# 3

# Driving behaviour and learner driver experiences

# 3 Driving behaviour and learner driver experiences

In this section, the range of learner driver experiences and typical driving behaviour of the 19-20 year old participants in the ATP Young Drivers Study are described, along with their history of crash involvement and speeding violations. This is followed by an examination of gender differences, and differences between young people living in urban, regional or rural localities, on these aspects. A brief discussion of differences between motorcyclists and other drivers is also included.

## Total sample

Eighty-six per cent of the sample reported that they had obtained their car driver's licence, as shown in Table 4 below. Parent reports corroborated this finding. Only 6 per cent did not have a licence or learner's permit. Very few young people had gained a motorcycle licence (2 per cent). There was considerable diversity in the length of time licences had been held, which ranged from one month to 38 months, the average being 20.82 months (SD of 7.93 months).

**Table 4. Licence status (self and parent reports)**

| | Source of report | | | |
|---|---|---|---|---|
| | Self (n = 1135) | | Parent (n = 1066) | |
| Types of licence | N | % | N | % |
| None | 67 | 5.9 | 73 | 6.8 |
| Learner's permit only | 82 | 7.2 | 68 | 6.4 |
| Car licence | 983 | 86.2 | 922 | 86.5 |
| Motorcycle licence | 25 | 2.2 | 26 | 2.4 |

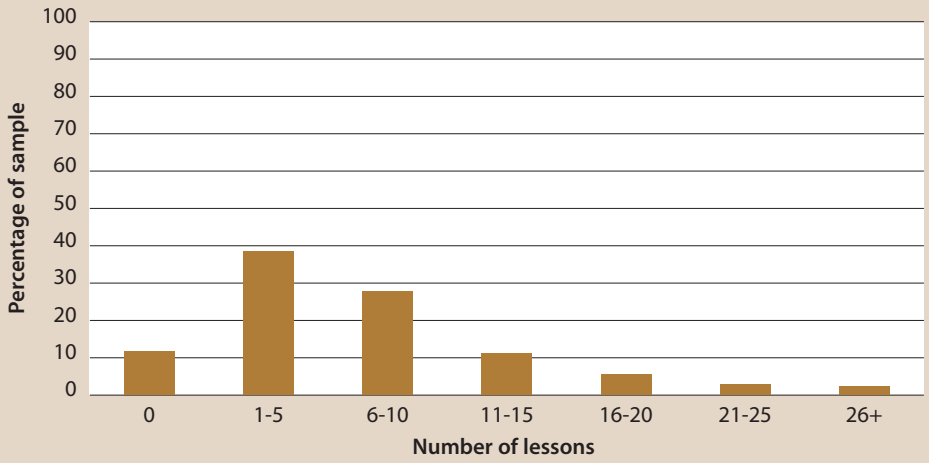
*Note:* Percentages do not add to 100 as some individuals fit more than one category. A small number of parent reports were of individuals for whom there was no corresponding young adult data; likewise, for some young adult reports there was no corresponding parent data. Thus young adult and parent report are not expected to be entirely consistent.

The following discussion focuses on all young adults who reported having a licence (for a car or motorcycle) or learner's permit at the time of data collection (19-20 years).

### *Learner driver experiences*

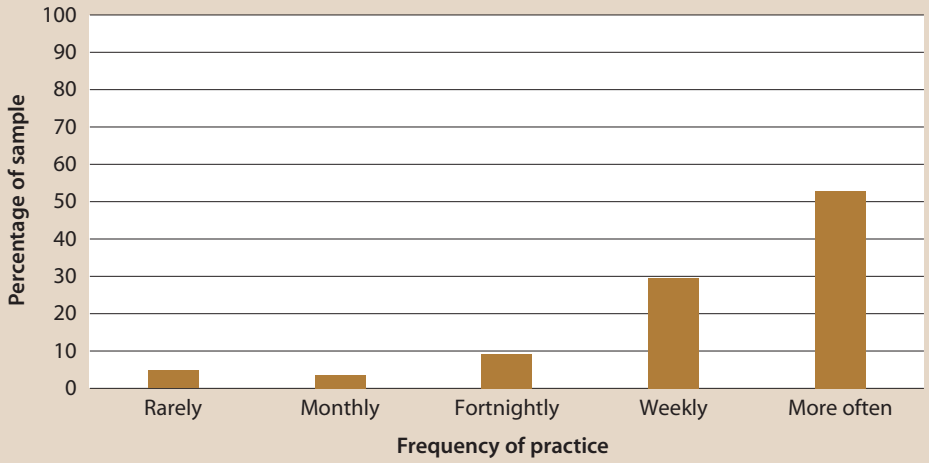
Young adults were asked to report how many professional driving lessons they had undertaken (that is, lessons with a professional driving instructor), using one of seven categories provided. This response format was designed to reduce the unreliability inherent in trying to recall a particular number of lessons, which could have been undertaken up to three years previously. Figure 1 displays the diversity in the number of lessons taken, which ranged from no lessons at all (12 per cent of young people) to 26 or more (2 per cent). Most commonly, between one and five lessons were undertaken, with a notable proportion receiving six to ten lessons. Overall, approximately three-quarters (78 per cent) had taken ten or fewer professional driving lessons when learning to drive.

