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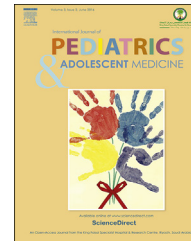


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ORIGINAL RESEARCH ARTICLE

# Attitudes and behaviors towards risky driving among adolescents in Saudi Arabia



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## KEYWORDS

Risky driving;  
Saudi Arabia;  
Adolescent;  
School setting;  
Road traffic accidents

**Abstract** *Background and Objectives:* The main objective of the paper is to investigate perceptions and attitudes of school youth concerning risky driving behaviors (i.e.: Tafheet) in Saudi Arabia.

*Design and Setting:* This was a school-based cross-sectional study of adolescents in Riyadh that employed a multistage probability sampling scheme.

*Subjects and Methods:* The self-administered survey included questions adapted from the school-based studies conducted by the Centers for Disease Control and Prevention in the United States. The survey inquired about adolescents' behaviors and attitudes toward driving, perceptions of school and family, and leisure time activities.

*Results:* Nearly 40% of the students surveyed reported engaging in the risky driving behavior called Tafheet. Fifty-one percent of those who engage in dangerous activities also reported engaging in Tafheet. A higher proportion (70%) among those who believe Tafheet is a talent or a cool activity also engaged in Tafheet. Multivariate analyses indicate that students who are willing to engage in dangerous activities even when they are known to be dangerous (OR = 2.7; 95% CI = 1.55–4.72), those who think there is no harm in not wearing seat belts are at higher speeds (OR = 2.77; 95% CI = 1.24–6.21), and those who use a mobile telephone while driving are nearly three times (OR = 2.96; 95% CI = 1.41–6.23) at risk for engaging in Tafheet. Lack of respect towards traffic laws is also a risk factor.

*Conclusion:* Our study unequivocally points to pro-attitudes and behavior including a daring personality, not wearing a seat belt and using a mobile telephone while driving are significant factors associated with risky driving activity. Our study calls for a strategic intervention plan to

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change the culture of risky driving through a structured and stringent driving curriculum in school settings. A curriculum of this nature is currently non-existent in the Kingdom of Saudi Arabia (KSA). Multilevel and multifaceted interventions may hold great promise in reducing unintended motor vehicle injuries and changing the culture as a whole.

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## 1. Introduction

Motor vehicle accidents are the leading cause of death in adolescents and young adults worldwide. According to the Centers for Disease Control and Prevention [1], unintentional injuries related to motor vehicle accidents are consistently the leading cause of mortality from ages 5 through 24 in the United States. Road traffic accidents (RTAs) are a major public health concern worldwide that have resulted in nearly 1.24 million deaths and 20–50 million non-fatal injuries. RTAs are also ranked as the ninth-highest cause of disability-adjusted life years (DALY) lost, and they are estimated to rise by one-third by 2020 [2].

According to the 2013 World Health Organization (WHO) report, there are only 19 countries in the world with higher per capita road traffic death rates than the Kingdom of Saudi Arabia (KSA), where nearly one person is killed and four are injured every hour on average [2]. Excessive speed and disobeying traffic signals cause over 65% of traffic accidents, which result in considerable economic losses to victims, their families, and to nations as a whole [3]. RTAs are the second-greatest public health concern in the Kingdom, as they contribute to emergency and outpatient hospital admissions and are responsible for a yearly estimated loss of 500 million U.S. dollars [4]. In a recent review article, Mansuri et al [5] reported that over the past 25 years, RTAs accounted for 83.4% of all trauma admissions. Nearly 80% of total accidents are primarily due to speeding and non-compliance with right-of-way rules by drivers and pedestrians [6].

According to WHO [7], Saudi Arabia has the world's highest number of deaths from RTAs per capita. Road traffic accidents are now the primary cause of death, injury, and disability in adult males aged 16–36 years in the Kingdom and result in significant health care costs. For example, the cost of treating people injured due to road traffic crashes during 2002 was estimated at 652.5 million Saudi riyals (US\$ 174 million). According to recent estimates, the traffic accident death rate (age adjusted) in Saudi Arabia is 23.2 per 100,000 [8]. According to the Director of the General Directorate of Traffic, there were more than 544,000 accidents in Saudi Arabia during 2011, resulting in more than 39,000 injuries and 7153 deaths. Three-fourths of these accidents involved young people. Moreover, RTA losses amounted to more than 80% of the deaths and 7 billion in economic losses every year [9]. On average, 17 Saudis, primarily male, die on the roads each day. Furthermore, road traffic victims occupy one-fifth of hospital beds, with the majority of victims requiring long-term rehabilitation [10].

The number of road deaths per year has risen during recent years to a rate equal to an average of 19 deaths per day [5]. The most common human factors contributing towards traffic accidents include speeding (in 65% of accidents), driver error (in 80% of accidents), violation of traffic signals at intersections (in 50% of accidents), and illegal U-turns. Other causes are related to vehicles, the road, and the environment (e.g., road layout, which contributes to 20% of accidents) [11]. Excessive speeding was the most common cause reported in all recent and past studies. Driver error was identified as the main contributing factor in about two-thirds of all RTAs, mainly characterized as reckless driving and excess speeding [5,12].

Attitudes and behaviors in general are founded very early in life and are crucial for safe driving behavior. Adult role models and certain cultural factors may promote risky behaviors that contribute to unintentional injuries that result in premature death or lifelong impairment. Many young men in the Arab world treat driving like a hobby or a sport. It is not unusual to see teenage boys participate in "Saudi drifting" with a crowd of spectators, for example. The major objective of the paper is to examine attitudes and behavior that encourage risky driving called "drifting" among Saudi youth. The capital, and the actual birthplace of the "Arab Drift" (called "Tafheet" or "Hajwalah" in Arabic) is Riyadh. The combination of good roadways and fine desert sand give the drifter the sensation of driving on water rather than asphalt. Such thrill-seeking behavior is very alluring to young Saudi males. Many of them adopt "Tafheet" as their leisure-time activity, usually during weekends and late nights. Tafheet is an illegal street racing phenomenon that emerged in the late 1970s that involves trying to "drift" a motor vehicle at speeds of up to 260 km/h (160 mph) across wide highways. Racers often drive dangerously close to traffic at high speed or slide around on a wide flat straight road section at high speed, drifting sideways and ignoring road barriers. This activity often attracts spectators, who watch from the roadside without any protection. Tafheet practices and events occur with little to no concern for the safety of vehicle occupants, other drivers or spectators. Tafheet events are commonly seen on the wide-sectioned highways of Riyadh, Al-Qassim Province, and less notably in other parts of Saudi Arabia [12]. Because they occur in a secretive manner, there seems to be no police records or documentation by highway authorities regarding these events.

To date, no research studies have investigated youth attitudes favoring risky driving behaviors (pro-attitudes),

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