Exploring the influences of country-level factors on mid-age women’s drink driving attitudes

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Abstract

Background
Drink driving remains a major cause of serious and fatal car crashes in Australia and internationally. While this problem is more prevalent among male drivers, the rates of female intoxicated drivers have increased steadily over the past decades in many motorised countries. A combination of police enforcement, media awareness campaigns, and community initiatives has played a key role in reducing incidents of illegal drink driving by targeting public drink driving attitudes. However, important cultural differences in regards to the tolerance towards drink driving have been noted. While many countries, including Australia, have a legal Blood Alcohol Concentration (BAC) limit of .05 or higher, some countries have moved towards a zero –or low tolerance approach to drink driving; several European countries, including Sweden, Hungary, Slovakia, and Estonia currently enforce .00 or .02 BAC limits.

Aim
The current study aimed to increase the understanding of women’s attitudes towards drinking before driving by exploring the impact of country-level differences in BAC-levels and tolerance towards drink driving.

Methods
Semi-structured interviews were conducted with a convenience sample of Australian (n = 15) and Swedish (n = 15) mid-aged women, a group that has received little prior research attention. Thematic analysis explored participant’s knowledge and attitudes towards drink driving.

Results
Several key themes were developed from the data including women’s understanding of the relationship between alcohol consumption and BAC levels, the effect of alcohol on driving ability, views of the legal BAC limit in each country, cognitive disassociation between alcohol and driving, and the morality and ethical implications of drink driving.

Discussion and conclusions
Findings illustrate that women’s attitudes towards driving while intoxicated are influenced by country-level BAC and tolerance towards drink driving. Implications for road safety are discussed. Future research may expand on the knowledge of women’s drink driving attitudes by conducting cross-cultural studies with broader samples of women.

Introduction
Drink driving is a serious road safety problem in many parts of the world, with around 20% of fatal crashes in high income countries involving a driver under the influence of alcohol (Global Road Safety Partnership, 2007). Alcohol consumption impairs a range of cognitive, motor, and behavioural functions that are essential to driving (Ogden & Moskowitz, 2004)
and is linked to both crash risk and injury severity. The relationship between BAC level and the probability of being involved in a crash was first quantified in the 1964 Grand Rapids Study. Findings from this study and others like it showed that a significant increase in crash risk occurs at a BAC of around 0.04 and continues to rise exponentially as consumption increases (Blomberg, Peck, Moskowitz, Burns, & Fiorentino, 2009). Significant impairment at BAC levels less than 0.04 has, however, been noted in other research (e.g., Ogden & Moskowitz, 2004).

Most alcohol-impaired drivers are male, a pattern which holds true in many, if not all, parts of the motorised world. However, the past decades have seen an increase in female drink driving rates (e.g., Robertson, Liew, & Gardner, 2011; Wylie, 1995), often paralleled by a stabilisation or decrease in male drink driving rates (Tsai, Anderson, & Vaca, 2010). Several reasons for women’s increased involvement in drink driving have been suggested, including increases in driving exposure, alcohol consumption, and risk taking behaviour (Robertson et al., 2011; Roche & Deehan, 2002). Regardless of the cause of women’s alcohol-impaired driving, these changes necessitate a move away from the view that drink driving is predominantly a male problem.

In the current study, drink driving behaviours and attitudes will be examined among mid-aged women in Australia and Sweden. This group has previously received little attention from researchers, although they comprise a substantial proportion of female drink driving offenders. In Sweden, Jones and Holmgren (2009), found that the average age of female drink drivers who provided venous blood sample between 2000 and 2007 was 41.8 years (SD = 13.6). In Queensland, Australia, analysis of drink driving detections from 2000 to 2011 show that women aged 40-49 years make up 18.4% of all female cases, only rivalled by women aged 30-39 (24.7%) (Armstrong, 2013).

In addition to increasing the knowledge of mid-aged women’s approach to drink driving, the current study sought to discern cultural differences in drink driving attitudes and behaviours among the participants. In particular, the impact of different BAC levels for legally permissible driving was examined. While the general trend over the past decades have been towards a lowering of the BAC, differences still exist. A range of countries and jurisdictions have adopted limits of 0.05 to 0.08, while others have taken a zero or near zero-tolerance approach to drink driving with BAC limits of either 0.00 or 0.02. Research indicates that lowering BAC levels decreases crash rates (Hingson, Heeren, & Winter, 2000), however, it is likely that part of this reduction can be attributed to increases in enforcement and public awareness of drink driving that often accompany changes to BAC levels (e.g., Mann et al., 2001; Nakahara & Ichikawa, 2011).

