

Pre-licence driving experience in newly licensed Māori drivers: New Zealand Drivers Study

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Abstract

Despite recent reductions in motor vehicle injury rates in New Zealand, the rates for young drivers and especially young Māori drivers remain disproportionately high. This is commonly associated with driver inexperience and led to the development of road safety initiatives such as graduated driver licensing to increase beginner driver experience in low risk situations. There is anecdotal evidence that many newly licensed drivers in New Zealand have had some pre-licence driving experience, but no scientific research has been done to explore this issue. This paper describes a study of pre-licence driving experience in a cohort of newly licensed Māori drivers and its relationship with rural or urban locality. Results will be presented that describe and compare the pre-licence driving experience in the cohort of 824 Māori drivers. This will identify any fundamental differences or similarities by locality within this high risk driving population at the time of licensure.

Key words

Rangatahi, pre-licence driving, rural and urban

Introduction

Serious injury and death due to motor vehicle traffic crashes (MVTCS) is a significant health problem in New Zealand. This is especially true for 15-24 year olds who have the highest traffic crash rates of any population group [1, 2]. In response to this, a Graduated Driver Licensing (GDL) system was introduced in 1987. GDL is a three step system designed to provide young drivers with the opportunity to gain driving experience under conditions which minimise exposure to high risk situations [3]. A full description of the New Zealand system can be found elsewhere [1].

An initial evaluation of GDL revealed that immediately after its introduction there was a large reduction in the number of crashes involving 15-19 year old drivers [4]. While this initial, large effect dissipated, in 1996 Langley and colleagues found that GDL had accounted for at least a 7% reduction in traffic-related hospital admissions among 15-19 year olds since its introduction [5]. Further work examining the impact of the three main driving restrictions associated with GDL (a night time driving curfew from 10 pm – 5 am, no passengers unless supervised and a blood alcohol limit of 30mg per 100ml blood) indicated each of these restrictions, and in particular the night time driving curfew had significantly contributed to reducing both fatal and serious injury crashes involving young drivers [1, 6].

Although the traffic-related injury problem among young people in New Zealand has reduced since the introduction of GDL, there is still considerable room for improvement [1]. In 2006 26% of all traffic-related fatalities involved 15-24 year olds [7], who represented only 14% of the total population [8]. This is true for Māori and non-Māori but especially for rangatahi (Māori aged 15-24), who were involved in 27% of fatal crashes involving young people but represented only 18% of this population age group [9]. Despite this there is a scarcity of research on rangatahi drivers.

The over-representation of young drivers in crash statistics is not unique to New Zealand but is evident in most Westernised countries [10], and this international young driver problem has ensured ongoing debate about the primary crash factors for young drivers. This debate often centres on whether young drivers have underdeveloped driving skills due to their inexperience behind the wheel or whether they take intentional driving risks due to their age (immaturity). While research indicates both factors are important contributors to elevated crash rates, the debate continues as to which, if either is more important [11]. Various studies support either side of the argument and ultimately illustrate the need for both factors to be addressed in order to have the maximum impact on young driver crash rates [12, 13].

Appreciating the combined impact that inexperience and age have on young driver crash risk highlights how pre-licence driving may further impact this already elevated risk. While there is anecdotal evidence to suggest pre-licensed driving occurs in New Zealand, especially within the Māori population [14], it has never been quantified and is therefore absent in analytical work [15]. The few published studies that do concentrate on pre-licence driving demonstrate that unlicensed drivers involved in a crash are likely to be male, at fault, carry young passengers, speed prior to a crash, drink before driving and to suffer more serious injuries when compared to their licensed counterparts [15, 16, 17]. One of these studies investigated the driver factors that may predispose young rural drivers in Australia to crash and found the frequency of self reported pre-licence driving was significantly associated with a motor vehicle crash within the first 12 months of driving. This was irrespective of gender and whether the driver was a rural or urban driver. The frequency of pre-licence driving resulted in a linear association where those who reported daily pre-licence driving had almost two times greater risk of a crash (in the first 12 months of licensed driving) compared with drivers who never drove pre-licence [17].

