The Novice Rider Study
Final report

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Contents

1 The background to the study

The resurgence of interest in motorcycling in recent years has led to a substantial increase in the number of motorcycles on the road and to more crashes and casualties. In Australia, over the past five years there has been an annual average increase in the number of registered motorcycles by 7% and the number of motorcycle crash casualties by 4%. These figures represent more than 200 motorcyclists killed and over 5,000 hospitalised every year (Johnston, Brooks et al. 2008).

The protective benefits of motorcycle helmets are well established and their usage widely promoted (Liu, Ivers et al. 2008; Mertz and Weiss 2008; Moskal, Martin et al. 2008). There has been less focus on other forms of motorcycle protective clothing, although the injury reduction potential has been well established by researchers for many years (Feldkamp and Junghanns 1976; Zettas J.P.; Zettas P. & Thanasophon 1979; Hurt, Ouellet et al. 1981; Schuller, Beier et al. 1982; Schuller, Beir et al. 1986; Otte and Middelhauve 1987; Hell and Lob 1993; Otte, Schroeder et al. 2002; ACEM 2004). Over twenty years ago, Schuller found that injured riders, who had been wearing protective clothing, averaged seven days less in hospital and were able to return to work twenty days earlier that unprotected riders (Schuller, Beir et al. 1986). More recently, Otte reported on the potential benefits of impact protectors in reducing the complexity and severity of leg fractures (Otte, Schroeder et al. 2002 (b)).

While protective clothing can only contribute to the prevention or reduction of soft tissue injuries and some fractures, this is not a trivial benefit. Such injuries account for almost half (49%) of all the injuries recorded in a recent European motorcycle crash study and were the most serious injury suffered by 39% of all rider casualties (ACEM 2004). Such injuries are not life threatening, but they may have severe long term consequences for the rider in terms of loss of mobility (Clarke and Langley 1995).

Despite the well documented benefits, it is apparent that many riders do not make use of the range of available protective clothing product (Hurt, Ouellet et al. 1981; Benton 2002; ACEM 2004; de Rome 2006; Watson, Wishart et al. 2008). Little is known about the factors associated with usage or non-usage of motorcycle protective clothing nor the process by which riders decide on the type of protection they require. This lack of information inhibits the development of programs aimed at increasing the use of protective clothing.

The Novice Rider Study is a cross sectional survey of novice riders in NSW. The aim of the study was to identify the factors associated with the usage and non-usage of protective clothing by novice riders. The objective was to inform strategies designed to encourage the usage of protective clothing by motorcyclists. This report is a descriptive account comparing the responses of those novices who were new riders to others who had at least some prior riding experience. Further analysis, to be reported separately, will be undertaken to investigate associations between these factors and participants' usage or non-usage of protective clothing.

2 Population and method

The graduated rider licensing scheme in NSW requires all riders to attend compulsory training courses at two stages in the licensing process. This provided an opportunity to access a representative sample of novice riders early in their riding careers. Riders were surveyed when they attended the second course for their Provisional Licence test, rather than the initial learn-to-ride course, in order to ensure that all participants had at least three months riding experience.

The target population consisted of all riders attending Pre-Provisional rider training courses operated by the selected providers between March and August 2008. Novice riders are defined as those who have not previously held either a provisional or full motorcycle licence in NSW or elsewhere. While the majority of riders attending the courses are new riders, a proportion have some prior riding experience and are completing the course in order to obtain or renew a NSW licence.

2.1 Method

The three major rider training companies in NSW, (Ride It Right, Stay Up Right and Honda Australia Roadcraft Training, agreed to distribute surveys to riders attending their courses. These providers manage 14 of the 21 novice rider training centres in NSW and provided access to riders from urban and regional centres along the coastal strip north and south of Sydney including the Hunter, Sydney Basin and Illawarra regions. Course bookings are managed centrally by the Roads and Traffic Authority and places assigned on the basis of availability and location.

Only full- time, or permanently employed, rider trainers were involved in the study. There does not appear to be any systematic difference in the time or day of the week when these trainers worked compared to casual staff, which might have biased the selection of participants.

The trainers distributed the questionnaire during the lunch break to all participants in their courses during the study period. Participants were provided with information about the study and assured that all information was confidential and anonymous, and participation was voluntary. They were asked to complete and then seal the questionnaires in envelopes, which were collected by the training instructor for return to the researchers. As these are small group courses with a maximum of six participants, any not wishing to take part, were advised to protect their anonymity by returning the blank questionnaire sealed in the envelope provided. Participants could also choose to take the questionnaires home for subsequent mailing in the pre-paid addressed envelope.

The questionnaire was designed to be completed in 20 minutes and included questions about their usage of protective clothing and about a number of potential risk factors for novice riders including demographic details and the extent and variety of their rider learning practice. The University of Sydney Human Research Ethics Committee approved the study. Data was analysed using SAS V9.1.

2.2 Study population and sample size

An average of 9,000 novice riders complete the pre-provisional training course in NSW each year. Assuming that 30% of novice riders wear protective clothing and ensuring the 95% confidence interval is within 4% of the point estimate, the minimum sample size of usable surveys was calculated to be approximately 500. In order to allow for up to half of the returned questionnaires to be blank or incomplete, a target was set for 1,000 questionnaires returned.

3 Results

3.1 Respondents

A total of 1,112 questionnaires were returned to the research centre, including 106 blank and 3 with less than 10% of the questions completed. Usable questionnaires were obtained from 1003 riders, representing 85% of all riders from courses included in the study and 36% of all riders enrolled at the training centres during the study period.

Over eighty percent (81%) of the participants were novices obtaining a rider's licence for the first time. The remainder had some form of prior riding experience. These included: experienced off-road riders (10%) seeking a license to ride on-road; older riders returning to motorcycling after a break (4%); riders from other jurisdictions converting to a NSW licence (3%); and those renewing their licence after a period of disqualification (1%). For the purposes of this study, participants are classified as either Novices (81%) or Experienced riders (19%).

Table 1. Rider licence status - Novice or other by gender.

Rider status	Total	
New rider	816	81%
Experienced off-road rider	102	10%
Returning rider	45	4%
Renewing cancelled licence	7	1%
Converting license from other State	25	3%
Other status	7	1%
Total	1003	100%

3.2 Age and gender[1]

The average age of the Novice riders, was 32.7 years compared to those with some experience who had a mean age of 35.6 years.[2] The age distribution was similar between the two groups but there were relatively more young Novices (Aged ≤ 25) and fewer older Novices (Aged ≥ 40).

Table 2. Rider status by age group

Rider status	Aged ≤ 25		26-39		Aged ≥40		Total	
Novice	201	30%	310	46%	167	25%	678	100%
Experienced	36	24%	63	43%	49	33%	148	100%
Total	237	29%	373	45%	216	26%	826	100%

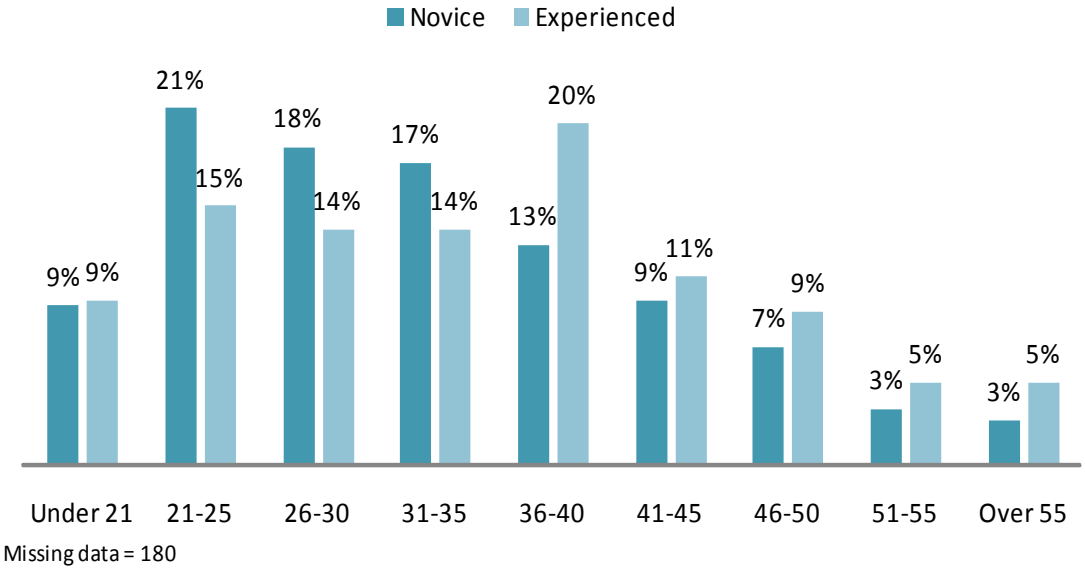
Missing data = 180

Figure 1 compares the age groups of Novice and experience riders in five year bands. It is apparent that, although young riders (Aged ≤ 25) comprised 29% of all participants, those aged 21-25 comprised the single largest age concentration (21%) of Novice riders. Young adults in their late thirties (36 - 39 years) comprised the largest concentration of Experienced riders.

