

# **The Road Safety Implications of Unlicensed Driving: A Survey of Unlicensed Drivers**

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**Centre for Accident Research and Road Safety (CARRS-Q)  
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The Road Safety Implications of Unlicensed Driving: A Survey of Unlicensed Drivers

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### **Abstract**

This report documents the findings of a survey of 309 unlicensed driving offenders interviewed at the Brisbane Central Magistrates Court. A wide range of offenders participated in the study including disqualified and suspended drivers, expired licence holders, drivers without a current or appropriate licence, and those who had never been licensed. The results indicate that unlicensed drivers should not be viewed as a homogenous group. Significant differences exist between offender types in terms of their socio-demographic characteristics, whether they were aware of being unlicensed or not, their behaviour while unlicensed, and the factors contributing to their behaviour. Among some offenders, unlicensed driving appears to be indicative of a more general pattern of non-conformity and illegal behaviour. While many offenders limited their driving while unlicensed, others continued to drive frequently. Moreover, almost one-third of the sample continued to drive unlicensed after being detected by the police. One of the strongest predictors of both the frequency of unlicensed driving and continued driving after detection was whether the offenders needed to drive for work purposes when unlicensed. While there was some evidence that offenders attempted to drive more cautiously while unlicensed, this was not always reflected in their reported drink driving or speeding behaviour. The results highlight the need to enhance current policies and procedures to counter unlicensed driving. In particular, there is a need to examine current enforcement practices since over one-third of the participants reported being pulled over by the Police while driving unlicensed but not having their licence checked.

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**Keywords** Unlicensed, disqualified, suspended, revoked, driver behaviour, road safety, deterrence, social learning

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### **NOTES**

- (1) This report is disseminated in the interests of information exchange.
- (2) The views expressed are those of the author(s) and do not necessarily represent those of the Commonwealth.

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# Glossary

## **Alcohol ignition interlock**

A device that prevents a vehicle being started if the breath specimen provided by the driver indicates a blood alcohol concentration above a pre-set limit.

## **Blood alcohol content (BAC)**

A measurement of the proportion of alcohol in a person's blood, typically obtained using a breathalyser or by conducting a blood test.

## **Demerit points**

Points that are allocated to an individual's driving record for traffic offences. The accumulation of the maximum number of demerit points over a set period results in licence cancellation and a period of suspension or transfer to provisional licence status.

## **Driver**

The operator of a motorised vehicle including a car, truck, bus, or motorcycle.

## **Licence disqualification**

The removal of a person's authority to hold or obtain a driver's licence, typically under a court order.

## **Licence suspension**

The administrative removal of a person's authority to drive for reasons such as accumulation of excess demerit points, being medically unfit or for unpaid fines.

## **Road crash**

A crash reported to the police that resulted from the movement of at least one road vehicle (motorised or non-motorised) on a road and involving death or injury to any person, or property damage.

### **- *Fatal crash***

A road crash resulting in the death of a person within 30 days of injuries sustained in the crash.

### **- *Serious injury crash***

A road crash resulting in the hospitalisation of a person due to injuries sustained in the crash.

- ***Serious casualty crash***

A road crash resulting in either the death (within 30 days) or hospitalisation of a person due to injuries sustained in the crash (i.e. a summation of fatal and serious injury crashes).

- ***Minor injury crash***

A road crash resulting in the injury, but not hospitalisation, of a person due to their involvement in a crash.

- ***Property damage only (PDO) crash***

A road crash where no one was injured but at least one vehicle is towed away or the damage cost is greater than a predetermined level (e.g. \$2,500 in Queensland).

### **Unlicensed driver**

A generic term used to refer to people who drive or ride a motor vehicle without a valid driver's licence, including those who

- have let their licence expire,
- have been disqualified or suspended from driving,
- hold an inappropriate licence for the class of vehicle they drive,
- drive outside the restrictions of a special licence,
- do not currently hold a licence, or
- have never held a licence.

# Executive Summary

## Rationale for study

Unlicensed driving is a serious problem in many countries, despite ongoing improvements in traffic law enforcement practices and technology. The term "unlicensed driver" is generally used to refer to people who drive or ride a motor vehicle without a valid driver's licence, including those who

- have let their licence expire,
- have been disqualified or suspended from driving,
- hold an inappropriate licence for the class of vehicle they drive,
- drive outside the restrictions of a special licence,
- don't currently hold a licence, or
- have never held a licence.

While unlicensed driving does not play a direct causative role in road crashes, unlike alcohol impairment or speeding, it represents a major problem for road safety in two respects. First, it serves to undermine the system used to monitor and manage driver behaviour. Because they operate outside the licensing system, unlicensed drivers dramatically reduce the ability of authorities to monitor and manage their behaviour through sanctions such as demerit points. In particular, unlicensed driving serves to undermine the effectiveness of licence disqualification which has otherwise been demonstrated to be a very effective deterrent to illegal behaviour. Second, there is a growing body of evidence linking unlicensed driving to a cluster of other high-risk behaviours, including drink driving, speeding, and motorcycle use. Accordingly, there is a need to better understand the factors contributing to unlicensed driving in order to develop and implement more effective countermeasures to the behaviour. This study aimed to address this problem by surveying a cross-section of unlicensed driving offenders.

## Method

Previous surveys of unlicensed drivers have been characterised by relatively low response rates, due in part to the itinerant nature of many offenders. To overcome this problem it was decided to recruit participants for the study immediately after they left court. This increased the likely representativeness of the sample, since all adult unlicensed driving offenders in Queensland were required to attend court at the time. The Brisbane Central Magistrates Court was selected as the location for the study because it processes the largest number of traffic offenders in Queensland each year. This represented the most cost-effective method of obtaining a reasonably large cross-section of offenders. However, it should be noted that this court primarily caters for offenders who are detected in the inner city and suburban area of Brisbane. Consequently, the degree to which the findings can be generalised to other metropolitan and rural areas remains to be confirmed.

The survey involved a face-to-face interview that took approximately 25 minutes to complete. The offenders were offered \$25 to participate in the study to compensate them for the time involved and to increase the likely response rate. In total, 309

offenders agreed to participate in the study from 495 eligible offenders approached, representing a response rate of 62.4%. All offender categories were represented in the sample, including disqualified and suspended drivers, expired licence holders, drivers without a current or appropriate licence, and those who had never been licensed.

## **Key findings**

The findings of the study both confirm and question common assumptions relating to unlicensed driving. The results confirm that unlicensed drivers should not be viewed as a homogenous group. Significant differences were found between the offender types in terms of their socio-demographic characteristics (age, education level, prior criminal convictions), driving history (prior convictions for unlicensed driving and other traffic offences), whether they were aware of being unlicensed, the degree to which they limited their driving while unlicensed, and their drink driving behaviour. The differences among offenders suggest that it is unlikely that one approach will adequately address the problem.

It is of concern that over one-third (36.0%) of the participants claimed that they were unaware, or at least unsure, that they were unlicensed at the time they were detected. In addition, almost half the offenders (49.0%) reported that they still had their photographic licence when they were driving unlicensed. This highlights the need to examine current administrative processes for dealing with unlicensed drivers.

The results of the study question the common assumption that unlicensed drivers drive in a more cautious manner to avoid detection. While the findings confirm that many offenders reduce their overall driving exposure in order to avoid detection, it is unclear whether this results in more cautious driving. In particular, responses relating to the drink driving and speeding behaviour of the participants suggest that they are not as cautious as drivers in general. For example, almost one-quarter of the offenders admitted driving at some time when they thought they were over the legal alcohol limit. It is also a concern that almost one-third of the sample continued to drive unlicensed after being detected by the police. While it remains possible that unlicensed drivers tend to act more cautiously than they would otherwise, it appears that their driving behaviour is primarily designed to reduce the chances of detection.

To explore some of the factors contributing to unlicensed driving, three variables were selected for more in-depth analysis: the frequency of unlicensed driving, whether offenders continued to drive after detection, and their intention to drive unlicensed in the future. These analyses suggested that many offenders are not deterred by existing police enforcement practices or current penalties. The perceived risk of apprehension for unlicensed driving was significantly lower than that for drink driving and speeding. Current penalties were not rated as particularly severe, while prior conviction for unlicensed driving did not appear to discourage the behaviour. Moreover, many offenders reported that they had evaded detection on one or more occasions when they were driving unlicensed. For example, over one third of the participants reported being pulled over by the police while driving unlicensed and not having their licence checked.

One of the strongest predictors of both the frequency of unlicensed driving and continued driving after detection was whether the offenders needed to drive for work

when unlicensed. This and other findings support a social learning based explanation of unlicensed driving (rather than a deterrence-based perspective that informs the design of many road safety countermeasures). Social learning theory acknowledges the potential benefits associated with different behaviours, not just the potential costs. In this regard, the need to drive for work represents a powerful motivation to drive unlicensed, since it facilitates obtaining personal rewards (e.g. income, social status) and reduces the potential costs associated with not driving (i.e. potential loss of employment). Consequently, it is not surprising that those offenders who drive unlicensed for work-related reasons would perceive the benefits of the behaviour to outweigh the potential costs. As such, the findings suggest that countermeasures should not just focus on increasing the potential costs associated with unlicensed driving, but attempt to reduce the perceived benefits of the behaviour.

### **Implications for countermeasures**

It is possible that improvements to administrative processes and a greater awareness of the penalties associated with unlicensed driving may reduce the problem among some drivers (particularly the one-third of offenders who claimed that they were unaware of being unlicensed). However, it is arguable that these individuals may not represent a major road safety risk compared with more intentional or persistent offenders. Nevertheless, higher compliance with licensing laws will contribute to more effective driver management. To reduce more serious offending, the results of the survey suggest that a multi-strategy approach is required addressing

#### *Traffic policing practices*

- the improved detection of unlicensed driving through the adoption of compulsory carriage of licence and the widespread, random checking of drivers licences (e.g. at RBT and specific licence checking operations);
- the continued development and implementation of technology to enable the Police to quickly verify the validity of licences by the roadside;

#### *Current sanctions and penalty processes*

- reviewing the adequacy of current penalties and punishment processes for unlicensed driving and other related behaviours, such as driving unaccompanied on a Learner's Licence;
- developing strategies to encourage drink driving offenders (particularly those who need to drive for work) to participate in alcohol ignition interlock programs;
- the trialling of other sanctions for unlicensed driving, such as vehicle-based sanctions or rehabilitation programs specifically targeting recidivist unlicensed driving offenders;
- the continued development of electronic licence technology to prevent drivers without valid licences from operating vehicles;

### *Discouraging work-related unlicensed driving*

- developing strategies to reduce the perceived benefits of driving for work-related reasons while unlicensed, such as encouraging employers to regularly check the licence status of their employees; and

### *Public education*

- the judicious use of mass media to highlight and reinforce changes in the methods used to detect and punish unlicensed drivers.

## **Research implications**

There is a need for further research into unlicensed driving to assist with the development and evaluation of countermeasures. High priorities include

- periodic roadside surveys to establish the prevalence of unlicensed driving and to provide a benchmark for evaluating relevant countermeasures;
- research into the crash involvement patterns of unlicensed drivers to identify risk factors that are prevalent among different types of offenders;
- the need to evaluate the impact of policy changes that may influence the level of unlicensed driving, particularly those relating to the surrender of licences by suspended drivers and the use of licence loss as a penalty for non-road safety related offences, such as non-payment of fines;
- research into the extent and nature of underage driving; and
- research into the factors that promote compliance with licensing laws among licensed drivers.

## **Likely road safety impact of unlicensed driver countermeasures**

It should be acknowledged that reducing the level of unlicensed driving may not automatically improve road safety. While unlicensed driving appears to be associated with a cluster of high-risk behaviours, such as drink driving and speeding, there is no guarantee that these drivers would be any safer if they were actually licensed. In other words, many drivers who are currently unlicensed may still engage in higher levels of risk-taking, irrespective of their licence status. Nonetheless, it is likely that more effective countermeasures would have a positive effect on road safety by

- encouraging drivers who have never been licensed to participate in the licensing system and thus be subject to processes such as graduated licensing and demerit point systems;
- deterring people from driving vehicles for which they do not have an appropriate class of licence;
- reducing the level of disqualified or suspended driving, thereby improving the deterrent impact of these sanctions; and
- exposing persistent offenders to rehabilitation programs that may assist them to resolve the personal or social factors under-pinning their behaviour.

# INTRODUCTION

## 1.1 The road safety implications of unlicensed driving

Unlicensed driving remains a serious problem in many countries, despite ongoing improvements in traffic law enforcement practices and technology. In the United States, over 11% of drivers involved in fatal crashes are unlicensed and over 16% of fatal crashes involve at least one unlicensed driver (Griffin and DeLaZerda, 2000). In Australia, unlicensed drivers represent over 5% of the drivers involved in fatal crashes. The crashes involving unlicensed drivers and riders account for almost 10% of the national road toll (FORS, 1997a).

While it does not play a direct causative role in road crashes, unlike alcohol impairment or speeding, unlicensed driving represents a major problem for road safety in two respects. First, it serves to undermine the system used to monitor and manage driver behaviour. Because they operate outside the licensing system, unlicensed drivers dramatically reduce the ability of authorities to monitor and manage their behaviour through sanctions such as demerit points. In particular, it serves to undermine the effectiveness of licence disqualification which has otherwise been demonstrated to be a very effective deterrent to illegal behaviour (Nichols and Ross, 1990; Vingilis, Mann, Gavin, Adlaf and Anglin, 1990; Siskind, 1996). Second, there is a growing body of evidence linking unlicensed driving to a cluster of other high-risk behaviours including drink driving, speeding, and motorcycle use (Harrison, 1997; FORS, 1997b; Watson, 1997 and 2000; Griffin and DeLaZerda, 2000). Consistent with this, the crashes involving unlicensed drivers tend to be more severe (i.e. are more likely to involve a fatality or serious injury) than those involving licensed drivers (Watson, 2000). Accordingly, there is a need to better understand the factors contributing to unlicensed driving in order to develop and implement more effective countermeasures to the behaviour.

## 1.2 Rationale for study

A number of obstacles have hindered the development of unlicensed driver countermeasures. First, unlicensed drivers are not necessarily a homogenous group. A wide variety of people drive without a valid licence, including those who have let their licence expire, have had their licence cancelled or disqualified, drive a vehicle without an appropriate licence, or have never held a licence. The motives for a person being unlicensed and their associated driving behaviour may therefore vary greatly. In addition, the crash data indicates that those drivers who have let their licence expire are less likely to be involved in serious crashes than those who have never held a licence, have had it disqualified, or hold an inappropriate class of licence (Watson, 1997). This suggests a possible link between the degree of risk-taking displayed by different types of unlicensed drivers and the intentionality of their actions. From a criminological perspective it may therefore be more appropriate to view different types of unlicensed driving as discrete behaviours (or even possibly a continuum of behaviours) representing varying degrees of non-conformity (deviance).

A second major obstacle has been the lack of research into the behavioural characteristics and perceptions of unlicensed drivers. Although some self-report surveys have been conducted with different types of unlicensed drivers (e.g. Robinson, 1977; Williams, Hagen and McConnell, 1984; Ross and Conzaes, 1988; Smith and Maisey, 1990; Job, Lee and Prabhakar, 1994) the results are constrained by low response rates. Moreover, these studies have been largely descriptive, concentrating on self-reported reasons for unlicensed driving, and have lacked a strong theoretical base to guide the interpretation of results (Watson, 1998a).

In consequence there is a need for further research into the factors contributing to unlicensed driving. This research needs to employ more rigorous data collection methodologies to obtain a more representative sample of unlicensed drivers and to examine relevant theoretical perspectives explaining the behaviour.

### **1.3 Objectives of the study**

The objectives of the current study are to

- examine the self-reported driving behaviour of unlicensed drivers and the circumstances surrounding their apprehension and punishment;
- examine the personal, social, and environmental factors contributing to unlicensed driving;
- investigate whether there are any differences among unlicensed driver sub-groups in terms of driving behaviour or the factors contributing to the behaviour;
- examine unlicensed driving behaviour in light of key theoretical perspectives identified in the literature; and
- identify improvements to current countermeasures and potential initiatives to reduce the incidence of unlicensed driving.



# LITERATURE REVIEW

## 2.1 Definition of unlicensed driving

In the international literature a variety of terms are used to describe the people who drive or ride a motor vehicle without a valid licence. Among the more common terms used are "unlicensed driver", "unauthorised driver", "disqualified driver", "suspended driver", "revoked driver", "cancelled driver", and "never licensed driver". Some of these terms are used in a general sense while others are used to describe particular sub-groups of drivers. For example, terms like "disqualified", "suspended", or "revoked" are generally used to describe those drivers who have had their licence removed by a judicial or administrative process. In contrast, the "never licensed" term is generally used to describe those drivers who remain outside the licensing system because they have never officially obtained a licence, including underage drivers.

Consistent with the broad perspective of this study the term "unlicensed driving" will be used to refer to all instances where a person drives or rides a motor vehicle without a valid licence. Hence the term will be used to refer to drivers who

- have let their licence expire,
- have been disqualified or suspended from driving,
- hold an inappropriate licence for the class of vehicle they drive,
- drive outside the restrictions of a special licence,
- don't currently hold a licence, or
- have never held a licence.

In Queensland the legislation relating to unlicensed driving is covered in Section 78 of the *Transport Operations (Road Use Management) Act 1995*. Appendix A provides a more detailed list of the ways in which a person can drive unlicensed in Queensland. Unless specified otherwise, the term "driver" is used in this report to refer to both drivers and riders of motorised vehicles.

## 2.2 The prevalence of unlicensed driving

It has proved difficult for road safety authorities to reliably estimate the community-wide prevalence of unlicensed driving. Given that it is an illegal behaviour, it is likely that some unlicensed drivers will attempt to conceal their actions from the authorities and be reticent to discuss their behaviour with researchers. As a consequence there is a lack of definitive evidence available relating to the extent and nature of unlicensed driving. The following section reviews the data currently available from both Australian and international studies.

### 2.2.1 Roadside licence check surveys

Due to various legal and logistical constraints, very few roadside licence check surveys have been conducted in Australia or elsewhere in the world. Among these constraints are difficulties associated with randomly sampling drivers and confirming the validity of licences (Watson, 1998b).

In 1976 the police in Western Australia conducted a survey of 392 motorcyclists that were intercepted as part of a weekend "blitz" on motorcycle safety. On the basis of interviews and police radio checks it was found that 12% of the riders were unlicensed (Smith, 1976). However, this result should be treated with some caution due to the relatively small sample, the difficulty the police experienced in identifying the exact licence status of some riders, and the fact that all riders did not have an equal probability of being intercepted and interviewed (Smith, 1976).

In 1991, the New South Wales Police Service conducted a survey of unlicensed driving in the northern suburbs of Sydney as part of routine Random Breath Testing (RBT) operations (Carseldine, Court & Graham, 1992). It was found that 2.4% of the 4,352 drivers surveyed did not have a current valid driver's licence. The random nature of RBT should have made the sample more representative of the general driving population than would have been achieved through a targeted enforcement approach. However, the researchers acknowledged the difficulty in generalising their results beyond the area and times surveyed. In particular, they noted that there was a lower representation of unlicensed drivers in crashes occurring within the survey area than in other parts of the State (Carseldine *et al*, 1992).

More recently Malenfant, Van Houton and Jonah (2002) conducted a roadside survey of suspended drivers in the Greater Moncton area of New Brunswick, Canada. This study found that 1.53% of the drivers stopped at roadside checkpoints (who resided within the study area) were driving while suspended. Official records at the time showed that 2.7% of all drivers in the study area were suspended from driving. In other words, the relative exposure of suspended drivers in the study area was 57% of that which would be expected if all suspended drivers continued to drive. While these results tend to confirm a general reduction in exposure among suspended drivers, the study identified a number of concerns. First, although the percentage of suspended drivers on the road was higher after midnight the police preferred to perform the checks during daylight hours. Second, 91% of the suspended drivers identified in the study produced an invalid driving permit at the time they were pulled over. This finding draws into question the practice in New Brunswick of requiring suspended drivers to voluntarily surrender their permits upon receiving notification in the mail. In particular "*there are no provisions to contact suspended drivers who fail to surrender their driving permits*" (Malenfant *et al*, 2002, p.442). Finally, official records indicated that the suspended drivers in the study had four times more reportable crashes in the preceding five years than the average (licensed) New Brunswick driver.

### **2.2.2 Self-report surveys**

Due to the difficulties involved in conducting roadside licence checks, road safety authorities have generally preferred to rely on self-reported survey methods to obtain data about the extent and nature of unlicensed driving. For example, a number of studies have used official records to locate unlicensed drivers and survey them by interview or self-administered mail questionnaires.

#### *Disqualified/suspended drivers*

The majority of the self-report surveys undertaken to date have focussed on disqualified/suspended drivers. These surveys suggest that driving while disqualified is relatively common. For example, Australian surveys conducted in Victoria (Robinson, 1977) and Western Australia (Smith and Maisey, 1990) found that over 30% of respondents admitted driving while disqualified. Similar surveys in the United Kingdom (Mirrlees-Black, 1993; Corbett and Simon, 1992; Davies, Broughton, Clayton & Tunbridge, 1999) and the United States (Williams *et al*, 1984; Ross and Gonzales, 1988) have found self-reported levels of disqualified/suspended driving ranging from 11% to almost 70%.

However, these surveys are characterised by low response rates and probably underestimate the full extent of the problem. For example, the interview surveys conducted by Robinson (1977) and Mirrlees-Black (1993) obtained response rates of 23% and 47% respectively, while the mail surveys conducted by Robinson (1977), Smith and Maisey (1990) and Corbett and Simon (1992) had response rates of below 40%. These low response rates reduce the likely representativeness of the data.

#### *Other unlicensed drivers*

Job *et al* (1994) conducted one of the few studies that surveyed a variety of unlicensed drivers. This study involved the distribution of a mail survey to all drivers convicted of unlicensed driving in New South Wales during a six-month period in 1992-93. While many of the respondents indicated that they drove regularly while unlicensed, the overall amount of driving undertaken across the sample was significantly reduced compared to earlier periods of legal driving. However, in common with other studies, this survey had a relatively low response rate of 19.6%. In part, this was due to the fact that many of the drivers no longer resided at the address recorded in the official licensing database. This finding is consistent with other studies (e.g. Robinson, 1977; Mirrlees-Black, 1993) and suggests that drivers convicted of unlicensed driving are a relatively transient group, possibly reflecting a lack of social stability in their lives (Mirrlees-Black, 1993; Job *et al*, 1994). In addition, Job *et al* (1994) suggest that there may be a systematic respondent bias in these studies toward less serious offenders. This could lead to a general under-estimation of the extent and seriousness of the unlicensed driving problem.

### **2.2.3 Crash involvement of unlicensed drivers**

Due to the difficulties involved in surveying unlicensed drivers, road safety authorities have tended to rely on the use of crash data as a surrogate measure of unlicensed driving. In one of the first studies of this kind, Coppin and Van Oldenbeek (1965) examined the crash and offence records of over 1,300 negligent

drivers who had their licences suspended or revoked as a result of offences committed in late 1955/early 1956. The records indicated that at least 33% of those suspended and 68% of those revoked drove during the sanction period.

More recently in the United States, Griffin and DeLaZerda (2000) examined the involvement of unlicensed drivers in fatal crashes using five years of data (1993-97) from the Fatal Accident Reporting System (FARS) database. This study found that 11.1% of drivers involved in fatal crashes were unlicensed (and a further 2.7% were of unknown licence status). In addition, 16.3% of fatal crashes involved at least one unlicensed driver. These crashes resulted in over 34,000 fatalities during the period.

Similar results have been found in Australia. A study by the then Federal Office of Road Safety (FORS) found that 5% of the drivers and 19% of the motorcyclists involved in fatal crashes during 1992 and 1994 were unlicensed at the time (FORS, 1997a). Overall the crashes involving unlicensed drivers accounted for almost 10% of the national road toll in those two years. Almost half of the people killed in these crashes were road users other than the unlicensed drivers (FORS, 1997a).

There are therefore a number of limitations associated with using crash data as a surrogate measure of unlicensed driving. First, in many jurisdictions the crash records contain a relatively high proportion of drivers with an unknown licence status, some of whom may have been unlicensed. Second, the proportion of unlicensed drivers is not necessarily uniform across different crash types. Crash data from both New South Wales (Job *et al*, 1994) and Queensland (Watson, 1997; 2000) indicates that unlicensed drivers are over-represented in fatal and serious injury crashes compared with minor injury and property damage only crashes. This is illustrated in Table 2.1, which provides a breakdown of the licence status of drivers and motorcycle riders involved in crashes in Queensland between 1994 and 1998. During the five-year period, 6.3% of the drivers and riders involved in fatal crashes and 5.1% of those involved in crashes resulting in hospitalisation were unlicensed compared with 2.6% for minor injury crashes and 2.5% for property damage only crashes.

**Table 2.1 Licence status of drivers and riders involved in crashes in Queensland 1994-98**

Licence Type	Severity of Crash									
	Fatal		Hospital		Other Injury		Property Damage		Total	
Licensed	2148	87.9	23560	90.4	58235	92.9	73602	92.9	157635	92.5
Unlicensed	154	<b>6.3</b>	1330	<b>5.1</b>	1626	<b>2.6</b>	1966	<b>2.5</b>	5076	<b>3.0</b>
International	24	1.0	314	1.2	675	1.1	960	1.2	1973	1.2
Unknown	117	4.8	851	3.3	2134	3.4	2693	3.4	5795	3.4
<b>TOTAL</b>	2443	100.0	26055	100.0	62760	100.0	79221	100.0	170479	100

Source: Queensland Road Crash Database, Queensland Transport

The above data illustrate the difficulties involved in estimating the community-wide prevalence of unlicensed driving. In particular, it is unclear which figure is more representative of unlicensed driving in general since “*it is not known whether unauthorised (unlicensed) drivers are under represented, proportionately represented, or overrepresented in traffic offences or crashes*” (Carseldine *et al*, 1992, p.2). As will be discussed in the next section, the serious casualty crashes involving unlicensed drivers appear to involve higher levels of risk-taking than those involving licensed drivers. This suggests that unlicensed drivers may be over-represented in these crashes. However, it is also possible that unlicensed drivers are under represented in minor crashes because it is easier to avoid reporting these crashes to the police than serious crashes involving injury or major damage. That is, unlicensed drivers may be highly motivated to avoid reporting crashes wherever possible in order to avoid being punished. It is possible that the apparent over-representation of unlicensed drivers in serious casualty crashes (compared with licensed drivers) is partly an artefact of the under-reporting of minor crashes by these drivers (Watson, 1997). This highlights the strengths of more direct methods of measuring unlicensed driving, such as roadside licence check surveys.

## **2.3 The driving behaviour of unlicensed drivers**

### **2.3.1 Self-reported driving behaviour**

There is a common assumption in the literature that unlicensed drivers drive in a more cautious manner to avoid detection. This assumption is based on the findings of various self-report surveys which suggest that 55% to 65% of disqualified drivers (who continue to drive) adopt strategies to reduce their risk of detection including driving less frequently and driving more cautiously (Williams *et al*, 1984; Smith and Maisey, 1990). Similar findings were noted by Mirrlees-Black (1993) as follows.

*Although disqualification had failed to keep all these offenders off the roads it was, nevertheless, still effective as a method of restraint as the frequency of driving, and the amount of dangerous driving, were probably reduced for the majority of those that continued to drive (p.21).*

In their survey of unlicensed drivers, Job *et al* (1994) found that between 40% to 50% of respondents reported driving more carefully in terms of complying with the speed limit, traffic lights, stop signs, and seat belt and drink driving laws.

Based on the early self-report evidence, Hurst (1980, cited in Silcock, 2000) suggested that unlicensed drivers are rewarded for driving safely and inconspicuously because they reduce the threat of discovery and may “learn” defensive driving skills by driving in this manner. However, Warren (1982, cited in Silcock, 2000) argued in a rejoinder to Hurst that the behaviour learned while driving unlicensed may not actually be safer but oriented instead to avoiding detection.

### 2.3.2 The behaviour of unlicensed drivers involved in crashes

The crash evidence draws into question the assumption that unlicensed drivers drive in a more cautious manner, at least when compared to licensed drivers. As noted in Section 2.2.3, Australian evidence indicates that the crashes involving unlicensed drivers are more likely to result in a fatality or hospitalisation than those involving licensed drivers. For example, 29.2% of all the crashes involving unlicensed drivers in Queensland during 1994-98 involved a fatality or hospitalisation, compared with only 16.3% of the crashes involving licensed drivers (Watson, 2000). The exact reasons for the over-representation of unlicensed drivers in serious crashes remain unclear. As noted in section 2.2.3, it may in part be due to the under-reporting of minor crashes by this group. However, the crash evidence suggests that it may also be a product of differences in the behaviour of unlicensed drivers. In particular, there is an increasing body of evidence linking unlicensed driving to a cluster of other high-risk behaviours (Healy and Harrison, 1986; Harrison, 1997; Watson, 1997 and 2000, Griffin and DeLaZerda, 2000).

This is illustrated in Table 2.2 which compares the involvement of licensed and unlicensed drivers in serious casualty crashes (those resulting in a fatality or hospitalisation) occurring in Queensland between 1994 and 1998. The serious casualty crashes involving unlicensed drivers are more likely to involve alcohol and drugs, motorcycle use, speeding, and inexperience and to occur at the weekend and at night i.e. at recreational times. In addition, the police are more likely to consider unlicensed drivers as being at fault for the crash. As pointed out by DeYoung, Peck and Helander (1997, p.20) *"unlicensed drivers are subject to a "negative halo effect", in that law enforcement will more likely judge them responsible for a crash, especially in situations where the officer is aware of their invalid licence status"*. Nonetheless, the higher "at fault" status of unlicensed drivers is consistent with the greater involvement of other illegal behaviours such as drink driving and speeding. Interestingly, no significant difference was found between unlicensed and licensed drivers in relation to the prevailing speed zone at the time of the crash. This suggests that both groups are equally exposed across the road network.

Historically, the link between motorcycling and unlicensed riding appears to be quite persistent. A Queensland study of motorcycle crashes undertaken in the 1970s found that over 40% of riders killed (where licence status was known) were effectively unlicensed (Beggs and Siskind, 1978). After excluding overseas riders and the unknowns, the present study indicates that 20% of the motorcycle riders involved in fatal crashes in Queensland remain unlicensed.

The over-involvement of males, young drivers, and inexperience in serious casualty crashes involving unlicensed drivers is also notable. In part, this may reflect the greater tendency for these drivers to lose their licence in the first place (Harrison, 1997). However, other studies have demonstrated the influence of risk-taking and recklessness on the crash rates of young male drivers (e.g. Catchpole, Macdonald and Bowland, 1994).

**Table 2.2: Licence status by key driver-related and crash circumstance variables for serious casualty crashes in Queensland 1994-1998**

Variable	Driver classification		Significance level
	Licensed (%)	Unlicensed (%)	
<b>Gender</b> (n=27190)			
Males	69.1	83.3	$\chi^2$ (df1) = 134.2, $p < .001$
Females	30.9	16.7	
<b>Age</b> (n=27190)			
Under 25	29.3	55.7	$\chi^2$ (df2) = 504.7, $p < .001$
25 to 59	59.6	42.7	
60 and over	11.1	1.6	
<b>Vehicle type</b> (n=27192)			
Car (and derivatives)	82.7	68.7	$\chi^2$ (df2) = 603.5, $p < .001$
Motorcycles	9.9	29.7	
Trucks and buses	7.4	1.5	
<b>Day of week</b> (n=27192)			
Weekday	71.9	64.3	$\chi^2$ (df1) = 40.3, $p < .001$
Weekend	28.1	35.7	
<b>Time of day</b> (n=27192)			
Day (6:00am to 5:59pm)	70.5	52.3	$\chi^2$ (df1) = 220.8, $p < .001$
Night (6:00pm to 5:59am)	29.5	47.7	
<b>Alcohol/drugs</b> (n=27182)			
Yes	5.8	25.9	$\chi^2$ (df1) = 886.6, $p < .001$
No	94.2	74.1	
<b>Speeding</b> (n=27182)			
Yes	3.5	14.7	$\chi^2$ (df1) = 443.2, $p < .001$
No	96.5	85.3	
<b>Inexperience</b> (n=27192)			
Yes	13.4	26.2	$\chi^2$ (df1) = 190.2, $p < .001$
No	86.6	73.8	
<b>At fault</b> (n=27192)			
Yes	56.7	82.1	$\chi^2$ (df1) = 374.0, $p < .001$
No	43.3	17.9	
<b>Speed zone</b> (n=27192)			
60 km/h or less	60.1	59.4	$\chi^2$ (df2) = 0.4, $p > .05$
70 to 90 km/h	12.0	12.1	
100 to 110 km/h	27.9	28.6	

Source: Queensland Road Crash Database, Queensland Transport.

(Note: The speeding variable includes cases where the police considered the driver to be either exceeding the speed limit or travelling at a speed excessive for the conditions.)

The Queensland data are consistent with the findings of other Australian and international studies. For example, a Victorian study found that disqualified drivers *“are over-represented in serious crashes and in crashes that suggest a pattern focussed on recreational road use and drink-driving”* (Harrison, 1997, p.110). They were also over-represented in single vehicle crashes and in crashes involving loss of control (e.g. on curved section of roads). A FORS study found that unlicensed drivers and riders involved in fatal crashes were more likely than their licensed counterparts to be judged at fault for the crash and to not wear seat belts or helmets (FORS, 1997b). Similar results were found by the ATSB (2000) in a study of never-licensed drivers. In the USA, Griffin and DeLaZerda (2000) found that alcohol use was much more common among unlicensed drivers involved in fatal crashes than licensed drivers. In particular, 74.1% of the revoked driver and 50.7% of the expired licence holders involved in fatal crashes had been drinking alcohol compared with 19.9% of the licensed drivers. As noted earlier, Malenfant *et al* (2002) found that the suspended drivers detected in their study (at roadside checkpoints) had four times more reportable crashes in the preceding five years than the average New Brunswick driver. Other data indicate that suspended drivers in that province are over-involved in fatal crashes during their suspension period.

While the above data suggest that unlicensed drivers engage in more risky behaviour than licensed drivers, it does not necessarily confirm that they have a higher crash risk. This is because the crash data do not account for possible differences in the exposure of unlicensed drivers (Silcock, 2000). Given the difficulty in obtaining accurate exposure data, DeYoung *et al* (1997) used a ‘quasi-induced’ exposure procedure to estimate the exposure and subsequent fatal crash rates of unlicensed drivers in California. This procedure involves dividing the proportion of at-fault drivers in a particular group by the proportion of innocent drivers to calculate an estimated crash rate. It is based on the assumption that the proportion of crash-involved innocent drivers should be indicative of their overall representation in the driving population. While this approach has a number of limitations it provides a means to compare different groups of drivers. On this basis DeYoung *et al* (1997) estimated that suspended/revoked drivers and other unlicensed drivers were over-involved in fatal crashes by a factor of 3.7:1 and 4.9:1 respectively, compared to licensed drivers.

