THE ROAD SAFETY TRUST

Making Roads Safer

NYRF

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Young Riders Matter

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RESEARCH SERVICES

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EXECUTIVE SUMMARY

The National Young Rider Forum is a road safety group that focusses exclusively on young motorcyclists aged 16 to 24 years, riding small motorcycles of 125cc or less. Its forum members come together to look at every facet of being a young rider to see where they can offer support, knowledge, information and practical guidance to tackle some of the problems these young people face as motorcyclists. NYRF members include National Highways, DVSA, DFT, Operation Apex, ROSPA, safer road partnerships from Warwickshire, Essex, Sussex, Vision Zero South West, South Yorkshire & Kent, BMF, National Motorcycle Council, NRPOII, Fire & Rescue and Police forces, MAG and many other key motorcycle stakeholders.

Before developing or delivering any new interventions targeting young riders, the Forum decided to commission research to understand the attitudes, behaviours, needs and preferred methods of communication of young riders. The first research report was delivered in 2020, using casualty analysis, a young rider survey, and qualitative insights to understand the risk faced by young motorcyclists. The report produced 17 recommendations that could be used to understand young riders and assist practitioners to deliver effective, consistent interventions.

This new research employs the same multi-phased methodology as the 2020 study to provide a snapshot of how young motorcyclists experience risk in 2025. It includes new casualty analysis based on the most recent police-reported injury data (2019-2023). There was a new young rider survey, gathering 250 responses and followed up with focus groups and mini-interviews, to understand how this at-risk group report behaving, their attitudes to safety, and identifying opportunities to engage with them. Deep learning segmentation of survey results was undertaken to group motorcyclists into clusters, based on their questionnaire responses. The clusters can be used to target different types of young motorcyclist, tailoring to their specific needs. This report also included a review of activities delivered by NYRF since the previous work, identifying how these activities align with the 17 recommendations.

It was clear that the previous report was used as a blueprint to guide the activities of NYRF, and part of the feedback from the forum related to the accessibility of this report. The report contains a lot of detail, based on the analysis of multiple data sources, and this is required so that practitioners and policymakers can delve into the characteristics of the analysis. However, to increase usability of the findings, graphical summaries have been produced, which can be found on the following pages.

22,161 young motorcyclists injured in five years

28% reduction in injured young motorcyclists compared to 2014-2018[1]

Up to 19 years old, there are HIGHER numbers of motorcycle KSIs than car driver KSIs

Car traffic accounted for 76% of vehicle miles, compared to 0.8% of vehicle miles being by motorcycle

Two-thirds of young riders were riding a 51-125cc motorcycle

The severity ratio increases as engine size increases

Rider casualties aged between 16 and 21

Rider casualties are disproportionately from deprived areas

Rider casualties live and crash in urban areas

T-junctions and conflicts with cars feature often

Often occur on weekdays and afternoons

An autumn peak could coincide with college terms

Three quarters of survey respondents were male

Many have always been interested in riding, and have family members into bikes

About half thought the CBT could contain hazard perception or theory tests

This sample are far more likely to wear PPE than in 2020

Motorcycle helmets tend to be new

Only half were aware of SHARP

Most indicated they did not engage in risky behaviours

There were only 14 gig economy riders

Instagram, WhatsApp, Snapchat and Facebook are most common channels

Most common sources of information on riding were search engines, online forums, friends/siblings, social media, motorcycle retailers/trainers

Most participants would use a Young Riders' App

They were favourable about an app containing route planning, safety tips, and further training

[1] It should be noted that the study period includes the periods during 2020 and 2021 during which road utilisation was reduced due to restrictions associated with the COVID-19 pandemic.

The survey respondents were segmented into 13 clusters 	Group 1 is 'More Experienced Riders on Larger Motorcycles' (11% and 2 clusters) 	Group 2 is 'Young Inexperienced Riders' (84% and 6 clusters) 	Group 3 is 'Delivery Riders' (6% and 5 clusters) 
In the focus groups - three reasons for riding: social activity, convenience, and waiting to get a car 	CBT and advanced licensing could be improved with more information on pre-empting risk 	Experience, confidence, and risk were key themes – over-confidence and risk-taking personalities can be a problem	Buying PPE online is a 'minefield' and there is a need for trusted sources 

CONCLUSIONS

This update of the casualty analysis and a repeat survey of young people have reinforced the findings from the previous work. As before, there is no single definition that captures everything it means to be a 'young rider', because these young people use a motorcycle for many different reasons; have different experience levels; and have different attitudes to safety and therefore behave in different ways. Some do not even identify as motorcyclists; it is a form of transport and means to an end, rather than something that defines them.

As with last time, this group can be difficult to engage with, and this may be partly due to many not identifying themselves as riders. It was hypothesised last time that the Covid-19 pandemic may have adversely influenced engagement with this cohort; however, it was still difficult to encourage participation in the survey and focus groups, despite incentivisation, multi-channel promotion, and adapting the qualitative element to talk with them at dates and times that suited them. As such, the young riders spoken to within this research are very much self-selecting and may not necessarily reflect the views of all young riders.

The number of collisions involving young riders remains high: there were 22,161 young motorcyclists (16 – 24 years) injured between 2019 and 2023. Whilst this is a reduction of 28% compared to the previous study period (2014-2018), this analysis does include the Covid-19 pandemic, when travel restrictions reduced collision numbers. Up to the age of 19 years, there are higher numbers of young people killed or seriously injured riding a motorcycle than there were driving a car. This over-representation as motorcyclists is despite car traffic accounting for 76% of all vehicle miles on average in the study period, compared to 0.8% of vehicle miles being by motorcycle (for drivers of all ages).

Many of the same themes emerged in the collision analysis: the riders injured tend to be male and are aged between 16 and 21 years old. The home location analysis revealed a tendency for injured young motorcyclists living in communities with limited resources and squeezed budgets, which may influence their choices around safety (motorcycle purchased, training undertaken, and personal protective equipment they use, for example). Many live in urban areas and are involved in collisions in towns and cities.

Collision circumstances identified in the previous work were also present in the newer data. Many of the collisions occurred near junctions, particularly at T-junctions, when the young rider was travelling straight ahead and was in conflict with a car. This could mean that the cars are pulling out of the junction into the path of the motorcyclist. As previously, this has implications for engagement with other road users, as well as finding ways to reduce motorcycle risk when approaching junctions. How conspicuous they are to other road users, due to clothing and road positioning, and their approach speed are all important factors.

There were 250 young riders who completed the survey. As with last time, those who participated are aware of their vulnerabilities as motorcyclists and display good knowledge about the importance of helmet choice, maintenance, and wearing it correctly. Only half were aware of SHARP (Safety Helmet Assessment and Rating Programme) ratings of helmet safety performance, however, so this does provide an educational opportunity. This sample of respondents were more likely to wear PPE than the 2020 sample, with the majority wearing leather or textile gloves, jackets and boots. There were a minority who reported wearing hoodies, jeans or trainers and few respondents stated that they wore a leather one-piece suit, air vests or Hi-Viz or reflective gear. In the interviews, there was agreement that purchasing PPE online was a "minefield" and that it can be difficult to find a trusted voice. They

thought it was better if you could find a local in-person supplier who could discuss safety issues and provide advice on accredited gear.

It was felt that there were opportunities to improve CBT, with many suggesting hazard perception, pre-learning, a theory test, or post-CBT support could be provided to help them.

The 17 recommendations from the previous report covered actions related to the overall approach of NYRF; engagement; training; websites and apps; campaigns; and further research. An exploration of activities over the last five years since the report was published shows that the Forum has truly embraced these recommendations and delivered a range of evidence-based initiatives. Interventions which have been delivered as a consequence of the research include tailored infographics covering weather and road conditions; PPE; bike maintenance; impairment; and seasonable events. Multiple channels have been used for dissemination, increasing potential reach. Films aimed at the youngest college cohort and to fill gaps related to the Highways Code have been created and disseminated through social media, partner organisations and the New Rider Hub. To assist with hazard perception and riding theory, the DVSA's RideFree resource is heavily promoted, alongside 'The View From the Saddle' hazard perception test. There have been strong collaborations developed with national motorcycle stakeholders, using the evidence from the study to shape interventions.

RECOMMENDATIONS

Ten of the previous 17 recommendations are still relevant:

- For NYRF members and other stakeholders to use this report as a guide when creating interventions targeting young riders, working with colleagues to drill down into their local young rider collision issues.
- To target the youngest segments of young riders (16 to 21 years old) as these are the motorcyclists most at risk of collision involvement. Furthermore, the segmentation, surveys and interviews suggest that these are the riders requiring the most support. They have less experience and have undergone less training, providing an opportunity for engagement and assistance before poor habits or attitudes are developed.
- Identify effective ways to engage with young riders who are using a motorcycle for the first time to commute to school, college or an apprenticeship. Whilst working with educational establishments is one option, the numbers of young riders per institution may be small.
- Liaise with DVSA on the findings and discuss the support surrounding CBT that young riders would like.
- Continue to highlight the importance of their visibility and bike light maintenance, alongside adopting good road positioning and approach speeds that will help reduce their risk at night-time and at junctions.
- Look to accessing, and engaging with, young riders on social media platforms such as Instagram, Snapchat and TikTok.
- Work collaboratively with trainers to access and engage with this group as young riders tend to approach their trainers for support. This could involve encouraging training bodies to deliver the DVSA's RideFree scheme and promoting the scheme to increase participation amongst young riders.
- Provide support on how to filter appropriately.
- Investigate which online forums they use to access information, exploring partnerships and cross-referencing of materials and resources.

- Consider that there is diversity between young riders, with their interests, motivations, experience, behaviour and attitudes differing. Interventions will need to be tailored according to the type of rider who is the target.

An additional three recommendations focus on protective equipment:

- Work with DfT's SHARP rating initiative to promote the helmet assessment and rating programme
- Provide advice on how to find good quality PPE, perhaps providing a guide as to what to look out for and what the minimum equipment used should be
- Continue to enhance the New Rider Hub and explore the potential of an app could include route planning, safe riding tips, and information on training and protective clothing.

INTRODUCTION

The National Young Rider Forum (NYRF) is a diverse collective of road safety professionals who focus exclusively on young motorcyclists aged 16 to 24 years who ride motorcycles of 125cc or less. Young riders are over-represented in injury collisions (particularly fatal and serious injury crashes) and are often from the poorest, most deprived areas of society. NYRF was formed in 2019 and is now the leading young rider road safety forum whose main aim is to reduce rider casualties through support, engagement, research and education.

At its inaugural meeting on the 19th February 2019, held at Alfreton Fire Station, the nature and extent of the problem partners faced was discussed, the definition of a 'Young Rider' was agreed, and examples of best practice were shared.

However, it soon became clear that little in-depth knowledge was known about the target road safety group – the Young Rider. Therefore, the Forum decided that its first piece of work would be to commission a research paper to understand the attitudes, behaviours, needs, and preferred methods of communication of young riders. This work was funded by the Department of Transport and undertaken by the transport and road safety research consultancy, Agilysis, with a report published in 2020.

Five years on, the NYRF felt that it was time to update the casualty and survey analysis contained in the original report, given that the global Covid-19 pandemic was occurring at the time of the previous research and that a full five years of new collision data is now available. Furthermore, in the last five years, there have been increases in the number of motorcyclists employed in the gig economy and it is useful to NYRF to understand this cohort's attitude to safety and how they can be supported.

AIMS AND OBJECTIVES

The aim of this study is to understand the road safety challenges facing young motorcyclists through:

- Casualty analysis to understand how they are involved in collisions
- Survey analysis to understand their self-reported behaviours, attitudes, communication preferences, training experiences, and support they might want
- Qualitative insights, gained through discussions with young people to unpick the themes in more depth
- An activities' review to understand how the previous report has been used by NYRF and how the recommendations are being implemented.

PROJECT DESIGN AND ACTIVITIES

This study revisits the methodologies used in the previous study, allowing comparisons over time.

Casualty Analysis

Agilysis has access to full national STATS19 data, provided by the Department for Transport. This includes all collisions where there was at least one injury, and the incident was reported to the police. The filters used to undertake this analysis are set out in the **Casualty Analysis** section.

Young Rider Survey

An online survey was disseminated through NYRF, its partners, and Agilysis between October 2024 and March 2025 and a prize draw was offered as an incentive to participation. Among the 384 participants who completed the survey, 250 were active motorcycle users aged between 16 and 24.

The aim of the survey was to gain an insight into young motorcyclists and their characteristics, attitudes, and behaviours, and to compare the results with those of the previous survey conducted for the same purpose, to examine whether any changes have occurred over the past five years.

Survey Segmentation

As with last time, the respondents to the survey were processed to group them into 'clusters' of similar characteristics. A deep learning algorithm was used to segment them into groups based on the similarity of their questionnaire responses. A deep autoencoder neural network was used to spatially arrange motorcyclists so that those with more similar responses are closer together, and those who differ more are further apart. This technique takes a holistic approach, using all of the data available from the questionnaires, whilst also accounting for interdependencies between responses to different questions. Once the motorcyclists are arranged, a hierarchical clustering algorithm is used to form distinct groups of similar motorcyclists. The cluster hierarchy also provides super-groups of motorcyclists that show which of these groups are similar to each other. One of the major benefits of this technique is that it allows respondents to be grouped without researcher bias.

Qualitative insights

Several virtual focus groups and mini-interviews were held with participants of the questionnaire. Microsoft Teams was used for the sessions. As with the previous project, these interactions provided opportunities to follow up on issues raised, and trends found within, the answers given to the surveys.

As with the previous study, it was difficult to encourage participation in the sessions. Online focus groups were scheduled at various times of day and days of the week, and whilst initial sign up was positive, subsequent attendance was often low. To increase the sample, mini-interviews were set up, which involved shorter one-to-one sessions, scheduled at a time to suit the interviewee. These were also held online. Overall, eleven young riders participated in these discussions. Whilst that number is low, there were some interesting insights gained from those sessions.

Activities' Review

Finally, a review of activities delivered since the previous report was conducted. The method for undertaking this was to create a spreadsheet of the 17 recommendations made last time. Members of the NYRF then shared information on the activities they have delivered, providing details on how they felt they had been delivering against each recommendation (including who was involved and the lessons learned from the work).

CASUALTY ANALYSIS

SCOPE

This analysis explores the Department for Transport's collision data to provide an insight into the ways in which young people in Great Britain are involved in injury collisions as motorcyclists. These data are collected by police and collated by the Department for Transport as a National Statistic. The collisions which are included involve at least one participant sustaining an injury and the collisions were reported to the police. This means that these are the minimum numbers of injury collisions which could have occurred, as no information is available on those unreported to the police.

The following filters were applied to the data, prior to analysis:

- Date range of 2019-2023 (the most recent five years available)
- Casualty age between 16 and 24 years old
- Type of related vehicle was a motorcycle
- Casualty class was rider

The above filters mean that this analysis focuses on **injured young motorcycle riders only** (so does not include any pillion passengers, uninjured young motorcyclists, or other casualties in motorcycle collisions).

Most of the analysis is undertaken using the sample of **22,161 young motorcyclists** who sustained any level of injury. There is analysis undertaken on those who were killed (281 casualties [a reduction of 11% from 314 killed between 2014 to 2018]) or killed or seriously injured (6,635 casualties [a reduction of 18% from 8,076 between 2014 to 2018]). Most of the analysis is undertaken using the period between 2019 to 2023, although there are some trends analysed that extend further in time. These will be explicitly stated throughout.

SETTING THE SCENE

Casualty Trends

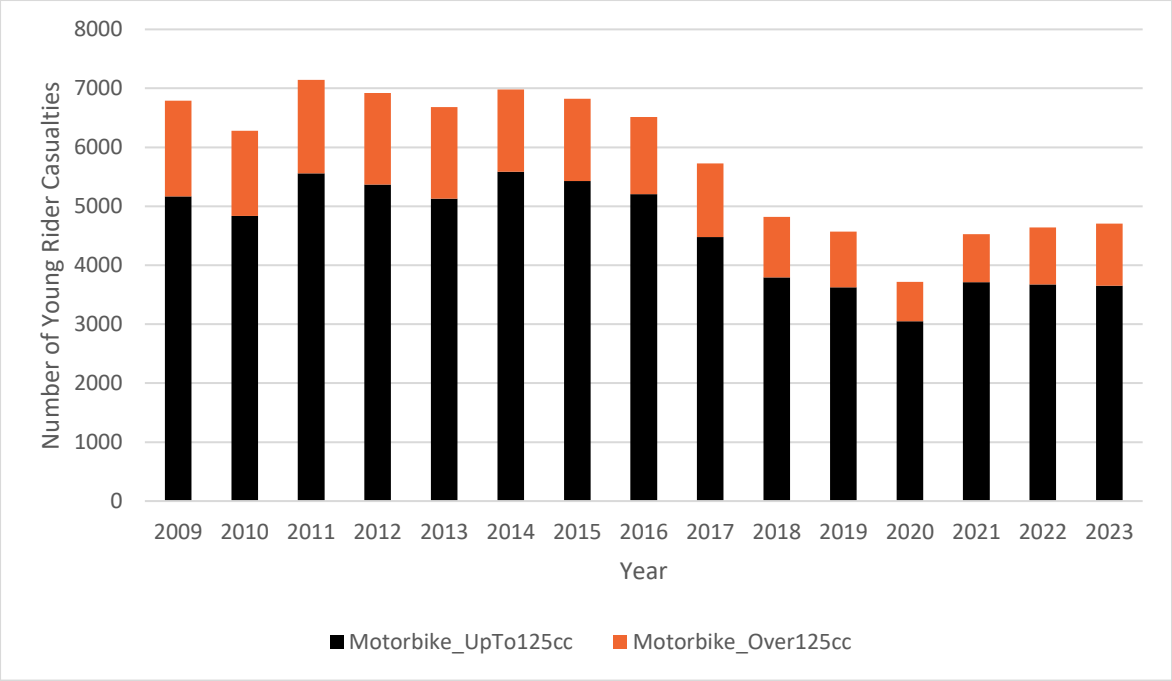
The total number of young motorcyclists injured in Great Britain in the last five years is 22,161. This is a reduction of 28% compared to the 2014 to 2018 period, when the last report was released. This means there has been a reduction of 8,701 young motorcycle casualties between the current and previous period. However, it should be remembered that the current analysis includes the period in 2020 and 2021 when travel restrictions due to the Covid-19 pandemic affected road use .

Figure 1 shows the trends for all young motorcycle casualties, regardless of age. It shows that there were few changes in overall numbers of casualties between 2009 and 2016. After 2016, there was a notable reduction in young motorcyclist casualties. However, there has been a general plateau in the number of young motorcycle casualties since 2018 (although there was a reduction in 2020 during the Covid pandemic).

However, there have been reporting changes in recent years, which may affect trends. "From 2016 onwards, figures on the severity of injury have been affected by a large number of police forces changing their reporting systems. It is likely that recording of injury severity is more accurate for forces using these new reporting systems. Some of these serious injuries may previously have been classified as slight injuries which means that the 2016, 2017 and 2018 serious injuries are not comparable to

previous years."[2] In the future, this means that reporting will be more accurate, but for now, trend analysis on unadjusted serious figures should be treated with caution. As such, most of this analysis is undertaken on all casualties, regardless of severity, as the overall numbers of those involved have not changed.

Figure 1 - 16 to 24-year-old rider casualties – all severities – by year



The majority of rider casualties were on smaller motorcycles in every year.

Motorcycle Engine Size

When considering casualties where motorcycle engine sizes are known (including electric motorcycles), there were 21,656 observed young rider casualties of any severity that occurred between 2019 to 2023. **This is a reduction of 30% since the 2014 to 2018 period.**

Table 1 shows the breakdown by type of motorcycle related vehicle associated with casualties of any severity. Note that the total is reduced from 22,161 as the analyses omits casualties on motorbikes when the engine size was not known.

The largest group of casualties is those riding motorcycles with an engine size of 51 to 125cc. However, as motorcycles get larger, the severity ratio increases. There is a low prevalence of young rider casualties on electric motorcycles, there these are omitted from further analyses.

[2] Department for Transport, *Reported Road Casualties in Great Britain: 2018 annual report,* https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/834585/reported-road-casualties-annual-report-2018.pdf, p.3

Table 1: Casualty Numbers of all Severities related to the Type of Motorbike in Great Britain, 2019 to 2023

Type of Motorbike	Number of All Casualties	Number of Killed or Seriously Injured (KSI) Casualties	KSIs to All Casualties for Type of Motorbike
Up to 50cc	2,729	665	Of all young motorcyclist casualties up to 50cc, **24%** resulted in KSIs
From 51 to 125cc	14,664	3,983	Of all young motorcyclist casualties from 51 to 125cc, **27%** resulted in KSIs
From 126 to 500cc	2,299	799	Of all young motorcyclist casualties from 126 to 500cc, **35%** resulted in KSIs
Over 500cc	1,641	858	Of all young motorcyclist casualties from over 500cc, **50%** resulted in KSIs
Electric	323	118	Of all young motorcyclist casualties from electric, **37%** resulted in KSIs
Total	21,656	6,384	Of all young motorcyclist casualties, **29%** resulted in KSIs

Age

Figure 2 shows number of young rider casualties by age and motorbike engine size. This shows that there is a peak number of casualties at age 18, closely followed by those aged 17. Unsurprisingly, the proportion of casualties on larger motorcycles increases with age. **These trends follow the same trends as those found between 2014 and 2018.**

Figure 2 - 16- to 24-year-old rider casualties - all severities (2019-2023) - by age

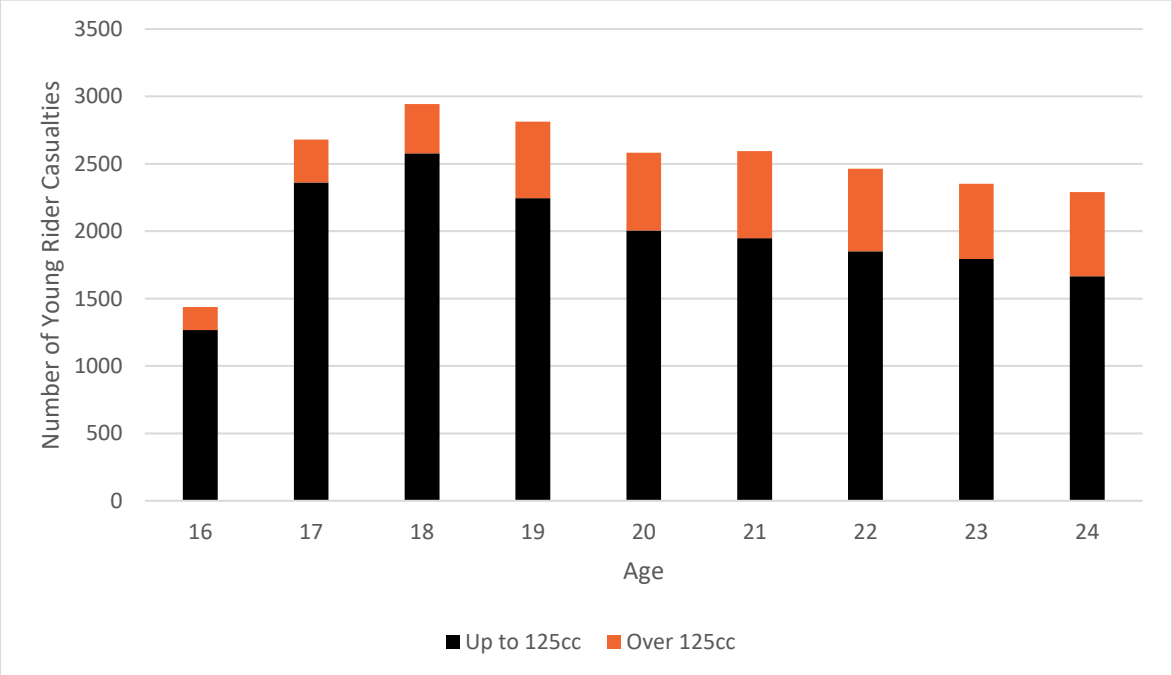


Figure 3 - 16- to 24-year-old rider casualties – killed or seriously injured (2019-2023) - by age

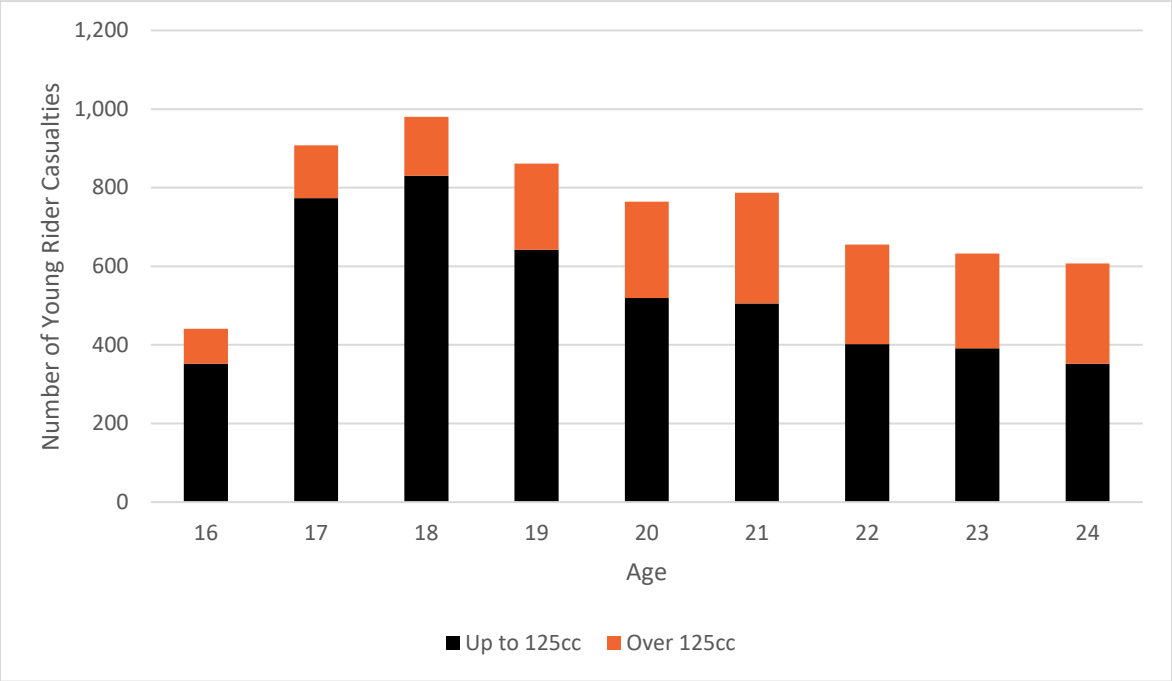


Figure 4 – 16- to 24-year-old casualties: car drivers and motorcyclists (2019-2023) - by age

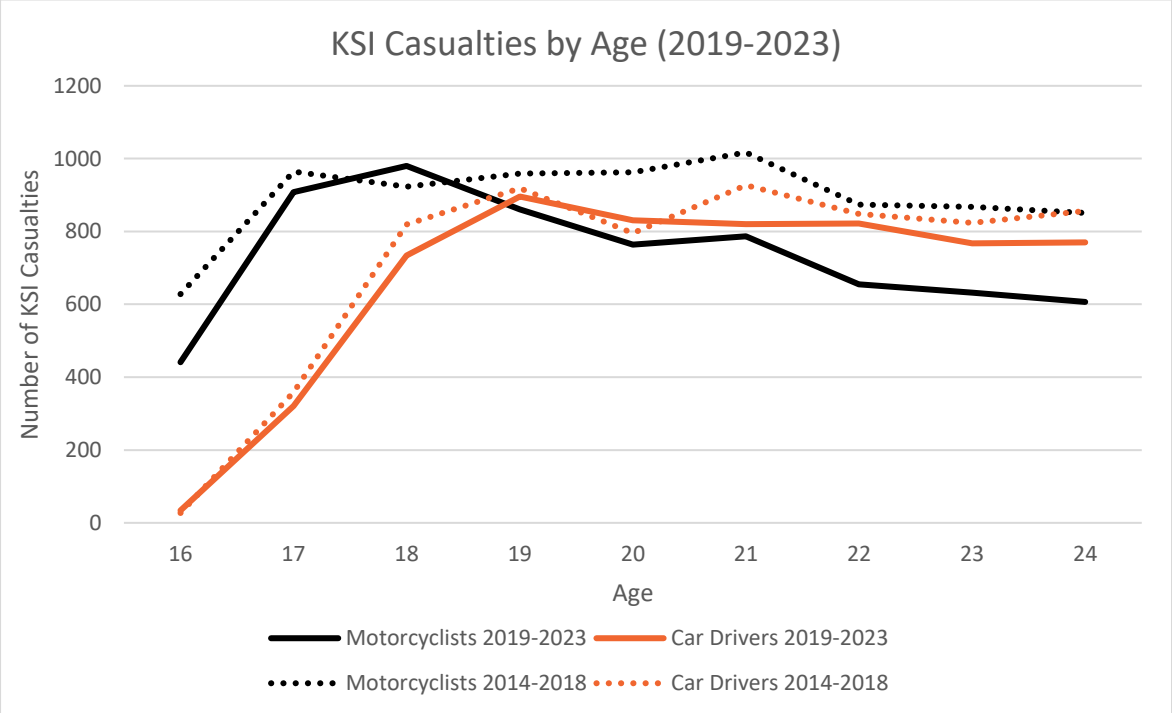


Figure 4 compares the numbers of young motorcyclists who were killed or seriously injured in Great Britain between 2019 and 2023 with the numbers of young car drivers who were also killed or seriously injured in that time period. The previous analysis for 2014 to 2018 is also shown in the dashed lines. It shows that up until the age of 19 (for both time periods), there were higher numbers of motorcyclists killed or seriously injured than car drivers. After this, the numbers are similar until the age of 22, when there are fewer motorcyclists. This trend differs from the previous analysis which found greater

numbers of young motorcyclists killed or seriously injured for all ages up to 24 years for the period 2014 to 2018. The gap between motorcycle and car driver KSI casualties is large for those aged 16, 17 and, to some extent, 18 years.

