



Australian Government

Australian Transport Safety Bureau

Female motorcyclists



ISBN: 1 877071 76 5

Deaths and serious injuries among female motorcyclists

Motorcyclists are a relatively vulnerable road user group. They have less protection and a higher risk of serious injury in the event of a crash than vehicle occupants. ATSB discussions with motorcycle organisations suggested that the number of female motorcyclists is increasing. Any change in the pattern of road use has implications for road safety. This paper presents available national data on female motorcyclists killed and seriously injured and discusses the implications for road safety.



Prevalence of serious casualties among motorcyclists

Motorcycle riders and pillion passengers constitute around 10 to 13 per cent of all road deaths each year. In 2003, there were 1,625 road deaths, of which 188 (11.6 per cent) were motorcyclists.

In 2003, 16 female motorcyclists were killed, accounting for 8.5 per cent of all motorcyclist deaths and around one per cent of all road deaths (Table 1). From 1999 to 2003, between 38 and 53 per cent of female motorcyclist

deaths were pillion passengers. Pillion passenger deaths accounted for between one and four per cent of male motorcyclist deaths during the same period.

Motorcyclists account for 18 to 20 per cent of all people seriously injured on the roads each year. In the 2001–02 financial year, the latest 12-month period for which data are available, there were 22,775 people seriously injured, of whom 4,486 were motorcyclists (Table 2).

Table 1: Motorcyclist deaths, Australia

	Male Riders	Male Pillions	Female Riders	Female Pillions	All motorcyclists Total
1999	158	6	6	6	176
2000	174	4	8	5	191
2001	207	3	3	3	216
2002	208	1	7	8	224
2003	169	3	9	7	188

Source: ATSB, Monthly Fatal Crash Database

Table 2: Motorcyclists seriously injured, Australia

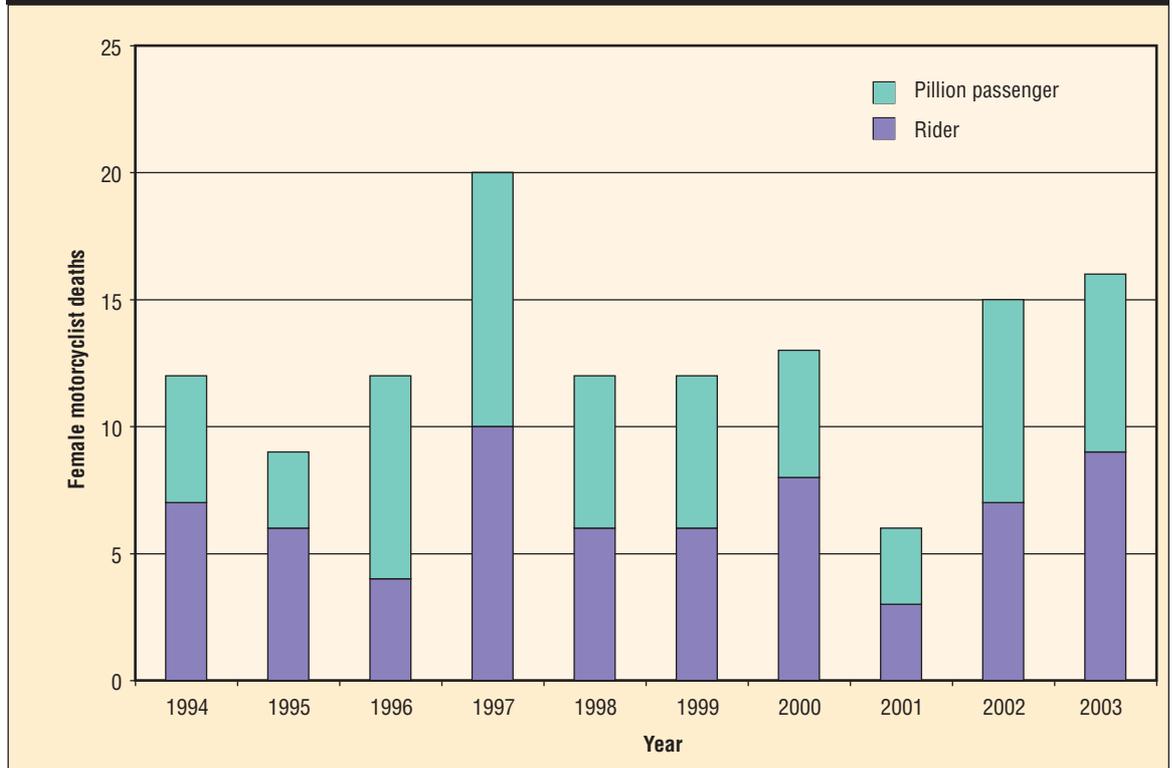
	Male	Female	Total
1999–2000	3649	313	3962
2000–01	3810	352	4162
2001–02	4131	355	4486

