



London Powered Two Wheeler User Survey

London Road Safety Unit
Research Summary No 11

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Overview

This summary presents the findings from the *P2W User Survey* carried out in 2004 (1). The survey was undertaken to gain a greater understanding of powered two wheeler (P2W) users in London and the factors influencing their safety.

Telephone interviews were conducted with P2W riders within the M25 and face-to-face interviews were conducted with London-based courier riders. The results suggest that there are a substantial number of P2W riders in London.

The results indicate that P2W and courier riders have different issues that need to be considered separately when Transport for London (TfL) and partner organisations are planning road safety initiatives for riders.

Background

P2Ws include all two-wheeled motor cycles, scooters and mopeds. P2W riders are one of the most vulnerable road user groups in London. They account for a disproportionate number of killed and seriously injured (KSI) casualties. In 2006, P2W riders made up 21% of all KSI casualties and 15% of slight injuries on London's roads, yet they account for less than 3% of passenger kilometres travelled (2).

The Mayor of London has set targets to reduce road traffic casualties by 2010. The target for P2W casualties is a 40% reduction in KSI casualties (from a baseline of the average number of KSI casualties for 1994-1998). Although there has been good progress towards the Mayor's targets for most user groups, this has not been the case for P2W riders.

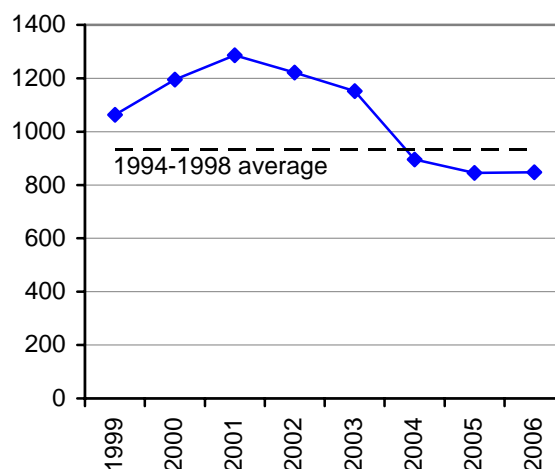


Figure 1: Number of P2W KSI casualties by year, 1999-2006

KSI casualties for P2W riders increased until 2001 and have only recently fallen below the 1994-1998 baseline average. In 2006, 848 P2W riders were killed or seriously injured in London, representing a 9% reduction from the 1994-1998 baseline (see Figure 1).



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This research was commissioned by TfL and carried out by FDS International. Previous research has been undertaken on P2W riders in London (3) as well as courier and food delivery riders in London (4, 5). Furthermore, the data collected for this study has also been used in other research (6).

TfL is committed to improving road safety and reducing casualties among P2W riders. Investigating P2W riders and the factors that affect their safety may help reduce P2W casualties on London's roads.

Objectives

This research was undertaken to gain a greater understanding of P2W riders in London and to enable effective planning and implementation of road safety initiatives for P2W users.

The objectives of the research were to:

1. Profile P2W riders who live and ride in London
2. Understand P2W usage in London
3. Identify the use of safety equipment and training
4. Investigate attitudes towards riding
5. Estimate the number of collisions involving P2W riders

Methods

The survey was conducted through telephone interviews with P2W riders living in households within the M25 in London. The interviews were carried out with an adult in the household who had ridden a P2W in London within the previous 12 months. Interviews were conducted between September and November 2004.

Identifying P2W riders via the telephone proved difficult. After calling over 22,000 households, only 263 interviews with P2W riders had been completed. Due to this low response rate, an additional 241 telephone surveys were conducted using

a sample of known P2W riders in London. The results presented here are based on a total of 504 telephone interviews from both samples.

To minimise any sampling bias from including the sample of known P2W riders, the combined data was weighted to reflect the profile of the original random sample of P2W riders, with respect to sex; years of riding; and vehicle engine size.

An additional 80 face-to-face interviews were carried out with London-based P2W courier riders. The results of these interviews are reported here separately.

Results

1. P2W Riders in London

Compared to London's population, P2W riders are more likely to be male, aged between 35-44 years, middle class and white.