There are disproportionate levels of risk experienced by young motorcyclists: car traffic accounted for 76% of vehicle miles, on average, between 2019 and 2023, compared to 0.8% of vehicle miles being by motorcycle (for drivers of all ages).[3]

Figure 5 - 16 to 24-year-old rider casualties - Fatal casualties (2019-2023)

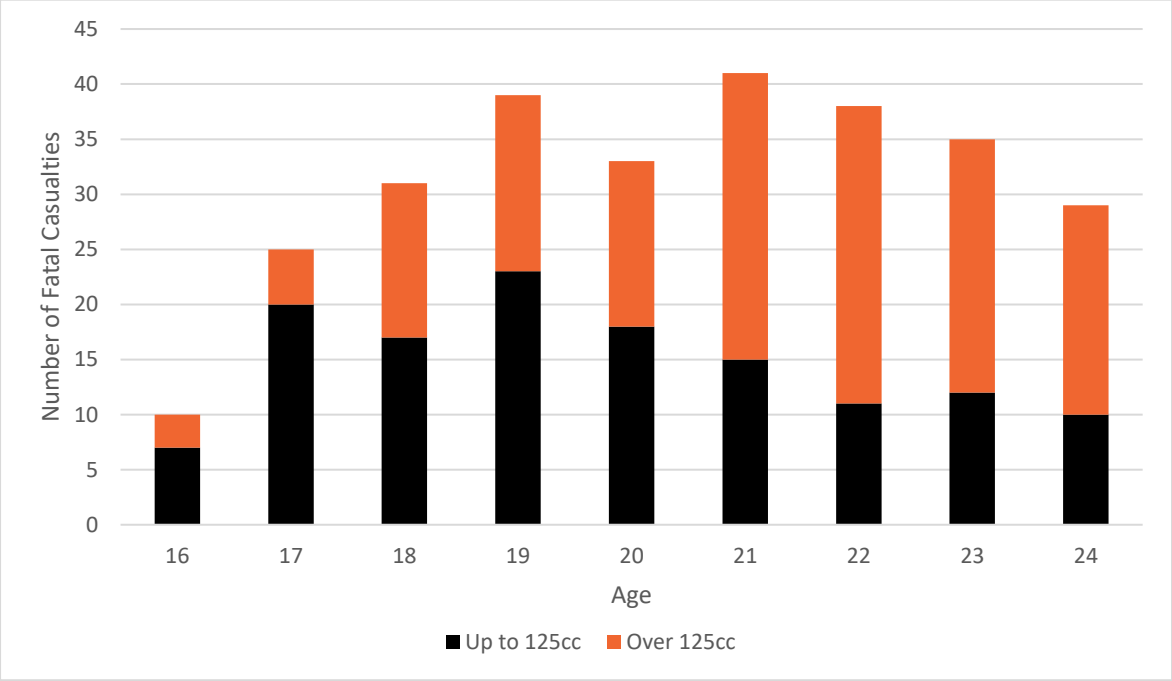


Figure 5 shows the number of fatalities amongst young motorcyclists. As with the previous analysis, it shows that the number of young riders who were fatally injured increases with age and the proportions switch from being predominantly on smaller motorcycles to being predominantly on larger ones.

There are some slight differences to the trends in 2014 to 2018. The number of fatalities decreases with age, from a peak at age 21. Previously, there was fluctuation, with peaks at age 20 and 24 years. However, with a smaller sample, fluctuations are expected. There were 281 young people killed on a motorcycle in this time period (compared with 314 between 2014 to 2018).

After setting out the differences by severity, most of the rest of the analysis is conducted on casualties who suffered an injury of any severity. For many of the charts, the analysis is split by motorcycle size.

Sex

Figure 6 shows the sex of those rider casualties on smaller motorcycles, by age. As with the previous analysis, 8% of these riders were female. Between 2014 and 2018, the proportion of female rider casualties on motorcycles up to 125cc reduced with age (from a peak of 11% at aged 16 years). The

[3] Table TRA0101: Road traffic (vehicle miles) by vehicle type in Great Britain, annual from 1949, Department for Transport Statistics https://www.gov.uk/government/statistical-data-sets/road-traffic-statistics-tra#traffic-volume-in-miles-tra01

trend differs between 2019 and 2023, with 9% of 16-year-old casualties being female, reducing to 6-7% for 17- to 19-year-olds, and then increasing back to 9% from 21- to 24-year-olds.

For all ages of young motorcyclist, the majority (93%) of rider casualties were male. In comparison, only 59% of 16- to 24-year-old car driver casualties were male.

Figure 6 - Sex of all casualties on up to 125cc (2019-2023)

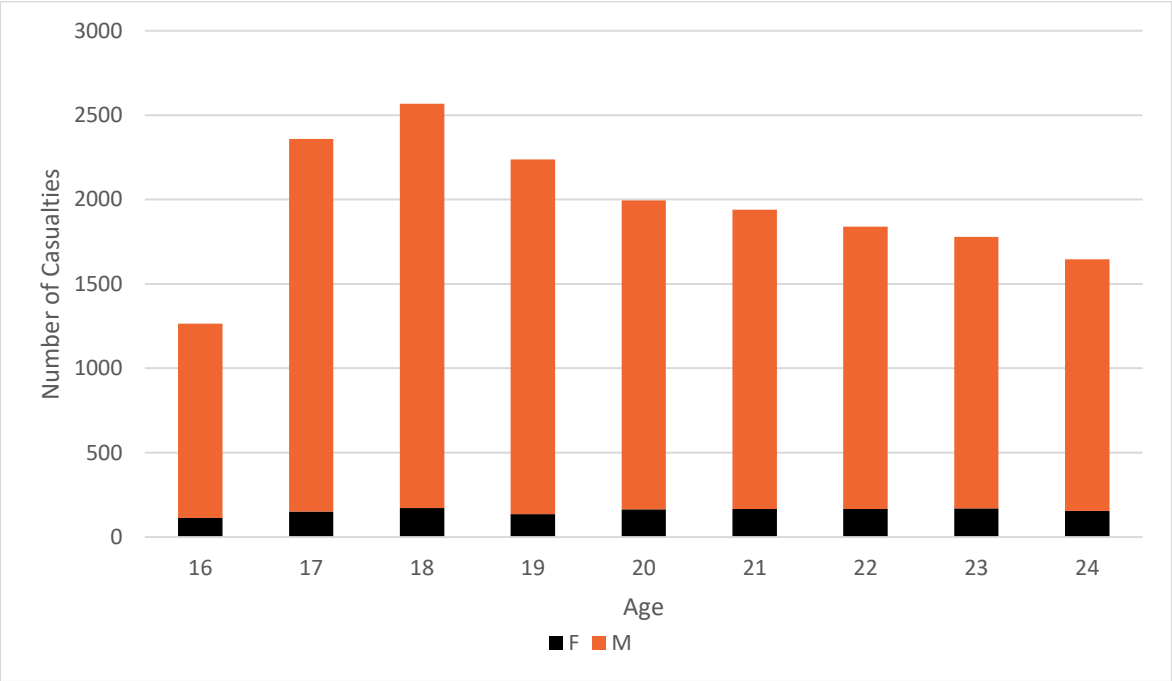
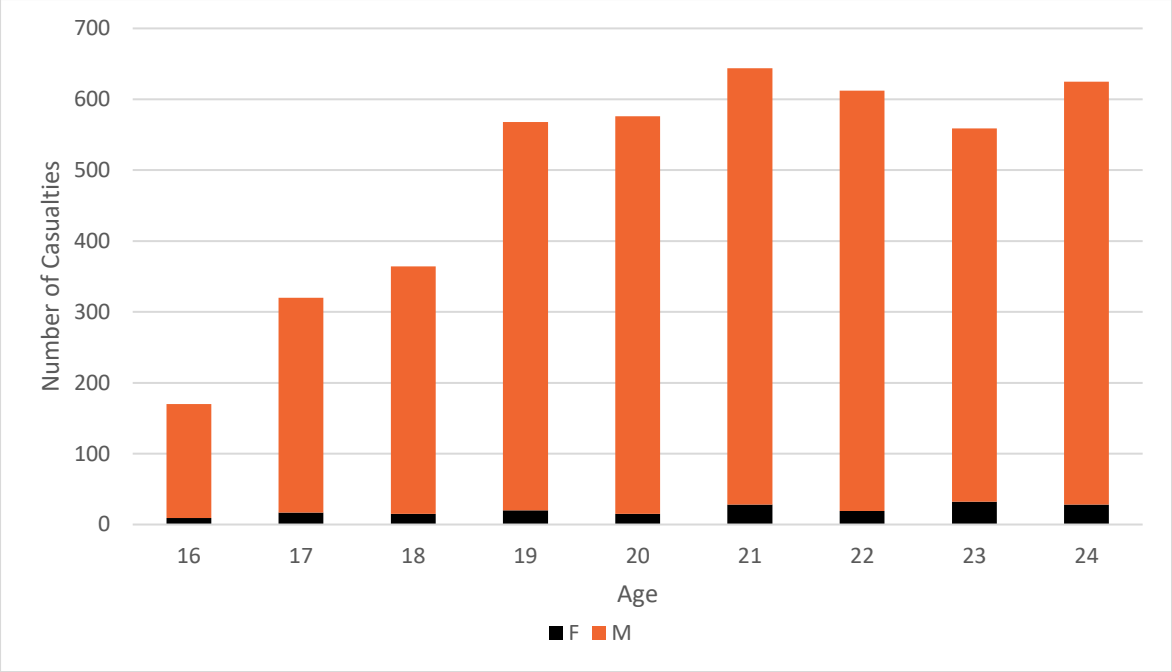


Figure 7 shows the same information for those on larger motorcycles. Again, the majority were male, with 4% being female. The overall number of casualties increases with age, with little change in the proportion of females (4-6%). Motorcycle use exhibits a predominance of male riders, reflected consistently in both the national casualty statistics and reported travel patterns. Their volume and exposure as riders will naturally influence the heightened collision risk for male riders in this regard. It is, however, beyond the scope of this study to consider in detail how far the amount of motorcycle travel by male riders is a determinant of their collision involvement.

Figure 7 - Sex of all casualties on over 125cc (2019-2023)



Segmentation

Analysis of young rider casualties, by age and engine size, suggests that not all young riders are the same. This was confirmed in the previous report, where the data was segmented to show firstly the proportion of casualties by these measures, and secondly into clusters of young riders who shared common characteristics based on the survey data and casualty analysis. This approach is replicated based on the more recent data collected for this project.

Table 2 shows the proportions of total young rider casualties by age and engine size. The up and down arrows show comparisons to the proportions identified in the previously analysis. As with 2014 to 2018, the largest group of casualties is 16- to 18-year-olds on motorcycles up to 125cc at 28.0%. However, this proportion is slightly lower than before (31.6% between 2014 and 2018). A further 28% of casualties were aged 19 to 21 years on smaller motorcycles (a slight increase from 27.2% previously). A larger increase was seen amongst those aged 22 to 24 years old on motorcycles up to 125cc – up to 24% from 20.6%.

For motorcycles over 125cc, there was a decrease in the proportion of casualties aged 22 to 24 years old (8.1% compared to 10% in 2014-2018). There was no change in the proportion of all casualties aged 19 to 21 years old on larger motorcycles. Worryingly, there has been an increase in the proportion of casualties aged 16 to 18 years on machines over 125cc (3.9% from 2.6%). This group are riding these larger motorcycles illegally and so, whilst it is important to address this issue, engaging with them through the National Young Rider Forum is unlikely to be effective. As such, this group is not included in subsequent analysis. The rest of the analysis is based on the other five segments.

Table 2 - Segmentation of casualties by age and engine size (2019-2023)

16- to 18-year-olds on up to 125cc ↓ 28.0% (6,206) ↓	16- to 18-year-olds on over 125cc ↑ 3.9% (856) ↑
19- to 21-year-olds on up to 125cc ↑ 28.0% (6,200) ↑	19- to 21-year-olds on over 125cc ↓ 8.1% (1,790) ↓

22- to 24-year-olds on up to 125cc ↑ 24.0% (5,310) ↑	22- to 24-year-olds on over 125cc ↓ 8.1% (1,799) ↓
Total Up to 125cc: 79.9% (17,716)	Total Over 125cc: 20.1% (6,367)

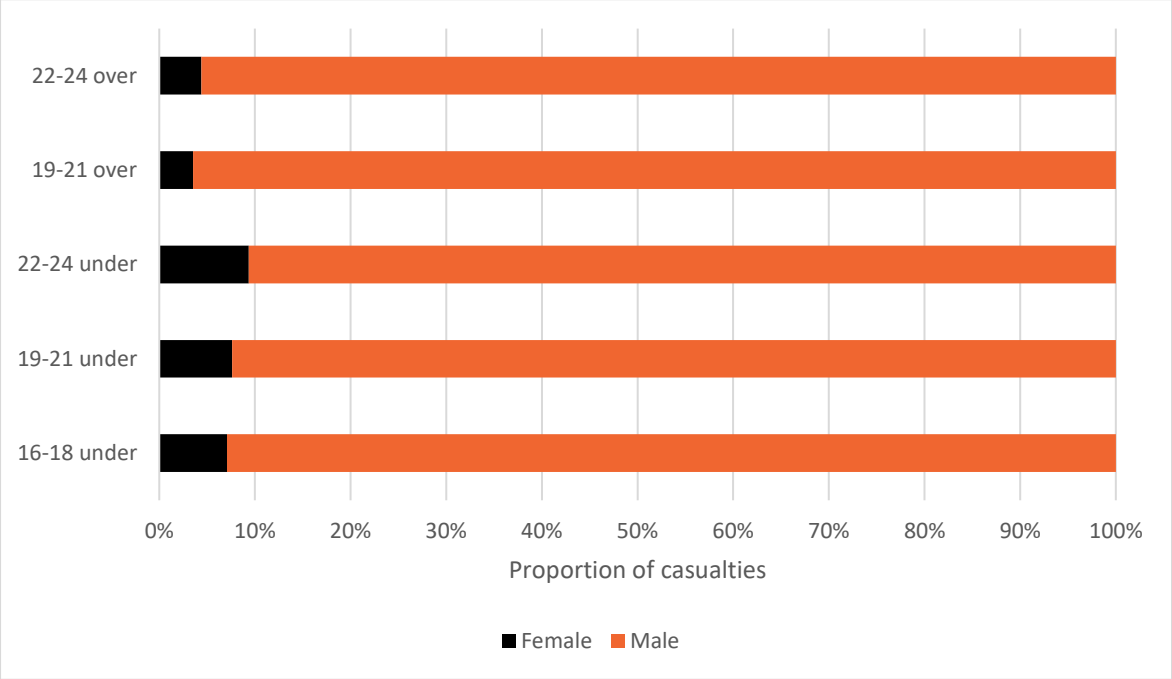
WHO IS INVOLVED?

This section explores the five segments to determine 'who' they were. The segments are defined by age group and whether their motorcycle had an engine over or under 125cc, with 'under' including up to 125cc.

Sex

The highest percentages of female casualties were in the three 'under' segments, with 9% of those in *22 to 24 under* being female, as shown in Figure 8. This differs from the 2014 to 2018 analysis, where the largest percentage of female casualty riders was in the *16 to 18 under* segment.

Figure 8 - Gender split by segment (2019-2023)



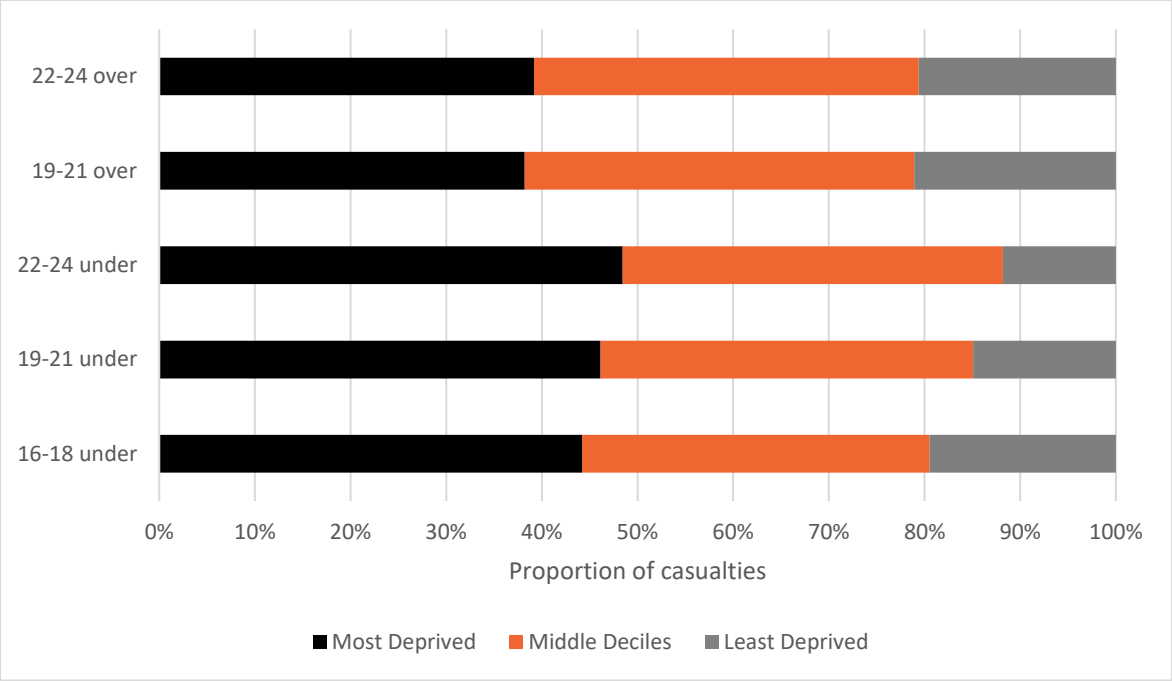
Deprivation

Deprivation levels are examined using UK Index of Multiple Deprivation (IMD) values. IMD is calculated by the Office for National Statistics (ONS), the Scottish Government and the Welsh Government, and uses a range of economic, social and housing data to generate a single deprivation score for each small area in the country. This profile uses deciles, which are ten groups of equal frequency ranging from the 10% most deprived areas to the 10% least deprived. It should be remembered that indices of multiple deprivation include income, employment, health, education, access to services and living environment and are not merely about relative wealth. Home postcode data for casualties is used to define their deprivation levels. If all casualties were equally distributed across the country, then each decile would comprise of 10% of casualties. Note that all analyses in this section only considers casualties where home postcode was known.

For this analysis, the deciles have been grouped to make the analysis clearer. The three most deprived deciles have been grouped into 'most deprived, the three least deprived deciles have been grouped into 'least deprived' and the four deciles in the centre (from more deprived 40% to less deprived 40%) into 'middle deciles'. As above, if casualties were equally distributed then the 'most deprived' should equal 30%, the 'least deprived' should be 30%, and the 'middle deciles' should equal 40%.

Figure 9 shows that casualties were not equally distributed across the groups. For the *19 to 21 under* (46%) and *22 to 24 under* (48%) segments, over 40% of the casualties were from the 'most deprived' communities. The proportions in the middle segments were in line with the proportions of the population who live in these communities. There were fewer casualties from the 'least deprived' deciles than expected, with fewer than 30% in all segments. The *22 to 24 under* segment had the fewest casualties from the 'least deprived' communities. This analysis is in line with the previous study.

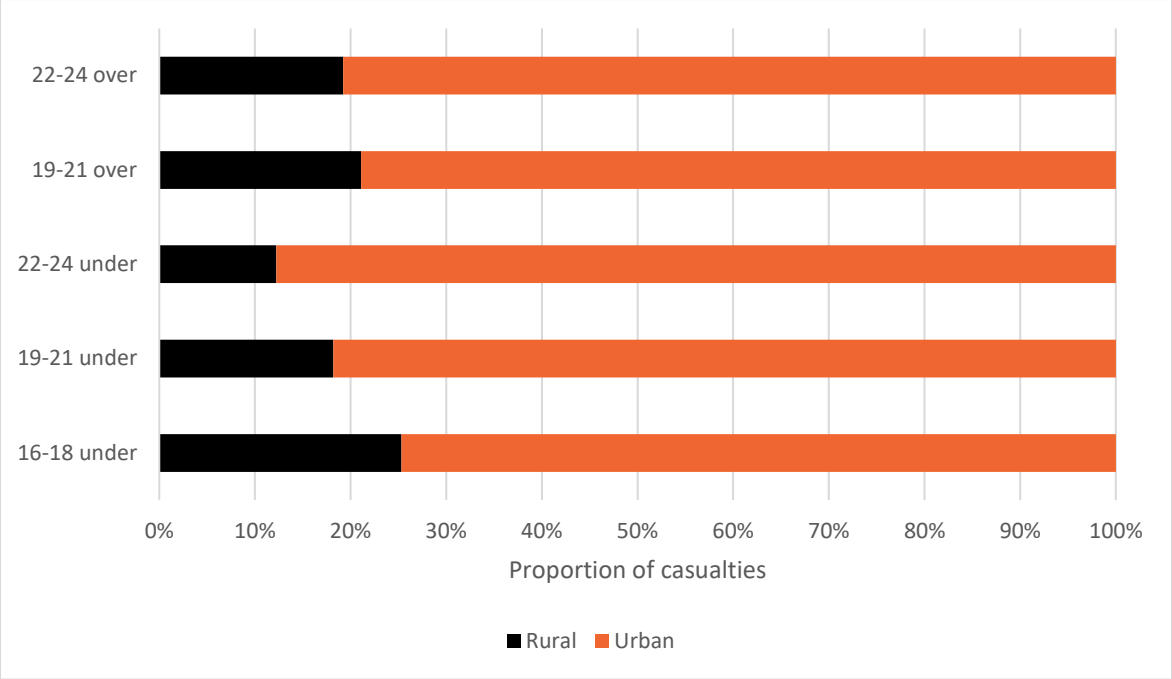
Figure 9 - Deprivation distribution by segment (2019-2023)



Rurality

Postcode data can also be used to determine home rurality, also defined using Government data, shown in Figure 10 . In all cases, the majority of young rider casualties come from urban areas, especially those in the *22 to 24 under* segment. Between 75% and 88% of young rider casualties live in urban areas. The highest percentages from rural areas were *16 to 18 under* (25%) and *19 to 21 over* (21%) segments. These are similar proportions to those revealed in the 2014 to 2018 analysis.