[1] Note: We are waiting on information from the RTA to establish the age and gender distribution of the population of novice riders.

[2] Note: 17% of participants did not complete the last page of the survey which included demographic questions. Those for whom the demographic information is missing, were more likely to be Experienced riders (21%) than Novices (16%).

Figure 1. Age group of participants by rider status.



Women made up just 14% of all participants and were more likely to be Novices (16%) than Experienced riders (6%). See Table 3.

Table 3. Gender by rider status - Novice or with prior experience.

Rider status	Male		Female		Missing		Total	
Novice	552	68%	133	16%	130	16%	815	81%
Experienced	138	73%	11	6%	39	21%	188	19%
Total	690	69%	144	14%	169	17%	1003	100%

3.3 Commitments

Riders were asked about their relationship commitments in terms of partners and children. Half of the participants (50%), were co-habiting (married or living in de-facto relationships) and less than a third had dependent children (27%). There was little difference on either of these factors between the Novice and Experience riders. Tables 8 and 9 illustrate relationship and child responsibilities by rider status.

Table 4. Rider status by relationship status.

Relationship status	Single		Dating		Co-habiting		Separated		Total	
Novice	194	29%	122	18%	337	50%	25	4%	678	100%
Experienced	31	21%	34	23%	71	49%	10	7%	146	100%
Total	225	27%	156	19%	408	50%	35	4	821	100%

Note: Missing data = 182

3.4 Occupation

The majority of participants (82%) were in full time employment, a further 13% were either working part time (5%) or were students (6%). See Table 10.

Table 5. Occupation by rider status

Occupation	Novice		Experienced		Total	
Full-time work	555	82%	124	83%	679	82%
PT work	47	7%	6	4%	53	6%
Student	49	7%	10	7%	59	7%
Unemployed	13	2%	5	3%	18	2%
Not in workforce	15	2%	4	3%	19	2%
Total	679	100%	149	100%	828	100%

Note: Missing data = 175

3.5 Driving experience

The majority of participants (81%) held unrestricted driving licences and fourteen percent were novice drivers, only five percent were not licenced to drive a car. The novice drivers included 4% who held a Learner Driver licence, 2% with Provisional (Level 1) and 8% Provisional Level 2 licences.

The majority (71%) of those with unrestricted driving licences, including 69% of Novice riders, had over 10 years driving experience. The mean number of years of driving experience for a Novice rider was 16.9 compared to 19.7 years driving experience for the more experienced riders.

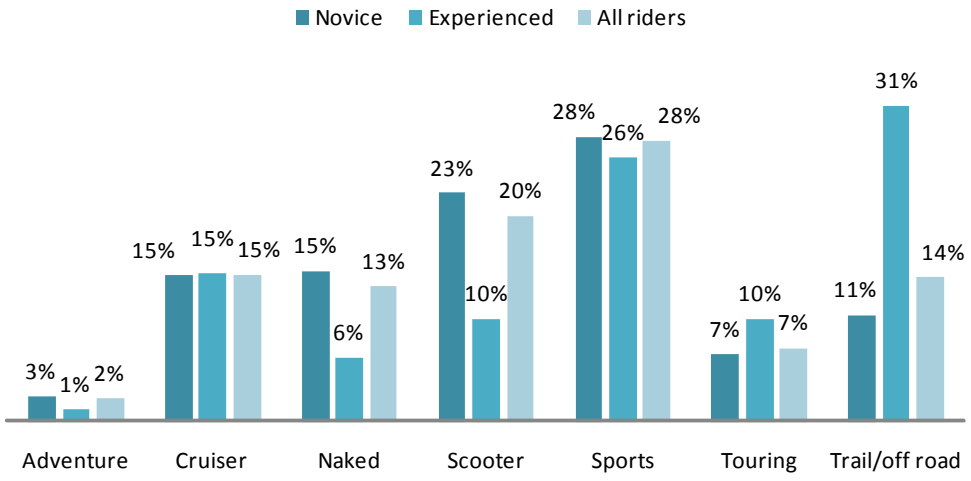
4 Type and usage of motorcycle

4.1 Type of motorcycle

Riders were asked about the type of motorcycle they used most frequently for on-road riding. The type of motorcycle was considered relevant as it is often associated with the style of protective clothing promoted in advertising.

Sports bikes (28%) and scooters (20%) were the most popular types of motorcycle, the remainder of participants were almost evenly divided between cruisers (15%), off-road/ trail (14%) and naked bikes (13%). There were some differences in the types of bikes ridden by the two groups. Novice riders were more likely to ride scooters (23% vs10%) and less likely to ride off-road bikes than were the Experienced riders (11% vs 31%). Figure 2 illustrates the pattern of motorcycle choice by rider status.

Figure 2. Type of motorcycle most frequently ridden (on road) by rider status.



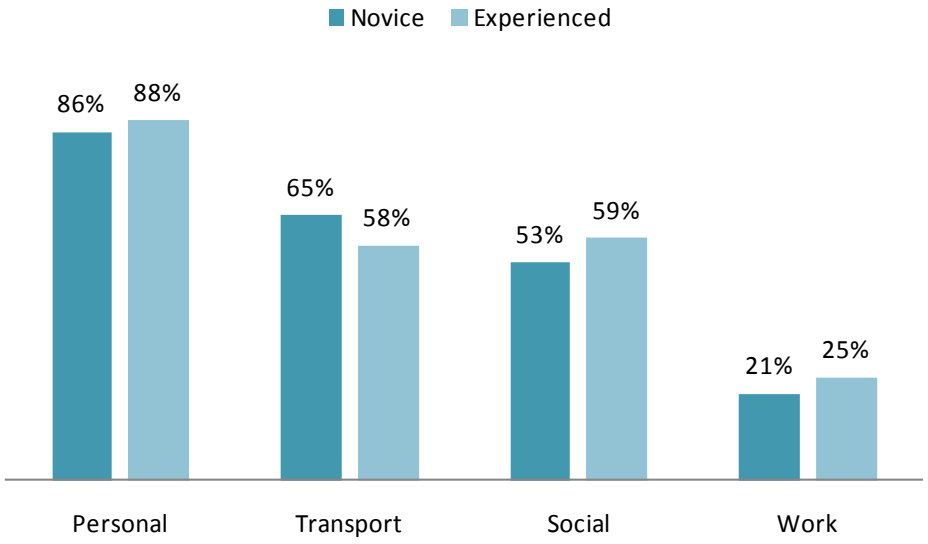
Note: Missing data = 129

4.2 Reasons for riding

Riders were asked about their reasons for riding. Options included transport related reasons such as convenience, cost or parking; Work related reasons such as being required as a part of their job or necessary to get a job; Social reasons such as having friends who ride or for the associated social activities; and finally Personal reasons, such as enjoying riding, or the feeling of freedom. Reponses were provided on a five point scale from 'very important' through to 'very unimportant'.

The responses on these items have been collapsed and re-coded into binomial categories, on which important or very important is scored as 1 and other responses as 0. Figure 2 illustrates the proportion of Novice and Experienced riders who rated each type of reason as being important or very important. It is apparent that the personal enjoyment of riding is a primary factor for most riders. Transport was important to almost two thirds of Novice riders (65%), but a smaller proportion of Experienced riders (58%), for whom the social aspects were equally important (59%).

