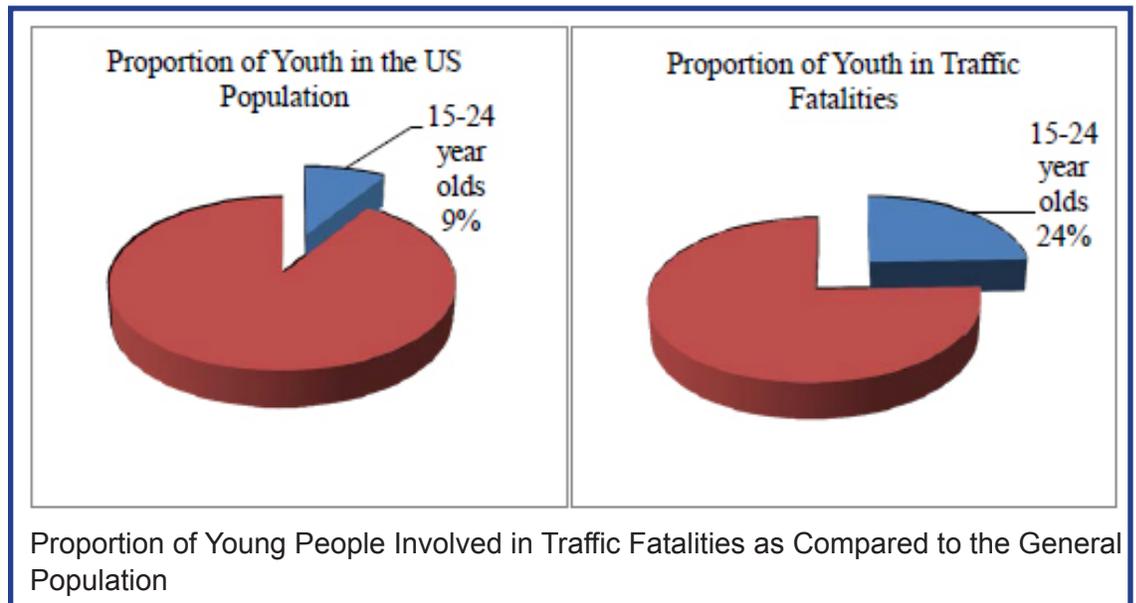


# Improving Safety of Teenage and Young Adult Drivers in Kansas

Report Number: KSU-10-6 • Publication Date: December 2013

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**TECHNICAL SUMMARY**



## Introduction

Statistics show that young drivers have higher motor vehicle crash rates compared to other age groups. This study investigated characteristics, contributory causes, and factors which increase injury severity of young driver crashes in Kansas by comparing young drivers with more experienced drivers. Crash data were obtained from the Kansas Department of Transportation. Young drivers were divided into two groups: 15–19 years (teen) and 20–24 years (young adult) for a detailed investigation.

## Project Description

Using data from 2006 to 2009, frequencies, percentages, and crash rates were calculated for each characteristic and contributory cause. Contingency table analysis and odds ratios (OR) analysis were carried out to identify overly represented factors of young-driver crashes as compared to experienced drivers. Young drivers were more likely to be involved in crashes due to failure to yield right-of-way, disregarding traffic signs/signals, turning, or lane changing when compared to experienced drivers. Ordered logistic regression models were developed to identify severity-affecting factors in young driver crashes. According to model results, factors that decreased injury severity of the driver were seat belt use, driving at low speeds, driving newer vehicles, and driving with an adult passenger. The models also showed that alcohol involvement, driving on high-posted-speed-limit roadways, ejection at the time of crash, and entrapment at the time of crash can increase young drivers' injury severity.

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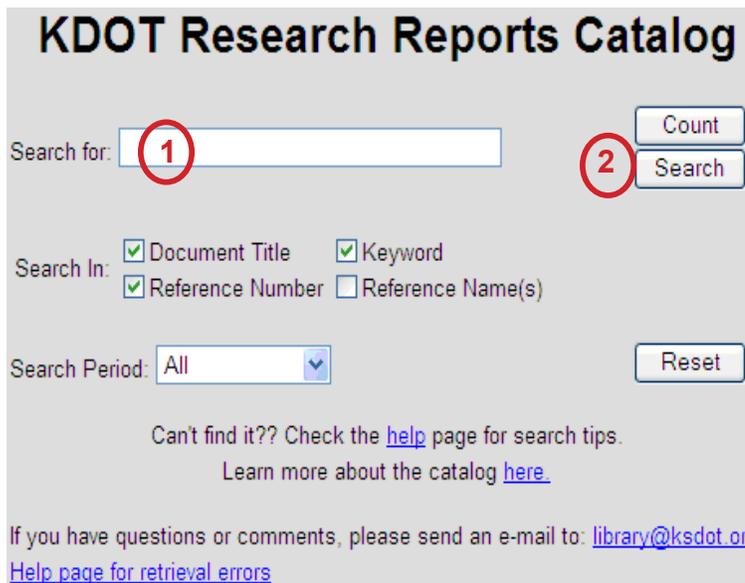
## Project Results

Based on identified critical factors, countermeasure ideas were suggested to improve the safety of young drivers. It is important for teen drivers and parents/guardians to gain better understanding of critical factors that are helpful in preventing crashes and minimizing driving risk. Parents/guardians should consider high-risk conditions such as driving during dark, during weekends, on rural roads, on wet road surfaces, and on roadways with high speed limits when planning teen driving. Protective devices, crash-worthy cars, and safe road infrastructures such as rumble strips and forgiving roadsides, particularly reduce young drivers' risk. Predictable traffic situations and low complexity resulting from improved road infrastructure are beneficial to young drivers. The effectiveness of Kansas Graduated Driver Licensing (GDL) system needs to be investigated in the future.

## Project Information

For information on this report, please contact Dr. Sunanda Dissanayake at the Kansas State University Transportation Center, 2128 Fielder Hall, Manhattan, Kansas 68506; 785.532.1540; sunanda@ksu.edu.

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