Figure 10 - Home rurality by segment (2019-2023)



Home Region – Young Rider Casualties

Figure 11 - Map of Home Regions of Young Rider casualties (casualties per 100,000 16-to-24 population)

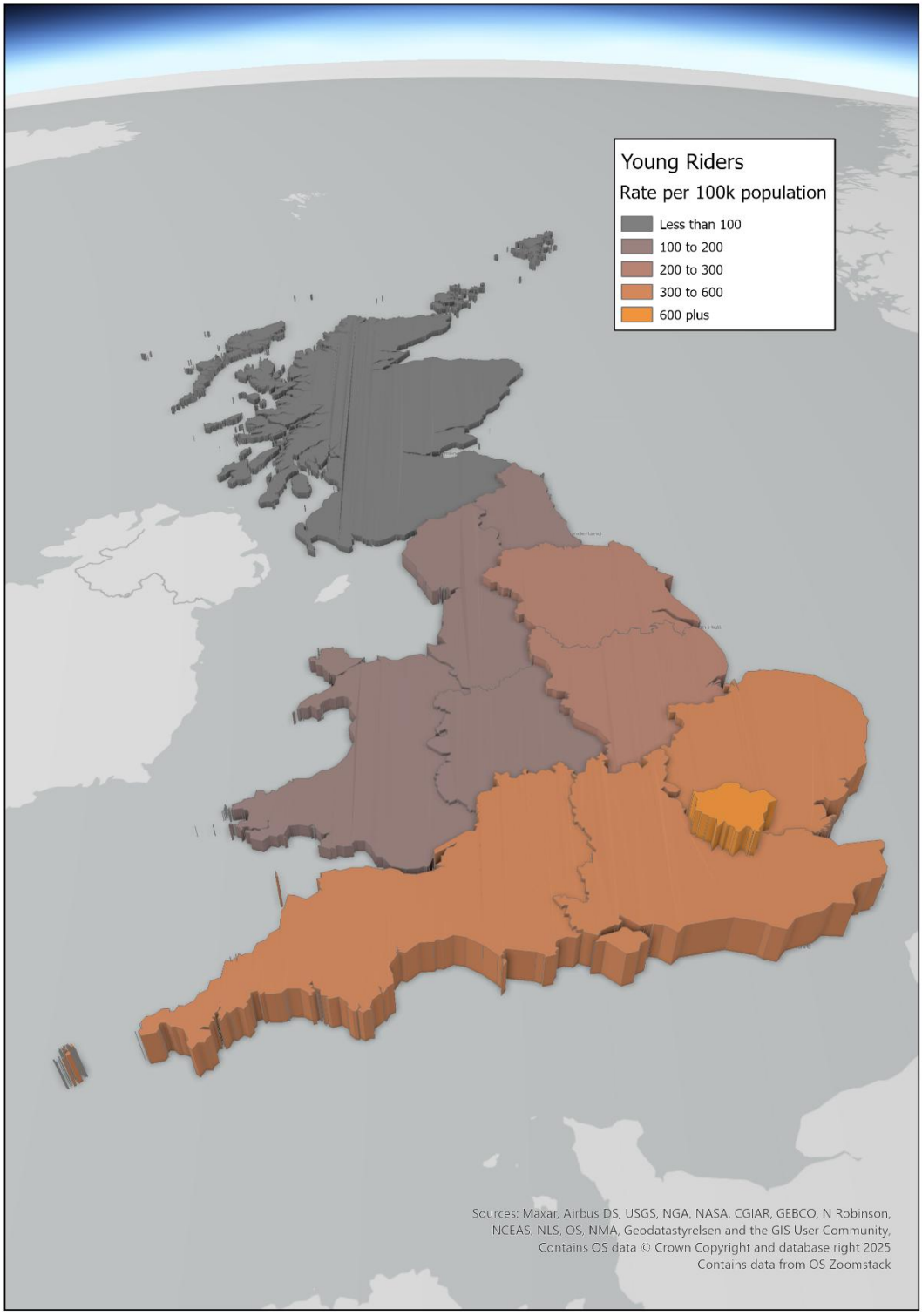


Figure 11 shows the home locations of young rider casualties from 2019 to 2023, expressed as rates calculated as the numbers of young riders injured in each region per 100,000, 16-to-24 years old in the local population. It shows the rates are highest in the south of England, particularly in London, where there are 664 rider casualties per 100,000 young people (the rate was 661 per 100,000 in the previous study).

The South East, the South West and East of England all have young rider casualty rates between 335 and 400 casualties per 100,000 16-to-24-year-olds. Whilst these regions are still the ones with the highest rates after London, the rates themselves have reduced significantly from between 450 and 560 casualties per 100,000 in the 2020 study.

The East Midlands and Yorkshire and Humberside experienced around 250 casualties per 100,000 young people (down from 300 to 400 casualties). The West Midlands was previously in this category but is now with the North East, North West and Wales, with having between 120 and 165 young rider casualties per 100,000 population. As with the last analysis, Scotland had the lowest casualty rates of 63 per 100,000 young people (down from 106).

Acorn Analysis

The final analysis conducted using the home postcodes of the young rider casualties is using a socio-demographic profile system, called Acorn. In the 2020 study, a similar system called Mosaic was used. Acorn profiling uses CACI's Acorn cross-channel classification system[4], which is assigned uniquely for each casualty and vehicle user based on individual postcodes in STATS19 records. Typically, nearly 85% of casualty and driver STATS19 records can be matched to Acorn Types, so residency analysis is based on about five out of six young rider casualties involved in reported injury collisions.

Acorn is intended to provide an accurate and comprehensive view of citizens and their needs by describing them in terms of demographics, lifestyle, culture, and behaviour. By analysing data from hundreds of different sources, and segmenting UK postcodes by common characteristics, Acorn provides a detailed understanding of the various types of people who make up customer bases and catchment areas.

Acorn presently classifies the community represented by each UK postcode into one of 7 categories, 22 Groups and 65 Types. Each Group embraces between 3 and 6 Types.

This report displays Acorn analysis as dual series column charts, to facilitate quick and easy insight into residents and relative risk. In these charts, the wider background columns denote the absolute number of Manchester resident casualties or drivers in each Acorn Type or Group, corresponding to the value axis to the left of the chart. The columns in the foreground provide an **index** for each Acorn Type or Group. These indices are 100 based, where a value of 100 indicates the number of casualties or drivers shown by the corresponding background column is exactly in proportion to the population of communities in the UK where that Type or Group predominates. Indices over 100 indicate **over representation** of that Type among motorcycle casualties relative to the population: for example, a value of 200 would signify that people resident in communities of that Type were involved in collisions at twice the expected rate. Conversely, indices below 100 suggest **under representation**, so an index of 50 would imply half the expected rate. Inevitably, index values become less significant as numbers of involved residents decrease, because increased random fluctuations tend to decrease levels of confidence.

The following charts (Figure 12 to Figure 16) show the Acorn distributions for each of the five segments. Summaries of the over-represented Acorn Groups are shown in **Appendix A: Selected Acorn Groups**.

Figure 12 shows the Acorn Groups where the *16 to 18 under* segment come from. There are five Acorn Groups of interest for this segment: *Group M: Family Renters* represents the third largest group of

[4] https://acorn.caci.co.uk/how-acorn-works/

casualties for this segment and is the most over-represented compared to the number of residents of this Group in Great Britain (as shown with an index of 179); *Group Q: Limited Budgets*, which represents a large number of casualties and is second the most over-represented with an index of 167; *Group S: Cash-strapped Families* (which is the largest group and has an index of 128); *Group R: Hard-up Households*, (also the largest group with an index of 126); and *Group J: Aspiring Communities*, which has an index of 130 and also has a high number of casualties.

Figure 12 - Home Acorn of 16- to 18-year-old rider casualties on up to 125cc (2019-2023)

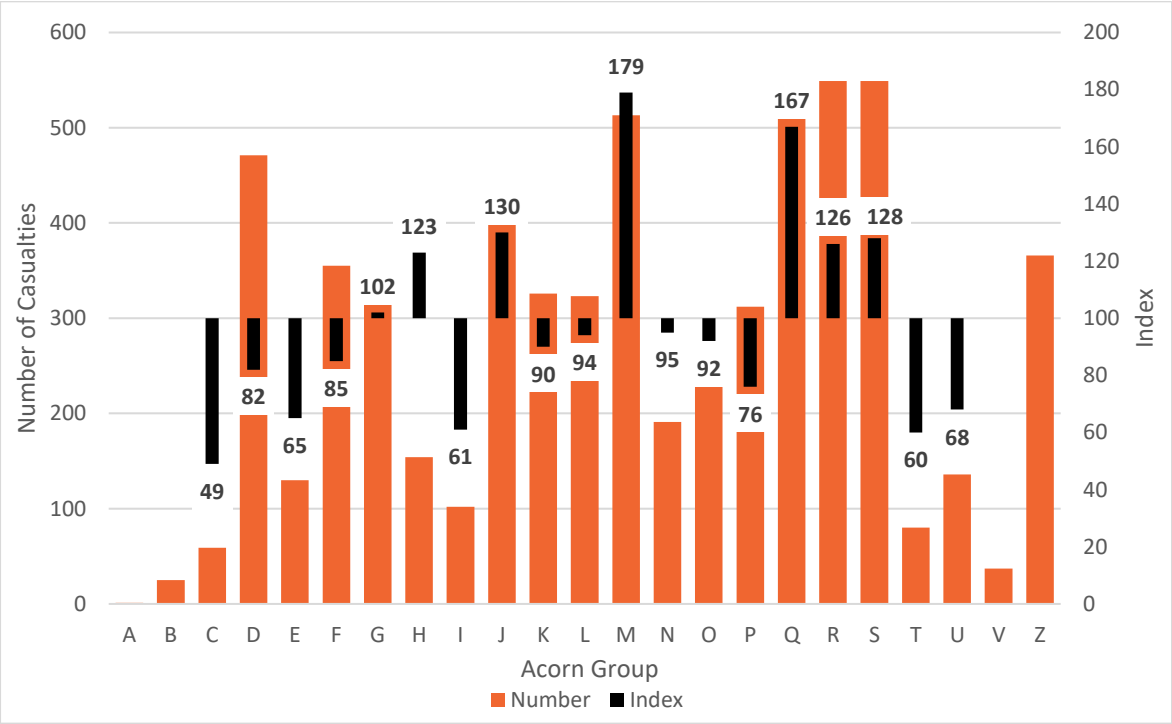


Figure 13 - Home Acorn of 19- to 21-year-old rider casualties on up to 125cc (2019-2023)

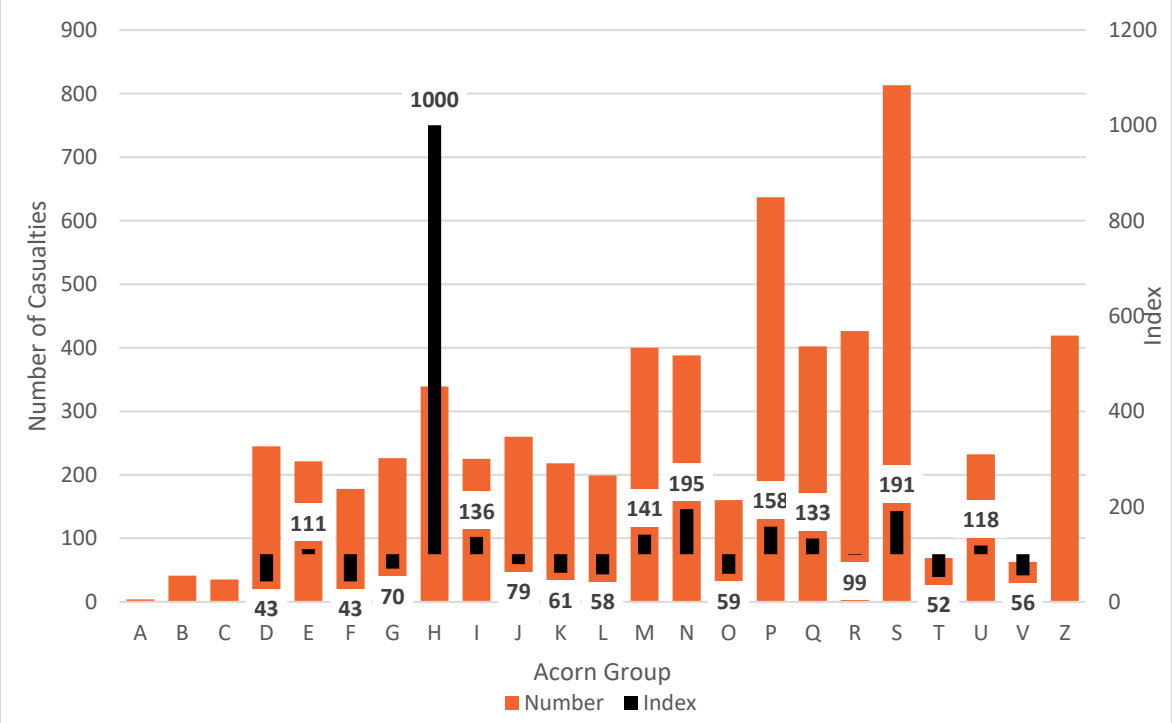
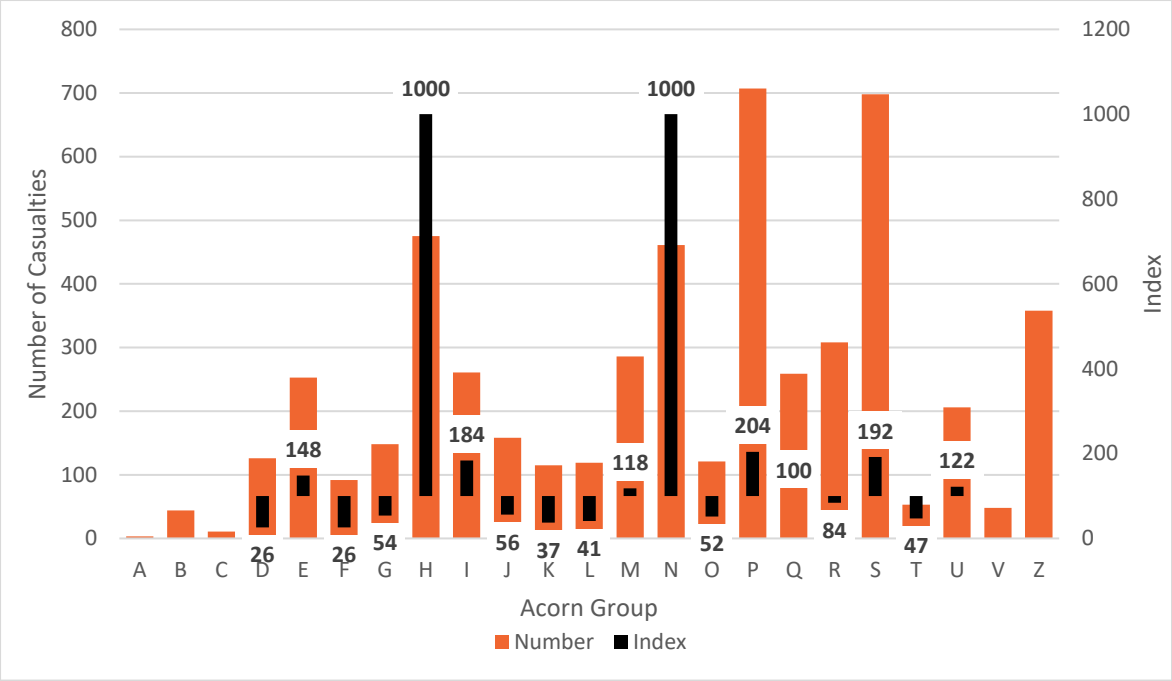


Figure 13 shows that there is one Acorn Group which is extremely over-represented for casualties in the *19 to 21* age group - *Group H: Metropolitan Surroundings*. There are other Groups which have high numbers of casualties and are over-represented, particularly *Group S: Cash-strapped Families* and *Group P: Tenant Living.*

Figure 14 - Home Acorn of 22- to 24-year-old rider casualties on up to 125cc (2019-2023)



For casualties in the *22 to 24 under* segment, there are two Groups which are extremely over-represented: *Group H: Metropolitan Surroundings* and *Group N: Urban Diversity*. There are also two Groups with high numbers of casualties, and both are over-represented. These are *Group P: Tenant Living* and *Group S: Cash-strapped Families*. These are shown in Figure 14.

Figure 15 - Home Acorn of 19- to 21-year-old rider casualties on over 125cc (2019-2023)

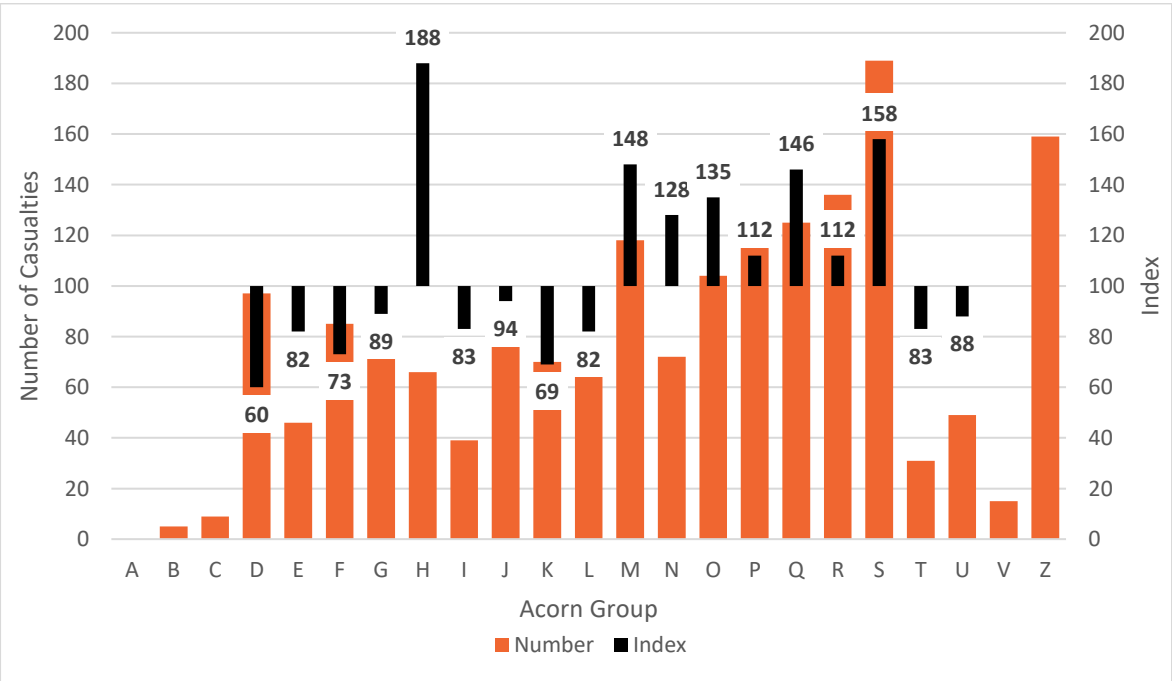
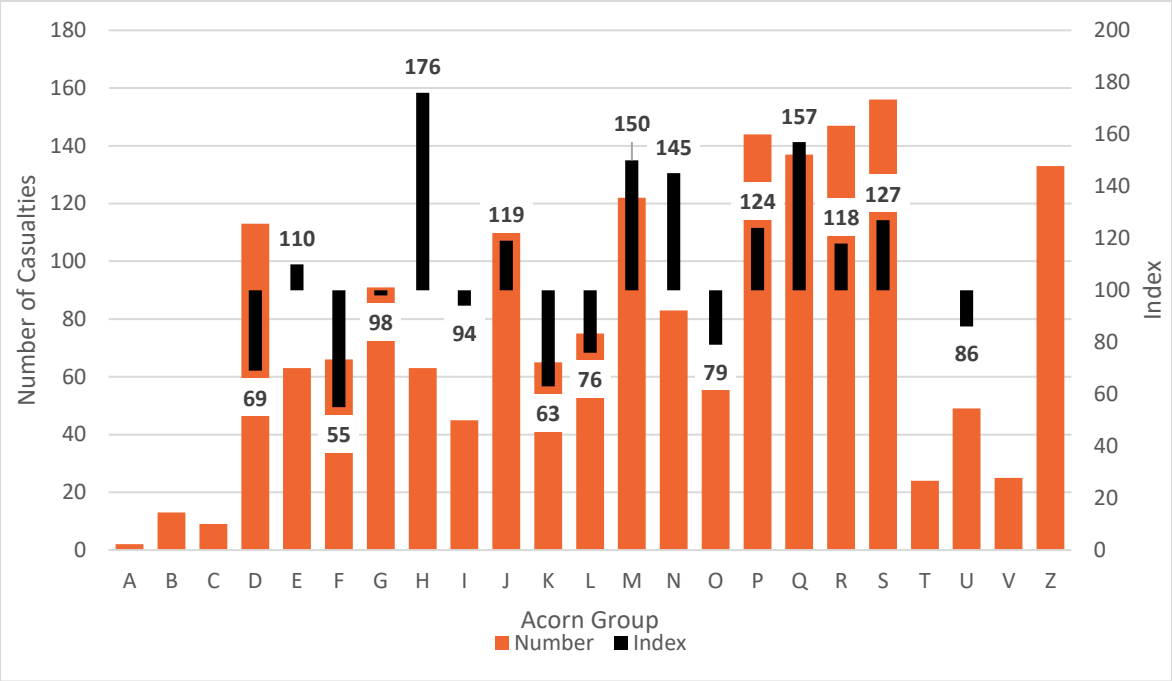


Figure 15 shows the Acorn casualty data for casualties aged 19 to 21 years who were riding a motorcycle over 125cc. The Group with the highest number of casualties and is also over-represented is *Group S: Cash-strapped Families*, followed by *Group Q: Limited Budgets* and Group M: Family Renters.

Figure 16 shows the Acorn casualty analysis for those in the *22 to 24 over* segment. *Group Q: Limited Budgets* has one of the largest numbers of casualties and one of the highest indices, whilst *Group S: Cash-strapped Families* has the highest number of casualties and is also over-represented. *Group P: Tenant Living* is the third largest casualty Group and is also over-represented.

Figure 16 - Home Acorn of 22- to 24-year-old rider casualties on over 125cc (2019-2023)



Acorn Summary

The Acorn analysis reveals some common themes across the five segments: four of the five segments feature *Group S: Cash-strapped Families* amongst the highest numbers and most over-represented casualties. This Group is described as 'families and single parents with young children in socially rented houses, often claiming benefits.' There is an over-representation of residents aged 18 to 34 years old in this Acorn Group. These are diverse communities, with a higher proportion of residents with Asian backgrounds than for the whole of the UK. Properties are likely to be flats or terraced house and there is a high proportion of social renting. Residents often work in semi-routine and routine occupations or are unemployed. Car ownership is low, meaning a motorcycle might be their only form of private transport.

Three of the segments also has *Group P: Tenant Living* featuring. As with *Group S*, there is an over-representation of young people (18 to 34 years). With housing, 62% of the properties in this Group are flats, which is significantly higher than for the UK (17%), with many residents privately renting. These properties are most likely to have one or two bedrooms. Many of these residents are students. As with *Group S*, car ownership is low.

Group Q: Limited Budgets is another Acorn Group which features in three of the segments. Properties in this Group are semi-detached houses where residents are social renting. Residents are employed in routine occupations.

Table 3 shows a summary of the over-represented Group, indicating whether they are in the largest five Groups for that segment and whether there is an over-representation compared to the general population.

Table 3 - Summary of Over-Represented Acorn Groups

		H	J	M	N	P	Q	R	S
		Metropolitan Surroundings	Aspiring Communities	Family Renters	Urban Diversity	Tenant Living	Limited Budgets	Hard-Up Households	Cash-Strapped Families
16-18 Under	Top 5	✗	5	3	✗	✗	4	1	2
	Over-represented	✓	✓	✓	✗	✗	✓	✓	✓
	% of casualties	2%	7%	8%	3%	5%	8%	9%	9%
19-21 Under	Top 5	✗	✗	4	5	2	3	✗	1
	Over-represented	✓	✗	✓	✓	✓	✓	✗	✓
	% of casualties	5%	4%	6%	6%	10%	6%	7%	13%
22-24 Under	Top 5	3	✗	5	4	1	✗	✗	2
	Over-represented	✓	✗	✓	✓	✓	✗	✗	✓
	% of casualties	9%	3%	5%	9%	13%	5%	6%	13%
19-21 Over	Top 5	✗	✗	5	✗	3	4	2	1
	Over-represented	✓	✗	✓	✓	✓	✓	✓	✓
	% of casualties	4%	5%	7%	4%	7%	7%	8%	11%
22-24 Over	Top 5	✗	✗	5	✗	3	4	2	1
	Over-represented	✓	✓	✓	✓	✓	✓	✓	✓
	% of casualties	4%	6%	7%	5%	8%	8%	8%	9%

WHERE DO THEY OCCUR?

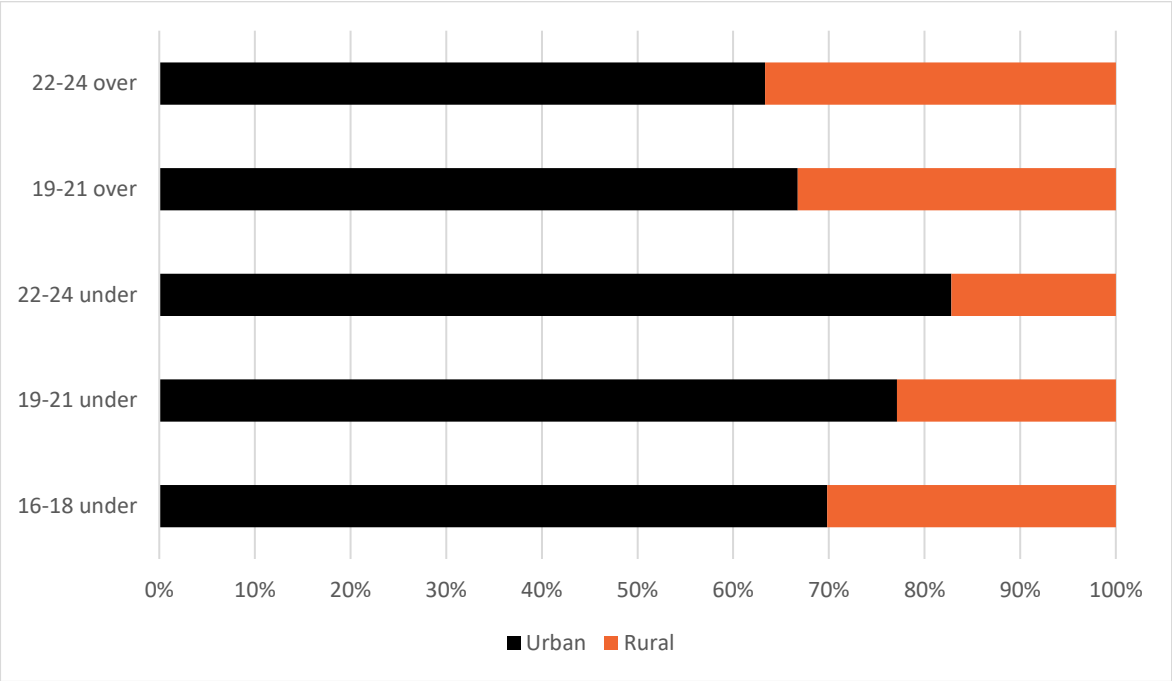
This section explores were collisions involving young rider casualties occur.

Crash Location

The previous analysis examined who young rider casualties are and where they are from, whereas this analysis focuses on the locations of their crash.

