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**REDUCING ALCOHOL-RELATED DRIVING ON CHINA'S ROADS:
TRAFFIC POLICE OFFICERS' PERCEPTIONS AND PRACTICE**

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ABSTRACT

Alcohol-related driving is a longstanding, serious problem in China (Li, Xie, Nie, & Zhang, 2012). On 1st May, 2011 a national law was introduced to criminalize drunk driving, and imposed serious penalties including jail for driving with a blood alcohol level of above 80mg/100ml. This pilot study, undertaken a year after introduction of the law, sought traffic police officers' perceptions of drink driving and the practice of breath alcohol testing (BAT) in a large city in Guangdong Province, southern China. A questionnaire survey and semi-structured interviews were used to gain an in-depth understanding of issues relevant to alcohol-related driving. Fifty-five traffic police officers were recruited for the survey and six traffic police officers with a variety of working experience including roadside alcohol breath testing, traffic crash investigation and police resourcing were interviewed individually. The officers were recruited by the first author with the assistance of the staff from Guangdong Institute of Public Health, Centre for Disease Control and Prevention (CDC). Interview participants reported three primary reasons why people drink and drive: 1) being prepared to take the chance of not being apprehended by police; 2) the strong traditional Chinese drinking culture; and 3) insufficient public awareness about the harmfulness of drink driving. Problems associated with the process of breath alcohol testing (BAT) were described and fit broadly into two categories: resourcing and avoiding detection. It was reported that there were insufficient traffic police officers to conduct routine traffic policing, including alcohol testing. Police BAT equipment was considered sufficient for routine traffic situations but not highway traffic operations. Local media and posters are used by the Public Security Bureau which is responsible for education about safe driving but participants thought that the education campaigns are limited in scope. Participants also described detection avoidance strategies used by drivers including: changing route; ignoring a police instruction to stop; staying inside the vehicle with windows and doors locked to avoid being tested; intentionally not performing breath tests correctly; and arguing with officers. This pilot study provided important insights from traffic police in one Chinese city which suggest there may be potential unintended effects of introducing more severe penalties including a range of strategies reportedly used by drivers to avoid detection. Recommendations for future research include a larger study to confirm these findings and examine the training and education of drivers; the focus and reach of publicity; and possible resource needs to support police enforcement.

1. INTRODUCTION

Alcohol-related driving is a longstanding, serious problem in China (Li, Xie, Nie, & Zhang, 2012). On 1st May, 2011 a national law was introduced to criminalize drunk driving, and imposed serious penalties including jail for driving with a blood alcohol level of above 0.08mg/100ml. There were 2664 serious traffic crashes and 930 fatalities in one large city with population 12.78 million in Guangdong province (hence referred to as "the city") in 2011 (Ministry of Public Security, 2012). There were a total of 4750 drink drivers detected in the city (that is, with a blood alcohol level between 20mg-80mg/100ml), among them 877 drunk drivers (that is, with a blood alcohol level 80mg/100ml or more) after the introduction of the amended law on 1 May, 2011 to 30 April 2012. This is quite high, even though the

annual rate of drink and drunk driving reportedly decreased by 56.3% and 70.13% respectively after the legislation (Kong, 2012). These data show that alcohol-related driving is still a critical problem for road safety in the city, even though numbers of detections are reported to have reduced.

Many of China's large cities are rapidly motorizing. For instance, by the end of 2011, the total number of motorized vehicles in China had reached 225 million, 13 times the 1991 level (Ministry of Public Security Transportation Management Bureau; 2012). The number of motor vehicles has increased by more than 300,000 per year in the last two years in the study city, and the length of sealed road has also increased, however the number of police officers (2000) has reportedly not changed for many years (Wang, 2011). The contrast between the rapid increase in number of vehicles and length of roads and the lack of increase in traffic police resources means that conducting BAT at high enough levels to deter inappropriate drink driving is challenging. This paper reports the results of a pilot study, undertaken a year after introduction of the law, on traffic police officers' perceptions of drink driving and the practice of alcohol breath testing in a large city. It explores traffic police practices in conducting BAT, the kinds of problem they encounter during routine BAT, and related resourcing issues.

2. METHOD

Semi-structured interviews and a questionnaire were used to gain an in-depth understanding of issues relevant to alcohol-related driving and enforcement in the city.