Figure 3. The proportion of Novice and Experienced riders who ranked each reason as being either important or very important

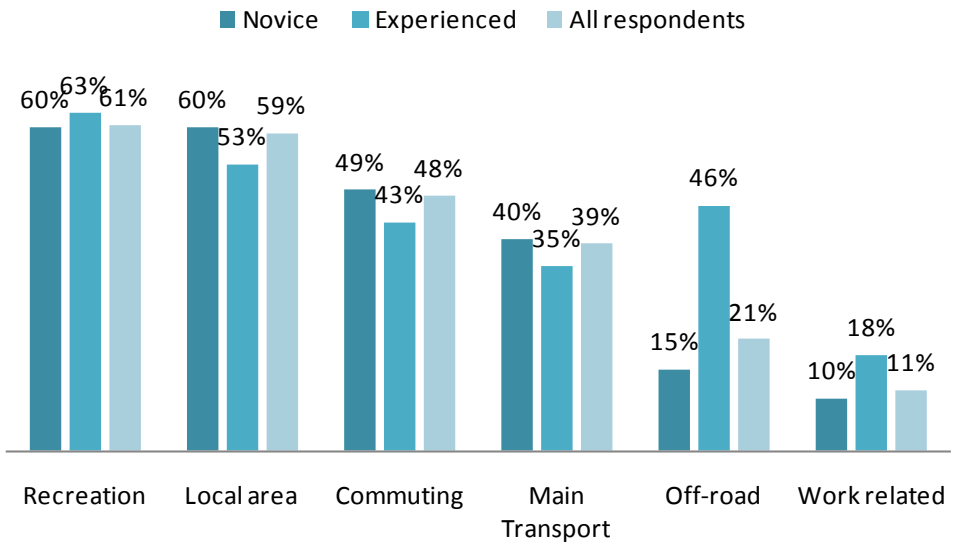


4.3 Types of journey

Riders were also asked to indicate how frequently their riding would involve different types of journey on a five point scale from 'very often' through to 'never'. Their responses were collapsed into binomial categories, in which 'very often' and 'often', were scored as one (1) and other responses as zero (0). Figure 3 shows the proportion of participants by rider status who reported riding often or very often for each of the listed types of journey.

Riders were more likely to report riding for recreation (61%) or around their local area (59%) often or very often, whereas commuting accounted for less than half (48%) and riding as the main form of transport accounted only 39%. There was little difference between the Novice and Experienced riders in the patterns of general riding. However Experienced riders were far more likely than Novice riders to ride off-road frequently (46% vs 15%) and to ride as a part of their job (18% vs 10%).

Figure 4. The proportion of Novice and Experienced riders whose riding often or very often involved each of the following.



5 Commitment to motorcycling

5.1 Investment in their motorcycle and gear

The question of motorcycle and gear ownership is of interest in this study as a measure of a riders' investment in motorcycling. This may be taken as an indicator of their commitment or lack of commitment to becoming a rider, which might confound other factors associated with the usage or non-usage of protective clothing.

The majority of participants owned the motorcycle (82%) and riding gear (89%) that they used. Experienced riders were slightly more likely than Novice riders to be riding a borrowed motorcycle (24% vs 17%), or gear (19% vs 9%). See Tables 3 and 4.

Table 6. Ownership of riding gear by rider status

Novice	Own all gear		Own some gear		Borrowed all gear		Total	
	n	%	n	%	n	%	n	%
Novice	705	91%	59	8%	12	2%	776	100%
Experienced	137	81%	25	15%	8	5%	170	100%
Total	842	89%	84	9%	20	2%	946	100%

Note: Missing data = 57

Table 7. Registered owner of the motorcycle or scooter most frequently ridden

	Novice		Experienced		Total	
	n	%	n	%	n	%
Own	590	83%	116	76%	706	82%
Family	33	5%	111	7%	44	5%
Friend	35	5%	141	9%	49	6%
Hire	30	4%	11	7%	41	5%
Spouse	25	4%	1	1%	26	3%
Total	713	100%	153	100%	866	100%

Note: Missing data = 137

5.2 Ownership and age

Age as a factor in the ownership of motorcycle is also of interest because motorcycle registrations are used as an estimate of the active rider population and their crash rate within each age group. It is apparent that a higher proportion (12%) of riders aged 25 years or less were riding a motorcycle that was registered to another member of their family than were older riders. See Table 5.

Table 8. Registered owner of the motorcycle or scooter most frequently ridden

	25 or younger		26-39		40 or older		Missing		Total	
	n	%	n	%	n	%	n	%	n	%
Family	27	12%	7	2%	6	3%	4	5%	44	5%
Friend	7	3%	27	8%	11	5%	4	5%	49	6%
Hired	2	1%	24	7%	13	6%	2	3%	41	5%
Owner	188	84%	278	79%	173	83%	67	86%	706	82%
Spouse	1	0%	18	5%	6	3%	1	1%	26	3%
Total	225	100%	354	100%	209	100%	78	100%	866	100%

Note: Missing data = 137

6 Riding practice and exposure

Riders were asked about their rider learning experience. Questions included the duration of their learner licensing period; any additional rider training or instruction they had received; the number of hours and kilometres ridden and the types of riding conditions they had experienced during their learning period.

6.1 Duration of learner licence period

Almost a third (30%) of all participants had held their Learner licence for no more than the minimum of three months. This included 130 riders who had held it for less than the minimum 3 months. The majority of these riders were aged 30 years or more and would have been exempted under the Mature Aged Riders Scheme (MARS)[3].

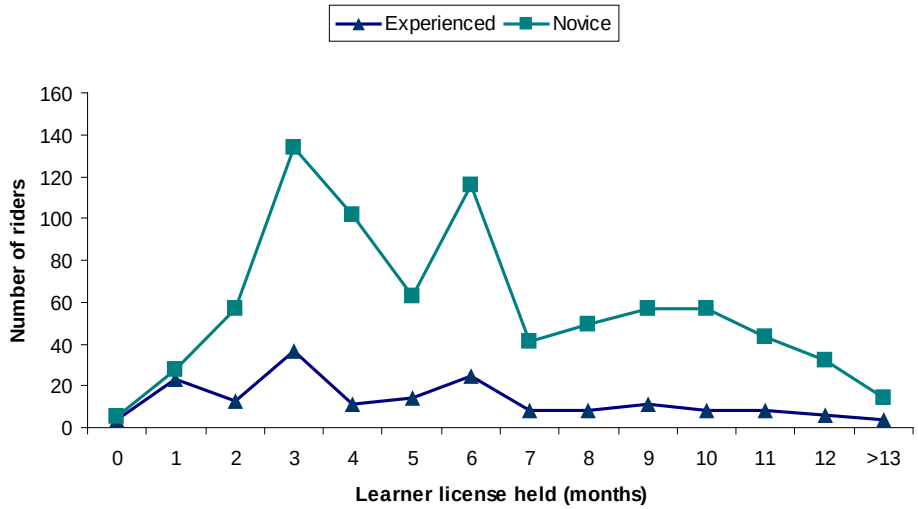
Table 9. How many months had they held their Learner Licence

Months/ rider status	< 3		3		4-6		7-9		10-12		≥13		Total	
Novice	90	11%	134	17%	281	35%	147	18%	132	17%	14	2%	798	100%
Experienced	40	22%	37	21%	50	28%	27	15%	22	12%	4	2%	180	100%
Total	130	13%	171	17%	331	34%	174	18%	154	16%	18	2%	978	100%

Missing data = 25

The reported period over which participants had held their Learner Licence, varied from zero through to 31 months in one case. In NSW, motorcycle learner licences were previously valid for a maximum of 6 months until July 2007, when this was extended to 12 months . As this survey was conducted between March and August 2008, most of the riders could have been on their first learner licence, just 2% had held their licence for more than 12 months indicating at least one licence renewal. See Figure 5.

Figure 5. Duration learner licence held (Months) by rider status.



[3] Under the MAR Scheme, drivers aged 30 or more who have held an unrestricted drivers licence for five consecutive years are not required to hold their learner's licence for the minimum 3 months before attempting the riding test. They are still required to complete both the pre-learner and pre-provisional training courses RTA (2007). Motorcycle Rider's Handbook. RTA, Roads and Traffic Authority: 72.

6.2 Training

Few participants had supplemented the compulsory learner training course with any further formal rider training at either commercial centres (6%) or motorcycle club novice sessions (2%). They were more likely to have gone on practice rides with a mentor /more experienced rider (19%) or sought informal advice from other riders (21%). A relatively high proportion (7%) had received some training when they hired a scooter while on holidays.