Of the 14,408 households who said whether or not they contained a P2W rider, 370 said that one or more adults in the household had ridden a P2W in London in the previous 12 months (263 completed interviews and 107 non-completed interviews). Therefore, it can be estimated that 2.6% of households within the M25 includes at least one P2W rider.

The results indicated that most P2W riders are male (86%) but there is also a sizeable number of females riding in London (14%).

Riders were asked the age group in which they belonged. Figure 2 shows that the majority of riders were aged between 25-54 years. Rider age peaked in the 35-44 year age group (40%), with few riders aged 24 years and under (5%) or over 54 years (12%).

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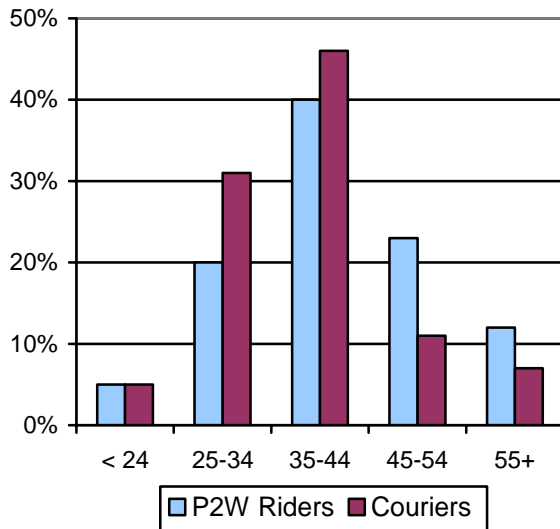


Figure 2: Proportion of P2W and courier riders in each age group (age in years)

Almost half (48%) of the riders surveyed had been riding on public roads for over ten years, including 9% who had over 30 years riding experience. Most riders first started riding in their teens (48%). A quarter of riders began riding in their late twenties or early thirties. Few riders started riding after they were over 45 years of age (4%).

An overwhelming majority of P2W riders described themselves as White British (84%). The next largest ethnic group was White Other (8%). Very few riders belonged to other ethnic groups.

Riders were classified into a social grade based on the employment status and occupation of the household's main income earner. Social grades range from A (upper middle class) to E (those living at the lowest level of subsistence).¹ Nearly a third (32%) of P2W riders were

¹ Social grades (as defined by the National Readership Survey, NRS Ltd): Grade A - upper middle class (e.g., higher managerial or professional); grade B - middle class (e.g., intermediate managerial or administrative); grade C1 - lower middle class (e.g., supervisory or clerical, junior managerial); grade C2 - skilled working class (e.g., skilled manual workers); grade D - working class (e.g., semi and unskilled manual workers); grade E - those at lowest level of subsistence (e.g., state pensioners and casual workers).

classified as belonging to households of social grades A and B. A further third (34%) belonged to grade C1 and the final third (34%) belonged to the C2, D and E grades. This profile compares with a London breakdown of 26% (grades A and B), 33% (grade C1) and 40% (grades C2, D and E) and indicates that P2W riders in London tend to be more affluent than the average London resident.

Courier Riders. Of the 80 P2W courier riders interviewed, only one was female. As shown in Figure 2, courier riders were slightly younger than the average P2W rider. The majority of courier riders were aged between 35-44 years (46%) and nearly a third (31%) were aged between 25-34 years. Similar to the P2W riders, few courier riders were aged under 25 years (5%) or over 54 years (7%).

The majority of couriers began riding in their teens (71%) or early twenties (16%). Very few couriers stated that they began riding over the age of 25 years. The majority of couriers had over 10 years riding experience (76%), with over a third having over 20 years experience (36%). Despite the finding that courier riders are generally younger than P2W riders, they started riding at earlier ages and therefore, have more years of riding experience compared to other P2W riders.

Similar to P2W riders, the vast majority (85%) of courier riders described themselves as White British. Five percent of couriers described themselves as White Other and very few belonged to other ethnic groups.

Couriers were predominantly classified as social grade D. This classification reflects their occupation as delivery riders and is in contrast to the P2W riders, who were mostly classified as belonging to more affluent social grades.

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2. P2W Usage in London

Most riders ride vehicles between 125cc and 600cc, commute by this mode and cover considerable mileage per year.