**Figure 1. Number of professional lessons (self report)**




Most young adults reported taking part in frequent driving practice when learning to drive. For example, approximately half (53 per cent) reported practising more than once a week, while over 80 per cent reported practising on at least a weekly basis (see Figure 2). Only a small number of participants (5 per cent) reported "rarely" engaging in driving practice.

**Figure 2. Frequency of driving practice (self report)**




Young adults were questioned about who had assisted them with driving practice, and the amount of stress experienced when practising driving. Almost three-quarters had practised with their parents on at least a weekly basis, although a sizable number (17 per cent) reported practising monthly or less with parents (see Figure 3). About one-third (37 per cent) had practised driving on a regular basis (at least monthly) with persons other than their parents (Figure 4).

Parent reports provided a similar picture, although there was a trend for parents to report their sons/daughters had gained slightly more driving practice (both with themselves and others) than reported by the young people (see Figures 3 and 4).

**Figure 3. Frequency of driving practice with parents (self and parent reports)**

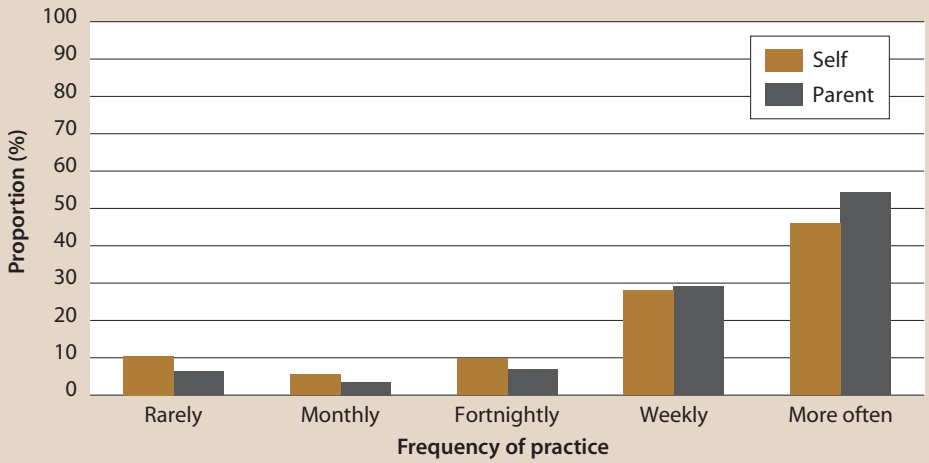
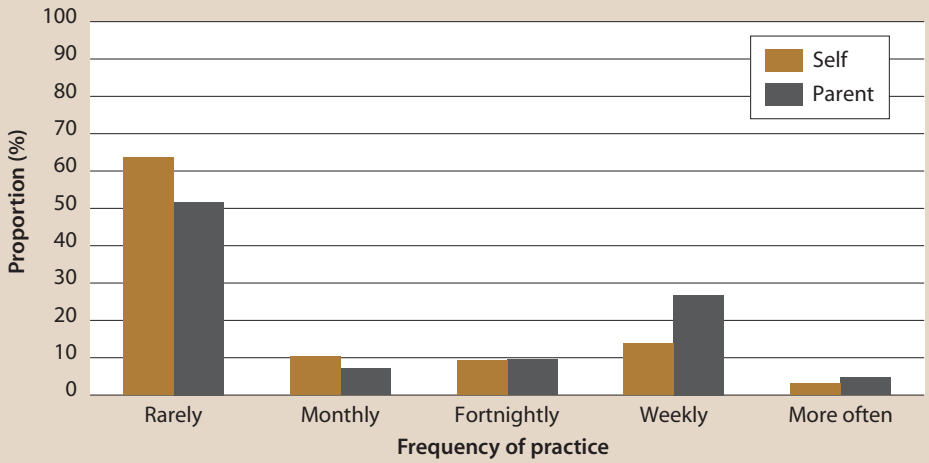