Table 10. Additional rider training by rider status

	Informal advice/other riders		Mentor/ more experienced rider		Hire company		Other commercial training		Motorcycle club novice sessions		Total	
Novice	175	21%	161	20%	64	8%	50	6%	19	2%	469	100%
Experienced	38	20%	32	17%	8	4%	14	7%	5	3%	97	100%
Total	213	21%	193	19%	72	7%	64	6%	24	2%	566	100%

6.3 Hours of riding practice

Riders were asked about their riding practice while on their learner licence in terms of the average number of hours they rode each week and the total number of kilometres and hours they had ridden since obtaining their licence. Table 7 shows the mean and median for Novice riders compared to Experienced riders for the number of hours per week and the total numbers of hours and kilometers ridden over the duration of their Learner Licence.

Excluding the extreme claims of a small number of participants (n=3), the average hours per week for Novice riders was 6.6 hours, whereas the Experienced riders reported riding more hours per week (mean = 7.3 hours). The median weekly hours for both groups was 5 hours. Novice riders had ridden an average of 100.9 hours and 2,132.7 kilometres compared to 90.5 hours and 1574.1 kilometres by Experienced riders.

There was a very wide range of responses in relation to questions about the total hours and total kilometers ridden since first obtaining their Learner Licence. This may be partially a factor of the varied lengths of time for which they had held their Learner Licence, but it may also mean that, at least, some of the participants had no idea of how many hours or kilometers they had ridden. Unlike learner drivers, learner riders are not required to maintain log books of their riding practice.

In order to estimate average total hours and kilometres, the more extreme claims of a small number of participants were excluded. [4]

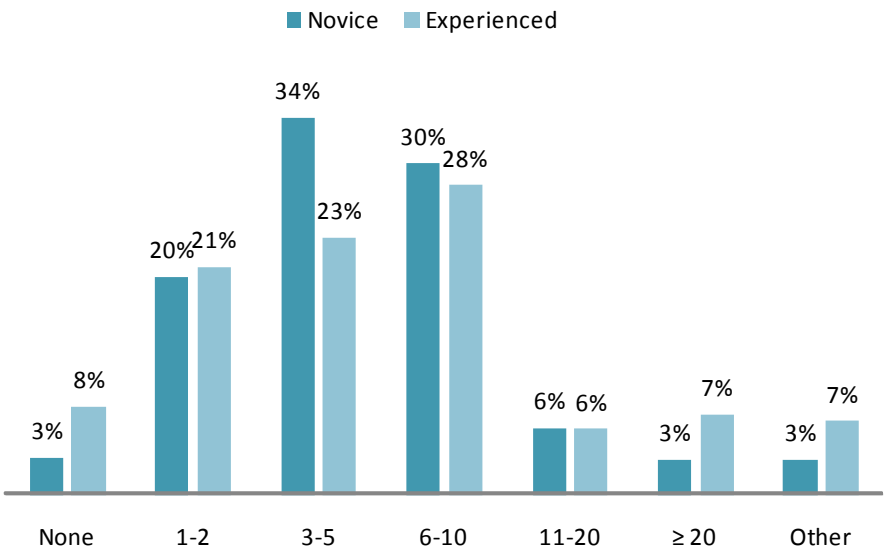
Table 11. Riding exposure in terms of hours per week and total hours and kilometres ridden for Novices compared to Experienced riders.

Riders	Novice			Experienced			All participants		
	n	Mean	Median	n	Mean	Median	n	Mean	Median
Hours per week	690	6.6	5.0	145	7.3	5.0	835	6.8	5.0
Total hours	700	100.9	60.0	145	90.5	50	845	99.1	60.0
Total kilometres	608	2132.7	1500	127	1574.1	1000	735	2035.7	1200

[4] Total hours ridden tabulated against the number of months they had held their Learner Licence, suggested that the 6% of novice who reported over 500 hours riding experience and the 2% of novice riders who reported riding over 10,500 kilometres were extremes and these were excluded from estimates of central tendency.

Almost two thirds (64%) of the Novice riders and half (51%) of the Experience riders, reported riding several hours each week since obtaining their Learner Licence. Only 3% of Novices but 8% of the Experienced riders, rode less than one hour per week.

Figure 6. Distribution of the average hours ridden each week since obtaining Learner Licence



Missing data = 153

Twenty percent (20%) of novice riders reported having less than 26 hours total riding practice and twenty five percent (25%) reported having ridden less than 501 kilometres in total prior to applying for their provisional licence. These figures were even higher for Experienced riders with 40% reporting less than 26 hours in total including 5% who had not ridden at all. See Figures 3 and 4. The data relating to the Experienced riders cannot be interpreted without reference to their previous riding experience, which was not a focus of this study.

Figure 7. Total hours ridden since obtaining Learner Licence

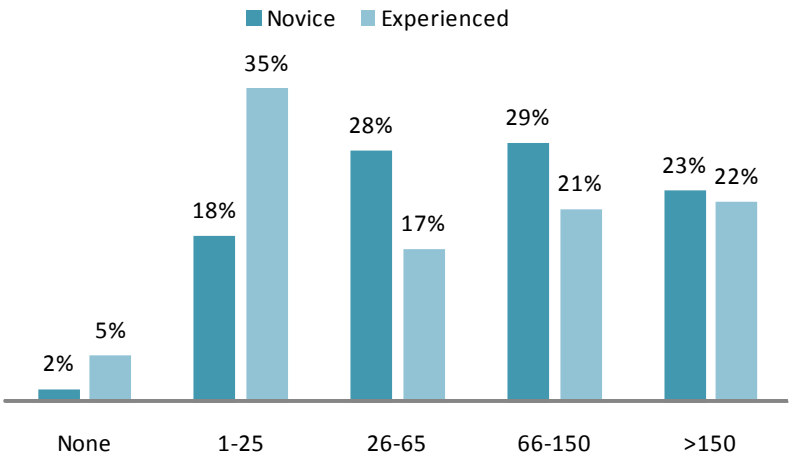


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Figure 8. Total kilometres ridden since obtaining their Learner Licence.

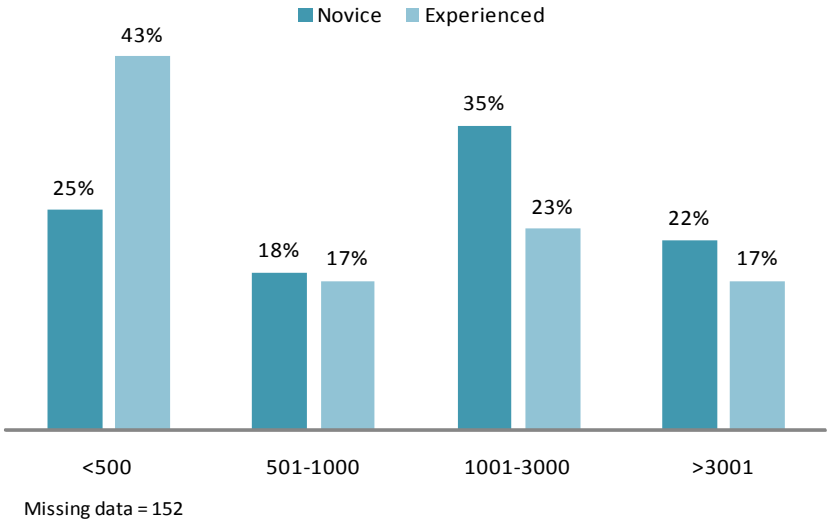


Table 7 shows the mean weekly and total hours, and the total kilometres ridden by those Novice riders, who had held their licences for three, six, nine and twelve months[5]. Those who had held their licence for the minimum period of 3 months, reported an average total of 87.7 hours compared to 123.6 for those with 6 months. (Note leveling off of hours and distance travelled over longer licensing duration.)

Table 12. Novice riders' average reported riding exposure in hours per week and total hours and kilometres ridden during Leaner Licensing period.

	3 months (n=134)	6 months (n=116)	9 months (n=57)	12 months (n=32)	All Novices (n=815)
Hours per week	7.3	6.8	5.3	5.7	6.6
Total hours	87.7	123.6	128.3	144.5	100.9
Total kilometres	2116.1	2459.1	2324.8	3840	2132.7

6.4 Learning to ride in adverse conditions

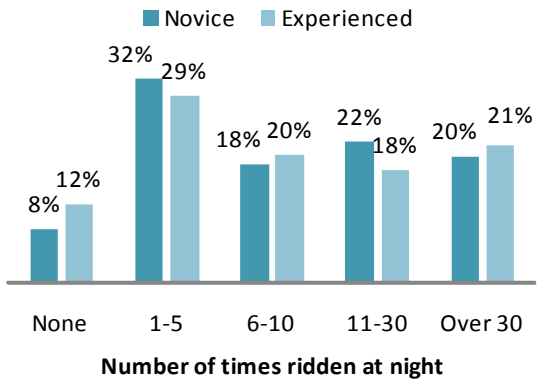
Riders were asked about the type of riding exposure and the number of times they had ridden in adverse conditions such as rain or dark, in heavy traffic or on high speed or winding rural roads. The majority of novice riders had little or no practice of riding in adverse or challenging conditions and, perhaps surprisingly, neither had many of the Experienced riders.