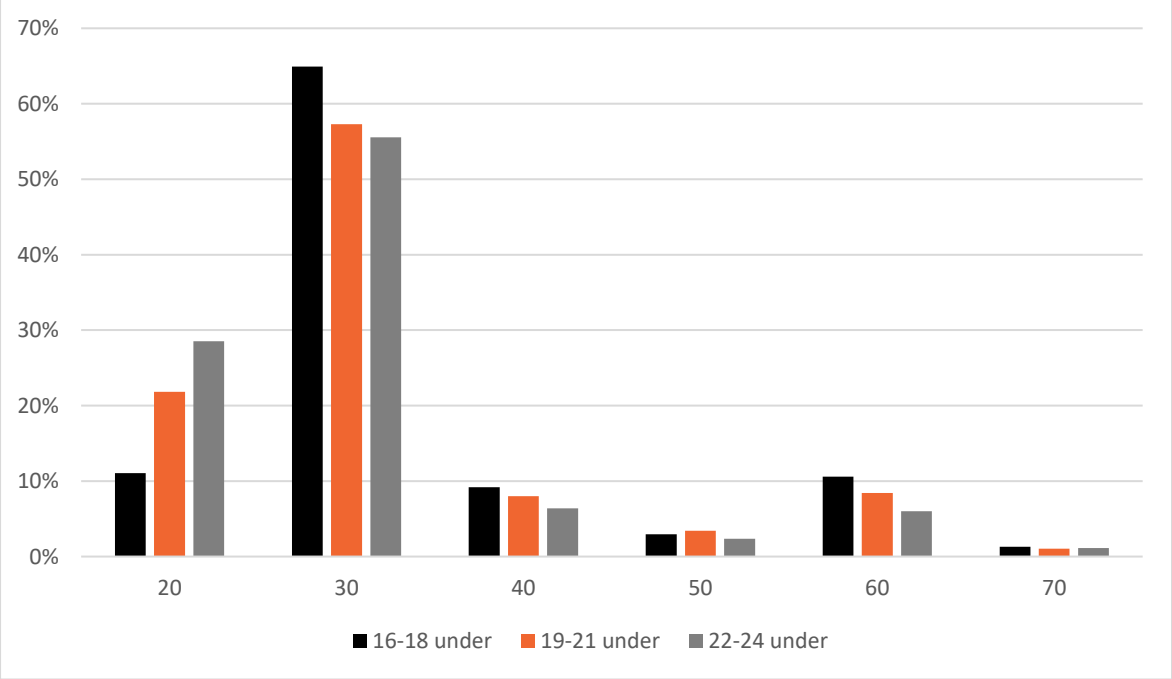
Figure 17 shows the rurality of the collision locations by segment, showing that the majority of collisions occur in urban areas for all of the segments. For the three segments on motorcycles under 125cc, between 70% and 83% occurred on urban roads whilst for those on larger motorcycles (the 'over' segments), 33 to 37% of collisions occurred on rural roads. This is consistent with the residency data, which showed that young rider casualties are mostly living in urban areas and are therefore more likely to be travelling on urban roads. This is also similar to the analysis from 2020.

Figure 17 - Crash location by segment (2019-2023)



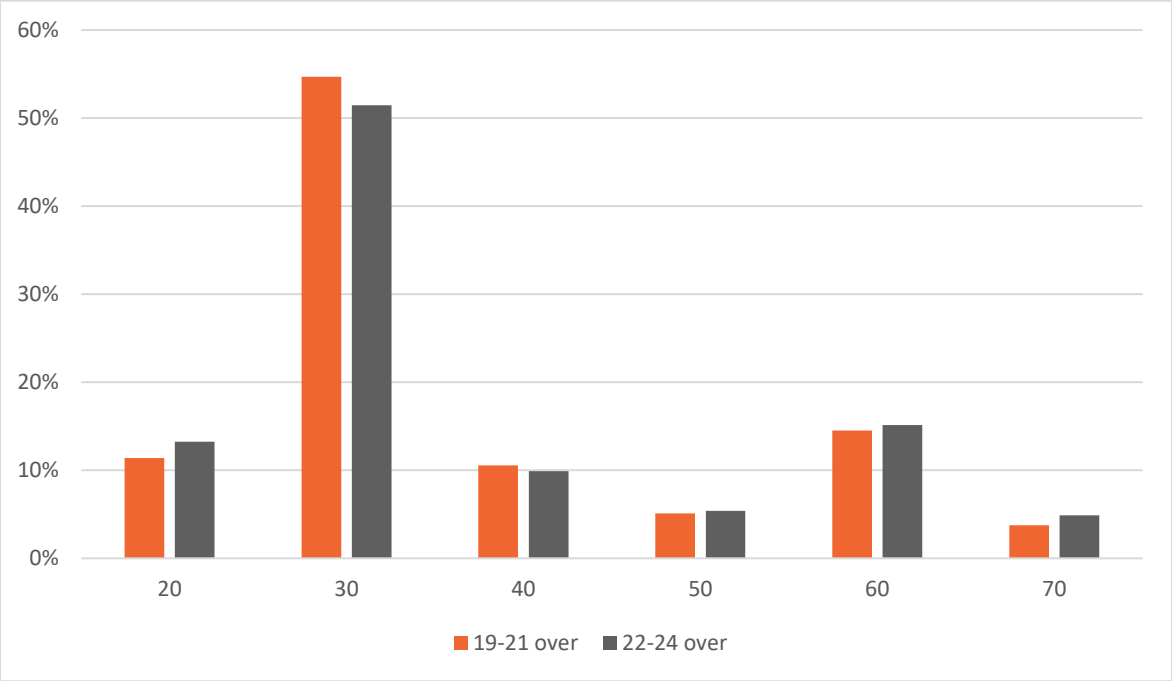
Speed limit

Figure 18 – Speed limit of segments up to 125cc (2019-2023)



Overwhelmingly, young rider casualties are involved in collisions on 30mph roads, as shown in Figure 18 and Figure 19. It is interesting to see that this proportion on 30mph roads is less than it was in the previous study, where over 70% of those on smaller motorcycles were on 30mph roads. An increase in the prevalence of 20mph limits across Great Britain mean that more collisions are now occurring on 20mph roads. For those on larger motorcycles, 15% occurred on 60mph roads.

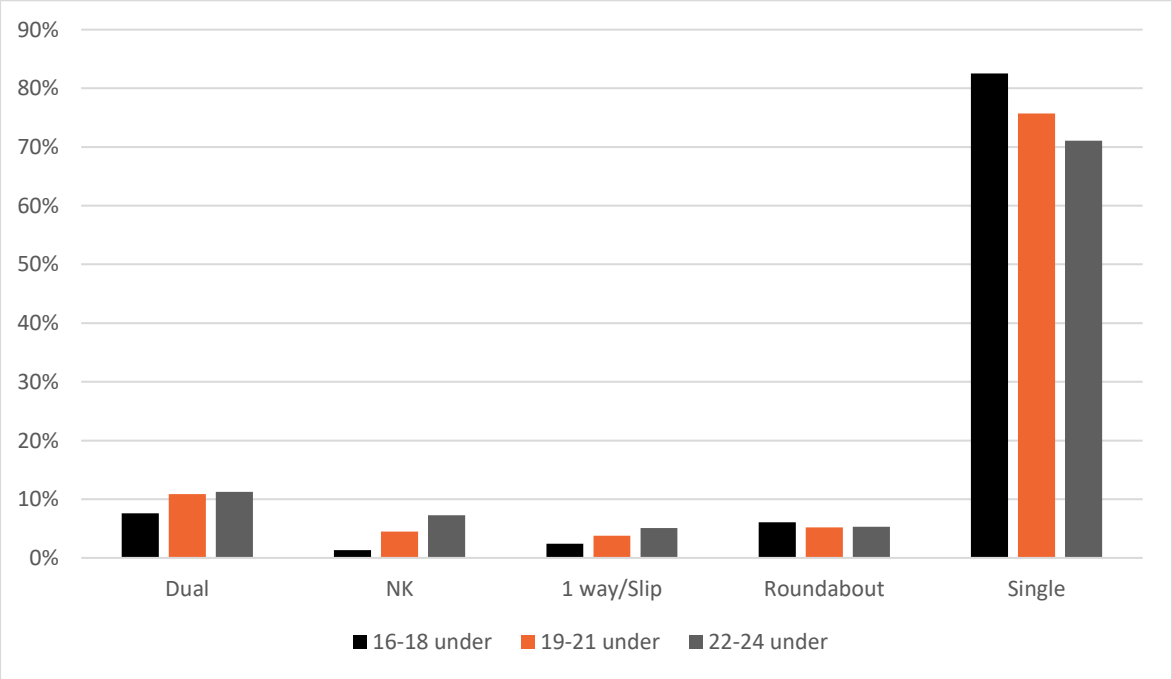
Figure 19 - Speed limit of segments over 125cc (2019-2023)



Road types

Figure 20 and Figure 21 show the road types for the five different segments of young rider casualties.

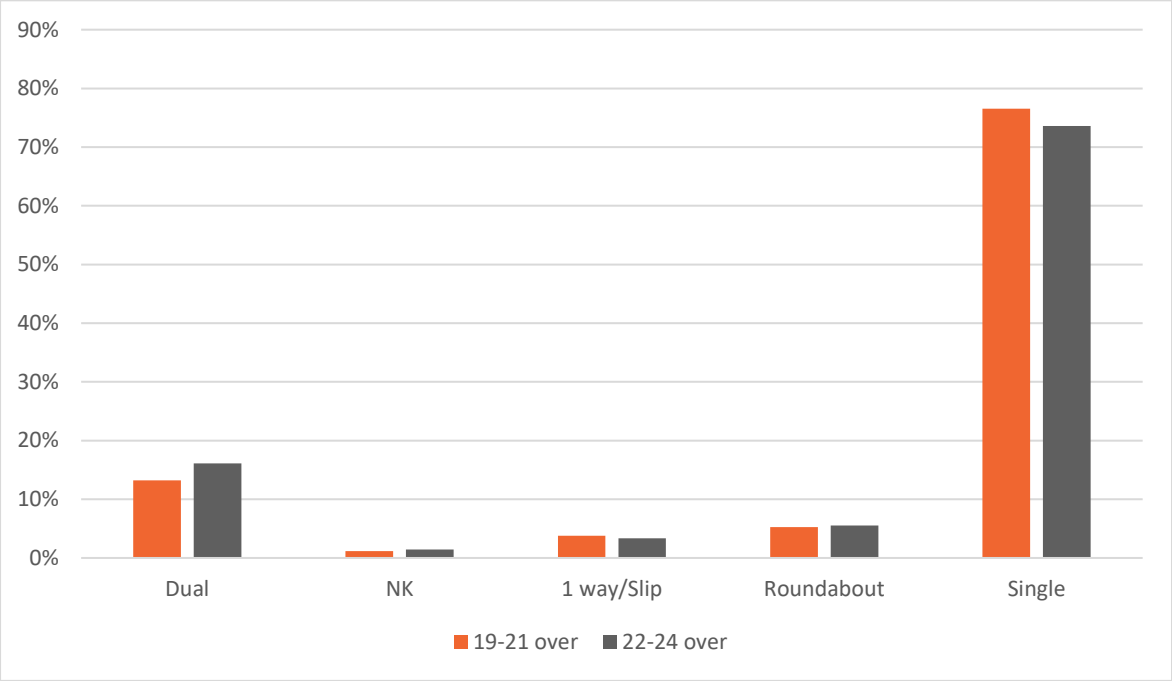
Figure 20 - Road type of segments up to 125cc (2019-2023)



In all cases, over 70% of motorcycle casualties were on single carriageway roads at the time of the collision, with over 83% of those on the smallest motorcyclists on these roads. There have been slight increases in the number of motorcyclists on machines up to 125cc who are involved in collisions on dual carriageways, since the last report, and an increase in the proportion where road type was reported as unknown.

For those on larger motorcycles, 13% of *19 to 21 over* and 16% of *22 to 24 over* were on dual carriageways at the time of their collision, which is almost the same as the 2020 study.

Figure 21 - Road type of segments over 125cc (2019-2023)



Road class

Figure 22 - Road class of segments up to 125cc (2019-2023)

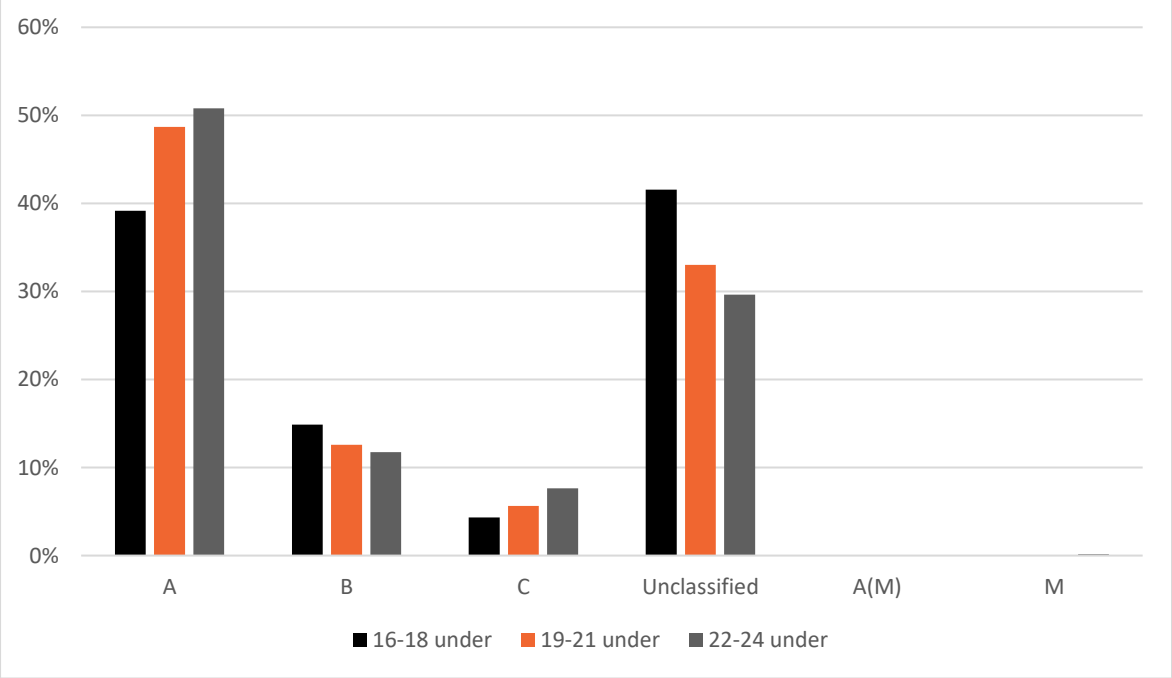


Figure 23 - Road class of segments over 125cc (2019-2023)

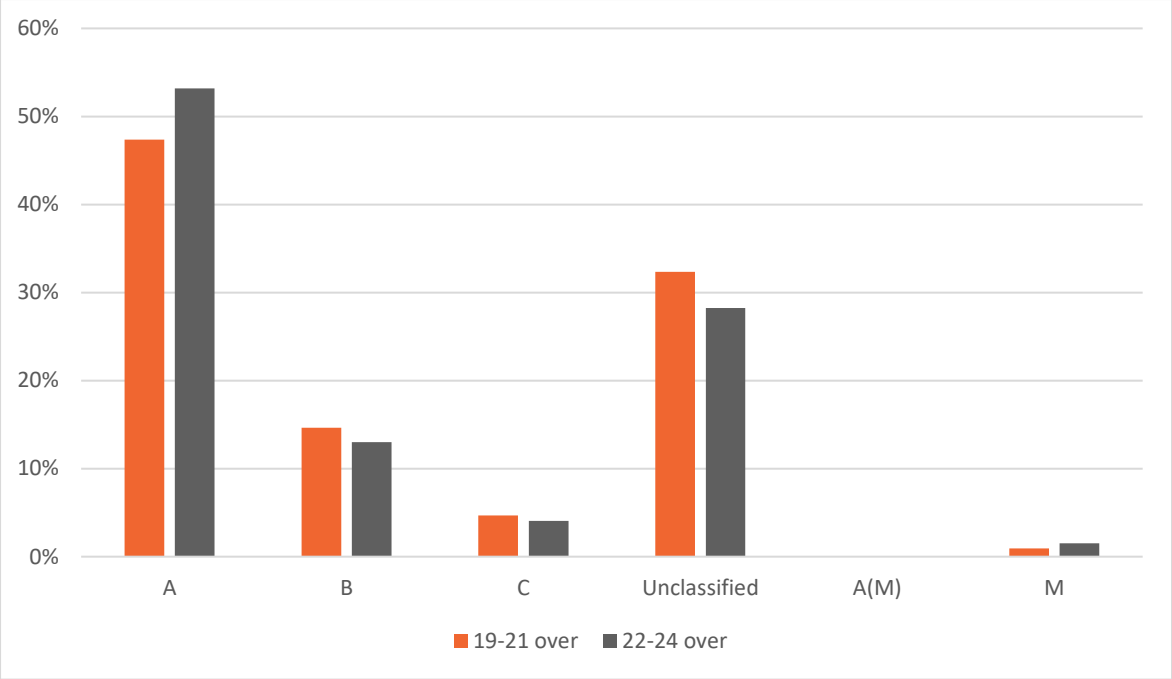


Figure 22 and Figure 23 show the road classes that young rider casualties were on at the time of their collision.

There were some differences between the segments, as there were in the last study. For the *16 to 18 under* segment, the largest percentage were on unclassified roads at 42%, which is slightly higher than the 39% from last time. It was followed for this segment by casualties on A roads (39%, compared to 37% last time). For the *19 to 21 under* segment, the largest percentage of casualties were injured on A roads (49%) followed by unclassified roads (33%). A similar trend was seen for the *22 to 24 under* segment, with 51% involved in collisions on A roads and 30% on unclassified roads.

On larger motorcycles, A roads and unclassified roads also featured, with larger percentages on A roads than unclassified roads. Given their licences, they can travel on motorways, which is why 1% of *19 to 21 over* and 2% of *22 to 24 over* motorcyclists were involved in casualties on these roads.

Whilst A roads are major roads between towns and regions, they are not all classified as 'strategic' roads (which are managed by National Highways, rather than the local highways authority). In total, 2.1% of all young rider casualties were injured on National Highways' roads, which is 469 casualties.

Junction detail

The following two charts show the junction details of the locations at which the motorcyclists were injured in collisions. Both Figure 24 and Figure 25 show that between 30% and 40% were not at a junction at the time of their collision. A further 31 to 39% were at a T-junction, with 8 to 11% at crossroads. These are similar findings to the last study. As with last time, analysis later this document will show that young motorcyclists are most frequently riding straight ahead at the time of their collision, and that they are most likely to be in conflict with car drivers. This junction analysis might suggest that car drivers are often pulling out of T-junctions into the path of the motorcyclist.

Figure 24 - Junction detail of segments up to 125cc (2019-2023)

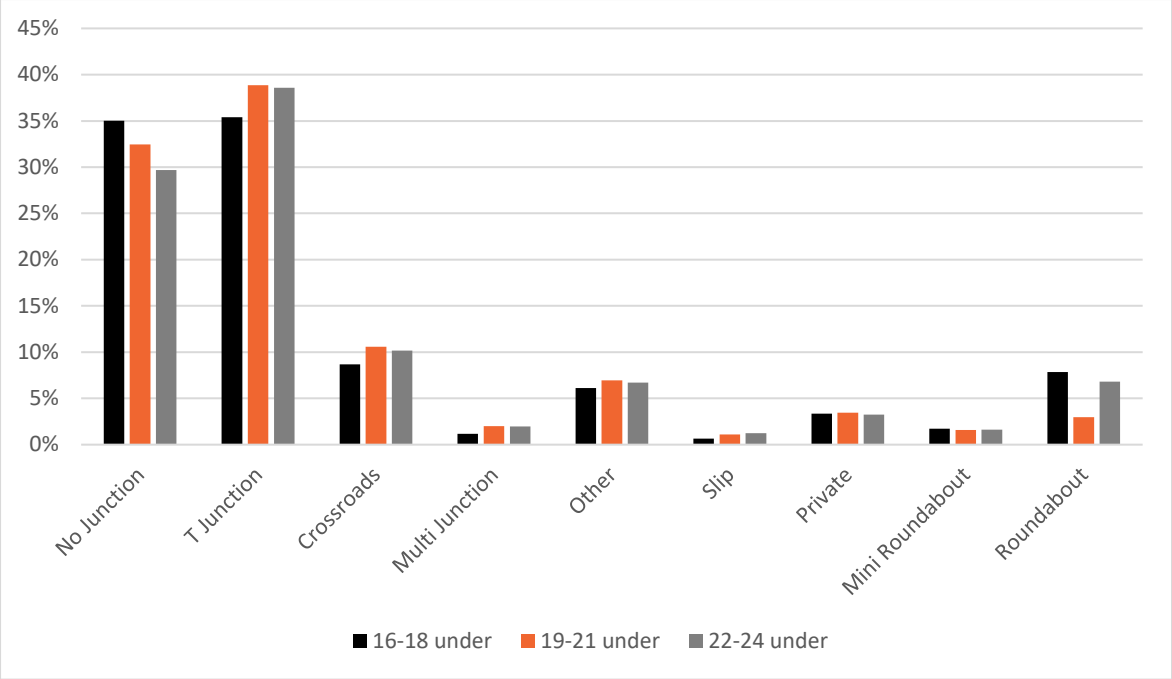
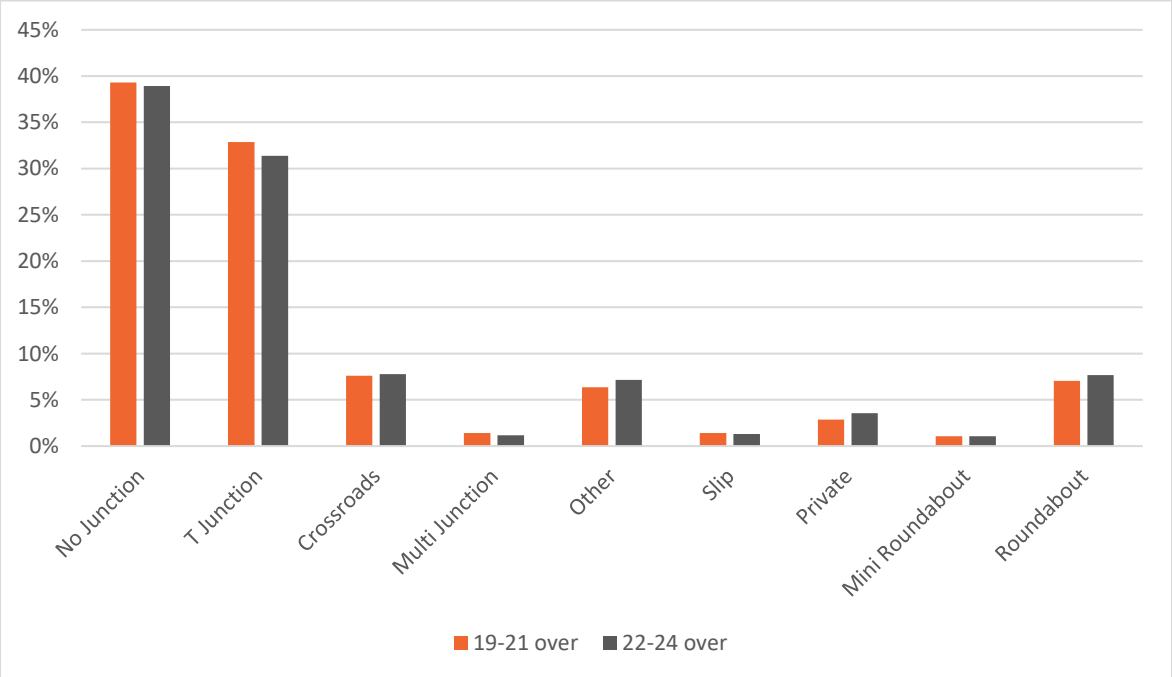


Figure 25 - Junction detail of segments over 125cc (2019-2023)



HOW DO THEY OCCUR?

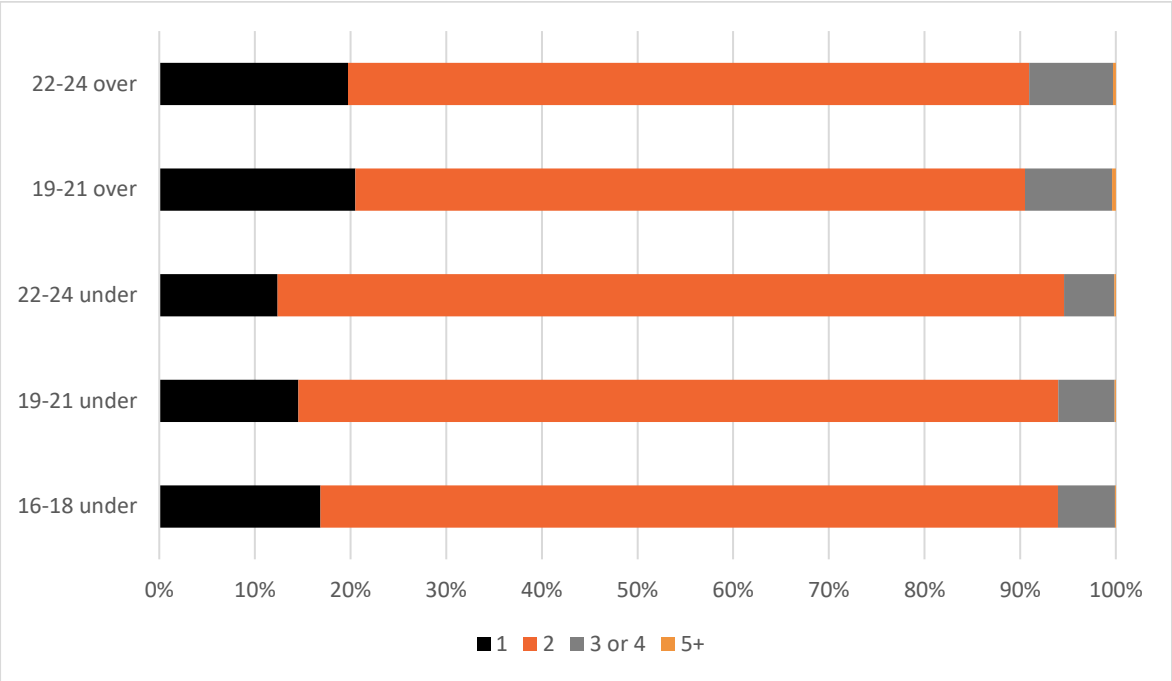
This section looks at the circumstances in which young rider casualties were involved in collisions.

Number of vehicles involved

Figure 26 shows the numbers of vehicles involved in the collisions. For all ages and engine sizes, fewer than 20% of the young rider casualties were involved in single vehicle collisions (so no other vehicle involved). Between 70 and 80% were involved in collisions where there were two vehicles – the motorcyclist and one other vehicle. Only 6% of those on smaller motorcycles were involved in collision

with three or more vehicles, compared to 9% of those on larger motorcycles. This analysis is similar to the 2020 study.

