We examined the psychometric properties of the Japanese version of the Autism Spectrum Screening Questionnaire (ASSQ) and developed a short-form. This study included 157 children with autism spectrum disorders (ASD, ages 7–18, 128 boys) and 4,101 healthy controls (ages 7–15, 3,344 boys) from a general population with a controlled male-female ratio. Four factors (Unusual Interests, Sociality, Peer Relations, and Repetitive Behaviors) were extracted by exploratory factor analysis of control group data. Confirmatory factor analysis revealed that the 4-factor model fit well with data for another sample of the control and ASD groups. Logistic analysis showed that the former 3 factors could significantly predict ASD diagnosis. Thus, a short form of the ASSQ was developed, consisting of 11 items for these 3 factors. This short form showed sufficient internal consistency and high discrimination power for ASD diagnosis that was comparable to that of the 22-item version. Receiver operating characteristic analysis indicated an optimal cut-off of 7 for the 22-item version (sensitivity .949, specificity .801) and 5 for the short-form (sensitivity .936, specificity .818).

**Keywords:** autism spectrum disorders, developmental disorders, Autism Spectrum Screening Questionnaire, psychometric properties, short-form.

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