



The Effects of an 8-Week Training Programme on Physical Fitness and Social Communication in 10-Year-Old Children With Autism Spectrum Disorder

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Background and Aim. The effects of training regarding physical fitness and social communication in children with autism spectrum disorder (ASD) remain unclear. The aim of this study was to examine the effects of an 8-week structured training programme on physical fitness and social communication in children with ASD.

Methods. An experimental study design was employed. Twenty-nine 10-year-old children with ASD were assigned to either an intervention group ($n = 15$) or a control group ($n = 14$). Participants in the intervention group completed a structured physical training programme (five sessions per week, 40 minutes per session) for eight consecutive weeks, while the control group maintained their usual daily activities. Physical fitness was assessed using standardised tests, and social communication was evaluated using the parent-reported Social Responsiveness Scale, Second Edition (SRS-2). Assessments were conducted before and after the intervention.

Results. The results indicated that the 8-week training programme significantly improved physical fitness, particularly speed–agility (from 6.28 ± 0.82 to 5.42 ± 0.95 ; $p = 0.04$) and muscular strength (from 15.62 ± 1.12 to 17.92 ± 1.34 ; $p = 0.03$). Additionally, children in the intervention (MBTP) group demonstrated improvements in SRS-2 domains: social awareness (from 7.4 ± 1.14 to 8.6 ± 1.23 ; $p = 0.04$), social cognition (from 7.8 ± 1.15 to 8.28 ± 1.06 ; $p = 0.04$), social communication (from 7.1 ± 0.92 to 8.5 ± 0.87 ; $p = 0.03$), and autistic mannerisms (from 7.2 ± 1.24 to 8.4 ± 1.28 ; $p = 0.03$). No significant changes were observed in the control group.

Conclusions. The findings suggest that an 8-week structured training programme may improve physical fitness and social communication in children with ASD. Therefore, physical exercise interventions may be considered a beneficial therapeutic approach for this population.

Keywords: Autism spectrum disorders; physical fitness; 10-year-old school children; social communication

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Informed Consent Statement: This study was approved by the Ethics Committee of Lithuanian Sports University (No. 52363, dated 15 01 2026). All participants and their guardians/parents provided written informed consent prior to participation. The study was conducted in accordance with the Declaration of Helsinki.



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