

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### ADMINISTRATIVE INFORMATION

**Support** - No specific external funding was received. This study is conducted as part of academic research activities at Taif University.

**Review Stage at time of this submission** - Completed but not published.

**Conflicts of interest** - None declared.

**INPLASY registration number:** INPLASY202630106

**Amendments** - This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 28 March 2026 and was last updated on 28 March 2026.

### INTRODUCTION

**Review question / Objective** This systematic review and meta-analysis aims to evaluate the effectiveness of parent-mediated interventions in reducing aggression and self-injurious behaviors in children with autism spectrum disorder (ASD).

Using the PICOS framework:

Population: Children diagnosed with ASD

Intervention: Parent-mediated interventions

Comparator: Standard care, waitlist, or pharmacological treatment

Outcomes: Reduction in aggression and self-injury

Study design: RCTs, cohort, and non-randomized studies.

**Rationale** Aggressive and self-injurious behaviors are highly prevalent in children with ASD and significantly impact quality of life for both patients and families. While pharmacological treatments exist, they carry potential adverse effects.

Parent-mediated interventions represent a promising, cost-effective, and safe alternative. However, evidence remains fragmented.

This study synthesizes current evidence to determine their effectiveness and support clinical decision-making.

**Condition being studied** Autism spectrum disorder (ASD) is a neurodevelopmental disorder characterized by social communication deficits and restricted behaviors.

Children with ASD frequently exhibit:

Aggression  
Self-injury  
Behavioral dysregulation

These behaviors may persist into adulthood if untreated and are associated with:

Family burden

Social impairment  
Increased healthcare utilization.

## METHODS

### Search strategy

Databases:  
PubMed  
Scopus  
Web of Science

Search terms:  
"Autism Spectrum Disorder" OR "Autism"  
AND "Parent" OR "Parent-mediated"  
AND "Aggression" OR "Self-injury" OR "Self-harm"

Search applied to:  
Titles and abstracts

Duplicate removal:  
EndNote software.

**Participant or population** Children diagnosed with autism spectrum disorder (ASD), typically aged between 2 and 18 years.

### Intervention

Parent-mediated interventions including:

Parent training programs  
Psychoeducation  
Mindfulness-based parenting  
Parent-child interaction therapy.

### Comparator

Standard care  
Waitlist  
Medication-only interventions.

**Study designs to be included** Randomized controlled trials, cohort studies, and non-randomized trials.

### Eligibility criteria

**Inclusion:**  
ASD diagnosis  
Parent-mediated interventions  
Aggression or self-injury outcomes

**Exclusion:**  
Case reports  
Reviews  
Non-human studies.

### Information sources

PubMed  
Scopus  
Web of Science  
Reference lists of included studies.

### Main outcome(s)

Primary outcomes:  
Aggression reduction  
Self-injury reduction

Measured using:  
ABC-Irritability  
HSQ.

**Additional outcome(s)** Change from baseline  
Other behavioral scales (e.g., BASC, BPI).

### Data management

Data extracted using Excel spreadsheets including:  
Study characteristics  
Participants  
Interventions  
Outcomes

Duplicates removed using EndNote..

### Quality assessment / Risk of bias analysis

RCTs: Cochrane RoB-2 tool  
Non-RCTs: Newcastle-Ottawa Scale (NOS).

### Strategy of data synthesis

Meta-analysis using Review Manager  
Mean Difference (MD) and Standardized Mean Difference (SMD)  
Random-effects model  
Heterogeneity assessed using  $I^2$ .

### Subgroup analysis

Subgroup analyses based on:  
Intervention type  
Study design  
Population characteristics.

**Sensitivity analysis** Leave-one-out method to assess influence of individual studies.

**Language restriction** English only.

**Country(ies) involved** Saudi Arabia.

**Keywords** Autism; Parent-mediated intervention; Aggression; Self-injury; Behavior.

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