To date, the only New Zealand study to address pre-licence driving is a population-based case control study from the Auckland region. Data collected in 1998 – 1999 was used to investigate any association between all forms of unlicensed driving and motor vehicle crash injury. The results revealed that 12% of cases (driver of vehicle where any occupant was hospitalised or killed) drove unlicensed as opposed to 1% of controls (drivers of vehicle stopped at random on road side). The majority of unlicensed cases had never held a licence (were driving pre-licence) as opposed to being disqualified or suspended from driving. After adjusting for age and gender, unlicensed drivers had approximately 11 times higher risk of being involved in a serious injury crash compared to drivers holding a valid licence. Interestingly there were also significant associations between unlicensed driving and ethnicity, with more Māori and Pacific Islanders driving unlicensed than other ethnic groups [18].

While this New Zealand example demonstrates how, in general, unlicensed drivers are a high risk group for crash injury further research is required. The authors suggest that unlicensed driving is unlikely to be a randomly distributed characteristic and therefore the identification of high risk groups and risk factors would assist in targeting intervention strategies [18]. The New Zealand Drivers Study (NZDS), a prospective cohort study of drivers recruited when they gain their learner licence provides a unique opportunity to examine pre-licence driving experience within the high risk group of novice rangatahi drivers. The purpose of the present research was to examine the pre-licence driving experiences of newly licensed Māori drivers in rural and urban areas of New Zealand. The specific aims of this paper were to:

- (a.) examine the extent, type and reason for self-reported pre-licence car driving for both on and off road driving and
- (b.) examine whether location (rural or urban) affects pre-licence driving experience in various vehicle types.

Method

This research was part of an ongoing prospective cohort study, the New Zealand Drivers Study (NZDS). The primary aim of the NZDS is to examine risk and protective factors for traffic related injury among newly licensed drivers in New Zealand, and from this identify factors that can be targeted to reduce these injuries. The study population for the present research was made up of all participants in the NZDS cohort (n = 3992) who identified Māori as either their sole ethnic group or, one of the ethnic groups they belonged to. In the

NZDS newly licensed drivers were recruited at the learner licence (baseline) stage of licensure, it was the baseline NZDS data that was used for this research.

Participants were recruited face-to-face after successful completion of the car learner licence theory test. The minimum age at which a learner licence can be applied for in New Zealand is 15 years. This is the youngest minimum driver licensing age in the industrialised world. To be eligible for the NZDS a person had to pass the car driver's theory test and have never held a car drivers licence before (either in New Zealand or overseas). Once eligible participants agreed to take part they were given an information sheet describing the study and written consent was obtained. The self-administered, pen and paper questionnaire which took approximately 30 minutes, was then completed. All participants were compensated for their time with a \$20 Motor Trade Association (MTA) voucher upon receipt of the completed questionnaire. Recruitment involved one of three situations:

(1.) On-site at Driver Licensing Agencies: Research Assistants recruited in licensing agencies in: Auckland (Albany, Takapuna, New Lynn, Quay Street, Howick, Penrose and Manukau), Gisborne, Napier, Hastings, Christchurch (Riccarton, Shirley) and Dunedin. Once a participant agreed to take part, there were two ways they could complete the questionnaire; **On-site:** Participants completed the questionnaire at the agency immediately after finishing the learner licence test. This was the preferred option. **Mail back:** If newly licensed drivers wanted to take part in the NZDS but could not complete the questionnaire on-site (e.g. had to get to work) they were able to take the questionnaire home. The consent and contact details were completed on-site, removed from the questionnaire and remained with the research team to enable follow up if required. Completed questionnaires were free posted back to the research team.

(2.) Learner Licence Courses: In many communities, courses to obtain a learner licence are held by relevant organisations in the area. Course recruitment followed the same procedures as on-site, agency recruitment but on a larger scale. Courses were an important source of Māori participants as local iwi or hapu (tribe or sub-tribe) groups, already involved in community road safety were often course providers. These community groups were located in Auckland and on the East Coast of the North Island, important areas due to their relatively high Māori population base.

(3.) Self Recruitment – Postcard Mail Back: For practical and economic reasons it was not viable to recruit throughout all licensing agencies nation-wide. Furthermore it was desirable to increase the representation of newly licensed rural drivers. To address these issues, a specially designed NZDS postcard was placed in licensing agencies in rural areas. The postcard invited people who had gained their New Zealand learner licence within the last month to take part. Potential participants contacted the study team via a free phone telephone number, text message or email. Upon contact, eligibility was established and licensing and contact information was obtained. Questionnaires were then sent out to participants to complete and return in the same way a mail back was completed.