2.1 Interviews

Police officers from the city's Public Security Bureau were recruited with the assistance of the Guangdong Institute of Public Health, Guangdong CDC. Prior to the commencement of interviews, in keeping with ethical requirements of the Queensland University of Technology, information about the research aims and assurance of confidentiality of responses was given to participants. Six traffic police officers with a variety of working experience including roadside alcohol breath testing, traffic crash investigation and police resourcing were interviewed individually by the first author and one trained research assistant from the Guangdong Institute of Public Health.

Consent for audio-recording the interviews was not granted and extensive notes were taken during the interviews, all of which were conducted in Mandarin. In the following individual officers' comments are identified by number. Seven topics guided the open-ended questions; the topic areas are shown in Table 1.

Interview notes were typed by the first author, translated by a professional interpreter and then back-translated by a bilingual associate not connected with the research project to ensure accuracy of information for analysis. Participants were offered RMB 200 for their participation.

Table 1. Topics that guided open-ended questions for semi-structured interviews

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- Q1 Participant introduction, demographic information and description of responsibility for conducting BAT
 - Q2 Procedure used in conducting BAT and any problems encountered in the operation of BAT
 - Q3 Legislation on drink driving, effectiveness of current legislation and enforcement and how to improve them
 - Q4 Education and publicity about drink driving, and changes in public perceptions, especially after 1st May 2011
 - Q5 Joint responsibility for drink driving (police and other agencies)
 - Q6 Influence of Guanxi on the processes of conducting BAT and on imposition of penalties
 - Q7 Perceptions about reason for the decrease in numbers of alcohol-related driving detections and suggestions for reducing drink driving
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2.2 Survey

A total of 55 traffic police officers were recruited by the first author with the assistance of staff from the Guangdong Institute of Public Health the Guangdong CDC. The average age of survey participants was 40.1 years (range 25-52, SD: 7.7) and the majority were male (81.8%). Questions regarding traffic police officers' opinions on drink driving, enforcement policies and sanctions for drink driving were asked. Two trained research assistants from the Guangdong Institute of Public Health assisted with the survey. In line with ethical approval obtained from the Queensland University of Technology, participants were informed that completion of the questionnaire was entirely voluntary and anonymous and that all responses would be treated confidentially. Each participant was offered a tea bottle and a small towel to thank them for their participation. Data has been analysed by using SPSS (version 19).

3. RESULTS

3.1 Reasons for drink driving

Interview participants reported three primary reasons why people drink and drive: 1) being lucky and prepared to take the chance of not being apprehended by police; 2) the strong traditional Chinese drinking culture; and 3) insufficient public awareness about the harmfulness of alcohol-related driving. For example, one police officer noted that: *"half of them take a chance, especially those who are rich or have power within hand"*(P 5). Here, the officer was referring to his belief that many people seem willing to risk drink driving in the hope that they won't be detected and further, that those who are rich or have access to people with authority drink and drive because they believe they can avoid penalties if caught. In addition, another officer reported that: *"the public awareness on drink driving has increased (but) some people still persuade (others) to drink more, but this has been decreasing...(a) thousand years of drinking culture still deeply affects human behaviour today"*(P1). In the interviews, the police reported that from their experience, most drunk drivers (i.e., those above 0.08mg/100ml) were private enterprise owners, individual business owners, and were less likely to be public servants and public institute staff.

Table 2 summarises information from the survey (in contrast to the semi-structured interview results above) about what police officers believe to be the main reasons why people drink and drive.

Table 2. The main reported reasons why people drink drive

Reasons ^a	Number of responses
1. People think they are lucky (including that they won't get caught)	32
2. Strong social drinking culture in China	16
3. Insufficient public awareness about the harmfulness of drink driving	14
4. Lack of awareness of law	7
5. Penalties not severe enough	3
6. Seeking stimulation or excitement	3
7. Lack of trust in car parking places, don't want to leave car parked outside drinking areas.	2

^a Participants could offer more than one reason

3.2 Legal limit

All but one of the 55 officers surveyed reported knowledge that drunk driving became a criminal offence in May 2011. When asked to state the current lowest Blood Alcohol Concentration (BAC) level for the two offences of drink driving and drunk driving, the majority gave correct responses (51 and 48 officers respectively). Officers were asked whether they believed that the current BAC range for drink driving (0.02g-0.08mg/100ml) was appropriate; 36 (about two-thirds) agreed, 11 disagreed and 7 were neutral. For drunk driving, the responses were very similar: 38 agreed with the BAC limit of 0.08mg/100ml or more; 10 disagreed, and 5 were neutral. Interestingly, when asked if a person could drive safely if they had been drinking but their BAC were below the legal limit (<0.02mg/100ml), the responses were almost evenly divided: (27 Yes; 26 No; 2 Don't know).

