Background

There has been an increasing interest in diagnosis Autism Spectrum Disorders (ASD) in children younger than 4 years. These children have limited social communication skills, such as poor joint attention, imitation and symbolic play. In ASD diagnostics, parent questionnaires are often used. However, for such young children a specific parent questionnaire focusing on early social communicative behavior was not available for clinical use.

In 2009, we developed the Early Social Communicative Behavior Questionnaire (ESCBQ; Blijd-Hoogewys & Buruma, 2009). The ESCBQ items are formulated, based on 1) literature research concerning both typical and atypical development of early social communicative behavior in infants, 2) existing instruments concerning this topic, and 3) clinical expertise with young children with ASD.

The following topics are questioned in the ESCBQ: eye contact, social interest, reaction to name, emotions, attachment, sharing pleasure, taking turns, looking, following gaze, following a point, pointing, showing, giving, playing, interaction games, imitation, gestures, and language (Buruma et al., 2016).

Objectives

The objective of this study was to develop a parent questionnaire that can be easily used to measure early social communicative behavior in young children in a reliable and valid way.

Methods

The ESCBQ (Blijd-Hoogewys & Buruma, 2009) is a parent questionnaire, consisting of 108 dichotomous items, questioning early social communication skills that typically developing children should master at the age of 24 months. In order to explore the psychometric properties of the ESCBQ, 1230 parents of typically developing children aged 0-2 years filled in the questionnaire. Also, 108 parents of children with ASD filled in the ESCBQ.

The ESCBQ-2 (Buruma & Blijd-Hoogewys, 2014) is a shortened version of 58 dichotomous items. Data collection is ongoing. Currently, 517 parents of typically developing children (TD) aged 0-4 years have filled in the questionnaire (267 boys, 246 girls). Also, 81 parents of children with ASD filled in the ESCBQ-2 (61 boys, 20 girls) and 26 parents of children with ASD and 55 parents of children with ASD and developmental delay (ASD+DD). All children with ASD were diagnosed by trained clinicians. ASD assessment was based on an extensive psychiatric examination, a standardized ASD interview, a developmental interview with parents, psychological assessment (ADOS-2, non-verbal cognitive development & language), an observation at home and an observation at the day care or school.

Results

Research ESCBQ

Research ESCBQ

It takes 20-25 minutes to fill in the ESCBQ. The total score shows a steady increase with age, with a plateau at 30 months, for both boys and girls (see Figure 1). The internal consistency, based on inter-item reliability, is good (Cronbach’s alpha = .97). Also the test-retest reliability (second measurement after 1 week) is good (r = .43, M1 = .93 ± SD1 = .95, M2 = .91, SD2 = .91). The ASD group has significantly lower ESCBQ total scores than the TD group (MASD = 55.66, SDASD = 20.49, MTD = 95.14, SDTD = 16.86, with correction for age, p < .001, Cohen’s d = 1.75).

From ESCBQ to ESCBQ-2

The ESCBQ is shortened and ameliorated, to make it more user-friendly. This resulted in the ESCBQ-2. The shortening is based on additional item analyses—such as a Principal Component Analysis and a Differential Item Functioning analysis—and on clinical expertise.

Research ESCBQ-2

It takes 10-15 minutes to fill in the ESCBQ-2. The total score shows a steady increase with age (see Table 1), with again a plateau at 30 months, for both boys and girls (see Figure 2). The internal consistency, based on inter-item reliability, remains the same (Cronbach’s alpha = .97).

A Principal Component Analysis conveyed three clusters (64% explained variance): 1) Joint attention and imitation, 2) Sharing affect, and 3) Language, gestures, pretending and symbolic play. Items concerning Play are found in all three clusters, mainly in cluster 2 and 3.

Both ASD groups have lower ESCBQ-2 total scores than the TD group (MASD = 30.68, SDASD = 21.21, MSD+DD = 26.29, SDASD+DD = 17.45, MTD = 47.39, SDTD = 13.04). An ANCOVA, controlling for age in months, shows there is no significant difference between the groups (F[2, 590] = 182.85, p < .001, partial η2 = .32). Post hoc analysis was performed with Bonferroni adjustment. Results show a significant difference between the TD group and both the ASD group (MASD = 31.13, 95% CI [24.84, 37.41], p < .001) as the ASD + DD group (MASD = 32.96, 95% CI [28.38, 37.53], p < .001).

Conclusions

The ESCBQ-2 is a new questionnaire aimed at measuring early social communicative behavior children typically develop before the age of 30 months. The questionnaire has good psychometric properties (internal consistency and test-retest reliability). The three clusters found for the ESCBQ-2 coincide with what is expected from literature.

There was no difference between the two ASD groups with or without developmental delay, illustrating that merely ASD has influence on the ESCBQ-2 scores. More research is underway, focusing on the use of the ESCBQ-2 as a ‘diagnostic’ tool.

You can obtain the poster content via the following QR code:

References


INTER-PSY

General Mental Health Care Services in Northern region of the Netherlands

m.buruma@inter-psy.nl