Figure 26 - Number of casualties by the numbers of vehicles involved by segment (2019-2023)



Types of vehicles involved

Table 4 shows the types of vehicles involved in the collisions resulting in young riders being injured. The term 'crash involved' is used, detonating that at least one of the type of vehicle was involved in the collision but not necessarily in direct conflict with the young rider themselves (for example, there could be a three vehicle collision, involving the motorcyclist, a bus and a car, where the bus hits the car and the car hits the motorcyclist. The collision will be described as involving a bus, but the motorcyclist will not have been hit by the bus themselves).

Table 4 - Involvement of other participants by segment (2019-2023)

	16-18 years up to 125cc	19-21 years up to 125cc	22-24 years up to 125cc	19-21 years over 125cc	22-24 years over 125cc
Crash involved a bus	1%	1%	1%	1%	1%
Crash involved a car	72%	74%	76%	68%	68%
Crash involved a goods vehicle	8%	9%	9%	8%	10%
Crash involved a pedal cyclist	0.3%	1%	1%	1%	1%

Table 5 - Involvement of motorised vehicle drivers by segment (2019-2023)

	16-18 years up to 125cc	19-21 years up to 125cc	22-24 years up to 125cc	19-21 years over 125cc	22-24 years over 125cc
Crash involved a senior driver	8%	6%	6%	7%	7%
Crash involved a working driver*	17%	24%	27%	18%	19%
Crash involved a young car driver	8%	7%	7%	9%	9%

*This could be the young motorcyclist.

Table 4 shows that few young riders were involved in collision involving a bus or a pedal cyclist. The majority of young riders were involved in a collision with a car. For all segments, 6-8% were involved in a collision with a senior driver (who could be driving any of the vehicles in the rows above) and 8-10% were involved in a collision with a goods vehicle. Table 5 shows that 8% were involved in a collision with a young car driver and between 17% and 27% were in a collision which involved a working driver (defined where journey purpose was 'at work'). This working driver could be the young rider casualty themselves.

Note: there could be double counting where one collision involved more than one type of participant, and one participant could be counted more than once (e.g. a young car driver also being a working driver) so percentages do not equal 100%.

The number of vehicles and types of vehicles analysis shows that young motorcyclists are most commonly in conflict with cars. This isn't surprising, given that cars comprise 76% of traffic (compared to motorcyclists being 1% of traffic). This is based on the 256 billion vehicle miles driven by cars in 2024, compared to the 3 billion vehicle miles by motorcycles.[5]

For context, there were 389,800 mopeds and motorcycles under 125cc registered in Great Britain in 2018, with 1,102,200 motorcycles over 125cc registered in the same period[6]. This means that small motorcycles and mopeds make up 26% of those motorcycles registered in Great Britain, making the majority of the 1% of billion vehicle miles being made by larger motorcycles.

[5] https://roadtraffic.dft.gov.uk/summary

[6] MCIA, *Statistical Pocket Guide v1 2021,* (The Motorcycle Industry Association, Coventry, 2021)

Journey purpose

Figure 27 - Journey purpose by segment (2019-2023)

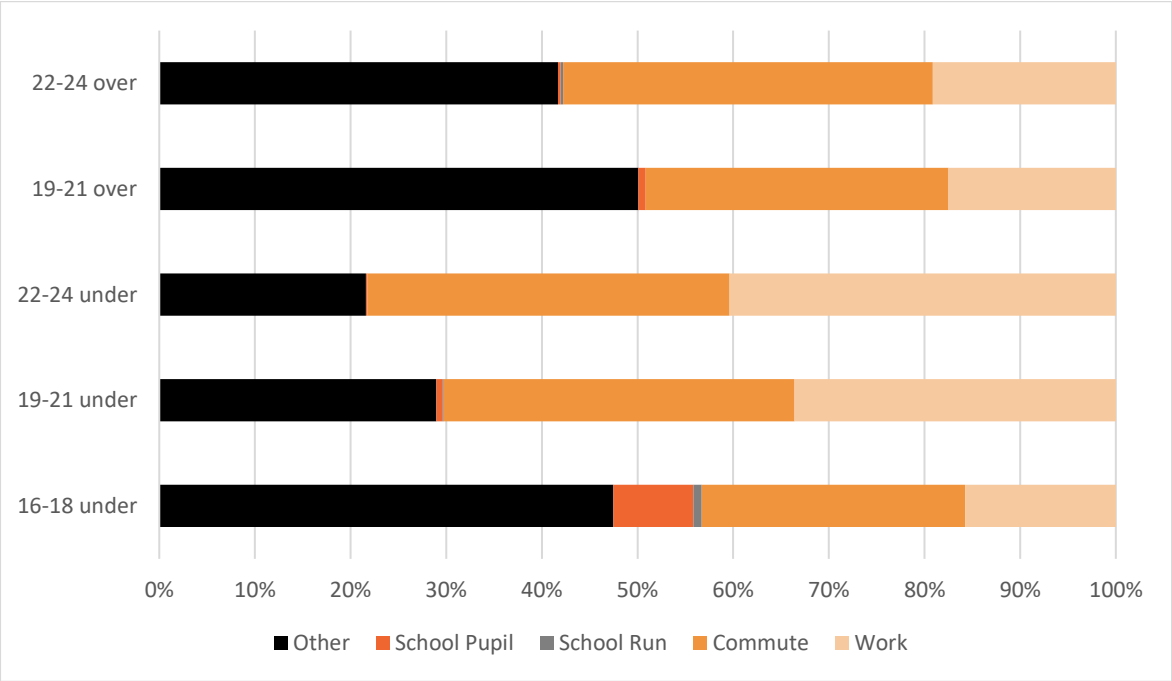


Figure 27 shows the journey purpose of the young rider casualties. 'Commute' represents the journey made to get to work at the beginning of each working day or shift, or the journey made after work to get home from work. 'Work' is when the rider was working at the time of the collision. This could be as a delivery or courier rider; in a role where a motorcycle is the most appropriate form of transport (police, paramedic or blood bikes, for example); or was using a motorcycle to get between meetings as part of their working day[7]. It is not possible to determine which of these roles the working motorcyclists may have been performing from this data, but the times of day analysis may give some indications. It should also be noted that journey purpose is not always recorded, meaning the percentages are likely to be underestimates and unknown journey purpose has been excluded.

The analysis shows that between 22 and 40% of young rider casualties were recorded as riding for work at the time of their collision, and between 40 and 57% were commuting.

The largest percentages who were recorded as riding for work at the time of their collision were the *19 to 21 under* and *22 to 24 under* segments. The largest percentages recorded as commuting were the *22 to 24 under* and *22 to 24 over* segments. The *16 to 18 under* and *19 to 21* segments had the highest percentages of 'other' journey purpose, with the youngest age group having 8% recorded as school pupil travelling to school and 1% those on the school run (1%).

Vehicle manoeuvres

Figure 28 and Figure 29 show the vehicle manoeuvres of the young rider casualties. For all young riders, between 47% and 60% were travelling straight at the time of their collision. Those on smaller motorcycles were more likely to be manoeuvring by stopping and starting (6-7%) or turning right (4-5%) than those on larger motorcycles. Conversely, those on larger motorcycles were more likely to e travelling ahead on a bend (11%) or overtaking on the offside (11%).

[7] Department for Transport, *Instructions for the Completion of Road Accidents Reports from non-CRASH Sources,* (Department for Transport, London, 2011), p.62

These patterns are all similar to those reported in 2020, although the percentages are slightly lower, with an increase in the number of manoeuvres 'not known' in this current sample.

Figure 28 - Vehicle manoeuvre of segments up to 125cc (2019-2023)

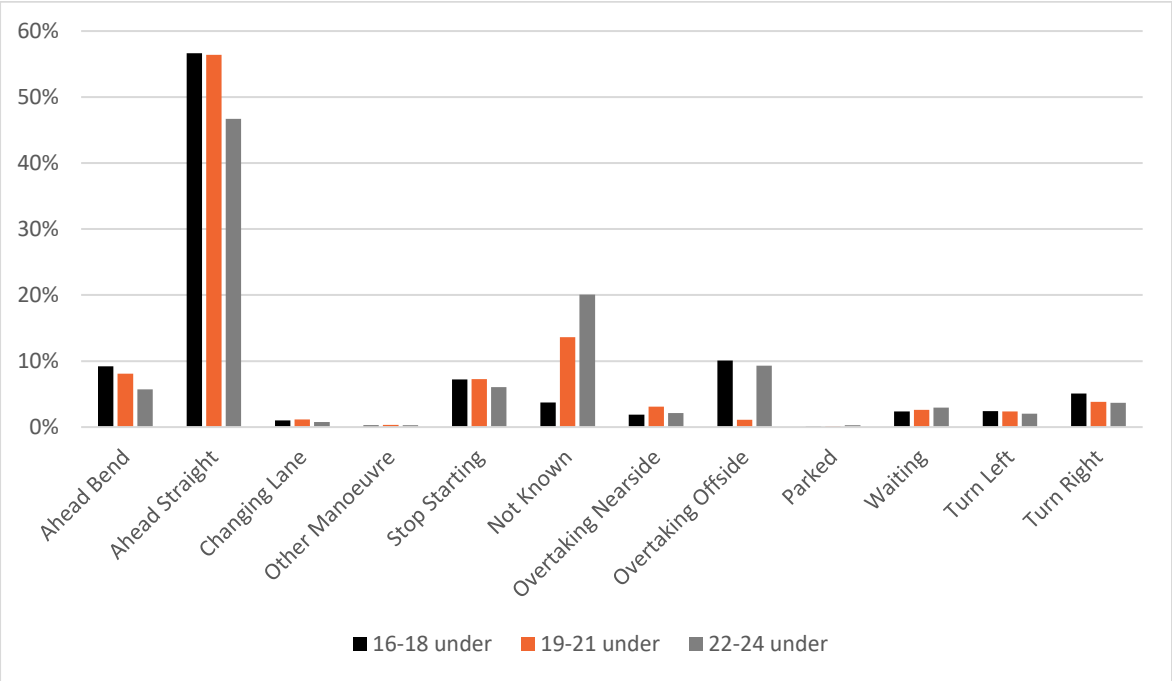
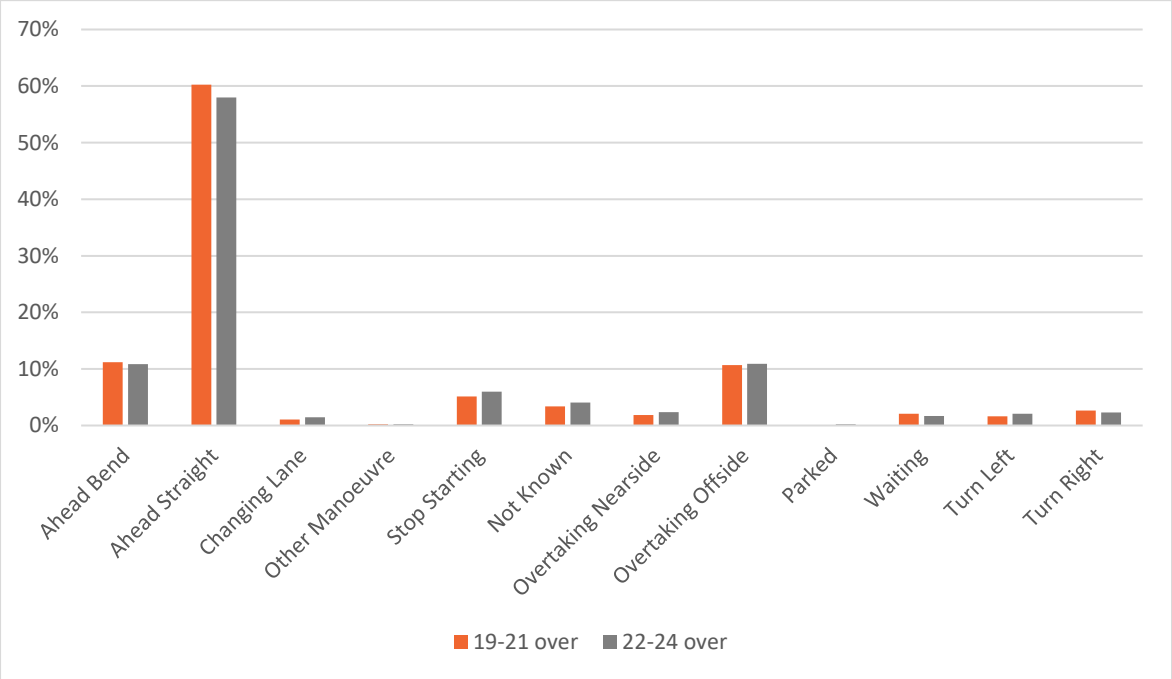


Figure 29 - Vehicle manoeuvre of segments over 125cc (2019-2023)



Contributory Factors

Police officers who attended the scene of an injury collision may choose to record certain contributory factors (CFs) which in the officer's view were likely to be related to the incident. Up to six CFs can be recorded for each collision. CFs reflect the officer's opinion at the time of reporting but may not be the result of extensive investigation. Consequently, CFs should be regarded only as a general guide for identifying factors as possible concerns.

In all CF analysis, only collisions which were both attended by a police officer and for which at least one factor was recorded are included. It means that this analysis is undertaken on a subset of the data previously analysed above. Since multiple CFs can be recorded for a single collision, the same incidents may be included in analysis of more than one CF. Figure 30 and Figure 31 show the groups of contributory factors assigned to the different segments. The groups are set out in **Appendix B: Contributory Factor Groupings**.

The *16 to 18 under* segment had some of the highest percentages of Control Errors, Nervous Behaviour and Unsafe Behaviour contributory factors, as did the *19 to 21 under* segment. Both of these were most commonly assigned Observation Errors, as were the *22 to 24 under* segment, with them all receiving the highest percentages of any contributory factor (40-44%). Observation Errors are commonly assigned in all collisions, not just those involving motorcyclists, under the assumption that if participants had looked properly, they would have been able to take mitigating actions. The *22 to 24 under* segment also received Control Error and Unsafe Behaviour contributory factors.

The *19 to 21 over* and *22 to 24 over* segments had some of the highest percentages of those riders receiving Control Errors and Unsafe Behaviour contributory factors. Unlike the last study, these segments had lower percentages of young riders receiving Speed Choice contributory factors than those on smaller motorcycles.

Figure 30 - Contributory factors of segments up to 125cc (2019-2023) – young riders

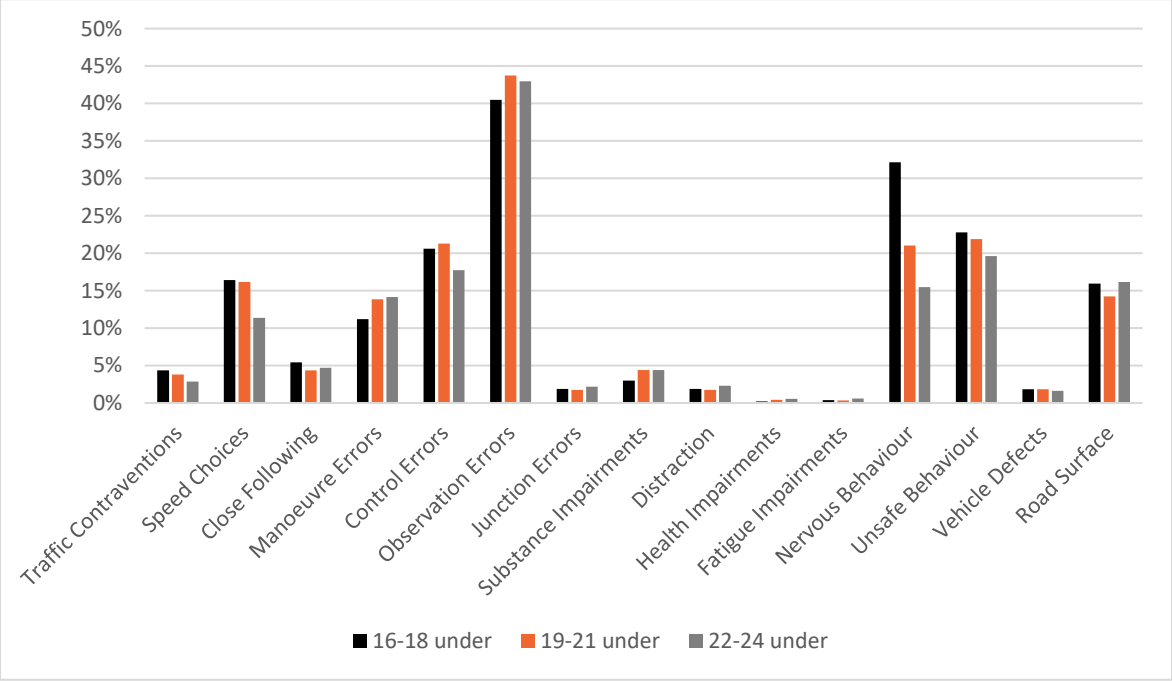
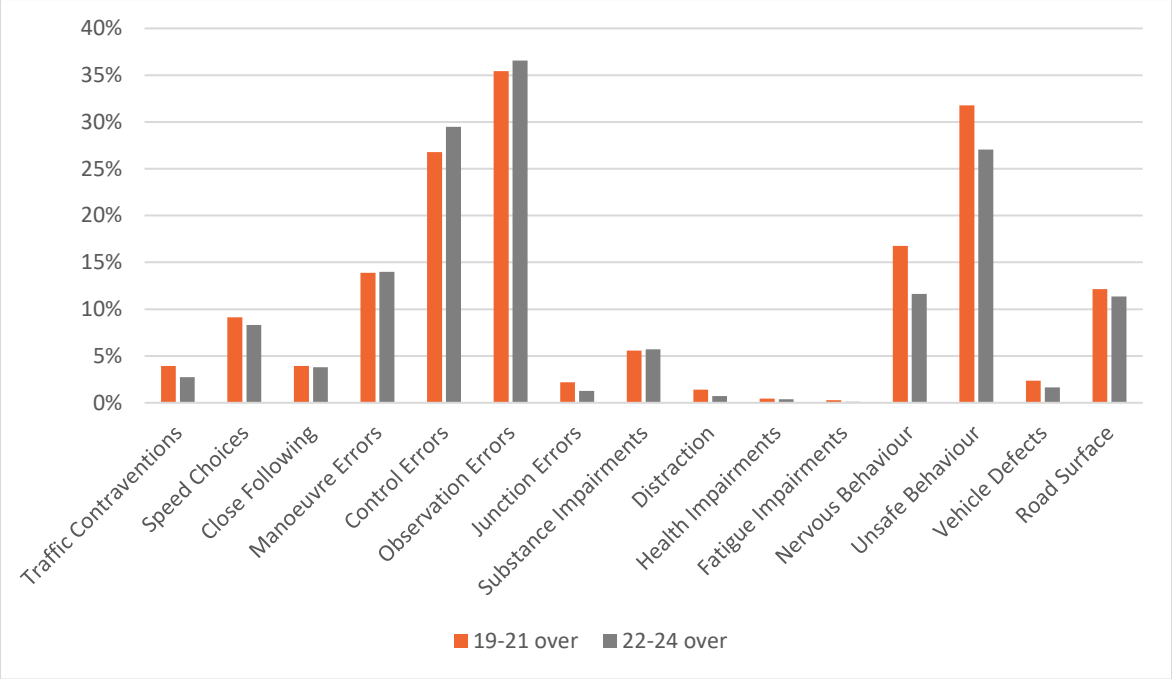


Figure 31 - Contributory factors of segments over 125cc (2019-2023) – young riders



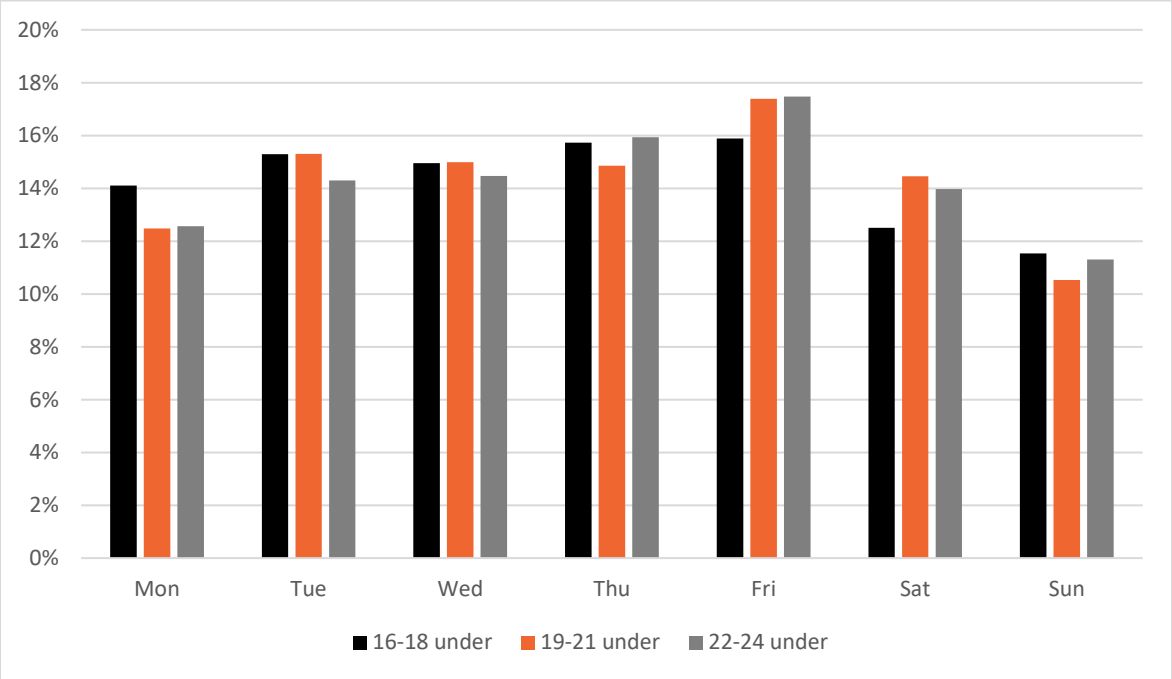
WHEN DO THEY OCCUR?

This section looks at when the young rider casualties were injured.

Day of week

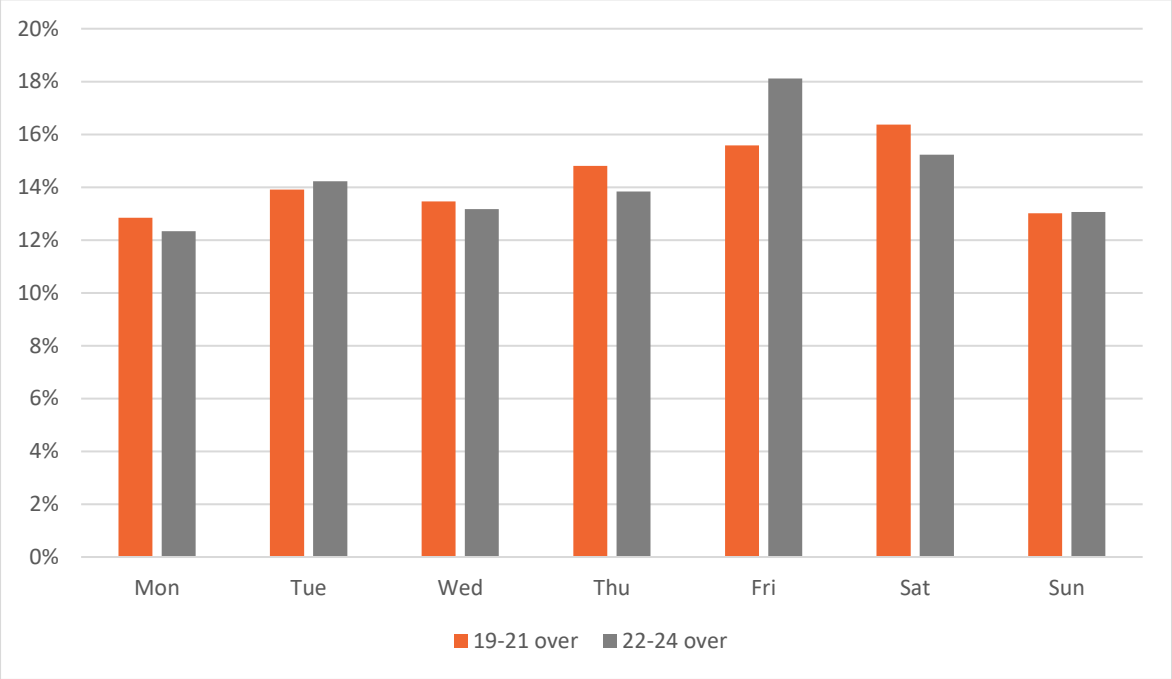
As with the previous study, those on smaller motorcycles (as shown in Figure 32), are most likely to be involved in collisions on weekdays.

Figure 32 - Day of week of segments up to 125cc (2019-2023)



As previously, those on larger motorcycles were more evenly split across the week. Whilst there were higher percentages involved on weekdays, the percentages involved at the weekends were only slightly lower.