NZDS Baseline Questionnaire

The NZDS baseline questionnaire was designed to obtain a pre-licensing profile of the driver and included items for a wide range of personal, driving and licensing related behavioural variables including; background characteristics, the learner licence theory test, attitudes and behaviours related to driving and the GDL system, motivations for licensure, pre-licence driving experience, previous exposure to motor vehicle crash (not specifically as a driver), police enforcement, sleep, alcohol consumption, marijuana, recreational drugs and herbal high (party pill) use and personality characteristics relevant to driving. A selection of the NZDS baseline questionnaire variables were used in the present work, these included:

Demographic factors: In addition to age (at time of licensure), gender and residence location (rural or urban) a question relating to main current activity or employment status was asked (*'what is your main current activity?'*).

Pre-licence driving experience: Participants were asked about any driving (defined as being in control of the vehicle for at least one kilometre) they had done before they gained their learner licence. Information was

sought for both on and off road driving¹ and was split into three vehicle types including cars (included similar vehicles, such as vans and utilities), motorcycles (2 wheelers only) and 3 or 4 wheeler motorcycles (e.g. All Terrain Vehicles). For each vehicle type participants were asked how often they drove (*How many times in total have you driven a CAR?*), their age when they first drove, the total distance they had travelled and the reason(s) for driving (*Why have you driven a CAR on a public road?*). For this last question a number of response options and a free text response option were provided. All of this information was gathered for on and off-road driving.

Learner licence theory course attendance: All NZDS participants were asked if they had taken part in a learner licence theory course. If a course had been attended participants were required to give information on who ran it, where it was held and the duration of the course.

Statistical Analysis

Basic descriptive statistics were calculated for demographic variables and pre-licence car driving factors. Chi Squared tests were performed to highlight any difference in learner licence course attendance and pre-licence driving experience by vehicle type between the rural and urban groups.

Table 1. Māori cohort demographics.

| | n | % |
|---------------------------------|------------|------------|
| Gender | | |
| Male | 376 | (46) |
| Female | 448 | (54) |
| | 824 | 100 |
| Age at Licensure (years) | | |
| 15 | 324 | (39) |
| 16 | 164 | (20) |
| 17 | 113 | (14) |
| 18 | 52 | (6) |
| 19 | 29 | (4) |
| 20+ | 142 | (17) |
| | 824 | 100 |
| Main Current Activity | | |
| Student | 531 | (64) |
| Employed | 141 | (17) |
| Homemaker | 35 | (4) |
| Unemployed | 49 | (6) |
| Other | 46 | (6) |
| Missing | 22 | (3) |
| | 824 | 100 |
| Location* | | |
| Rural | 429 | (52) |
| Urban | 395 | (48) |
| | 824 | 100 |

*Urban = Major metropolitan areas; Auckland, Wellington, Christchurch and Dunedin. All other towns and cities were classified as rural.

¹ On-road driving is on public roads where any member of the public can drive. Off-road driving is on private roads such as driveways, farm paddocks, carparks, beaches and race tracks.

Results

The Māori cohort of the NZDS consists of 824 people; Table 1 reports their demographic details. It is important to note that gender (males 46% and females 54%) and town or city living in (location) at time of licensure (urban 48% and rural 52%) are both evenly split. The age at licensure ranges from 15 to 66 years with over half (59%) of the participants younger than 17 when they got their learner licence. Additionally, over a third (39%) got their learner licence before turning 16 (within the first year legally eligible to gain a driver licence), 41% of these people did so within the first three months of their fifteenth birthday. Over half (64%) of the cohort were students at the time of licensure, the majority of these (75%) were secondary school students.

Figure 1 reports the demographic factors by location and shows how similar the rural and urban groups were for these characteristics. There are a few minor differences. For example more rural participants were 20 years or older (rural 20%, urban 15%) when they got their licence, but the urban group has more people employed as their main current activity (20%), compared to the rural group (14%). However these differences involve relatively small numbers.