There are a number of possible explanations for the apparent contradiction between the crash data and the self-reported behaviour of unlicensed drivers. First, as noted earlier, most of the self-report surveys feature relatively low response rates. Accordingly, it is possible that crash-involved unlicensed drivers tend to represent a sub-group who do not typically respond to self-report surveys. Second, some of the unlicensed drivers who report driving more safely in general may still engage in risky behaviours on some occasions. Finally, it is possible that some of the behaviours unlicensed drivers adopt to evade detection may actually increase their crash risk. As noted by Job *et al* (1994, p.12) *“some behaviours such as driving only at night or using back streets rather than main streets may reduce safety”*. Further research is required to establish whether the behaviour of crash-involved unlicensed drivers is indicative of unlicensed drivers as a whole, or whether they represent a sub-group, which is less concerned about the risks of detection and punishment, and may be less cautious in general.



## 2.4 Types of unlicensed drivers

A driver may be unlicensed for a wide variety of reasons ranging from those who have inadvertently let their licence expire through to those who have never held a licence. The motives for driving without a valid licence might vary greatly therefore, depending on the circumstances. Interestingly, some research has found similarities among unlicensed drivers involved in crashes. Compared with licensed drivers, unlicensed drivers involved in serious crashes are more likely to be males and younger motorists, motorcyclists (FORS, 1997a; Watson, 1997) unemployed and, to a lesser extent, students and blue collar workers, and involved in crashes in remote, rural areas (FORS, 1997a).

However, other research suggests that unlicensed drivers do not represent a uniform group. For example, an analysis of Queensland crash data has shown that different types of unlicensed drivers vary in their relative risk of involvement in serious crashes (Watson, 1997 and 2000). This is illustrated in Table 2.3 which compares the risk of being involved in a serious casualty crash (relative to a minor crash) for licensed and unlicensed drivers. The relative risk is estimated by the odds ratio with 95% confidence intervals. Unlicensed drivers as a whole and each of the sub-groups were compared with all licensed drivers.

**Table 2.3 Risk of involvement in a serious casualty crash, relative to a minor crash, for different licence categories with 95% confidence intervals (95% CI)**

Type of driver	Odds ratio risk	95% CI
<b>All licensed drivers*</b>	<b>1.00</b>	----
<b>All unlicensed drivers</b>	<b>2.12</b>	1.99 – 2.26
Inappropriate class	5.75	4.61 – 7.18
Never licensed	2.33	2.03 – 2.67
Disqualified or suspended	2.13	1.89 – 2.40
Expired	1.80	1.51 – 2.12

\* Primary reference category

Source: Queensland Road Crash Database, Queensland Transport

As a whole, unlicensed drivers are 2.12 times more likely to be involved in a serious casualty crash than licensed drivers. The sub-group most at risk were those who did not possess an appropriate class of licence for the vehicle they were driving (predominantly males riding motorcycles), followed by those who had never held a licence, and those who were disqualified or suspended from driving. The unlicensed drivers with the lowest risk were those whose licence had expired and who may have been unlicensed for essentially administrative reasons.

This suggests that the preparedness of drivers to engage in different forms of unlicensed driving may be reflective of a broader propensity to take risks. In particular, it appears that more flagrant unlicensed driving is associated with higher

risk-taking on the road. For example, the drivers with the highest risk of involvement in a serious crash were those who effectively did not hold a licence at all i.e. they did not hold a licence for the vehicle they were driving or they had never held a licence. In addition, this suggests that the crash risk of many of these drivers may be exacerbated by a lack of driving experience (refer to Table 2.2).

Even among some of the unlicensed driver sub-groups there appears to be variability. One of the largest sub-groups of unlicensed drivers involved in crashes in Queensland is the *never held a licence* group. This sub-group represented 31% of all unlicensed drivers involved in fatal crashes between 1992 and 1996. However, there was considerable variation in the age of these drivers with 34% being 16 years of age or younger, 38% being 17 to 24, and 24% in the 25 to 39 age category (Watson, 1998d). Therefore, while driving without a licence is more common among underage drivers it is not unique to them.

In addition, the evidence suggests that some unlicensed drivers, particularly those who have previously lost their licence for drink driving, may have an alcohol-related health problem (see Section 2.5.2 for a more detailed discussion). In a similar vein, a recent Australian study examined the driving behaviour of a convenient sample of people who use illicit opiates, stimulants, and cannabis. The study involved a combination of focus groups (36 participants) and field survey (160 participants). It found that nearly 10% of the total sample was driving unlicensed at the time (Aitken, Kerger and Crofts, 2000). It is possible that the factors influencing the driving behaviour of regular alcohol and drug users are different from those influencing other unlicensed drivers.

The evidence therefore suggests that despite some similarities unlicensed drivers do not represent a uniform group. This highlights the need for research to examine both common and different factors contributing to unlicensed driving among different groups of drivers.

## **2.5 Factors contributing to unlicensed driving**

### **2.5.1 Survey evidence**

In order to understand the factors contributing to unlicensed driving, it is essential to obtain an insight into the motivations, attitudes and perceptions of the different types of offenders. This type of information is best obtained through the use of focus groups, interviews or self-administered surveys.

As noted earlier, a number of surveys conducted in Australia, the USA, and the UK have explored the factors contributing to unlicensed driving (albeit with low response rates). The reasons most frequently cited by respondents are related to business or employment commitments, family, or social reasons and lack of public transport (Robinson, 1977; Ross and Gonzales, 1988; Smith and Maisey, 1990; Mirrlees-Black, 1993; Job *et al.*, 1994). A Victorian survey of over 1550 disqualified drivers found that among those who continued to drive, many reported doing so only in exceptional circumstances. Nevertheless, their responses suggested that "*a considerable number of exceptional circumstances presented themselves*" (Robinson,

1977, p.75). While employment reasons were most frequently cited in some surveys (Robinson, 1977; Ross and Gonzales, 1988), family and social reasons were given equal weight in others (Smith and Maisey; Job *et al*, 1994). Ross and Gonzales (1988) found that driving while disqualified was more prevalent among those who were employed and worked far from home, those who lived in households without another licence holder, and those who had access to a vehicle. This latter finding was also reported by Mirrlees-Black (1993) and Williamson (1996).

While the majority of the surveys conducted to date have focussed on disqualified or suspended drivers Job *et al* (1994) surveyed a cross-section of convicted unlicensed drivers. In this NSW study almost 30% of the 877 respondents reported that they were not aware that they were unlicensed when they were detected. Not surprisingly this was most common among drivers whose licence had expired and those who held interstate licences. Job *et al* (1994) also found a very low awareness of the penalty for unlicensed driving among those offenders who admitted driving. However, over half of these people reported that they would have probably driven even if they had known the penalty.

A more recent, smaller-scale survey of 50 unlicensed drivers in the UK found that the respondents were more likely to agree with statements supporting aggressive driving styles and had a high opinion of their driving skills (Silcock, Sunter, van Lottum and Beuret, 1999). The study found some evidence that difficulties involved in passing the driving theory test and the costs involved with learning to drive could discourage participation in the licensing system. In addition, the study highlighted the link between unlicensed and uninsured driving. *“The fact that with unlicensed driving the insurance would be invalid did not seem to occur to most young people. Others were concerned about this aspect and it was one of the major motives for eventually taking a driving test”* (Silcock *et al*, 1999, p.13).

Unfortunately, many of the surveys conducted to date feature a number of shortcomings. First, as already noted, most are characterised by relatively low response rates. Second, the surveys have mainly focussed on disqualified drivers, rather than unlicensed drivers in general. Third, most of the surveys are largely descriptive in nature providing little insight into the underlying personal, social, and environmental factors contributing to unlicensed driving. As a result it is generally unclear why some people find employment, family, or social reasons compelling enough to warrant driving without a valid licence. One way to address this is to use a theoretical framework to guide the collection and interpretation of survey data.

### **2.5.2 Theoretical perspectives**

The following section reviews a number of theoretical perspectives that have been used in the literature to explain illegal or high-risk driving behaviours such as drink driving, speeding, or unlicensed driving. The first three perspectives focus on the social factors influencing behaviour particularly the role of legal (formal) and social (informal) sanctions. The last two perspectives focus on personality-related factors that may predispose people to certain behaviours.

### *Deterrence theory*

Deterrence theory has been used extensively in Australia and other countries to guide the development of many road safety countermeasures, particularly in the area of drink driving (e.g. Ross, 1982; Homel, 1988). It has ‘underpinned’ the design of traffic law enforcement programs such Random Breath Testing (RBT) and speed cameras (Homel, 1988; Cameron, Cavallo and Gilbert, 1992; Watson *et al*, 1996).

Deterrence theory focuses on explaining the conditions under which criminal acts are omitted or curtailed out of fear of legal punishment (Gibbs, 1975). The traditional or classical form of this theory asserts that the effectiveness of a legal threat is related to the perceived certainty, severity, and swiftness of punishment. Consequently legal threats are most effective when there is a greater likelihood of detection, arrest, prosecution, conviction, and punishment, and when the eventual penalty is more certain, severe, and quickly administered (Vingilis, 1990).

Not surprisingly deterrence theory has also been used to explain the prevalence of unlicensed driving. Researchers have suggested that the high level of unlicensed driving in many jurisdictions is primarily a function of the low perceived risk of apprehension (Nichols and Ross, 1990; Ross, 1991). For example, research in Queensland has suggested that the public’s perceived risk of apprehension for drink driving and speeding is much higher than for unlicensed driving. There appears to be a common perception that you are unlikely to be caught for unlicensed driving if you do not draw attention to yourself (Watson *et al*, 1996). As noted by Ross (1991, p. 65)

*... the experience of driving while unlicensed teaches that participation in the licensing system is unnecessary if one takes precautions in the amount and nature of driving. Given this belief, disincentives to rejoining the system may operate to keep drivers from seeking re-entry.*

According to deterrence theory the decision to drive unlicensed should be mainly influenced by a person's perceptions of the risk of apprehension and the certainty, swiftness, and severity of punishment. Partial support for this explanation was obtained in a study conducted by Robinson and Kelso (1981). Using the responses obtained from Robinson's (1977) survey of disqualified drivers they found that anxiety towards apprehension was significantly related to the decision to drive. In other words the respondents who admitted driving were more likely to rate their anxiety about possible apprehension as lower than those who reported that they did not drive. A multiple regression analysis indicated that the strongest predictor of apprehension anxiety was the perceived risk of apprehension. Interestingly, awareness of the penalty for disqualified driving added little to the predictive power of the analysis. Similarly, regression analyses undertaken by Job *et al* (1994) suggested that the operation of RBT and associated licence checking in NSW was an important factor in deterring unlicensed driving.

Classical deterrence theory has been criticised in the literature for its failure to account for the wide range of factors that can influence social conformity. First, there is a need to conceptualise deterrence within a “*large context of social control, wherein legal threats constitute but one mechanism that may result in conformity. The other mechanisms are usually called extralegal factors or informal sanctions*”

(Vingilis, 1990, p.108). A number of studies comparing the statistical contributions of formal (legal) and informal (extralegal or social) sanctions to behaviours such as marijuana use and drink driving have found that the informal sanctions have a greater predictive power (Meier and Johnson, 1977; Anderson, Chiricos and Waldo, 1977; Berger and Snortum, 1986).

Second, Vingilis (1990) has argued that certain types of offenders, particularly those that commit offences for impulsive or compulsive reasons, are less likely to be influenced by formal sanctions. This concern is unlikely to apply in the case of those who have inadvertently let their licence expire. However, it is quite relevant for those unlicensed drivers with previous convictions for the behaviour. For example, Bakker, Ward, Cryer and Hudson (1997, p.30) cite evidence suggesting that many disqualified drivers continue to offend *"despite strong expectations that they will be caught"*. Mirrlees-Black (1993) has argued that some disqualified drivers appear to have a compulsion to drive which cannot be satisfied by alternative forms of transport. Bakker *et al* (1997) suggest this compulsion to drive represents a maladaptive response to stressful life events and that a therapeutic approach is more appropriate to reduce unlicensed driving offences among persistent offenders. As noted later, social learning perspectives appear better able to explain unlicensed driving for compulsive or impulsive reasons.

Two further criticisms of classical deterrence theory made by Stafford and Ward (1993) are also quite relevant to understanding illegal driving behaviour. First, they argue that deterrence theory does not adequately account for the effect of punishment avoidance on behaviour.

*To illustrate, it is possible that punishment avoidance does more to encourage crime than punishment does to discourage it. Offenders whose experience is limited largely to avoiding punishment may come to believe that they are immune from punishment, even in the face of occasional evidence to the contrary* (Stafford and Warr, 1993, p.125).

Second, Stafford and Warr (1993) argue that it is important to consider not only the effect of a person's direct experience with punishment and punishment avoidance but also their indirect experiences obtained through contact with their peer group. To support their argument, they draw on the distinction in social learning theory between experiential learning (via direct experience) and observational/vicarious learning (via indirect experience) (e.g. Bandura, 1969).

### *Reconceptualisations of deterrence theory*

Since the 1970s more sophisticated models of deterrence have been developed and tested by researchers. A number of these have been used to explain illegal driving behaviours, particularly drink driving. For example, Homel (1986, 1988) developed a model of deterrence to guide the introduction of RBT in NSW that incorporated both legal sanctions and informal sanctions, such as peer pressure and the internalisation of norms relating to drink driving. Drawing on rational choice theory and prospect theory, he suggested that the decision to drive after drinking is based on an individual's evaluation of the potential losses involved. While Homel's results generally supported his deterrence model, they suggested that deterrence is an unstable process: *"... whether a deterrent effect is maintained or not is essentially*

*an outcome of a delicate balance, over time, between the forces maintaining and those tending to erode perceptions of arrest for drinking and driving as a likely event” (Homel, 1986, p.136).*

More recently, Stafford and Warr (1993) have proposed a reconceptualisation of deterrence theory that incorporates both personal and vicarious experiences with punishment and the concept of punishment avoidance. Traditionally, *specific* deterrence has been conceptualised as the process by which an offender is deterred from reoffending through direct exposure to punishment, while *general* deterrence concerns the deterring of the general community through the threat of punishment (Homel, 1986). Stafford and Warr (1993) argue that *specific* deterrence should be reconceptualised as the direct effect on an individual of punishment and punishment avoidance. *General* deterrence can then be used as a concept to cover an individual's indirect or vicarious experience of these contingencies. The advantage of this perspective is that *specific* and *general* deterrence no longer become mutually exclusive processes operating on different populations (as is the case in classical deterrence theory) but can operate together on individuals.

Support for Stafford's and Warr's perspective was obtained by Piquero and Paternoster (1998) in a study examining drink driving behaviour. They found that intentions to drink and drive were affected by both personal and vicarious experiences, as well as by experience of punishment and punishment avoidance. They also found strong effects for legal and informal sanctions.

#### *Social learning theory*

Akers (1977, 1990) has argued that deterrence theory is not a general or complete model of criminal behaviour but represents a sub-set of social learning theory. His central thesis is that “*the primary concepts and valid postulates of deterrence and rational choice are subsumable under general social learning or behavioural principles*” (Akers, 1990, p. 655). While deterrence theory is concerned with the influence of legal sanctions on criminal behaviour, social learning theory is more concerned with the overall social setting in which behaviours occur and the way in which they are differentially rewarded and punished (Akers, 1990).

Social learning theory is a broad descriptor used in psychology and criminology to encompass a set of theoretical perspectives with some common elements. One of the key characteristics of social learning theories is the proposition that behaviour is primarily learned and reinforced through social interaction. Learning about the social outcomes of different behaviours occurs both directly (through personal experience) or vicariously (by observing others). This latter process is generally referred to as modelling or imitation (Bandura, 1969, 1977).

Social learning theory has been used to investigate a wide range of deviant or non-conforming behaviours including alcohol and drug abuse, adolescent smoking, delinquency, adolescent sexual behaviour and computer crime (e.g. Akers *et al*, 1979; Krohn, Skinner, Akers and Massey, 1985; DiBlasio and Benda, 1990; Akers and Lee, 1996; Skinner and Fream, 1997). These studies have demonstrated extensive support for the theory with both adolescent and adult populations. However, the theory has not been used widely in the road safety field. One exception

was a study by DiBlasio (1987) which showed that a social learning model was a good predictor of adolescents' choice to ride with a drinking driver.

While social learning theory has not yet been used to examine unlicensed driving, it appears to offer a number of heuristic advantages over deterrence-based theories. First, it provides a comprehensive means of addressing a range of important factors including formal and informal sanctions, direct and indirect experiences, and punishment and punishment avoidance. Second, this approach appears better equipped to explain compulsive behaviours characteristic of some recidivist offenders particularly those who repeatedly drive after having their licence disqualified (Mirrlees-Black, 1993; Bakker *et al*, 1997).

### *Sensation seeking*

As noted earlier there is a growing body of evidence linking unlicensed driving to other high-risk driving behaviours such as drink driving and speeding. This suggests that unlicensed driving may be influenced by an individual's general propensity to take risks on the road. There has been considerable research into the link between personality-related factors, risky driving, and crash involvement.

One of the personality factors showing the strongest relationship with risky driving is sensation seeking. This construct has been defined as "*a trait defined by the seeking of varied, novel, complex, and intense sensations and experiences, and a willingness to take physical, social, legal, and financial risks for the sake of such experience*" (Zuckerman, 1994 p. 27). Sensation seeking is generally measured in terms of scores on the *Sensation Seeking Scale* (SSS) first published by Zuckerman *et al* (1964, cited in Zuckerman, Eysenck and Eysenck, 1978). Using this scale various studies have shown higher levels of sensation seeking to be linked to a range of risky behaviours and to be more common among males and young people (Zuckerman, 1994). Many studies have also demonstrated a significant positive relationship between sensation seeking and risky driving behaviours such as drink driving, speeding, and following too closely (Jonah, 1997). These studies have generally found a stronger relationship between sensation seeking and self-reported driving behaviour, rather than with traffic offences or crash involvement. However, this may be due to weaknesses in the crash measures used to date.

It is possible that sensation seeking may influence unlicensed driving in two ways. First, high sensation seekers may be more likely to perceive unlicensed driving as being rewarding, due to the thrill and excitement associated with breaking the law. Second, the act of driving (while unlicensed) may facilitate other behaviours such as drink driving and speeding that are rewarding to high sensation seekers.

### *Alcohol dependence*

Among disqualified drivers there appears to be a core of persistent offenders who continue to drive despite previous convictions (Bakker *et al*, 1997). In many cases these convictions occur in conjunction with other offences such as drink driving, refusing a breath test, or reckless driving (NRMA, 1991). Australian research has confirmed that there is a higher incidence of alcohol impairment among unlicensed drivers involved in serious crashes compared to licensed drivers (Harrison, 1997; Watson, 1997; FORS, 1997b). This is most pronounced among disqualified drivers,

*"perhaps reflecting a high representation of recidivist drink drivers in that group"* (FORS, 1997b). Similarly, international research has indicated that drivers involved in fatal crashes with high blood alcohol concentrations (BACs) are more likely than other groups to have a history of previous licence suspensions and to have been driving without a valid licence at the time (Simpson and Mayhew, 1991).

Persistent drink driving offenders tend to display numerous psychological and behavioural characteristics that distinguish them from the general driving population including higher levels of aggression, hostility, and sensation seeking. They are also more likely to have a criminal history, to use drugs, to have a poor driving history, to more frequently consume large amounts of alcohol, and to experience alcohol-related problems (Mayhew, Simpson and Beirness, 1997). It is therefore tempting to assume that the behaviour of many unlicensed drivers, particularly those who have previously lost their licence for drink driving, is primarily a product of their alcohol dependence.

However, some caveats need to be placed on this conclusion. First, while persistent drink driving offenders appear to be different to the general driving population, they are not a homogenous group. *"They are diverse, with different backgrounds, problems, and most likely different reasons for engaging in DWI (driving while impaired) behaviour"* (Mayhew *et al*, 1997, p.794). Second, there is evidence that drink driving offenders and high-risk problem drivers are substantially overlapping populations, sharing many common characteristics (Wilson, 1991; Donovan *et al*, 1983 cited in Bakker *et al*, 1997). Indeed, Bakker *et al* (1997, p.29) have argued that

*. . while it is clear that most disqualified drivers have a number of offences for alcohol-impaired driving, DWD (driving-while-disqualified) offences are, for most of these individuals, more numerous, strongly suggesting that it is a significant problem in its own right.*

## **2.6 Countermeasures to unlicensed driving**

A range of countermeasures are currently used in Australia and elsewhere to reduce the incidence of unlicensed driving. While some of these are specific to unlicensed drivers, others target broader problem groups such as recidivist drink driving offenders (who are often unlicensed). The following section reviews the available evidence relating to these countermeasures with special emphasis on the current situation in Queensland.

### **2.6.1 Administrative and judicial processes**

As noted earlier, Malenfant *et al* (2002) found that 91% of the suspended drivers detected at roadside checkpoints in New Brunswick, Canada produced an invalid driving permit when they were pulled over. This finding draws into question the practice of requiring suspended drivers to voluntarily surrender their permits as is the case in New Brunswick. In this regard, Ross and Gonzales (1988) argue that it is important for licensing authorities to recover the licences of those offenders who are disqualified from driving. This should reduce the temptation among these people to attempt to evade detection even if the police intercept them.



The current practice in many parts of Australia, including Queensland, is to require those offenders who are processed at court to surrender their licence at the time. However, those offenders who lose their licence administratively (e.g. for accumulation of demerit points) are typically advised by mail to surrender their licence to a government office. More recently, the policy in Queensland has been changed for those drivers who lose their licence for the accumulation of demerit points<sup>1</sup>. These drivers are now advised by mail that their licence has been suspended but are no longer required to surrender it.

Little research appears to have been conducted into the effectiveness of traditional penalties for unlicensed driving. The available evidence suggests that very high fines do not necessarily improve compliance with road rules if the risk of apprehension is perceived by the public to be low (Nichols and Ross, 1990). The penalties for unlicensed driving should nevertheless exceed the costs associated with participating in the licensing system, otherwise the risk of remaining unlicensed may appear more attractive (Watson, 1998a; Travelsafe, 1998).

Both Mirrlees-Black (1993) and Job *et al* (1994) have argued that improved knowledge about the consequences of unlicensed driving could improve compliance. Low cost measures in this area include ensuring that adequate information about penalties is included in warning/notification letters about licence loss (Job *et al*, 1994) and that offenders are warned about the consequences of non-compliance when they are sentenced to disqualification in court (Mirrlees-Black, 1993).

It is also possible that some licensing processes may inadvertently encourage unlicensed driving. For example, Job *et al* (1994) found some evidence that the cost of rider training courses in New South Wales was contributing to the level of unlicensed riding among motorcyclists. Similarly, Silcock *et al* (1999) report that the introduction of a new written theory test in the UK appeared to have led to an increase in unlicensed driving. This highlights the need for licensing authorities to avoid erecting barriers that may discourage licensing, such as more complex driving tests or costly licensing processes (Watson *et al*, 1996). In addition, a number of jurisdictions in Australia, including Queensland, have started cancelling driver's licences for non-driving related offences such as non-payment of parking fines (e.g. Carseldine *et al*, 1992). While this approach offers certain administrative efficiencies, it has the potential to significantly exacerbate the numbers of people driving unlicensed.

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1. This policy change came into effect in December 2001, during the period in which this survey was being conducted.

### **2.6.2 Police enforcement practices**

Researchers have repeatedly noted the need to improve the roadside technology used by police to ensure the rapid identification of drivers who are unlicensed (e.g. Smith, 1976; Job *et al*, 1994). In Queensland, major developments have occurred in this area over recent years. In a joint project the Queensland Police Service and Queensland Transport have successfully developed and trialled a system known as Mobile Intelligence Data Access (MINDA). This system provides operational police with a computer link to Queensland Transport's licensing and registration databases, resulting in a 15 second turnaround time for inquiries (Travelsafe, 1998). The development of the system was prompted by the time delay experienced by police (15 minutes on average) when making roadside inquiries via their radio-based system. This often discouraged them from checking the licence status of drivers they intercepted. Evaluations of MINDA have proved very successful with a substantial reduction in average response times and a fourfold increase in the level of detection for unlicensed driving, unregistered vehicles, and outstanding warrants (Watson *et al*, 1996).

In order to heighten the perceived risk of detection among unlicensed drivers, some researchers have recommended the widespread checking of driver's licences at RBT operations (Job *et al*, 1994; Watson *et al*, 1996; Staysafe, 1997) and the introduction of random licence checking (Watson, 1998d). While the police have the power to randomly check licences in Queensland, it is difficult for them to do so on a systematic basis because open licence holders are not, in practice, required to carry their licence. Rather, they have 48 hours to present it at a police station (Travelsafe, 1998). New South Wales is the only state that currently requires all drivers to carry their licence, facilitating the checking of licences at RBT operations in that state (Watson *et al*, 1996).

### **2.6.3 Restricted licences**

Job *et al* (1994) suggest that consideration be given to the use of restricted licences as an alternative to full disqualification to allow offenders to drive to and from work. This suggestion was prompted by their finding that the most common reason cited for unlicensed driving (among their sample of NSW offenders) was the need to work. In Australia, only Queensland, Western Australia, and the Australian Capital Territory issue restricted licences to drink drivers on hardship grounds. In the USA, however, the practice is far more widespread (Watson, 1998c).

Despite their intuitive appeal, the evidence suggests that the benefits of restricted licences may be minimal. Smith and Maisey (1990) found that almost 30% of respondents who had been granted a special licence admitted driving outside the conditions of the licence. Research undertaken in Queensland with drink driving offenders indicates that, while restricted licences appear to reduce drink driving recidivism on a par with full disqualification, they do not deliver the same reductions in overall offences and crashes (Watson and Siskind, 1997; Watson, Siskind and King, 2000). It is also possible that the use of restricted licences may actually undermine the general deterrent effect of licence disqualification by creating the impression that licence loss is neither certain nor inevitable.

#### 2.6.4 Vehicle-based sanctions

As noted earlier, a number of studies have found that unlicensed driving is more prevalent among those people who have ready access to a vehicle (Ross and Conzales, 1988; Mirlees-Black, 1993; Williamson, 1996). Consistent with these findings, a number of vehicle-based sanctions are increasingly being used throughout the world to reduce the opportunity for offenders to drive without a valid licence. Typically, vehicle-based sanctions are used to reduce recidivism among both drink drivers and disqualified/suspended drivers. The strategy is particularly relevant for persistent offenders, who appear undeterred by the threat of further punishment, and often drive with high blood alcohol concentrations (BACs).

##### *Alcohol ignition interlocks*

Since the late 1980s, a number of jurisdictions in the USA and Canada have implemented alcohol ignition interlock programs for drink driving offenders. In effect, these devices will not allow a vehicle to be started until a breath test has been passed at a pre-set BAC level (Watson *et al*, 1996). While these devices are primarily designed to reduce drink-driving recidivism, they are increasingly being used in conjunction with shorter suspension periods (Voas, Marques, Tippetts and Beirness, 1999). They represent an alternative sanctioning approach that, if successful, could serve to reduce the overall level of suspended driving in the community.

The available evidence suggests that alcohol ignition interlock programs can reduce drink driving recidivism over conventional sanctions such as license suspension, at least while the devices are fitted to the vehicles of offenders (Weinrath, 1997; Beck *et al*, 1997; Voas *et al*, 1999). However, the effect once the devices are removed remains unclear. Indeed, there is some evidence that interlocks may only delay recidivism, with offence rates returning to higher levels once they are removed (Watson, 1998c; Voas *et al*, 1999). Moreover, the impact of interlocks on drink driving recidivism is currently constrained by the low take-up rates (often below 10%) of the devices among eligible offenders (Voas *et al*, 1999; Voas, Blackman, Tippetts and Marques, 2002). In practice most drivers prefer to receive traditional sanctions, such as licence suspension, which continue to exacerbate the problem of driving while suspended.

Researchers in Australia have long advocated a trial of alcohol ignition interlocks (Homel, 1988). Following trials in a number of states, interlock programs have been established in South Australia, Queensland, Victoria, and New South Wales. The Queensland program is trialling the use of interlocks in conjunction with a rehabilitation program in the hope of bringing about long term changes in behaviour that may persist after the interlock is removed (Sheehan *et al*, 2000).

##### *Licence plate sanctions*

A number of jurisdictions in the United States have implemented licence (registration) plate sanctions for suspended drivers. In Oregon and Washington, the police were empowered to place a 'zebra' sticker on the registration plate of suspended drivers when detected. If the driver was unable to show within 60 days that he/she had a valid licence or that the vehicle was registered to another person,

the vehicle's registration was cancelled (Clayton, 1997). An evaluation of the program in Oregon suggested that it was effective in reducing the level of moving violations and convictions for drink driving and driving while suspended (Voas, Tippetts and Lange, 1997). Both these programs operated for limited periods and have now lapsed (Clayton, 1997).

In addition, there is some evidence that impounding licence (registration) plates can reduce recidivism among repeat drink driving offenders (Ross, Simon and Cleary, 1995; Clayton, 1997). This approach tends to present fewer practical difficulties to enforcement agencies than impounding the vehicle itself (see below).

#### *Vehicle immobilisation, impoundment, and forfeiture*

A number of countries have introduced legislative provisions that permit vehicle immobilization, impoundment, or forfeiture for driving under the influence of alcohol (DUI) and/or driving while suspended (DWS) offences. Generally, impoundment involves the vehicle being removed to a storage facility while immobilisation involves the securing of the vehicle by a steering lock or wheel clamp (Clayton, 1997). Evaluations of these sanctions have been limited to date.

In 1989 the Canadian province of Manitoba simultaneously introduced administrative licence suspension for DUI offenders and vehicle impoundment for DWS offenders. The impoundment period was 30 days for first offenders and 60 days for repeat offenders. An evaluation by Beirness, Simpson and Mayhew (1997) was unable to isolate the individual effects of the two measures. However, they did find evidence of a general deterrent effect with a 12% reduction in alcohol-involved driver fatalities and a 26% decrease in single vehicle night-time crashes. In addition, there appeared to be a specific deterrent effect associated with the measures evidenced by a 27% reduction in repeat DWS offences within the first four years.

In 1993 the US State of Ohio enacted a law enabling the immobilization of vehicles for DUI and DWS offences (Voas, Tippetts and Taylor, 1998). The legislation was broad in nature allowing counties within the state to either immobilize or impound the vehicles of offenders (30 days for the first DWS offence and 60 days for the second offence). Third-time DWS offenders were subject to vehicle forfeiture. Evaluations of both vehicle immobilization (Franklin County) and vehicle impoundment (Hamilton County) programs showed positive results, with recidivism rates reduced during both the sanction period and after the vehicles were returned to offenders (Voas *et al*, 1998).

In early 1995 California enacted two laws to provide for the impoundment and forfeiture of vehicles driven by drivers who were suspended/revoked or otherwise unlicensed. The laws enabled the vehicles of offenders to be impounded for 30 days or to be forfeited if they had prior convictions for DUI or DWS. An evaluation of this initiative by DeYoung (1997b) examined its impact on the subsequent driving records of those who had had their vehicles impounded. It found that first-time offenders experienced 18.1% fewer traffic convictions and 24.7% fewer crashes in the year following the sanction than a comparison group who had not had their vehicles impounded. Among repeat offenders the reductions were larger, with 34.2% fewer convictions and 37.6% fewer crashes. As noted by Griffin and DeLaZerda (2000, p.31)

*Although the results of California's vehicle impoundment program are impressive, it should also be noted that . . . many unlicensed, suspended, and revoked drivers . . . continued to be convicted of unlicensed driving . . . and continued to be involved in crashes.*

More recently, Voas and DeYoung (2002) reviewed the evaluations of various vehicle-based sanctions in California, Minnesota, New York, Ohio, Oregon, and Washington. They noted that all the programs demonstrated reductions in recidivism associated with denying offenders the use of their vehicles for 1 to 6 months. At this stage they suggest that the evidence in favour of vehicle impoundment is more compelling than that for license plate impoundment, license plate marking, or vehicle forfeiture.

In May 1999 New Zealand introduced a range of countermeasures to reduce the level of unlicensed driving including photo driver licences, mandatory licence carriage, and vehicle impoundment (LTSA, undated). The vehicle impoundment provisions allow the police to seize and impound (for 28 days) vehicles driven by drivers whose licence has been disqualified, revoked, or suspended. The provisions also apply to drivers who have never been licensed and those with expired licences, as long as they have previously been forbidden to drive by the police until they obtain a valid licence. Because the three measures were introduced together it has proven impossible to disentangle their individual effects. Nonetheless, the preliminary evidence is encouraging. The proportion of crash involved drivers who were disqualified or unlicensed decreased by approximately 2% following the introduction of the measures. In addition, there was a 38% reduction overall in the number of disqualified driving offences detected by the police in the first three years of the new provisions. Interestingly, however, the number of vehicle impoundments remained relatively high during the period. While the exact reasons for this are unclear, it appears that an increasing number of unlicensed drivers were being detected (LTSA, undated).

While the emerging evidence relating to vehicle impoundment/forfeiture appears promising, a number of concerns have been raised about these measures. First, it has been suggested that they can be overly punitive in their effect on offenders, their families, and other involved persons. For example, an early evaluation of the vehicle immobilisation program in Ohio indicated that judges sometimes failed to apply the sanction uniformly, particularly when offenders were driving vehicles belonging to other people (Stewart, Voas and Taylor, 1995). Second, it appears that offenders can sometimes use a variety of strategies to avoid vehicle-based sanctions such as failing to advise authorities about changes in the ownership of vehicles (Clayton, 1997). As noted by Clayton (1997, p.31) *"Despite the availability of these vehicle-based sanctions, their usage appears to be low, largely because of administrative and practical problems associated with their implementation."*

### *Electronic licences*

In the medium to long term the development of electronic licences offers the potential to prevent vehicles being operated by drivers without a valid licence. The Swedish National Road Administration is currently field-testing an electronic driver's licence (EDL) system (Goldberg, 1997). It features a "smart-card" that acts as an ignition key to the car. The system can be programmed to require an alcohol ignition interlock to be operated in the vehicle. It has been claimed that "*With an alcohol interlock in the car combined with the KittleLock electronic driving licence system it will be very difficult, if not impossible, to bypass the system*" (Goldberg, 1997, p.850). As the technology improves there is potential to require electronic licences to be installed in the vehicles of recidivist offenders and, eventually, in all new vehicles.

### **2.6.5 Rehabilitation of offenders**

There is a growing body of evidence that rehabilitation programs can be effective in reducing alcohol-related offences and crashes (Wells-Parker *et al*, 1995). In particular, the research suggests that the combined use of licence actions and rehabilitation programs are most effective in reducing drink driving recidivism among first and multiple offenders and deliver the best overall road safety outcomes (McKnight and Voas, 1991; Peck, 1991; Sadler, Perrine and Peck, 1991; DeYoung, 1997a). By addressing the factors underlying alcohol misuse, these programs offer the potential to reduce the compulsion among some offenders to drive illegally.

Since 1993 a rehabilitation program for drink drivers known as *Under the Limit* (UTL) has been operating in Queensland. This program is implemented through the court system in order to complement the probationary orders and licence disqualification applied to offenders. An evaluation has indicated that completion of the program reduces the risk of reoffence by 30% among repeat offenders (Sheehan, Siskind, Schonfeld, Ferguson and Davey, 1999). (However, there was a group of offenders with exceptionally high recidivism rates who were less likely to complete the program. This is a group requiring additional interventions or controls.)