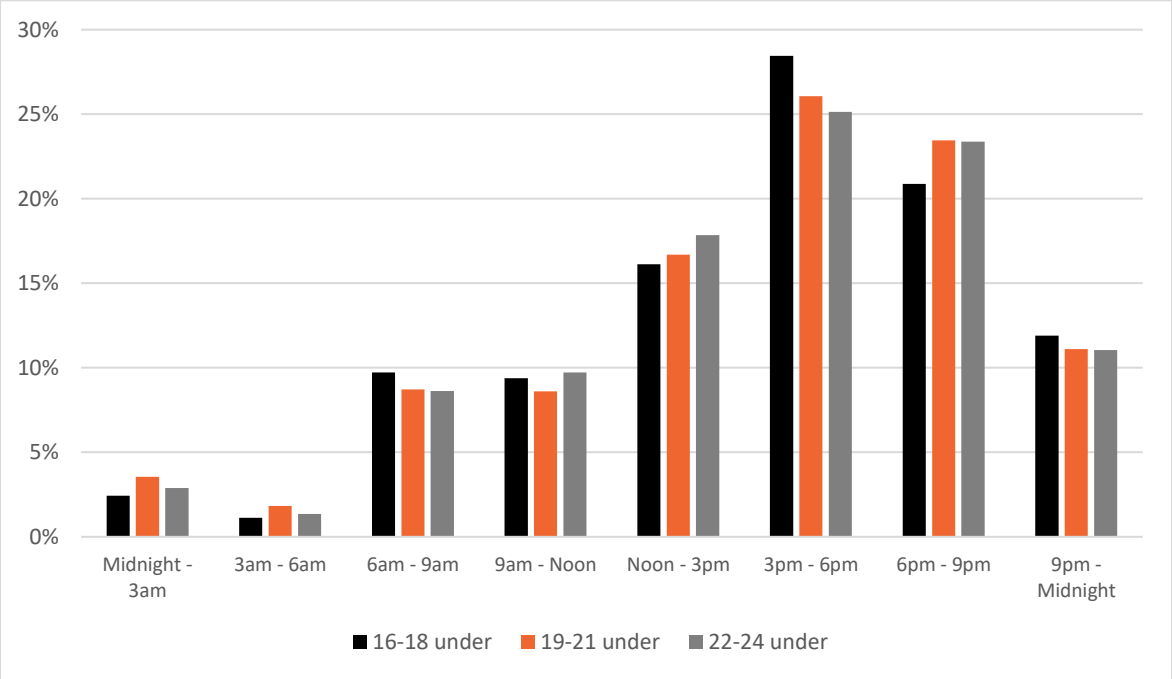
Figure 33 - Day of week of segments over 125cc (2019-2023)



Time of day

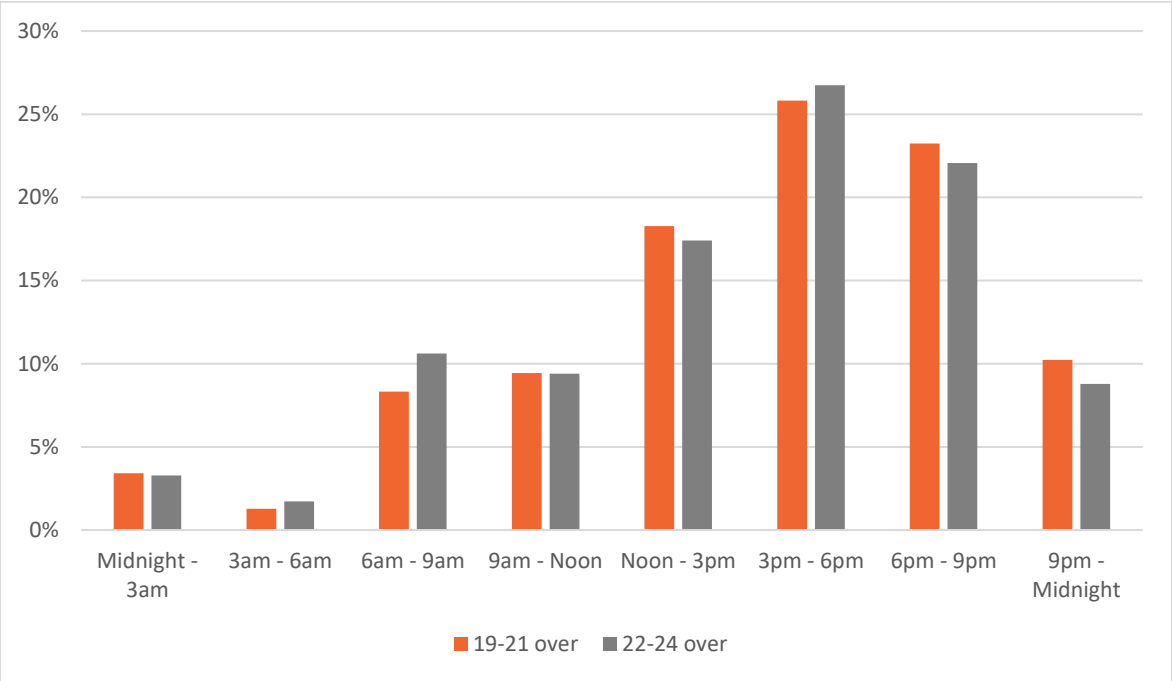
Figure 34 shows the time of the day that the young riders on smaller motorcycles were involved in collisions. There is a clear peak between 3pm and 6pm, especially for the *16 to 18 under* segment, and this is the same as the previous study. The higher percentages continue into early evening.

Figure 34 - Time of day of segments up to 125cc (2019-2023)



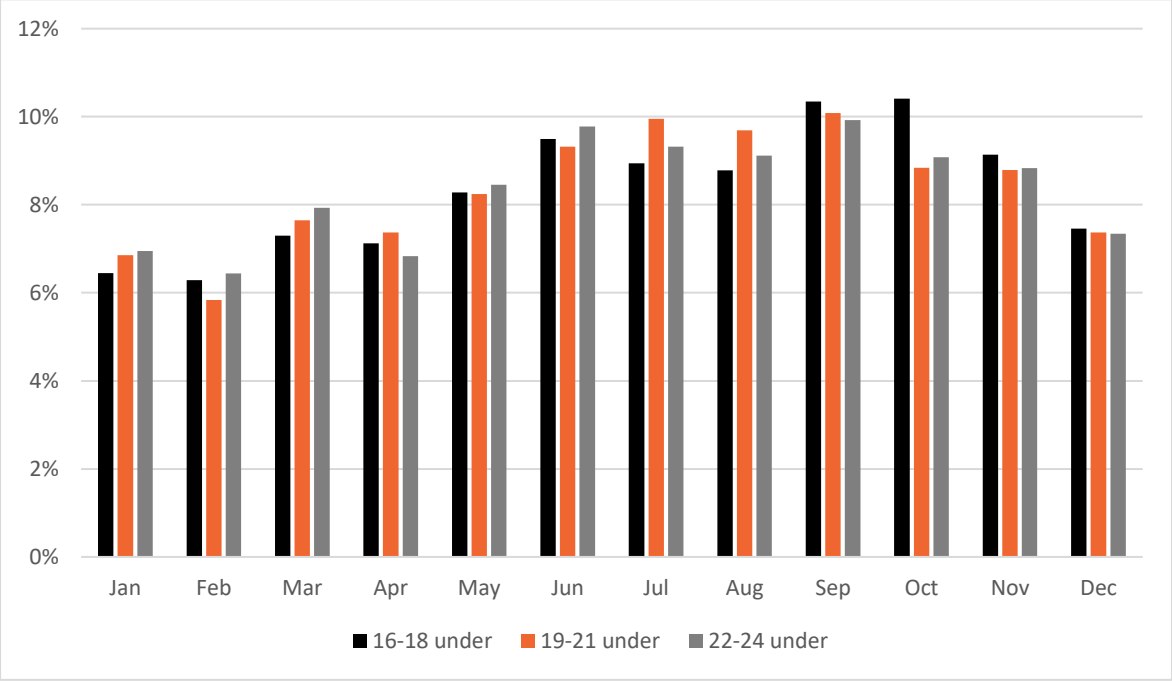
Those on larger motorcycles have a similar peak in the afternoons and early evening, as shown in Figure 35

Figure 35 - Time of day of segments over 125cc (2019-2023)



Month of year

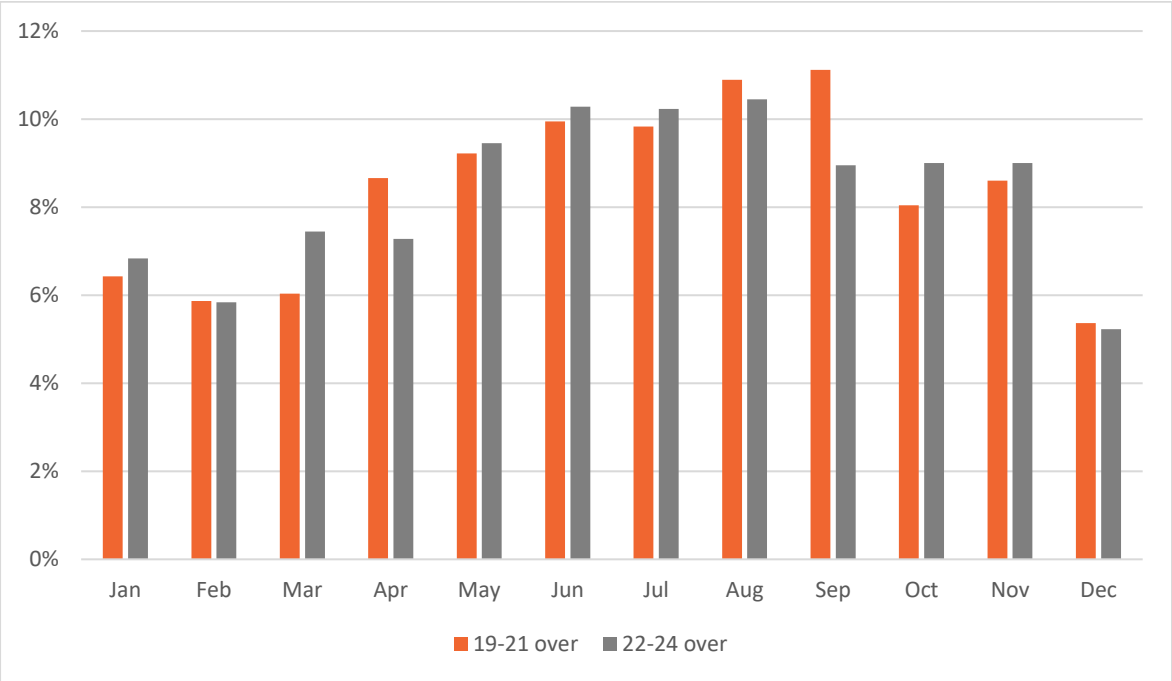
Figure 36 - Month of year of segments up to 125cc (2019-2023)



The month of year in which young riders were involved in collisions is shown in Figure 36 and Figure 37. The charts show different trends for the segments, based on engine size. As with the previous study, those belonging to the three segments with engine sizes up to 125cc were involved in collisions throughout the year, with autumnal peaks, particularly in September and especially for the youngest

cohort. This peak coincides with the start of the academic year and may reflect novice riders using motorcycles for the first time to travel further to college, work, or apprenticeships.

Figure 37 – Month of year of segments over 125cc (2019-2023)



Those on motorcycles over 125cc are more likely to be involved in collisions in the traditional motorcycling 'season' of April to October.

Weather conditions

Overwhelmingly, young riders are involved in collisions in fine and still weather, as shown in Figure 38 and Figure 39, although just over 10% of those on smaller motorcycles were involved in collisions in wet and still weather (compared to less than 10% of those on larger motorcycles).

Figure 38 - Weather conditions of segments up to 125cc (2019-2023)

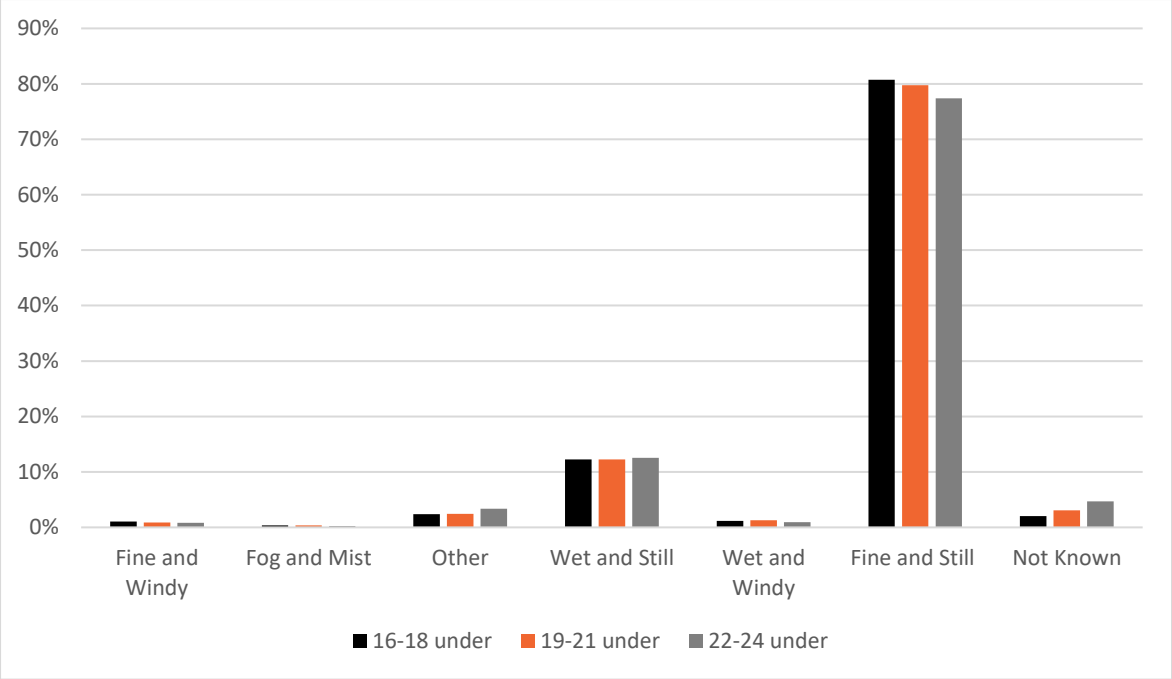
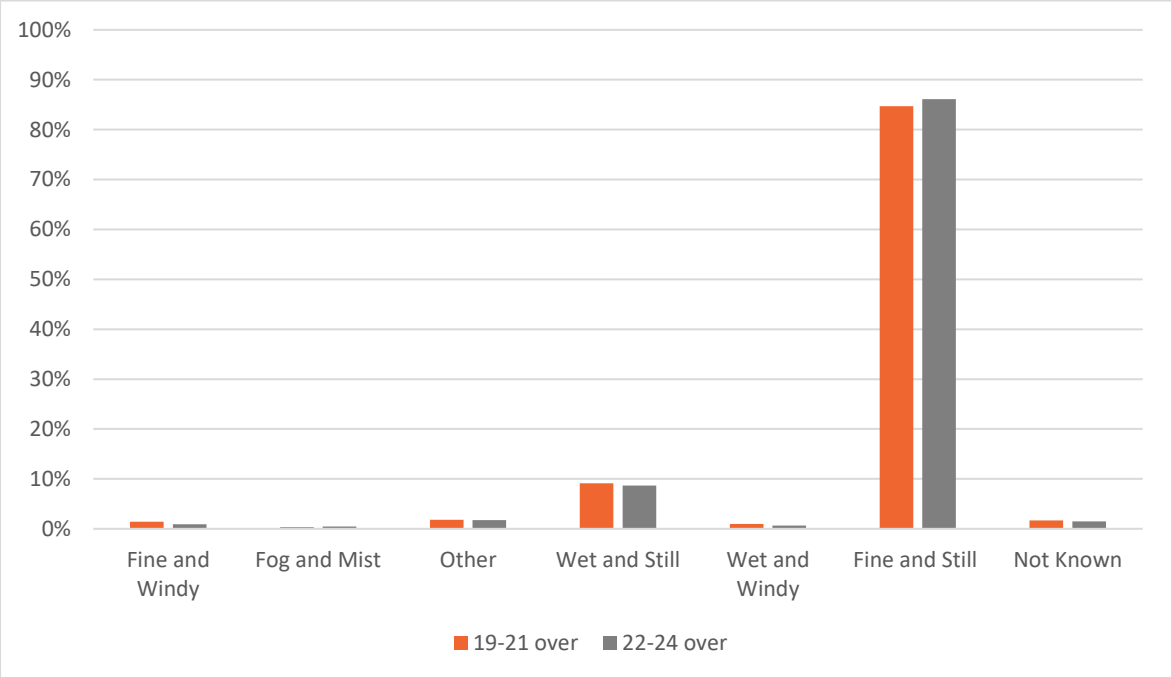


Figure 39 - Weather conditions of segments over 125cc (2019-2023)



Lighting conditions

Figure 40 - Lighting conditions of segments up to 125cc (2019-2023)

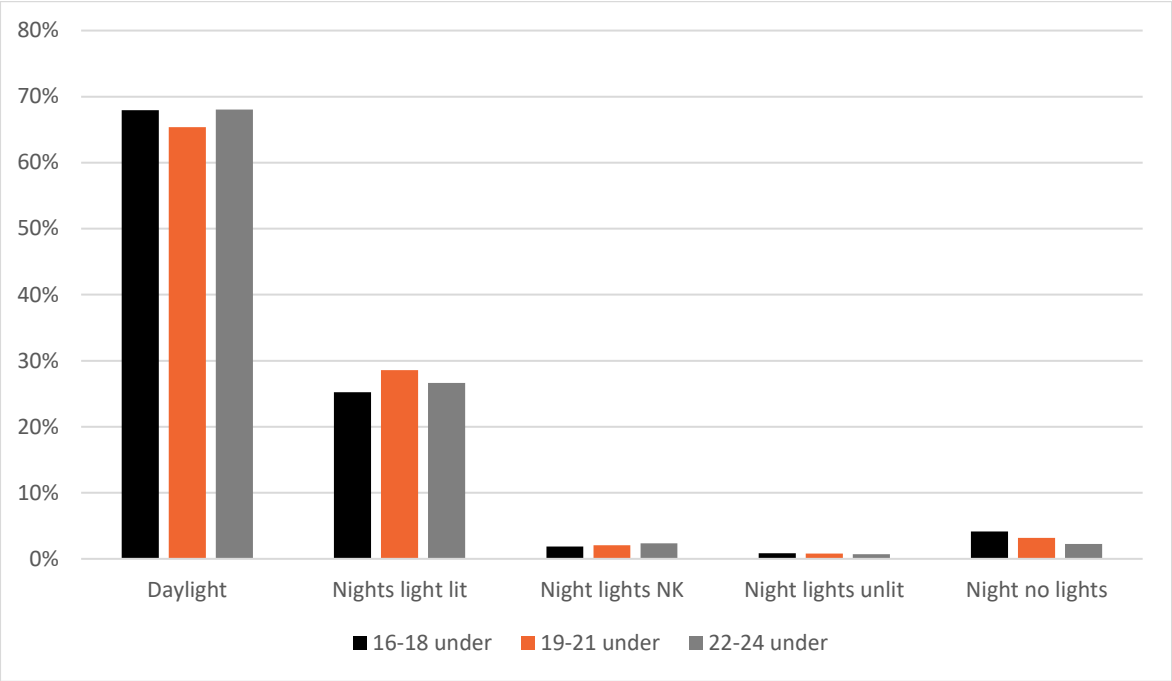
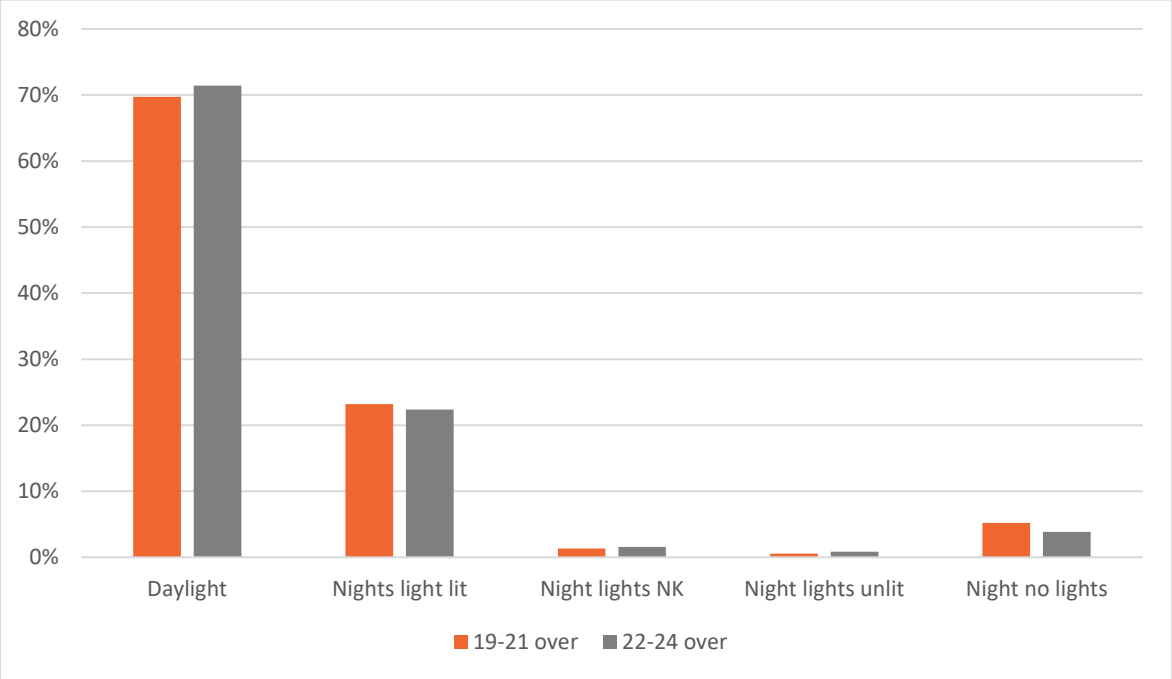


Figure 41 - Lighting conditions of segments over 125cc (2019-2023)



Most casualties were involved in collisions in daylight, as shown in Figure 40 and Figure 41. For those on smaller motorcycles, over 65% were involved in collisions in daylight with 29% of *19 to 21 under* and 27% of *22 to 24 under* were at night-time when streetlights were lit.

There were slightly higher percentages of those on larger motorcycles who were involved in collision in daylight (around 70%).

This analysis is very similar to the previous study.

YOUNG RIDER ONLINE QUESTIONNAIRE

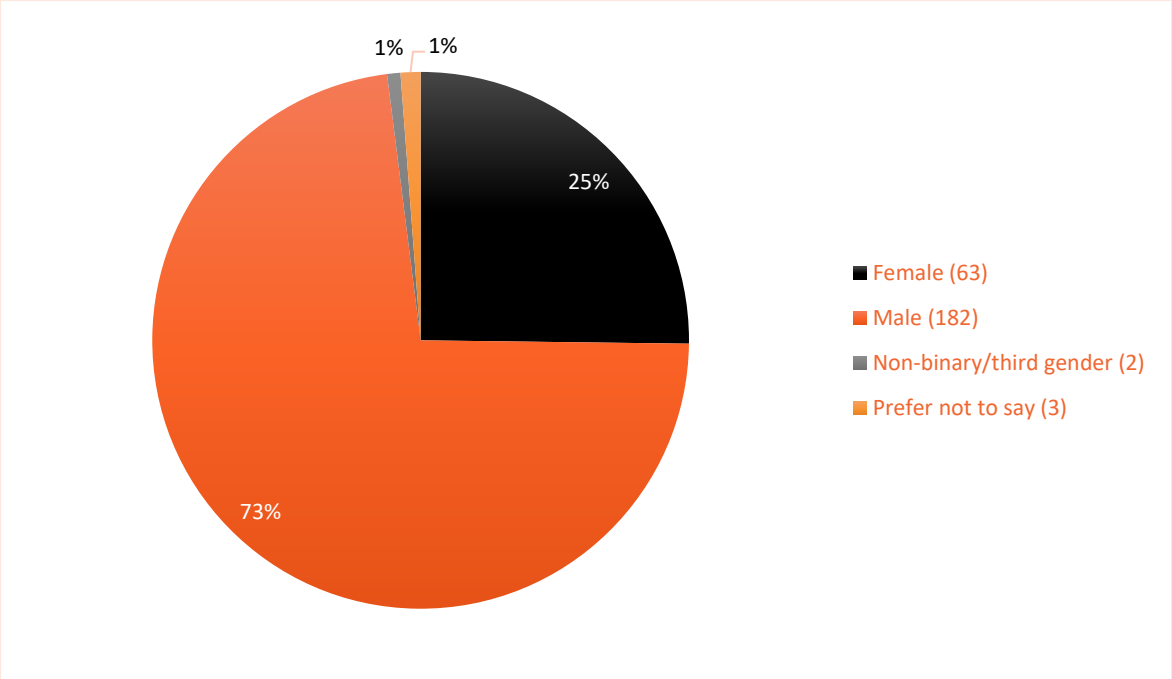
An online survey was disseminated through NYRF, its partners, and Agilysis between October 2024 and March 2025 and a prize draw was offered as an incentive to participation. Among the 384 participants who completed the survey, 250 were active motorcycle users aged between 16 and 24.

The aim of the survey was to gain an insight into young motorcyclists and their characteristics, attitudes, and behaviours, and to compare the results with those of the previous survey conducted for the same purpose, to examine whether any changes have occurred over the past five years.

DEMOGRAPHICS

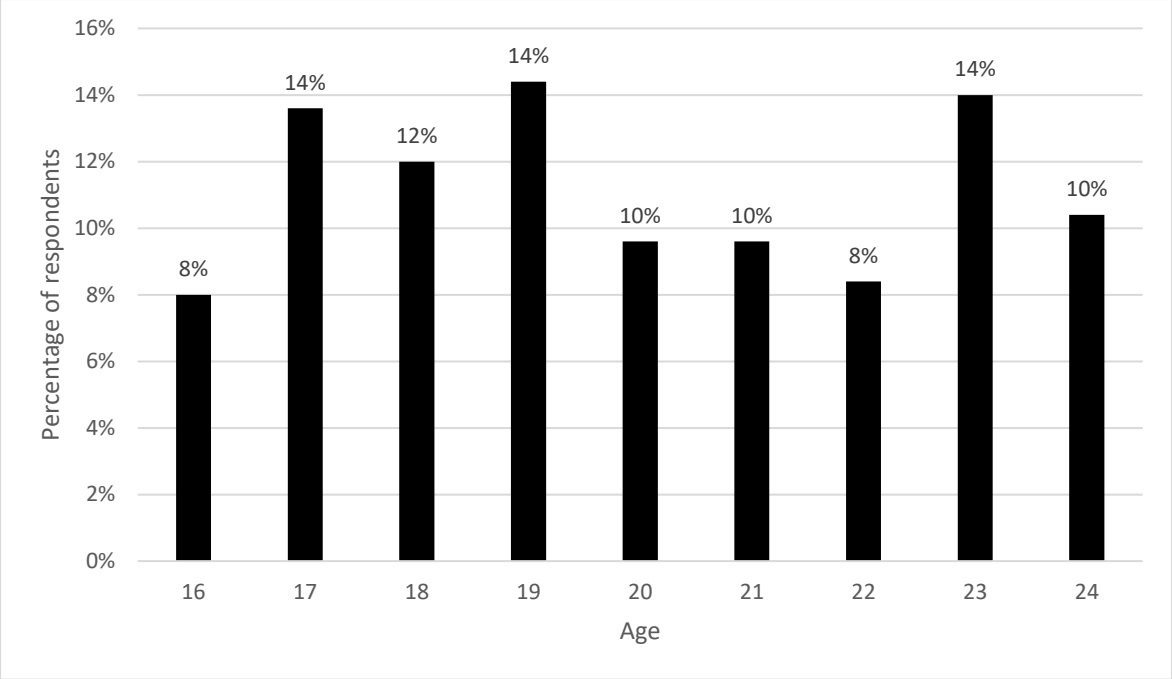
The gender distribution of the participants is presented in Figure 42. Three-quarters of the respondents were male, which is slightly lower than the 2020 percentage (81%). In the previous survey, 18% of respondents were female, compared to 25% in 2025. This makes the survey sample slightly different to the profile of all casualties: the majority of young motorcycle casualties are also male (93%) and represent a slightly higher proportion than achieved in the survey.