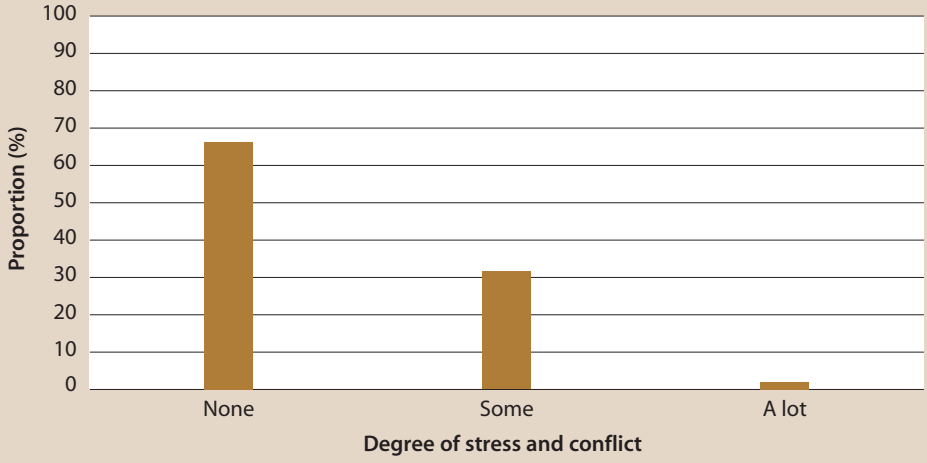

**Figure 4. Frequency of driving practice with others (self and parent reports)**




The majority of young adults and parents reported experiencing "some" stress or conflict during driving practice sessions (as shown in Figure 5). While parents were more likely to recall "a bit" of stress or conflict during practice sessions (74 per cent of parents, compared with 58 per cent of young people), young adults were somewhat more likely to rate the experience as highly stressful (20 per cent, compared with 12 per cent of parents). While fewer young people had gained regular driving practice with persons other than their parents, this was generally a less stressful experience (Figure 6). Only 30 per cent recalled some stress and conflict during such practice sessions and this was relatively mild for most, with only 2 per cent reporting high levels of stress.

**Figure 5. Stress and conflict experienced during driving practice with parents (self and parent reports)**


**Figure 6. Stress and conflict experienced during driving practice with others (self report)**



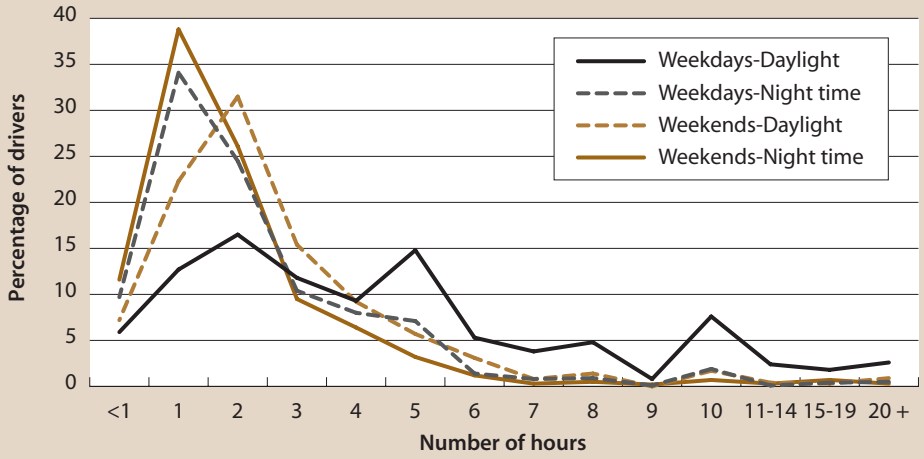

## *Driving behaviour*

### *Time spent driving*

There was considerable variability in the number of hours young adults spent driving at different times of the day (daylight hours, nightime hours) and week (weekdays, weekends), as displayed in Figure 7.

For example, one in five reported driving less than two hours during the day on weekdays, while in contrast, approximately 14 per cent said that they usually drove for ten or more hours during these times. Overall, the average number of hours spent driving during the day on weekdays was almost five hours per week. Weekend daytime driving was also quite common, with young adults spending an average of 2.8 hours each weekend driving. Considerably less driving was undertaken at night time both during the week and at weekends, with almost half driving less than two hours and a further one-third driving two to three hours. The average number of hours spent on night-time driving was 2.4 during the week, and 2.1 at weekends.

**Figure 7. Number of hours typically spent driving by time of week**




### *Crash involvement*

About four in ten young adults (43 per cent) reported that they had been involved in a crash when they had been the driver of a car or motorcycle. Of those who had been involved in a crash, 70 per cent had experienced one crash, 25 per cent had been involved in two crashes, and 5 per cent had been involved in three or more crashes, with the highest number of crashes experienced being seven. The average number of crashes reported by those who had been in a crash was 1.36.

Parent reports indicate a good awareness of young adults' crash involvement, with 39 per cent reporting that their son or daughter had been involved in a crash when driving a car or motorcycle. Furthermore, the average number of crashes reported by parents was almost identical to that reported by young adults (1.37).

Young adults and parents were also asked about the circumstances in which the crash/es had occurred, focusing particularly on whether or not passengers were present and the consequences of the crash in terms of property damage or injury/death. As Table 5 shows, the most frequent type of crashes reported by young adults were those in which the driver was alone, there was property damage, but no one was injured. Nevertheless, there was also a sizable number (approximately one-third) who were carrying passengers when involved in a crash of this type (resulting in property damage). Crashes involving death or injury to a person were extremely rare. Parent reports supported these trends.

**Table 5. Circumstances surrounding, and outcomes of, crash involvement (self and parent reports)**

| | Source of report | | | | | |
|---|---|---|---|---|---|---|
| | Self Number of crashes | | | Parent Number of crashes | | |
| Circumstances and outcome | N | Mean | S.D. | N | Mean | S.D. |
| Driving alone, property damage | 292 | 1.12 | 0.68 | 257 | 1.27 | 0.64 |
| With passengers, property damage | 182 | 0.79 | 0.65 | 65 | 1.10 | 0.43 |
| Driving alone, injury/death | 15 | 0.09 | 0.29 | 7 | 0.36 | 0.58 |
| With passengers, injury/death | 8 | 0.06 | 0.27 | 7 | 0.44 | 0.62 |

*Note:* N denotes the number of young adults who had been in a crash of this type when driving.