Overall forty percent of participants had limited night riding experience, including 31% with between 1-5 night riding experiences and nine percent with none. It is a matter for concern that higher proportion of the Experienced riders (12%) reported never having ridden at night.

Almost two thirds (62%) had little or no experience of riding in wet conditions. This included 13% who had no wet weather experience and 49% who had only ridden in wet weather between 1 and 5 times. A higher proportion of Experienced riders (18%) reported not having any wet weather experience compared to the Novices (13%). See Figure 6.

[5] Note this distribution is not provided for the Experienced riders, as a high proportion 41%) had held their Learner licence for 3 months or less.

Figure 9. Experience riding at night or in the rain by rider status.



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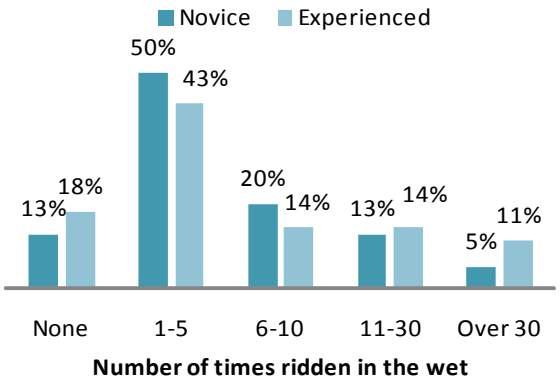

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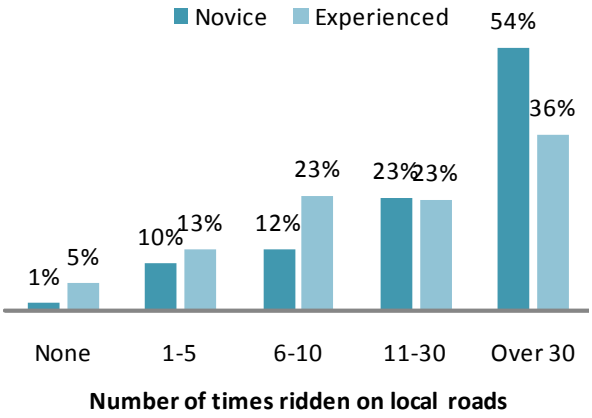
6.5 Learning to ride in traffic

It was apparent that most participants had spent most of their riding practice time on relatively low risk local roads compared to more challenging environments such as main roads or highways. Thirty two percent of Novices and 40% of the Experienced riders had little or no experience of riding on main roads or highways.

Figure 10. Experience riding on local and main roads or highways by rider status.



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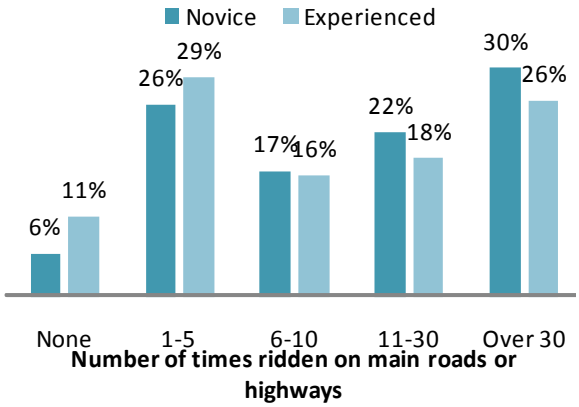
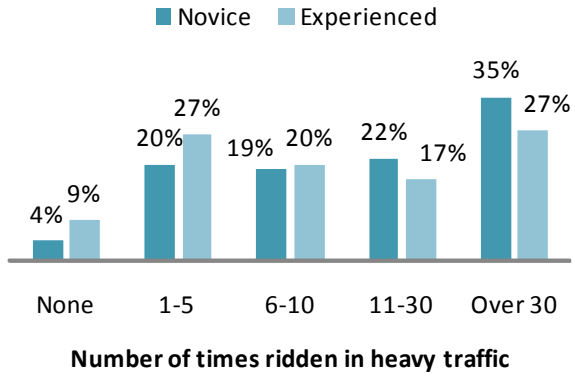


Missing data= 237

Apart from the types of road, riders were also asked about their experience of riding in different types of traffic. Over a quarter of all participants (26%) had little or no experience riding in heavy traffic and 46% had only ridden under such conditions less than 10 times before applying for their provisional licence. A similar proportion had never ridden in the town centre or CBD and a further 25% had done so only between one and five times.

Figure 8 compares the amount of experience of riding in heavy traffic or in the centre of a town or CBD as reported by Novice and Experienced riders.

Figure 11. Experience riding in heavy traffic or a CBD.



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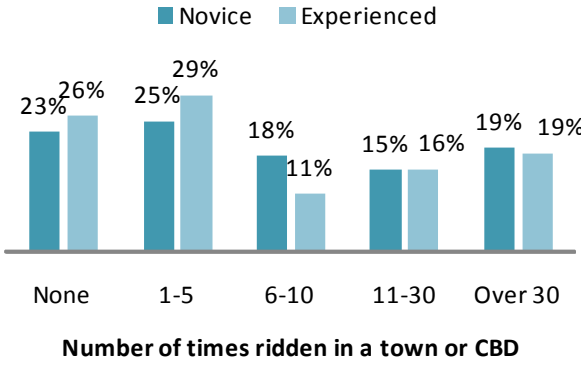

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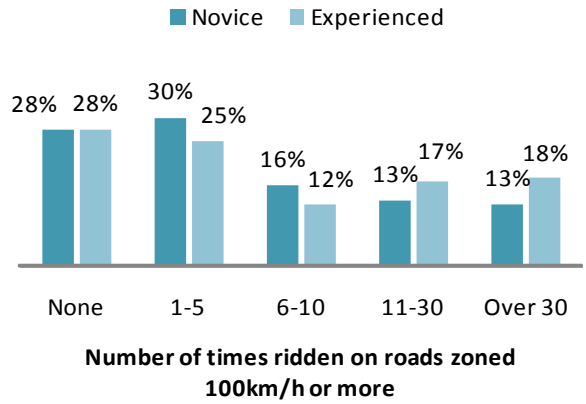
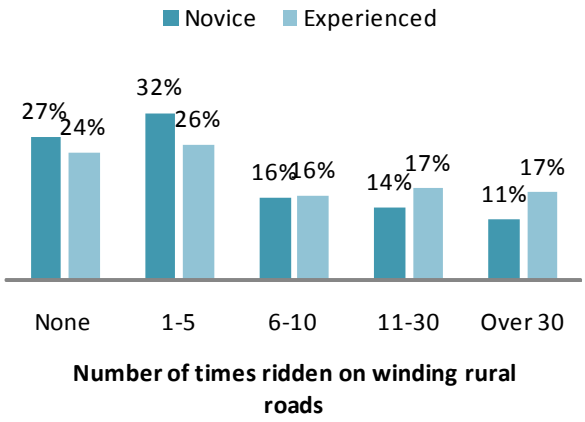
6.6 Learning to ride in higher speed zones and on winding rural roads.

The majority of participants had limited experience riding in high speed zones or on winding rural roads. Over a quarter (28%) reported that they had never ridden on a road zoned 100km/m or more, and a further 29% had done so only between one and five times. In addition, over half had little or no experience of riding on winding rural roads.

Figure 12. Experience riding in high speed zones or on winding rural roads by rider status.



Missing data = 231



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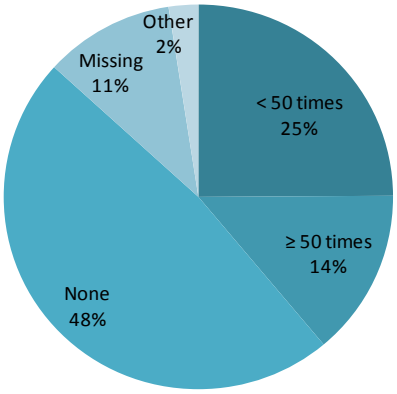
7 Risk taking

7.1 Unlicensed riding

Prior experience as a driver is sometime thought to be protective for learner riders (Haworth, Mulvihill et al. 2005). However, on-road riding and driving experience prior to obtaining the appropriate learner licences may also be taken as an indicator of risk taking. Participants were asked about any experience riding, on or off-road, prior to obtaining their learner licence, as a proxy for risk taking. It should be noted that there are no age restrictions for riding off road and motorcycle competition licences can be held from as young as seven years (Motorcycling Australia, Manual of Motorcycling Sport, 2009).

