

Prevalence of impaired driving behaviors in a diverse, rural, southern middle school

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Abstract

Little research has been reported on the risky behaviors of pre-driving adolescents revolving around alcohol use, in particular impaired driving behaviors, which in general have been shown to be higher in rural areas. This study investigated the prevalence of drinking while driving and riding with a drinking driver among 290 middle school students in a Mississippi Delta area middle school. Just under half (45.3%) responded that at least once in the past 30 days they had ridden with a drinking driver and 17% indicated they had driven an automobile after drinking alcohol. The prevalence of underage drinking, driving under the influence of alcohol, and riding with a drinking driver among our sample of middle school students is alarming. This study shows alcohol-related driving behaviors are not solely performed by those who are legally licensed to drive, but simply by those who have access to vehicles. The authors recommend that prevention programs focusing on reducing the incidence of impaired driving should start in early adolescence.

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1. Introduction

A plethora of research exists documenting the risky driving behaviors of young people, including speeding, aggressive driving, and alcohol-related impaired driving. However, research investigating young adolescent drivers not old enough to obtain a driver's license is virtually nonexistent. Motor vehicle crashes remain the leading cause of death for adolescents 15 to 19 years

of age (National Highway Traffic Safety Administration, 2006), with alcohol use being a contributing factor in approximately 41% of all deaths in motor vehicle crashes (Substance Abuse and Mental Health Services Administration, 1999).

Young adolescent drivers have been identified by some researchers as those licensed and unlicensed drivers under the age of 19 (Hanna et al., 2006). More specifically, many young unlicensed adolescent drivers are ineligible, typically due to age, to obtain a driver's license but still operate a motor vehicle (Hanna et al., 2006). Although there are no national rates for unlicensed teen driving, studies have shown evidence that up to 57% of 15 year olds and 10% of 16 year olds did not have a license at the time of a fatal crash (Williams et al., 1997). One study investigating crashes involving 7–14-year-old drivers found that between 1996 and 2000 an alarming 378 crashes involved fatalities. These crashes accounted for 436 fatalities, most of whom were 2–14 years of age (Frisch et al., 2003). The prevalence of unlicensed adolescents who drive motor vehicles, as well

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as engage in associated risky behaviors, warrants examination because adolescents who drive before they are legally licensed are at increased risk of accident involvement upon licensing (Hanna et al., 2006). Furthermore, the use of alcohol increases the risk for fatal crash involvement, particularly for those under the age of 21 (Zador, 1991).

Adolescents who start drinking at an earlier age are more likely to drink and drive, as well as have a higher risk of being involved in a motor vehicle crash (Hingson et al., 2002). Perhaps this is because of the compounding effect of risky behaviors. Jessor's Problem Behavior Theory emphasizes that although one behavior – such as drinking alcohol – may be the focus of study, often this behavior is interrelated with other dangerous activities, such as risky driving behavior (Jessor and Jessor, 1977). Focus on risky behaviors beginning in middle school has come to the forefront because of the belief that this stage in life is the primary initiation period for substance use (Johnston et al., 2006). Lifetime alcohol consumption in middle school children has been reported to be as high as 36.7% for sixth graders and 65% for eighth graders (Whalen et al., 2006). One study found that 8% of seventh graders and 17% of eighth graders reported binge drinking at least once in the past 12 months (Guilamo-Ramos et al., 2005). Even though alcohol use among adolescents has decreased in the past few years, nearly three-fourths reported ever having one or more drinks at least once in their lifetime (Eaton et al., 2006). Moreover, over 40% of these adolescents had consumed alcohol at least once in the past 30 days, and at least one-fourth had consumed five or more drinks during that same time (Eaton et al., 2006).

Decreases have also occurred in the prevalence of adolescents riding with a driver who had been drinking, and those who drove after drinking alcohol. Even though prevalence of these risky motor vehicle behaviors decreased over a 12-year period from 1991–2003, 2005 data indicate nearly 30% had ridden in a car with a driver who had been drinking, and 10% had actually driven after drinking alcohol (Eaton et al., 2006). Early initiation of alcohol has been found to be a predictor of increased use of alcohol, and participation in risky driving behaviors before the age of 21 (Zakrajsek and Shope, 2006).

Although a significant problem, little research has been reported on the risky behaviors of early adolescents revolving around unlicensed driving, including the impact of alcohol use. Risky behaviors in early adolescence may predict subsequent perilous conduct in late adolescence and adulthood (DuRant et al., 1999; Wilson et al., 2002). Therefore, an important prerequisite in primary prevention is to understand the origins and precursors of risky driving behaviors, such as alcohol use. Early alcohol use has been associated with alcohol-related driving offenses (Zakrajsek and Shope, 2006). A study investigating why adolescents aged 15 years and younger ride with drinking drivers reported that as much as 69% of the pre-driving youth in the study sample had been a passenger at least once in a vehicle with someone who had been drinking. Further, 21% or more rode at least once in the past month with a driver who had been drinking (DiBlasio, 1988).

Driving after drinking alcohol and riding with a driver who had been drinking have been shown to increase the chances of

motor vehicle crashes, and in turn, injury and death (Zador et al., 2000). The prevalence of driving after drinking is higher among males, whites, and youth living in a rural area (O'Malley and Johnston, 1999). The National Highway Traffic Safety Administration National Center for Statistics and Analysis (NHTSA) reported that, among young drivers involved in automobile crashes, 26% of males compared to 12% of females had been drinking alcohol at the time of their accident (NHTSA, 2004). Also, among 15 to 20 year-old drinking drivers involved in fatal crashes, three-fourths were not using seat belts (NHTSA, 2004). Although there has been less research on riding with drinking drivers compared to driving after drinking, this subject raises concern, particularly in younger teens. Those who drink and drive are also more likely to ride with a drinking driver; but those who ride with drinking drivers may not necessarily drink and drive (Yu and Shackel, 1999).

Driving after drinking continues to be problematic for adolescents, especially in rural areas, because early alcohol use and risky behaviors may be more prevalent in those areas (Felton et al., 1999; O'Malley and Johnston, 1999). Adolescents living in rural populations have challenges that are quite different from those of their urban and suburban counterparts. According to the National Center on Addiction and Substance Abuse at Columbia University, eighth graders in rural America are more likely to use crack cocaine, smoke marijuana, drink alcohol, and smoke cigarettes, relative to their urban counterparts (National Center on Addiction and Substance Abuse at Columbia University, 2000).

Even though studies have shown that alcohol consumption is prevalent among youth attending middle schools, research on the resulting impact of behaviors involving motor vehicles is limited. If substantial numbers of middle school aged children drink alcohol and substantial numbers engage in underage driving, it seems plausible to hypothesize that some of them may be combining these two risky behaviors. Further, consistent with the Jessor's Problem Behavior Theory, risky driving behaviors in early adolescents may be starting earlier because of the desire for peer acceptance, respect, establishing autonomy from parents, and challenging the social norms of society, in an attempt to transition to pre-adult status (Jessor, 1991). It is imperative that these risky behaviors be highlighted in the middle school environment to reduce negative consequences and to decrease the chance of injury and death as these children experiment outside the boundaries of adult supervision. This study investigates the prevalence of driving after drinking alcohol and riding with a driver who had been drinking among children in a rural Mississippi middle school. The authors further examine demographic and behavioral factors that may be related to automobile use in an environment of alcohol consumption.

2. Methods

2.1. Characteristics of the student population

One school was selected because of limited resources and the similarity between its student population and the population in the Mississippi Delta region—high poverty rate, low high

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