### *Speeding*

Just under 70 per cent of young adults had never been apprehended for speeding, 20 per cent had been apprehended once, and 11 per cent more than once. The highest number of speeding apprehensions was eight. Once again, parent reports were concordant with these trends, with 73 per cent reporting that their son or daughter had never been caught speeding. As parents were not asked about the number of times their son or daughter had been caught speeding, comparisons between young adults and parents cannot be made on this aspect.

### *Unsafe driving behaviour*

Both young adults and parents were asked about the young people's engagement in various types of unsafe driving practices, such as speeding, failure to wear a seat belt (or helmet if driving a motorcycle), driving when affected by alcohol or an illegal drug, or driving when very tired. Young adults were asked to report on how many of their last ten trips they had engaged in the behaviour, while parents were asked to describe how often the behaviour occurred on a five-point scale ranging from "never" to "always" (with an option provided for "don't know"). Table 6 displays the number of young adults who reported engaging in each unsafe driving behaviour on one or more occasions in their last ten trips. It also shows the average number of trips in which young drivers reported engaging in each type of behaviour.

**Table 6. Rates of unsafe driving behaviours during the previous 10 trips (self report)**

| Unsafe driving behaviours | Proportion of sample | | Mean number of trips out of last ten |
|---|---|---|---|
| | N | % | |
| Up to 10 km/h over the limit | 886 | 83.7 | 4.10 |
| Drove when very tired | 676 | 63.8 | 1.55 |
| 10 to 25 km/h over the limit | 522 | 49.4 | 1.56 |
| More than 25 km/h over the limit | 203 | 19.2 | 0.50 |
| Drove when probably affected by alcohol | 151 | 14.2 | 0.23 |
| Did not wear seat belt (or helmet) for part of the trip | 127 | 12.0 | 0.28 |
| Drove when probably affected by illegal drug | 99 | 9.3 | 0.26 |
| Did not wear seatbelt (or helmet) at all | 91 | 8.6 | 0.23 |

A very common type of unsafe driving behaviour was speeding up to 10 km/h above the limit, with more than four-fifths of young adults reporting such behaviour on at least one of their last ten trips. This occurred quite frequently (on average, on four of their past ten trips). In addition, almost half reported they had driven between 10 and 25 km/h above the limit at least once during their last ten trips, and close to 20 per cent reported driving more than 25 km/h above the limit on one or more occasion. However, these higher levels of speeding generally occurred less frequently.

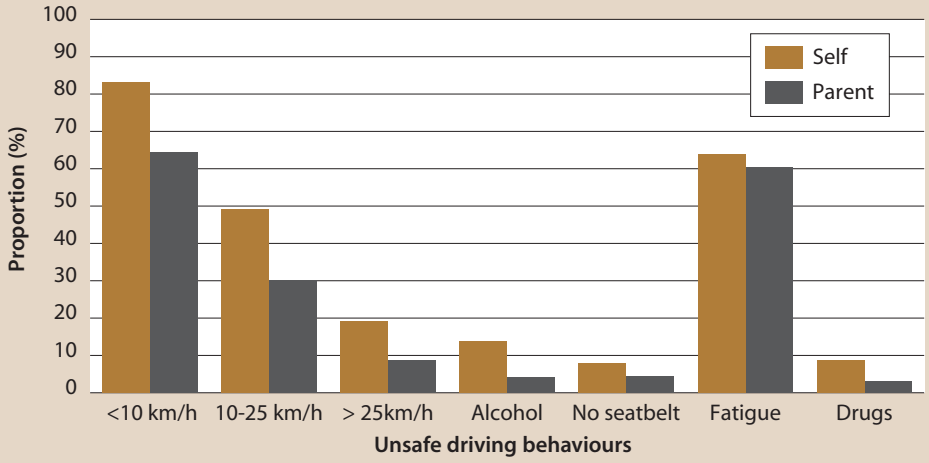
Another common unsafe driving behaviour was driving when very tired, with almost two-thirds of the sample reporting this type of behaviour on at least one occasion. Across the sample, the average number of trips undertaken when very tired was 1.55 (in last ten trips). If young adults' driving behaviour over the past ten trips can be seen as indicative of their general driving behaviour, these findings suggest that young adults drive when very tired on 15 per cent of their driving trips.

Rates of other types of unsafe behaviours were lower, ranging from 9 per cent for failure to wear a seat-belt or helmet to 14 per cent for driving when affected by

alcohol. The average number of occasions on which these less common unsafe driving behaviours occurred was also very low.

Figure 8 compares young adults' and parents' ratings of the occurrence of each form of unsafe driving, using young adults' report of the occurrence of each type of behaviour on at least one of the past ten trips, and parent's reports of whether the behaviour had occurred (combining ratings of rarely, sometimes, often or always). There was a consistent trend for parents to underestimate the level of unsafe driving practices engaged in by young adults (see Figure 8). For example, while 84 per cent of young adults reported driving over the speed limit by up to 10 km/h on at least one occasion in their last ten trips, only 65 per cent of parents reported that this behaviour occurred. Similarly, while parent reports suggest that driving under the influence of alcohol was rare (4 per cent), young adult reports suggest that this behaviour was considerably more prevalent (14 per cent). The only unsafe driving behaviour on which parent reports were consistent with young adult reports was driving when fatigued (64 per cent of young adults compared with 60 per cent of parents).