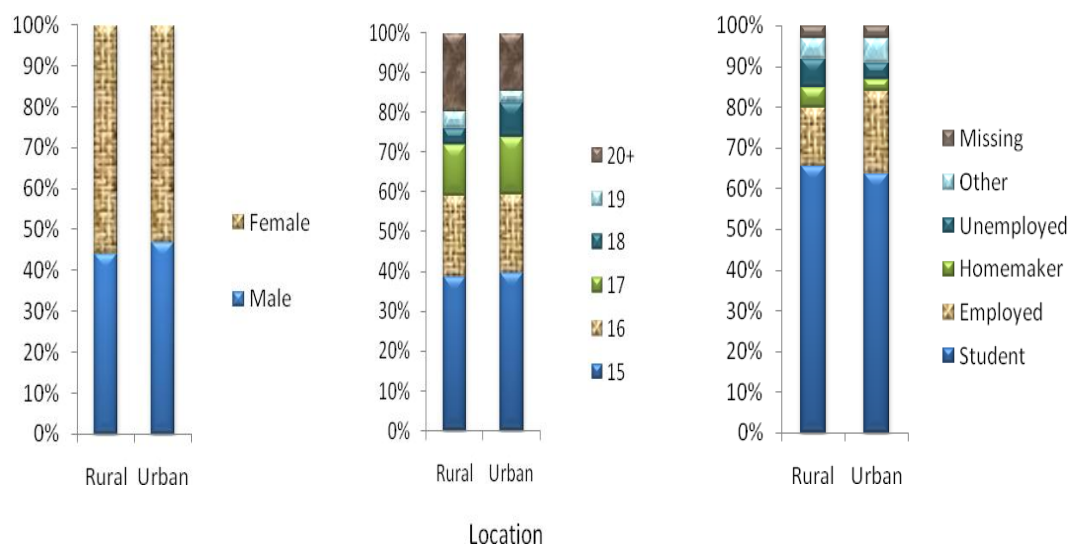


Figure 1. Demographic factors gender, age at licensure and main current activity by location.

Table 2 reports the car driving characteristics for on-road driving only. In the full cohort over half (57%) were under the legal driving age of 15 when they first drove a car on-road. Thirty seven percent had driven a car on-road less than 6 times, constituting very little exposure, but a further 44% had high levels of exposure reporting driving a car on-road more than twenty times. More than half (58%) of the cohort had driven less than one hundred kilometres pre-licence, but another large group (27%) had driven further than two hundred kilometres in total. The most common reason for pre-licence car driving on-road was to learn to drive (35%), however also of interest is the group who report a sober driver being required as the reason for driving (14%).

Similar to the full cohort, half of the participants in each location group had driven before the age of 15, however the percentage was higher in the rural group (rural 61%, urban 51%). Both location groups had a substantial proportion who reported driving a car, on-road more than twenty times (40% urban and 48% rural) and over half of each group (urban 59% and rural 57%) had driven less than one hundred kilometres in total. Again (similar to the full cohort) learning to drive was the most common reason for driving a car in both groups (urban 36% and rural 35%). Overall the amount of driving, age at first drive, total distance travelled

and reason for driving a car on-road, pre-licence were very similar for participants living in rural and urban locations.

Table 3 reports the pre-licence car driving experience for off-road driving. Twenty eight percent of participants had never driven a car in an off-road situation. For those people who had driven off-road, almost two thirds (65%) did so before the age of 15. More than a third of those who had driven (40%) had done so less than six times. The majority (76%) had driven less than one hundred kilometres in distance. Learning to drive was again the main reason for pre-licence driving but farm work also became a prominent reason (22%).

Table 2. On-road, pre-licence CAR driving experience.

