

Training for the Trainers to enhance Psychosocial Effectiveness in Children with Autism: A Systematic Review

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Abstract

Psychosocial interventions play a crucial role in improving social communication, emotional regulation and adaptive behaviour in children with Autism Spectrum Disorder (ASD). However, limited availability of trained professionals restricts large-scale implementation. The Training for Trainers (TTT) model has emerged as a scalable approach to enhance intervention delivery by training caregivers, teachers and community workers.

Therefore, present study was planned to systematically review evidence on the effectiveness of TTT models in improving psychosocial outcomes among children with ASD. Electronic databases including pubmed, psycinfo, ERIC and Google Scholar were searched. Studies involving a structured TTT approach for psychosocial interventions targeting children with ASD were included.

Eleven empirical studies and three review papers were identified. Findings suggest that TTT models improve trainer fidelity, trainee competence and lead to small-to-moderate improvements in children's social and communication outcomes. Ongoing supervision and coaching significantly enhanced effectiveness. So it can be concluded that TTT models are effective and feasible strategies for scaling psychosocial interventions for children with ASD, especially in low-resource settings.

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Introduction

Autism Spectrum Disorder (ASD) is a neurodevelopmental condition characterised by impairments in social interaction, communication and restricted or repetitive behaviours. Psychosocial interventions, including behavioural, developmental and social skills-based programs, are essential for improving functional outcomes in children with ASD. ^[1] Despite strong evidence supporting early psychosocial interventions, access remains limited due to shortages of trained professionals and high service costs. ^[2]

Training for Trainers (TTT) models aim to address these barriers by training a small group of master trainers who then train parents, teachers or community providers. This cascading model enhances sustainability, scalability and cost-effectiveness while maintaining intervention fidelity³. Present systematic review evaluates the effectiveness of TTT approaches in improving psychosocial outcomes for children with ASD.

Research Methodology

Research Strategy

A systematic search was conducted using PubMed, PsycINFO, ERIC and Google Scholar. Keywords included “train-the-trainer”, “training of trainers”, “autism”, “ASD”, “parent training”, “teacher training” and “psychosocial intervention”. Studies published in English up to December 2025 were considered.

Inclusion criteria

- Studies involving a TTT or cascading training model
- Psychosocial interventions targeting children with ASD
- Outcomes related to social, emotional or behavioural functioning

Exclusion criteria:

- Pharmacological-only interventions
- Studies without a trainer cascade
- Non-empirical reports

Data Extraction and Quality Assessment

Data extracted included study design, participants, type of intervention, training structure, fidelity measures and child outcomes. Due to heterogeneity across studies, narrative synthesis was employed rather than meta-analysis.

Results

Study Characteristics: The included studies were conducted across clinical, school and community settings in both high-income and low- and middle-income countries⁴. Trainees included parents, teachers, paraprofessionals and community health workers.

Trainer and Trainee Outcomes: Most studies reported significant improvements in trainee knowledge, skill acquisition and fidelity following TTT-based training. Programs that included follow-up supervision and performance feedback demonstrated superior outcomes compared to workshop-only models⁵.

Child Psychosocial Outcomes: Children whose caregivers or teachers were trained through TTT models showed improvements in social communication, joint attention and reductions in challenging behaviours⁷. Parent-mediated interventions delivered by trained trainers were particularly effective in early childhood.

Implementation Outcomes: TTT models were found to be feasible and acceptable across diverse cultural contexts. Digital and hybrid training formats further enhanced accessibility and sustainability⁶. However, challenges included variability in trainer competence and fidelity decay without booster sessions¹.

Discussion

The findings of this review indicate that TTT models are effective mechanisms for disseminating psychosocial interventions for children with ASD. The success of these models depends heavily on structured training manuals, ongoing supervision and fidelity

monitoring³. These results align with broader implementation science literature emphasizing coaching and support for sustainable skill transfer⁷.

Despite promising results, methodological limitations such as small sample sizes, lack of blinded outcome assessments and limited long-term follow-up restrict definitive conclusions regarding effectiveness magnitude.

Identification: Records identified through database searching (PubMed, PsycINFO, ERIC, Google Scholar, n = 420

Additional records identified through reference lists and manual search n =30

Total records identified n = 450

Screening

Records after removal of duplicates **n = 380**

Records screened by title and abstract **n = 380**

Records excluded after screening

- Not related to Autism Spectrum Disorder
- No Train-the-Trainer model
- Non-psychosocial interventions

n = 330 excluded

Eligibility: Full-text articles assessed for eligibility n = 50

Full-text articles excluded (with reasons)

- No cascading / trainer-of-trainers model (n = 18)
- Outcomes not psychosocial (n = 9)
- Insufficient methodological details (n = 6)

- Opinion papers / editorials (n = 3)

Total excluded = 36

Included

Studies included in qualitative synthesis

- Empirical intervention studies = 6
- Systematic / scoping reviews = 2

Total studies included = 8

S. No.	Author	Year of Publication	Research Design	No. of participants	Sample characteristics	Theme
1	Arman Paramansyah et al. [8]	2023	Descriptive qualitative research method	3	Parents of school going children	To determine the impact of parent training program on the Psychosocial Development of students with ASD
2.	Kate Tsiplova et al. [9]	2022	RCT	24	Parents of children aged between 15 to 30 months who were screened positive on M-CHAT	Parent coaching intervention for children with suspected autism spectrum disorder: Cost Analysis
3.	Seung Eun McDevitt et al. [10]	2021	Non-experimental (Descriptive program evaluation)	294	Mothers of young children of age 2-7 diagnosed with ASD	Online parent education and training model for families of

						children with autism
4.	Afsaneh Akhane et al. [11]	2021	RCT	22	Parents of 3-5 year old children	To investigate the effectiveness of parent training therapy on autism symptoms and functional emotional development of children
5.	Alessandro Froli et al. [12]	2021	PRFQ questionnaire	84	Aged between 20 and 30 months	Parent Training and Therapy in children with Autism
6.	Shoumitro Deb et al. [13]	2020	Systematic Review	10	Aged 1 to 18 years	The effectiveness of parent training for children with ASD
7.	Karen Bearss et al. [14]	2015	RCT	89	Aged 3 to 7 years	Effect of Parent Training vs Parent Education on Behavioral Problems in children with ASD
8.	Michael L. Matson et al. [15]	2009	Narrative/ Literature Review	35	Preschoolers who met DSM-III-R criteria for autism	Parent training: A review of methods for children with ASD

Representing various articles taken in Systematic Review

Implications for Practice

- Incorporate structured manuals and standardised training protocols
- Provide ongoing supervision and fidelity monitoring
- Adapt training materials culturally and contextually
- Use digital platforms to expand reach in resource-limited settings

Conclusion

Training for Trainers models offer a scalable and effective approach to enhancing psychosocial outcomes in children with ASD. When implemented with adequate supervision and fidelity checks, TTT programs can significantly improve the reach and quality of psychosocial interventions.

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