There may be value in developing rehabilitation programs specifically targeting disqualified drivers. As noted in Section 2.5.2 Bakker *et al* (1997) argue that some persistent offenders experience a compulsion to drive that represents a maladaptive response to stressful life events such as interpersonal conflict. They suggest that the problem with these offenders is often not related to alcohol *per se*, but is indicative of a lack of self-control in their driving behaviour. Consequently, Bakker *et al* (1997) have developed and trialled a relapse-prevention program for "driving-while-disqualified" (DWD) offenders which involves teaching more effective ways of solving interpersonal problems and regulating negative emotional states. An evaluation of this intervention has produced promising results (Bakker, Hudson, and Ward, 2000). The program reduced the DWD recidivism rate among a group of convicted offenders (n=144), compared with a matched comparison group. While the program did not affect subsequent drink driving offences, there were some indications that subsequent criminal convictions were reduced. Besides confirming the potential benefits of rehabilitation, the results suggest that recidivist disqualified drivers do represent a distinct subgroup of driving offenders.

The Bakker *et al* (2000) study utilised participants from both the general community and the prison population within New Zealand. The implementation of traffic-oriented rehabilitation programs also appears relevant for prison populations in Australia. A Victorian study examining the conviction records for a sample (n=105) of reception prisoners found that 37% had outstanding drink driving convictions while 80% were unlicensed (Marshall, undated).

#### **2.6.6 Mass media campaigns**

A far more controversial issue concerns the likely effectiveness of using mass media publicity to heighten the perceived risk of apprehension for unlicensed driving. Homel (1988) has argued that mass-media publicity can reinforce and heighten the impact of RBT operations, contributing to their deterrent impact. However, Job *et al* (1994, p.59) has argued against the use of mass media campaigns to target unlicensed driving due to a concern that it “*may promote a perception that many unauthorised drivers go undetected or it may simply raise awareness of the possibility*”.

Elliott (1992) argues that mass media publicity in isolation is rarely sufficient to alter entrenched behaviours. However, it can contribute to improved road user behaviour by creating a climate of opinion supportive of other measures and by ‘signposting’ the need for behaviour change. This suggests that mass media publicity relating to unlicensed driving should be only considered if “real” improvements are made in the probability of detection.

#### **2.6.7 The road safety benefits of unlicensed driving countermeasures**

As noted in Section 2.3.2, unlicensed driving appears to be associated with a cluster of high-risk behaviours such as drink driving and speeding. However, it is not the cause of these behaviours so there is no guarantee that unlicensed drivers involved in crashes would be any safer if they were actually licensed. In other words these drivers may still engage in higher levels of risk-taking irrespective of their licence status. It is nonetheless likely that more effective countermeasures to unlicensed driving would have a positive effect on road safety by

- encouraging drivers who have never been licensed to participate in the licensing system and thus be subject to processes such as graduated licensing and demerit point systems;
- deterring people from driving vehicles for which they do not have an appropriate class of licence;
- reducing the level of disqualified or suspended driving, thereby improving the deterrent impact of these sanctions; and
- exposing persistent offenders to rehabilitation programs that may assist them to resolve the personal or social factors associated with their behaviour.

# METHOD

## 3.1 General research strategy

A number of methodological problems common to research dealing with illegal or deviant behaviours are encountered when surveying unlicensed drivers. First, it is difficult for a number of reasons to obtain a random, representative sample of these drivers. As already noted, a number of studies that have used official records to recruit subjects have found that many no longer reside at the address provided (Robinson, 1977; Mirrlees-Black, 1993; Job *et al*, 1994). In addition, surveys of this group generally feature high refusal rates which is not surprising given the illegal nature of the behaviour. Together, these factors have contributed to the low response rates of self-report surveys using both interview (Robinson, 1977; Mirrlees-Black, 1993) and mail questionnaire (Robinson, 1977; Smith and Maisey, 1990; Job *et al*, 1994) methods.

Second, concerns are often expressed about the reliance on self-report data where illegal behaviours are concerned. This highlights the need to minimise any systematic bias produced by low response rates and to utilise a survey method that encourages more truthful responses from the subjects.

To obtain a more representative sample it was decided to use the court system to directly access offenders. In Queensland, there are two types of offences relating to unlicensed driving: *disqualified driving* and *unlicensed driving*. At the time the survey was conducted, both of these offender types were required to attend court (Travelsafe, 1998)<sup>2</sup>. This acted as a "bottle-neck" through which all alleged offenders had to pass and represented an ideal time to recruit subjects. In addition, a recent survey of drink drivers conducted in central Queensland courts achieved a reasonably high response rate (61%) (Ferguson *et al*, 2000).

Approval was obtained from the Registrar of the Brisbane Central Magistrates Court to survey unlicensed driving offenders either before or after their court hearing. (The rationale for selecting this location is explained in Section 3.3.) This approval was based on a number of conditions, including that the survey did not interfere with Court business or case flow management, and that the interviewers did not provide any advice to offenders. Approval for the study was also obtained from QUT's Human Research Ethics Committee.

## 3.2 Pilot testing

A two-stage pilot test was conducted involving qualitative and quantitative phases. In both stages, potential participants were offered \$25 to participate in the study.

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2. In Queensland a person is charged with *disqualified driving* if they drive contrary to a court-ordered licence disqualification. Other unlicensed drivers are charged with *unlicensed driving*. In November 2002 (after the end of the data collection period) a Traffic Offence Notice (TON) was introduced for first-time *unlicensed driving* offenders who were otherwise eligible to hold a licence. As a result these offenders were no longer required to attend court.



### 3.2.1 Qualitative pilot test

A semi-structured interview questionnaire was developed to explore a range of issues related to unlicensed driving and the factors contributing to the behaviour. In particular, it was designed to explore the social and legal factors that either encourage or discourage the behaviour, and to inform the concepts and language to be used in the subsequent quantitative pilot test. This phase confirmed the viability of the survey procedure with a total of 15 respondents agreeing to participate from the 23 eligible offenders approached (65% response rate). It also highlighted some driving behaviours associated with unlicensed driving which had not previously been reported in the literature. For example, some participants who had been caught driving on an expired or cancelled Learner's Licence reported that they had purposefully refrained from obtaining a Provisional Licence (the first licence which permits solo driving). The reason cited was that the penalty for Unaccompanied Driving on a Learners Licence (\$30) was lower at that time than the costs associated with obtaining a Provisional Licence.

### 3.2.2 Quantitative pilot test

A questionnaire was developed based on the findings of the qualitative pilot test and the available literature. The two aims of this were to identify potential problems with the instrument and to compare the relative efficacies of an interview-administered versus self-administered versions of the questionnaire. A total of 19 respondents participated in this phase from the 28 eligible offenders approached (68% response rate). Basic information was collected about all the eligible offenders approached (irrespective of whether they agreed to participate or not) including their gender, the offence with which they were charged and, where applicable, the reason cited for non-participation. The main findings of the quantitative pilot test are discussed below.

- The majority of the eligible offenders approached were male (86%). However, there did not appear to be any major difference in the response rate among males and females with 71% of males agreeing to participate compared with 67% of females.
- The majority of the eligible offenders approached were charged with *Unlicensed Driving* (82%). The *unlicensed* drivers appeared more likely to agree to participate (70%) than the *disqualified* drivers (60%).
- The most common reason cited by the 9 offenders who refused to participate was that they were in a rush to go elsewhere (n=7). In particular, three participants specifically mentioned that they needed to go to work. This raised the possibility that offenders who were employed may have been less likely to agree to participate in the survey, either because of time constraints or the fact that the incentive payment appeared less attractive to them.
- The self-administered version of the questionnaire had much higher levels of missing data than the interview-administered version. Hence, while more costly, it appeared that better quality information would be obtained by adopting an interview-based approach for the main study.

- It became apparent that a wider range of questions relating to the on-road driving behaviour of participants was required. While many reported modifying their behaviour when driving unlicensed, there appeared to be strong differences among participants in terms of the caution they exercised. Accordingly, it was decided to include some questions relating to compliance with key road safety rules (namely speeding, restraint use, and drink driving) in the main survey questionnaire.
- The Sensation Seeking Scale items in the pilot questionnaire were measured on a Likert scale as suggested by Rimmo and Aberg (1999) in their research on drivers. However, it became apparent that some participants found the rating scale ambiguous so it was decided to use the fixed-choice format (as originally proposed by Zuckerman *et al*, 1978) in the main survey questionnaire.

### **3.3 Main survey**

#### **3.3.1 Selection of survey location**

The main survey was conducted through face-to-face interviews in the Brisbane Magistrates Court between June 2001 and April 2002. This location was selected for two reasons. First, at the Brisbane Court specific times are allocated for traffic-related matters including drink driving, speeding, disqualified driving, and unlicensed driving charges. These sessions are typically held in the same courtroom each morning making it possible to allocate interviewers to the court sessions when they were most likely to encounter unlicensed and disqualified drivers. Second, the Brisbane Court processes more traffic offenders each year than any other court in Queensland, accounting for over 10% of all unlicensed and disqualified driving offenders (Micola, 2002). Consequently, concentrating on this court represented the most cost-effective method of obtaining a sample that was both reasonably large and representative of offenders detected in a metropolitan setting. It should nevertheless be acknowledged that the court primarily processes offenders who are detected in the inner city and suburban areas of Brisbane.

It was originally intended to interview a sample of offenders in a non-metropolitan setting. However, difficulties arose in identifying suitable courts that processed sufficient numbers of unlicensed drivers in a concentrated manner. An attempt was made to recruit participants at the Townsville Magistrate's Court since it conducts specific traffic-related court sessions (albeit on a fortnightly basis only). In practice, this did not prove an effective research strategy with only 13 participants being recruited at this court during the study period. Due to the small size of this sample it was excluded from the main study.

#### **3.3.2 Participants**

The sample for the main study consisted of 309 offenders. Information relating to the survey response rate and the characteristics of the offenders who agreed to participate compared with those who declined is provided in Section 4.1. Offenders who participated in the two pilot studies were excluded from the main study.

### 3.3.3 Materials

The questionnaire and related information sheet used in the study are reproduced as Appendix B. The questionnaire drew on items and standardized scales from a variety of sources. A summary of the main variables measured in the questionnaire and the related items is provided below.

#### *Socio-demographic characteristics*

The socio-demographic information collected from the participants included gender, age, marital status, level of education attained, employment status/occupation, income, and driving experience (Questions 1 to 7).

#### *Circumstances/process of detection and punishment*

A range of questions were included relating to the offence with which the participants were charged, the circumstances of their detection, and the outcomes of the court hearing (Questions 8 to 20).

#### *Unlicensed driving behaviour*

A number of aspects of the participants' driving behaviour were examined including

- The amount of unlicensed driving undertaken by the offenders during their lifetime, since their previous conviction (if applicable) and since their detection by the police (Questions 23 to 28). The categories used in this section were modelled on the Job *et al* (1994) survey of unlicensed drivers;
- The degree of access to motor vehicles and whether they gave lifts to other people (Questions 30 to 31);
- Compliance with speeding, seat belt and drink driving laws (Questions 37 to 39). These items were adapted from the annual survey of community attitudes to road safety conducted by the Australian Transport Safety Bureau (ATSB, 2000);
- Compliance with a range of other road rules, modelled on questions in the Job *et al* (1994) survey (Question 41);
- Exposure to Police enforcement activity and related licence checking practices (Questions 44 to 48); and
- The participants' intention to drive unlicensed in the future (Question 60).

### *Deterrence variables*

The deterrence variables measured in the questionnaire drew heavily on Stafford's and Warr's (1993) distinction between a person's direct and indirect experience with both punishment and punishment avoidance (see Section 2.5.2). The key variables measured included

- Perceived risk of apprehension for unlicensed driving and a selection of other illegal behaviours (Question 33 to 34);
- Direct and indirect exposure to police traffic law enforcement (Questions 44 to 48 and Question 51);
- Direct and indirect experience of punishment (Questions 15, 17, 21, 22, 49, and 50);
- Direct and indirect experience of punishment avoidance (Questions 44 to 48 and items in Question 51 and 52); and
- Perceived risk of punishment for unlicensed driving (Questions 16, 33, 34, and items in Question 52).

### *Social learning variables*

The social learning variables measured in the questionnaire were based on the theoretical model developed by Akers (1977, 1990) and drew on studies conducted by Akers *et al* (1979), Krohn *et al* (1985), DiBlasio and Benda (1990), Akers and Lee (1996) and Skinner and Fream (1997). The key variables measured included

- Imitation (Questions 49 to 50);
- Definitions (attitudes) toward unlicensed driving and alternative behaviours (items in Question 52);
- Differential Association (items in Question 52); and
- Differential Reinforcement (items in Question 52).

### *Sensation seeking*

Due to the prohibitive length of the full 40-item *Sensation Seeking Scale* (SSS) only the *Thrill and Adventure Seeking* (TAS) subscale (10 items) was used (see Question 54). Previous driving-related studies that have used the SSS suggest that the TAS subscale has the strongest relationship to risky driving (Jonah, 1997). The TAS subscale was drawn from Form V of the SSS because this is the version most widely used to date in driving behaviour studies (Jonah, 1997; Rimmo and Aberg, 1999). This form of the scale uses a fixed-choice format (Zuckerman *et al*, 1978).

### *Alcohol use*

To explore the degree to which alcohol problems may be associated with unlicensed driving, the questionnaire included the Alcohol Use Disorders Identification Test (AUDIT) (Saunders, Aasland, Babor, de la Fuente and Grant, 1993). This AUDIT is a brief screening instrument developed for the World Health Organisation (WHO) for the early detection of hazardous and harmful alcohol consumption. It has been used in a variety of clinical and community settings and has been reported to be more accurate than traditional screening questionnaires (Degenhardt, Conigrave, Wutzke and Saunders, 2001). The 10 items making up the AUDIT are reproduced as Questions 57 to 59 in the study questionnaire.

### *Availability of a motor vehicle or alternative transport*

A number of items were included to examine the influence of transport availability on unlicensed driving. The particular issues addressed were

- access to a motor vehicle (Question 14 and 30);
- ownership of a motor vehicle (Question 14 and 30);
- possession of an old (invalid) photographic licence (Question 32); and
- access to public transport or other means of alternative transport (items in Question 53).

### *Other issues of interest*

A number of items were included to examine other issues of interest, including:

- factors that may have discouraged the Learner Licence holders in the sample from obtaining a Provisional licence (Questions 3 to 36); and
- whether the participants had any previous criminal offences (Question 61).

### **3.3.4 Procedure**

In addition to the author, four people with psychology/social science degrees were employed to interview the participants. Before commencing the survey the interviewers were given a training session with the questionnaire and provided with an *Interviewer's Guide* that specified the procedure to be followed.

The interviewers approached people as they left the courts and explained that they were conducting an anonymous, voluntary survey on the topic of unlicensed driving. Only people who were charged with *Disqualified Driving* or *Unlicensed Driving* and appeared to understand English were invited to participate in the study. The offence category was primarily determined from information presented in the court hearing and/or published on notice boards at the Court. Once potential participants were identified, they were given a brief explanation of the survey and offered \$25 to participate in the study.

As with the pilot studies, certain basic information was collected from all offenders approached to participate in the survey in order to characterise the non-respondents. During the course of the main study it became apparent that the presence of others (e.g. family or friends) appeared to increase the likelihood of an offender refusing to participate in the study. Consequently, the interviewers were requested to record whether the offenders were accompanied or not. Because this procedure was introduced during the course of the study the relevant data was only collected for the later offenders approached.

Under normal circumstances the interview took approximately 25 minutes to complete. However, approval to conduct the survey had been granted on condition that the interviews did not interfere with the normal workings of the court or case flow management. Consequently, on some occasions the interviews were suspended for a period while the participants attended to court-related business.

### **3.4.5 Statistical analyses**

The data collected from the survey was analysed using the Statistical Package for the Social Sciences (SPSS) Version 10.0.5. The level of missing data was minimal given the interview method adopted for the administration of the survey. Cases with missing values were generally excluded from the relevant analyses since they had a minimal impact on the sample size. Unless otherwise specified the significance level ( $\alpha$ ) for the main statistical tests was .05. A more stringent significance level ( $\alpha = .01$ ) was used for post-hoc comparisons to protect against inflating the Type 1 error rate.

The categorical data was analysed using a variety of non-parametric tests. Chi-square ( $\chi^2$ ) tests were used to test for the independence of categorical variables. Where necessary, post-hoc analyses were undertaken within each variable using an adjusted standardised residual statistic ( $\hat{e}$ ). The adjusted standardised residual indicates the relative difference between the observed and expected frequencies for a particular cell, adjusted for row and column totals. This statistic can be used to identify those cells with observed frequencies significantly higher or lower than expected. Adjusted standardised residuals are approximately normally distributed with a mean of 0 and a standard deviation of 1, and can be interpreted as Z-scores (Haberman, 1978). The strength of association between categorical variables was measured using either the phi ( $\phi$ ) coefficient (for  $2 \times 2$  tables) or Cramer's Phi ( $\phi_c$ ) coefficient (for tables greater than  $2 \times 2$ ). Cohen (1988, cited in Aron and Aron, 1999) has suggested that a phi coefficient of .10 represents a small effect size, .30 a medium effect size and .50 a large effect size. The effect size conventions for Cramer's coefficient vary with the degrees of freedom of the contingency table. In addition,  $\phi^2$  (but not  $\phi_c^2$ ) can be treated as a squared correlation co-efficient indicating the amount of variance that can be accounted for by one of the variables in the other (Smithson, 2000). Other non-parametric methods, such as the Kruskal-Wallis (H) test, were used to analyse interval data where the assumptions of normality or homogeneity of variance were sufficiently violated.

Although not strictly interval data, the data collected by Likert scale was generally analysed using parametric methods. This facilitated the use of more sophisticated regression-based analyses that are not possible with non-parametric tests. The correlation and strength of association between continuous and dichotomous variables were measured using the point-biserial correlation coefficient ( $r_{pb}$ ) and its square ( $r_{pb}^2$ ), respectively. The strength of association between continuous dependent variables and discrete independent variables was measured using eta squared ( $\eta^2$ ). Reliability analyses were undertaken on the various scales used in the study. A summary of the scales and their Cronbach's alpha is provided in Appendix C.

# RESULTS

## 4.1 Sample characteristics

### 4.1.1 Response rate

A total of 309 participants agreed to participate in the main survey from 495 eligible offenders approached, representing a response rate of 62.4%. Table 4.1 compares the offenders who agreed to participate with those who refused in terms of gender, their offence, the interviewer who approached them, and whether they were accompanied or not.

**Table 4.1 Characteristics of all offenders approached to participate**

Offender Characteristics	Agreed Or Not		Significance level
	Agreed to participate	Refused to participate	
<b>Gender</b>	n=309	n=186	
Males	257 (60.5%)	168 (39.5%)	$\chi^2$ (df1) = 4.89, $p < .05$ , $\phi = -.10$
Females	52 (74.3%)	18 (25.7%)	
<b>Offence type</b>	n=309	n=186	
Unlicensed driving	257 (62.4%)	155 (37.6%)	$\chi^2$ (df1) = 0.00, $p > .05$ $\phi = .00$
Disqualified driving	52 (62.7%)	31 (37.3%)	
<b>Interviewer</b>	n=309	n=186	
One	39 (52.0%)	36 (48.0%)	$\chi^2$ (df4) = 5.67, $p > .05$ $\phi_c = .11$
Two	32 (72.7%)	12 (27.3%)	
Three	68 (63.6%)	39 (36.4%)	
Four	63 (64.3%)	35 (35.7%)	
Five	107 (62.6%)	64 (37.4%)	
<b>Accompanied</b>	n=88	n=39	
Yes	31 (58.5%)	22 (41.5%)	$\chi^2$ (df4) = 4.99, $p < .05$ $\phi = -.20$
No	57 (77.0%)	17 (23.0%)	

There was a significant difference between males and females in their preparedness to participate in the study with females (74.3%) being more likely to agree than males (60.5%). There was no significant difference between the participants and those who refused in terms of their offence. In addition, although there was some variation in the response rate achieved by the five interviewers used in the study, these differences were not significant.



The data relating to whether the offenders were accompanied or not was only collected during the latter phase of the study (see section 3.3), accounting for the smaller sample size. As can be seen, a significant difference was found between the offenders with those who were unaccompanied (77.0%) being more likely to agree to participate than those who were accompanied (58.5%). While this introduced a potential source of bias, it did not appear to vary systematically across the sample. There were similar representations of males/females (88.7/11.3% vs 86.5/13.5%) and *disqualified/unlicensed drivers* (79.2/20.8% vs 85.1/14.9%) among those who were accompanied and those who were not. In addition, no significant differences were found between the participants who were accompanied and those who were not in terms of gender [ $\chi^2$  (df1, n=88) = 0.99,  $p > .05$ ,  $\phi = .11$ ], age [ $\chi^2$  (df3, n=88) = 4.36,  $p > .05$ ,  $\phi_c = .22$ ] or offence category [ $\chi^2$  (df1, n=88) = 1.57,  $p > .05$ ,  $\phi = -.13$ ].

As with the pilot study, the most common reason cited by the offenders who refused to participate in the survey related to 'being in a rush' or 'having no time' (n=40). However, only 11 offenders specifically mentioned that they could not participate due to work-related commitments.

#### 4.1.2 Types of offender

The participants in the survey were charged with the offence of either *unlicensed driving* or *disqualified driving*. However, within these two offence categories, there were major differences relating to the reason that offenders were driving without a valid licence. Table 4.2 provides a breakdown of the sample in terms of the relevant offence and the reason for being unlicensed.

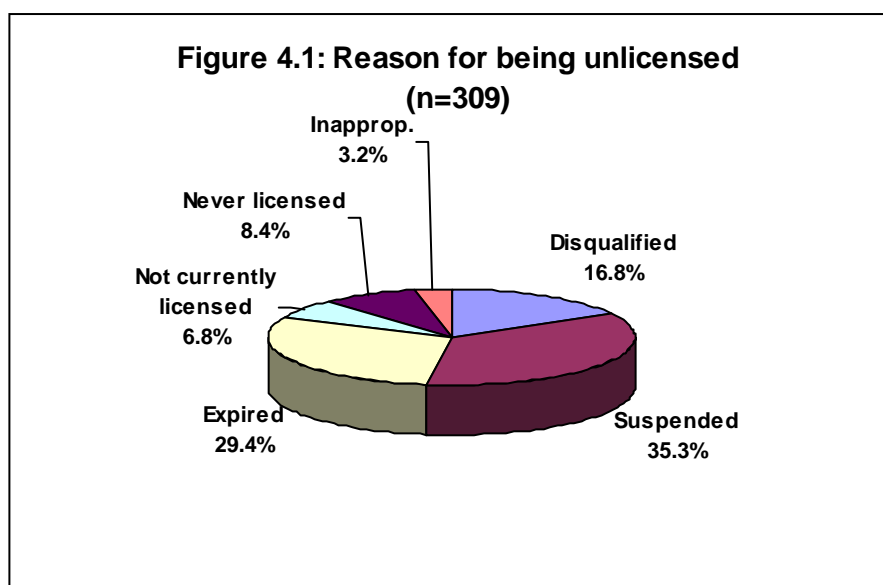
**Table 4.2 Types of unlicensed drivers**

Offence	Reason for being without valid licence	No.	% of offence	% of total
<b>Disqualified Driving</b>	Disqualified for drink driving	27	51.9	8.7
	Disqualified for unlicensed driving	18	34.6	5.8
	Other	7	13.5	2.3
	Sub-total	52	100.0	
<b>Unlicensed Driving</b>	Cancelled (suspended) licence	109	42.4	35.3
	Expired licence	91	35.4	29.4
	Not currently licensed	21	8.2	6.8
	Never licensed	26	10.1	8.4
	Inappropriate licence	10	3.9	3.2
	Sub-total	257	100.0	
	Total	309		100.0

The majority of the offenders charged with *disqualified driving* had previously lost their licence for either drink driving (51.9%) or unlicensed driving (34.6%). The "other" category was mainly made up of offenders who had been disqualified as a result of a *dangerous driving* conviction. Among the offenders charged with *unlicensed driving*, two-fifths had had their licence cancelled as a result of the accumulation of

demerit points (42.4%) henceforth referred to as *suspended drivers*<sup>3</sup>. The next two largest groups were those who were driving on an *expired licence* (35.4%) and those who had *never held a licence* (10.1%). Of the 21 (8.2%) offenders who were *not currently licensed*, 13 had a prior conviction for drink driving. It is likely that many of these had failed to renew their licence following a period of disqualification. The *inappropriate licence* category (3.9%) consisted of offenders who were driving a vehicle for which they were not specifically licensed (e.g. riding a motorcycle with an engine capacity exceeding 250ml while on a provisional licence), were driving outside the conditions of a special licence or were driving on an inappropriate overseas licence.

In order to facilitate later comparisons between types of offenders it was decided to collapse the *disqualified drivers* into one category. This served to increase the size of this sub-group while maintaining their unique status as offenders who were driving despite a court-ordered ban (as opposed to licence cancellation/suspension which is administratively imposed). Based on this, Figure 4.1 provides a summary of the sample in terms of the reason for which they were unlicensed.



### 4.1.3 Socio-demographic characteristics of the sample

Table 4.3 provides a breakdown of the socio-demographic characteristics of the sample by type of unlicensed driver. As can be seen, the overall sample was predominantly male (83.5%). Although there was no significant difference between the unlicensed driver subgroups, there was a higher proportion of females among the offenders with *expired* licences. The overall sample was relatively young, with over half (54.7%) of the offenders being 25 or younger. There was a significant difference between the unlicensed driver types in terms of age. An examination of the adjusted standardised residuals highlights two issues of interest. The *suspended* drivers were predominantly young with over three-quarters (71.6%) being under 25. In contrast, those with *expired* licences tended to be older with two-thirds (67.0%) being 26 or older.

3. Queensland Transport refers to offenders whose licence they cancel administratively as suspended drivers. Accordingly, this term will be used in the remainder of the report to describe these offenders.

**Table 4.3      Socio-demographic characteristics of offenders by type of driver**

Variable	Unlicensed Driver Type							Significance level <sup>1</sup>
	Disqualified %	Suspended %	Expired %	Not curr'tly licensed %	Never licensed %	Inapp. licence %	Total %	
<b>Gender</b>	n=52	n=109	n=91	n=21	n=26	n=10	n=309	$\chi^2$ (df4) = 7.44, $p > .05$ , $\phi_c = .16$
Males	90.4	84.4	74.7	90.5	84.6	100.0	83.5	
Females	9.6	15.6	25.3	9.5	15.4	0.0	16.5	
<b>Age</b>	n=52	n=109	n=91	n=21	n=26	n=10	n=309	$\chi^2$ (df12) = 41.77, $p < .001$ , $\phi_c = .22$
17 to 20	19.2	<b>30.3</b>	<b>6.6</b>	19.0	26.9	30.0	20.4	
21 to 25	42.3	41.3	26.4	38.1	19.2	20.0	34.3	
26 to 39	28.8	<b>26.6</b>	<b>59.3</b>	33.3	46.2	50.0	39.5	
40 and over	9.6	1.8	7.7	9.5	7.7	0.0	5.8	
<b>Marital status</b>	n=52	n=109	n=91	n=21	n=26	n=10	n=309	$\chi^2$ (df8) = 10.73, $p > .05$ , $\phi_c = .13$
Single	65.4	78.0	67.0	52.4	69.2	80.0	70.2	
Married/ <i>de facto</i>	23.1	18.3	22.0	38.1	26.9	20.0	22.3	
Divorced or separated	11.5	3.7	11.0	9.5	3.8	0.0	7.4	
<b>Education level</b>	n=52	n=109	n=91	n=21	n=26	n=10	n=309	$\chi^2$ (df12) = 44.74, $p < .001$ , $\phi_c = .22$
Grade 10 or less	63.5	<b>33.9</b>	37.4	<b>76.2</b>	<b>84.6</b>	10.0	46.3	
Grade 12	13.5	<b>38.5</b>	29.7	14.3	11.5	60.0	28.5	
TAFE/Technical/ Apprentice	13.5	12.8	13.3	9.5	0.0	10.0	12.0	
University/CAE	9.6	14.7	18.7	0.0	3.8	20.0	13.3	
<b>Employed at time of court hearing</b>	n=52	n=109	n=91	n=21	n=26	n=10	n=309	$\chi^2$ (df4) = 2.83, $p > .05$ , $\phi_c = .10$
Yes	59.2	70.6	66.3	63.2	53.8	70.0	65.6	
No	40.8	29.4	33.7	36.8	46.2	30.0	34.4	
<b>Annual income</b>	n=52	n=109	n=91	n=21	n=25	n=9	n=307	$\chi^2$ (df8) = 19.75, $p < .05$ , $\phi_c = .18$
Below \$10,000	34.6	17.4	16.5	23.8	<b>48.0</b>	22.2	23.2	
\$11k to \$30k	42.3	51.4	48.4	52.4	44.0	44.4	48.1	
\$31,000 or more	23.1	31.2	35.2	26.3	8.0	33.3	28.7	

1. The "inappropriate licence" category was excluded from the Chi-squared tests to ensure sufficient cell sizes. The results of all Chi-squared ( $\chi^2$ ) tests are shown. Where the overall Chi-squared was significant ( $p < .05$ ), the cells with significant ( $p < .01$ ) adjusted standardised residuals are in bold.

Consistent with the youth of the sample, most of the offenders were single (70.2%) and had been educated to Grade 12 or less (74.8%). While there was no significant difference between the unlicensed driver types in terms of marital status there was for education level attained. In particular, there was a high representation of the *not currently licensed* and *never licensed* drivers (and an under-representation of *suspended* and *expired* drivers) in the "Grade 10 or less" education category. The majority of the sample were employed (65.0%) and earned between \$11,000-30,000 per year (48.2%). Although there was no significant difference between the offenders in terms of employment, there was for annual income. The standardised adjusted residuals indicated that the *never licensed* drivers were over-represented in the "less than \$10,000" category. This is consistent with the high proportion of these offenders who were educated to Grade 10 or less.

#### 4.1.4 Driving and criminal history of offenders

Table 4.4 examines the self-reported driving and criminal history of the offenders by type of unlicensed driver. The driving history variables include years of driving experience, past convictions for unlicensed/disqualified driving, and other traffic offences.

The item relating to driving experience specifically measured both legal and illegal driving (i.e. included periods of unlicensed driving). In light of this, the offenders in the sample had considerable driving experience. The overall mean driving experience of the offenders was 9.1 years. Due to violations of normality and homogeneity of variance, the driving experience data was analysed using a Kruskal-Wallis ( $H$ ) test. As can be seen, there was an overall significant difference in the amount of driving reported by the different unlicensed driver types. In particular, the *suspended* drivers had the least experience ( $M=6.7$  years), consistent with the younger age distribution of this group. It is worth noting that the *never licensed* group had a mean driving experience of 9.3 years. This highlights the extent of the illegal driving undertaken by this group, given that these offenders would never have had a valid licence.

Overall, over one third (39.2%) of the sample reported having a prior conviction for unlicensed or disqualified driving. Moreover, there was a significant difference among the unlicensed driver types with three sub-groups being particularly likely to have a prior conviction: the *disqualified* drivers (71.2%), the *not currently licensed* drivers (71.4%), and the *never licensed* drivers (59.3%). In the case of the *disqualified* drivers this is not surprising given that over a third of these offenders had originally been disqualified for unlicensed driving. However, the proportion of *never licensed* drivers reporting prior convictions for unlicensed driving is somewhat surprising. It highlights that many of these offenders were prepared to continue to drive unlicensed despite being previously detected and punished.

Over one-third of the offenders (38.8%) reported having a prior criminal offence. Similar to the findings relating to prior conviction for unlicensed/disqualified driving, there was a much higher proportion of prior criminal convictions among the *disqualified* (65.4%) and *never licensed* (65.4%) drivers. Indeed, a significant association was found between the likelihood of prior unlicensed/disqualified driving offences and criminal offences [ $\phi = .29$ ,  $p < .001$ ] suggesting a strong relationship between the two variables.

**Table 4.4 Driving and criminal history of offenders by driver type**

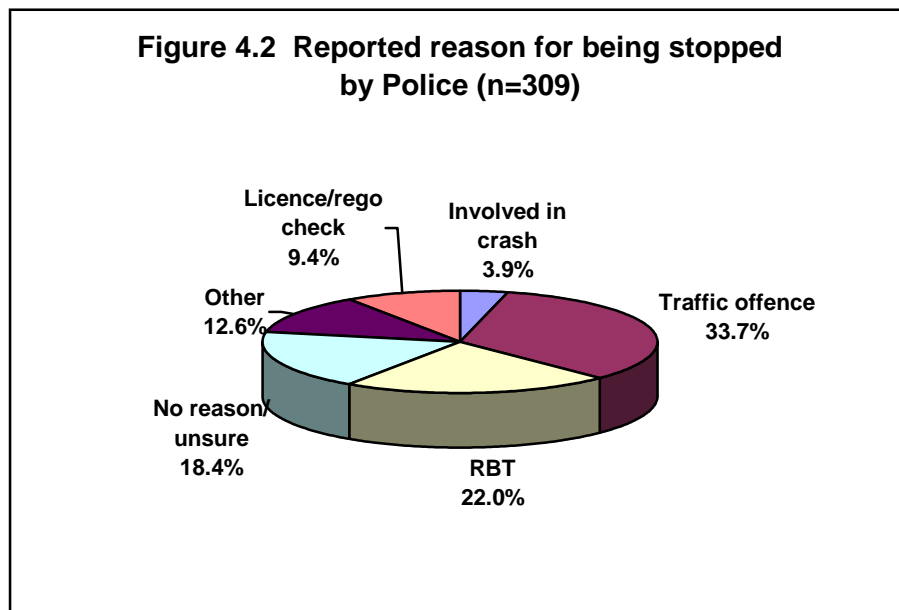
Variable	Unlicensed Driver Type							Significance level
	Disquali- fied %	Suspen- ded %	Expir- ed %	Not curr'tly licensed %	Never licensed %	Inapp- licence %	Total %	
<b>Driving experience in years</b>	n=52	n=107	n=89	n=21	n=26	n=10	n=305	$H(df5) = 18.54,$ $p < .01, \eta = .25$
Mean	9.9	6.7	10.8	10.6	9.3	11.1	9.1	
Median	7.0	5.0	10.0	6.5	8.0	13.5	7.0	
Std. deviation	8.1	5.0	7.7	9.6	8.2	7.1	7.3	
Mean rank	160.1	126.1	177.9	158.3	149.6	180.7		
Minimum	0.5	0.8	1.0	1.0	0.0	2.0	0.0	
Maximum	35.0	25.0	42.0	38.0	30.0	19.0	42.0	
<b>Prior conviction for unlicensed/disqual. driving<sup>1</sup></b>	n=52	n=109	n=91	n=21	n=26	n=10	n=309	$\chi^2(df5) = 57.70,$ $p < .001, \phi_c = .43$
Yes (%)	<b>71.2</b>	<b>29.4</b>	<b>23.1</b>	<b>61.4</b>	61.5	<b>0.0</b>	39.2	
No (%)	<b>28.8</b>	<b>70.6</b>	<b>76.9</b>	<b>28.6</b>	38.5	<b>100.0</b>	60.8	
<b>Other traffic offences<sup>1</sup></b>	n=52	n=109	n=91	n=21	n=26	n=10	n=309	$\chi^2(df5) = 15.02,$ $p = .01, \phi_c = .22$
Yes (%)	82.7	<b>88.1</b>	<b>69.2</b>	85.7	65.4	70.0	79.0	
No (%)	17.3	<b>11.9</b>	<b>30.8</b>	14.3	34.6	30.0	21.0	
<b>Prior criminal conviction<sup>1</sup></b>	n=52	n=109	n=91	n=21	n=26	n=10	n=309	$\chi^2(df5) = 34.19,$ $p < .001, \phi_c = .33$
Yes (%)	<b>65.4</b>	30.3	<b>28.6</b>	42.9	<b>65.4</b>	10.0	38.8	
No (%)	<b>34.6</b>	69.7	<b>71.4</b>	57.1	<b>34.6</b>	90.0	61.2	

1. The cells with significant ( $p < .01$ ) adjusted standardised residuals are in bold.

## 4.2 Circumstances of detection and outcome of court hearing

### 4.2.1 Reason stopped by the Police

Figure 4.2 summarises the participants' reported reasons for being stopped by the police when detected. The most common reason for the offenders being stopped was that they had committed a traffic offence. Within this category, the most common offences were speeding (44.2%), vehicle registration offences (e.g. expired registration, no registration plates, obscured plates) (16.3%), and seat belt offences (relating to the driver or passengers) (10.6%).