**Figure 8. Self- and parent-reported frequency of unsafe driving behaviours**




*Note:* <10km/h = drove up to 10 km/h over the limit; 10-25km/h =drove between 10 and 25 km/h over the limit; >25km/h = drove more than 25km/h over the limit; alcohol = drove when probably affected by alcohol; no seatbelt = forgot seatbelt (or helmet) for all of the trip; fatigue = drove when very tired; and drugs = drove when probably affected by an illegal drug.

SUMMARY

*Summary*

More than four-fifths of young people had obtained a car licence by 19-20 years of age. Most young adults reported participating in frequent driving practice when learning to drive. For example, about 80 per cent reported that they had practised driving on at least a weekly basis. Parents predominantly provided driving practice, although some young adults also practised with others. Most young people experienced some stress and conflict when practising driving with parents, although this was minor for the majority. In contrast, driving practice with persons other than parents, while less common, was generally stress-free. While there was considerable diversity in the

SUMMARY

number of professional driving lessons undertaken, it was most commonly between one and five. Almost 80 per cent had taken ten or fewer professional lessons while learning to drive.

Turning to the young adults' current pattern of driving, most driving was reported to take place during the week in daylight hours. The average time per week spent driving at such times was five hours. Day-time driving during the weekend was also relatively common, with an average of 3 hours spent on the road at this time. Night-time driving was somewhat less frequent, with an average of two-and-a-half-hours spent driving at night during the week and two hours at the weekend.

Over 40 per cent of the sample had been involved in a crash while driving a car or motorcycle. Most crashes resulted in property damage. Two-thirds of such crashes occurred when the young people were driving alone, and one-third when they were carrying passengers. Crashes resulting in injury or death were extremely rare.

Approximately 30 per cent had been apprehended for speeding. Additionally, speeding was one of the most common unsafe driving behaviours reported by young people, with over 80 per cent having driven up to 10 km/h above the limit at least once during their past ten trips and almost half at 10 to 25 km/h on one or more occasion. Driving while very tried was also relatively common, with 64 per cent having done so at least once in their most recent ten trips. Other types of unsafe driving behaviour, such as failure to wear a seat belt and driving when affected by alcohol or illegal drugs, were less common, and ranged in incidence from 8-14 per cent. Parents appeared to be less aware of the amount of unsafe driving engaged in by young adults, and generally reported lower rates of unsafe driving behaviours.

## Gender differences

There were a number of significant differences between young men and women in both the type of learner driving experiences gained and in their current driving patterns.

There was a small, but significant difference in the number of young men and women who had obtained a motorcycle licence, with slightly more young men (3 per cent) than women (1 per cent) having a licence of this type.[2] There were no significant differences in the proportion of young men and women who had a car licence, learner's permit, or did not have a licence of any type.

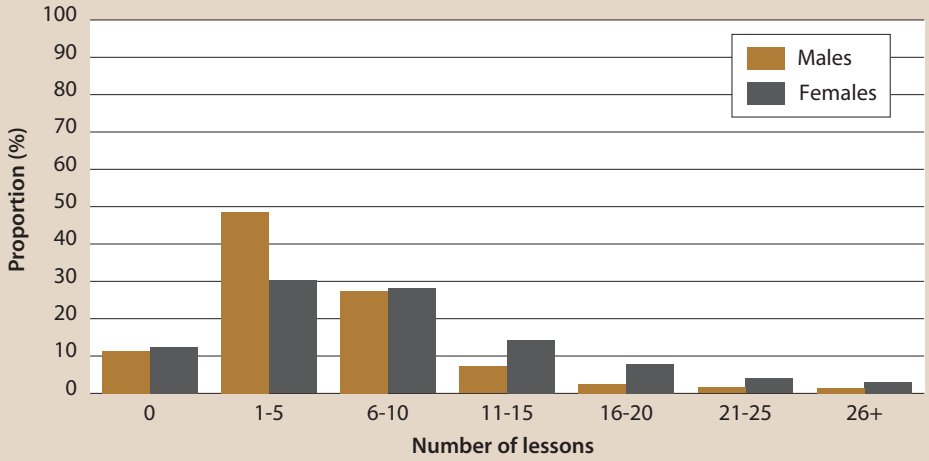
### *Learner driver experiences*

Young men and women also significantly differed in the number of professional driving lessons undertaken when learning to drive.[3] In general, young women

2 $\chi^2$ (3) = 12.56, p < .01.
3 $\chi^2$ (7) = 60.94, p < .001.