Source: ATSB, National Transport Injury Database

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August 2004

Figure 1: Female motorcyclist deaths, Australia



In the 2001–02 financial year, 355 female motorcyclists were seriously injured, accounting for 7.9 per cent of all motorcyclists seriously injured and around 1.6 per cent of all people seriously injured on the road.

Trends in serious female motorcyclist casualties

The relatively small numbers and large fluctuations from year to year mean there is no statistically significant trend in female motorcyclist deaths (Figure 1).

Serious injury data may provide a better trend measure as larger numbers are involved. Serious injury data were only available for three financial years. Caution should be used in interpreting the data as three years are not sufficient to determine a statistically reliable trend.

The data provide no clear indication that the numbers of female motorcyclists seriously injured are increasing. The number of

seriously injured female motorcyclists increased from 313 in the 1999–2000 financial year to 352 in 2000–01; followed by an increase of three in 2001–02 to 355 (Figure 2).

The popularity of motorcycling among females

As no suitable national data are available to illustrate the popularity of motorcycling among females, motorcycle licence data from the NSW Roads and Traffic Authority (RTA) have been used. NSW licence data were chosen as NSW is the most populous state. Underlying the use of these data is the assumption that licence patterns in NSW are indicative of the rest of Australia.

In 2003, females comprised 9.6 per cent of all licenced motorcycle riders in NSW. The number of licenced female motorcycle riders in NSW increased from 35,804 in 1999 to 38,569 in 2003, an increase of 7.7 per cent (Table 3). The total number of licenced motorcycle riders increased by 4.3 per cent over the same period.