Riders were asked the engine size of the P2W vehicle they rode most often in London. Figure 3 shows that the majority of P2W riders ride vehicles of between 125cc–600cc (35%). A quarter of riders use vehicles between 51-125cc (24%) and between 601-1000cc (25%).

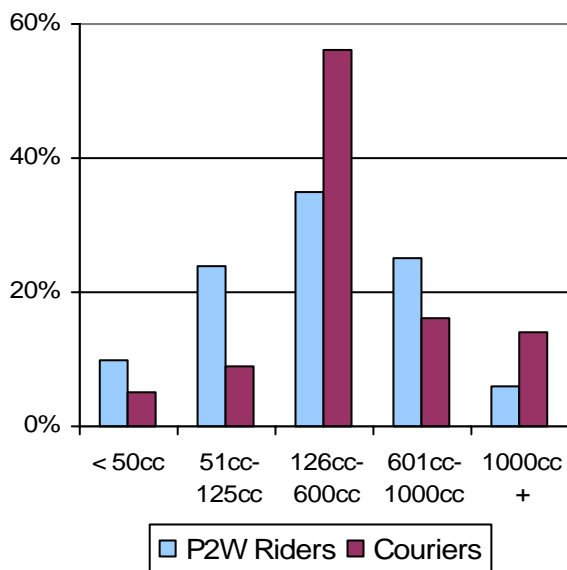


Figure 3: Engine sizes of P2W vehicles ridden in London

Female riders and riders with fewer years riding experience were more likely to ride vehicles with smaller engine sizes (less powerful vehicles). Riders with unrestricted licences were more likely to ride vehicles of over 125cc.

Riders were asked to estimate the number of miles they had ridden in the last 12 months. Most riders ride between 3,000 and 10,000 miles per year (43%) and few ride over 10,000 miles per year (11%). Thirty-six percent of riders stated that they ride under 2,000 miles per year. Most P2W riders ride all year round, however, about 1 in 6 riders prefer to avoid riding during the winter months (December to February).

Riders were asked about the purposes

for which they ride their vehicles.

Seventy-one percent of riders stated that they used their vehicle to commute to and from work. For these riders, commuting accounted for about 70% of their annual mileage in London.

Forty percent of riders used their vehicles for leisure activities, where they ride for its own sake rather than to reach a specific destination. Other common reasons for riding were to travel to visit friends or relatives or when travelling on personal business. However, these trips accounted for only a small number of miles ridden in London.

Courier Riders. Figure 3 shows that over half (56%) of courier riders ride vehicles between 126cc-600cc. Few couriers ride vehicles with engine sizes under 126cc (14%). Courier riders cover substantially more miles annually compared to P2W riders. Over half (56%) of courier riders reported that they ride between 20,000 and 40,000 miles per year. A further quarter (24%) ride between 40,000 and 75,000 miles per year.

Compared to P2W riders, couriers ride larger vehicles and cover considerably more miles annually. These findings are not surprising given that couriers ride as part of their work.

3. Safety Equipment and Training

Overall, the majority of riders wear protective clothing when riding. Compared to riders of vehicles over 50cc, riders of vehicles under 50cc were less likely to use protective clothing and equipment.

In addition to helmets, the most common pieces of safety equipment were motorcycle jackets, motorcycle boots and gloves. Eighty-one percent of riders stated that they usually or always wear a protective motorcycle jacket when riding and 95% stated that they usually or always wear gloves. Almost two thirds (61%) of riders wear protective

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motorcycle boots and just over half (52%) of riders wear protective motorcycle trousers.

The use of protective clothing differed depending of the type and size of P2W vehicle ridden. The sample was divided between those who ride vehicles over 50cc and those who ride vehicles under 50cc. The results showed that over a third (35%) of those who ride vehicles under 50cc never wear protective motorcycle jackets and over half (54%) never wear protective motorcycle trousers. Even taking into account the 9% who always wear a protective one-piece motorcycle suit, this still leaves a high proportion of these riders wearing inadequate protective clothing. In contrast, riders of vehicles over 50cc who stated they did not wear protective jackets or trousers accounted for 6% and 16%, respectively.

These results suggest that there is a lower appreciation of the need for protective clothing among riders of smaller P2Ws (despite these vehicles being capable of travelling at urban speed limits).