Officers were asked their beliefs regarding the level of punishment for drunk driving (BAC >0.08mg/100ml) because there has been some debate in China about whether penalties should differ according to the circumstances of the driving incident. For instance, it has been suggested that if a person is caught drunk driving but is not involved in a crash, the penalty may be different than if the same person were to be involved in a crash that injured/killed others. Overall, 40 participants (almost three-quarters) reported agreement for punishment of drunk driving (BAC >0.08mg/100ml), even if no crash occurs. However, 9 officers disagreed.

3.3 First learn of the amended law

Survey participants were asked how they first learned about the 2011 changes of criminal law relating to the offence of drunk driving. Figure 1 presents the responses.

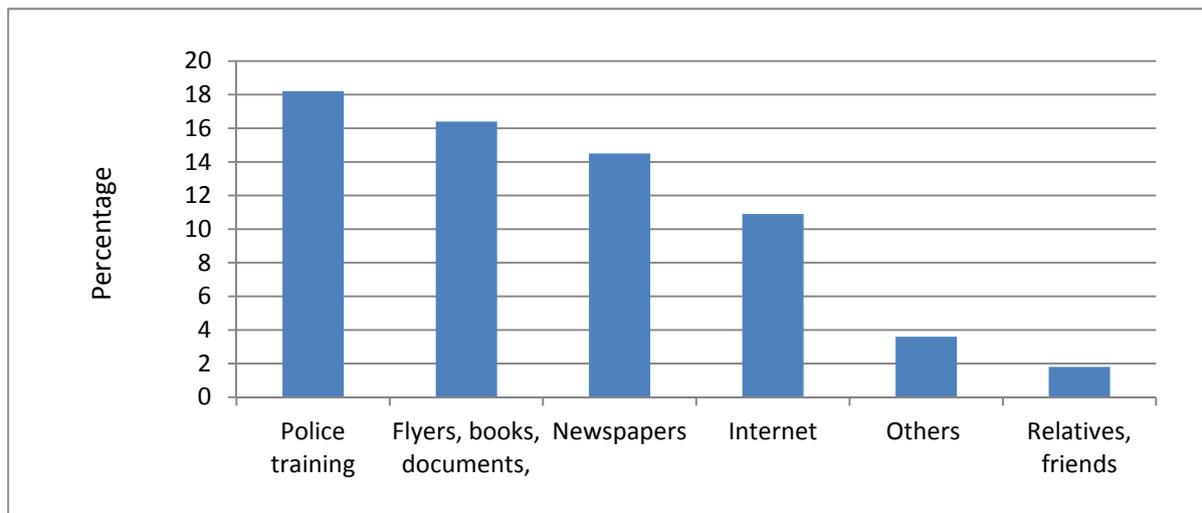


Figure 1. First source of information about the amended drunk driving criminal law

3.4 Drinking age

Survey participants were also asked their opinion about whether people under 18 years of age should not be allowed to purchase and consume alcohol. Three quarters agreed that they should not, although 8 participants disagreed and 6 gave a neutral response. Regarding whether novice drivers in their first year of having a license should have a BAC of 0.00g/100ml, 32 participants agreed and 23 did not.

3.5 Breath Alcohol Testing

Beliefs about the deterrent nature of the more severe penalties for drunk driving that were introduced in 2011 were canvassed. The majority (50) of those surveyed agreed that the more severe penalties for drunk driving are an effective means of reducing the number of traffic crashes. Only 3 disagreed. In addition, 50 of traffic police officers agreed that BAT has been effective in reducing the number of people killed. Five of them were neutral. However, when asked whether they prefer to conduct BAT rather than other traffic duties, the response was mixed. Only a relatively small proportion (12 of 55) reported that they prefer to conduct BAT rather than their other duties; 13 police did not prefer to perform this kind of duty. More than half (30 of 55) gave a neutral response.