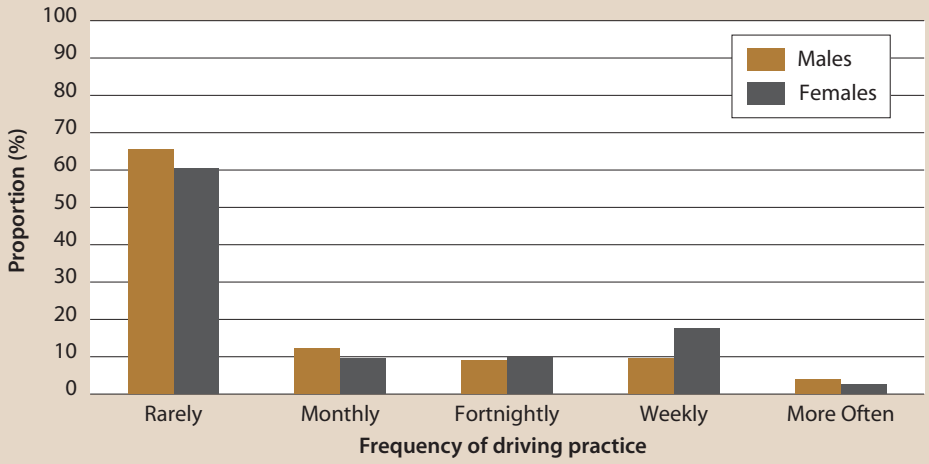
had taken more professional driving lessons than young men when learning to drive. More than half the young women (58 per cent) had taken six or more professional lessons, compared with 41 per cent of young men, as shown in Figure 9.

**Figure 9. Number of professional lessons, by gender**




By their own report, young men and women did not significantly differ in the amount of driving practice provided by parents, or obtained overall. However, young women had more frequently practised driving with people other than parents, as shown in Figure 10.[4]

**Figure 10. Gender differences in the frequency of driving practice with others**




There was a significant gender difference in the degree of stress and conflict experienced when practising driving with parents.[5] While most young drivers of both sexes reported "a little" stress, more young men reported that they experienced no stress or conflict during these practice sessions (28 per cent young men compared with 17 per cent young women), while young women more frequently reported

4 $\chi^2$ (4) = 16.71, p < .01.
5 $\chi^2$ (3) = 59.41, p < .001.

these sessions to be highly stressful and conflictual (22 per cent young women and 14 per cent young men). Figure 11 displays these differences. However, there were no gender differences in the stress experienced when practising with others.

**Figure 11. Stress and conflict experienced during driving practice with parents, by gender**


### *Driving behaviour*

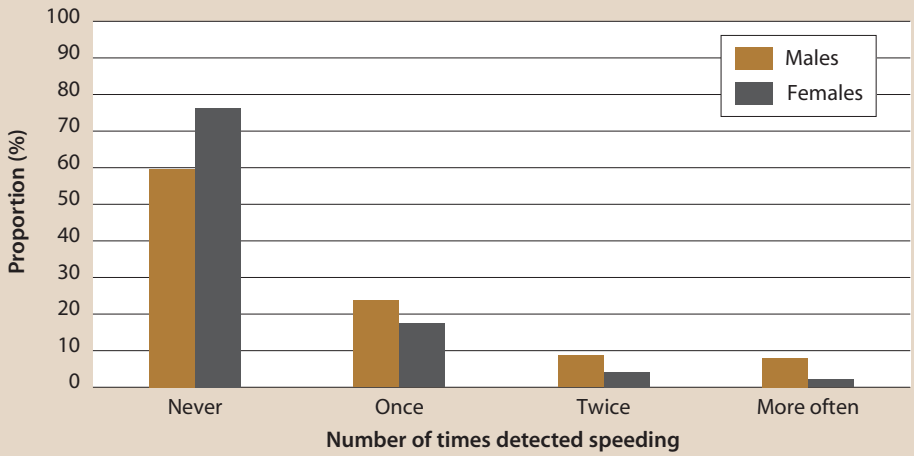
Young men and women did not significantly differ in the number of daylight or night-time hours spent driving during the week or at weekends. They reported similar rates of crashes when driving a car or motorcycle (42 per cent of both young men and women). Furthermore, among those individuals who had been involved in a crash, there was no significant gender difference in the number of crashes experienced (an average of 1.45 crashes among young men and 1.33 among young women). Likewise, there were no significant gender differences in the circumstances of the crash/es (that is, whether driving alone or with passengers), or the outcomes (that is, property damage or injury/death).

Turning to unsafe driving behaviours, young men reported speeding significantly more frequently than young women during their last ten trips (Table 7). This gender difference was evident across all degrees of speeding (up to 10 km/h over the limit; 10-25 km/h over the limit, and more than 25 km/h above the limit). Given

**Table 7. Gender differences in rates of unsafe driving behaviours during the previous 10 trips**

| Unsafe driving behaviour | Mean number of trips out of last ten | | | | T test result | |
|---|---|---|---|---|---|---|
| | Males | | Females | | | |
| | Mean | S.D. | Mean | S.D. | t value | p < |
| Up to 10 km/h over the limit | 4.79 | 3.60 | 3.54 | 3.14 | 5.89 | .001 |
| 10-25 km/h over the limit | 2.19 | 2.81 | 1.05 | 1.83 | 7.54 | .001 |
| More than 25 km/h over the limit | 0.89 | 1.91 | 0.18 | 0.73 | 7.64 | .001 |
| Drove when affected by alcohol | 0.33 | 1.00 | 0.16 | 0.73 | 3.29 | .001 |
| Did not wear seatbelt/helmet at all | 0.31 | 1.21 | 0.16 | 0.76 | 2.33 | .020 |
| Did not wear seatbelt/helmet for part of trip | 0.35 | 1.14 | 0.21 | 0.86 | 2.19 | .029 |
| Drove when very tired | 1.44 | 1.78 | 1.64 | 1.94 | -1.74 | .086 |
| Drove when affected by an illegal drug | 0.33 | 1.25 | 0.20 | 1.02 | 1.73 | .085 |

**Figure 12. Number of times detected speeding, by gender**




these findings, it is unsurprising that significantly more young men than young women had been apprehended for speeding (40 per cent young men compared with 24 per cent young women), and a higher proportion had been caught speeding on multiple occasions (17 per cent of young men and 6 per cent young women).[6] These gender differences are shown in Figure 12.