Figure 42 - Gender distribution of the participants



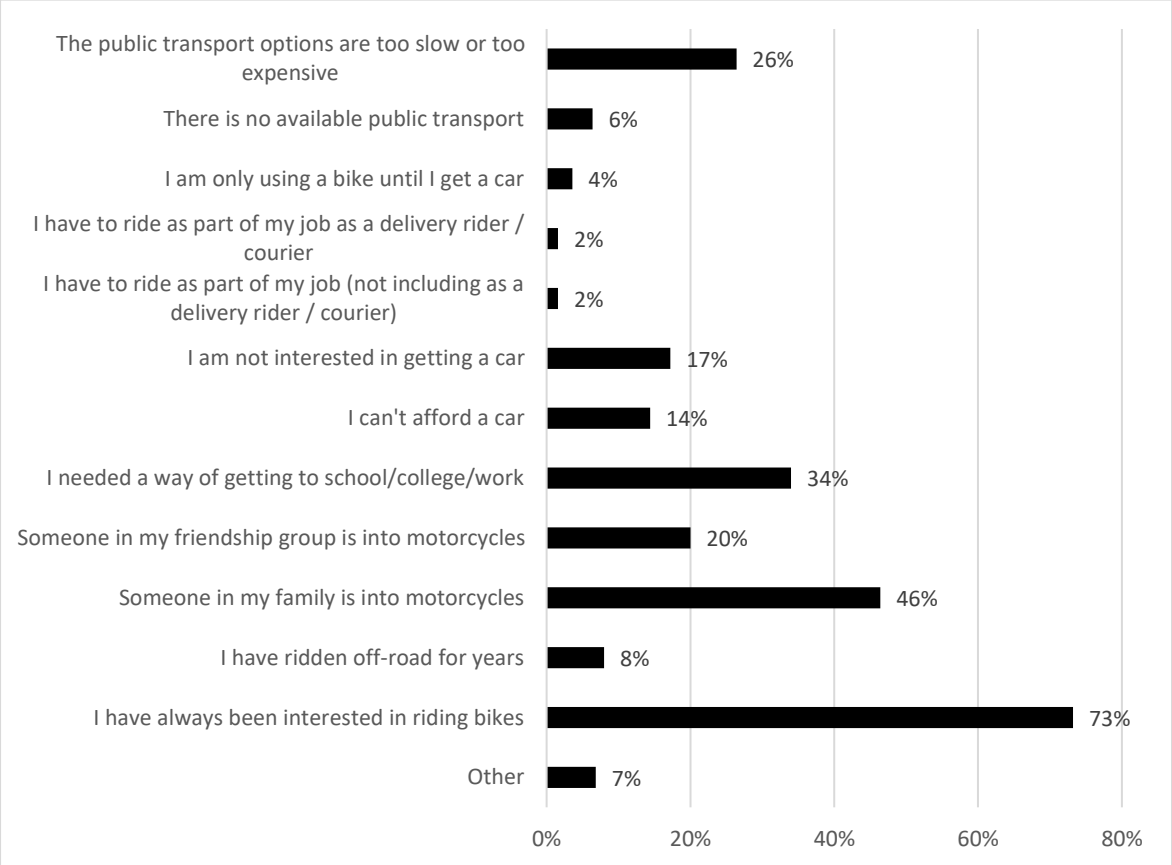
The age distribution of the participants appeared to be fairly balanced within the examined age range (see Figure 43). This pattern is not significantly different from the 2020 sample.

Figure 43 - Age distribution of the participants (between 16-24 years old)



ABOUT THEIR MOTORCYCLE AND THEIR RIDING

Figure 44 - The reasons why participants started motorcycling

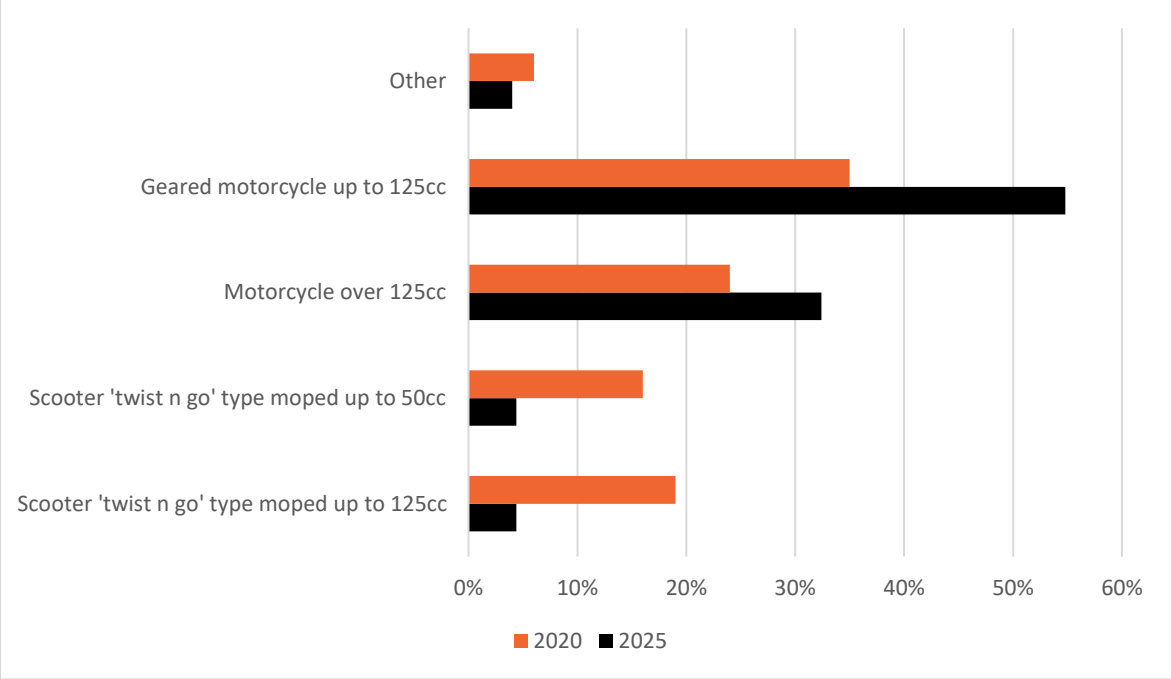


Participants were asked about their reasons for starting to ride a motorcycle. They were allowed to select all of the options that applied to them. The vast majority of participants (73%) stated that they

had always been interested in riding motorcycles. This is higher than the 2020 proportion of 61%. This was followed by 46% of the participants selecting the response 'Someone in my family is into motorcycles' (35% in 2020), and subsequently by those who indicated 'I needed a way of getting to school/college/work (34% in 2025 and 38% in 2020). Moreover, a significant proportion of participants reported that public transportation options were either too slow or too expensive (26%). This was the same in 2020. The results regarding participants' other reasons for starting to ride motorcycles can be seen in Figure 44.

The respondents were asked what type of motorcycle they ride: 55% indicated that they ride geared motorcycles up to 125cc the most often (35% in 2020); and 32% ride motorcycles over 125cc (24% in 2020); 5% scooter 'twist n go' type moped up to 125cc (19% in 2020); and 4% scooter 'twist n go' type moped up to 50cc (16% in 2020) (see Figure 45). This shows that this sample of respondents is quite different to those who participated in the 2020 survey in terms of motorcycle choice. Many more respondents are riding geared motorcycles up to 125cc in this sample, with fewer twist n go scooters than in 2020.

Figure 45 - Motorcycle type (2024 and 2020)

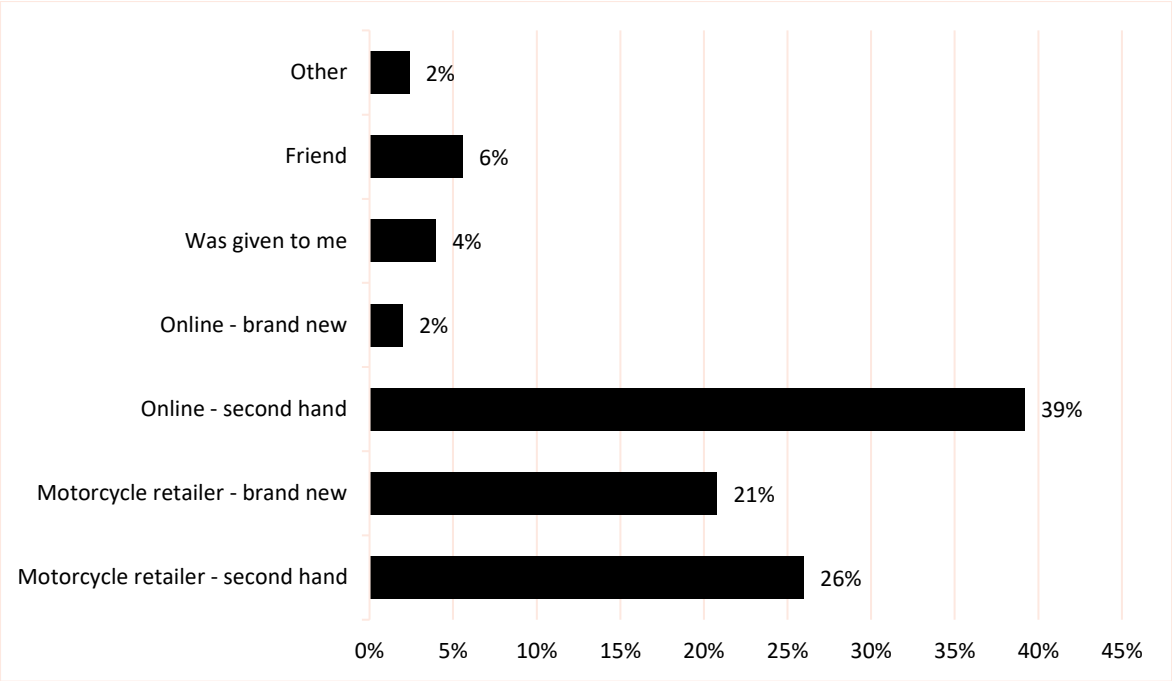


Participants were asked where they got the motorcycle they ride most often from. Most participants indicated that they obtained their motorcycles respectively via online second-hand platforms (39%); second-hand from motorcycle retailers (26%); and brand-new from motorcycle retailers (21%).

The options provided in this option were slightly different to those asked in 2020, to provide more insight into where second-hand motorcycles were bought from. In 2020, 35% of motorcycles were second-hand and 37% were from a motorcycle retailer. However, this year's results show that those options are not mutually exclusive, and many second-hand motorcycles are bought from retailers. It is interesting to note that only a quarter of motorcycles are brand new.

Detailed information on where participants obtained their motorcycles is presented in Figure 46.

Figure 46 - Where participants got their motorcycle from



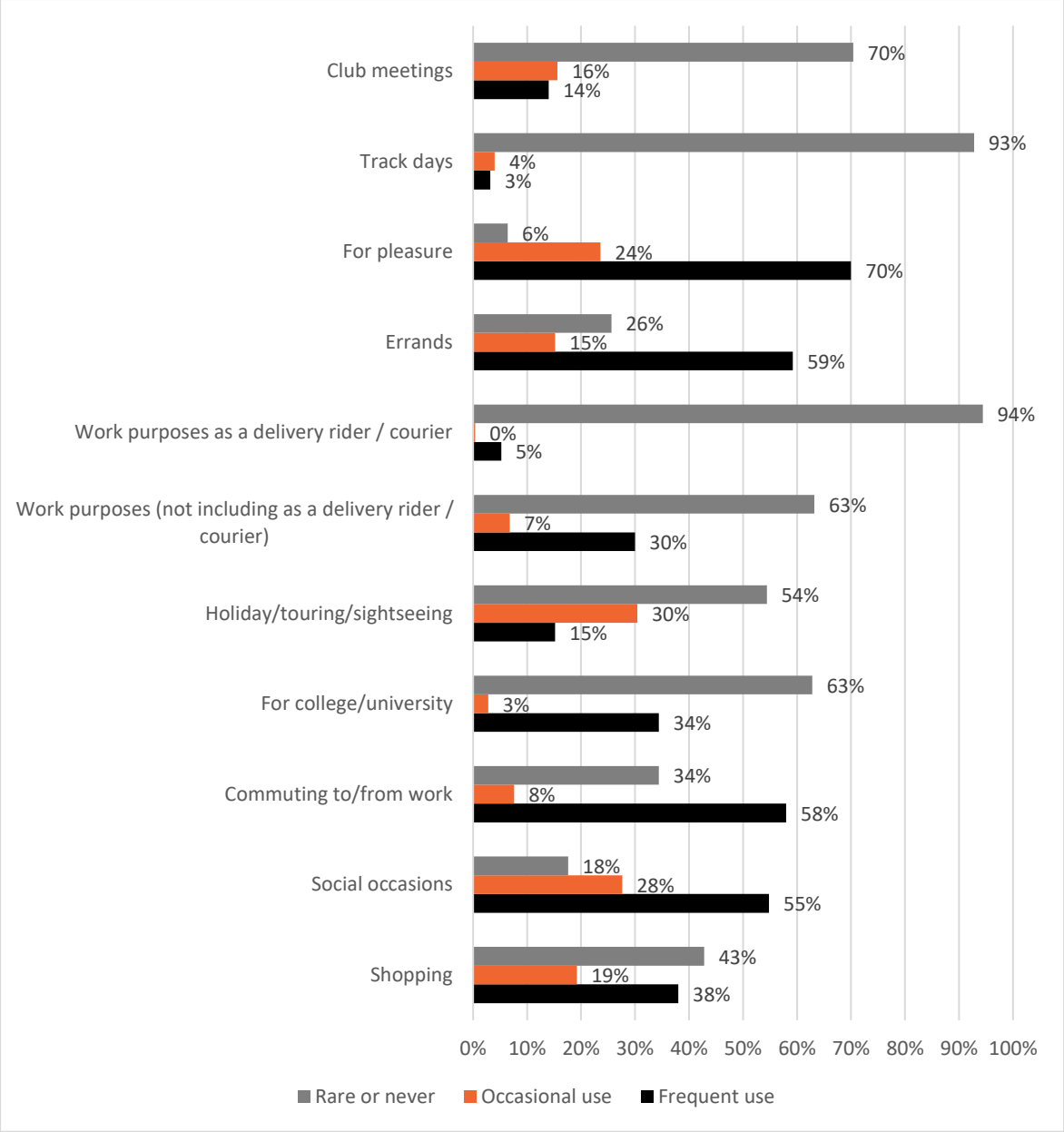
JOURNEY PURPOSES

Respondents were asked about how frequently they ride for different purposes, as shown in Figure 47. The majority of participants (70%) stated that they ride frequently for pleasure (every weekday, most days, 2-3 times a week, or once or twice a week), compared to 62% in 2020. Fifty-nine percent of participants said they frequently rode for errands (60% in 2020); 58% said they rode for commuting to or from work (67% in 2020); and 55% for social occasions (47% in 2020). Thirty-eight percent said they rode for shopping (46% in 2020); and 34% mentioned travelling for college or university (31% in 2020).

However, when looking at the proportions of participants reporting that they rarely or never rode for certain purposes, the majority (94%) indicated riding rarely or never for work purposes as a delivery rider/courier (70% in 2020). This was followed by 93% of participants saying they rarely or never rode for track days (77% in 2020); 70% for club meetings (61% in 2020); 63% for work purposes not including as a delivery rider/courier (not asked in 2020), and those travelling for college or university (61% in 2020). For occasional use, 30% of participants reported riding for holiday, touring or sightseeing (33% in 2020); 28% for social occasions (37% in 2020); 24% for pleasure (29% in 2020); 19% for shopping (25% in 2020); and 16% for club meetings (20% in 2020).

The results show that people now ride more for fun and social reasons than they did in 2020, while riding for work, shopping, or commuting has reduced. Most riders rarely or never use their motorcycles for things like courier work, track days, or club meetings. Overall (with this sample), motorcycling seems to be less about work or practical needs and more about leisure and personal enjoyment.

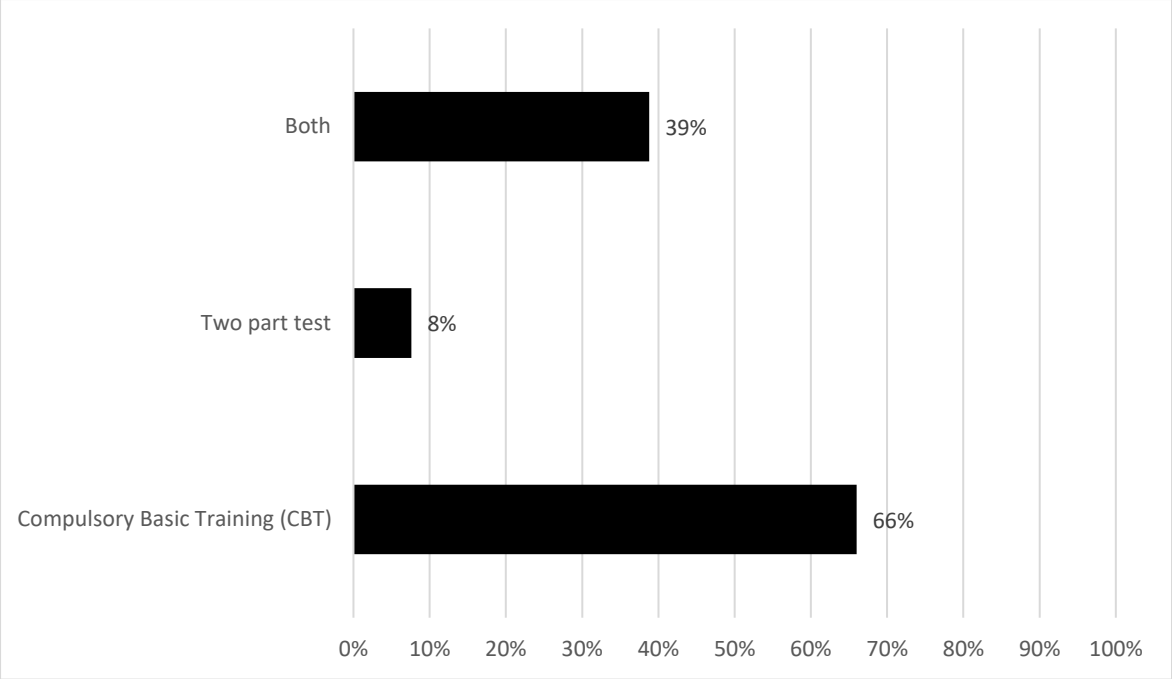
Figure 47 - Participants' journey purposes



CBT AND TWO-PART TEST

Figure 48 provides a detailed breakdown of whether participants had completed CBT, the two-part test, or both.

Figure 48 - What kind of test participants had taken[8]



The respondents were asked their views about the CBT. Of the respondents:

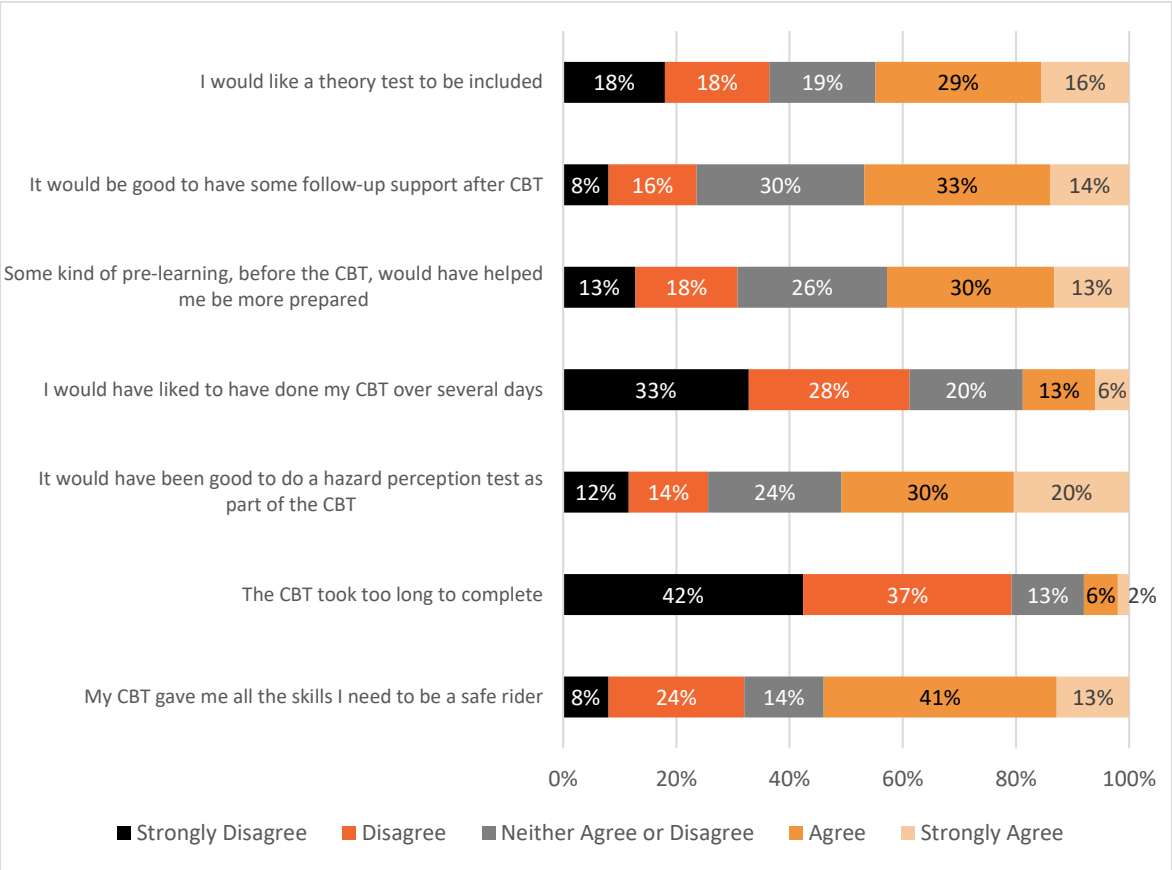
- More than half of the participants (54%) agreed or strongly agreed that their CBT provided them with all the skills they need to be a safe rider.
- 79% of the participants disagree or strongly disagree that their CBT took too long to complete.
- 50% of the participants agree or strongly agree that it would have been good to do a hazard perception test as part of the CBT.
- 61% of the participants disagree or strongly disagree that they would have liked to have done their CBT over several days.
- While 43% of the participants agreed or strongly agreed that some kind of pre-learning before the CBT would have helped them feel more prepared, 26% responded with 'neither agree nor disagree'.
- 47% of the participants agreed or strongly agreed that it would be good to have some follow-up support after the CBT, and 30% neither agreed nor disagreed.
- Lastly, 45% of participants agreed or strongly agreed that they would like a theory test to be included.

Like in 2020, almost half of the respondents believed that the CBT did not give them all the skills they need to be a safe rider and around half believed that including a hazard perception test (50% in 2025 and 58% in 2020) and pre-learning before the CBT (43% in 2025 and 47% in 2020) would have helped them to be more prepared. Interestingly, a larger proportion agreed or strongly agreed that it would be good to have some follow up support after the CBT, increasing from 34% to 47%. Furthermore, a high proportion disagreed that CBT took too long to complete (moving from 68% to 79%). There continues to be disagreement with the concept of taking the CBT over several days and nearly half of respondents in both surveys would have liked a theory test to be included.

[8] Participants were asked the following question: *'Which of the following have you completed? (Select all that apply)'.* As a result, the total percentage exceeds 100.

As with the 2020 study, these results suggest that there is scope for more support to those completing their CBT, before, during, and after the training.

Figure 49 - Agreement levels on statements about Compulsory Basic Training (CBT)



CLOTHING WORN WHEN RIDING

Participants were asked about the personal protective equipment (PPE) they wore while riding and how frequently they wore each item, using a three-point scale (always, sometimes, or never). The results indicated that there are many items of safety equipment which are not used by these respondents. For example, only 2% of participants reported that they always wore a leather one-piece suit, which offers a high level of protection, particularly at higher speeds. Similarly, just 17% stated that they always wore Hi-Viz or reflective gear, which may help to prevent some collisions by increasing conspicuity of the rider for other road users. In addition, the use of air vests, which are designed to protect the body in the event of a fall, was reported as "always" by only 5% of participants.

While one-third of participants (31%) stated that they wore armoured jeans, which provide protection for critical areas such as the hips and knees, the proportion of those who reported never wearing them was nearly the same (36%). As for back and chest armour, 55% reported always wearing it, while 28% said they never did.

Regarding leather or textile protective clothing, the proportion of participants who said they always wore such items while riding was 92% for gloves, 76% for jackets, 71% for boots, and 40% for trousers. These usage rates appear to be closely linked to how easy it is to put on and take off these garments.

There were still respondents who reported not wearing protective clothing. For hoodies, 17% stated they always wore one and 14% said they always wore normal jeans. Eight percent always wear trainers.

A positive finding is the very high reported usage of helmets (98%). However, since helmets are one of the most critical items for rider safety and are a legal requirement, continuing to emphasise their importance will help ensure usage rates remain high (see Figure 50).