During the interviews, problems associated with the process of breath alcohol testing were described and fit broadly into two categories: resourcing and avoiding detection. With regard to the first issue, resourcing, it was reported that there were insufficient traffic police officers to conduct routine traffic policing, including alcohol testing, especially in the large cities where there are very large numbers of vehicles. In the survey, 21 officers reported that overall there were not enough traffic police. One officer reported that *“a traffic police officer working in frontline has a 24 hour shift every 4 days. Conducting the Breath Alcohol Testing is usually a small part of large amount of work. There are usually not enough traffic police officers check drink driving”*(P4). Another officer reported: *“We can only check a tiny part of drunk*

drivers due to limited police resources. There are still many people who take a chance, especially the owners of private enterprises and individual business man”(P6).

Police BAT equipment was considered sufficient for routine traffic situations but not highway traffic operations. One interviewee reported that *“every 60-70 highway traffic police officers has 2 breathalysers’ and that ‘breathalysers will be sent to the provincial Public Security Department to be calibrated every 6 months”(P6).*

Other officers commented: *“We want to set down more checkpoints to conduct breath alcohol testing; however, we had to give it up due to insufficient traffic police officers and equipment”(P6); and: “Therefore, breath alcohol tester is a not rapid accurate method, we are very much looking forward to having an instrument on the spot to determine accurate alcohol concentration. This will significantly reduce the workload, improve work efficiency, and improve law enforcement accuracy”(P4).*

This issue of resourcing was also canvassed in the survey. Approximately one third of those surveyed reported that the equipment for testing alcohol-related driving was insufficient. Suggestions for improvements to the ways in which BAT is conducted in the city included the purchase of more advanced equipment and having sufficient equipment available to police officers.

3.6 Road safety publicity and education

The issue of road safety education was also raised. Local media and posters are used by the Public Security Bureau which is responsible for education about safe driving but participants thought that the education campaigns are limited in scope and that there should be a national approach. For instance, one interviewee noted that *“at present drunk driving related knowledge, training and education is mainly conducted by public security departments through local radio and television, media and publicity, but there is not much advertising on CCTV channels”(P4).* Furthermore, it was reported that there were limited numbers of police to conduct publicity of road safety. For example, one interviewee reported that *“Our unit has specialised staff for city, community and the countryside for drink driving publicity such as posting posters and broadcasting publicity films. The publicity police officers are extremely limited, we only have one staff in each unit and they are usually older police officers”(P6).* Additionally, when asked why the reported incidence of alcohol-related driving has substantially reduced since May 2011, the majority (4/5) of those surveyed thought that this was a result of serious penalties. Only 8 police reported the belief that it was the result of publicity and enforcement.

Three traffic police officers who attended interviews thought that driving schools present a problem with regard to appropriate driver education because they pay more attention to financial benefits than road safety. It was asserted that driving schools sometimes made illegal arrangements with licensing staff to ensure that licences were issued to particular drivers: *“A lot of unsuccessful students have passed examinations smoothly, got their driver’s license and become killers on the roads”(P6).*

3.7 Problems with Alcohol testing

Interview participants identified detection avoidance strategies used by drivers. These strategies included: changing route; ignoring a police instruction to stop; staying inside the vehicle with windows and doors locked to avoid being tested; intentionally not performing breath tests correctly; and arguing with police officers. One officer gave an account of his experience with detection avoidance: *“In general, when the drivers see a checkpoint, they will either change the route to escape or change to the furthest lane (to) get away. Sometimes suspicious vehicles get away too easily”*(P4). Another officer described difficult situations that a colleague in a different city in China had faced: *“The driver turned off the engine and drank (alcohol) in front of the police. Sometimes before traffic police officers take any extreme actions, they must ask their leadership for instructions. For example, one driver kept himself inside the car and did not open the window or door for 30 minutes while traffic police officers were conducting BAT. In the end, the traffic police officers smashed the window of the car in Shenzhen”*(P5). This quote highlights a current problem facing officers when attempting to carry out their duties but are faced with drivers unwilling to cooperate.