| | Full Cohort | | Urban | | Rural | |
|--|-------------|------------|------------|------------|------------|------------|
| | n | % | n | % | n | % |
| Age when first drove | | | | | | |
| 1 - 14 years | 328 | (57) | 121 | (51) | 207 | (61) |
| 15 - 19 years | 216 | (37) | 105 | (44) | 111 | (32) |
| 20 - 24 years | 13 | (2) | 5 | (2) | 8 | (2) |
| 25+ years | 6 | (1) | 0 | (0) | 6 | (2) |
| Missing | 17 | (3) | 7 | (3) | 10 | (3) |
| | 580 | 100 | 238 | 100 | 342 | 100 |
| Number of times driven | | | | | | |
| Never | 36 | (6) | 19 | (7) | 17 | (5) |
| 1 - 5 times | 188 | (31) | 87 | (34) | 101 | (28) |
| 6 - 20 times | 104 | (17) | 42 | (16) | 62 | (17) |
| 20+ times | 273 | (44) | 102 | (40) | 171 | (48) |
| Missing | 15 | (2) | 7 | (3) | 8 | (2) |
| | 616 | 100 | 257 | 100 | 359 | 100 |
| Distance travelled when driving | | | | | | |
| 1 -10 km | 119 | (21) | 59 | (25) | 60 | (18) |
| 11 - 100 km | 213 | (37) | 80 | (34) | 133 | (39) |
| 101 - 200 km | 65 | (11) | 28 | (12) | 37 | (11) |
| 201+ km | 159 | (27) | 62 | (26) | 97 | (28) |
| Missing | 24 | (4) | 9 | (4) | 15 | (4) |
| | 580 | 100 | 238 | 100 | 342 | 100 |
| Reason for driving | | | | | | |
| Learning to drive | 444 | (35) | 185 | (36) | 259 | (35) |
| Travel to School | 53 | (4) | 27 | (5) | 26 | (3) |
| Travel to Work | 79 | (6) | 32 | (6) | 47 | (6) |
| Travel to Sport | 65 | (5) | 31 | (6) | 34 | (5) |
| Farm Work | 87 | (7) | 25 | (5) | 62 | (8) |
| A Sober Driver | 180 | (14) | 72 | (14) | 108 | (14) |
| For Social Reasons | 117 | (9) | 49 | (10) | 68 | (9) |
| No Specific Reason | 160 | (13) | 65 | (13) | 95 | (13) |
| Other | 67 | (5) | 22 | (4) | 45 | (6) |
| Missing | 9 | (1) | 3 | (1) | 6 | (1) |
| | 1261 | 100 | 511 | 100 | 750 | 100 |

Table 3. Off-road, pre-licence CAR driving experience.

| | Full Cohort | | Urban | | Rural | |
|--|-------------|------------|------------|------------|------------|------------|
| | n | % | n | % | n | % |
| Age when first drove | | | | | | |
| 1 - 14 years | 289 | (65) | 101 | (60) | 188 | (68) |
| 15 - 19 years | 118 | (26) | 51 | (30) | 67 | (24) |
| 20 - 24 years | 10 | (2) | 2 | (1) | 8 | (3) |
| 25+ years | 8 | (2) | 3 | (2) | 5 | (2) |
| Missing | 21 | (5) | 12 | (7) | 9 | (3) |
| | 446 | 100 | 169 | 100 | 277 | 100 |
| Number of times driven | | | | | | |
| Never | 170 | (28) | 88 | (34) | 82 | (23) |
| 1 - 5 times | 182 | (29) | 89 | (35) | 93 | (26) |
| 6 - 20 times | 109 | (18) | 32 | (12) | 77 | (21) |
| 20+ times | 143 | (23) | 43 | (17) | 100 | (28) |
| Missing | 12 | (2) | 5 | (2) | 7 | (2) |
| | 616 | 100 | 257 | 100 | 359 | 100 |
| Distance travelled when driving | | | | | | |
| 1 -10 km | 147 | (33) | 105 | (62) | 151 | (55) |
| 11 - 100 km | 193 | (43) | 27 | (16) | 57 | (21) |
| 101 - 200 km | 28 | (6) | 10 | (6) | 18 | (6) |
| 201+ km | 57 | (13) | 18 | (11) | 39 | (14) |
| Missing | 21 | (5) | 9 | (5) | 12 | (4) |
| | 446 | 100 | 169 | 100 | 277 | 100 |
| Reason for driving | | | | | | |
| Learning to drive | 312 | (45) | 118 | (48) | 194 | (44) |
| For sport (speedway) | 19 | (3) | 7 | (3) | 12 | (3) |
| Farm Work | 150 | (22) | 43 | (17) | 107 | (24) |
| No Specific Reason | 142 | (20) | 58 | (23) | 84 | (19) |
| Other | 54 | (8) | 15 | (6) | 39 | (9) |
| Missing | 15 | (2) | 7 | (3) | 8 | (2) |
| | 692 | 100 | 248 | 100 | 444 | 100 |

As expected more urban participants had never driven off-road. Additionally, when the number of times driven for each group was analysed it is clear that the two location groups are at different ends of the exposure spectrum with the largest group of urban off-road drivers making less than six trips (35%) and the largest rural group driving in excess of twenty times (28%). However the groups were similarly matched for age at first drive with over half of the participants in each group driving before their fifteenth birthday (urban 60% and rural 68%). The total distance travelled was also very similar as the majority of each group had driven less than one hundred kilometres (urban 78% and rural 76%). The most common reason for driving in both groups was to learn to drive (urban 48% and rural 44%); this was followed by farm work for both groups (rural 24%, urban 17%).