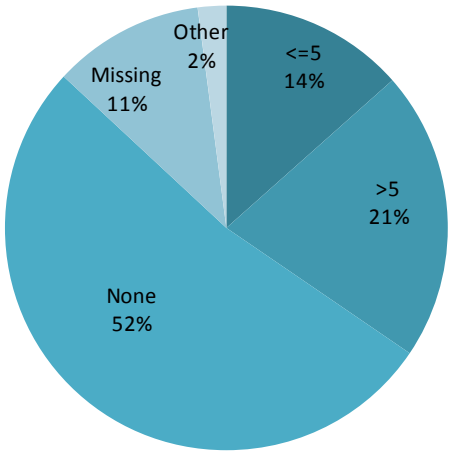
Almost forty percent (39%) of Novice riders had some off road riding experience, including 25% who had ridden off-road more than 50 times.

Figure 13. Number of times had ridden off-road before obtaining their Learner Licence. (Novice riders only)



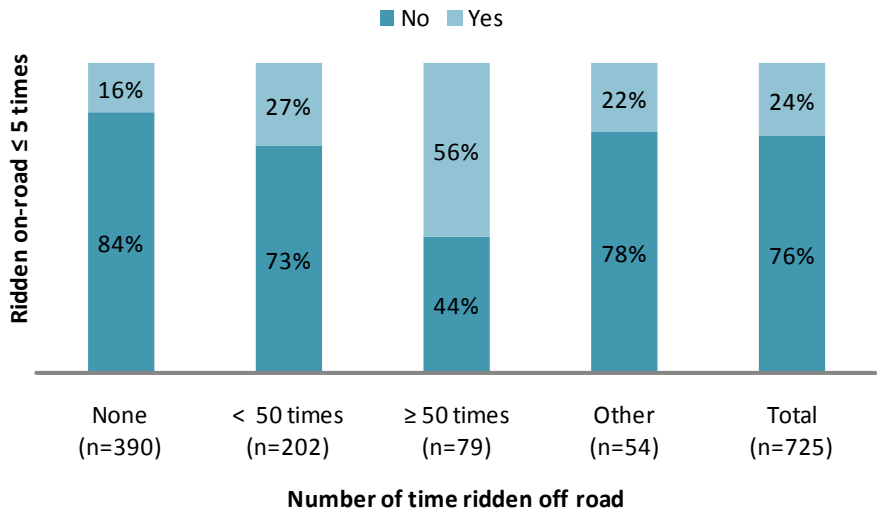
Over one third (35%) had some experience of riding on-road before obtaining their Learner Licence. Of these riders, 21% had ridden illegally more than five times.

Figure 14. Number of times had ridden on--road before obtaining their Learner Licence (Novice riders only).



Novice riders with prior off-road riding experience were more likely to have engaged in unlawful, on-road riding prior to obtaining a Learner Licence. Over half (56%), of those with extensive off-road experience (≥ 50 times), reported having ridden on-road more than 5 times before obtaining their Learner Licence. This compares to only 16% of those without off-road riding experience. See Figure 15.

Figure 15. Number of times had ridden on--road before obtaining their Learner Licence (Novice riders only).



7.2 Traffic violations

A high proportion, almost a quarter (23%) of participants had at least one traffic violation in the past 12 months. There was a slightly lower proportion of traffic violations amongst the Novice riders (23% vs 25%).

Table 13. Traffic violations in the past 12 months

Rider Status	None		Yes		Total	
Novice	519	77%	152	23%	672	100%
Experienced	109	75%	37	25%	146	100%
Total	628	77%	200	23%	817	100%

Missing data 186

7.3 Rider's perception of their own riding ability compared to others.

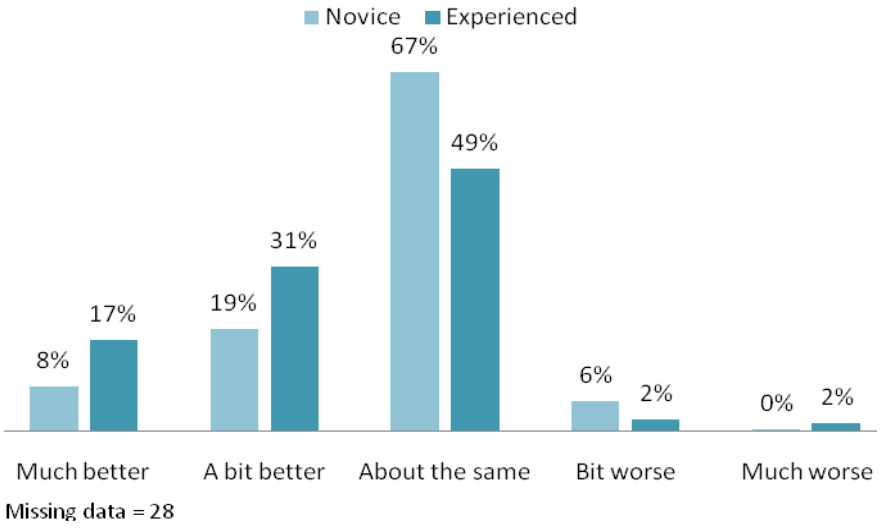
Riders were asked how they thought their riding ability compared to other novice riders at the same licensing stage and also to other riders in general [6].

The novice riders in the survey were fairly modest about their comparative riding ability. Over two thirds (67%) thought that they were about the same as other riders at the time they obtain their provisional licence. Nineteen percent (19%) thought that they were 'A bit better' and just 8%

[6] Note: the questions were taken from the NSW DRIVE study, which was based on the New Zealand driving cohort study, adapted from 1990 University of Colorado risky driving questionnaire. References?).

thought they were much better than their peers. As might be expected, a much higher proportion (48%), of the Experienced riders thought that they were 'Better' or 'Much better' than other novice at the provisional licensing stage. Very few from either group felt that they were worse than their peers. See Figure 16

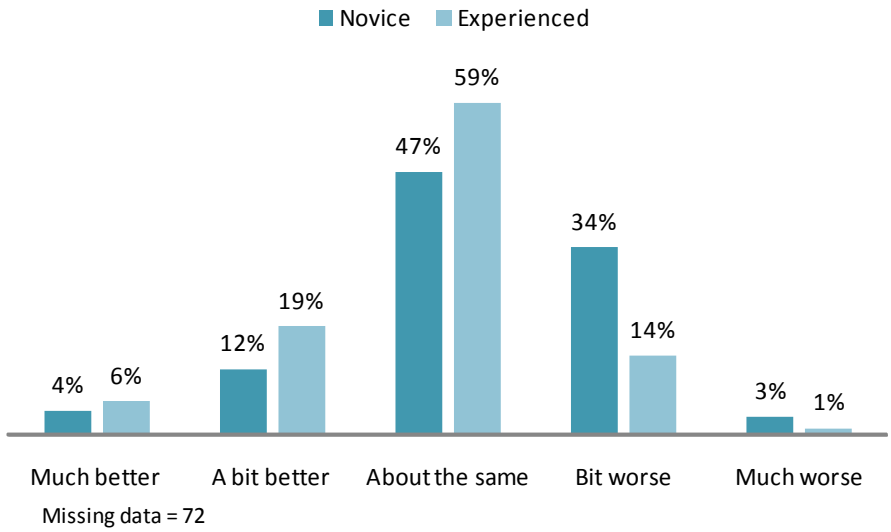
Figure 16. How they rate their own riding compared to others at the Provisional licence stage.



Asked to rate their own riding against other riders in general, Novice riders were likely to compare themselves less favourably than they had in relation to their peers. Over a third thought they were 'A bit worse' (34%) or 'Much worse (3%) than other riders in general.

By comparison, the Experienced riders were far less shy. A total of 85% rated themselves as 'About the same' or better than other riders in general. A quarter rated themselves as 'Better' (19%) or 'Much better' (6%) than other riders in general.

Figure 17. How they rate their own riding compared to other riders in general.



