

STUDY PROTOCOL COVER PAGE

Study Title:

Effects of a Physical Activity Program for Children with Autism on Psychomotor and Psychosocial Characteristics

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Purpose of the Study:

This study aims to examine the effects of a Physical Activity Program on the motor skills, social skills, and quality of life of children diagnosed with ASD. This approach will examine the physical activity levels of individuals with autism and develop recommendations on the conditions necessary for activity and how these conditions can be achieved.

Research Model:

This study will utilize a mixed-method sequential exploratory design consisting of two phases: quantitative and qualitative. This design utilizes the advantages of both qualitative and quantitative designs within a single study, aiming to understand a phenomenon in more detail and comprehensively (Creswell & Plano Clark, 2011). In the quantitative phase, which evaluates the effects of the physical activity program (PAP) on psychomotor and psychosocial characteristics, a quasi-experimental design with an unequalized pretest-posttest control group will be employed within the scope of one of the quantitative research methods. In this research design, the experimental group, which received the intervention, and the control group, which did not receive the intervention, are measured before and after the intervention; however, equating the groups at baseline is not necessary (Büyüköztürk et al., 2008). Furthermore, to qualitatively evaluate the program's impact, a focus group interview design will be used to determine the views of families and special education teachers of children with autism spectrum disorders regarding the program's effects.

Participants:

This study will be conducted with 40 children with autism, aged 8 to 12, attending four different special education practice schools in Kocaeli province. A total of 40 children will participate in the study: 20 in the experimental group (EG) and 20 in the control group (CG). The number of participants was determined using G*Power analysis based on the expected effect size, 80% power, and a 5% significance level.

Inclusion criteria were being between 8 and 12 years of age, having a clinical diagnosis of ASD according to DSM-5 criteria (American Psychiatric Association, 2013), having no prior experience with a physical activity program (PAP), having no health problems that would prevent participation in the PAP, and having no secondary diagnoses such as visual or hearing impairments. Exclusion criteria included having a health condition that would prevent participation in the 12-week PAP in the EG, inability to participate in the assessments in either group, or withdrawal from the intervention or assessments for any reason during the study period. These criteria are consistent with those commonly used in physical activity-based intervention studies involving children with autism (e.g., Haghighi et al, 2023; Hatipoğlu Özcan et al., 2025; Sansi et al., 2021). Other participants of the study will consist of a total of 24 people, including 9 mothers/fathers, 13 teachers, 1 child protection agency director, and 1 physiotherapist working in a child protection agency.

Procedures

The study received ethics committee approval dated May 6, 2022, and dated 376308. Data collection for the pretests will begin after participants receive permission from their departments and information from their educational institutions. The tests and the PAP will be administered in primary education institutions. Activities and visuals will be used on the PAP's computer to make the program easier and more understandable. Social stories will be used to reinforce social healing. For those unable to attend the training registrations, intermittent training may be provided within the same week.

In the research, Bruininks-Oseretsky Motor Proficiency Test-2 Short Form (BOT-2 SF), Eurofit Test Battery, Social Skills Rating System Parent Form (SBDS-EF), Pediatric Quality of Life Scale (PedsQL) and Gilliam Autism Disorder Rating Scale-2 Turkish Version (GARS-2 TV) will be used.

Physical Activity Program

The Physical Activity Program (PAP) is designed to support the developmental areas targeted by the experimental group, namely psychomotor and psychosocial skills. The program will be implemented by the first author at the participants' educational institutions for 10 weeks, three days a week, with each session lasting 60 minutes. Each session includes a structured combination of individual and group activities.

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