

# He said, she said: Autism spectrum diagnosis and gender differentially affect relationships between executive functions and social communication

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Autism spectrum disorder (ASD) is characterised by difficulties in social communication. In people with ASD, relationships have been found between social communication skills and thinking skills, such as working memory (the ability to hold and manipulate information in mind for a short time) and planning. However, the relationships between social communication and *specific* thinking skills, as well as how gender may alter these relationships, require further study. In this study, we examined relationships between social communication and several different thinking skills in young men and women, with and without ASD (none of whom had intellectual disabilities). These data came from a publicly available database called ABIDE-II. Our results revealed relationships between social communication and thinking skills that were present in males with ASD, but not females. Specifically, the relationships between social communication and monitoring (the ability to assess our own behaviour and its effects on others) and working memory were *stronger* in males with ASD than males without ASD, but this pattern was not observed in females. From our results, it appears that relationships between social communication and certain thinking skills are different for young men and women with an ASD diagnosis. To better understand how these relationships might contribute to ASD behaviour or diagnosis, future work should investigate the co-development of monitoring, working memory, and social communication, while taking gender into account.