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Original Research

Knowledge, attitudes, and practices around drinking and driving in Cambodia: 2010–2012☆

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ABSTRACT

Objective: Road traffic injuries are a leading cause of disability and death in Cambodia. Economic development has long been associated with rapid increases in road traffic injuries and fatalities. Drink driving is of particular concern in Cambodia. In 2014, the percentage of fatal crashes involving alcohol rose to 17.5% (n = 381), representing a 34.9% (n = 253) increase from 2012. This study aims to illustrate current knowledge, attitudes and practices (KAP) around drinking and driving in three Cambodian provinces.

Methods: A roadside survey of randomly selected road users (aged 18 years and older) was conducted in Phnom Penh, Kandal, and Kampong Speu, Cambodia, between November 2010 and May 2012. Data were collected for five-day periods every 6 months. A survey was administered to assess prevailing knowledge, attitudes, and practices surrounding drink driving.

Results: A total of 1187 road users responded to the KAP survey, the majority (49.6%, n = 585) of whom were from Phnom Penh. Males accounted for 96.2% (n = 1142) of respondents; the majority (63.8%, n = 757) were aged 34 years and younger. Despite the belief that drinking and driving would increase the risk of a crash, a significant proportion of respondents (37.1%, n = 438) reported driving within 2 h of drinking alcohol at least once in the 30 days preceding the survey. This proportion was particularly high among males aged 25–34 years at 49.2% (n = 208). Of those who reported drinking and driving, 76.5% (n = 335) indicated they 'felt conscious enough' to drive at the time and 34.0% (n = 149) reported having 'no other available transportation options'.

Conclusions: This study shows that, in general, drinking and driving remains a problem in Cambodia. A multi-pronged, coordinated approach is needed to effectively address this issue. Such an approach ought to include social marketing and public education campaigns, enhanced enforcement, and programs that either limit the number of drinks to drivers or those that provide alternatives to drinking and driving.

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Introduction

Road traffic crashes result in an estimated 1.40 million fatalities annually, constituting the fifth leading cause of death globally.[1] An additional 20–50 million individuals suffer nonfatal road traffic injuries (RTIs), which commonly result in disability.[2] Accordingly, from 1990 to 2013, RTIs increased by 13.3% from the ninth to the seventh leading cause of disability-adjusted life years globally (from 64.6 million to 73.3 million) and now account for the largest proportion (29.6%) of the global injury burden.[3,4]

Southeast Asia, East Asia, and Oceania accounts for approximately 32.7% ($n = 456,077$) of global road traffic mortality.[15] In Cambodia, the proportion of morbidity and mortality attributable to RTIs continues to increase. Over the 8-year period from 2005 to 2013, the number of road traffic fatalities has more than doubled from 1662 to 3657, respectively, whereas the population size and number of registered motorized vehicles has increased by roughly 10% and 231%, respectively.[5–7] Consequently, the road traffic fatality rate also increased by 91.2%, from 6.8 per 100,000 population in 2005 to 13.0 per 100,000 population in 2013. According to the Road Crash and Victim Information System, in 2013, there were 16,654 road crashes, resulting in 1950 deaths and 13,468 injuries. Young adults (15–29 years) were disproportionately affected, with 49.0% of mortality due to RTIs occurring among this age group.[6]

Numerous studies implicate alcohol as a major risk factor for road traffic crashes, as well as traumatic outcomes including death or disability of individuals at relatively young age.[8–13] Substantial evidence suggests that alcohol impairs judgment and increases the possibility of engaging in other high-risk behaviors, such as speeding and violating traffic rules.[14–20] It also affects vision, makes identifying risks and potentially dangerous situations in the road environment more difficult, and delays reaction time to both light and sound.[11] Although the rates and methods of assessing the prevalence of drinking and driving differ across countries making meaningful comparisons difficult to make, alcohol remains a universal risk factor for road traffic crashes.[9] The WHO estimates that, in high-income countries, approximately 20% of drivers in fatal crashes had blood alcohol contents above the legal limit. In low-income countries, the proportion of fatal crash crashes involving an alcohol-impaired driver range from 33% to 69%.[21] Furthermore, in an older review of 26 epidemiological studies of RTIs in the context of developing countries, Odero et al.[8] reported that nearly one-fifth to one-third of crashes occur at night, and the majority of the observed crashes were associated with high rates of alcohol consumption among drivers, in combination with poor visibility and greater traffic density.

Cambodia ranks 114th in the world in alcohol consumption and is higher than many Southeast Asian countries (e.g. Indonesia: 0.59 L/person; Singapore: 1.55 L/person).[9] Between 2008 and 2010, the average adult (over 15 years of age) per capita consumption of pure alcohol in Cambodia was 5.5 L (L), as compared with 4.6 L per person in 2003–2005.[9] On average, the per capita alcohol consumption among males (9.6 L/person) far exceeds that of females (1.7 L/person) as well as the global average (6.6 L/person).[9] A 2010 WHO survey of Cambodians aged 25–64 years also found that almost two-thirds consumed alcohol and that males were 2.4 times more likely to be current drinkers and ten times more likely to have engaged in heavy episodic drinking in the past 30 days, as compared with their female counterparts.[22]

In Cambodia, drunk-driving is second only to speeding as a major risk factor for road crashes and casualties.[6,7] It is estimated that 16% of road traffic deaths are attributable to alcohol in Cambodia.[23] From 2012 to 2014 alone, the proportion of alcohol-impaired road traffic fatalities increased by around one-third, from 12.9% in 2012 to 17.1% in 2014.[7] Among at-fault motorcyclists, this proportion increased to 30.9%. It is also worth noting that in crashes attributed to unsafe speed in Cambodia, 12.0% of at-fault drivers were also suspected of driving under the influence of alcohol.[6]

In light of the considerable evidence on the link between alcohol, impairment, and crash risk, it is critical that action is taken to develop programs and policies that address the factors influencing the decision to drink and drive in the Cambodian context. This study represents a first step in this process, as it aims to develop a better understanding of the knowledge, attitudes, and practices (KAPs) around alcohol use and drinking and driving in three provinces in Cambodia. It will help guide the enforcement of existing alcohol legislation or develop more targeted social marketing and public education campaigns in the country. Moreover, we hope this study stimulates strong action to reduce the impact of alcohol.

Methods

Roadside surveys were conducted between November 2010 and May 2012 with the objective of capturing road users' KAPs regarding road safety, alcohol use, and drink driving. This was done by surveying randomly selected road users (18 years of age and older) at gas stations or rest areas in 14 districts in the study provinces: Phnom Penh ($n = 4$), Kandal ($n = 6$), and Kampong Speu ($n = 6$). Province selection was determined based on the criteria established under the Road Safety in 10 Countries project funded by Bloomberg Philanthropies.[24]

In each province, the study employed a multiphase sampling strategy with gas stations and rest areas as the primary sampling unit. The first phase entailed road selection, where all roads in each province were listed and categorized as national or provincial roads. Roads without a gas station or rest stop were excluded due to concerns for the safety of participants as well as the interviewers. In the second phase, gas stations and rests stops located on the roads listed in each province were identified for inclusion. Given that road user behavior may change depending on the type of road being used, all road types were represented (highway, secondary roads, city roads, and rural roads). In the final phase, road users were randomly selected for participation. One road user was selected for surveying at the beginning of each time block and every tenth road user thereafter. Informed consent and agreement to participate were obtained at the study sites.[25]