Another tactic used by drivers to avoid detection described in the interviews included the use of a third person. For instance: *“Some people know that there is a BAT up ahead, they will offer drunk drivers the service to drive them past the checkpoint for a fee. This action has decreased the chance to catch drink driving offenders and poses a significant risk to road safety. How to inspect and make legislation against these situations is still in question”*(P3). Strategies used by police to deal with drivers running checkpoints were also reported. For example, *“Our police officers encountered the drivers who run checkpoints and injure police. There have been many cases. We generally do not encourage the chase, which may result in secondary accident”*(P2). The survey results supported the issue of problems with compliance at checkpoints: the majority (51) of officers reported having come across drivers who did not cooperate with BAT.

3.8 Public and police perceptions of drink driving

Two important opinions were stated by traffic police officers in the interviews. Firstly, all of them admitted that the public awareness on drink driving has increase dramatically since the release of the new criminal law. It appears that many people have taken notice of the publicity which has encouraged people not to mix the two activities: if drive do not drink, if drink do not drive. Secondly, the media has played an important role to publicise the amended criminal law and relevant events. *“Especially, the case of famous composer and singer Gao Xiaosun for his drunk driving played a important negative example and achieved effective results for publicity and education for general public”*(P1). Survey results revealed that there were 46 traffic police who were familiar with the relevant law and legislation for alcohol-related driving. The number of trained police officers who conduct breath testing and the number familiar with procedures were 38 and 42 respectively.

3.9 Guanxi and drink driving

A final problem associated with conducting breath testing that was described during interviews relates to the concept of Guanxi (Guanxi is a Chinese concept referring to social relationships involving mutual reciprocity and obligation that are sometimes considered to undermine the integrity of enforcement: Gold, Guthrie, & Wank, 2002). Importantly, those interviewed indicated that the use of Guanxi by drivers to avoid drunk driving penalties appears to be decreasing: *“The number of drunk drivers has been dropped significantly after the release of the amended criminal law... there were no cases involving Guanxi”*(P3). It appears to be common practice in China today that traffic police use portable video to record all the processes when they conduct BAT. One officer noted that the use of such technology (i.e., video footage of BAT and computerised systems to manage offences) means that it is difficult to avoid the penalties associated with alcohol-related driving: *‘With the video evidence, and the number of tests being entered into the system, there is no way to modify again to avoid any Guanxi factors’*(P1). This issue was also canvassed in the survey. Three quarters of those surveyed reported that they would not help their friends or relatives to reduce the level of punishment if they committed alcohol-related driving, even if it did not involve a crash leading to serious injury. Eleven traffic police officers reported they were neutral on the issue while 3 traffic police officers indicated that they may help friends or relatives to reduce the level of punishment if they committed drink driving and did not involve a crash leading to serious injury.

4. DISCUSSION

“China has entered the automobile era; however, the civilization of driving behaviour has not come” (Zhang, 2010; quote translated by first author). This quote represents a major issue facing China today as it deals with the many consequences that accompany the recent large-scale, rapid motorization. One of the primary reasons advanced by police about why people drink and drive relates to the concept of being lucky. Here, ‘lucky’ refers to two concepts. It can refer to the idea that a person is lucky and will therefore not be involved in any traffic crashes. It may also refer to the concept of being lucky to escape detection by traffic police for a violation and reflect sub-optimal levels of enforcement.

Another key issue that has been described as relevant to alcohol-related driving is the strong role that alcohol plays in Chinese culture. Drinking is socially accepted and plays a significant part in major events of daily life, such as Chinese Spring Festival, wedding ceremonies, birthday parties, and all celebratory events (Hao, Chen & Su, 2005). Alcohol has another important role in China for ritual purposes. It is used for thanking God, ancestors, heaven, and earth. With the economy blooming, the Chinese business world is becoming highly competitive, and drinking is seen as a necessary behaviour for success. Furthermore, alcohol is also believed to help maintain good relations between supervisors and employees, and among colleagues (Hao and Young 2000; Cochrane, Conigrave & Hao, 2003). It is possible that recent changes to traffic safety law, including the 2011 drunk driving change, have not yet had time to reach their full potential in deterring drivers. One officer interviewed in this research noted that *“Comparing with other countries, the relevant laws and*

regulations of Chinese law to punish drunk driving is still too gentle. Laws and regulations to public servants and public institution staff have strong restraining effect but not the same to many individuals and private owners”(P4). It may also be the case, as indicated by participants in this study, that a lack of resources (staff and equipment) means that effective enforcement practices and sufficient levels of enforcement have not yet been attained to ensure deterrence of drink drivers.