Table 4. Driver licensing and pre-licence driving behaviour by rural and urban location.

| | Urban | | Rural | | ChiSq | |
|--|------------|------------|------------|------------|--------------|-------------------|
| | n | % | n | % | (1 d.f.) | p value |
| Course Attendance | | | | | | |
| Yes | 194 | (49) | 340 | (79) | | |
| No | 195 | (49) | 84 | (20) | 82.72 | <0.0001 |
| Missing* | 8 | (2) | 3 | (1) | | |
| | 397 | 100 | 427 | 100 | | |
| Ever driven a: | | | | | | |
| Car (includes vans & utilities) | | | | | | |
| No | 96 | (24) | 64 | (15) | | |
| Yes | 257 | (65) | 359 | (84) | 17.11 | <0.0001 |
| Missing* | 44 | (11) | 4 | (1) | | |
| | 397 | 100 | 427 | 100 | | |
| Motorcycle (2 wheeler) | | | | | | |
| No | 267 | (67) | 272 | (64) | | |
| Yes | 81 | (20) | 150 | (35) | 13.67 | 0.0002 |
| Missing* | 49 | (13) | 5 | (1) | | |
| | 397 | 100 | 427 | 100 | | |
| 3 or 4 wheeler motorbike (ATV) | | | | | | |
| No | 227 | (57) | 187 | (44) | | |
| Yes | 121 | (30) | 234 | (55) | 33.20 | <0.0001 |
| Missing* | 49 | (13) | 6 | (1) | | |
| | 397 | 100 | 427 | 100 | | |

*missing responses are excluded from Chi Squared tests

Table 4 reports on the results of the statistical analyses to compare urban and rural participants. Specifically looking at how the licensing process was undertaken (whether or not they attended a learner licence course) and also whether participants had pre-licence driving experience with any of the three types of vehicle referred to in the questionnaire. Compared to the participants living in urban centres, attending a learner licence course before sitting the theory test was significantly more likely for participants who lived in rural areas. Additionally, participants living in rural locations, when compared to their urban counterparts, were also significantly more likely to have been a pre-licence driver of all three types of vehicle, especially 3 or 4 wheeler motorbikes.

Discussion

This study provided a unique opportunity to examine the nature and extent of pre-licence driving experience in a cohort of newly licensed Māori drivers and to compare those living in rural and urban areas. The results showed that over half of the cohort got their learner licence before they were 17 (within the first two years of eligibility). It follows then that nearly half of the cohort were still attending secondary school at the time of licensure, as the school leaving age in New Zealand is 16 years.

The demographic make-up of the rural and urban groups was very similar. The similarity in age at licensure was of particular interest. The increased need to travel large distances for school, sport and work commitments is often stated as an important reason for rural adolescents obtaining their learner licence as

soon as they are eligible and therefore it would have been reasonable to expect the rural participants as to be younger (than their urban counterparts) at the time of licensure. This was not the case and in fact the only notable difference in age at licensure was the large rural group who were twenty years or older when they got their licence for the first time. Likewise, the main current activity was also very similar between the groups and not surprising, given the predominantly young age at licensure over half of each group were classified as students. Of those not classified as students the rural group did have a larger proportion of unemployed people compared to their urban counterparts. This may simply reflect overall employment rates in these areas.

