



Gender Differences in ASD Symptoms in Toddlers

Autism spectrum disorder (ASD) is being diagnosed in younger and younger children. Early diagnosis is important as it means that early intervention may be obtained for those diagnosed. While it is well known that ASD is more common in males than in females, so far little research has been conducted on the gender differences of ASD symptoms. The research that has been conducted on gender differences has focussed on older children, and the results have been inconsistent. It is likely that understanding gender differences in very young children with ASD would further aid early diagnosis.

The Study

The aim of this study was to look at the differences in ASD symptoms of young children. Three hundred and ninety toddlers between the ages of 17 and 36 months were observed and their caregivers were interviewed using the Baby and Infant Screen for Children with aUtism Traits – Part 1 (BISCUIT-Part 1). The BISCUIT-Part 1 is used to assess the symptoms of ASD, with higher scores indicating greater impairment.

Based on gender and their level of functioning or their developmental level (low or average), the children were divided into four groups; (1) males with low development, (2) males with average development, (3) females with low development, and (4) females with average development. The developmental level of the children was considered because it has been found that this influences the gender ratio in children with ASD. For example, one previous study

found that for children between 70 and 75 months of age, for every female diagnosed with ASD, there were 2.6 males. However, when they only looked at those children who were lower functioning (IQ below 50), for every one female diagnosed with ASD there were 1.3 males.

ASD Symptom Severity According to Gender and Development Level

The average results of the BISCUIT-Part 1 for each of the four groups is presented in the table below. Higher scores indicate more severe ASD symptoms, and lower scores indicate less severe ASD symptoms. The average scores of the BISCUIT-Part 1 show that the gender differences are less (male and female low development difference = 2; male and female average development difference = 5) than the differences of developmental level (male low and average difference = 12; female low and average difference = 15). This means that differences in the severity of ASD symptoms are more likely to be due to differences in developmental level than gender.

Gender	Development Level	Average Score
Male	Low	44
Male	Average	32
Female	Low	42
Female	Average	27

The results of the BISCUIT-Part 1 were also broken down into three domains to reflect the diagnostic criteria of ASD; communication, socialisation, and repetitive behaviours/restricted interests.



The same trend as above was found in the communication and socialisation domains; that the scores of males and females with average development were very similar and were lower, showing less severe ASD symptoms than those with low development levels.

One difference was found in the third domain, repetitive behaviours/restricted interests. The scores of females with average development were much lower than any other group. This suggests that there are both gender and developmental level differences. Female children with average developmental levels are less likely to engage in repetitive behaviours and have restricted interests than children who are male and children of both genders who have low developmental levels.

Conclusion

Overall, the only difference in gender that was found in children diagnosed with ASD and aged between 17 and 36 months was that females with average developmental levels showed fewer repetitive behaviours and restricted interests than the other three groups. Aside from this difference, there were no other gender differences found. Children of both genders with low developmental levels showed more severe symptoms of ASD than children with average developmental levels.

References

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