The second most common reason that offenders reported being stopped by the police was as a result of a random breath test (RBT). It is interesting to note that the police do not routinely check licences at RBT operations in Queensland (Watson, 1998d). (Indeed, data presented later in Section 4.3.5, indicate that almost one third of the participants were pulled over by RBT when driving unlicensed and did not have their licence checked.) Not surprisingly, it is likely that of the 68 offenders actually detected by RBT at least 20 (29.4%) registered a positive breath test at the time. This is based on the fact that these 20 offenders were convicted of drink driving on the same day they appeared in court for their unlicensed/disqualified driving charge.

Of the remaining offenders

- 18.4% were either unsure or could provide no reason as to why they were stopped by the Police,
- 12.6% cited a range of "other" reasons, mainly relating to the assumption that their vehicle or driving had attracted the attention of the Police,
- 9.4% specifically mentioned that they were pulled over for a routine or random licence check or registration check, and
- 3.9% were identified as a result of being involved in a crash.

Based on the above information, the reasons that offenders were stopped by the Police were re-classified into four broad categories

- illegal driving (comprising those who were caught for committing a traffic offence or being involved in a crash),
- RBT (comprising those detected through RBT, irrespective of whether they were subsequently charged with drink driving or not),
- a targeted check (comprising cases where offenders were stopped for a licence or registration check, either randomly or due to the nature of their driving behaviour or the characteristics of their vehicle), or
- an 'other' category (comprising cases where the reason was unclear).

Table 4.5 provides a breakdown of the reasons offenders were stopped by type of unlicensed driver. Almost thirty-eight percent (37.9%) of the offenders were detected as a result of illegal behaviour while a further 48.0% were detected through random or targeted enforcement. There was no significant difference between the different types of offenders in terms of the method of their detection.

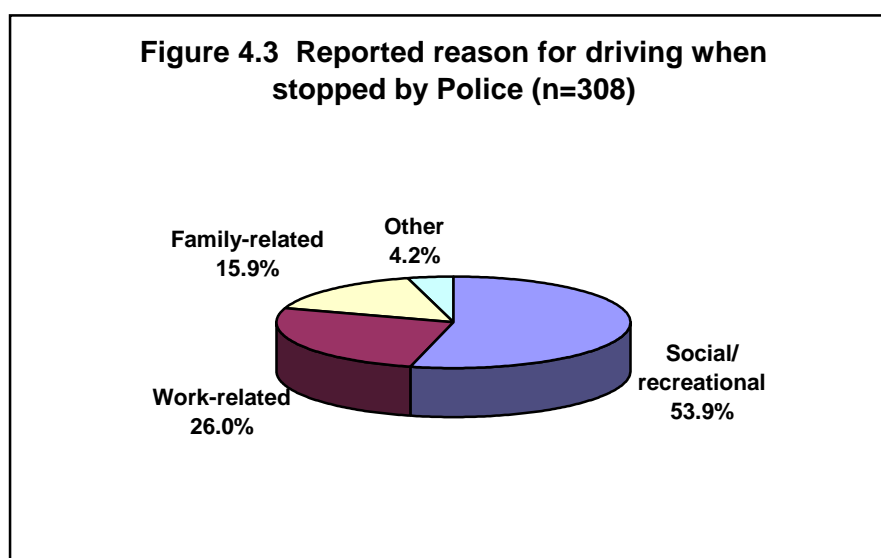
**Table 4.5 Reason stopped by police by driver type**

Variable	Unlicensed Driver Type							Significance level <sup>1</sup>
	Disqualified %	Suspended %	Expired %	Not curr'tly licensed %	Never licensed %	Inapp. licence %	Total %	
<b>Reason stopped</b>	n=52	n=109	n=91	n=21	n=26	n=10	n=309	$\chi^2$ (df12) = 14.44, $p > .05$ , $\phi_c = .13$
Illegal behaviour	32.7	38.5	42.9	28.6	30.8	50.0	37.9	
RBT	17.3	22.0	23.1	28.6	30.8	0.0	22.0	
Targeted check	28.8	25.7	29.7	19.0	23.1	30.0	26.9	
Other	21.2	13.8	4.4	23.8	15.4	20.0	13.3	

1. The "inappropriate licence" category was excluded from the Chi-squared test to ensure sufficient cell sizes.

#### 4.2.2 Reason for driving when detected

Figure 4.3 shows the participants' reported reasons for driving on the occasion that they were detected by the police. The most common group of reasons related to social/recreational activities (53.9%), followed by work-related (26.0%) and family (15.9%) reasons. The "other" category mainly involved personal activities such as shopping. There was no significant difference between the various types of unlicensed drivers and their reason for driving when detected [ $\chi^2$  (df8, n=286) = 7.10,  $p > .05$ ,  $\phi_c = .11$ ]<sup>4</sup>.



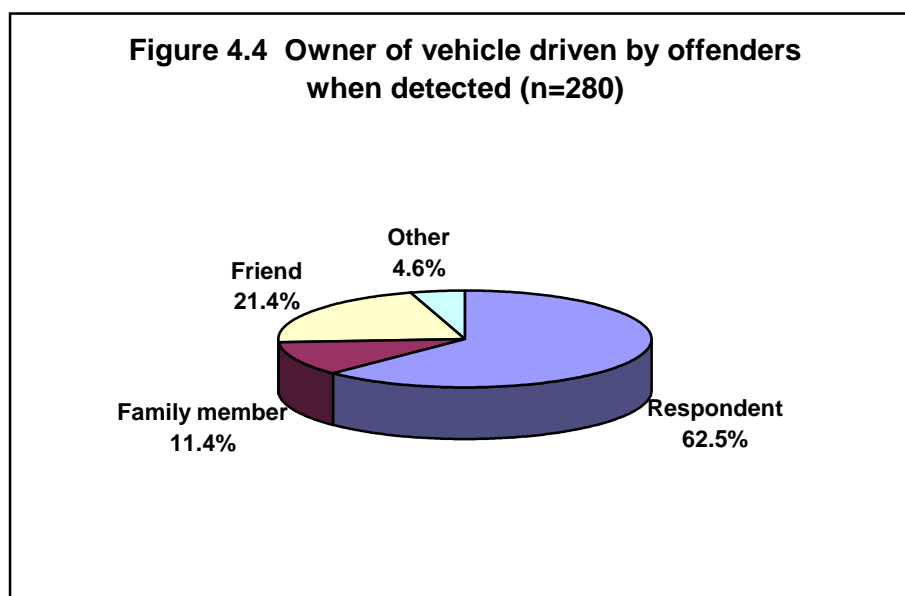
4. This analysis excluded the "inappropriate licence" and the "other reason for driving" categories to ensure sufficient cell sizes.

The predominance of driving for social/recreational and family-related driving suggests that many unlicensed driving trips are discretionary in nature. A possible exception to this relates to the behaviour of the offenders who were driving for work-related reasons. It is possible that the primary motivation of these drivers was to retain their job. In this regard Question 29 asked the participants whether they needed to drive as part of their job during the period in which they were unlicensed. A significant association was found between this variable and whether the offenders were caught driving for work-related purposes or not [ $\phi=.25, p < .001$ ].

### 4.2.3 Vehicle driven when detected

The majority of the offenders (92.6%) were detected driving a car. A further 5.2% were riding a motorcycle while the remaining offenders were driving a truck or bus. Unfortunately, the small number of offenders who were caught riding a motorcycle makes it difficult to conduct separate analyses on this group. Nonetheless, it is worth noting that of the 16 motorcycle riders interviewed 6 were *suspended* from driving, 5 were *inappropriately licensed* (2 only had a car licence while the other 3 were riding bikes with an engine capacity >250mls on a provisional licence), 3 were *disqualified*, and 2 did *not currently hold licences*.

Figure 4.4 provides a breakdown of who owned the vehicle driven by the offenders at the time they were detected. It excludes 29 offenders for whom vehicle ownership status was unknown. The majority of the offenders were driving a vehicle owned by themselves (62.5%), by a friend (21.4%), or a family member (11.4%). The ‘Other’ category (4.6%) was mainly made up of work vehicles.



As shown in Table 4.6 there was a significant difference among the offenders in terms of vehicle ownership. In particular the *suspended* drivers were more likely to be driving a vehicle that they owned (72.2%) whereas the least likely were those who had *never been licensed* (32.0%). This latter result is still surprising since it indicates that almost one-third of the *never licensed* drivers actually owned a vehicle.



**Table 4.6 Ownership of the vehicle driven by offenders**

Variable	Unlicensed Driver Type							Significance level <sup>1</sup>
	Disqualified %	Suspended %	Expired %	Not curr'tly licensed %	Never licensed %	Inapp. licence %	Total %	
<b>Vehicle ownership</b>	n=49	n=97	n=82	n=20	n=25	n=7	n=280	
Respondent	59.2	<b>72.2</b>	64.6	45.0	<b>32.0</b>	85.7	62.5	$\chi^2$ (df5) = 18.40, $p < .01$ , $\phi_c = .26$
Other	40.8	<b>27.8</b>	35.4	55.0	<b>68.0</b>	14.3	37.5	

1. The cells with significant ( $p < .01$ ) adjusted standardised residuals are in bold.

#### 4.2.4 Awareness of being unlicensed at time of detection

A total of 100 (36.0%) participants claimed that they were unaware, or at least unsure, that they were unlicensed at the time they were detected. Table 4.7 provides a breakdown of these participants by type of unlicensed driver. The *disqualified* and *never licensed* drivers were excluded, due to the very small numbers of these offenders who reported being unaware of their invalid licence status.

**Table 4.7 Awareness of being unlicensed when detected**

Variable	Unlicensed Driver Type					Significance level <sup>1</sup>
	Suspend-ed %	Expired %	Not curr'tly licensed %	Inapp. licence %	Total %	
<b>Aware of being unlicensed</b>	n=109	n=91	n=21	n=10	n=231	
Yes	59.6	<b>46.2</b>	<b>90.5</b>	90.0	58.4	$\chi^2$ (df3) = 18.70, $p < .001$ , $\phi_c = .28$
No/unsure	40.4	<b>53.8</b>	<b>9.5</b>	10.0	41.6	

1. The cells with significant ( $p < .01$ ) adjusted standardised residuals are in bold.

As can be seen, a substantial proportion of the offenders with *expired* licences (53.8%) claimed that they were unaware of being unlicensed. While almost one-fifth (18.7%) of these drivers claimed that they did not receive a renewal notice in the mail, most of the others admitted that they had either overlooked or forgotten to renew their licence. Among the 44 *suspended* drivers who were unaware, 26 (59.1%) claimed that they had not received any notification in the mail (although some acknowledged that they had changed address).

#### 4.2.5 Possession of a photographic licence

Almost half of the offenders (49.0%) reported that they still had their photographic licence when they were driving unlicensed. Table 4.8 provides a breakdown of these participants by type of unlicensed driver. Not surprisingly, none of the *never licensed* drivers reported that they had a photographic licence (since these drivers would never

have been officially issued with a licence). These drivers were excluded from the Chi-squared test.

**Table 4.8 Possession of a photographic licence by offender type**

Variable	Unlicensed driver type							Significance level <sup>1</sup>
	Disqualified %	Suspended %	Expired %	Not curr'tly licensed %	Never licensed %	Inapp. licence %	Total %	
<b>Still had photo licence</b>	n=52	n=109	n=91	n=21	n=25	n=10	n=308	
Yes	<b>13.5</b>	54.1	<b>75.8</b>	38.1	0.0	80.0	49.0	$\chi^2$ (df4) = 56.58, $p < .001$ , $\phi_c = .45$
No	<b>86.5</b>	45.9	<b>24.2</b>	61.9	100.0	20.0	51.0	

1. The never licensed drivers were excluded from the Chi-squared tests. The cells with significant ( $p < .01$ ) adjusted standardised residuals are in bold.

As shown in Table 4.8, there was a significant difference among the remaining offenders with the *expired* drivers being the most likely to still have their photographic licence and the *disqualified* drivers being the least likely. The results are not at all surprising in the case of the *expired* drivers, since there is no mechanism in place to recover the licences of drivers who fail to renew their licence on time. However, it remains a concern that there were many *suspended*, *disqualified*, and *not currently licensed* drivers who still had their photographic licences. Many of these participants claimed that they did not realise that they were meant to surrender their licence or that no one had requested them to do so. Consistent with this, the participants who retained their photographic licences were less likely to be aware of being unlicensed [ $\chi^2$  (df1,  $n=277$ ) = 60.12,  $p < .001$ ;  $\phi_c = .47$ ]. Nonetheless, a total of 15 offenders acknowledged that they had held onto their licence for identification purposes, while one admitted that they had done it to “deceive the police”.

#### 4.2.6 Outcome of court hearing

##### *Conviction for unlicensed/disqualified driving*

The majority of the offenders (86.4%) were convicted of the unlicensed/disqualified driving offence with which they were charged. Among the 42 offenders who were not convicted, 37 had the matter adjourned, 4 had no conviction recorded, and 1 was acquitted. A significant difference was found between the different types of offenders in terms of whether they were convicted of the offence on the day [ $\chi^2$  (df4,  $n=298$ ) = 9.60,  $p < .05$ ,  $\phi_c = .18$ ].<sup>5</sup> In particular, the *disqualified* drivers (25.5%) were more likely to have the matter adjourned than the other offenders. This would appear to relate to the more serious nature of the offence. In many cases the offenders were granted an adjournment in order to obtain further legal advice.

It is interesting to note that the majority of offenders (86.7%) did not have any legal representation in court (see Table 4.9). However, there was a significant difference among the offenders with the *disqualified* drivers (32.7%) much more likely to be

5. This analysis excluded the “inappropriate licence” category to ensure sufficient cell sizes.

represented and the *expired* drivers (3.5%) the least likely. This in part reflects the perceived seriousness of the relevant offences. Disqualified driving is a more serious offence than unlicensed driving, attracting higher penalties (see below). In addition, the findings reflect current practices in relation to the provision of legal aid. During the study period traffic offenders were only able to access the services of a legal aid solicitor if there was a possibility that they would be sent to prison. Consequently, this service was generally restricted to the recidivist disqualified drivers.

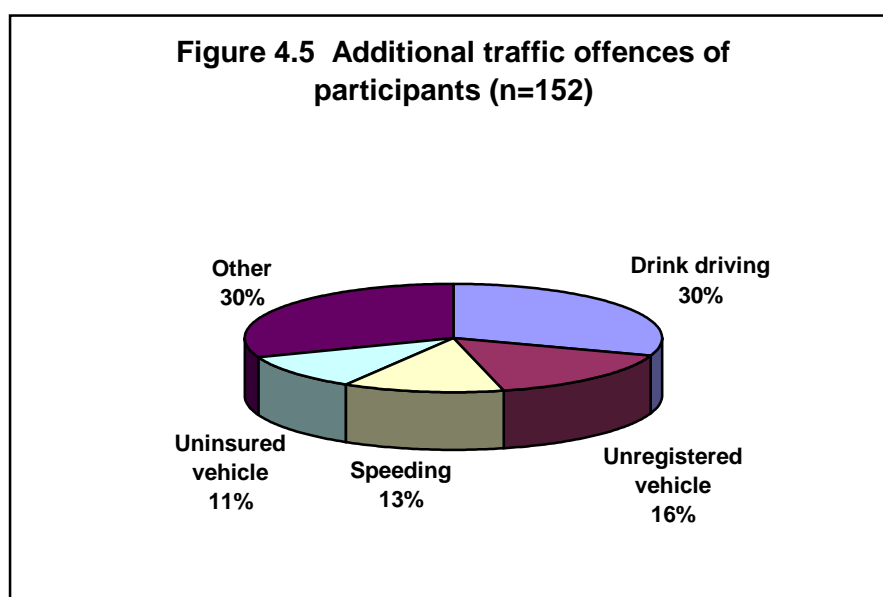
**Table 4.9 Legal representation**

Variable	Unlicensed driver type							Significance level <sup>1</sup>
	Disqualified %	Suspended %	Expired %	Not curr'tly licensed %	Never licensed %	Inapp. licence %	Total %	
<b>Had legal representation</b>	n=52	n=109	n=91	n=21	n=26	n=10	n=309	
Yes	<b>32.7</b>	13.8	<b>4.4</b>	4.8	11.5	11.5	13.3	$\chi^2$ (df4) = 24.51, $p < .001$ , $\phi_c = .27$
No	<b>67.3</b>	86.2	<b>95.6</b>	95.2	88.5	88.5	86.7	

1. The "inappropriate licence" category was excluded from the Chi-squared test to ensure sufficient cell sizes. The cells with significant ( $p < .01$ ) adjusted standardised residuals are in bold.

#### *Conviction for another traffic offence*

In addition to their unlicensed or disqualified driving charge, almost one-third of the offenders (33.0%) were convicted of one or more other traffic-related offences at the time. In total these 102 offenders were convicted of 152 offences (see Figure 4.5). The most common were drink driving, driving an unregistered or uninsured vehicle, and speeding.



There were no significant differences among the offender types in terms of being convicted of an additional offence or not [ $\chi^2$  (df5, n=309) = 6.96,  $p > .05$ ,  $\phi_c = .15$ ], or

being convicted of drink driving [ $\chi^2$  (df4, n=100) = 3.18,  $p > .05$ ,  $\phi_c = .18$ ]<sup>6</sup>. However, it is interesting to note that among all offenders in the sample, the proportion of drink driving convictions was highest among those who had *never been licensed* (30.8%) followed by the *not currently licensed* (19.0%), *disqualified* (15.4%), *suspended* (13.8%), and *expired* (11.0%) drivers.

#### *Penalties for unlicensed/disqualified driving*

In cases where offenders were found guilty of more than one traffic offence, the Magistrates would generally combine the relevant fines (and disqualification periods if applicable) into one penalty. To obtain an accurate indication of the range of penalties applied to unlicensed/disqualified drivers it is necessary to exclude the offenders with multiple offences from the analysis. Table 4.10 provides a breakdown of the penalties received for *Disqualified* and *Unlicensed driving* for those offenders who were not convicted of any additional offences. Due to the exclusion of these latter offenders, the sample size for some of the groups is small.

**Table 4.10 Penalties received for unlicensed/disqualified driving conviction among offenders who were convicted of no other offences**

Variable	Unlicensed driver type					
	Disqual- ified	Suspend- ed	Expired	Not currently licensed	Never licensed	Inapp. licence
<b>Fine (\$)</b>	n=19	n=62	n=53	n=12	n=12	n=5
Minimum	200	75	35	140	100	100
Maximum	1500	1400	420	500	800	400
Average	895	339	198	268	271	240
<b>Disqualification period (Months)</b>						
Minimum	3	0	0	0	0	0
Maximum	Absol. <sup>1</sup>	24	10	6	10	6
Average	22.8 <sup>2</sup>	2.7	0.7	0.7	2.8	3.0

1. Absolute disqualification.

2. Based on the minimum requirement for offenders who are absolutely disqualified to serve at least two years disqualification.

The fines and disqualification periods applied to the *disqualified* drivers were typically much higher than for the other offenders. The average fine for the *disqualified* drivers was almost \$900 and the majority received an absolute disqualification. This requires offenders to serve a disqualification period of at least two years before being eligible to apply for the return of their licence from a court. Among the other offenders the lowest average penalties were applied to the drivers with *expired* licences consistent with the more administrative nature of this offence.

6. This analysis excluded the "inappropriate licence" category to ensure sufficient cell sizes.

### 4.3 Unlicensed driving behaviour

#### 4.3.1 Length of time driving unlicensed

The reported length of time (in years) that offenders had driven unlicensed is summarised in Table 4.11. Separate breakdowns are provided for all offenders, first offenders, and repeat offenders. In the case of the repeat offenders the data relates to the total length of time they reported driving unlicensed during their driving career. Kruskal-Wallis ( $H$ ) tests were performed on the data due to violations of normality and homogeneity of variance.

**Table 4.11 Length of time driving unlicensed by offender type**

Variable	Unlicensed driver type							Significance level
	Disqualified %	Suspended %	Expired %	Not curr'tly licensed %	Never licensed %	Inapp. licence %	Total %	
<b>All offenders</b>								
<b>Years driving unlicensed<sup>1</sup></b>	n=47	n=102	n=88	n=18	n=26	n=10	n=291	
Mean	3.23	1.05	1.37	4.69	8.10	2.39	2.40	$H$ (df5)= 37.83, $p < .001$ , $\eta = .43$
Median	0.75	0.33	0.33	2.75	5.75	0.46	0.50	
Std. deviation	5.32	2.23	3.22	5.28	8.68	5.86	4.78	
Minimum	0.003	0.001	0.001	0.083	0.001	0.058	0.001	
Maximum	27.0	14.0	24.0	18.0	30.0	19.0	30.0	
<b>First offenders</b>								
<b>Years driving unlicensed<sup>1</sup></b>	n=14	n=77	n=70	n=6	n=10	n=10	n=187	
Mean	0.69	0.51	0.58	2.54	3.48	2.39	0.88	$H$ (df5)= 7.04, $p > .05$ , $\eta = .38$
Median	0.25	0.21	0.17	0.83	0.79	0.46	0.25	
Std. deviation	1.34	0.69	1.11	3.22	5.15	5.86	2.1	
Minimum	0.003	0.001	0.001	0.167	0.001	0.058	0.001	
Maximum	5.0	3.5	8.0	8.0	15.0	19.0	19.0	
<b>Repeat offenders</b>								
<b>Years driving unlicensed<sup>1</sup></b>	n=33	n=25	n=18	n=12	n=16		n=104	
Mean	4.30	2.69	4.42	5.72	10.99		5.13	$H$ (df4) = 14.06, $p < .01$ , $\eta = .40$
Median	2.00	1.00	1.83	4.25	8.5		2.00	
Std. deviation	6.00	3.04	5.98	5.92	9.31		6.63	
Minimum	0.003	0.005	0.083	0.083	0.333		0.005	
Maximum	27.0	14.0	24.0	18.0	30.0		30.0	

As expected, the mean time driving unlicensed was much lower among first offenders (mean = 0.88 years; median = 0.25 years). Although there was no overall significant difference between offenders, it is interesting to note some of the highest and lowest values among the first offenders. An offender who was riding a motorcycle on an *inappropriate licence* reported riding over a 19-year period before being caught, while a *never licensed* driver reported driving over a 15-year period. In contrast, a number of offenders reported being detected on the first occasion that they had driven unlicensed.

Among the repeat offenders, the mean length of time driving unlicensed was 5.13 years (median = 2 years). While these data highlight the long periods over which many offenders had driven unlicensed (particularly repeat offenders) they provide little insight into the extent of their driving. This is examined further in the next section.

#### 4.3.2 Frequency of unlicensed driving

Offenders were asked how many times a week they had driven prior to being caught, for both work-related and family/recreational reasons. They were advised to count going somewhere and returning home as different trips. The relevant findings are summarised in Table 4.12.

The mean number of trips per week for work-related reasons was 6.7 (median = 6.0). This relatively low mean was strongly influenced by the large number of offenders who reported that they did not make any trips for work-related purposes (105 offenders representing 34.0% of the sample). The maximum value of 50 trips was achieved by a *suspended* driver who was working as a courier. (This participant reported that he subsequently lost his job as a result of being detected.)

Due to the positively skewed nature of the distribution a Kruskal-Wallis test was used to test for differences among the unlicensed driver types. As can be seen in Table 4.12, this test found a significant overall difference among the offenders. Inspection of the medians suggested that this difference was due to the low number of trips reported by the *never licensed* drivers. This is consistent with the previous finding that this group of offenders had the highest level of unemployment (46.2%) in the sample (see Table 4.3).

The mean number of trips per week for family/recreational reasons was slightly higher at 7.3 (median = 6.0). Once again, there were a large number of offenders who reported that they did not make any trips for family/recreational reasons (72 offenders representing 23.3% of the sample). A Wilcoxon Matched-Pairs Signed-Ranks test was conducted to ascertain whether the higher level of reported trips for family/recreational reasons (compared with work-related trips) was significant. This test found no significant difference between the two types of trips [ $T = -0.16$ ,  $p > .05$ ]. In addition, post-hoc comparisons of work-related and family/recreational trips were performed for each of the offender types using a more stringent alpha (.01). The only comparison approaching significance was for the *never licensed* drivers [ $T = -2.53$ ,  $p = .011$ ] who reported more trips for social/recreational reasons.

**Table 4.12 Frequency of driving while unlicensed by offender type**

Variable	Unlicensed driver type							Significance level
	Disqualified %	Suspended %	Expired %	Not currently licensed %	Never licensed %	Inapp. licence %	Total %	
<b>Work-related reasons</b>								
<b>Trips per week<sup>1</sup></b>	n=52	n=108	n=91	n=21	n=26	n=10	n=308	
Mean	5.4	8.1	7.3	5.8	2.4	6.4	6.7	$H(df5) = 19.47$ , $p = .01$ , $\eta = .24$
Median	5.0	9.0	10.0	6.0	0.0	6.0	6.0	
Std. deviation	5.2	7.8	6.9	5.4	3.8	5.8	6.8	
Minimum	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Maximum	20.0	50.0	30.0	14.0	12.0	14.0	50.0	
<b>Social/recreational reasons</b>								
<b>Trips per week<sup>1</sup></b>	n=52	n=108	n=91	n=21	n=26	n=10	n=308	
Mean	6.0	7.6	7.0	10.6	6.7	7.0	7.3	$H(df5) = 4.73$ , $p > .05$ , $\eta = .12$
Median	2.0	6.0	6.0	4.0	4.0	4.0	6.0	
Std. deviation	7.9	8.1	6.9	15.4	8.9	9.4	8.5	
Minimum	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Maximum	30.0	50.0	30.0	56.0	42.0	30.0	56.0	
<b>All reasons</b>								
<b>Trips per week<sup>1</sup></b>	n=52	n=108	n=91	n=21	n=26	n=10	n=308	
Mean	11.4	15.7	14.3	16.4	9.1	13.4	14.0	$H(df5) = 12.03$ , $p < .05$ , $\eta = .18$
Median	10.0	14.0	14.0	14.0	7.0	12.0	12.0	
Std. deviation	10.7	13.5	11.3	15.6	9.8	11.7	12.4	
Minimum	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Maximum	42.0	80.0	60.0	56.0	42.0	30.0	80.0	

1. Note that some offenders reported that they did not drive on a weekly basis and were assigned a score of zero.

When the two reasons for driving were combined only 31 offenders (10.0%) reported that they did not undertake at least one trip per week. The overall mean number of trips was 14.0 per week (median = 12.0). Interestingly, this represents at least one return trip per offender each day of the week. The offender types with the highest means/medians were the *suspended*, *not currently licensed* and *expired* drivers, while the lowest was the *never licensed* drivers.

### 4.3.3 Unlicensed driving after detection

The offenders were asked whether they continued to drive unlicensed after being detected by the police (i.e. prior to the court hearing).

As shown in Table 4.13, almost one-third of the sample (30.5%) admitted that they did continue driving. However, no significant difference was found between the offender types on this variable.

**Table 4.13 Continued driving unlicensed after detection**

Variable	Unlicensed Driver Type							Significance level <sup>1</sup>
	Disqualified %	Suspended %	Expired %	Not curr'tly licensed %	Never licensed %	Inapp. licence %	Total %	
<b>Continued to drive after detection</b>	n=52	n=109	n=91	n=21	n=25	n=10	n=308	
Yes	28.8	35.8	24.2	42.9	20.0	40.0	30.5	$\chi^2$ (df5) = 6.45,
No	71.2	64.2	75.8	57.1	80.0	60.0	69.5	$p > .05$ , $\phi_c = .15$

Among the offenders who admitted continuing to drive, the process of detection at least appeared to temper the frequency of their driving. For example, the mean number of trips per week among these drivers fell from 18.3 per week to 16.1 per week after being detected by the police. A Wilcoxon Matched-Pairs Signed-Ranks test found that this reduction in trips was significant [ $T = -2.91$ ,  $p < .01$ ]. Interestingly, although offenders with a prior conviction for unlicensed driving were slightly more likely to report driving after detection (33.1% *cf.* 28.9%) this difference was not significant [ $\chi^2$  (df1, n=308) = 0.61,  $p > .05$ ,  $\phi = .04$ ].

#### 4.3.4 On-road driving behaviour

##### *Cautiousness when driving*

Question 41 asked the participants to rate on a 7-point Likert scale how careful they were in obeying a range of road rules during the time they were driving unlicensed. The items related to obeying the speed limit, traffic lights, Stop and Give Way signs, drink driving laws, seat belt laws, and other traffic rules. There was a higher level of missing data than usual with this question (8.4%), particularly among the offenders who claimed that they were unaware of being unlicensed. Among the participants who responded to all of the items, the Cronbach's alpha was quite high (.87), so the scores were combined to create a *Care in obeying the road rule* scale (see Appendix C).

Table 4.14 provides a breakdown of the scores on the *Care in obeying the road rules* scale by offender type. As can be seen, the overall mean score on the scale was very high (35.5 from a total possible score of 42). This indicates that the participants generally reported being much more careful obeying the various road rules during the period in which they were unlicensed. In addition, there was no significant difference across the offender types.



**Table 4.14 Cautiousness of driving while unlicensed by offender type**

Variable	Unlicensed Driver Type							Significance level
	Disqualified %	Suspended %	Expired %	Not curr'tly licensed %	Never licensed %	Inapp. licence %	Total %	
<b>Care in obeying road rules scale</b>	n=49	n=99	n=81	n=20	n=25	n=9	n=283	$H(df5) = 4.73$ , $p > .05$ , $\eta = .12$
Mean	36.9	35.0	35.2	35.2	36.8	34.4	35.5	
Median	38.0	37.0	37.0	35.5	39.0	36.0	37.0	
Std. deviation	4.9	7.2	6.6	6.0	8.2	6.5	6.7	
Minimum	22	6	21	22	10	24	6	
Maximum	42	42	42	42	42	42	42	
<b>Limited driving (all respondents)<sup>1</sup></b>	n=49	n=104	n=82	n=20	n=25	n=10	n=290	$\chi^2(df5) = 33.77$ , $p < .001$ , $\phi_c = .34$ ,
Yes (%)	<b>69.4</b>	49.0	<b>24.4</b>	70.0	56.0	70.0	48.3	
No	<b>30.6</b>	51.0	<b>75.6</b>	30.0	44.0	30.0	51.7	
<b>Limited driving (those aware of being unlicensed)<sup>1</sup></b>	n=15	n=64	n=42	n=19	n=25	n=9	n=174	$\chi^2(df5) = 11.45$ , $p < .05$ , $\phi_c = .26$
Yes (%)	73.3	56.3	<b>38.1</b>	73.7	56.0	77.8	56.3	
No	26.7	43.8	<b>61.9</b>	26.3	44.0	22.2	43.7	
<b>Where offenders drove<sup>12</sup></b>	n=49	n=103	n=87	n=21	n=23	n=10	n=293	$\chi^2(df5) = 6.45$ , $p > .05$ , $\phi_c = .11$
Back roads (%)	14.3	12.6	10.3	9.5	13.0	10.0	11.9	
Back roads and main roads	65.3	61.2	60.9	81.0	73.9	50.0	63.8	
Main roads	20.4	26.2	28.7	9.5	13.0	40.0	24.2	

1. The cells with significant ( $p < .01$ ) adjusted standardised residuals are in bold.

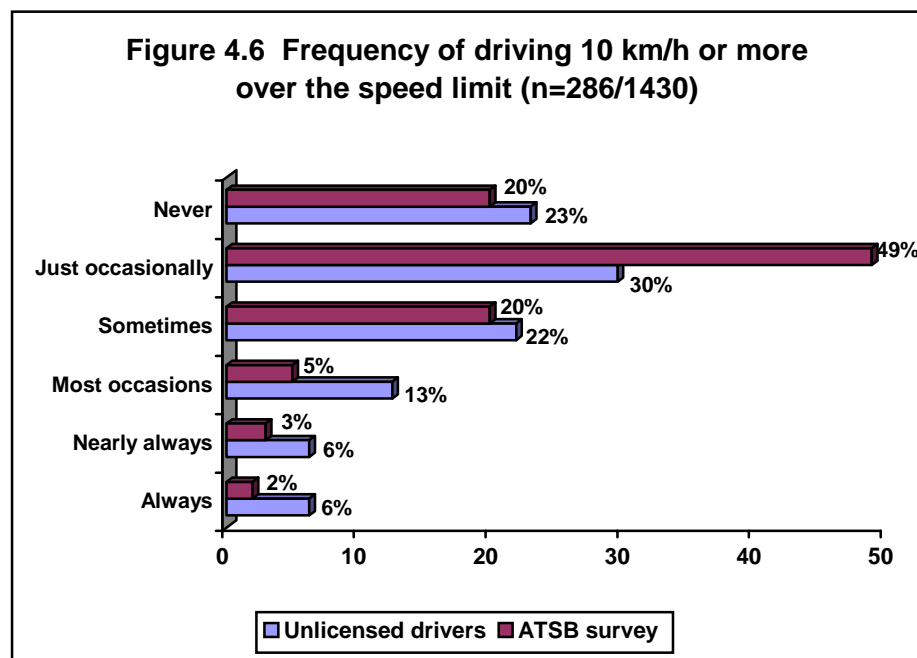
2. The "inappropriate licence" category was excluded from the Chi-squared test to ensure sufficient cell sizes.

Question 42 asked the participants whether they limited or altered their driving in any way in terms of when or where they drove while unlicensed. As shown in Table 4.14 among the total offenders responding to this question only 48.3% indicated that they did limit their driving in some way. There was a significant difference across the offender types with the *disqualified* drivers being more likely to limit their driving and the *expired* drivers being the least likely. However, many of the *expired* and *suspended* drivers had previously reported that they were unaware of being unlicensed (See section 4.2.4). A further analysis was undertaken excluding those offenders who were unaware of being unlicensed. Once this was done the proportion of offenders indicating that they did alter their driving rose to 56.3% and only the *expired* drivers were significantly less likely to limit their driving. Among the respondents who reported limiting their driving, the main methods cited were: restricting the overall amount of driving (47.1%), driving on back streets/avoiding main roads (10.0%), and only driving during the day (10.0%). Interestingly, three respondents said that they only drove during peak periods, while two others reported avoiding these times.

Question 43 related to the types of roads that the participants did most of their driving on while they were unlicensed. The responses were collapsed into three categories and are shown in Table 4.14. Among all the offenders responding to the question only 11.9% reported driving "only on back roads" or "mainly on back roads". The majority (63.8%) reported driving on "both back roads and main roads". There was no overall significant difference across offender types as to where they reported driving.