Riders were also asked how often they had felt that they were in danger while riding due to the actions of other road users or due to their own error/ misjudgement or to their own lack of skill. These questions were selected to identify the extent to which riders externalised responsibility or recognised their own contribution to high risk events. This is based on the view that those who

externalize responsibility for negative events fail to learn from the experience, and may be more likely to repeat the experience.

It was apparent that Novices were more likely than those with more experience, to believe that sometimes these situations were due to their own actions (see Figure 18), whereas a high proportion of the Experienced riders externalised responsibility for dangerous situations (see Figure 19).

Figure 18. How often Novice riders felt they were placed in danger due to the actions of other road users, or to their own error or lack of skill.

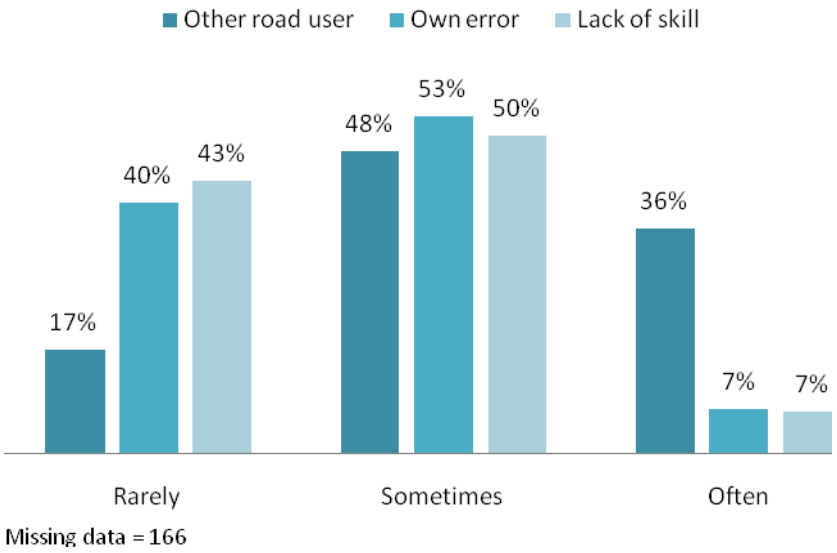
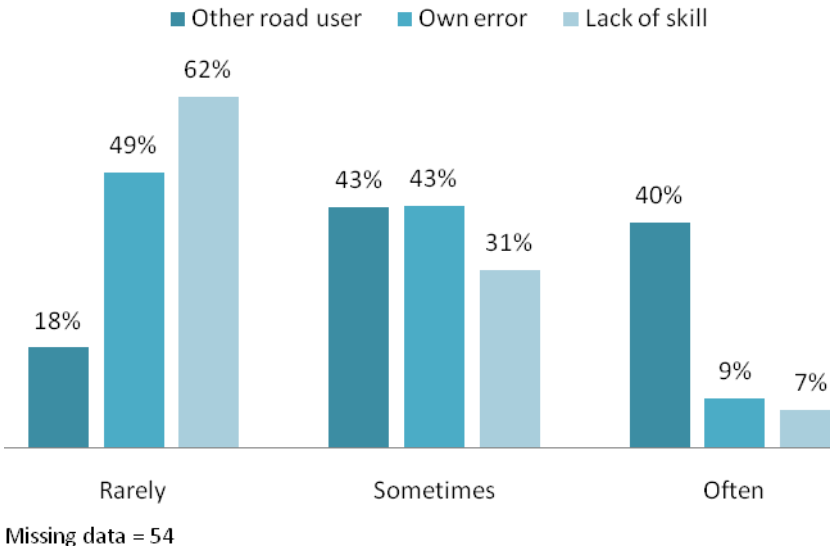


Figure 19. How often Experienced riders felt they were placed in danger due to the actions of other road users, or to their own error or lack of skill.



Riders were asked about their exposure to serious motorcycle crashes to determine whether such experience might have an effect on risk taking. Riders were asked whether they or anyone they knew had been involved in a serious motorcycle crash, in which anyone required medical treatment or where the motorcycle was too damaged to be able to be ridden. Almost half (48%) of the Novice riders and 63% of the Experienced riders, who responded to this question, knew of someone who had been involved in a serious motorcycle crash. There was a similar distribution of severity

amongst these crashes with22% resulting in fatality and 40% resulting in hospitalization for more than 24 hours.

Table 14. Exposure to serious motorcycle crashes by rider status.

	No		Yes			
Novice	331	52%	308	48%	689	100%
Experienced	51	37%	86	63%	137	100%
Total	382	49%	394	51%	776	100%

Missing data= 227

8 Protective clothing

8.1 What they usually wore

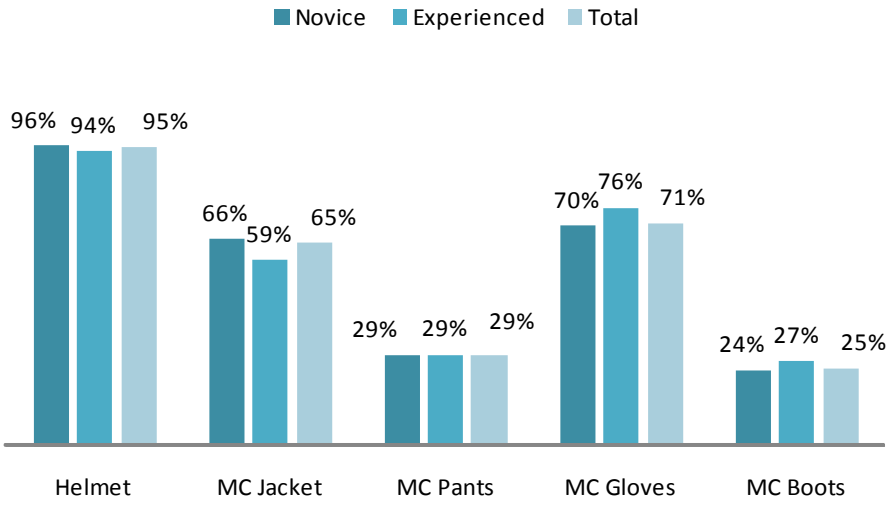
Riders were asked to identify the protective clothing products that they usually wore when riding. An option for riding unprotected (e.g. short sleeves, shorts etc) was also provided for each part of the body (head, upper torso, lower torso, hands and feet).

The usage of protective clothing is a complex area. In addition to helmets and visors or goggles, motorcycle protective clothing includes jackets, pants, gloves and boots. Products are available in a range of materials with varying benefits and disadvantages[7]. Many riders own more than one set of garments with different features, which they use according to the weather or purpose of the ride (de Rome 2006). While this potentially provides comprehensive information about what riders wear, it make it more difficult to determine protection scores. Those who own more than one item within a category (e.g. leather and fabric jackets) might wear each item ' Sometimes', making it difficult to determine whether this means that they 'always' ride protected .

In order to accommodate such variations, the questions allowed participants to indicate how often they wore each type of product on a 5 point Likert scale (1. Never; 2. Rarely 3. Sometimes; 4. Often and 5. Always). In order to consolidate this information into a usable score base, binary protection scores were calculated for each part of the body by using riding "unprotected" as a control.

The majority reported that they always wore a helmet (95%). Apart from helmets, the item of clothing they were most likely to 'always wear" is motorcycle gloves (71%). Almost two thirds (65%) reportedly always wore a motorcycle jacket, but only 29% always wore motorcycle pants and a quarter (25%) always wore motorcycle boots.

Figure 20. Proportion who usually wore motorcycle protective clothing by rider status.



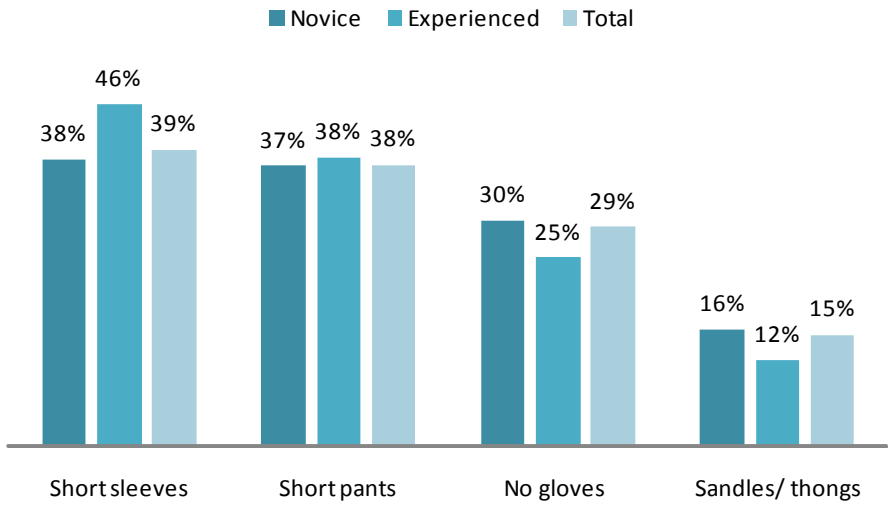
Missing data Helmet = 35, Jacket = 40, Pants = 59, Gloves = 50, Boots = 49.

