The Effects of Stress on the Driving Abilities of Paramedic Students

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Introduction—Previous research has demonstrated that stress has a negative impact on the performance of paramedics performing medical-related tasks. The driving abilities of the general population has been shown to be negatively impacted by acute stress, resulting in an increase in the number of critical driving errors performed. No literature was found that discussed the effects of stress on the driving abilities of paramedics.

Objective—To study the driving abilities of paramedic students in stressful situations.

Methods—Paramedic students underwent a driving ability assessment in a driving simulator before and after exposure to a stress-inducing medical scenario. The number and types of errors were documented before and after stress stimulus.

Results—A total of 36 students participated in the study. Following exposure to a stressful medical scenario, paramedic students demonstrated no increase in overall error rate compared to an assessment before the scenario. They did demonstrate an increase in three critical driving errors: failure to wear a seat belt (3 pre-stress vs. 10 post-stress, $p=0.0087$); failing to stop for red lights or stop signs (7 pre-stress vs. 35 post-stress, $p<0.0001$); and losing control of the vehicle (2 pre-stress vs. 11 post-stress, $p=0.0052$).

Conclusion—Paramedics are routinely exposed to acute stress during their working day, and this stress could increase the number of critical driving errors that occur. The results of this study demonstrate the need for further research into the impacts of stress on paramedics and highlight the potential need for increased driver training and stress management education to mitigate the frequency and severity of driving errors made by paramedics.

EDUCATIONAL ABSTRACTS

Peak Performance: How Education and Experience Affect Paramedic Readiness

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Introduction—Education and experience are strongly contested predictors of classroom performance and paramedic readiness. A 2017 paper found nursing students who only graduated high school performed significantly worse than students with a bachelor's degree. In contrast, a 2015 study showed an inverse relationship between years of experience and pass rates. This study sought to determine if education or years of experience related to paramedic readiness exam pass rates.

Methods—A retrospective review of paramedic student data from Fisdap, an online database for EMS and healthcare education, was analyzed for self-reported education and experience levels. Only students who attempted a paramedic comprehensive exam were included. A one-way ANOVA was used to determine association in variables in Fisdap paramedic exams pass rates (72.5% or better) among students with varying education levels and years of experience. Logistic regression models were fitted ($a=0.05$) using nominal predictor variables for education level (high school diploma/GED, associate degree, and bachelor's degree) and years of experience in the field (less than 1 year, 2–5 years, 6–10 years, or more than 10 years).

Results—According to this study, students with a degree are more likely to pass the readiness exam. The act of completion of the degree matters more than its level. Students with 2–10 years' experience are more likely to pass the readiness exam than students with less than 1 or more than 10 years' experience.

Conclusion—Predicting paramedic student readiness is important to program success. Paramedic programs might consider evaluating candidates' education and levels of experience before admission with the goal of selecting the best candidate for paramedic school, or consider setting experience and education requirements for entry.