### *Speeding behaviour*

Question 37 asked the participants "While you were driving unlicensed/disqualified, how often did you drive at 10 km/h or more over the speed limit?" As noted in the Method section this question was directly modelled on an item regularly used in the ATSB's Community attitudes to road safety telephone survey (ATSB, 2000). Figure 4.6 compares the responses obtained in the current study with those obtained in the most recent ATSB (2000) survey, which featured a sample size of over 1400 licensed drivers who had driven within the last two years.<sup>7</sup>



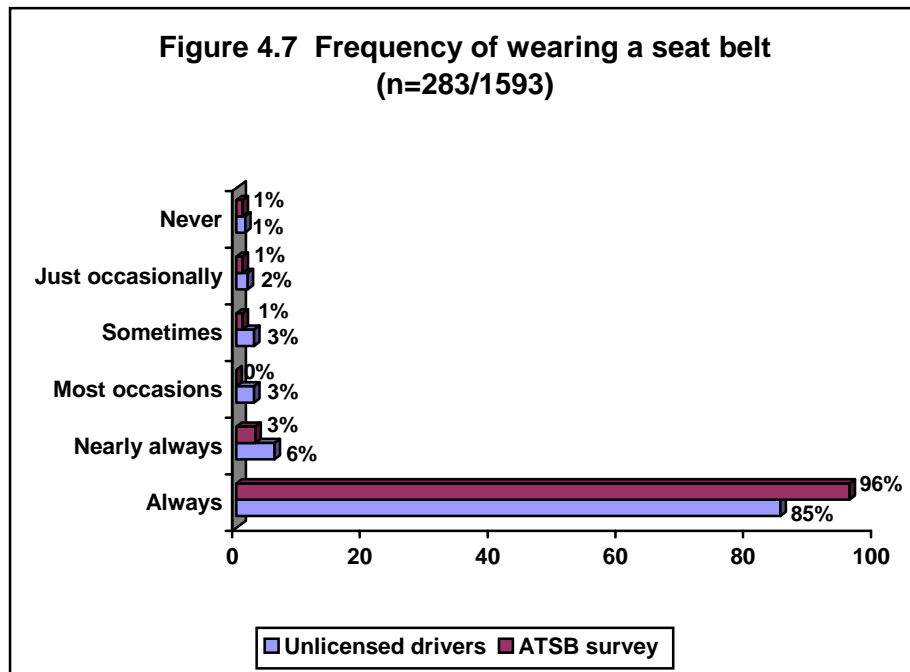
Twenty-five percent of the unlicensed drivers reported that they exceeded the speed limit by 10 km/h or more on at least most occasions (i.e. "always", "nearly always", or on "most occasions") compared with only 10% of the ATSB respondents. While it is problematical to compare responses across surveys that feature different methodologies, these results suggest that the level of self-reported speeding among the unlicensed drivers may be relatively high. Interestingly, however, there was no significant difference in the responses to this question among the different types of unlicensed drivers [ $H(df5, n=286) = 6.36, p > .05, \eta = .13$ ].

7. The results for the current study are shown as whole percents to enable direct comparison with the ATSB (2000) survey results.

### *Seat belt wearing*

Question 38 asked the participants: “. . . while you were driving unlicensed/disqualified how often did you wear a seat belt?” Again, this question was modelled on one regularly used in the ATSB’s community attitudes to road safety telephone survey (ATSB, 2000). Figure 4.7 compares the responses obtained in the two surveys.

Eighty-five percent of the unlicensed drivers reported that they always wore their seat belt compared with 96% of the respondents in the ATSB survey. Bearing in mind the problems in comparing surveys these results suggest that the level of self-reported seat belt wearing among unlicensed drivers, although very high, is lower than that reported by general drivers. Again, there was no significant difference in the responses to this question among the different types of unlicensed drivers [ $H(df5, n=283) = 2.38, p > .05, \eta = .12$ ].



### *Drink driving behaviour*

Question 39 related to the participants’ general approach to drinking and driving during the time they were unlicensed (see Figure 4.8). The majority of the unlicensed driving respondents indicated that they either did not drink at any time or did not drink if they were driving (67%). While a further 26% indicated that they restricted their drinking if they were driving, 7% reported that they did not restrict their drinking at all. While the ATSB (2000) survey found a lower proportion of general drivers reporting that they either did not drink at any time or did not drink if they were driving (58%), less than 1% of their sample admitted to not restricting their drinking when they were driving.

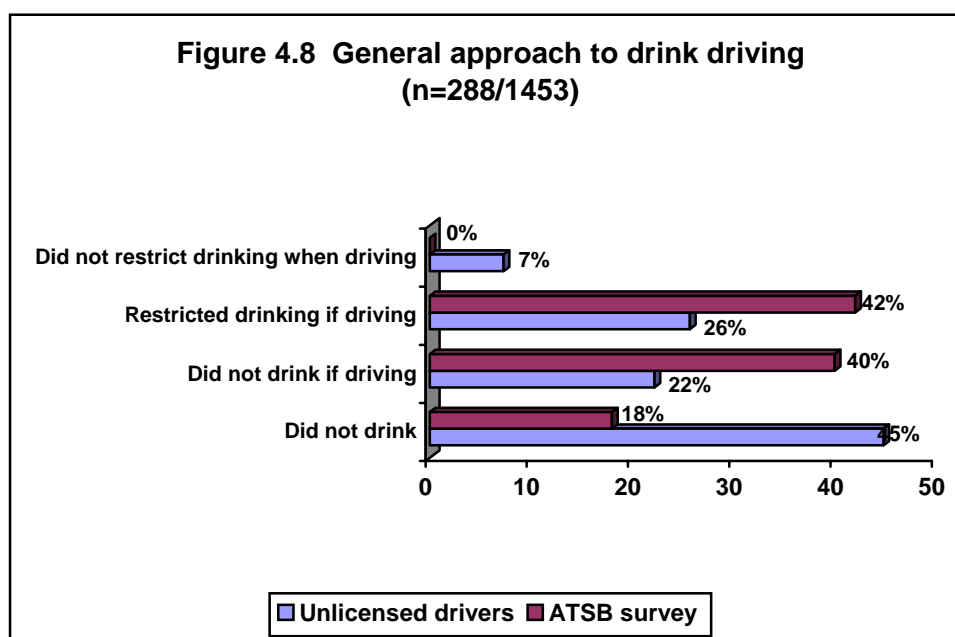


Table 4.15 examines differences in the reported drink driving behaviour of the unlicensed drivers by offender type. In the case of the participants' general approach to drink driving the two categories of "Didn't drink at any time" and "Didn't drink if driving" were collapsed into one category (Don't drink and drive), to facilitate the Chi-squared analysis. There was a significant difference between the offenders on this question. The *never licensed* drivers were the most likely to report that they did not restrict their drinking when driving while the *not currently licensed* drivers were the least likely to report that they did not drink and drive at all.

**Table 4.15 Drink driving behaviour while unlicensed by offender type**

Variable	Unlicensed driver type							Significance level
	Disqualified %	Suspended %	Expired %	Not curr'tly licensed %	Never licensed %	Inapp. licence %	Total %	
<b>General approach to drink driving<sup>1,2</sup></b>	n=48	n=101	n=86	n=19	n=24	n=10	n=288	$\chi^2$ (df8) = 34.51, $p < .001$ , $\phi_c = .25$
Do not drink and drive	60.4	<b>78.2</b>	67.4	<b>31.6</b>	58.3	70.0	67.0	
Restricted drinking if driving	25.0	18.8	29.1	<b>57.9</b>	16.7	30.0	25.7	
Did not restrict drinking if driving	14.6	3.0	3.5	10.5	<b>25.0</b>	0.0	7.3	
<b>Drove when they thought they were over limit<sup>1</sup></b>	n=48	n=102	n=86	n=19	n=24	n=10	n=289	$\chi^2$ (df5) = 10.71, $p = .058$ , $\phi_c = .19$
Yes	37.5	18.6	17.4	36.8	28.0	22.2	23.5	
No	62.5	81.5	82.6	63.2	72.0	77.8	76.5	

1. The cells with significant ( $p < .01$ ) adjusted standardised residuals are in bold.

2. The "inappropriate licence" category was excluded from the Chi-squared test to ensure sufficient cell sizes.

The participants were also asked if they ever drove when they thought they might have been over the legal limit during the time they were unlicensed. As shown in Table 4.15, 23.5% of the drivers admitted to this. The differences among the offenders were approaching significance ( $p=.058$ ), with the *disqualified* (37.5%), *not currently licensed* (36.8%), and *never licensed* (29.2%) drivers the most likely to admit to driving when they thought they may have been over the limit. The link between these findings and alcohol dependence is further discussed in Section 4.4.6.

### *Carrying of passengers*

Among all the participants 219 (70.9%) admitted giving lifts to other people when they were driving unlicensed. As previously noted, over one-third of the sample claimed that they were unaware or unsure that they were unlicensed. However, even after these participants are excluded the majority of offenders aware of their unlicensed status (72.5%) knowingly gave lifts to others while they were unlicensed. In addition, among the offenders who knowingly gave lifts to others 75.8% reported that their passengers were aware of them being unlicensed. This suggests that many of the people who travel with unlicensed drivers are unconcerned with the behaviour. No significant difference was found among the different types of offenders (who were aware of being unlicensed) in terms of whether they provided lifts to others [ $\chi^2$  (df5, n=178) = 7.16,  $p > .05$ ,  $\phi_c = .20$ ] or whether the passengers were aware or not [ $\chi^2$  (df4, n=124) = 3.40,  $p > .05$ ,  $\phi_c = .17$ ].

### **4.3.5 Evasion of detection**

As detailed in Section 4.2.1, many of the offenders in the sample were detected by the police as a result of either RBT or due to illegal driving behaviour such as a traffic offence or being involved in a crash. However, many of the offenders reported incidents where they were pulled over by the police and did not have their licence checked or were able to avoid the matter coming to the attention of the authorities. Table 4.16 provides a breakdown of these incidents. It should be noted that the data relate to the most recent period of unlicensed driving among those offenders with prior convictions for unlicensed driving.

A total of 164 offenders were pulled over by a RBT operation at least once during the time they were driving unlicensed, representing 53.1% of the sample. However, 97 (31.4% of total sample) of these offenders reported that they did not have their licence checked on one or more occasions. Indeed, of these offenders, 58 (18.8% of total) failed to have their licence checked on two or more occasions. In addition, a small number of offenders also cited cases where they were pulled over for speeding or another offence and did not have their licence checked (8 and 11 offenders, respectively). Another 8 offenders reported that they were involved in a traffic crash but were able to evade detection. In these cases the crashes were either minor in nature and the police were not called or the offender fled the scene. Finally, 11 offenders reported that they were able to evade a speed camera ticket for which they were responsible. In these cases the offenders were driving either another person's car or a work vehicle and were thus able to avoid the penalty. In two of these instances the offenders reported that another person lost their licence as a result of the speeding offence(s) they committed.

**Table 4.16 Incidents where offenders evaded detection while driving unlicensed**

Variable	Type of enforcement/incident					
	RBT	Speeding offence	Other offence	Traffic crash	Speed camera ticket	All methods
<b>Total number of offenders exposed to incident</b>	164	71	51	23	24	225
% of total sample	53.1	23.0	16.5	7.4	7.8	72.8
<b>Total number of offenders whose licence was not checked</b>	97	8	11	8	11	113
% of total sample	31.4	2.6	3.4	2.6	3.6	36.6
<b>Number of offenders whose licence was not checked on one occasion</b>	39	7	9	6	8	46
% of total sample	12.6	2.3	2.9	1.9	2.6	14.9
<b>Number of offenders whose licence was not checked on two or more occasions</b>	58	1	2	2	3	67
% of total sample	18.8	0.3	0.6	0.6	1.0	21.7

In total, 113 offenders (representing 36.6% of the sample) reported one or more instances where the police did not detect them when they could otherwise have been identified. Of these offenders, 67 (21.7% of sample) evaded detection on two or more occasions. The influence of punishment avoidance is discussed in section 4.4.3.

#### 4.3.6 Intention to drive unlicensed in the future

The participants were asked to rate on a 7-point scale (1 – very unlikely to 7 – very likely) how likely they were to drive without a licence sometime in the future.

**Table 4.17 Intention to drive unlicensed in the future**

Variable	Unlicensed driver type							Significance level
	Disqualified %	Suspended %	Expired %	Not curr'tly licensed %	Never licensed %	Inapp. licence %	Total %	
<b>Intention to drive unlicensed<sup>1</sup></b>	n=52	n=109	n=91	n=21	n=26	n=10	n=309	
Mean	3.1	2.8	2.1	3.1	2.9	2.9	2.7	$H(df5) = 10.22$ , $p > .05$ , $\eta = .17$
Median	2.0	2.0	1.0	3.0	2.0	2.0	1.0	
Std. deviation	2.5	2.2	1.9	2.3	2.2	2.2	2.2	
Minimum	1.0	1.0	1.0	1.0	1.0	1.0	1.0	
Maximum	7.0	7.0	7.0	7.0	7.0	7.0	7.0	

As shown in Table 4.17, the overall mean was 2.7 indicating that offenders generally thought it was unlikely that they would drive unlicensed in the future. While the *expired* drivers reported the lowest intentions to drive unlicensed in the future, there was no overall significant difference among the offender types.

## 4.4 Factors contributing to unlicensed driving behaviour

The following section examines the factors contributing to different aspects of unlicensed driving behaviour. It utilises a number of the measures of unlicensed driving discussed in the previous section as dependent variables in the analysis, including

- the frequency of unlicensed driving trips per week,
- whether the offenders continued to drive unlicensed after detection, and
- intention to drive unlicensed in the future.

These three variables were selected to measure different aspects of unlicensed driving behaviour. The frequency of unlicensed driving was selected to reflect the extent of the behaviour. This variable was considered a more immediate and reliable measure than the total length of time driving unlicensed. The continued driving after detection variable was selected to reflect the offender's commitment to (or reliance on) the behaviour. The intention to drive unlicensed variable was selected to provide an insight into the psychological processes underpinning the behaviour. A variety of social psychological theories incorporate the concept of intentions as a key predictor of behaviour (Fishbein *et al*, 1991).

The frequency of unlicensed driving and intention to drive unlicensed variables both featured problems associated with positively skewed distributions and univariate outliers. Consequently, the two variables were transformed (using logarithmic transformations) to facilitate the use of parametric statistical methods.

### 4.4.1 Socio-demographic factors

A number of the socio-demographic variables were recoded to facilitate the use of regression techniques. The age and income variables were recoded using the mid-point for the various categories used in the questionnaire. (The exceptions were the "70 or over" age category which was not required and the "over \$60,000" salary category which was recoded as \$65,000.) In addition, marital status was recoded into a dichotomous variable distinguishing between those participants who were single (including those who were separated or divorced) and those who were married or in a *de facto* relationship. Similarly, education was recoded into a dichotomous variable distinguishing between those participants who were educated to Year 10 or less and those with a higher level of education.

Table 4.18 summarises the bivariate correlations between the three dependent variables and the socio-demographic variables. The only variables significantly related to the frequency of unlicensed driving were the two relating to employment. Those participants who needed to drive for work while unlicensed and, to a lesser extent, those who were employed reported more frequent unlicensed driving. The

age of the participants was negatively related to both continued driving after detection and intentions. In other words, the younger participants were more likely to report driving after detection and had a stronger intention to drive unlicensed in the future. The only other significant correlation was between marital status and intentions. The single participants reported a stronger intention to drive unlicensed in the future than those who were married or in *de facto* relationships.

**Table 4.18 Bivariate correlations between dependent variables and socio-demographic variables**

Variable	Dependent variables		
	Frequency of unlicensed driving <sup>1</sup>	Continued to drive after detection	Intention to drive unlicensed in the future <sup>1</sup>
Gender	.02	-.01	.10
Age	-.04	-.13*	-.12*
Marital status	-.04	.09	-.12*
Educational level	.09	.04	-.08
Employed at time of court hearing	.12*	-.09	.06
Needed to drive for work when unlicensed	.28***	.09	.07
Annual income	.11	.06	.00
Prior criminal conviction	.10	.02	.06

1. Logarithmically transformed  
 \*  $p < .05$  \*\*  $p < .01$  \*\*\*  $p < .001$

#### 4.4.2 Facilitating factors

Table 4.19 reports the bivariate correlations between the dependent variables and a number of potential facilitating factors, including whether the offenders were aware of being unlicensed, whether they owned a vehicle or at least were able to access one while unlicensed and whether they still had their photographic licence. (This latter variable was examined both for all participants and for those who were aware of being unlicensed for reasons explained below.)

The other facilitating factor shown in Table 4.19 is *Lack of alternative transport*. This variable was formed from the summation of five items: "You find it possible to do most things by using public transport" (reverse scored), "You can generally get a lift from family or friends when you need one" (reverse scored), "There is not much public transport available in the area where you live", "You can't always rely on your family or friends for lifts" and "You could get by without driving if you really had to" (reverse scored), which were all measured on a seven-point Likert scale. Cronbach's alpha for the scale was relatively low at .66 (see Appendix C).



**Table 4.19 Bivariate correlations between dependent variables and facilitating factors**

Variable	Dependent variables		
	Frequency of unlicensed driving <sup>1</sup>	Continued to drive after detection	Intention to drive unlicensed in the future <sup>1</sup>
Unaware of being unlicensed	.17**	.10	-.24***
Able to access vehicle while unlicensed	.17**	.11	.12*
Owned a vehicle	.15**	.03	-.07
Still had photographic licence (all participants)	.22***	-.09	-.17**
Still had photographic licence (only participants who were aware of being unlicensed)	.18*	-.02	-.02
Lack of alternative transport	.22***	.16**	.22***

1. Logarithmically transformed  
 \*  $p < .05$  \*\*  $p < .01$  \*\*\*  $p < .001$

While a number of the coefficients in Table 4.19 are significant, they are relatively weak with only four exceeding .20. There was a significant correlation between awareness of being unlicensed and the frequency of the behaviour. This indicates that those drivers who were unaware of being unlicensed drove more frequently. Not surprisingly, there was no significant correlation between awareness of being unlicensed and continued driving after detection. However, the variable was negatively correlated with future intentions indicating that those participants who were unaware of being unlicensed when detected were less likely to intend to drive illegally in the future. In other words, those offenders who had knowingly driven unlicensed in the past were more likely to report an intention to do so again.

Access to a vehicle was significantly related to a higher frequency of unlicensed driving and stronger intentions to drive unlicensed in the future, but was not related to driving after detection. The participants were also asked who owned the vehicle(s) they drove when unlicensed. Owning a vehicle was significantly related to the frequency of unlicensed driving but not to the two other dependent variables.

As noted in Section 4.2.5, almost half the offenders in the sample reported that they were still in possession of a photographic licence when they were driving unlicensed. Interestingly, there was a significant positive correlation between possession of a photographic licence and the frequency of unlicensed driving but a negative correlation between it and intentions to drive unlicensed in the future. These results tend to suggest that some of the offenders who still had their photographic licence were originally unaware that they were unlicensed. While they may have unknowingly driven frequently when unlicensed they did not intend to do so in the future. This interpretation is supported by the significant association found between being in possession of a photographic licence and being unaware of being unlicensed [ $\phi = .49, p < .001$ ].

To further examine the issue an analysis was undertaken excluding the participants who were unaware/unsure whether they were unlicensed. Even among the offenders

who were aware of being unlicensed, there was still a positive correlation between the possession of a photographic licence and more frequent unlicensed driving. While significant, this relationship was not as strong for all participants. In addition, the correlation between possession of a licence and future intentions was no longer significant after the exclusion of those who were unaware/unsure whether they were unlicensed. As shown in Table 4.19 there were also significant, but relatively weak, positive correlations between the lack of alternative transport variable and the three dependent variables.

#### 4.4.3 Deterrence factors

##### *Perceived risk of apprehension*

The participants were asked to rate (on a seven-point Likert scale) how likely they thought they were to be caught for a variety of illegal behaviours, prior to being detected and charged with unlicensed driving (Question 33). As shown in Table 4.20, these behaviours included being involved in a crash, being random breath tested, and being caught if they engaged in a variety of illegal behaviours, including unlicensed driving.

**Table 4.20 Perceived likelihood of being caught for illegal behaviours prior to being detected for unlicensed driving**

	Type of event						Significance level
	Being involved in a crash	Being random breath tested	Being caught driving un-licensed	Being caught if not wearing a seat belt	Being caught speeding by radar	Being caught speeding by speed camera	
<b>Perceived likelihood</b>	n=307	n=307	n=307	n=305	n=307	n=307	$F(4,1154) = 61.56$ , $p < .001$ , $\eta^2 = .17$
Mean	2.4	4.0	3.3	2.3	3.8	3.8	
Median	2.0	4.0	3.0	1.0	4.0	4.0	
Std.deviation	1.6	1.8	1.8	2.0	2.1	2.1	
Minimum	1.0	1.0	1.0	1.0	1.0	1.0	
Maximum	7.0	7.0	7.0	7.0	7.0	7.0	

The repeated measures ANOVA found an overall significant difference between the participants' perceptions. A series of paired-sample *t* tests (utilising a more stringent alpha rate of .01) were undertaken to test for differences in the participant's perceptions towards unlicensed driving and the other events. This showed that the perceived likelihood of being detected for unlicensed driving was significantly

- lower than that for being random breath tested [ $t(306) = -5.55$ ,  $p < .001$ ]; being caught by a speed camera if speeding [ $t(306) = 3.08$ ,  $p < .01$ ]; or being caught by a radar if speeding [ $t(306) = -3.21$ ,  $p = .001$ ]; but
- higher than that for being involved in a crash [ $t(306) = 7.40$ ,  $p < .001$ ] or being caught if you were not wearing a seat belt [ $t(304) = 6.93$ ,  $p < .001$ ].

These questions would have been influenced to some degree, by participants' perceptions toward the likelihood of performing the behaviour, not just their risk of detection. For example, many participants commented that they always wore their seat belt so they were unlikely to be caught for not wearing one (even though the question specifically related to the likelihood of detection if they were unbelted). Nonetheless, the results tend to confirm that the perceived risk of detection for unlicensed driving in Queensland is lower than that for drink driving or speeding. However, no significant difference was found between the unlicensed driver types in terms of their perceived risk of being caught for driving unlicensed (prior to detection) [ $F(5, 301) = 1.95, p > .05, \eta^2 = .03$ ].

The participants were also asked to rate “if you were to drive unlicensed/disqualified in the future, how likely do you now think your chances of getting caught are” (Question 34). Not surprisingly, the responses to this question showed a significant increase in the participants' *perceived risk of apprehension* (compared with their reported perceived risk prior to getting caught), with the mean rating increasing from  $M = 3.3$  to  $M = 4.6$  [ $t(306) = -9.37, p < .001$ ]. As before, however, no significant difference was found between the unlicensed driver types on this question [ $F(5, 303) = 0.39, p > .05, \eta^2 = .01$ ].

The bivariate correlations between *perceived risk of apprehension* and the dependent variables are shown in Table 4.21. There was a significant (albeit modest) negative correlation between the participants' *perceived risk of apprehension* (prior to detection) and the frequency of their unlicensed driving [ $r = -.13, p < .05$ ]. In other words, a lower perceived risk of apprehension was associated with more frequent unlicensed driving. In addition, there was a significant negative correlation between the participants' *perceived risk of apprehension* (after detection) and whether they continued to drive after detection [ $r_{pb} = -.17, p < .01$ ] and their intention to drive unlicensed in the future [ $r = -.18, p < .01$ ]. Once again, the negative relationships indicate that a lower perceived risk of apprehension was associated with continued driving after detection and a stronger intention to drive unlicensed in the future. The remainder of the deterrence-related variables included in Table 4.21 are discussed below.

### *Knowledge of penalties*

The participants were asked whether they knew what the fine for unlicensed/disqualified driving was prior to getting caught (Question 16). Overall, the level of knowledge was relatively poor with only 42 (14.0%) participants reporting that they were aware of the fine. There was no significant difference among the offenders on this question [ $\chi^2(df4, n=291) = 7.15, p > .05, \phi_c = .13$ ]<sup>8</sup> and it was not significantly correlated with any of the main dependent variables (see Table 4.21).

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8. This analysis excluded the "inappropriate licence" category to ensure sufficient cell sizes.

**Table 4.21 Bivariate correlations between dependent variables and deterrence factors**

Variable	Dependent variables		
	Frequency of unlicensed driving <sup>1</sup>	Continued to drive after detection	Intention to drive unlicensed in the future <sup>1</sup>
Perceived risk of apprehension (prior to detection)	-.13*	-	-
Perceived risk of apprehension (after detection)	-	-.17**	-.18**
Knew what the fine for unlicensed driving was, prior to court	-.04	-.01	.06
Perceived severity of punishment	-.07	-.06	-.01
Perceived certainty of punishment	-.04	-.13*	-.07
Perceived swiftness of punishment	-.07	-.04	-.09
Prior conviction for unlicensed driving	-.03	.04	.20***
Exposure to enforcement	-.14	.02	-.05
Punishment avoidance	.31***	.09	.17**
Vicarious exposure to punishment	.09	.20***	.18***
Vicarious exposure to punishment avoidance	.02	.08	.14*

1. Logarithmically transformed

\*  $p < .05$  \*\*  $p < .01$  \*\*\*  $p < .001$

#### *Perceived severity, certainty, and swiftness of punishment*

Three items were used to measure the *perceived severity, certainty, and swiftness of punishment* for unlicensed driving.

- Severity – “*The penalties for unlicensed driving are very tough*” (Q 52a).
- Certainty – “*You can sometimes avoid getting punished if you get caught for unlicensed/disqualified driving*” (Q 52i – reversed scored).
- Swiftness – “*You are likely to be punished quickly if you get caught for unlicensed/disqualified driving*” (Q 52o).

The Cronbach’s alpha for these three items was very low (.27) suggesting that they were measuring related but different constructs. Hence it was decided to use each item as a separate variable in the analysis rather than form a composite variable. As shown in Table 4.22, there was a significant difference between the participants’ responses to the three items. The lowest mean was obtained for the *perceived severity of punishment* ( $M = 4.6$ ) and the highest for the *perceived certainty of punishment* ( $M = 5.4$ ). While all three means appear relatively high, it should be borne in mind that the majority of the participants completed the questionnaire shortly after being sentenced in court. This may have served to inflate the means.

**Table 4.22 Perceived severity, certainty, and swiftness of punishment for unlicensed driving**

	Variable			Significance level
	Perceived severity	Perceived certainty	Perceived swiftness	
	n=308	n=309	n=307	
Mean	4.6	5.4	5.2	$F(2,610) = 17.04$ , $p < .001$ , $\eta^2 = .05$
Median	4.0	6.0	6.0	
Std.deviation.	1.8	1.9	1.8	
Minimum	1.0	1.0	1.0	
Maximum	7.0	7.0	7.0	

As to be expected, the *perceived severity, certainty, and swiftness of punishment* measures were all negatively correlated with the dependent variables (see Table 4.21). In other words, the more that participants perceived current penalties to be severe, certain, and swift, the less they engaged in unlicensed driving (before and after detection) and the less they intended to do so in the future. However, the only significant correlation was found between the *perceived certainty of punishment* and whether the participants continued to drive after being detected [ $r_{pb} = -.13$ ,  $p < .05$ ]. No significant difference was found between the unlicensed driver types in terms of the *perceived severity* [ $F(5, 302) = 1.84$ ,  $p > .05$ ,  $\eta^2 = .03$ ], *certainty* [ $F(5, 303) = 2.16$ ,  $p > .05$ ,  $\eta^2 = .03$ ] or *swiftness* [ $F(5, 301) = 1.46$ ,  $p > .05$ ,  $\eta^2 = .02$ ] of punishment.

#### *Previous conviction for unlicensed driving*

As reported in section 4.1.4, over one third (39.2%) of the sample reported having a *prior conviction for unlicensed (or disqualified) driving*. As shown in Table 4.21, this variable was not significantly related to either the reported frequency of unlicensed driving or whether the participants continued to drive after detection. However, there was a significant positive correlation between prior conviction and a participant's intention to drive unlicensed in the future [ $r_{pb} = .20$ ,  $p < .001$ ]. Those participants who had a prior conviction for unlicensed driving were more likely to report an intention to do so in the future. Contrary to classical deterrence theory, this suggests that previous exposure to punishment has had a limited deterrent impact on the intentions of the participants (see section 5.3.4 for further discussion of this issue).

#### *Exposure to enforcement and punishment avoidance*

As previously noted, many of the offenders were exposed to some form of traffic law enforcement during the time they were driving unlicensed (see section 4.3.5). In many of these incidents the participants were detected. However, 113 (36.6% of total sample) were able to evade detection from the police on one or more occasions when they could otherwise have been identified. Two dichotomous variables were created to measure these two contingencies: whether the participants were exposed to enforcement, irrespective of whether they were detected (i.e. *exposure to enforcement*), and whether the participants were successful in avoiding detection (i.e.

*punishment avoidance*). The correlations between these two variables and the dependent variables are shown in Table 4.21. The *exposure to enforcement* variable was negatively related to the dependent variables but not significant in all instances. The *punishment avoidance* variable was positively and significantly associated with both the frequency of unlicensed driving [ $r_{pb} = .31, p < .001$ ] and intention to drive unlicensed in the future [ $r_{pb} = .17, p < .01$ ]. In other words, evading detection was associated with more frequent unlicensed driving prior to detection and a stronger intention to drive unlicensed in the future.

However, the causal direction of the relationship between *punishment avoidance* and frequency of unlicensed driving is unclear. While deterrence theory would suggest that evading detection encourages more frequent unlicensed driving, it may indicate that those people who drive more frequently have more opportunities to evade detection. This issue is further discussed in section 5.3.4.

#### *Vicarious exposure to punishment and punishment avoidance*

A measure of *vicarious exposure to punishment* was derived on the basis of whether the participants were aware of a family member or friend who had been convicted of unlicensed driving in the past. As shown in Table 4.21, this variable was not significantly associated with the frequency of unlicensed driving. However, it was significantly related to whether the participants continued to drive after detection [ $\phi = .20, p < .001$ ] and with future intentions to drive unlicensed [ $r_{pb} = .19, p \leq .001$ ]. These latter two findings are inconsistent with deterrence theory which suggests that vicarious exposure to punishment should act to deter unlicensed driving.

Similarly, a measure of the participant's *vicarious exposure to punishment avoidance* was derived based on whether they knew an unlicensed driver who had evaded detection (i.e. had not had their licence checked at some time). This variable was positively associated with intention to drive unlicensed [ $r_{pb} = .14, p < .05$ ].

#### **4.4.4 Social learning factors**

##### *Imitation*

In social learning theory, imitation refers to the process by which individuals model their behaviour on the actions of others. The primary source of behavioural models is salient social groups such as family and peers. A number of variables were derived to measure a participant's exposure to unlicensed driver models, including

- the number of family and friends known by the participants to have driven unlicensed in the past,
- the number of other people known by the participants to have driven unlicensed, and
- the total number of people known by the participants to have driven unlicensed.

As shown in Table 4.23, the Kruskal-Wallis ( $H$ ) test indicates that there was a significant difference between the unlicensed driver types in terms of the total number of people known to have driven unlicensed. The groups with the highest

means/mean ranks were the *inappropriate licence*, *not currently licensed* and *never licensed* drivers. However, caution should be exercised when interpreting the results for the *inappropriate licence* holders, given the low number of drivers in this group and the influence of one particular participant who reported knowing 41 other people who had driven unlicensed. (This particular participant had been charged with riding a motorcycle exceeding the engine capacity required by his class of licence. Hence, it is possible that many of the other unlicensed people he knew were other motorcycle riders.)

**Table 4.23 Total number of unlicensed drivers known by participants by type of offender**

Variable	Unlicensed Driver Type							Significance level
	Disqualified %	Suspended %	Expired %	Not curr'tly licensed %	Never licensed %	Inapp. licence %	Total %	
<b>Total number of unlicensed drivers (models) known by participants</b>	n=52	n=109	n=91	n=21	n=26	n=10	n=309	
Mean	4.8	3.5	3.6	7.1	6.3	9.1	4.4	$H(df5) = 15.12, p = .01, \eta = .21$
Median	2.5	2.0	1.0	4.0	5.0	3.5	2.0	
Std. deviation	6.1	4.5	5.7	7.0	6.3	13.1	6.0	
Minimum	0	0	0	0	0	0	0	
Maximum	25	26	30	22	23	41	41	

The bivariate correlations between the unlicensed models variables and the dependent variables are shown in Table 4.24. There was a significant positive correlation between the number of family and friends known to have driven unlicensed and both continued driving after detection [ $r_{pb} = .15, p < .01$ ] and intention to drive unlicensed in the future [ $r = .19, p < .01$ ]. When the number of models was combined, the only significant correlation was found with a participant's future intention to drive unlicensed [ $r = .15, p < .01$ ].

#### *Personal attitudes*

A scale was created to measure the participants' personal *attitudes to unlicensed driving* (see Appendix C for a list of items in each scale). This scale consisted of 12 items (7 favourable or neutral to unlicensed driving and 5 unfavourable to the behaviour) with a Cronbach's alpha of .74. As shown in Table 4.24, the *attitudes to unlicensed driving* scale was significantly correlated with continued driving after detection [ $r_{pb} = .27, p < .001$ ] and intention to drive unlicensed in the future [ $r = .48, p < .001$ ].

**Table 4.24 Bivariate correlations between dependent variables and social learning factors**

Variable	Dependent variables		
	Frequency of unlicensed driving <sup>1</sup>	Continued to drive after detection	Intention to drive unlicensed in the future <sup>1</sup>
Number of family and friends who have driven unlicensed	.08	.15**	.19**
Number of others they know who have driven unlicensed	-.03	-.03	.15*
Total models who have driven unlicensed	.03	.07	.23**
Attitudes to unlicensed driving	.10	.27***	.48***
Differential association (normative dimension)	.15*	.27***	.38***
Rewards for unlicensed driving	.11	.24***	.29***
Punishments of unlicensed driving	-.14**	-.20***	-.39***
Balance of reinforcement	.15*	.27***	.41***

1. Logarithmically transformed

\*  $p < .05$  \*\*  $p < .01$  \*\*\*  $p \leq .001$

#### *Differential association*

Differential association refers to the patterns of interaction between a person and other individuals and groups with whom they identify, particularly family and friends. The construct has both a behavioural and normative dimension. The behavioural dimension relates to the degree of interaction a person has with different groups and the models. This dimension can be measured by the number of family and friends who engage in unlicensed driving, which has already been derived (see Table 4.24). The normative dimension relates to the normative or evaluative climate found in these groups toward different behaviours. This dimension was measured by four items representing favourable or neutral attitudes of family and friends toward unlicensed driving (see Appendix C for a list of the items). The scale created from these four items had a Cronbach's alpha of .76 and was significantly correlated with all three dependent variables (see Table 4.24). The strongest relationship was with intention to drive unlicensed in the future [ $r = .38$ ,  $p < .001$ ]. No significant differences were found between the unlicensed driver types in relation to the *differential association variable* [ $F(5, 301) = 0.24$ ,  $p > .05$ ,  $\eta^2 = .004$ ].

#### *Differential reinforcement*

Differential reinforcement relates to the balance of reinforcement (rewarding or desired outcomes) and punishment (negative or desirable consequences) that an individual anticipates in relation to different actions. The reinforcers (rewards or punishments) can be either social or non-social in nature.