Although motorcycle and 3 or 4 wheeler (ATV) driving was also asked about in the baseline questionnaire, it was the pre-licence car driving that we were interested in and is the most common type of vehicle on New Zealand roads. For on-road car driving the experiences by location were very similar. Over half of each group had driven before turning fifteen. Over a third of both groups had a relatively high level of pre-licence driving experience having driven on more than twenty occasions but in doing this had travelled less than one hundred kilometres. The dominant reason for this driving in both groups was specifically to learn to drive. Interestingly both groups reported being a sober driver as the second most common reason for pre-licence driving. The prevalence of this as a reason for pre-licence driving was unexpected. In addition to this it is surprising the levels were so similar between the groups. Given the lack of public transport and taxi services in many rural areas it would have been reasonable to expect this to be more of a rural phenomenon. The rudimentary way in which location was classified may have had some effect on this result. The classification was split very simply with the urban group consisting only of the four most populated metropolitan areas in New Zealand. All other areas were classified as rural which meant that this group included many towns and cities quite different in size and population. For example Ruatoria a small and very remote town in the upper East Coast of the North Island and Invercargill the largest city in the Southland region were both classified as rural locations. The pre-licence driving experiences between these two locations, both classified as rural in the present study, would likely be quite dissimilar.

Compared to on-road car driving more of the full cohort had never driven a car off-road, this is especially true for the urban group with one third reporting no off-road driving at all. From all those that had driven off-road, the rural group were far more experienced with the largest proportion of this group reporting they had driven off-road on more than twenty occasions. In comparison the majority of urban participants who had driven off-road had more limited experience driving less than six times in total.

Similar to the on-road driving, in both locations the majority of people, who had driven, first did so before they turned fifteen. However the distance covered off-road was much smaller with over half in each group travelling less than eleven kilometres in total. Learning to drive was still the most common reason for driving however for the rural group farm work also became a common reason for driving. This is as you would expect as most driving for farm purposes is off-road. While off-road driving illustrated some increased variability between the rural and urban groups the pre-licence car driving experiences of these two geographically different groups was surprisingly similar in nature and extent. Again the rudimentary way in which location was categorised may have affected this.

Additionally, while it was not the focus of this research it would also be of interest to investigate further these pre-licence driving factors for motorcycles and ATVs as rural participants were significantly more likely to have 'ever driven' both of these vehicle types when compared to their urban counterparts. It is likely the nature and extent of pre-licence driving with these vehicles, especially off-road would be quite different between the two location groups.

The process by which the participants obtained their learner licence showed interesting differences within the cohort. Participants living in rural areas were significantly more likely to attend a learner licence theory course than those living in urban areas with 79% of the rural participants attending a course before sitting their theory test (compared to 49% in urban areas). The majority of learner licence courses were held on the East Coast of the North Island (Hastings, Napier, Wairoa, Gisborne and Ruatoria) and in South Auckland, areas which were targeted in the NZDS recruitment for their relatively high Māori population base. The organisations running the courses in these areas were employed directly by the NZDS to complete recruitment

which, in the course situation was invaluable as the courses had very high pass and subsequent NZDS participation rates. However the recruitment undertaken at licensing centres by these organisations was, for a number of reasons, not successful, especially in the rural areas. Therefore the large difference in learner licence course attendance may be an artefact of the NZDS recruitment methods and consequently not necessarily representative of the way the Māori population as a whole choose to undertake driver licensing in New Zealand.

The idea behind learner licence courses is to get people driving legally and to make the licensing process an affordable and positive experience. With this in mind it would have been reasonable to expect that the demographic make-up of the rural and urban groups would be quite dissimilar. In particular the rural participants who were predominantly from course recruitment could have been, as a group much younger than their urban counterparts when they first got their licence. The focus of the course recruitment in each location may explain why this is not the case. The rural courses were predominantly run by iwi based community groups encouraging people of all ages to attend, whereas the urban courses were most often school based and therefore incorporated the class groups with mostly fifteen and sixteen year old students in them. Therefore course recruitment may have increased the number of young participants in the urban areas and also increasing the older (20 years and older) drivers attending the rural courses.

In summary the results from this study show that the nature and extent of pre-licence car driving experience between newly licensed Māori drivers living in rural and urban locations of New Zealand is quite similar. However the rudimentary way in which location is classified and the recruitment methods employed in different geographical areas may have affected these findings. Further research addressing the issues associated with rural and urban classifications and also the effect of different recruitment methods within a cohort this size would be useful.

Acknowledgements

The New Zealand Drivers Study is jointly funded by the Health Research Council of New Zealand, the Accident Compensation Corporation (ACC) and the Road Safety Trust. The support during recruitment from the New Zealand Automobile Association (NZAA) and the ongoing assistance from the Driver Licensing Registry (DLR) are also appreciated. The support of Rebecca Brookland, as Project Manager of the NZDS is also acknowledged.

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