Figure 2: Female motorcyclists seriously injured, Australia

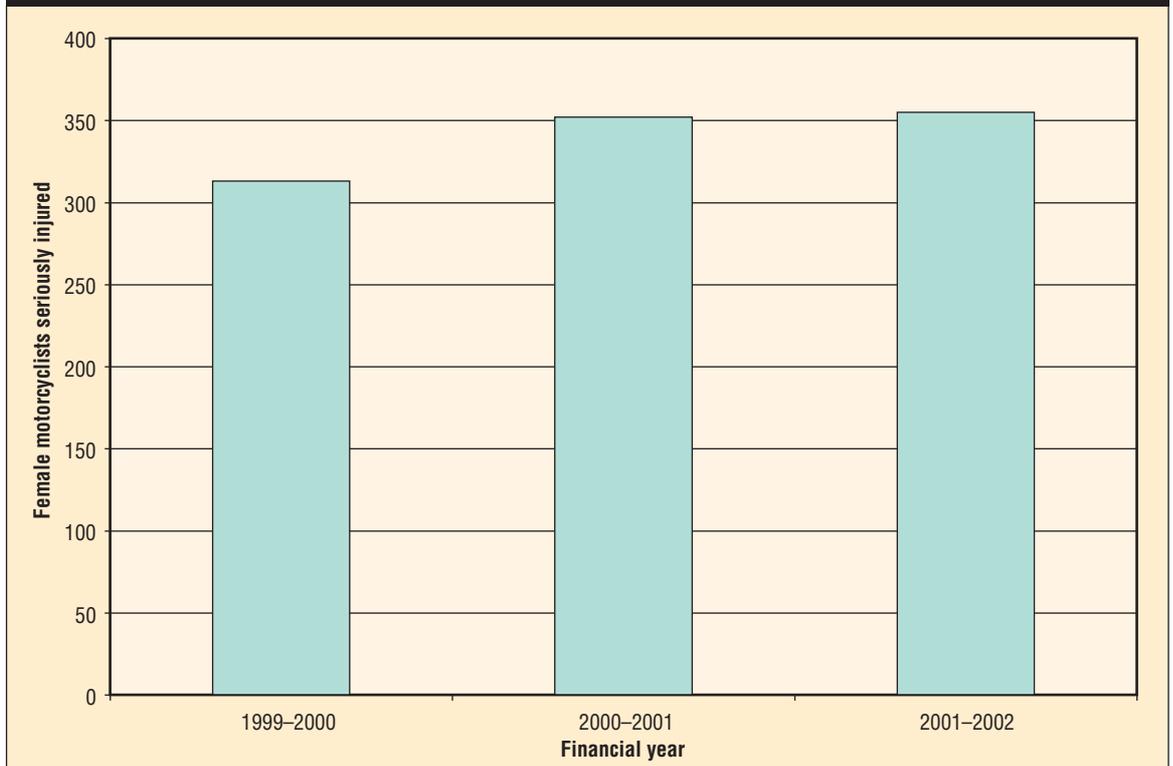


Table 3: Licenced motorcycle riders by gender, New South Wales

Year	Female	Male	Total*
1999	35,804	347,495	383,858
2000	36,920	353,664	391,179
2001	37,728	357,135	395,493
2002	39,223	365,050	404,924
2003	38,569	361,160	400,370

Per cent increase

1999-2003	7.7	3.9	4.3
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Source: NSW Roads and Traffic Authority

* Includes cases where a licence holder's gender was not recorded.

It should be noted that a significant increase in the number of licenced riders does not necessarily directly relate to a significant increase in motorcycle use. In NSW in 2003, there were four licenced motorcycle riders for each registered motorcycle.

Differences in riding patterns

Very little data are available on the differences between male and female motorcycle riding patterns in Australia. One of the only recent sources of information is a survey conducted for the NSW Motor Accident Authority in 2003.¹

The survey was conducted using a random sample of 6,000 registered motorcycle owners in NSW based on registration data, resulting in 794 respondents providing useable information. The researchers found that around seven per cent of respondents were female and that there were some significant differences between the riding patterns of males and females. These were:

- female riders were significantly younger than male riders, with a mean age of 40.1 years compared with 44.2 years
- female riders had significantly less riding experience (7.4 years) compared with males (20.2 years)

¹ Harrison, W. and Christie, R. (2003). *Exposure study by motorcycle make and type*. Motor Accidents Authority of New South Wales.

- a greater proportion of female riding took place in cities, towns or suburbs (49 per cent) than male riding (40 per cent)
- a greater proportion of female riding took place on the weekends (66 per cent) than male riding (54 per cent)
- the average annual distance travelled by female riders was 30 per cent less than male riders.

What are the implications for road safety?

The data show that there are a number of differences in the riding and crash patterns of male and female motorcyclists. Notably, half of all female motorcyclist deaths are pillion passengers. Compared with male riders, female riders tend to ride at different times of the week, ride less and have fewer years of experience. Any countermeasures aimed at reducing female motorcyclist deaths and injuries would have to take these differences into account.²

The numbers of female motorcyclists being killed and seriously injured, while significant, are relatively small compared with many other road user groups. In all likelihood, this is due to the relatively low number of female motorcyclists. There are currently no suitable data available for measuring the level of activity of motorcyclists by gender; therefore, it is not possible to analyse the relative safety of female motorcyclists compared with male motorcyclists and other road user groups.

The data available provide no clear indication that the numbers of female motorcyclists killed and/or seriously injured are increasing. However, the increase in licenced female motorcycle riders in NSW suggests there may have been an increase in the use of motorcycles by females in recent years. Any increase in activity could lead to an increase in the number of female motorcyclists killed and seriously injured. More definitive inferences should be possible as more serious injury data become available.

² Christie, R. and Harrison, W. (2001). *Investigation of motorcycle crash patterns for riders aged 17-25 in NSW and development of countermeasure strategies*. Motor Accidents Authority of New South Wales. P. 48.