The *rewards for unlicensed driving* were measured using eight items, six which measured the potential social rewards for the behaviour, one which measured the non-social rewards, and one which measured the overall rewards (see Appendix C for a list of the items). The Cronbach's alpha for the scale was .74. This variable was significantly correlated with continued driving after detection and intention to drive unlicensed in the future. The *punishments for unlicensed driving* were also measured using eight items (six measuring the potential social punishments associated with the behaviour and two measuring the non-social punishments). The Cronbach's alpha for this scale was .68. As expected, this variable was negatively correlated with all three dependent variables.

Finally, a *balance of reinforcement* variable was created by subtracting the rewards for unlicensed driving measure from the punishments measure. As shown in Table 4.24, this variable was positively related to all the dependent variables, particularly intention to drive unlicensed in the future [ $r = .41, p < .001$ ]. Once again, however, no significant differences were found between the unlicensed driver types in relation to the *balance of reinforcement* variable [ $F(5, 296) = 0.70, p > .05, \eta^2 = .01$ ].

#### 4.4.5 Sensation seeking

As noted in the Method section, the 10 sensation seeking items included in the questionnaire comprised the *Thrill and Adventure Seeking* (TAS) subscale of the *Sensation Seeking Scale* (SSS). The ten items were summated to produce a scale with a Cronbach's alpha of .71 (see Appendix C). As shown in Table 4.25, the total sensation seeking score was not significantly correlated with any of the dependent variables.

**Table 4.25 Bivariate correlations between dependent variables and sensation seeking score**

Variable	Dependent variables		
	Frequency of unlicensed driving <sup>1</sup>	Continued to drive after detection	Intention to drive unlicensed in the future <sup>1</sup>
<b>Sensation seeking</b>	.08	.03	.02

1. Logarithmically transformed  
 \*  $p < .05$  \*\*  $p < .01$  \*\*\*  $p < .001$

Further analyses were undertaken to examine any other possible link between *sensation seeking* and unlicensed driving. First, no significant difference was found across the unlicensed driver types in terms of their *sensation seeking* score [ $F(5, 297) = 1.01, p > .05, \eta^2 = .02$ ]. Second, analyses were undertaken to examine the relationship between *sensation seeking* and various driving and criminal history variables (see Table 4.26). *Sensation seeking* was not significantly correlated with either a prior conviction for unlicensed driving or a conviction for another type of traffic offence. However, significant but weak positive correlations were found between *sensation seeking* and self-reported speeding [ $r_{pb} = .12, p < .05$ ] and prior criminal conviction [ $r_{pb} = .11, p < .05$ ]. This suggests that sensation seeking as

measured by this variable may be more indicative of other risk-taking behaviours, some of which can result in a person losing their licence.

**Table 4.26 Bivariate correlations between sensation seeking score and selected driving and criminal variables**

	Variables			
	Prior conviction for unlicensed driving	Prior conviction for another traffic offence	Self-reported speeding	Prior criminal conviction
<b>Sensation seeking</b>	.02	.09	.12*	.11*

\*  $p < .05$  \*\*  $p < .01$  \*\*\*  $p < .001$

#### 4.4.6 Alcohol dependence

Table 4.27 provides a breakdown of the participants' scores on the Alcohol Use Disorders Identification Test (AUDIT). While the total possible score on the test is 40, a score of 8 or more suggests that a person is likely to have a hazardous or harmful level of alcohol consumption (Early Intervention Unit, 1993). Over half (54.7%) of the participants in the study met these criteria. In particular, four of the unlicensed driver types had mean scores exceeding eight: the *not currently licensed* ( $M=13.4$ ), the *never licensed* ( $M=12.7$ ), the *disqualified* ( $M=11.7$ ), and the *suspended* ( $M=8.6$ ) drivers. The difference among the unlicensed driver types was significant [ $F(5, 303) = 4.66, p < .001, \eta^2 = .07$ ]. A Tukey's HSD post-hoc test showed that the *not currently licensed* [ $p=.02$ ], the *never licensed* [ $p=.03$ ], and the *disqualified* [ $p=.03$ ] drivers all had significantly higher mean scores than the *expired* drivers.

**Table 4.27 AUDIT scores by type of unlicensed driver**

Variable	Unlicensed Driver Type							Significance level
	Disqualified %	Suspended %	Expired %	Not curr'tly licensed %	Never licensed %	Inapp. licence %	Total %	
<b>AUDIT scale</b>	n=52	n=109	n=91	n=21	n=27	n=10	n=309	$F(5,303) = 4.66, p < .001, \eta^2 = .07$
Mean	11.7	8.6	7.7	13.4	12.7	6.9	9.5	
Median	12.0	7.0	7.0	13.0	12.0	7.5	9.0	
Std. deviation	8.2	7.1	7.0	8.3	8.7	5.9	7.7	
Minimum	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Maximum	37.0	37.0	30.0	33.0	31.0	16.0	37.0	
% of sample with score of 8 or more	69.2	49.5	40.7	81.0	76.9	50.0	54.7	

As shown in Table 4.28, the AUDIT score was not significantly correlated with any of the dependent variables. However, significant associations were found between a participant's AUDIT score and the likelihood of having a prior unlicensed driving offence [ $r_{pb}=.17$ ,  $p < .01$ ], a conviction for another traffic offence [ $r_{pb}=.18$ ,  $p = .001$ ], and a prior criminal offence [ $r_{pb}=.22$ ,  $p < .001$ ] (see Table 4.29).

**Table 4.28 Bivariate correlations between dependent variables and AUDIT scores**

Variable	Dependent variables		
	Frequency of unlicensed driving <sup>1</sup>	Continued to drive after detection <sup>2</sup>	Intention to drive unlicensed in the future <sup>1</sup>
AUDIT score	.07	.03	.04

1. Logarithmically transformed  
 \*  $p < .05$  \*\*  $p < .01$  \*\*\*  $p < .001$

Not surprisingly, there was also a highly significant association between a participant's AUDIT score and their self-reported drink driving behaviour while unlicensed [ $r_{pb}=.49$ ,  $p < .001$ ]. The strength of the latter relationship confirms the validity of the self-reported drink driving measure used in the study.

**Table 4.29 Bivariate correlations between AUDIT scores and selected driving and criminal variables**

	Variables			
	Prior conviction for unlicensed driving	Prior conviction for another traffic offence	Self-reported drink driving <sup>1</sup>	Prior criminal conviction
AUDIT score	.17**	.18***	.49***	.22***

1. Based on whether the participants admitted driving unlicensed when they thought they were over the limit.  
 \*  $p < .05$  \*\*  $p < .01$  \*\*\*  $p \leq .001$

#### 4.4.7 Summary of contributing factors

In order to examine the explanatory power of the different contributing factors, a series of regression analyses were conducted to identify those factors that significantly predicted the three dependent variables. The results of these analyses are detailed below.

##### *Frequency of unlicensed driving*

As a first step in the analysis, a series of standard regressions were undertaken on each group of factors to explore their influence on the frequency of unlicensed driving (see Tables A1-A4 in Appendix D). The significant predictors from these

analyses were then used in a consolidated standard regression, reported in Table 4.30.<sup>9</sup>

**Table 4.30 Standard multiple regression of selected variables on frequency of unlicensed driving (n=294)**

Variables	Mean	Std. dev	<i>B</i>	Std. error	$\beta$	$sr^2$	$R^2$	$Adj R^2$
<b>Frequency of unlicensed driving<sup>1</sup></b>	1.00	.46						
<b>Educational level</b>	1.54	.50	.10	.05	.10			
<b>Need to drive for work when unlicensed</b>	.43	.50	.20***	.05	.22	.04		
<b>Prior criminal conviction</b>	.39	.49	.15**	.05	.16	.02		
<b>Able to access vehicle while unlicensed</b>	.96	.20	.22	.12	.10			
<b>Still had photo licence</b>	.49	.50	.14**	.05	.16	.02		
<b>Lack of alternative transport</b>	21.12	7.08	.01	.00	.11			
<b>Perceived risk of apprehension (prior to detection)</b>	3.29	1.80	-.01	.01	-.05			
<b>Punishment avoidance</b>	.37	.48	.21***	.05	.22	.05		
<b>Balance of reinforcement</b>	-24.41	13.13	.00*	.00	.13	.01		
							.24***	.22

1. Logarithmically transformed

\*  $p < .05$  \*\*  $p < .01$  \*\*\*  $p < .001$  Unique variability = .14; shared variability = .10

The regression model was significant [ $F(9, 284) = 10.05, p < .001$ ], accounting for 24% [ $R^2 = .24, AdjR^2 = .22$ ] of the variance in the frequency of unlicensed driving. The significant predictors in order of contribution were

- *Punishment avoidance* [ $\beta = .22; p < .001; sr^2 = .05$ ],
- *Needed to drive for work while unlicensed* [ $\beta = .22; p < .001; sr^2 = .04$ ],
- *Still had photographic licence* [ $\beta = .16; p < .01; sr^2 = .02$ ],
- *Prior criminal conviction* [ $\beta = .16; p < .01; sr^2 = .02$ ], and
- *Balance of reinforcement* [ $\beta = .13; p < .05; sr^2 = .01$ ].

Each of the significant predictors was positively associated with the frequency of unlicensed driving.

9. The "Balance of reinforcement" variable was also included in the regression model, since it was the social learning variable with the largest standardized regression co-efficient (see Table A4) and became a significant predictor once it was included with the other variables.

### *Continued unlicensed driving after detection*

As above, a series of logistic regressions were undertaken on each group of factors to explore their influence on continued driving after detection (see Tables A5-A8 in Appendix D). The significant predictors from these analyses were then used in a consolidated logistic regression, as shown in Table 4.31.

**Table 4.31** Logistic regression analysis of continued driving after detection as a function of selected variables (n=299)

Variables	<i>B</i>	Std. error	Wald test	Odds Ratio	95% CI for Odds ratio	
					Upper	Lower
Age	-.04	.02	2.80	.97	.93	1.01
Needed to drive for work when unlicensed	.77	.31	6.18*	2.17	1.18	3.99
Employed at the time of court hearing	-.81	.31	6.98**	.44	.24	.81
Lack of alternative transport	.04	.02	3.53	1.04	1.00	1.08
Perceived risk of apprehension (after detection)	-.14	.07	4.31*	.87	.76	.99
Vicarious exposure to punishment	.68	.29	5.34*	1.97	1.11	3.51
Differential association	.10	.03	13.29***	1.10	1.05	1.16

Full model vs constant-only model:  $\chi^2$  (df7, n=299) = 50.36,  $p < .001$ ; Nagelkerke  $R^2 = .22$

\*  $p < .05$  \*\*  $p < .01$  \*\*\*  $p < .001$

The consolidated logistic regression model was significant [ $\chi^2$  (df, n=299) = 50.36,  $p < .001$ ], accounting for 22% of the variance in the continued driving after detection variable. The significant predictors with their odds ratios and related 95% confidence intervals (CIs) were

- *Needed to drive for work while unlicensed* [odds ratio = 2.17, CI = 1.18 – 3.99],
- *Employed at the time of court hearing* [odds ratio = .44, CI = .24 - .81],
- *Vicarious exposure to punishment* [odds ratio = 1.97, CI = 1.11 – 3.51],
- *Perceived risk of apprehension* (after detection) [odds ratio = .87, CI = .76 - .99], and
- *Differential association* [odds ratio = 1.10, CI = 1.05 – 1.16].

As can be seen, two of the variables were associated with a lower likelihood of continued driving after detection: being *employed at the time of the court hearing* and a higher *perceived risk of apprehension*. However, the three other significant predictors were positively associated with the dependent variable. In particular, *needing to drive for work while unlicensed* and *vicarious exposure to punishment* increased the likelihood of continued driving after detection approximately two-fold.

### *Intention to drive unlicensed in the future*

Once again, a series of standard regressions were undertaken on each group of factors to examine their influence on intentions to drive unlicensed in the future (see Tables A9-A12 in Appendix D). The significant predictors from these analyses were then used in a consolidated standard regression, reported in Table 4.32.

**Table 4.32 Standard multiple regression of selected variables on intention to drive unlicensed in the future (n=299)**

Variables	Mean	Std. dev	<i>B</i>	Std. error	$\beta$	$sr^2$	$R^2$	$Adj R^2$
Intention to drive unlicensed in future <sup>1</sup>	.68	.77						
Marital status	1.22	.42	-.15	.09	-.08			
Unaware of being unlicensed	1.32	.47	-.22*	.09	-.14	.01		
Able to access vehicle	.95	.21	.21	.18	.06			
Lack of alternative transport	21.16	7.15	.01*	.01	.11	.01		
Perceived risk of apprehension	4.59	2.00	-.03	.02	-.09			
Prior conviction for unlicensed driving	.39	.49	.16*	.08	.10	.01		
Punishment avoidance	.37	.48	.15	.08	.09			
Total unlicensed driving models	4.35	6.01	.01*	.01	.11	.01		
Attitudes to unlicensed driving	37.76	12.01	.02***	.00	.24	.03		
Balance of reinforcement	-24.54	13.25	.01*	.00	.15	.01		
							.32***	.29

1. Logarithmically transformed

\*  $p < .05$  \*\*  $p \leq .01$  \*\*\*  $p \leq .001$  Unique variability = .08; shared variability = .24

The regression model was significant [ $F(10, 288) = 13.41, p < .001$ ] accounting for 32% [ $R^2 = .32, AdjR^2 = .29$ ] of the variance in the intention to drive unlicensed variable. The significant predictors in order of contribution were

- *Attitudes to unlicensed driving* [ $\beta = .24; p = .001; sr^2 = .03$ ],
- *Balance of reinforcement* [ $\beta = .15; p < .05; sr^2 = .01$ ],
- *Unaware of being unlicensed* [ $\beta = -.14; p < .05; sr^2 = .01$ ],
- *Lack of alternative transport* [ $\beta = .11; p < .05; sr^2 = .01$ ],
- *Total unlicensed driving models* [ $\beta = .11; p < .05; sr^2 = .01$ ], and
- *Prior conviction for unlicensed driving* [ $\beta = .10; p < .05; sr^2 = .01$ ].

The *unaware of being unlicensed* variable was the only significant predictor that was not positively associated with future intentions to drive unlicensed.

# DISCUSSION

## 5.1 Study limitations

The 62.4% response rate achieved in this study is relatively high when compared to previous surveys of unlicensed drivers. In addition, it was very similar to the response rate (61%) achieved in a survey of drink drivers conducted in central Queensland using a similar methodology (Ferguson *et al*, 2000). The strategy to recruit participants through the court system appeared to overcome the problems previously experienced in locating unlicensed driving offenders. Along with the decision to offer a payment to participants, these factors should have enhanced the representativeness of the sample. Nonetheless, it is important to acknowledge the limitations of the current sample.

First, over one-third of the eligible offenders approached to participate in the survey refused. While there did not appear to be any systematic bias among those who refused in terms of either offence category or interviewer, female offenders and those unaccompanied by family or friends were more likely to agree to participate. Given that an incentive payment was offered, it is possible that there was a higher refusal rate among those who were currently employed. However, only 11 of the offenders who refused specifically mentioned that they could not participate due to work-related commitments. In addition, some offenders would have been omitted from the study because they failed to appear at court as directed. Among the serious offenders (such as those facing additional drink driving or dangerous driving charges) this is a relatively rare event, since it will generally represent a breach of bail conditions and result in the issuing of a warrant for their arrest (Micola, 2002).

Second, the scope of the sample was limited in a number of respects. While the Brisbane Court processes the largest number of traffic offenders in Queensland each year (Micola, 2002), it primarily processes offenders who are detected in the inner city and suburban area of Brisbane. Consequently, the degree to which the findings can be generalised to other metropolitan and rural areas remains to be confirmed. Some of the offender groups (particularly the *inappropriately licensed* drivers) were relatively small. In addition, the sample did not include any under-age drivers since they are processed through juvenile courts (which are considerably more difficult for researchers to access). Therefore, caution should be exercised when generalising the findings to all unlicensed drivers.

Finally, it is unclear to what extent the behaviour of the sample is indicative of unlicensed drivers who have not been detected by the police. It is possible that offenders who remain undetected are generally more cautious (and possibly safer) than those caught by the police. However, many of the offenders in the sample were detected through random enforcement processes.

## 5.2 The nature and extent of unlicensed driving

### 5.2.1 Unlicensed driver types

The results clearly suggest that unlicensed drivers should not be viewed as a homogenous group. Significant differences were found between the offender types in terms of their socio-demographic characteristics (age, education level, prior criminal convictions), driving history (prior convictions for unlicensed driving and other traffic offences), whether they were aware of being unlicensed, the degree to which they limited their driving while unlicensed, and their drink driving behaviour.

In particular, the higher levels of prior criminal convictions among the *disqualified*, *not currently licensed*, and *never licensed* drivers, combined with the self-reported drink driving data, suggests that unlicensed driving may be associated with a more general pattern of non-conformity and risk-taking among these groups of offenders. This conclusion is consistent with the crash data presented in Section 2.4, which indicated that the *never licensed* and *disqualified/suspended* drivers were more likely to be involved in a serious casualty crash (relative to a minor crash) than both licensed drivers and those with *expired* licenses. Together, this data suggest that the motivations for driving unlicensed may vary considerably among different types of offenders and that a narrow range of countermeasures is unlikely to adequately address the problem.

### 5.2.2 The extent of unlicensed driving

Among the first offenders in the sample the mean reported length of time driving unlicensed was 0.88 years, while for the repeat offenders it was 5.13 years. In both cases there were individuals who reported driving for a considerable period of time before being detected. For example, 25 offenders (8.1%) reported driving unlicensed for 10 or more years. While this highlights the long periods over which offenders can remain undetected, it does not provide any insights into the extent of the driving undertaken while unlicensed.

Other data suggest that many of the offenders restricted the amount of driving they undertook while unlicensed. Firstly, the overall mean number of trips reported per week was 14.0. While this represents at least one return trip per offender each day of the week, 31 offenders (10.0%) reported driving less frequently than once a week. Secondly, 48.3% of the sample reported that they limited their driving while unlicensed. When the offenders who claimed that they were unaware of being unlicensed were excluded, this percentage increased to 56.3%. The offenders reported a variety of strategies to reduce their driving exposure, and hence their chances of detection, including restricting their overall amount of driving, driving on back streets/avoiding main roads and driving during daylight hours only.

Across the sample, the offenders reported a similar level of driving for work-related ( $M = 6.7$  trips per week) and social-recreational reasons ( $M = 7.3$  trips per week). Interestingly, however, a higher proportion of offenders were detected by the police when driving for social-recreational reasons (53.9%) than for work-related reasons (26.0%). There are a number of possible explanations for this difference. First, it is possible that unlicensed drivers are more likely to draw attention to themselves when



driving for social-recreational reasons than for work reasons. This would be consistent with factors such as alcohol use and peer pressure that would probably be more evident when driving for social-recreational reasons. Second, it is possible that the police are more likely to conduct licence checking at times when social-recreational driving is more likely, such as in the afternoons and evenings. This is consistent with the perceptions of some offenders that they could reduce their chances of detection by driving only in the day.

It is also interesting that almost two-thirds (62.5%) of the sample were detected driving a vehicle that they owned. Even among the *never licensed* drivers, 32.0% were detected driving their own vehicle. Therefore, while many offenders appeared to limit the amount of driving they undertook most had easy access to a vehicle. As will be noted later, this highlights the potential value of vehicle-based sanctions to reduce the level of unlicensed driving.

### **5.2.3 The on-road behaviour of unlicensed drivers**

As noted in section 2.3.1, there is a common assumption made in the literature that unlicensed drivers drive in a more cautious manner to avoid detection (Williams *et al*, 1984; Ross and Conzales, 1988; Mirrlees-Black, 1993, Job *et al*, 1994). While the evidence from this study tends to confirm that many offenders reduce their overall driving exposure in order to avoid detection, it is unclear whether this results in more cautious driving. All the offender types reported relatively high levels of care in obeying the road rules. However, more specific responses relating to drink driving, speeding, and seat belt compliance suggest that many participants were not always cautious in their driving behaviour. For example, almost a quarter of all offenders (and over a third of the *disqualified*, *not currently licensed*, and *never licensed* drivers) reported driving unlicensed when they thought they might have been over the limit. Similarly, 25% reported exceeding the speed limit by 10 km/h or more on (at least) most occasions, while 15% admitted that they didn't always wear their seat belt. Moreover, while it is problematic to compare responses across surveys using different methodologies, the self-reported drink driving, speeding, and seat belt behaviour of the participants appeared less safe than that reported by drivers in the ATSB's (2000) community telephone survey.

Consequently, the evidence supports a number of different explanations. First, it is possible that among some (possibly many) unlicensed drivers the desire to avoid detection tends to result in more cautious driving. Second, it is possible that even among those unlicensed drivers who admit regularly breaking road rules, their driving is more cautious than it would otherwise be (even though they are not as cautious as general drivers). Finally, as suggested by Hurst (1982, cited in Silcock, 2000) it is possible that the behaviour learned while driving unlicensed may not actually be safer, but more oriented to avoiding detection instead. Further research is required into this issue. However, the results of this study do question the common assumption that unlicensed drivers drive in a more cautious manner, if general community behaviour is adopted as the yardstick.

#### **5.2.4 The effectiveness of current administrative, enforcement and punishment processes**

The following section reviews the effectiveness of current administrative, enforcement and punishment processes, in light of the findings from the survey. Options for improving countermeasures in these areas are discussed in section 5.4.

##### *Administrative processes*

A number of potential problems with current administrative processes were identified in the study. Over one-third (36%) of offenders claimed that they were unaware, or at least unsure, of being unlicensed at the time they were detected. Not surprisingly, this was more common among the *expired* (53.8%) and *suspended* (40.4%) drivers. While this result may in part reflect the tendency of participants to provide more socially acceptable responses, it raises questions about the effectiveness of current methods used to inform drivers about the expiry and cancellation of licences. Interestingly, Job *et al* (1994) reported a similar proportion (29.4%) of ‘unaware’ participants in their postal survey of unlicensed drivers in New South Wales. This suggests that this issue may be a problem across Australia.

Almost half of the sample (49%) reported that they still had their photographic licence when driving unlicensed. While this is not surprising among the *expired* drivers, it remains a concern that many *suspended*, *disqualified* and *not currently licensed* drivers still had their photographic licence. In the case of the *disqualified* and *not currently licensed* drivers, it suggests that the processes for surrendering licences at court may not always be observed. In the case of the suspended drivers, the results may in part reflect the change in policy introduced in Queensland in December 2002, that no longer required drivers who have their licence cancelled for accumulation of demerit points to surrender their licences. As noted in section 2.6.1, Ross & Gonzales (1988) have argued that it is important for licensing authorities to recover the licences of those offenders who are disqualified from driving. This should reduce the temptation among these people to attempt to evade detection, even if the police intercept them.

##### *Enforcement practices*

The results tend to suggest that probability of detection for unlicensed driving in Queensland is relatively low. The most common reason for the participants being detected was due to them either committing a traffic offence or being involved in a crash (37.9%). While 22% of offenders were detected at RBT operations, many of these appear to have been initially detected for drink driving. The remaining offenders were detected through either a targeted check (26.9%) or for reasons unclear to the participants (13.3%). Therefore, while many offenders were detected through proactive policing initiatives (such as RBT or targeted checks), many others only came to the attention of the Police because of illegal behaviour.

Moreover, many of the offenders reported incidents where they were pulled over by the police and did not have their licence checked or were able to avoid the matter coming to the attention of the authorities. For example, a total of 164 offenders reported being pulled over by an RBT operation at least once during the time they were driving unlicensed, representing 53.1% of the sample. However, 97 (31.4% of

total sample) of these offenders reported that they did not have their licence checked on one or more occasions. In addition, a small number of offenders cited cases where they were pulled over for speeding or another offence and did not have their licence checked, were able to evade a speed camera ticket or were involved in a traffic crash but were able to evade detection. In total, 113 offenders (representing 36.6% of the sample) were able to evade detection from the police on one or more occasions when they could otherwise have been identified. Of these offenders, 67 (21.7% of sample) evaded detection on two or more occasions. (The impact of the evasion of detection on the frequency of unlicensed driving is discussed further in section 5.3).

The low probability of detection for unlicensed driving was also reflected in the behaviour and perceptions of the survey participants. As already noted, many offenders had been driving unlicensed for quite long periods of time. Furthermore, almost one-third (30.5%) of the sample admitted that they continued to drive illegally after they were detected. In terms of perceptions, the perceived risk of apprehension for unlicensed driving (prior to detection) among the participants was significantly lower than that for being randomly breath tested or being caught for speeding by either a speed camera or radar.

#### *Punishment processes*

The majority of the participants in the sample were either convicted of the offence on the day they were interviewed (86.4%) or had the matter adjourned (13.6%). Only four participants had no conviction recorded, while one was acquitted. In this respect the penalties for unlicensed driving were applied with a very high degree of certainty.

However, other evidence suggests that the participants did not perceive the current punishment processes to be a significant deterrent to unlicensed driving, particularly in terms of their severity. First, only 42 (14.0%) of the participants reported that they knew what the penalties for unlicensed driving were prior to being detected. Second, the participants did not rate the certainty ( $M = 5.4$  on a seven-point scale), severity ( $M = 4.6$ ), or swiftness ( $M = 5.2$ ) of current punishment processes particularly high. This finding is somewhat surprising given that the majority of offenders were interviewed shortly after being sentenced in court. Thirdly, as will be explained in more detail in the next section, no significant relationship was found between either the perceived severity or the swiftness of punishment and the three indicators of unlicensed driving used in the study (the frequency of unlicensed driving, continued driving after detection and intention to drive unlicensed in the future). The only significant relationship found (albeit modest) was between the perceived certainty of punishment and continued driving after detection [ $r_{pb} = -.13$ ,  $p < .05$ ]. Finally, a significant positive relationship [ $r_{pb} = .20$ ,  $p < .001$ ] was found between prior conviction for unlicensed driving and the participant's intention to drive unlicensed in the future. This suggests that current punishments for unlicensed driving do not tend to deter the behaviour (at least as measured by future intentions).

### 5.3 Factors predicting unlicensed driving behaviour

Due to the design of the study, it was not possible to directly compare people who had driven unlicensed with those who had not. Consequently, three variables were selected to measure different aspects of unlicensed driving behaviour. As noted in section 4.4, the frequency of unlicensed driving was intended to reflect the extent of the behaviour, while continued driving after detection was selected to reflect the offender's commitment to (or reliance on) the behaviour. The intention to drive unlicensed variable was selected to provide an insight into the psychological processes underpinning the behaviour.

#### 5.3.1 The frequency of unlicensed driving

The consolidated regression analysis indicated that the significant predictors of the frequency of unlicensed driving (in order of the variance explained) were whether the offenders had evaded detection while driving unlicensed (*punishment avoidance*), needed to drive for work while unlicensed, still had a photographic licence, had a prior conviction for unlicensed driving, and perceived the rewards of the behaviour to outweigh the likely punishments relative to other behaviours (*balance of reinforcement*).

The need to drive for work has previously been identified as one of the main factors contributing to unlicensed driving (e.g. Robinson, 1977; Ross and Conzaes, 1988; Mirlees-Black, 1993; Job *et al*, 1994). Besides acting as a major motivation for the behaviour, it serves to increase the overall exposure of offenders. Similarly, it is not surprising that those participants who perceived greater rewards than costs for unlicensed driving tended to engage in the behaviour more frequently. Indeed, being able to drive as required may have been seen as one of the main benefits of unlicensed driving.

However, the relationship between the other predictors and unlicensed driving is more difficult to interpret. While a positive correlation was found between *punishment avoidance* and the frequency of unlicensed driving, the causal direction of this relationship is unclear. While the deterrence model proposed by Stafford and Warr (1993) would suggest that evading detection could encourage more frequent unlicensed driving, it may only indicate that those people who drive more frequently have more opportunities to evade detection. This issue is discussed further in section 5.3.4.

The nature of the relationship between possession of a photographic licence and the frequency of unlicensed driving is also unclear. It is plausible that those drivers who still possessed a photographic licence were more likely to drive regularly in the belief that they could evade detection. However, the types of offenders who were most likely to still possess their licence were the *expired* and *suspended* drivers, who were also the most likely to claim that they were unaware of being unlicensed and hence did not limit their driving. As such, the relationship between possession of a photographic licence and more frequent unlicensed driving may be coincidental rather than causal.

Similarly, it is likely that the relationship between prior criminal conviction and the frequency of unlicensed driving is coincidental, rather than causal. It is likely that those people who have been convicted of a criminal offence in the past are going to be less concerned about the threat of detection and punishment for unlicensed driving, and therefore do not tend to limit their driving as much as other offenders.

### **5.3.2 Continued unlicensed driving after detection**

The consolidated logistic regression analysis indicated that the significant predictors of continued driving after detection were whether the offenders were employed, needed to drive for work while unlicensed, knew people who had been convicted of unlicensed driving (*vicarious exposure to punishment*), had a relatively high risk of apprehension, and had family and friends who held positive or at least neutral attitudes towards unlicensed driving (*differential association*).

Consistent with the findings relating to the frequency of driving, needing to drive for work significantly increased the odds (odds ratio = 2.17) of continued driving after detection. However, it is interesting that being employed (at least at the time of the court hearing) was found to reduce the odds (odds ratio = .44) of continued driving. This suggests that being employed, except in cases where it necessitates driving, may tend to act as a protective factor against continued offending. For example, employed offenders may be concerned about the long-term impact of a further penalty on their capacity to travel to and from work. Alternatively, the results may be more indicative of the characteristics of those people who tend to be employed.

A higher perceived risk of apprehension reduced the odds (odds ratio = .87) of an offender continuing to drive after detection. This finding is consistent with classical deterrence theory. In contrast, vicarious exposure to punishment (i.e. knowing family and friends who have been convicted of unlicensed driving) was associated with an increase in the odds (odds ratio = 1.97) of continued driving. This finding is not consistent with Stafford and Warr's (1993) reconceptualisation of deterrence theory, in that it suggests that vicarious exposure to the punishment experiences of others does not tend to deter the behaviour. It is possible that little deterrence was achieved because the penalties imposed were not perceived to be severe. However, the finding is not unexpected from a social learning perspective, since vicarious exposure to punishment is conceptually very similar to the behavioural dimension of *differential association*. In other words, family and friends who engage in unlicensed driving provide a source of behavioural models for other drivers. This interpretation is supported by the fact that the normative dimension of *differential association* was also found to be a significant predictor of continued driving after detection. In other words, it appears that exposure to people who drive unlicensed (even if they are convicted and punished for it) and who have positive or neutral attitudes toward the behaviour, tends to encourage continued unlicensed driving after detection.

### **5.3.3 Intention to drive unlicensed in the future**

The consolidated regression analysis indicated that the significant predictors of intention to drive unlicensed in the future were whether the offenders held more positive or at least neutral attitudes towards unlicensed driving (*attitudes to unlicensed driving*), perceived the rewards of the behaviour to outweigh the likely punishments relative to other behaviours (*balance of reinforcement*), were unaware

of being unlicensed when detected, reported a *lack of alternative transport* options available, knew a larger number of people who had driven unlicensed in the past (exposure to unlicensed driving *models*), and had a prior conviction for unlicensed driving.

These findings largely support the explanatory power of the social learning model used in the study. Three of the significant predictors were drawn from the social learning model. In addition, it is arguable that perceptions toward alternative transport options (as measured by the *Lack of alternative transport* variable) would influence attitudes toward unlicensed driving and the perceived benefits of the behaviour. It is not surprising that a perceived lack of alternative transport was positively associated with future intentions to drive unlicensed. Similarly, the positive relationship between the *Prior conviction for unlicensed driving* variable and future intentions is consistent with the view that persistent offenders perceive the benefits of unlicensed driving to outweigh the likely costs. This is also consistent with the negative relationship between the *Unaware of being unlicensed* variable and future intentions, which suggests that those offenders who had knowingly driven unlicensed in the past were more likely to report an intention to do so again.

#### **5.3.4 Theoretical implications**

Classical deterrence theory suggests that drivers will be deterred from driving unlicensed if they perceive a high likelihood of apprehension, and if the resulting penalties are perceived to be sufficiently certain, severe, and swift. The evidence from the survey tends to suggest that these conditions are not currently being achieved for many drivers. The most encouraging results were obtained for the *perceived risk of apprehension*, which was found to be significantly correlated (albeit weakly) with the three dependent variables used in the study and significantly reduced the odds of continued driving after detection. However, the *perceived risk of apprehension* for unlicensed driving was significantly lower than that for other illegal behaviours such as drink driving and speeding. In addition, the *knowledge of current penalties* among offenders was relatively low and no significant association was found between the *perceived severity* or *swiftness* of current penalties and the three dependent variables. While a weak significant correlation was found between the *perceived certainty of punishment* and continued driving after detection, it did not prove a significant predictor of the behaviour. Finally, rather than act as a specific deterrent, *prior punishment* for unlicensed driving was not significantly correlated with any of the dependent variables.

The above findings do not necessarily invalidate classical deterrence theory. Rather they suggest that the necessary conditions for deterring unlicensed driving are not currently being achieved. However, the incorporation of Stafford and Warr's (1993) concept of punishment avoidance into the study appeared to increase the explanatory value of the deterrence perspective. This construct was found to be a significant predictor of both the frequency of unlicensed driving and future intention to drive unlicensed. However, as noted earlier, the causal direction of the relationship between punishment avoidance and frequency of unlicensed driving is unclear. It is possible that the successful evasion of detection may serve to encourage more frequent unlicensed driving. As argued by Stafford and Warr (1993, p.125) "*Offenders whose experience is limited largely to avoiding punishment may come to believe that they are immune from punishment, even in the face of occasional*

*evidence to the contrary*". Alternatively, the findings may only indicate that those people who drive more frequently have more opportunities to evade detection.

Overall, the evidence appears to provide more support for the view that *punishment avoidance* contributes to more frequent unlicensed driving. First, if the findings concerning *punishment avoidance* were merely a product of increased driving exposure, a similar relationship should have been found between unlicensed driving and *exposure to enforcement*. In other words, *exposure to enforcement* should also be associated with more frequent unlicensed driving. However, this was not found to be the case. Second, the relationship between *punishment avoidance* and frequency of unlicensed driving is consistent with a participant's future intention to drive unlicensed. In this respect, it is reasonable to conclude that the experience of avoiding punishment for unlicensed driving directly contributes to a stronger intention to drive unlicensed in the future.

In contrast, the inclusion of Stafford and Warr's (1993) concepts of vicarious exposure to punishment and vicarious punishment avoidance did not add to the explanatory value of the deterrence perspective. While *vicarious exposure to punishment* significantly predicted continued driving after detection, the relationship was not in the direction expected.

The evidence relating to the explanatory role of the social learning variables was more encouraging. The *balance of reinforcement* variable was a significant predictor of both the frequency of unlicensed driving and future intention to drive unlicensed. The normative dimension of *differential association* was a significant predictor of continued driving after detection. In addition, the *vicarious exposure to punishment* variable, which was also a significant predictor of continued driving (contrary to the predictions of deterrence theory), is conceptually very similar to the behavioural dimension of *differential association*. Finally, both the *attitudes to unlicensed driving* and exposure to *unlicensed driving models* variables were significant predictors of intention to drive unlicensed in the future.

