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Driving Distraction in Teenagers with ADHD

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Introduction: A simple literature search will provide readers with dozens of articles on driving distraction in teenagers. However, distractions among teen drivers with a diagnosis of ADHD are not as well understood, and the amount of literature available is far less than the former. This is problematic as ADHD is defined in part by distractibility, which may be responsible for the increased negative driving outcomes such as crashes or fatalities when observed in samples of teens with ADHD (Fabiano & Schatz, 2015). This study is utilizing a non-experimental observational research design, looking at the types of distractors that are most commonly observed in youth with ADHD when driving prior to a risky event (e.g., swerve, hard break). A comparison group of driving situations for the same drivers when a risky event was not present were also reviewed to see whether there were specific distractors associated with the most risky driving situations. Outcomes will include an assessment of the frequency of distractors observed as well as the seriousness of the different types of distractors. It is hypothesized that teenagers with ADHD will have more distractors present prior to a risky driving event than a non-risky event.

Methods: Data for this study was collected from a sample of teens that had a Mobile Event Data Recorder installed within their vehicles to record their driving behaviors. The data recorded had forward and cabin facing cameras and an accelerometer that saved the 30-seconds of video data that occurred prior to any risky driving event (i.e., hard brake, swerve, collision) as well as during routine driving (non-risky event). Each event was paired with a non-risky event.

Participants: Participants were observed over a period of 12 months. This sample is limited to participants licensed at the 12-month follow-up assessment point that experienced a driving event (i.e., participants who were licensed and actively driving). All teens met the current diagnostic criteria for ADHD-Combined Type, as provided by the Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition, Text Revision (DSM-IV-TR;APA, 2000).

Gender of Teen	Valid Percent
Male	75.6
Female	24.4

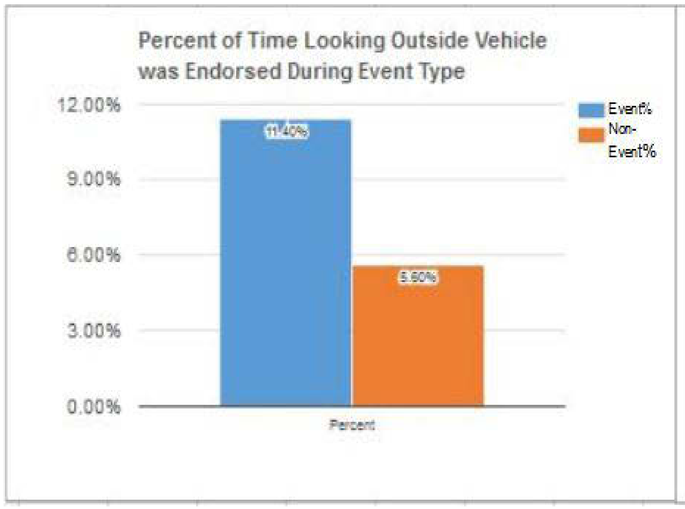
Ethnicity of teen	Valid Percent
Hispanic	2.2
Non-Hispanic or Latino	97.8

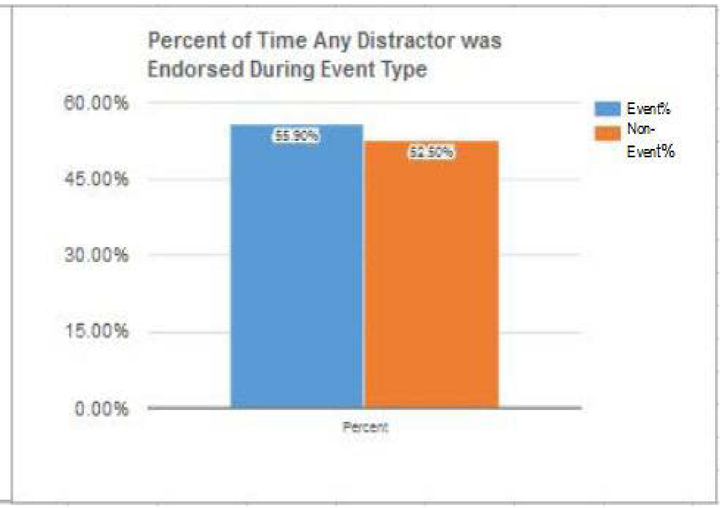
Race of Teen	Valid Percent
Black or African American	13.3
White	82.2
More than 1 race	2.2
Other	2.2

Teen Ages	N	Mean (SD)
Age at Permit	42	16.39 (0.55)
Age at Licensure	45	17.36 (0.65)
Age at Assessment	45	0.66

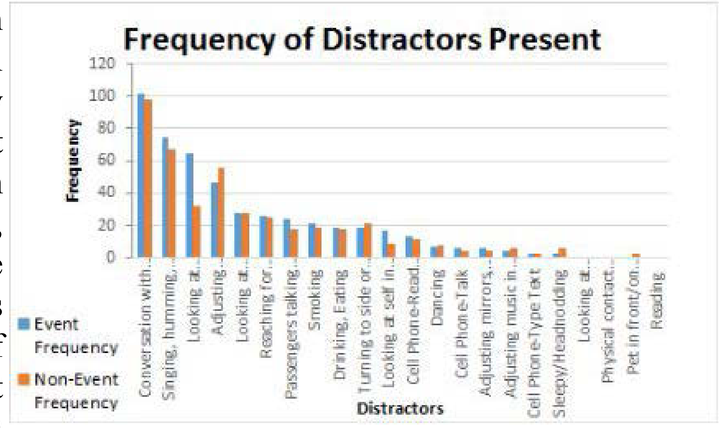
Materials: When turned on, the T-Eye device continuously records the view inside of the vehicle, as well as the driver's view of the road via the front windshield, obscured views from the side of the vehicle and the driver's view of the back window. The T-Eye device also records the speed of the vehicle, direction of travel, and GPS coordinates (http://kcicommunications/com/mobile/teye.html). Undergraduate coders who were blind to whether the event was a risky or non-risky event reviewed the 30-seconds of video prior to the event occurring and coded whether a distractor was present. Inter-Rater Reliability analyses indicated that raters were able to reliably code the presence of distractors *(k*= .66).

Results: The percentage and frequency of the 22 distractors did not differ between events and non-events with the exception of the code "Looking at something outside of car/Rubbernecking."





Discussion: The presence of distractors in both events and non-events was low. While cell phone usage while driving was indeed a risky and distracting behavior, my results suggest that teenagers with ADHD are not engaging in frequent distracted behavior with cell phones, though it is still worth further research on the topic. The most significant behavior was "Looking at something outside of car/Rubbernecking." These findings suggest that driving programs for teenagers with ADHD should emphasize focus on the road ahead as opposed to the drivers external surroundings along with an emphasis on the usage of rearview mirrors. As distraction is a symptom of ADHD, it is critical that these distracted behaviors are taken into consideration in programs aimed at teaching not only teens with ADHD to drive, but teens without ADHD as well.



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