The issue of road safety promotion and awareness was also raised in this research. A lack of resources to promote traffic safety (including alcohol-related laws) was suggested as a key deficiency in the current system with limited resources for staff, education and public awareness campaigns. The shortage of police resources appears to be a problem nationwide. One potential strategy to assist may be to develop technology to save human resources. Advanced monitoring systems can potentially save a lot of resources and time for traffic flow management. However, traffic police officers are still needed to conduct BAT and to deal with traffic crashes. As noted in the results of this study, it was widely reported that there are insufficient police to conduct BAT.

In China, the current procedure of conducting BAT means that traffic police usually only test drivers who are suspected to have consumed alcohol. Commonly there are only one or two designated police to conduct BAT on each checkpoint. Participants reported that not every police officer is equipped with a breathalyser. During an observational visit to several breath testing sites in the city, the first author observed that there is usually one breathalyser for each checkpoint. It was also reported that there were even less for highway patrol police (e.g., 60-70 police share two breathalysers). Additionally, the manner in which alcohol testing is conducted may need enhancement. As noted above, only those drivers suspected of drunk driving are generally stopped at a checkpoint. In the first instance, police use observation and their sense of smell as an initial screening tool to detect drivers who may have consumed alcohol. Because not every vehicle is stopped, these procedures are likely to lead to some intoxicated drivers avoiding detection.

These procedures are in contrast with Random Breath Testing (RBT) as it is conducted in Australia, where any vehicle can be stopped at any time of day (without reason) and the driver required to give an ‘in car’ breath test. In this way, RBT can convey the message that drivers can and will be stopped ‘anywhere, anytime’ (Watson, Fraine & Mitchell, 1994). It seems that more traffic police officers and breathalysers, as well as improvements in detection methods can help combat alcohol-related driving in China. Further, the reported strategies that drivers employ to evade detection are likely to be significant obstacles to the effective operation of BAT in China. Solutions are needed to protect officer safety and help them deal with motorists who attempt to evade detection.

Police reported in interviews that public servants and public institute staff will receive severe penalties if they are detected drunk driving. This may be the reason why officers reported the perception that there are fewer public servants and public institute staff among drunk drivers and more drunk drivers were private enterprise owners and individual business owners. According to Article 17 of the Public Servant Regulation Punishment (2007), “public servants, who were sentenced as a criminal offender, would have their employment terminated”. This applies to a conviction for drunk driving now that it has become a crime.

Apart from the operational difficulties associated with operating BAT described throughout this paper, another potential barrier to effective law enforcement is the use of Guanxi to avoid penalties associated with violations (Fleiter, Watson, Lennon, King & Shi; 2011). Guanxi is an historical problem in Chinese social activities and is a powerful source of influence. Encouragingly, three quarters of those surveyed reported that they would not help friends or relatives to reduce the level of punishment if they committed drink driving without serious injury. However, 20% reported a 'neutral' response and 5.5% indicated that they may offer help. Generally there are two ways that help could be offered by police. One way is that a police officer may let friends or relatives go when conducting BAT (i.e., they may not test them or they may not give a penalty for a positive breath test). A second way of offering help to avoid penalty for alcohol-related offences is to obtain the assistance of a person in authority to free a driver who has been identified by traffic police or have their record cancelled. Fortunately, after the information and evidence has been entered in the administrative system it will be processed according to legal procedures and it is extremely difficult for records to be erased or altered.

A number of limitations with this research are acknowledged. Both the interview and survey samples were small. Therefore, the results presented here are in no way representative of all traffic police officers in the city. Rather, they are intended to offer insights into some of the current issues facing those who enforce alcohol-related laws. Future research should aim to extend the sample population to gain a better understanding of how prevalent such issues are and whether others exist.

5. CONCLUSION

This pilot study provides insights from traffic police in one Chinese city. Although sample sizes were small, the findings suggest that greater resources are needed in the areas of personnel, enforcement equipment and education. In addition, there may be potential unintended effects of introducing more severe penalties including a range of strategies reportedly used by drivers to avoid detection at alcohol testing sites. The question of how to raise awareness of road safety and reduce the number of alcohol-related driving incidents on China's road is a serious one that needs ongoing attention and research. The development of effective drink driving countermeasures relies on an ongoing process of research and evaluation, and at this stage there remains much that is unknown about the factors contributing to drink driving in China, and the means of reducing its incidence and impact.

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