Australia and Sweden
The BAC limit in Sweden has been set at < 0.02 since 1990 and at < 0.05 in the Australian states since the 1980s and 1990s. Based on cases with known BAC in 2008, around 29% of fatally injured Australian drivers had a BAC equal to or above 0.05. In 2012, almost 18% of all killed drivers with known BAC in Sweden were recorded with a BAC above the legal cut-off (Trafikanalys, 2013).

Methods
The findings presented here emerged from the qualitative component of a larger study investigating drinking culture among Australian and Swedish women. The qualitative component was guided by an ethnographic methodology and data collection was conducted through a series of telephone and face-to-face interviews.
Participants
A convenience sample of 15 mid-aged women (range 45-58 years) was interviewed in each country. All participants completed the Alcohol Use Disorders Identification Test (AUDIT), a 10-item survey designed to assess levels of harmful or hazardous drinking. The average age of the Swedish women was 52.5 years ($SD = 4.8$) and the majority were married or in a relationship ($n = 10$). The average age of the Australian women was 52.2 years ($SD = 3.4$), with 10 women being married or living in de-facto relationships. Three Swedish women and five Australian women scored above the cut-off for risky drinking on the AUDIT$^1$.

Materials
All interviews were guided by a semi-structured protocol containing questions such as “What are your thoughts on the current legal limit for drink driving in Australia/Sweden (should it be lower or higher)?” and “Do you believe that driving experience can mitigate the effects of alcohol on driving ability?” The AUDIT was used as it has demonstrated high cultural applicability (Saunders, Aasland, Babor, Fuente, & Grant, 1993) as well as strong psychometric properties (Reinert & Allen, 2007). A total score of $\geq 6$ was used to classify risky drinkers as this cut-off has been found to yield optimal levels of sensitivity and specificity among mid-aged women (Aalto, Tuunanen, Sillanaukee, & Seppä, 2006).

Procedure
Interviews in Sweden were conducted either face-to-face or by telephone, however, all interviews in Australia were conducted by telephone. Prior to the interviews, participants in both countries were greeted and given an overview of their participation. The researcher stressed that the interviews were confidential and that honest responses were valued. The AUDIT was administered to participants after the completion of the interviews. All interviews were recorded and transcribed verbatim.

Data analysis
Interview transcripts were thematically analysed. Meaning units were identified, coded, and categorised. As the analysis progressed, categories were continuously renamed and modified to ensure they reflected the increasing number of codes. Finally, categories were organised into broader themes allowing general patterns in the data to emerge.

Results
Several similarities were uncovered between the two groups. Reflecting broader public sentiments, women in both samples viewed drink driving as morally wrong and inexcusable, often citing the risk alcohol-impaired drivers posed to other ‘innocent’ road users. While about half of the sample in each country believed that driving experience could mitigate some of the impact of alcohol on driving ability, this was not seen as an excuse to drive with BAC levels above the legal cut-off. Among Australian women in particular, the negative attitudes toward drink driving was couched within a broader culture of responsibility and caution that reflected their age as well as their roles as women and mothers. Two examples; “I think you become a bit more of a citizen, you know, you get a bit older and it’s not all about you, it’s also about living in a society that has some sort of standards” (Participant A, risky drinker) and “I think us women who are mothers become very cautious” (Participant O, risky drinker). Several women in both countries described how, at their age and among their

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$^1$ Swedish version of the AUDIT defines standard drinks as 12g of pure alcohol while the Australian version uses a 10g definition. This might bias results towards fewer identified risky drinkers in the Swedish sample.
friends, they were expected “... to do the right thing” (Participant H, risky drinker) in terms of drink driving and that they themselves would be willing to intervene to stop a friend from driving if they thought she was over the legal BAC. Among the Swedish women, removing the drivers’ keys or calling the police were mentioned as potential strategies; “If I knew that anyone, for instance, was, was under the influence of alcohol and got in the car I would call the police straight away” (Participant 1, low-risk drinker).

While several behavioural and attitudinal similarities were found between the two groups, further analysis revealed that many of these similarities were superficial. Most significantly, the majority of the Swedish women appeared to view drinking and driving as two separate activities; “Either you drive or you drink” (Participant 8, low-risk drinker). While the lower BAC placed limits alcohol consumption in driving situations, this was not the only reason behind these attitudes. Many women expressed a strong cognitive disassociation between drinking and driving, two examples; “... if you are going to drive you should absolutely not drink. Not even half a glass” (Participant 3, low-risk drinker) and; “I think it is natural not to drive a car in those situations” (Participant 4, low risk drinker).