Courier Riders. Couriers were more likely than P2W riders to wear a protective one-piece motorcycle suit (41%) and protective trousers (76%) when riding, compared to 17% and 52% of P2W riders, respectively.

Only 78% of couriers said they always wear gloves compared with 89% of all P2W riders. It is possible some couriers may wish to avoid having to take off their gloves when making deliveries and using communication devices.

Training Undertaken

Nearly a quarter of full P2W licence holders had completed additional training or skills courses.

P2W riders were asked whether they had completed training or skills development courses after passing their licence test.

Twenty-four percent of full P2W licence holders had undertaken further training or skills development courses. These courses included: Institute of Advanced Motorists courses (28%), Police Training Standard Motorcycle course (14%), and BikeSafe (19%), the rider skills day organised by TfL and London police forces.

Riders who attended further training were asked whether the course was useful in terms of improving their riding skills. All reactions to the courses were positive, with almost all training rated as useful or extremely useful for improving riding skills.

Of the riders who had not undertaken training or skills courses since obtaining their full P2W licence, the main reason given was that they did not feel they needed further training or that they already had had enough training (51%).

Courier Riders. Couriers were not markedly more likely to have had extra training. The majority of couriers said they had already had enough training or did not feel they needed any further training.

4. Attitudes Towards Riding in London

Most riders consider themselves to be as skilful but more confident than the average rider.

Riders were asked about their perceptions of their own riding abilities and attitudes to other road users. When asked how confident they were at riding, 84% rated themselves as more confident than the average rider. Very few riders rated themselves as average (13%) or below average (4%) in terms of confidence at riding.

While the majority of riders considered themselves to be more confident than average, only 41% considered themselves more skilful than average. In fact, the majority of riders rated themselves to be as skilful as the

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average rider (54%).

Riders were asked whether they agreed or disagreed with several statements about other road users and riding in London. When asked about riding, the majority of riders (90%) agreed that they have a responsibility to ride defensively. This result was especially true for older riders, riders with more experience, and those who had completed further training. Furthermore, 78% percent of riders agreed with the statement that riding in London is fairly safe when riding carefully and 74% agreed with the statement that riding in London is fairly safe for skilful riders.

When asked about other road users, the majority of riders (88%) agreed with the statement that riding is always potentially dangerous because of the carelessness of other motorists. When asked whether they agreed or disagreed with the statement that most crashes involving P2Ws are not caused by the riders themselves, 27% of riders agreed and 20% disagreed (the remaining 25% had no opinion). Sixty-six percent agreed with the statement that it is the responsibility of pedestrians to ensure that no P2Ws are filtering before crossing the road.

Courier Riders. Courier riders rated themselves as more confident and skilled riders, compared to P2W riders. The vast majority (93%) of couriers rated themselves as more confident than the average rider, and 71% rated themselves as more skilful than average.

When asked about riding in London, courier riders' attitudes were similar to P2W riders. Eighty-one percent agreed that riders have a responsibility to ride defensively. The majority (72%) of riders agreed that riding in London is fairly safe when riding carefully and 77% agreed that riding in London is fairly safe for skilful riders.

When asked about other road users, courier riders were more likely than P2W

riders to place responsibility for collisions on other road users. Sixty-two percent of courier riders agreed that most collisions involving P2Ws were not the responsibility of the rider (compared to 27% of P2W riders). Similarly, 76% of couriers agreed that it is the responsibility of a pedestrian to ensure that no P2Ws were filtering before crossing the road.

5. Estimating Collisions Involving P2Ws in London

The proportion of riders involved in collisions increases as the number of annual miles ridden increases.

P2W and courier riders were asked how many collisions they had been involved in over the previous three years, including those where there were no casualties. The results showed that 36% of P2W riders and 59% of courier riders reported having had at least one collision during the previous three years.

The results indicated that as the number of annual miles ridden increased, the proportion of riders who reported being involved in a collision also increased. Twenty-five percent of P2W riders who ride under 2,000 miles annually reported being involved in a collision within the last 3 years, followed by P2W riders who ride between 2,001 and 5,000 miles annually (37%), and P2W riders who ride over 5,000 miles annually (46%). P2W riders who ride more miles have a higher exposure to road traffic collisions, and therefore, their likelihood of being involved in a collision increases.

