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Title of Presentation/Poster: Young adults with Developmental Coordination Disorder adopt a different visual strategy during a hazard perception test for cyclists

Abstract (300 words max): Cycling in traffic requires a combination of motor and perceptual skills while interacting with a dynamic and fast-changing environment. The inferior perceptual-motor skills in individuals with Developmental Coordination Disorder (DCD) may put them at a higher risk for accidents. A key skill to navigate in traffic is to quickly detect hazardous situations. This perceptual-cognitive skill was investigated in young adults with DCD using simulated traffic situations in a hazard perception test in cycling. 9 individuals with DCD (age: 23.0 ± 3.8) and 9 typically developing (TD) individuals (age: 24.6 ± 3.5) participated in the study and completed the test while their gaze was tracked using a remote eye tracking device. A questionnaire was used to determine cycling experience and the perception of cycling and anticipation skill in traffic. Despite a longer period to master the motor skill of cycling, individuals with DCD reported to be able to safely cycle in traffic around the same age as TD young adults. In the hazard perception test, individuals with DCD fixated the hazards later, less frequently and for a shorter duration than the TD participants, however, the participants with DCD did not wait longer to react to the hazard than the TD participants. Interestingly, individuals with DCD rated the traffic situations in the test as significantly more dangerous than the TD participants. In conclusion, the differences exposed in the hazard perception test may imply an increased risk of accidents in individuals with DCD. In further research and practice it is recommended that both the motor and the perceptual aspects of cycling are addressed.

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