While rates were low overall, more young men than women reported driving without a seat-belt or helmet for the duration of the trip, or for part of the trip. Young men also more frequently drove when under the influence of alcohol than young women, although again the overall rates were low. There were no gender differences in rates of driving when fatigued or when affected by an illegal drug.

SUMMARY

*Summary*

There were numerous differences between young men and women in their learner driving experiences and in current driving patterns. Slightly more young men than women currently held a car or motorcycle licence. Young women had taken more professional driving lessons when learning to drive than young men. Young women and men received a similar amount of driving practice overall, and practice with parents. However, young women more frequently received driving practice from people other than their parents, and reported significantly more stress when practising with parents than did young men. There were no significant gender differences in the hours spent driving in the day or at night-time during the week, or at weekends. Nor were there gender differences in the frequency of crash involvement, or in the circumstances or outcomes of crashes. However, young men engaged in unsafe driving behaviour significantly more often than young women, with higher rates of speeding and driving when affected by alcohol, and lower rates of seat belt or helmet use than young women (although it should be noted that the rates of driving under the influence of alcohol and failure to wear a seat belt or helmet were very low overall).

6 $\chi^2$ (4) = 46.02, p < .001.

## Metropolitan, regional and rural differences

In general, there were few significant differences in the learner driver experiences and current driving behaviour of young adults living in metropolitan, regional or rural localities.[7]

Similar proportions of young people from the different locality types had obtained a car or motorcycle licence, or a learner's permit.

### *Learner driver experiences*

Individuals living in the Melbourne metropolitan area had received significantly more professional driving lessons than those living in regional or rural localities[8] (see Figure 13). For example, 60 per cent of young Melburnians had received six or more professional lessons, compared with 40 per cent of young adults from regional centres and 21 per cent from rural areas.

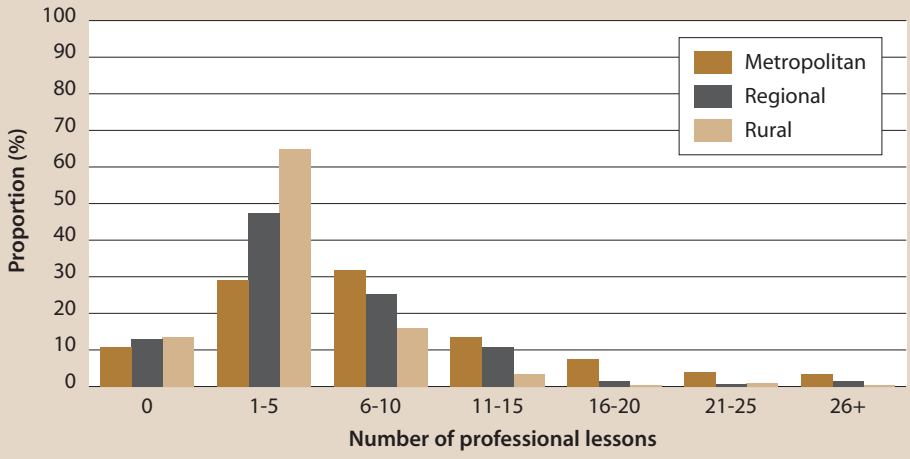
Significant differences were also found in the frequency with which young adults in metropolitan, regional and rural areas reported practising driving.[9] While the majority reported practising on a regular basis, a higher proportion of those from regional centres (27 per cent) practiced driving less than monthly than those in rural (18 per cent) or metropolitan (15 per cent) localities (see Figure 14).

There were no differences in the frequency with which young adults from different locations practiced driving with parents or others. Nor were there any significant differences in the levels of stress and conflict experienced when practising driving with parents or others.

### *Driving behaviour*

Individuals living in the different types of localities did not significantly differ in the number of daylight or night-time hours they spent driving during the