In addition, one of the strongest predictors of both the frequency of unlicensed driving and continued driving after detection was whether the offenders *needed to drive for work when unlicensed*. The role of this variable appears to be better explained by a social learning perspective than either of the deterrence perspectives used in the study. The need to drive for work represents a powerful motivation to drive unlicensed, since it facilitates the obtaining of personal rewards (e.g. income, social status) and reduces the potential costs associated with not driving (i.e. potential loss of employment). Consequently, it is not surprising that those offenders who drive unlicensed for work-related reasons would perceive the benefits of the behaviour to outweigh the potential costs. In this respect, deterrence theories tend to focus on the perceived costs associated with certain behaviours, while social learning perspectives consider both perceived benefits and costs. The findings from the study suggest that countermeasures to unlicensed driving should not just focus on increasing the potential costs associated with the behaviour, but attempt to reduce the potential benefits. This is further discussed in section 5.4.4.

It should also be noted that neither sensation seeking nor alcohol dependence were found to be significantly associated with the various measures of unlicensed driving used in the study. In the case of sensation seeking, it is possible that the particular

scale used in the study failed to adequately discriminate between the offenders because risk-taking was endemic within the group. While this is possible, significant (albeit weak) correlations were found between sensation seeking and self-reported speeding and prior criminal conviction. Similarly, the scores on the AUDIT scale were significantly associated with prior criminal and traffic behaviour and with self-reported drink driving behaviour, but not with the measures of unlicensed driving. Together, these results suggest that sensation seeking and alcohol dependence do not directly influence the extent or nature of unlicensed driving, but do contribute to licence loss (i.e. the reason that someone becomes unlicensed in the first place).

## **5.4 Countermeasure implications**

### **5.4.1 Driver licensing and other administrative processes**

The findings of the study have a number of implications for driver licensing and other processes. The relatively high proportion (36%) of offenders who claimed that they were unaware of being unlicensed raises questions about the methods currently used to inform drivers of the expiry or cancellation of licences. At the moment in Queensland, a letter is sent to drivers six weeks before the expiry of their licence. Given the relatively low costs involved in sending letters, consideration may need to be given to providing an additional reminder letter to those drivers who fail to renew their licence. However, this strategy will have little impact in cases where drivers have failed to notify the authorities of a change in their address. Therefore, as suggested by Job *et al* (1994, p.59) “*Promotion of the need to notify changes of address (with the message that it may avoid failing to receive reminder notices) may help with this problem*”.

Almost half of the sample (49%) in this study still had a photographic licence when driving unlicensed. Consequently, there is a need for licensing authorities to examine the processes used for managing the surrender/retrieval of driver's licences. In particular, jurisdictions need to ensure that they have processes in place to monitor whether offenders have surrendered their licences as required. More particularly, there is a need in Queensland to examine the impact of the change in policy that no longer requires drivers to surrender their licence when it is cancelled for accumulation of demerit points. In particular, it is possible that this change may have increased the temptation for suspended drivers to continue driving and may have reduced the impact of licence loss in terms of deterrence and convenience (e.g. being able to retain a licence for identification purposes).

In addition, many jurisdictions have now introduced licence loss as a penalty for non-road safety related offences, such as non-payment of fines. This has the potential to increase the level of unlicensed driving and reduce the integrity of licence loss as a road safety measure. Hence, research is required to examine the impact of these practices on driver perceptions and the level of unlicensed driving.



### **5.4.2 Traffic law enforcement practices**

As noted in the literature review, researchers have repeatedly identified the need to improve the roadside technology used by police to ensure the rapid identification of drivers who are unlicensed (e.g. Smith, 1976; Job *et al*, 1994). In Queensland, major developments have occurred in this area over recent years. Many police vehicles are now equipped with a computer link to Queensland Transport's licensing and registration databases (Travelsafe, 1998). Continued development and implementation of this technology is required to ensure that the Police have the capacity to quickly verify the validity of licences by the roadside.

However, the results of this survey highlight the need for more widespread checking of driver's licences. It is a concern that many offenders are not being detected when they come into contact with the police. For example, 97 (31.4%) of the participants in the study reported that they did not have their licence checked at an RBT operation during the time they were driving unlicensed. As noted earlier *punishment avoidance* was found to be positively associated with both the frequency of unlicensed driving and intention to drive unlicensed in the future. In addition, the perceived risk of apprehension for unlicensed driving is significantly lower than that for drink driving or speeding.

A major impediment to more widespread licence checking in Australia is the lack of compulsory carriage of licence laws. For example, while the police have the power to randomly check licences in Queensland, it is difficult for them to do so on a systematic basis because open licence holders are not, in practice, required to carry their licence (Travelsafe, 1998). New South Wales is the only State that currently requires all drivers to carry their licence, which facilitates the checking of licences at RBT operations in that State (Watson *et al*, 1996).

Consequently, a strong argument exists for the national adoption of compulsory carriage of licence and for the Police to conduct more widespread, random checking of drivers licences (e.g. at RBT and specific licence checking operations). Without these initiatives it will remain very difficult to meaningfully improve the detection of unlicensed driving, and hence to heighten drivers' perceived risk of apprehension. It is also interesting to note that a community survey conducted by the then Federal Office of Road Safety (FORS, 1996) found that 54% of Queensland respondents already believed that it was compulsory to carry their licence. In addition, 78% reported that they approved of compulsory licence carriage.

It should also be noted that approximately half the trips reported by the drivers in the study were for work-related reasons. This highlights the need for the Police to adopt a mix of approaches to licence checking which targets both social-recreational driving and work-related driving.

### **5.4.3 Unlicensed driving sanctions and punishment processes**

The findings of the study suggest that there is a need to review the adequacy of current penalties and punishment processes for unlicensed driving. Current penalties appear to have a minimal deterrent impact on offenders. Levels of knowledge about the penalties are minimal while the offenders did not rate them as particularly severe. While there was some evidence that the current penalties are perceived to be certain, their impact

on unlicensed driving behaviour appears limited. Most importantly, prior conviction for unlicensed driving did not appear to have any significant impact on either the subsequent frequency of unlicensed driving, continued driving after detection or future intention to drive unlicensed.

The penalties for other offences related to unlicensed driving may also need to be examined. For example, evidence emerged during the qualitative pilot that some participants preferred to remain on their Learner's Licence because the current penalty for Unaccompanied Driving was only \$30, which was lower than the costs associated with obtaining a Provisional Licence (see section 3.2.1).

In addition, consideration needs to be given to other sanctions to deter or constrain unlicensed driving. The majority of the offenders (62.5%) were detected driving a vehicle that they owned. This highlights the potential value of vehicle-based sanctions, such as alcohol ignition interlocks, vehicle or registration plate confiscation/ impoundment and electronic licences. As noted in section 2.6.4, efforts need to be directed at increasing the take-up rate of alcohol ignition interlocks among offenders. Given the findings of the current study, strategies need to be developed to encourage drink driving offenders who need to drive for work to participate in interlock programs, rather than have them drive while disqualified. Such strategies may include reducing the length of disqualification periods or making participation an alternative to more restrictive penalties like gaol or electronically monitored house arrest (Voas *et al*, 1999; 2002). Consideration should also be given to the broader implementation of drink driving rehabilitation programs and the trialling of remedial programs specifically targeting recidivist unlicensed driving offenders (see section 2.6.5).

#### **5.4.4 The need to target work-related unlicensed driving**

The need to drive for work appears to act as a major motivation for unlicensed driving. In this regard, Job *et al* (1994) have suggested that consideration be given to the use of restricted licences as an alternative to full disqualification, to allow offenders to drive to and from work. As noted earlier, the evidence suggests that the benefits of restricted licences may be minimal despite their intuitive appeal. Compliance with such licences is difficult to enforce and they do not tend to reduce overall offences and crashes as much as full disqualification (Watson and Siskind, 1997; Watson *et al*, 2000). It is also possible that the use of restricted licences may actually undermine the general deterrent effect of licence disqualification, by creating the impression that licence loss is neither certain or inevitable.

Consequently, there is a need to develop other strategies to reduce work-related unlicensed driving. As mentioned in the previous section, one way to achieve this may be to encourage relevant offenders to participate in alcohol ignition interlock programs. In addition, the theoretical findings of this study suggest that we need to reduce the benefits of unlicensed driving, not just focus on increasing the costs associated with detection and punishment (see Section 5.3.4). One way to do this would be to encourage employers to more actively monitor the licence status of their drivers. If drivers believed that their employers were likely to check their licences, the perceived benefits of unlicensed driving may be diminished. While this practice would have limited impact in the case of self-employed people, many government

and non-government organisations are adopting comprehensive fleet safety policies and programs that could include this practice.

#### **5.4.5 The role of public education**

Job *et al* (1994, p.59) warned against the use of mass media campaigns to target unlicensed driving, due to a concern that it “*may promote a perception that many unauthorised drivers go undetected or it may simply raise awareness of the possibility*”. While mass media publicity does not appear capable of changing entrenched behaviours, it can contribute to improved road user behaviour by creating a climate of opinion supportive of other measures and by ‘signposting’ the need for behaviour change (Elliott, 1992). This suggests that mass media publicity relating to unlicensed driving should only be considered if ‘real’ improvements are made in the probability of detection or the severity, certainty or swiftness of punishment. Rather than focus on the level of unlicensed driving, this publicity should focus on the changed practices or policies and how they impact on drivers. This would be particularly relevant if there was a change in policy relating to the compulsory carriage of licence or police licence checking processes. In the interim, public education should focus on issues such as the need for drivers to notify licensing authorities of changes of address.

### **5.5 Research priorities**

Research into unlicensed driving is characterised by many methodological difficulties (see section 2.2). As a consequence, there has been a lack of good information about the nature and characteristics of unlicensed driving available to guide the development of countermeasures. While this study has contributed to the knowledge base, it has also highlighted a number of key areas where further research is required.

#### **5.5.1 Roadside surveys of unlicensed driving**

Roadside surveys represent the most feasible means of obtaining an objective, independent estimate of the prevalence of unlicensed driving in the general community (see section 2.2.1 and 2.2.3). Periodic surveys of this nature are required to

- indicate the overall level of unlicensed driving at different times and places, as well as the prevalence among different types of unlicensed driving;
- provide a baseline measure which could be compared with the results of subsequent surveys, in order to evaluate the effectiveness of unlicensed driving countermeasures; and
- assist in interpreting from the crash data whether unlicensed drivers are actually over-involved or under-involved in different types of crashes, thereby improving the reliability of this surrogate measure (Watson, 1998d).

### 5.5.2 Crash studies

There is a need for further research into the crash involvement patterns of unlicensed drivers. In particular, there is a need to investigate whether certain risk factors (e.g. alcohol, speed, youthfulness) are more prevalent among certain types of unlicensed drivers. For example, it would be useful to ascertain whether the fatal crashes involving drivers who have never been licensed are more indicative of a lack of skill or of recklessness. This could have a major bearing on the types of countermeasures required to target this group.

In addition, it would be ideal to examine the issue of unlicensed driving within the broader context of a major road crash study. If feasible, the opportunity to interview unlicensed drivers who have been involved in crashes would provide valuable information to compare with other self-report surveys. For example, it would provide a means of ascertaining whether the behaviour of crash-involved unlicensed drivers is indicative of unlicensed drivers as a whole, or whether they tend to represent a special sub-set who are less concerned about the risks of detection and punishment (Watson, 1998b).

### 5.5.3 Evaluating changes in policies and practices

It is important to evaluate the impact of changes in policies and practices that may impact on the level of unlicensed driving. Two recent policy changes that require monitoring are

- the change of policy in Queensland that no longer requires drivers to surrender their licence when it is cancelled for accumulation of demerit points; and
- the use of licence loss in some jurisdictions as a penalty for non-road safety related offences, such as non-payment of fines (see Section 5.4.1).

In addition, it would be important to evaluate the impact of future countermeasures (such as the introduction of compulsory carriage of licence and more widespread licence checking) in order to estimate their cost-effectiveness and identify opportunities for further improvement. Such evaluations would need to utilise a variety of methods including analysis of crash data, roadside surveys of unlicensed driving and self-report surveys.

### 5.5.4 Survey studies

Replication of this study in other settings would help confirm the degree to which the findings can be generalised to unlicensed drivers in general. Two particular issues require further study using self-report methods.

First, there is a need to identify the main personal, social and environmental factors contributing to unlicensed driving among underage drivers. Research currently being undertaken by Williams (2002) suggests a possible link between underage driving and opportunistic car theft. Second, it would be useful to explore the personal, social, and environmental factors that encourage compliance with licensing laws among **licensed**

drivers. Meier and Johnson (1977) have argued that comprehensive theories of deviance (such as deterrence theory and social learning theory) need to be robust enough to not only explain deviant behaviour, but to account for why the majority of people comply with laws. In this regard, it would be interesting to examine whether the findings relating to deterrence and social learning factors obtained in this study generalise to licensed drivers.

## CONCLUSION

This study has both confirmed and questioned previous assumptions about unlicensed driving. The results confirm that unlicensed drivers should not be viewed as a homogenous group, suggesting that it is unlikely that one approach will adequately address the problem. In contrast, the results tend to question the common assumption that unlicensed drivers drive in a more cautious manner to avoid detection. While the findings confirm that many offenders reduce their overall driving exposure in order to avoid detection, it is unclear whether this results in more cautious driving. In particular, responses relating to the drink driving, speeding and seat belt behaviour of the participants suggest that they are not as cautious in their driving behaviour as general drivers. While it remains possible that unlicensed drivers tend to act more cautiously than they would otherwise, it appears that their driving behaviour is primarily designed to reduce the chances of detection.

Due to the design of the study, it was not possible to directly examine the factors contributing to unlicensed driving. Consequently, three variables were selected to measure different aspects of the behaviour: the frequency of unlicensed driving, whether offenders continued to drive after detection, and their intention to drive unlicensed in the future. At a theoretical level, the results suggest that the necessary conditions for deterring unlicensed driving are not currently being achieved. In addition to a relatively low perceived risk of apprehension, many offenders have experienced instances of punishment avoidance. For example, over one third of the participants reported being pulled over by the police while driving unlicensed and not having their licence checked.

In contrast, the evidence relating to the explanatory role of the social learning variables was more encouraging. A number of the social learning variables were significant predictors of the unlicensed driving measures. In addition, one of the strongest predictors of both the frequency of unlicensed driving and continued driving after detection was whether the offenders *needed to drive for work when unlicensed*. The role of this variable appears to be better explained by a social learning perspective than either of the deterrence perspectives used in the study. The need to drive for work represents a powerful motivation to drive unlicensed, since it facilitates the obtaining of personal rewards (e.g. income, social status) and reduces the potential costs associated with not driving (i.e. potential loss of employment). Consequently, it is not surprising that those offenders who drive unlicensed for work-related reasons would perceive the benefits of the behaviour to outweigh the potential costs. The findings from the study suggest that countermeasures to unlicensed driving should not just focus on increasing the potential costs associated with the behaviour, but attempt to reduce the potential benefits.

It is possible that improvements to administrative processes and a greater awareness of the penalties associated with unlicensed driving may reduce the incidence of the problem among some potential offenders (particularly those who are unaware of being licensed). However, it is arguable that these individuals may not represent a major road safety risk compared with more intentional or persistent offenders. Nevertheless, higher compliance with licensing laws will contribute to more effective driver management.

To reduce the number of more serious offences, the results of the survey suggest that a multi-strategy approach is required involving

- significant improvements in the detection of unlicensed driving through the adoption of compulsory carriage of licence and the widespread, random checking of drivers licences (e.g. at Random Breath Testing and specific licence checking operations) (see Section 5.4.2);
- the continued development and implementation of technology to enable the Police to quickly verify the validity of licences by the roadside (see Section 5.4.2);
- reviewing the adequacy of current penalties and punishment processes for unlicensed driving and other related behaviours, such as driving unaccompanied on a Learner's Licence (see Section 5.4.3);
- developing strategies to encourage drink driving offenders (particularly those who need to drive for work) to participate in alcohol ignition interlock programs (see Section 5.4.3);
- the trialling of other sanctions for unlicensed driving, such as vehicle-based sanctions or rehabilitation programs specifically targeting recidivist unlicensed driving offenders (see Section 5.4.3);
- the continued development of electronic licence technology to prevent drivers without valid licences from operating vehicles (see Section 5.4.3);
- developing strategies to reduce the perceived benefits of driving for work-related reasons while unlicensed, such as encouraging employers to regularly check the licence status of their employees (see Section 5.4.4); and
- the judicious use of mass media to highlight and reinforce changes in the methods used to detect and punish unlicensed drivers (see Section 5.4.5).

In addition, there is a need for further research into unlicensed driving to assist with the development and evaluation of countermeasures. High priorities include

- periodic roadside surveys to establish the prevalence of unlicensed driving and to provide a benchmark for evaluating the effectiveness of relevant countermeasures (see Section 5.5.1);
- further research into the crash involvement patterns of unlicensed drivers to identify what risk factors are more prevalent among different types of unlicensed drivers (see Section 5.5.2);

- the need to evaluate the impact of policy changes that may affect the level of unlicensed driving, particularly those relating to the surrender of licences by suspended drivers and the increasing use of licence loss as a penalty for non-road safety related offences, such as non-payment of fines (see Section 5.5.3);
- research into the extent and nature of underage driving (see Section 5.5.4); and
- research into the factors that promote compliance with licensing laws among licensed drivers (see Section 5.5.4).

It should be acknowledged that reducing the level of unlicensed driving may not automatically improve road safety. Many drivers who would otherwise drive unlicensed may still engage in higher levels of risk-taking, irrespective of their licence status. Nonetheless, it is likely that more effective countermeasures to unlicensed driving would have a positive effect on road safety by

- encouraging drivers who have never been licensed to participate in the licensing system and thus be subject to processes such as graduated licensing and demerit point systems;
- deterring people from driving vehicles for which they do not have an appropriate class of licence;
- reducing the level of disqualified or suspended driving, thereby improving the deterrent impact of these sanctions; and
- exposing persistent offenders to rehabilitation programs that may assist them to resolve the personal or social factors under-pinning their behaviour.



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# APPENDICES

<b>A</b>	<b>Types of unlicensed driving under Queensland legislation</b>	<b>101</b>
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## **APPENDIX A:**

### **TYPES OF UNLICENSED DRIVING UNDER QUEENSLAND LEGISLATION**

Under Section 78 of Queensland's *Transport Operations (Road Use Management) ACT 199*, unlicensed driving includes cases where:

- a person's driver licence has expired not more than 1 year before the offence was committed;
- a person's driver licence has expired not more than 1 year but less than 5 years before the offence was committed;
- a person's driver licence has expired more than 5 years before the offence was committed;
- a person's authority to drive in Queensland under their non-Queensland driver licence has been withdrawn because of residency considerations;
- a person's previous driver licence was cancelled because of a court disqualification but at the end of the disqualification period they did not obtain a further driver licence before driving;
- a person's driver licence had been surrendered;
- a person holds a driver licence but is not authorised to drive, or learn to drive, the particular class of vehicle;
- a person's driver licence has been cancelled because they are medically unfit to drive safely;
- a person's authority to drive in Queensland under their non-Queensland driver licence was suspended because they were medically unfit to drive safely;
- a person has never held a driver licence;
- a person was disqualified from holding or obtaining a driver licence because of unpaid fines;
- a person's authority to drive in Queensland under their non-Queensland driver licence was suspended because of unpaid fines;
- a person was disqualified from holding or obtaining a driver licence because of the accumulation of excess demerit points;
- a person's authority to drive in Queensland under their non-Queensland driver licence was suspended because of the accumulation of excess demerit points;
- a person was disqualified from holding or obtaining a driver licence under a court order.

## **APPENDIX B: SURVEY INFORMATION SHEET AND QUESTIONNAIRE**

Chief investigator: Mr Barry Watson  
Telephone: 3864 4955  
E-mail: b.watson@qut.edu.au



### ***Factors contributing to unlicensed driving***

### **Information sheet**

You are invited to take part in a survey about unlicensed and disqualified driving. If you agree to take part, you will be asked a range of questions about your driving and other aspects of your life.

The survey is completely anonymous. You will not be asked for your name and none of your answers will be passed onto either the Police or the Court.

The survey is voluntary and you are able to stop at any time if you feel uncomfortable about the questions. If you do find any of the questions distressing, please feel free to contact the QUT Counselling and Health Services, by phoning 3864 4539. They have been told about the survey and will provide you with counselling, free of charge.

The survey should take about 25 minutes to complete and you will be paid \$25 for taking part.

If you have any questions about the survey you can contact the Chief Investigator on the phone number given above. You may also contact the secretary of the QUT Research Human Ethics Committee by phoning 3864 2902, if you have any concerns.

Thank you.

## UNLICENSED DRIVER SURVEY

<i>We'll begin the interview now. The first few questions are just about you. I won't be able to identify you from this information, but it will help me to see if I'm talking to a wide variety of people.</i>		
1. Gender	Male.....1 Female.....2	<b>Circle - don't ask</b>
2. Could you look at Card A and tell me which age group you fall into?	17-20 .....1 21-25 .....2 26-29 .....3 30-39 .....4 40-49 .....5 50-59 .....6 60-69 .....7 70 or more.....8	<b>Show Card A</b>
3. What about your marital status, are you:	Single .....1 Married.....2 De facto/have a partner .....3 Divorced.....4 Widowed.....5 Separated.....6	<b>Read categories</b>
4. What is the highest level of education you have finished?	Primary.....1 Junior (Grade 10) .....2 Senior (Grade 12).....3 TAFE/Tech College/Apprenticeship .....4 CAE/University .....5 Other ( <i>Please Specify</i> .....).....6	<b><u>Don't</u> read categories</b>  <b>Code the highest level they've actually completed.</b>
5. Do you have a job at the moment?	Yes .....1 No.....2  If yes, what do you do? _____	<b>If more than one job - ask about the position in which they work the most hours.</b>
6. Could you look at Card B and tell me how much you earn in a year?	Less than \$10,000 .....1 \$11,000 – \$20,000 .....2 \$21,000 – \$30,000 .....3 \$31,000 – \$40,000 .....4 \$41,000 – \$50,000 .....5 \$51,000 – \$60,000 .....6 More than \$60,000.....7	<b>Show Card B</b>
7. How long, in total, have you been driving a car or riding a motorcycle, <b>with</b> or <b>without</b> a licence?		<b>Record months if less than 1 year</b>

Years _____ Months _____		
<p><i>In this next section I would like to ask you some questions about the unlicensed driving or disqualified driving charge that has brought you to court today.</i></p> <p>8. Were you charged with unlicensed driving or disqualified driving?</p> <p style="padding-left: 40px;">Unlicensed driving.....1</p> <p style="padding-left: 40px;">Disqualified driving .....2</p> <p style="padding-left: 40px;">When did the offence occur? _____ (Record date) <b>(If Unlicensed go to Qu.10)</b></p>		<p><b>After recording date of offence, go onto Qu.9 if charged with disqualified driving and Qu.10 if unlicensed</b></p>
<p>9. Why had you been disqualified from driving? (Record reason)</p> <p>_____</p> <p>What type of licence did you hold before you were disqualified?</p> <p style="padding-left: 40px;">Learner's licence.....1</p> <p style="padding-left: 40px;">Provisional licence.....2</p> <p style="padding-left: 40px;">Open licence .....3</p> <p style="padding-left: 40px;">Other (Please Specify _____) ...4</p> <p style="text-align: right;"><b>(Go to Qu.12)</b></p>		<p><b>Record reason and go to Qu.12</b></p>
<p>10. What was the reason for you being charged for unlicensed driving?</p> <p><b>Expired licence</b></p> <p style="padding-left: 40px;">Learner's licence had expired.....1</p> <p style="padding-left: 40px;">Provisional licence had expired.....2</p> <p style="padding-left: 40px;">Open licence had expired .....3</p> <p><b>Cancelled licence</b></p> <p style="padding-left: 40px;">Learner's licence cancelled for accumulation of demerit points ...4</p> <p style="padding-left: 40px;">Provisional licence cancelled for accumulation of demerit points 5</p> <p style="padding-left: 40px;">Open licence cancelled for accumulation of demerit points .....6</p> <p><b>Inappropriate class of licence</b></p> <p style="padding-left: 40px;">Riding motorcycle without motorcycle licence.....7</p> <p style="padding-left: 40px;">Riding motorcycle &gt;250ml with RE licence only .....8</p> <p style="padding-left: 40px;">Driving manual car with automatic licence only .....9</p> <p><b>Outside conditions of a special licence</b></p> <p style="padding-left: 40px;">Driving outside restrictions on licence .....10</p> <p><b>No licence</b></p> <p style="padding-left: 40px;">Don't currently hold a licence .....11</p> <p style="padding-left: 40px;">Never held a licence .....12</p> <p><b>Other</b> Other (Please Specify _____) ...13</p>		<p><b>Don't read categories</b></p> <p><b>Categorise response - probe if necessary</b></p>
<p>11. At the time you were caught, did you know that you were unlicensed?</p> <p style="padding-left: 40px;">Yes .....1</p> <p style="padding-left: 40px;">No .....2</p> <p style="padding-left: 40px;">Unsure .....3</p> <p style="padding-left: 40px;">If no/unsure: Why? _____</p> <p style="padding-left: 40px;">(Record reason) _____</p>		<p><b>Explore reasons e.g. change of address</b></p>
<p>12. When you were charged with unlicensed/disqualified driving, why were you stopped by the police?</p> <p style="padding-left: 40px;">Involved in a road crash .....1</p> <p style="padding-left: 40px;">Pulled over for a Random Breath Test (RBT) .....2</p> <p style="padding-left: 40px;">Caught for speeding .....3</p> <p style="padding-left: 40px;">Caught for another offence (Please Specify _____) 4</p> <p style="padding-left: 40px;">Pulled over for no particular reason.....5</p> <p style="padding-left: 40px;">Other (Please Specify _____).....6</p>		<p><b>Read for rest of questions as either unlicensed or disqualified, depending</b></p>

<p>Did the police check your licence at the time?</p> <p>Yes.....1 (Go to Qu.13)</p> <p>No.....2</p> <p>If no, how did the police find out you were unlicensed/disqualified? _____</p> <p>_____</p> <p>_____</p>	<p><b>on charge</b></p>
<p>13. When you were charged with unlicensed/disqualified driving, what was your reason for driving?</p> <p>Work related reasons .....1</p> <p>Family reasons .....2</p> <p>Social/recreation activities .....3</p> <p>Other (Please Specify _____) .....4</p>	<p><b>Read categories</b></p>
<p>14. When you were charged with unlicensed/disqualified driving, what type of vehicle were you driving?</p> <p>Car .....1</p> <p>Truck.....2</p> <p>Motorcycle.....3</p> <p>Bus .....4</p> <p>Other (Please Specify _____).....5</p> <p>Who owned the vehicle? _____</p>	<p><b>Record owner as 'Respondent' if owned by interviewee</b></p>
<p>15. Were you convicted of unlicensed/disqualified driving today?</p> <p>Yes .....1</p> <p>No .....2</p> <p>If yes: What penalty did you receive for driving while unlicensed/disqualified?</p> <p>Fine: _____ Disqualification (if applicable): _____</p> <p>(Record amount) (Record no. of months)</p> <p>If no: Why weren't you convicted?</p> <p>(Record reason) _____</p>	<p><b>Confirm conviction</b></p> <p><b>Record as adjourned where applicable</b></p>
<p>16. Did you know what the fine for unlicensed/disqualified driving was before you were caught?</p> <p>Yes.....1 (Go to Qu.17)</p> <p>No.....2</p> <p>Unsure.....3</p> <p>If no or unsure: Would you have still have driven while unlicensed/disqualified if you knew what the fine was?</p> <p>Yes.....1</p> <p>Yes, but less often.....2</p> <p>No.....3</p> <p>Unsure. ....4</p>	
<p>17. Were you charged/convicted of any other offences today?</p> <p>Yes.....1</p> <p>No.....2 (Go to Qu.18)</p> <p>If yes: What offences? _____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>What penalty did you receive? _____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p>	<p><b>Read as charged if matters adjourned today or convicted if finalised</b></p> <p><b>Record all offences and related</b></p>

	penalty
<p>18. Did you have any legal representation today (i.e. a solicitor)?</p> <p>Yes.....1 (Go to Qu.19)</p> <p>No.....2</p> <p>If no: Why? _____</p>	
<p>19. Did you tell your <b>family</b> that you had been charged with unlicensed/disqualified driving?</p> <p>Yes.....1</p> <p>No.....2</p> <p>If yes: How did they react? _____</p> <p>If no: Why? _____</p>	
<p>20. Did you tell your <b>friends</b> that you had been charged with unlicensed/disqualified driving?</p> <p>Yes.....1</p> <p>No.....2</p> <p>If yes: How did they react? _____</p> <p>If no: Why? _____</p>	
<p>21. Have you ever been convicted of unlicensed or disqualified driving in the past?</p> <p>Yes .....1</p> <p>No .....2 (Go to Q.22)</p> <p>If yes: How many times? _____</p> <p>What penalties did you receive (e.g. fines / community service)?</p> <p>_____</p> <p>_____</p>	
<p>22. Have you ever been convicted of any other driving relating offences in the past?</p> <p>Yes .....1</p> <p>No .....2 (Go to Q.23)</p> <p>If yes: What offences? _____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>What penalty did you receive? _____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p>	<p><b>Include offences that were dealt with by Traffic Offence Notice, as well as by Court</b></p>
<p><i>In this next section, I would like to ask some questions about the times you have driven while unlicensed/disqualified. If the participant has not had a previous conviction for unlicensed or disqualified driving, go directly to Question 25.</i></p>	
<p>23. Since you started driving, how long in total would you have driven either unlicensed or while disqualified?</p> <p>Years _____ Months _____ (Record amount of time)</p>	<p><b>For participants with a previous conviction</b></p>
<p>24. How long were you driving unlicensed/disqualified between your last conviction and when you were recently caught?</p> <p>Years _____ Months _____ (Record amount of time) Go to Qu.26</p>	



<p><b><i>For participants who have had no previous convictions for unlicensed/disqualified driving.</i></b></p> <p>25. Prior to getting caught by the Police, how long had you been driving unlicensed / disqualified?</p> <p>Years _____ Months _____ (<i>Record amount of time</i>)</p>	<p><b>For participants with <u>no</u> previous conviction</b></p>
<p><b><i>For all participants</i></b></p> <p>26. Prior to getting caught, how many times a week would you have driven while unlicensed/disqualified for <b>work-related</b> reasons? (Count going somewhere and returning home as different trips)</p> <p>Number of times _____ (<i>Record number of trips</i>)</p>	<p><b>Record actual number of trips, not range</b></p>
<p>27. How many times a week would you have driven while unlicensed/disqualified for <b>family or recreational</b> reasons? (Count going somewhere and returning home as different trips)</p> <p>Number of times _____ (<i>Record number of trips</i>)</p>	<p><b>Record actual number of trips, not range</b></p>
<p>28. After being caught by the police (the last time, for those with prior convictions), did you continue to drive unlicensed/disqualified up until the court date?</p> <p>Yes .....1 No .....2 (<b>Go to Qu.29</b>)</p> <p>If yes:</p> <p>For how many months? _____ (<i>Record amount</i>)</p> <p>How many times a week did you drive for <b>work-related</b> reasons? _____ (<i>Record no. trips</i>) (Count going somewhere and returning home as different trips)</p> <p>How many times a week did you drive for <b>family or recreational</b> reasons? _____ (<i>Record</i>) (Count going somewhere and returning home as different trips)</p>	
<p>29. While you were unlicensed/disqualified, did you need to drive as part of your job?</p> <p>Yes .....1 No. ....2</p>	
<p>30. While you were unlicensed/disqualified, were you able to get hold of a car or motorcycle when you needed to?</p> <p>Yes.....1 No.....2 (<b>Go to Q.31</b>)</p> <p>If yes: What type of vehicle(s)?                      Who owned the vehicle(s)?</p> <p>_____</p> <p>_____</p> <p>_____</p>	<p><b>Record owner as 'Respondent' if owned by interviewee</b></p>
<p>31. While you were unlicensed/disqualified, did you ever give lifts to other people?</p> <p>Yes.....1 No.....2 (<b>Go to Q.32</b>)</p> <p>If yes: Were your passengers generally aware that you were unlicensed/disqualified?</p> <p>Yes.....1 No.....2 (<b>Go to Q.32</b>)</p>	

Who were your passengers? _____ _____																																																									
32. While you were unlicensed/disqualified, did you still have your photographic driver's licence? Yes.....1 No.....2 (Go to Q.33)  If Yes: Why? _____																																																									
33. Could you use Card C to answer the next questions. Before you got caught for unlicensed/disqualified driving, how likely did you think the following things were? Remember you can give an answer from '1' Very unlikely to '7' Very likely. <table border="0" style="width: 100%; text-align: center;"> <tr> <td></td> <td>Very unlikely</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>Very likely</td> </tr> <tr> <td>Getting caught for unlicensed/disqualified driving.....</td> <td>1</td> <td>2</td> <td>3</td> <td>4</td> <td>5</td> <td>6</td> <td>7</td> </tr> <tr> <td>Getting Random Breath Tested .....</td> <td>1</td> <td>2</td> <td>3</td> <td>4</td> <td>5</td> <td>6</td> <td>7</td> </tr> <tr> <td>Being involved in a car crash .....</td> <td>1</td> <td>2</td> <td>3</td> <td>4</td> <td>5</td> <td>6</td> <td>7</td> </tr> <tr> <td>Getting caught if you were not wearing a seat belt .....</td> <td>1</td> <td>2</td> <td>3</td> <td>4</td> <td>5</td> <td>6</td> <td>7</td> </tr> <tr> <td>Getting caught if you were speeding by a speed camera.....</td> <td>1</td> <td>2</td> <td>3</td> <td>4</td> <td>5</td> <td>6</td> <td>7</td> </tr> <tr> <td>Getting caught if you were speeding by radar .....</td> <td>1</td> <td>2</td> <td>3</td> <td>4</td> <td>5</td> <td>6</td> <td>7</td> </tr> </table>		Very unlikely						Very likely	Getting caught for unlicensed/disqualified driving.....	1	2	3	4	5	6	7	Getting Random Breath Tested .....	1	2	3	4	5	6	7	Being involved in a car crash .....	1	2	3	4	5	6	7	Getting caught if you were not wearing a seat belt .....	1	2	3	4	5	6	7	Getting caught if you were speeding by a speed camera.....	1	2	3	4	5	6	7	Getting caught if you were speeding by radar .....	1	2	3	4	5	6	7	<b>Show Card C</b>
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34. Using Card C again, if you were to drive unlicensed/disqualified in the future, how likely do you <b>now</b> think your chances of getting caught are? <table border="0" style="width: 100%; text-align: center;"> <tr> <td></td> <td>Very unlikely</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>Very likely</td> </tr> <tr> <td>.....</td> <td>1</td> <td>2</td> <td>3</td> <td>4</td> <td>5</td> <td>6</td> <td>7</td> </tr> </table>		Very unlikely						Very likely	.....	1	2	3	4	5	6	7																																									
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<p><i>The next two questions are for those participants who had held a Learner's Licence immediately prior to driving unlicensed/disqualified. In other words, only ask for participants who were unlicensed because their Learner's Licence had expired; it had been cancelled for accumulation of points, or they had been disqualified while on their Learners. Go to question 37 for all other participants.</i></p> 35. Why did you only hold a Learner's Licence at the time you became unlicensed/disqualified? _____ _____ _____ _____																																																									
36. Have you ever attempted the driving test to obtain a Provisional Licence? Yes.....1 No..... (Go to Q.37)  If Yes: What happened (each time)? _____ _____ _____																																																									

