

THE RELATION BETWEEN EXECUTIVE FUNCTIONING AND DRIVING ERRORS IN A SAMPLE OF YOUNG NOVICE DRIVERS WITH AN AUTISM SPECTRUM DISORDER

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Introduction Driver-errors can be considered by-products of executive functioning. As autism spectrum disorders (ASDs) are often accompanied with executive functioning difficulties, it is possible that, when compared to typically developing young novice drivers, young novice drivers with ASD will show an increased or divergent rate of driving errors. The current study extends on previous research by investigating driving errors, and the relation with underlying executive functioning, in a sample of young novice drivers with ASD. **Methods** The driving performance of 19 young novice drivers with ASD is compared to a control group of 21 typically developing young novice drivers. The research consisted of two segments: a driving simulator scenario and computer task battery. Several driving behavioural measures were considered, including the number of collisions, brake reaction time stops at traffic lights and red-light-running, as well as the mean time and value of both speed exceedance and centreline crossing. The executive functions (working memory, attention and inhibitory control) were measured with three different tasks: stop-signal reaction time, useful field of view, and working memory task. **Results** Results indicated no group differences regarding inhibitory control and driving performance; on the other hand the control group appeared to perform better in the tasks related to working memory and attention. **Conclusion** More research will be necessary to draw any firm conclusions regarding driving errors, and their relation with underlying executive functioning in ASD.

Keywords (3): Autism spectrum disorder, young novice drivers, executive functioning