The majority of Swedish women displayed poor knowledge regarding the level of alcohol that can be legally consumed before driving. When asked to discuss their opinions of the current BAC limit many of the women sought information from the interviewing researcher in order to construct their argument. For instance; “Don’t know, zero point two [sic] how much would you be able to drink then? I don’t know where it, what the limit is, is it one beer or...?” (Participant 5, risky drinker). A further few women appeared to significantly over-estimate the impact of alcohol consumption on BAC levels. For instance, one woman described how spotting a police van while driving had made her concerned about a mid-strength beer she had consumed the previous night. Thus, the restrictions placed on driving after drinking by the Swedish BAC limits, the relatively low levels of knowledge regarding the impact of alcohol consumption on BAC levels and, importantly, the cognitive disassociation between drinking and driving prompted the majority of the Swedish women to take an either or approach to drinking and driving.

Among the Australian women, safe and morally defensible driving was more closely linked to the BAC limit enforced in Australia. Rather than abstaining the majority of women chose to place limits on their alcohol consumption, often applying different variations of the ‘one glass rule’ to ensure a legal BAC level when driving. However, several of the Australian women spoke of a ‘Grey Zone’ that denoted instances when they, or their friends, had driven while potentially over the BAC limit. Speaking of her female friends, one participant related that; “Um, they won’t be much over but, you know, they won’t be much over but, in my mind, they will be over, yeah” (Participant F, low-risk drinker). Another woman described a similar situation; “And then there’s sort of decision and you know, I know I do occasionally, I’m only allowed to have two, but I have had three but I will drive, yeah” (Participant H, low-risk drinker). This reveals an interesting paradox as, for some women, ‘Grey Zone offending’ did not appear to challenge their self-image as responsible drivers. One example:

“. . . and I still think that we take risks from time to time and get in a car, yeah. But generally, generally I think I feel myself and most of my friends are very, very wary about getting in a car after they’ve been drinking.” (Participant C, risky drinker)

While not seen as ideal, it is possible that instances of ‘Grey Zone’ drink driving was viewed differently from ‘actual’ drink driving, an act that was morally indefensible. Driving while ‘just over the limit’ might not have been conceived as reckless enough to contradict the broader culture of responsibility and caution many of the Australian women ascribed to. For
instance, one woman spoke of how in instances of Grey Zone drink driving, the prospect of being apprehended was a stronger deterrent than the risk of injuring other road users:

“...I’m really terrible, obviously I would hate to hurt somebody doing it, ah, but I’m really scared about going to the watch house laughs... I suppose I think it’s like if I did drink I would be, you know, just barely over the, barely over and I feel, I suppose I feel safe then” (Participant F, low-risk drinker)

Thus, the demarcation between alcohol consumption and driving was found to be less clear among Australian than Swedish women. This difference was further evident in the views held by the two samples in relation to current BAC limits. When discussing the current BAC in Sweden, all but one woman expressed opinions in favour of a zero-tolerance (i.e., BAC of 0.00) approach to drink driving. A few women believed that zero-tolerance would preclude drivers from taking a chance or that the approach was necessary as the impact of BAC levels on driving ability is contingent on variable factors such as a person’s tolerance to alcohol. However, while supporting a zero-tolerance approach, many of the interviewed women spontaneously stated that the current Swedish legal BAC was ‘very low’ and that a BAC around 0.02 might not critically impair ones driving ability. This was an interesting finding as it indicated that the Swedish sample were willing to forgo alcohol in the context of driving even at levels perceived to be relatively safe.

In contrast, the majority of Australian women thought the current Australian legal BAC to be ‘reasonable’. While believing that the limit should be kept at 0.05, a few women did, however, note that it was somewhat arbitrary, again referring to individual differences in the relationship between BAC and driving impairment. In addition, a few of the women spoke of the potential advantages of a zero-tolerance approach in terms of removing the ‘guesswork’ from driving after drinking. Nonetheless, the current BAC limit was generally seen as safe and appropriate. Lowering the limit or adopting a zero-tolerance approach was, by the majority of women, seen as impractical, impossible or even as a “prohibition type of situation which is anti-social” (Participant D, low-risk drinker).

Discussion

Women in both the Swedish and Australian samples held strong negative views of drink driving and experienced social pressure to abide by the legal BAC limit in their respective countries. However, the Swedish sample expressed a strong cognitive disassociation between drinking and driving and shared the opinion that the BAC limit could be lowered to 0.00. In contrast, driving after drinking (relatively) small amounts of alcohol was a regular part of social situations for the Australian women. Lowering the BAC limit was seen as impractical, impossible, or anti-social. While still regarding driving at illegal BAC levels as morally wrong, some women in the Australian sample occasionally drove although they might be close to, or potentially over, the legal BAC. This finding illustrates the different approach to drinking and driving in the two countries. Due to the mental separation between driving and drinking among the Swedish women, any alcohol consumption before driving was seen as ill-advised. Among Australian women, safe and morally defensible driving was often equated to a BAC level around the legal cut-off. Thus, beyond its practical implications for driving, lower BAC limits might also help foster a broader social environment where alcohol consumption and driving are thought of as separate activities. Future research is needed to substantiate these findings in broader samples of both men and women.

References