<p><i>The next questions relate to your driving while you were unlicensed/disqualified (the most recent time for those with previous convictions).</i></p>						<p><b>Explain that the questions relate to the most recent period of unlicensed driving for those with previous convictions. Show Card D</b></p>																																																														
37.	<p>Could you look at Card D to answer the next two questions. While you were driving unlicensed/ disqualified, how often did you drive at 10 km/hr or more over the speed limit?</p> <table border="0"> <tr> <td>Always</td> <td>Nearly always (90%)</td> <td>Most occasions</td> <td>Sometimes</td> <td>Just occasionally (20% or less)</td> <td>Never</td> </tr> <tr> <td>1</td> <td>2</td> <td>3</td> <td>4</td> <td>5</td> <td>6</td> </tr> </table>						Always	Nearly always (90%)	Most occasions	Sometimes	Just occasionally (20% or less)	Never	1	2	3	4	5	6																																																		
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38.	<p>Looking at Card D again, while you were driving unlicensed/disqualified how often did you wear a seat belt?</p> <table border="0"> <tr> <td>Always</td> <td>Nearly always (90%)</td> <td>Most occasions</td> <td>Sometimes</td> <td>Just occasionally (20% or less)</td> <td>Never</td> </tr> <tr> <td>1</td> <td>2</td> <td>3</td> <td>4</td> <td>5</td> <td>6</td> </tr> </table>					Always	Nearly always (90%)	Most occasions	Sometimes	Just occasionally (20% or less)	Never	1	2	3	4	5	6																																																			
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39.	<p>Looking at Card E, which of the statements best describes your drink driving behaviour while you were driving unlicensed/disqualified?</p> <p>I didn't drink at any time .....1          If I was driving, I didn't drink .....2          If I was driving, I'd restrict what I drank .....3          If I was driving, I did not restrict what I drank .....4</p>					<p><b>Show Card E</b></p>																																																														
40.	<p>While you were unlicensed/disqualified, did you ever drive when you thought you may have been over the legal alcohol limit?</p> <p>Yes.....1          No..... 2 <b>(Go to Q.41)</b></p> <p>If Yes: How many times? _____ (<i>Record number of occasions</i>)</p>																																																																			
41.	<p>Using Card F, could you tell me if you were more careful than usual doing the following things when you were driving unlicensed/disqualified? Remember you can give an answer from '1' Much less careful to '7' Much more careful.</p> <table border="0"> <tr> <td></td> <td colspan="3">Much less careful</td> <td colspan="3">Much more careful</td> </tr> <tr> <td colspan="7"><i>Were you more careful:</i></td> </tr> <tr> <td>Obeying the speed limit.....</td> <td>1</td> <td>2</td> <td>3</td> <td>4</td> <td>5</td> <td>6</td> <td>7</td> </tr> <tr> <td>Obeying traffic lights.....</td> <td>1</td> <td>2</td> <td>3</td> <td>4</td> <td>5</td> <td>6</td> <td>7</td> </tr> <tr> <td>Obeying Stop and Give Way signs.....</td> <td>1</td> <td>2</td> <td>3</td> <td>4</td> <td>5</td> <td>6</td> <td>7</td> </tr> <tr> <td>Obeying drink driving laws .....</td> <td>1</td> <td>2</td> <td>3</td> <td>4</td> <td>5</td> <td>6</td> <td>7</td> </tr> <tr> <td>Obeying seat belt laws.....</td> <td>1</td> <td>2</td> <td>3</td> <td>4</td> <td>5</td> <td>6</td> <td>7</td> </tr> <tr> <td>Obeying other traffic rules.....</td> <td>1</td> <td>2</td> <td>3</td> <td>4</td> <td>5</td> <td>6</td> <td>7</td> </tr> </table>						Much less careful			Much more careful			<i>Were you more careful:</i>							Obeying the speed limit.....	1	2	3	4	5	6	7	Obeying traffic lights.....	1	2	3	4	5	6	7	Obeying Stop and Give Way signs.....	1	2	3	4	5	6	7	Obeying drink driving laws .....	1	2	3	4	5	6	7	Obeying seat belt laws.....	1	2	3	4	5	6	7	Obeying other traffic rules.....	1	2	3	4	5	6	7	<p><b>Show Card F</b></p>
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42.	<p>While you were unlicensed/disqualified, did you limit or alter your driving in anyway - for example, in terms of when or where you drove?</p> <p>Yes.....1          No..... 2 <b>(Go to Q.43)</b></p>																																																																			

<p>If Yes: In what ways?</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p>	
<p>43. Using Card G, could you tell me where you did most of your driving while you were unlicensed/disqualified?</p> <p>Only back roads .....1</p> <p>Mainly back roads.....2</p> <p>Both back roads and main roads .....3</p> <p>Mainly main roads .....4</p> <p>Only main roads .....5</p> <p>Other (<i>Please Specify</i>.....).....6</p>	<p><b>Show Card G</b></p>
<p>44. While you were driving unlicensed/disqualified (the last time), were you random breath tested by the Police?</p> <p>Yes.....1</p> <p>No.....2 (<b>Go to Q.45</b>)</p> <p>If yes: How many times? _____</p> <p>Was your licence checked on each occasion?</p> <p>Yes.....1</p> <p>No.....2</p> <p>If no, how many times wasn't it checked? _____</p> <p>What happened on the times it was checked? _____</p> <p>_____</p>	<p><b>Only read “the last time” for participants with previous convictions</b></p>
<p>45. While you were driving unlicensed/disqualified (the last time), were you pulled over for speeding by the Police?</p> <p>Yes.....1</p> <p>No.....2 (<b>Go to Q.46</b>)</p> <p>If yes: How many times? _____</p> <p>Was your licence checked on each occasion?</p> <p>Yes.....1</p> <p>No.....2</p> <p>If no, how many times wasn't it checked? _____</p> <p>What happened on the times it was checked? _____</p> <p>_____</p> <p>_____</p>	<p><b>Only read “the last time” for participants with previous convictions</b></p>
<p>46. While you were driving unlicensed/disqualified (the last time), were you pulled over by the Police for another offence?</p> <p>Yes.....1</p> <p>No.....2 (<b>Go to Q.47</b>)</p> <p>If yes: How many times? _____</p> <p>Was your licence checked on each occasion?</p> <p>Yes.....1</p>	<p><b>Only read “the last time” for participants with previous convictions</b></p>

<p>No.....2</p> <p>If no, how many times wasn't it checked? _____</p> <p>What happened on the times it was checked? _____</p> <p>_____</p> <p>_____</p>	
<p>47. While you were driving unlicensed/disqualified (the last time), were you involved in a traffic crash?</p> <p>Yes.....1</p> <p>No.....2 (Go to Q.48)</p> <p>If yes: How many times? _____</p> <p>Was your licence checked on each occasion?</p> <p>Yes.....1</p> <p>No.....2</p> <p>If no, how many times wasn't it checked? _____</p> <p>What happened on the times it was checked? _____</p> <p>_____</p> <p>_____</p>	<p><b>Only read "the last time" for participants with previous convictions</b></p>
<p>48. While you were driving unlicensed/disqualified (the last time), did you get caught for speeding by a speed camera?</p> <p>Yes.....1</p> <p>No.....2 (Go to Q.49)</p> <p>If yes: How many times? _____</p> <p>What happened as a result of the tickets? _____</p> <p>_____</p> <p>_____</p>	<p><b>Only read "the last time" for participants with previous convictions</b></p>
<p><i>In this section, I would like to ask you some general questions about other people's driving?</i></p>	
<p>49. Has any of your family or friends ever driven while unlicensed or disqualified?</p> <p>Yes.....1</p> <p>No .....2 (Go to Q.50)</p> <p>If yes: How many? _____</p> <p>How many of these people have been convicted of unlicensed or disqualified driving? _____</p> <p>What penalties did they receive (e.g. fines / community service)?</p> <p>_____</p> <p>_____</p> <p>How many of your family and friends currently drive unlicensed or disqualified? _____</p>	
<p>50. Do you know of anyone else who has driven while unlicensed or disqualified at sometime?</p> <p>Yes.....1</p> <p>No.....2 (Go to Q.51)</p> <p>If yes: How many? _____</p>	

<p>How many of these people have been convicted of unlicensed or disqualified driving? _____</p> <p>What penalties did they receive (e.g. fines / community service)? _____</p> <p>How many of these people currently drive unlicensed or disqualified? _____</p>	
<p>51. Do you know of anyone who was pulled over by the police when they were driving unlicensed or disqualified and didn't have their licence checked?</p> <p>Yes .....1</p> <p>No.....2 (<b>Go to Q.52</b>)</p> <p>If yes: What were the circumstances? _____</p> <p>_____</p> <p>_____</p> <p>_____</p>	

52. The following statements are about unlicensed/disqualified driving. Using Card H, could you tell me how much you agree or disagree with each statement? Remember you can give an answer from '1' Strongly Disagree to '7' Strongly Agree. There is no right or wrong answer.								Show Card H
		Strongly disagree					Strongly agree	
The penalties for unlicensed/disqualified driving are very tough .....	1	2	3	4	5	6	7	Emphasise bolded words
It's OK to drive unlicensed/disqualified as long as you don't get caught .....	1	2	3	4	5	6	7	
Everybody drives unlicensed once in a while .	1	2	3	4	5	6	7	
Your <b>family</b> would think you were really stupid for driving unlicensed/disqualified.....	1	2	3	4	5	6	7	
Your <b>friends</b> would think you were really stupid for driving unlicensed/disqualified.....	1	2	3	4	5	6	7	
There is no excuse for unlicensed/disqualified driving .....	1	2	3	4	5	6	7	
Your <b>family</b> doesn't care about unlicensed/disqualified, as long as you don't get caught...	1	2	3	4	5	6	7	
Your <b>friends</b> don't care about unlicensed/disqualified, as long as you don't get caught...	1	2	3	4	5	6	7	
You can sometimes avoid getting punished if you get caught for unlicensed/disqualified driving	1	2	3	4	5	6	7	
The Police spend too much time hassling unlicensed/disqualified drivers .....	1	2	3	4	5	6	7	
Unlicensed/disqualified drivers are generally more careful on the road.....	1	2	3	4	5	6	7	
We need tougher penalties for unlicensed/disqualified driving.....	1	2	3	4	5	6	7	
Most of your <b>family</b> think it's OK to drive unlicensed or disqualified.....	1	2	3	4	5	6	7	
Most of your <b>friends</b> think it's OK to drive unlicensed or disqualified.....	1	2	3	4	5	6	7	
You are likely to be punished quickly if you get caught for unlicensed/disqualified driving .....	1	2	3	4	5	6	7	
You were lucky not to have got caught earlier for driving unlicensed/disqualified.....	1	2	3	4	5	6	7	

You feel guilty about driving unlicensed/ disqualified .....	1	2	3	4	5	6	7	
The chances of being caught for unlicensed/ disqualified driving are over-rated .....	1	2	3	4	5	6	7	
It's OK to drive unlicensed/disqualified as long as you don't do it too much .....	1	2	3	4	5	6	7	
Unlicensed/disqualified driving gives you the freedom to lead a normal life .....	1	2	3	4	5	6	7	
Most of your <b>family</b> would praise <b>you</b> for driving unlicensed/disqualified.....	1	2	3	4	5	6	7	
Most of your <b>friends</b> would praise <b>you</b> for driving unlicensed/disqualified.....	1	2	3	4	5	6	7	
Unlicensed/disqualified driving gives you a thrill .....	1	2	3	4	5	6	7	
It would be easy for you to obtain a valid driver's licence in the future .....	1	2	3	4	5	6	7	
Unlicensed/disqualified driving gives you a feeling of power.....	1	2	3	4	5	6	7	
Unlicensed/disqualified driving is generally not worth the risks .....	1	2	3	4	5	6	7	
You wouldn't like your workmates to know you had been driving without a licence .....	1	2	3	4	5	6	7	
Unlicensed/disqualified driving generally makes you feel good.....	1	2	3	4	5	6	7	
Unlicensed/disqualified driving is potentially dangerous.....	1	2	3	4	5	6	7	
Unlicensed/disqualified driving gives you a feeling of being in control .....	1	2	3	4	5	6	7	
Unlicensed/disqualified driving makes you feel worried.....	1	2	3	4	5	6	7	
You could lose your job if your boss found out that you had been driving without a licence ....	1	2	3	4	5	6	7	
Overall, more good things are likely to come from unlicensed/disqualified driving than bad	1	2	3	4	5	6	7	
<p>53. The following statements are about driving in general. Using Card H, could you tell me how much you agree or disagree with each statement? Remember you can give an answer from '1' Strongly disagree to '7' Strongly agree.</p> <p style="text-align: center;">Strongly disagree <span style="float: right;">Strongly agree</span></p> <p>The Police generally check driver's licences</p>								<p><b>Show Card H</b></p>



when they conduct RBT ..... 1	2	3	4	5	6	7	
It is really important to have a valid driver's licence..... 1	2	3	4	5	6	7	
It costs too much money to obtain a driver's licence..... 1	2	3	4	5	6	7	
You find it possible to do most things by using public transport..... 1	2	3	4	5	6	7	
You can generally get a lift from family or friends when you need one ..... 1	2	3	4	5	6	7	
The whole process of getting and renewing a driver's licence is a hassle ..... 1	2	3	4	5	6	7	
The Police generally check driver's licences when they pull someone over ..... 1	2	3	4	5	6	7	
There is not much public transport available in the area where you live..... 1	2	3	4	5	6	7	
You can't always rely on your family or friends for lifts ..... 1	2	3	4	5	6	7	
It is easy to get out of a speed camera ticket ... 1	2	3	4	5	6	7	
It costs too much to use taxis regularly ..... 1	2	3	4	5	6	7	
You could get by without driving if you really had to ..... 1	2	3	4	5	6	7	
<p>54. The following statements are about things you like to do in your general life. For each of the following pairs of statements, please choose the one that most describes your likes or the way you feel. We are interested only in your likes or feelings, not in how others feel or how one is supposed to feel. There is no right or wrong answer as with the previous questions.</p> <p>a. I often wish I could be a mountain climber ..... 1</p> <p>b. I can't understand people who risk their necks climbing mountains..... 2</p> <p>a. A sensible person avoids activities that are dangerous ..... 1</p> <p>b. I sometimes like to do things which are a little frightening..... 2</p> <p>a. I would like to take up the sport of water skiing ..... 1</p> <p>b. I would not like to take up water skiing ..... 2</p> <p>a. I would like to try surfboard riding..... 1</p> <p>b. I would not like to try surfboard riding ..... 2</p> <p>a. I would not like to learn to fly an airplane..... 1</p> <p>b. I would like to learn to fly an airplane..... 2</p> <p>a. I prefer the surface of the water to the depths..... 1</p> <p>b. I would like to go scuba diving ..... 2</p> <p>a. I would like to try parachute jumping..... 1</p> <p>b. I would never want to try jumping out of a plane with or without a parachute..... 2</p>							<p><b>Circle the statement in each pair selected by the respondent</b></p>

<p>a. I would like to dive off the high board ..... 1</p> <p>b. I don't like the feeling I get standing on the high board or I don't go near it at all ..... 2</p> <p>a. Sailing long distances in small sailing crafts is foolish ..... 1</p> <p>b. I would like to sail a long distance in a small but seaworthy sailing craft ..... 2</p> <p>a. Skiing fast down a high mountain slope is a good way to end up on crutches..... 1</p> <p>b. I think I would enjoy the sensations of skiing very fast down a high mountain slope..... 2</p>																																											
<p><i>In this next section, I would like to ask some general questions about your drinking behaviour.</i></p> <p>55. Looking at Card I, how often do you have a drink containing alcohol?</p> <p>Never.....1 (Go to Q.60)</p> <p>Monthly or less .....2</p> <p>2 to 4 times a month.....3</p> <p>2 to 3 times a week .....4</p> <p>4 or more times a week .....5</p>	<p><b>Show Card I</b></p>																																										
<p><i>Can you look at Card J. This tells you what a standard drink is. It basically just says that a standard drink is a pot of beer, or a nip of spirits, or a glass of wine, or a can of light beer, or a glass of port. I would now like to ask you some personal questions about your drinking and would appreciate your honesty.</i></p> <p>56. Looking at Card J, how many 'standard' drinks containing alcohol do you have on a typical day when you drink?</p> <p>1 or 2 .....1</p> <p>3 or 4 .....2</p> <p>5 or 6 .....3</p> <p>7 to 9 .....4</p> <p>10 or more .....5</p>	<p><b>Show Card J</b></p>																																										
<p>57. For the next few questions I would like you to use Card K. This card has answer categories ranging from never to less than monthly, monthly, weekly, and daily or almost daily.</p> <table border="0" style="width: 100%;"> <thead> <tr> <th></th> <th style="text-align: center;">Never</th> <th style="text-align: center;">Less Than Monthly</th> <th style="text-align: center;">Monthly</th> <th style="text-align: center;">Weekly</th> <th style="text-align: center;">Daily Or Almost Daily</th> </tr> </thead> <tbody> <tr> <td>How often do you have six or more drinks on one occasion?..... 1</td> <td style="text-align: center;">1</td> <td style="text-align: center;">2</td> <td style="text-align: center;">3</td> <td style="text-align: center;">4</td> <td style="text-align: center;">5</td> </tr> <tr> <td>How often during the last year have you found that you were not able to stop drinking once you had started? ..... 1</td> <td style="text-align: center;">1</td> <td style="text-align: center;">2</td> <td style="text-align: center;">3</td> <td style="text-align: center;">4</td> <td style="text-align: center;">5</td> </tr> <tr> <td>How often during the last year have you failed to do what was normally expected from you because of drinking? ..... 1</td> <td style="text-align: center;">1</td> <td style="text-align: center;">2</td> <td style="text-align: center;">3</td> <td style="text-align: center;">4</td> <td style="text-align: center;">5</td> </tr> <tr> <td>How often during the last year have you needed a drink in the morning to get yourself going after a heavy drinking session?..... 1</td> <td style="text-align: center;">1</td> <td style="text-align: center;">2</td> <td style="text-align: center;">3</td> <td style="text-align: center;">4</td> <td style="text-align: center;">5</td> </tr> <tr> <td>How often during the last year have you had a feeling of guilt or remorse after drinking?..... 1</td> <td style="text-align: center;">1</td> <td style="text-align: center;">2</td> <td style="text-align: center;">3</td> <td style="text-align: center;">4</td> <td style="text-align: center;">5</td> </tr> <tr> <td>How often during the last year have you</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>		Never	Less Than Monthly	Monthly	Weekly	Daily Or Almost Daily	How often do you have six or more drinks on one occasion?..... 1	1	2	3	4	5	How often during the last year have you found that you were not able to stop drinking once you had started? ..... 1	1	2	3	4	5	How often during the last year have you failed to do what was normally expected from you because of drinking? ..... 1	1	2	3	4	5	How often during the last year have you needed a drink in the morning to get yourself going after a heavy drinking session?..... 1	1	2	3	4	5	How often during the last year have you had a feeling of guilt or remorse after drinking?..... 1	1	2	3	4	5	How often during the last year have you						<p><b>Show Card K</b></p>
	Never	Less Than Monthly	Monthly	Weekly	Daily Or Almost Daily																																						
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Record the date of interview: \_\_\_\_\_

## **APPENDIX C: SUMMARY OF SCALES USED IN ANALYSES**

### **B1. Cautiousness while driving scale**

**Items:** . . . *were more careful than usual doing the following things when you were driving unlicensed/disqualified?* (Measured on 7-point Likert scale)

Obeying the speed limit  
Obeying traffic lights  
Obeying Stop and Give Way signs  
Obeying drink driving laws  
Obeying seat belt laws  
Obeying other traffic rules

Cronbach's alpha = .87

### **B2. Availability of alternative transport scale**

**Items:** . . . *how much do you agree or disagree with each statement?* (Measured on 7-point Likert scale)

You find it possible to do most things by using public transport (reverse scored)  
You can generally get a lift from family or friends when you need one (reverse scored)  
There is not much public transport available in the area where you live  
You can't always rely on your family or friends for lifts  
You could get by without driving if you really had to

Cronbach's alpha = .66

### **B3. Attitudes to unlicensed driving scale**

**Items:** . . . *how much do you agree or disagree with each statement?* (Measured on 7-point Likert scale)

The police spend too much time hassling unlicensed/disqualified drivers  
Unlicensed/disqualified driving gives you the freedom to lead a normal life  
It costs too much money to obtain a driver's licence  
The whole process of getting and renewing a driver's licence is a hassle  
Everybody drives unlicensed once in a while  
It's OK to drive unlicensed/disqualified as long as you don't get caught  
It's OK to drive unlicensed/disqualified as long as you don't do it too much  
There is no excuse for unlicensed/disqualified driving (reversed scored)  
We need tougher penalties for unlicensed/disqualified driving (reversed scored)  
Unlicensed/disqualified driving is potentially dangerous (reversed scored)  
Unlicensed/disqualified driving is generally not worth the risks (reversed scored)  
It is really important to have a valid driver's licence (reversed scored)

Cronbach's alpha = .74

**B4. Differential association (normative dimension) scale**

**Items:** . . . *how much do you agree or disagree with each statement? (Measured on 7-point Likert scale)*

Most of your family think it's OK to drive unlicensed/disqualified  
Most of your friends think it's OK to drive unlicensed/disqualified  
Your family doesn't care about unlicensed/disqualified, as long as you don't get caught  
Your friends don't care about unlicensed/disqualified, as long as you don't get caught

Cronbach's alpha = .76

**B5. Rewards for unlicensed driving scale**

**Items:** . . . *how much do you agree or disagree with each statement? (Measured on 7-point Likert scale)*

Most of your **family** would praise **you** for driving unlicensed/disqualified  
Most of your **friends** would praise **you** for driving unlicensed/disqualified  
Unlicensed/disqualified driving gives you the freedom to lead a normal life  
Unlicensed/disqualified driving gives you a thrill  
Unlicensed/disqualified driving gives you a feeling of power  
Unlicensed/disqualified driving gives you a feeling of being in control  
Unlicensed/disqualified driving generally makes you feel good  
Overall, more good things are likely come from unlicensed/disqualified driving than bad

Cronbach's alpha = .74

**B6. Punishments for unlicensed driving scale**

**Items:** . . . *how much do you agree or disagree with each statement? (Measured on 7-point Likert scale)*

Your family would think you were really stupid for driving unlicensed/disqualified  
Your friends would think you were really stupid for driving unlicensed/disqualified  
You wouldn't like your workmates to know you had been driving without a licence  
You could lose your job if your boss found out that you had been driving without a licence  
Unlicensed/disqualified driving is generally not worth the risks  
You feel guilty about driving unlicensed/disqualified  
Unlicensed/disqualified driving makes you feel worried  
Unlicensed driving is potentially dangerous

Cronbach's alpha = .68

**B7. Thrill and Adventure subscale of Sensation Seeking Scale (Form V)**

**Item:** *For each of the following pairs of statements, please choose the one that most describes your likes or the way you feel. (Sensation seeking option in italic)*

- a. *I often wish I could be a mountain climber*
- b. I can't understand people who risk their necks climbing mountains
- a. A sensible person avoids activities that are dangerous
- b. *I sometimes like to do things which are a little frightening*
- a. *I would like to take up the sport of water skiing*
- b. I would not like to take up water skiing
- a. *I would like to try surfboard riding*
- b. I would not like to try surfboard riding
- a. I would not like to learn to fly an airplane
- b. *I would like to learn to fly an airplane*
- a. I prefer the surface of the water to the depths
- b. *I would like to go scuba diving*
- a. *I would like to try parachute jumping*
- b. I would never want to try jumping out of a plane with or without a parachute
- a. *I would like to dive off the high board*
- b. I don't like the feeling I get standing on the high board or I don't go near it at all
- a. Sailing long distances in small sailing crafts is foolish
- b. *I would like to sail a long distance in a small but seaworthy sailing craft*
- a. Skiing fast down a high mountain slope is a good way to end up on crutches
- b. *I think I would enjoy the sensations of skiing very fast down a high mountain slope*

Cronbach's alpha = .71

**APPENDIX D:**  
**SUPPLEMENTARY TABLES**



**Table A1: Standard multiple regression of socio-demographic variables on frequency of unlicensed driving (n=304)**

Variables	Mean	Std. dev	<i>B</i>	Std. error	$\beta$	$sr^2$	$R^2$	$Adj R^2$
Frequency of unlicensed driving <sup>1</sup>	.99	.47						
Gender	.84	.37	-.02	.07	-.01			
Age	26.71	7.57	-.00	.00	-.05			
Marital status	1.22	.42	.01	.06	-.05			
Educational level	1.54	.50	.13*	.06	.13	.01		
Needed to drive for work when unlicensed	.42	.49	.25***	.06	.25	.06		
Employed at the time of court hearing	.65	.48	.01	.07	.01			
Annual income	23230	15281	.00	.00	.06			
Prior criminal conviction	.38	.49	.16**	.06	.16	.02		
							.11***	.09

1. Logarithmically transformed

\*  $p < .05$  \*\*  $p < .01$  \*\*\*  $p < .001$  Unique variability = .09; shared variability = .02

**Table A2: Standard multiple regression of facilitating factors on frequency of unlicensed driving (n=299)**

Variables	Mean	Std. dev	<i>B</i>	Std. error	$\beta$	$sr^2$	$R^2$	$Adj R^2$
Frequency of unlicensed driving <sup>1</sup>	.99	.47						
Unaware of being unlicensed	1.32	.47	.07	.06	.07			
Able to access vehicle	.96	.19	.28*	.14	.11	.01		
Owned a vehicle	.63	.48	.07	.06	.07			
Still had a photo licence	.49	.50	.14*	.06	.15	.02		
Lack of alternative transport	21.21	7.15	.01***	.00	.22	.05		
							.13***	.11

1. Logarithmically transformed

\*  $p < .05$  \*\*  $p < .01$  \*\*\*  $p < .001$  Unique variability = .08; shared variability = .05

**Table A3: Standard multiple regression of deterrence factors on frequency of unlicensed driving (n=292)**

Variables	Mean	Std. dev	<i>B</i>	Std. error	$\beta$	$sr^2$	$R^2$	$Adj R^2$
Frequency of unlicensed driving <sup>1</sup>	.97	.47						
Perceived risk of apprehension (prior to detection)	3.33	1.83	-.03*	.02	-.11	.01		
Knew fine for unlicensed driving	.14	.34	-.03	.08	-.03			
Perceived severity of punishment	4.55	1.84	-.02	.02	-.06			
Perceived certainty of punishment	5.37	1.92	.00	.01	.01			
Perceived swiftness of punishment	5.17	1.79	-.02	.02	-.06			
Prior conviction for unlicensed driving	.39	.49	-.02	.06	-.02			
Exposure to enforcement	.26	.44	-.02	.07	-.02			
Punishment avoidance	.37	.48	.29***	.06	.30	.07		
Vicarious exposure to punishment	.29	.45	.01	.06	.08			
Vicarious exposure to punishment avoidance	.36	.48	-.01	.06	-.01			
							.12***	.09

1. Logarithmically transformed

\*  $p < .05$  \*\*  $p < .01$  \*\*\*  $p < .001$  Unique variability = .08; shared variability = .04

**Table A4: Standard multiple regression of social learning factors on frequency of unlicensed driving (n=299)**

Variables	Mean	Std. dev	<i>B</i>	Std. error	$\beta$	$sr^2$	$R^2$	$Adj R^2$
Frequency of unlicensed driving <sup>1</sup>	.98	.47						
Total unlicensed driving models	4.41	6.02	-.00	.01	-.02			
Attitudes to unlicensed driving	37.63	12.06	-.00	.00	-.06			
Differential association	10.59	5.58	.01	.01	.10			
Balance of reinforcement	-24.65	13.32	.00	.00	.13			
							.03	.01

1. Logarithmically transformed

\*  $p < .05$  \*\*  $p < .01$  \*\*\*  $p < .001$  Unique variability = .00; shared variability = .03

**Table A5: Logistic regression analysis of continued driving after detection as a function of socio-demographic variables (n=304)**

Variables	<i>B</i>	Std. error	Wald test	Odds Ratio	95% CI for Odds ratio	
					Upper	Lower
Gender	-.18	.36	.26	.83	.41	1.69
Age	-.05	.02	5.48**	.95	.92	.99
Marital status	-.45	.34	1.76	.64	.33	1.24
Educational level	-.17	.28	.35	.85	.49	1.47
Needed to drive for work when unlicensed	.66	.28	5.46**	1.94	1.11	3.38
Employed at the time of court hearing	-.79	.33	5.74**	.46	.24	.87
Annual income	.00	.00	.20	1.00	1.00	1.00
Prior criminal conviction	-.04	.29	.02	.96	.54	1.68

Full model vs constant-only model:  $\chi^2(8,304) = 17.64, p < .05$ ; Nagelkerke  $R^2 = .08$

\*  $p < .05$  \*\*  $p < .01$  \*\*\*  $p < .001$

**Table A6: Logistic regression analysis of continued driving after detection as a function of facilitating factors (n=269)**

Variables	<i>B</i>	Std. error	Wald test	Odds Ratio	95% CI for Odds ratio	
					Upper	Lower
Unaware of being unlicensed	-.36	.32	1.29	.70	.37	1.30
Able to access vehicle	1.86	1.07	3.00	6.43	.78	52.82
Owned a vehicle	-.26	.27	.90	.77	.45	1.32
Still had a photo licence	-.27	.29	.86	.76	.43	1.35
Lack of alternative transport	.06	.02	9.50**	1.06	1.02	1.10

Full model vs constant-only model:  $\chi^2(5,299) = 17.48, p < .01$ ; Nagelkerke  $R^2 = .08$

\*  $p < .05$  \*\*  $p < .01$  \*\*\*  $p < .001$

**Table A7: Logistic regression analysis of continued driving after detection as a function of deterrence factors (n=294)**

Variables	<i>B</i>	Std. error	Wald test	Odds Ratio	95% CI for Odds ratio	
					Upper	Lower
Perceived risk of apprehension (after detection)	-.14	.07	4.49*	.87	.76	.99
Knew fine for unlicensed driving	-.35	.42	.73	.70	.31	1.58
Perceived severity of punishment	.09	.08	1.31	1.09	.94	1.27
Perceived certainty of punishment	-.13	.07	3.31	.88	.77	1.01
Perceived swiftness of punishment	-.02	.08	.05	.98	.84	1.15
Prior conviction for unlicensed driving	.15	.29	.28	1.16	.66	2.05
Exposure to enforcement	.49	.35	2.00	1.64	.83	3.25
Punishment avoidance	.47	.32	2.14	1.60	.85	3.00
Vicarious exposure to punishment	.79	.30	6.99**	2.20	1.23	3.93
Vicarious exposure to punishment avoidance	.18	.29	.39	1.20	.68	2.10

Full model vs constant-only model:  $\chi^2(10,294) = 25.40, p < .01$ ; Nagelkerke  $R^2 = .12$

\*  $p < .05$  \*\*  $p < .01$  \*\*\*  $p < .001$

**Table A8: Logistic regression analysis of continued driving after detection as a function of social learning factors (n=299)**

Variables	<i>B</i>	Std. error	Wald test	Odds Ratio	95% CI for Odds ratio	
					Upper	Lower
Total unlicensed driving models	.00	.02	.02	1.00	.96	1.05
Attitudes to unlicensed driving	.02	.02	1.13	1.02	.99	1.05
Differential association	.07	.03	5.72*	1.08	1.01	1.14
Balance of reinforcement	.02	.01	1.68	1.02	.99	1.05

Full model vs constant-only model:  $\chi^2(4,299) = 31.88, p < .001$ ; Nagelkerke  $R^2 = .14$

\*  $p < .05$  \*\*  $p < .01$  \*\*\*  $p < .001$

**Table A9: Standard multiple regression of socio-demographic variables on intention to drive unlicensed in the future (n=305)**

Variables	Mean	Std. dev	<i>B</i>	Std. error	$\beta$	$sr^2$	$R^2$	$Adj R^2$
Intention to drive unlicensed in future <sup>1</sup>	.68	.77						
Gender	.84	.37	.17	.12	.08			
Age	26.77	7.62	-.01	.01	-.11			
Marital status	1.22	.41	-.28**	.11	-.15	.02		
Educational level	1.54	.50	-.08	.10	-.05			
Needed to drive for work when unlicensed	.42	.49	.09	.09	.06			
Employed at the time of court hearing	.65	.48	.01	.11	.04			
Annual income	23238	15256	.00	.00	.00			
Prior criminal conviction	.39	.49	.16	.10	.07			
							.06*	.04

1. Logarithmically transformed

\*  $p < .05$  \*\*  $p \leq .01$  \*\*\*  $p < .001$  Unique variability = .02; shared variability = .04

**Table A10: Standard multiple regression of facilitating factors on intention to drive unlicensed in the future (n=299)**

Variables	Mean	Std. dev	<i>B</i>	Std. error	$\beta$	$sr^2$	$R^2$	$Adj R^2$
Intention to drive unlicensed in future <sup>1</sup>	.69	.77						
Unaware of being unlicensed	1.32	.47	-.36***	.10	-.22	.04		
Able to access vehicle	.96	.19	.73**	.23	.18	.03		
Owned a vehicle	.63	.48	-.14	.09	-.09			
Still had a photo licence	.49	.50	-.13	.10	-.09			
Lack of alternative transport	21.21	7.15	.03***	.01	.24	.06		
							.15***	.14

1. Logarithmically transformed

\*  $p < .05$  \*\*  $p < .01$  \*\*\*  $p \leq .001$  Unique variability = .13; shared variability = .02

**Table A11: Standard multiple regression of deterrence factors on intention to drive unlicensed in the future (n=295)**

Variables	Mean	Std. dev	<i>B</i>	Std. error	$\beta$	$sr^2$	$R^2$	$Adj R^2$
Intention to drive unlicensed in future <sup>1</sup>	.68	.77						
Perceived risk of apprehension (after detection)	4.59	2.00	-.07**	.02	-.18	.03		
Knew fine for unlicensed driving	.14	.34	.02	.13	.01			
Perceived severity of punishment	4.57	1.84	-.01	.02	-.02			
Perceived certainty of punishment	5.38	1.91	-.01	.02	-.03			
Perceived swiftness of punishment	5.18	1.78	-.03	.03	-.08			
Prior conviction for unlicensed driving	.39	.49	.30***	.09	.19	.03		
Exposure to enforcement	.26	.44	.07	.11	.04			
Punishment avoidance	.37	.48	.21*	.10	.13	.01		
Vicarious exposure to punishment	.29	.45	.16	.10	.10			
Vicarious exposure to punishment avoidance	.36	.48	.67	.09	.10			
							.14***	.10

1. Logarithmically transformed

\*  $p < .05$  \*\*  $p < .01$  \*\*\*  $p \leq .001$  Unique variability = .07; shared variability = .07

**Table A12: Standard multiple regression of social learning factors on intention to drive unlicensed in the future (n=300)**

Variables	Mean	Std. dev	<i>B</i>	Std. error	$\beta$	$sr^2$	$R^2$	$Adj R^2$
Intention to drive unlicensed in future <sup>1</sup>	.68	.77						
Total unlicensed driving models	4.40	6.01	.02*	.01	.13	.02		
Attitudes to unlicensed driving	37.63	12.04	.02***	.00	.31	.05		
Differential association	10.58	5.57	.01	.01	.08			
Balance of reinforcement	-24.69	13.31	.01*	.00	.15	.01		
							.26***	.25

1. Logarithmically transformed

\*  $p < .05$  \*\*  $p < .01$  \*\*\*  $p < .001$  Unique variability = .08; shared variability = .18