Twenty-one percent of P2W riders with less than one year riding experience reported being involved in at least one collision since they began riding. The proportion of riders involved in collisions increased for riders who had been riding for longer. Forty-two percent of riders with 1-3 years riding experience and 43% of riders with 3-10 years riding experience reported being involved in a

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least one collision in the last 3 years. For riders with over ten years experience, the proportion who reported being involved in a collision in the last 3 years dropped to 29%.

As shown in Figure 4, a higher proportion of younger riders (under 35 years) reported being involved in a collision over the last three years.

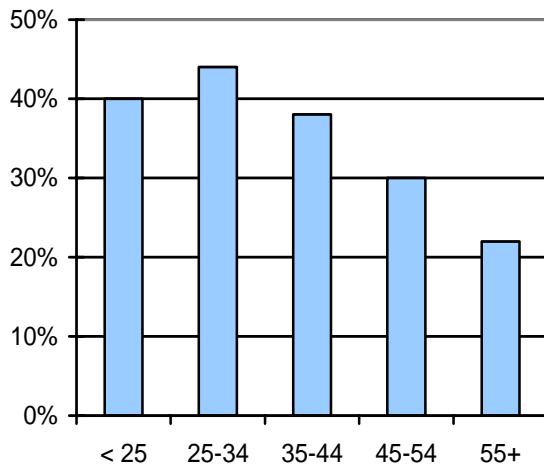


Figure 4: Proportion of P2W riders in each age group who reported having a collision in the past 3 years (age in years).

It is important to note that the data on reported collisions are an indication of the frequency of collisions involving P2W riders in London. It is likely that there are additional collisions that were not reported, and therefore these data should be used as an indication only.

Conclusions

P2W riders are one of the most vulnerable road user groups in London. The current research was undertaken to gain a greater understanding of riders and the factors influencing their safety. The findings suggest that 2.6% of London households contain at least one P2W rider. In addition, at the time of the survey, there were 108,000 P2Ws licensed in Greater London (7). Thus, there are a substantial number P2W riders in London and they are an important group for targeted road safety initiatives.

P2W riders are typically white middle class males, aged between 35-44 years. They regularly ride P2Ws. They ride all year round and cover a considerable distance per year. They primarily use their vehicles for commuting to and from work. In fact, commuting accounts for the vast majority of annual mileage ridden. It is important to understand the demographic profile of the riders and the uses of P2Ws in order to most effectively design and target road safety initiatives for P2W riders in London.

Although most riders wear protective clothing when riding, a high proportion of those who ride vehicles under 50cc are inadequately protected. There may be a lower appreciation of the need for protective clothing among riders of these vehicles (despite these vehicles being capable of travelling at urban speed limits) and therefore this is a potential area for targeted road safety initiatives.

Riders rated themselves as above average in terms of riding confidence, but only average in terms of riding skills. Most riders had not undertaken further skills or training courses and the main reason for not participating was that they do not feel they need further training. Therefore, to most effectively promote training and skills development courses for P2W riders, TfL and partner organisations should be aware that many riders do not think they require further training, even though they believe they only have average riding skills.

Many riders believe that collisions are often caused by other road users. They also acknowledge that it is their own responsibility to ride defensively, especially when other motorists or pedestrians may not look out for them. To effectively address road safety issues for P2W riders, initiatives should ideally be targeted at not only the P2W rider, but also at other road users.

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Courier riders are slightly younger than P2W riders but because they start riding earlier, they have more years riding experience. Courier riders ride larger and more powerful vehicles, they are more likely to wear protective clothing, and more likely to have undertaken further training. They rate themselves as more confident and more skilled than P2W riders. They also cover substantially more miles per year and this higher on-road exposure is a significant collision risk factor. Therefore, important differences exist between P2W and courier riders and TfL has undertaken further research to provide a greater understanding of courier and food delivery riders and delivery companies in London (4, 5).

TfL is committed to improving road safety and reducing casualties among P2W riders, in accordance with the casualty reduction targets set out in London's Road Safety Plan (8). The findings of this research contribute to the understanding of road safety issues for P2W riders and may help reduce P2W casualties on London's roads.

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