**Figure 13. Number of professional lessons, by locality**

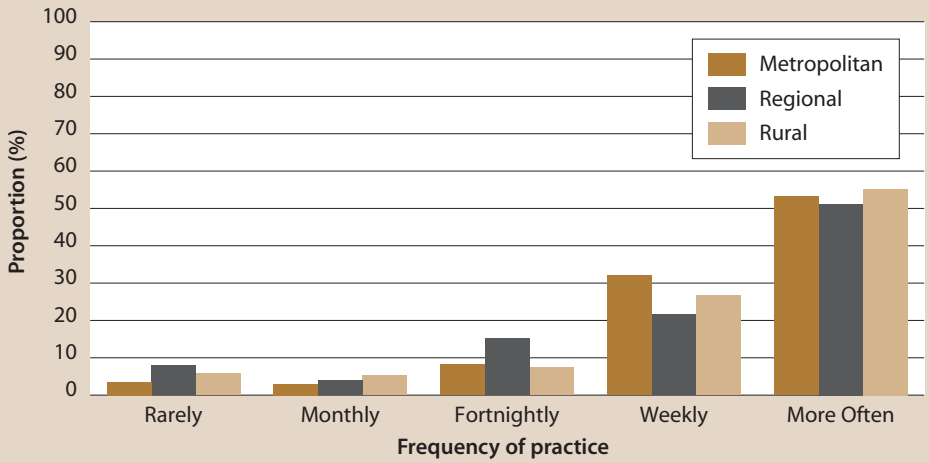



7 Participants were classified as living in metropolitan, regional or rural localities based upon their postcode at the time of completing the questionnaire "Metropolitan" = state capital city; "Regional" = large regional centre (for example, Geelong, Ballarat, Bendigo); "Rural" = other area of state.

8 $\chi^2$ (12) = 117.82, p <.001.

9 $\chi^2$ (8) = 18.30, p <.05.

**Figure 14. Frequency of driving practice, by locality**




week or at the weekend. While more young people living in the Melbourne metropolitan area (46 per cent) had been involved in a crash than those from regional (35 per cent) and rural areas (38 per cent)[10], there were no significant differences between individuals from the different types of localities on the number of crashes experienced, or in the circumstances or outcomes of the crashes. Similarly, rates of apprehension for speeding were not significantly different among young people from metropolitan, regional or rural localities.

Several significant differences were found between young people from the different types of localities on the frequency of unsafe driving behaviours. Individuals from regional centres were significantly more likely than those from metropolitan localities to drive when affected by alcohol,[11] while young adults from rural areas were more likely to drive without a seat-belt or helmet for the whole duration of a trip[12] or part of a trip[13] than those from metropolitan localities.

SUMMARY

*Summary*

Relatively few differences between young adults from metropolitan, regional or rural localities were found. These differences centred upon learner driver experiences (young adults in metropolitan areas had taken more professional driving lessons, while those in regional areas tended to practice driving less frequently), rates of crash involvement (higher among young adults living in metropolitan localities) and unsafe driving behaviours (higher rates of driving when affected by alcohol in regional areas and higher rates of failing to wear a seat-belt or helmet in rural areas).

10 $\chi^2$ (2) = 6.90, p <.05
11 F (2, 945) = 3.48, p<.05
12 F (2, 945 = 6.40, p<.01
13 F (2, 944) = 6.42, p<.01

## Motorcyclists and other road users

While it would have been informative to examine the driving patterns of different classes of road users separately (for example, car drivers versus motorcyclists), the small number of motorcyclists in the ATP sample (n=25) precluded these more fine-grained analyses. Further limiting the feasibility of such analyses was the fact that the majority of motorcyclists in this sample (88 per cent) were also car drivers: only three young adults reported having a motorcycle licence alone. Hence, if such comparisons were conducted it would be difficult to determine whether motorcyclists were reporting on their driving experiences when driving a car, riding a motorcycle or both.

Nevertheless, while recognising these limitations, some exploratory analyses were conducted to determine whether the driving experiences of motorcyclists differed substantially from those who only drove cars. All motorcyclists (including those who had a car licence) were compared to those who only had a car licence.[14] These comparisons revealed few significant differences in the learner driver experiences and current driving behaviour of motorcyclists and car drivers. For example, only one significant difference was found between the groups in their learner driver experiences (that is, motorcyclists tended to recall less stress in their driving practice sessions with parents than those who only drove cars).[15] Most of the differences that did emerge centred on young adults' current driving behaviour. In comparison to car drivers, motorcyclists tended to spend more time driving,[16] engage in more moderate (10-25 km/h over limit)[17] to high (in excess of 25 km/h over limit)[18] speeding behaviour, and were more likely to be involved in crashes which resulted in injury or death when not carrying passengers.[19]

Hence, it appeared that young adults with a motorcycle licence reported a somewhat different pattern of driving behaviour from those who only had a car licence. However, given the limitations previously discussed (small sample size, difficulties separating motorcyclists from car drivers), it was decided to combine both groups of road users in future analyses, as it was not anticipated that the inclusion of motorcyclists in these analyses would have a strong influence on overall results.

14 Learner drivers were excluded from these analyses as it could not be determined whether their learner's permit was for driving a car or motorcycle.

15 While almost half (46 per cent) of motorcyclists reported experiencing no stress or conflict during driving practice sessions with parents, the vast majority of car drivers (79 per cent) reporting experiencing at least "a little" stress when practicing driving with their parents ($\chi^2$ (3) = 8.87, p<.05).

16 In comparison to young adults who only had a car licence, those with a motorcycle licence tended to spend more time driving during weekday daylight hours (F (1, 950) = 12.00, p<.01); weekend daylight hours (F (1, 934) = 7.29, p<.01); weekday night-time hours (F (1,924) = 8.05, p<.01); and weekend night-time hours (F(1, 910) = 5.99, p<.05).

17 F(1, 981) = 12.86, p<.001.

18 F(1, 981)= 14.63, p<.001.

19 F (1,161) = 4.41, p<.05.