

Visuospatial Skills and Intention Attribution: A Review of the Object Perspective-Taking Test and Santa Barbara Sense of Direction Questionnaire with Exploratory Graph Analysis and Applications to Autism

Thursday, September 11, 2025 2:10 PM (20 minutes)

Visual-spatial skills are fundamental for navigating the environment and performing daily activities. Individuals with Autism Spectrum Disorder (ASD) often exhibit atypical perceptual processing, especially regarding complex visual stimuli and visuo-perceptual abilities. This study aims to revise the Object Perspective Taking Test (OPT) and the Santa Barbara Sense of Direction Scale (SBSOD) in the Italian context and to compare visuospatial skills between individuals with Autism Spectrum Disorder (ASD) and individuals from the general population (Control Group; CG).

A total of 254 participants (mean age 21.53; 111 males and 143 females) were involved in the test revision process. Exploratory Graph Analysis (EGA) and Confirmatory Factor Analysis (CFA) confirmed satisfactory structural validity for both tests. The unidimensional structure of the OPT led to the proposal of a revised scale (OPT-r) composed of 9 items. The SBSOD-r revealed a bidimensional solution, distinguishing between spatial visualization and navigation skills. Significant negative correlations were found between OPT-r, spatial visualization, and the total SBSOD-r score. The tests revised were administered to 13 individuals with ASD (all males; mean age 23.46 ± 8.19 , mean IQ 105.04 ± 11.04) and 13 CG individuals (all males; mean age 24.31 ± 5.96 , mean IQ 113.1 ± 9.6), who were comparable for relevant variables such as IQ, age and education level. Preliminarily results showed significant differences in OPT-r scores, indicating lower performance in the ASD group.

This study suggests the importance of visual-spatial skills in ASD, offering potential implications for clinical practice and interventions.

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Primary author: COVONE, nicole

Co-authors: Dr DI GIMINIANI, Erika; LE DONNE, Ilenia (Dipartimento Scienze Cliniche Applicate e Biotecnologiche, Università degli Studi Dell'Aquila); ATTANASIO, Margherita (Università degli Studi dell'Aquila); Dr GRECO, Maria Paola; MAZZA, monica (Università L'Aquila)

Presenter: COVONE, nicole

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