Riders were also asked how often, if ever, they rode unprotected. Almost forty percent reported at least sometimes wearing short sleeved tops (39%) or shorts (38%). Twenty nine percent at least sometimes rode without gloves (29%) and 15% sometimes wore sandals or thongs. There appears

[7]These include leather and various abrasion resistant polymer products (e.g. Kevlar & Cordura).

to be some differences between the two rider groups, with the Novices less likely to ride in short sleeves but more likely to ride without gloves or in open shoes such as sandals or thongs.

Figure 21. Proportion who, at least sometimes, rode unprotected by rider status.



Missing data Jacket = 94, Pants = 91, Gloves = 93, Boots = 95

8.2 Impact protectors

The European Standard for motorcycle jackets and pants or one-piece suits requires the usage of impact protectors over the shoulders, elbows, hips and knees (EU 2002). Riders were asked whether the jacket and pants that they usually wore, included impact protectors at each of these body zones.

Novice riders were more likely than experienced riders to wear jackets that included impact protectors for the elbows, shoulders and back (57% vs 48%). Relatively few (18%) riders wore pants with impact protectors, but the proportion was higher amongst the experienced riders (26%) than the novices (16%).

Table 15. Usage of impact protectors at all recommended body zones by rider status

	Jacket		Pants	
Novice	467	57%	129	16%
Experienced	90	48%	48	26%
Total	557	56%	177	18%

Missing data for jackets= 286 Missing data for pants =743

8.3 Factors in choice of riding gear

Motorcycle clothing has to perform a range of functions in providing the rider with protection from weather conditions (heat, cold and wet) and injury in a crash, in addition to being comfortable and suitable clothing for riding and at their destination. Riders were asked about the importance of a range of factors when selecting their riding gear. The proportion who rated each factor as being either important or very important were combined to determine their relative priority.

The proportions are as follows: Comfort was rated as the most important factor by both Novices and Experienced riders; protection from Injury and from Cold were each 90%; protection from Heat, Wet and Impact were each rated as important by 88%. Conspicuity was rated as important or very

important by 66%. Factors associated with the products as clothing were far less likely to be considered important: Design – 59%, Appearance – 49% and Brand name- 30%.

Table 16. The importance of factors in the selection of motorcycle clothing by rider status.

	Novice		Experienced		All	
Comfort	683	95%	142	88%	825	94%
Protection from cold	661	92%	136	84%	797	90%
Protection from injury	659	92%	135	83%	794	90%
Protection from wet	645	90%	133	82%	778	88%
Protection from impact	642	89%	132	81%	774	88%
Protection from heat	641	89%	133	82%	774	88%
Conspicuity	476	66%	105	65%	581	66%
Design	439	61%	82	51%	521	59%
Appearance	361	50%	71	44%	432	49%
Brand	220	31%	44	27%	264	30%

8.4 Attitudes and beliefs about protective clothing

The Theory of Planned Behaviour (TPB) postulates that behavior is determined by attitude (beliefs), subjective norms (social pressure) and perceived behavioural control*(*Ajzen *1991).* Riders were asked how much they agreed with statements, framed in the format of TPB, about the usage and benefits of motorcycle protective clothing. The data will be used in further analysis with other factors to determine whether this type of information is predictive of usage and non-usage of protective clothing.

For this report, the proportion who agreed or strongly agreed with each statement were combined and are presented in Table 17. From this data, it would appear that the message about motorcycle protective clothing is accepted by a high proportion of novice riders.

Table 17. Proportion who agree with statements about usage of motorcycle clothing.

Statement about usage or benefits of motorcycle protective clothing	Novice	Experienced
Wearing rider protective gear can reduce your risk of injury in a crash	95%	92%
Full rider protective gear is not necessary on short trips around town	15%	15%
Some of my family/ friends think I should wear more protective gear.	37%	36%
Wearing full rider protective gear takes the fun out of riding	10%	13%
Wearing full rider protective gear makes you feel safer	90%	84%
Full rider protective gear is bulky and uncomfortable to wear.	38%	28%
It is not necessary for scooter riders to wear full rider protective gear	11%	11%
In general I try to do what my family/ friends would like me to do.	26%	25%
In summer I do not wear full rider protective gear if it is too hot	28%	28%
The protective gear that is available is not suitable for the sort of riding that I do on my motorcycle/ scooter	11%	14%
I do not wear full protective gear when riding to work because it is not suitable for wearing while at work.	17%	15%
The riders that I most respect do not always wear full protective gear.	13%	14%
There is no point in spending a lot of money on protective clothing because it cannot protect you in a serious crash.	4%	9%
If it is too hot to wear protective gear, it is too hot to ride	26%	23%
It is too much trouble to get dressed in full rider protective gear except when I am going on a long ride.	16%	18%

9 Discussion and conclusions

The survey provides valuable new information about a representative sample of novice riders in NSW and compares them to a smaller sample of experienced riders surveyed at the same time.

The results confirm that Novice riders represent a very different demographic to that of novice drivers. They were predominantly male with an average age of 32.7 years. The majority were in full time employment (82%), held unrestricted driver licenses (81%) and had over 10 years driving experience (69%).

Recreation and personal enjoyment were the primary reasons nominated by both groups of riders, with commuting cited by less than half the participants. Novice riders were most likely to ride either a sports bike (28%) or scooter (23%), where as the Experienced riders preferred trail bikes (31%) and then sports bikes (26%).

The majority of participants demonstrated a degree of commitment to motorcycling as they had already invested in buying the motorcycle and riding gear that they used. A relatively high proportion of riders aged 25 or younger (12%) rode a bike that was registered to another member of their family.

Almost one third held their Learner licence for no more than the minimum of three months and a total of 63% for no more than six months. During this time, it would appear that although the average Novice rider had ridden almost every day (6.6 hours per week), they had limited exposure to adverse or challenging riding conditions such as riding at night, in the dark or in heavy traffic. In addition, a high proportion had little or no experience of riding on roads zones 100 km/h or on winding rural roads

One of the objectives of the study was to determine whether factors identified as predictors of risk taking behavior might be associated with the usage or non-usage of protective clothing. One indicator of a propensity for taking risks was the extent to which participants had ridden motorcycles illegally prior to obtaining their learner licence. It was apparent that those with prior off-road riding experience were far more likely to have engaged in illegal on-road riding. Subsequent analysis will help to determine whether these factors are associated with use or non-use of protective clothing.

One component of risk perception involves the assessment of one's own ability to cope with specific hazards (Brown and Groeger 1988; Drummond 1989; Geurin 1994). Several studies suggest that young people consider themselves better, safer drivers than than their peers and the average driver (Svenson 1981; Geurin 1994). Others have found that even while young people are willing to believe that their peers are the worst drivers in the population, they still consider themselves to be exceptions to that rule (Finn and Bragg 1986; Geurin 1994). This was not the case with the majority of the Novice rider who were more prepared than the Experienced riders to believe that they had more to learn about riding. A high proportion, almost a quarter of participants (23%) had incurred at least one traffic violation in the past year.

The pattern of protective clothing usage was similar to other surveys of the general rider population in NSW (de Rome, Stanford et al. 2004; de Rome and Brandon 2007). While most reported always wearing a helmet, only around two thirds always wore a motorcycle jacket and gloves, while less than 30% always wore motorcycle pants and boots. It is a matter for concern that four out of ten riders reported that at least sometimes they rode with their arms or legs exposed. On a more positive note, a high proportion of riders rated injury protection as an important factor when selecting riding gear and did not subscribe to negative views about protective clothing being uncomfortable or unnecessary.

Further analysis of the data will be undertaken to determine whether there are patterns that can be usefully applied in the development of educational programs and policies to improve the safety of novice riders.

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