Figure 50 - What participants wear while riding

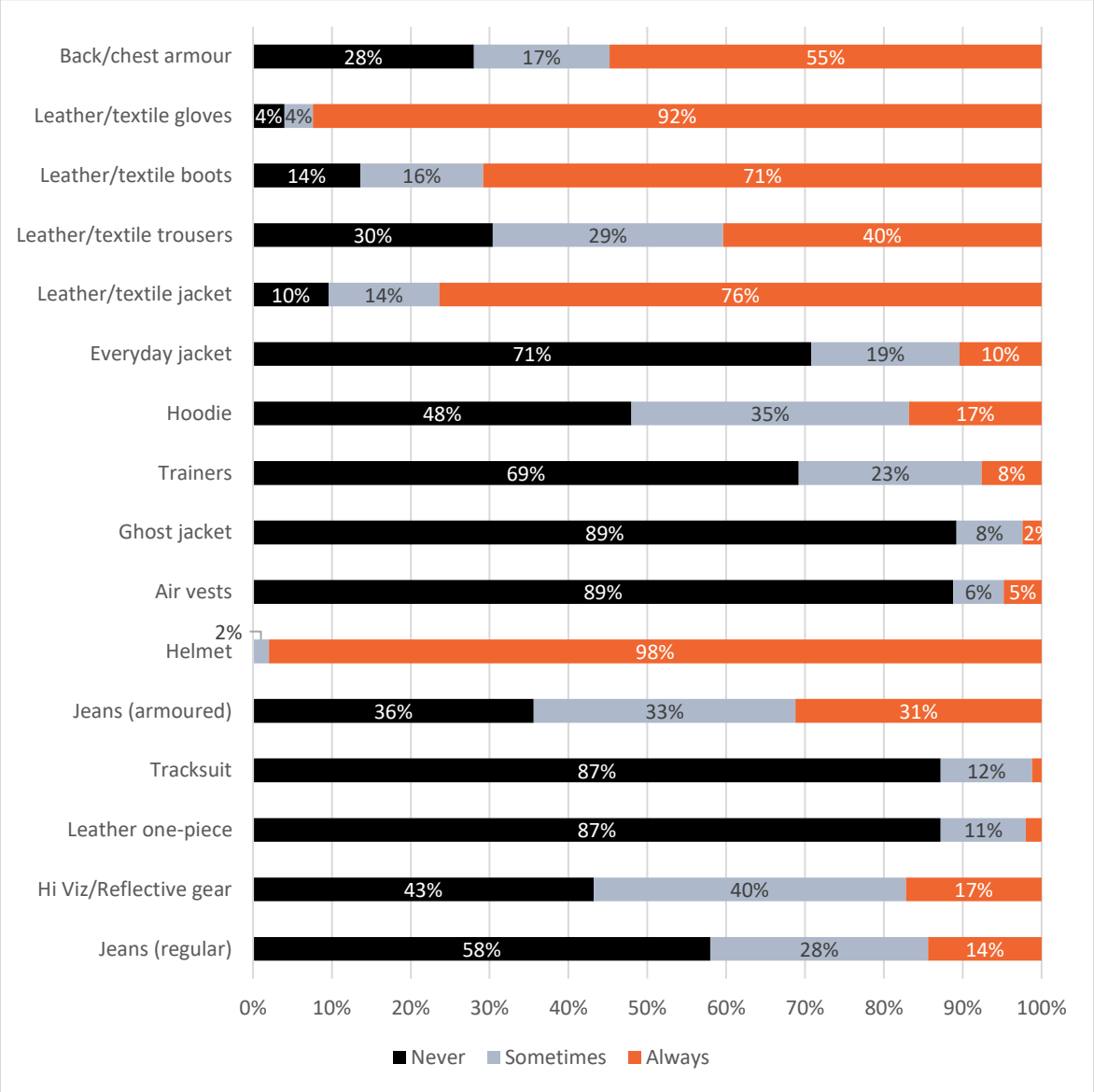


Table 6 - Always or Never wearing unsafe clothing

	Always		Never	
	2020	**2025**	**2020**	**2025**
Regular Jeans	3%	14%	21%	58%
Trainers	4%	8%	17%	69%
Hoodie	3%	17%	10%	48%
Tracksuit	4%	1%	8%	87%
Everyday Jacket	3%	10%	14%	71%

The comparisons with the previous study regarding not wearing safety equipment are interesting. The proportions ‘always’ or ‘never’ wearing unsafe clothing are larger in 2025 (aside from always wearing

a tracksuit), as shown in Table 6. It suggests that this cohort are less likely to report 'sometimes' wearing these items.

Table 7 shows the proportions 'always' or 'never' wearing safety equipment. This cohort is far more likely to report wearing safety equipment than the 2020 sample of respondents (apart from wearing a leather one-piece). This may indicate that this sample is more pro-safety than those who participated in the 2020 study. Alternatively, it could indicate positive changes in attitudes to safety equipment. This should however be seen in the context of the pandemic when use of personal protective equipment (PPE) was widespread and highly visibly, which may have influenced levels of awareness and acceptability towards safety equipment generally. PPE were brought to forefront of public life, although it would require further investigation to assess whether this has had a material effect on road user behaviour and attitudes.

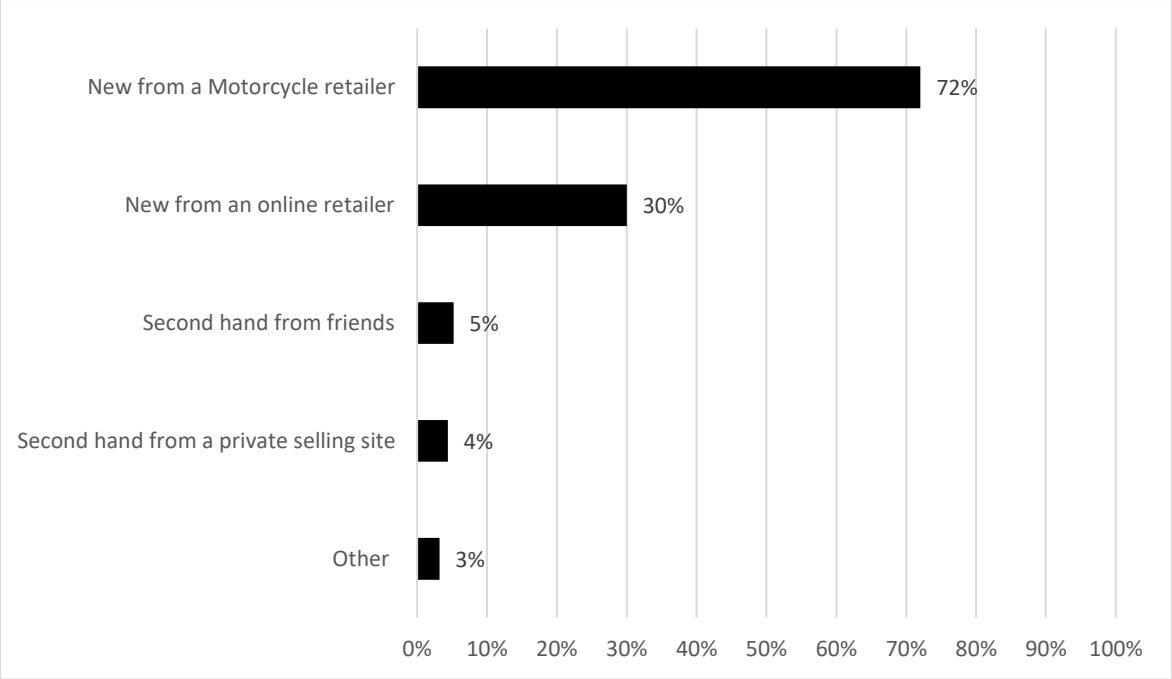
Table 7 - Always or Never wearing safe clothing

	Always		Never	
	2020	**2025**	**2020**	**2025**
Leather/textile gloves	78%	92%	5%	4%
Leather/textile boots	1%	71%	59%	14%
Leather/textile trousers	2%	40%	26%	30%
Leather/textile jacket	2%	76%	55%	10%
Leather one-piece	4%	2%	4%	87%
Hi Viz/Reflective gear	2%	17%	20%	43%
Armoured jeans	3%	31%	20%	36%

MOTORCYCLE HELMETS

Participants were also asked where they obtained their motorcycle helmets. A large proportion (72%) reported that they had purchased their helmets new from a motorcycle retailer. This was followed by those who bought their helmets new from an online retailer (30%). Only a small number of participants reported obtaining their helmets second-hand, either from friends (5%) or through a private selling site (4%). These are similar to the proportions from 2020.

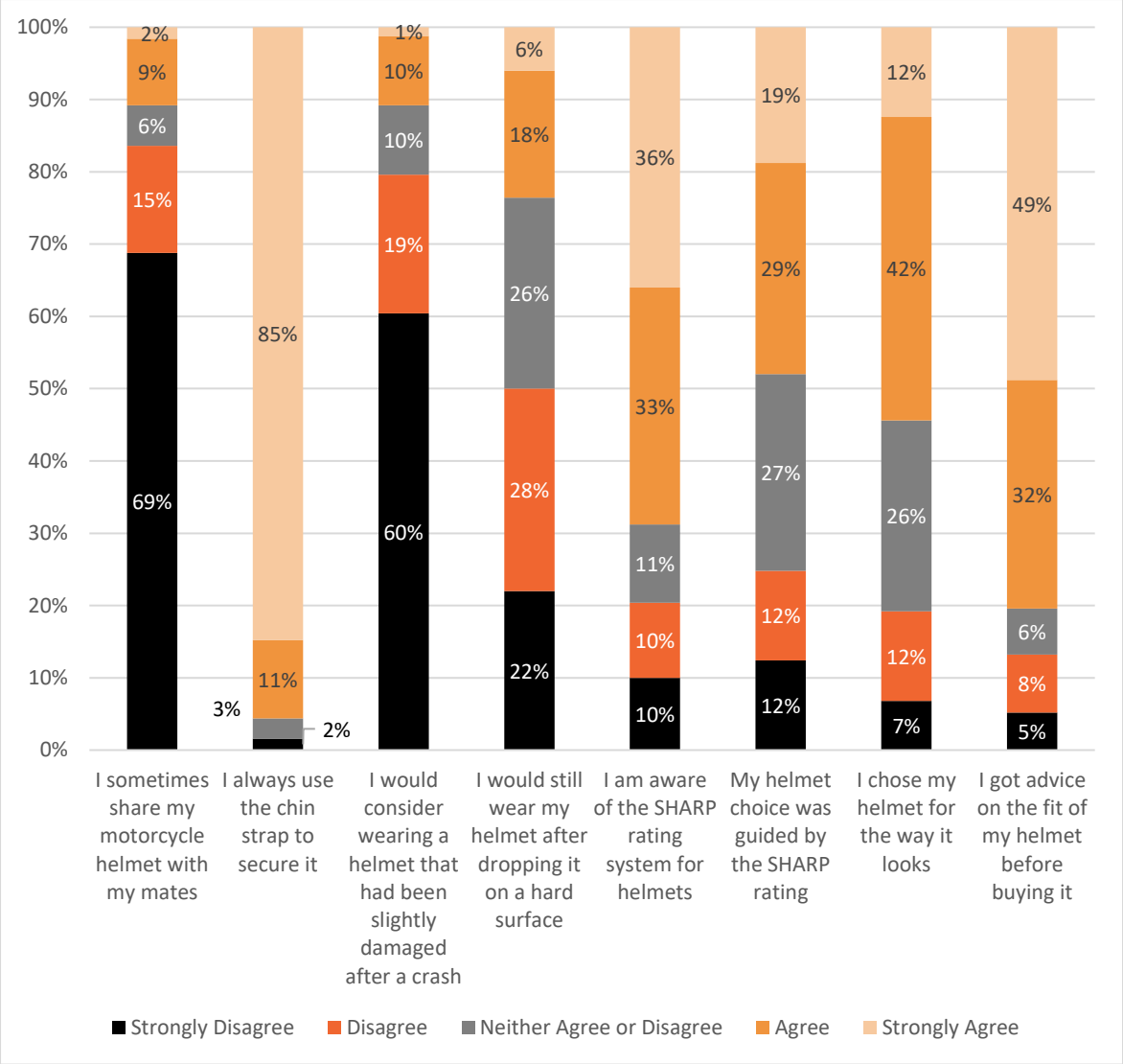
Figure 51 - Where participants have purchased their motorcycle helmets from



At a later stage, participants were presented with several statements regarding motorcycle helmets and were asked to indicate the extent to which they agreed with each one.

- A very large proportion of participants (11% agreed, 85% strongly agreed) reported that they always used the chin strap to secure their helmet (79% strongly agreed in 2020).
- Similarly, a high proportion indicated that they had received advice on the fit of the helmet before buying it (32% agreed, 49% strongly agreed) (70% agreed or strongly agreed in 2020).
- The majority of participants (33% agreed, 36% strongly agreed) also stated that they were aware of the SHARP rating system for helmets (31% strongly agreed and 36% agreed in 2020).
- However, fewer participants reported that their helmet choice was guided by the SHARP rating system, with only 48% selecting either 'agree' or 'strongly agree' (up from 38% in 2020).
- In addition, more than half of the participants (42% agreed, 12% strongly agreed) stated that they chose their helmet based on how it looked (12% strongly agreed and 39% agreed in 2020).
- Young riders also expressed strong negative attitudes towards wearing a helmet that had been slightly damaged in a crash (with a combined 79% disagreeing or strongly disagreeing), and towards sharing their helmet with a mate (a combined 84% disagreed or strongly disagreed). However, the first point is slightly less positive than in 2020, when 83% disagreed with wearing a helmet slightly damaged in a crash. However, sharing of helmets is the same as in 2020 (85%).

Figure 52 - Level of agreement relating to motorcycle helmets

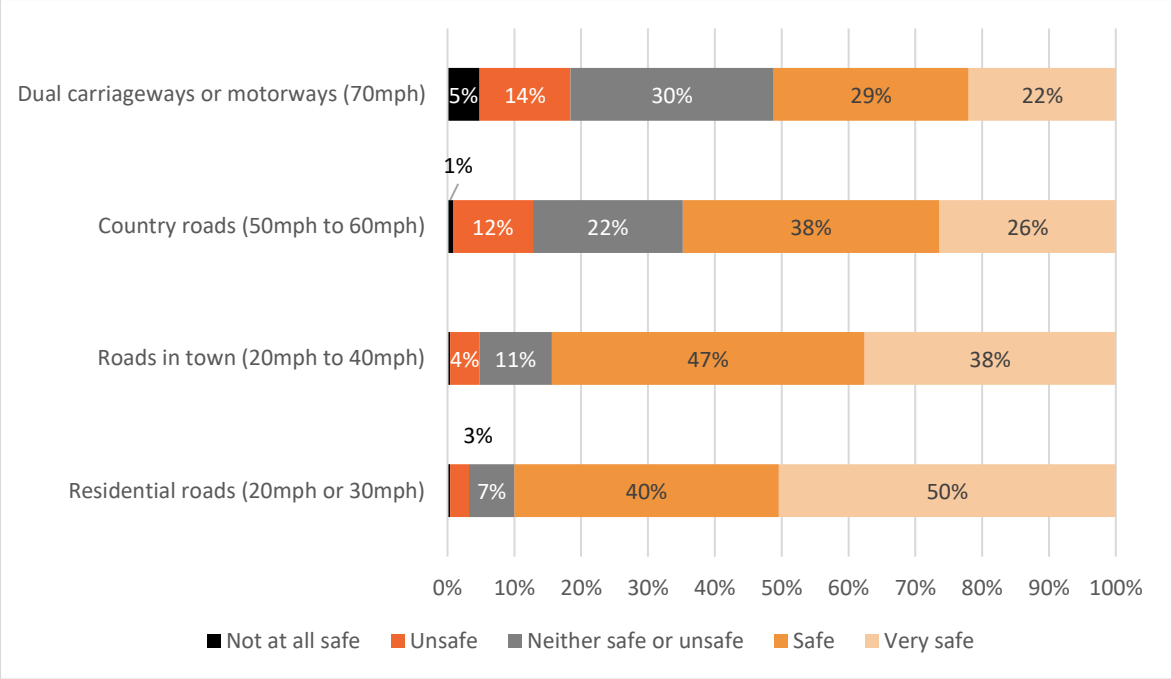


Based on these findings, and in line with previous research, it can be said that young riders generally demonstrate a good level of awareness and practice regarding helmet safety and use. However, the results also suggest that for some riders, how the helmet looks may sometimes be more important to them than how safe it is.

ROAD TYPES

Participants were asked how safe they felt when riding on different types of roads based on their own riding experience.

Figure 53 - How safe participants feel riding on the following types of roads



- Consistent with the findings of the initial study (although the original study asked about confidence, rather than sense of safety), participants reported feeling safest on residential roads (20mph or 30mph), with a combined 90% selecting either "safe" or "very safe".
- The second most frequently reported road type where participants felt safe was roads in town (20mph to 40mph), with 47% indicating "safe" and 38% "very safe".
- This was followed by country roads (50mph or 60mph), where 38% reported feeling "safe" and 26% "very safe".
- Finally, the road type where participants felt the least safe was dual carriageways or motorways, with just over half (51%) selecting either "safe" or "very safe".

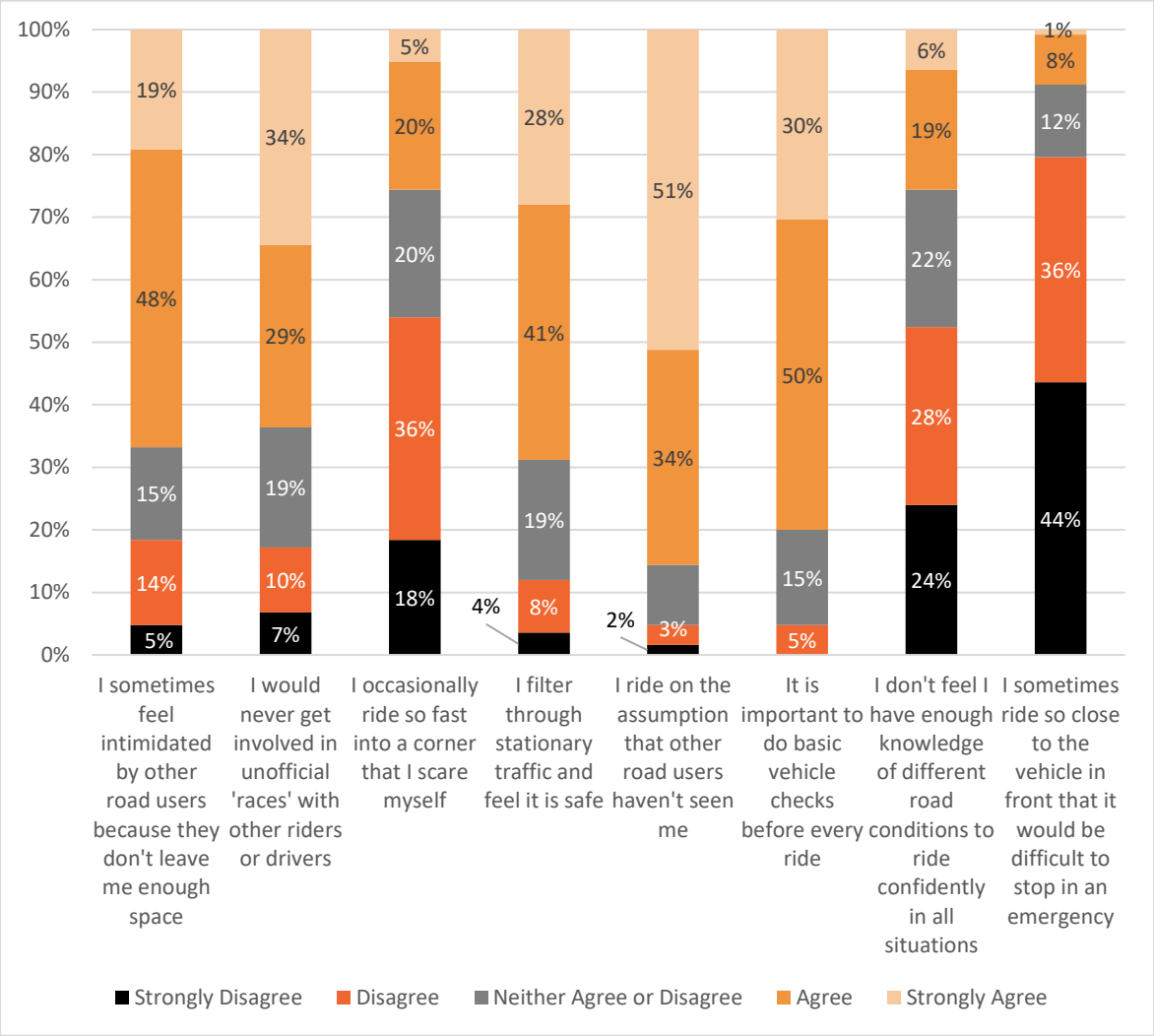
RIDING ATTITUDES AND BEHAVIOURS

Participants were asked a series of questions about their own attitudes and behaviours while riding, as well as their perceptions of other road users.

- 80% of participants agreed or strongly agreed that performing basic vehicle checks before every ride is important (79% in 2020).
- A very high proportion (85%) reported that they ride under the assumption that other road users may not have seen them (82%).
- 69% agreed or strongly agreed that they filter through stationary traffic and believe this practice to be safe (69% in 2020).
- 67% (48% agree, 19% strongly agree) stated that they sometimes feel intimidated by other road users due to not being given enough space on the road (55% in 2020).
- 63% of participants (29% agree, 34% strongly agree) stated that they would never get involved in unofficial races with other riders or drivers (64% in 2020).

- When asked whether they ride so close to the vehicle in front that it would be difficult to stop in an emergency, the majority (80%) strongly disagreed or disagreed with this statement, indicating generally cautious following behaviour (78% in 2020).
- However, when presented with the statement *"I don't feel I have enough knowledge of different road conditions to ride confidently in all situations,"* only 52% disagreed or strongly disagreed, suggesting that nearly half of participants may lack confidence in adapting to varying riding environments (58% in 2020).
- Finally, 54% disagreed or strongly disagreed with the statement *"I occasionally ride so fast into a corner that I scare myself,"* meaning a substantial portion may still engage in riskier cornering behaviours at times (54% in 2020).

Figure 54 - Agreement levels with statements about participants' riding attitudes and behaviours



Overall, the attitudes and behaviours of the riders appear to be consistent with the findings of the initial study. First, it is encouraging that many participants reported checking their vehicles before riding.

At the same time, the fact that riders tend to assume other road users have not seen them suggests a high level of awareness regarding their own vulnerability. Additionally, participants also reported that they sometimes feel intimidated by other road users. When these two statements are considered

together, it becomes clear that the attitudes of other road users towards motorcyclists also need to be examined.

Another key finding from the study is that some riders do not feel fully confident when riding in different road conditions. Some also appear to take risks, such as entering corners at high speed. Furthermore, while the majority of participants stated they would not get involved in unofficial races, 19% were unsure and 17% disagreed with the statement. At this stage, increasing riders' awareness of the risks they might take seems important to help reduce the likelihood of dangerous situations on the road.

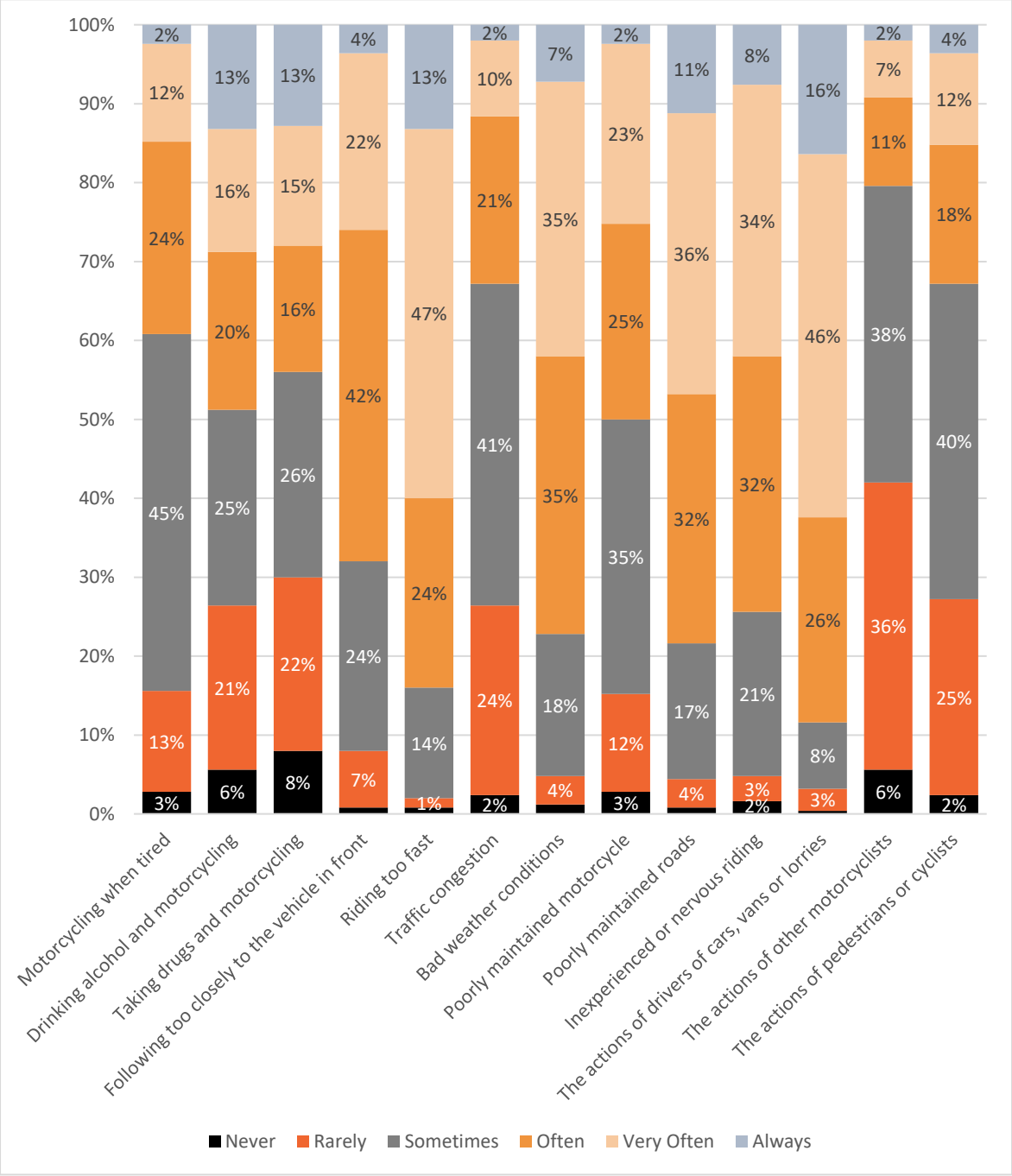
In another question in the survey, participants were presented with a number of factors that could contribute to a crash and were asked to what extent they believed these factors play a role in young riders being involved in road collisions.

Participants' responses were ranked based on the combined percentage of those who selected "often", "very often", or "always". The most frequently identified contributory factors to young riders' involvement in road collisions were as follows:

- The actions of drivers of cars, vans or lorries (88%, 74% in 2020)
- Riding too fast (84%, 80% in 2020)
- Poorly maintained roads (79%, 53% in 2020)
- Bad weather conditions (77%, 65% in 2020)
- Inexperienced or nervous riding (74%, 73% in 2020)
- Following too closely to the vehicle in front (68%, 64% in 2020)
- Poorly maintained motorcycle (50%, 46% in 2020)
- Drinking alcohol/taking drugs and motorcycling (49%, 44% in 2020)
- Motorcycling when tired (39%, 44% in 2020)
- Traffic congestion (33%, 29% in 2020)
- The actions of pedestrians or cyclists (33%, 36% in 2020)
- The actions of other motorcyclists (20%, 21% in 2020)

All of the proportions seeing these factors as contributing to collisions increased since 2020, with the largest increase in 'poorly maintained roads' and 'bad weather conditions'.

Figure 55 - How often respondents think each of the following factors are the cause of YOUNG riders being involved in road collisions



The findings suggest that young riders see external factors, particularly the actions of other road users, as major contributors to road collisions. The fact that 88% of participants identified the behaviour of drivers of cars, vans, or lorries as the leading contributory factor highlights a sense of vulnerability and a perceived lack of safety caused by others on the road. This finding is consistent with the analysis of the previous question, in which many participants reported feeling unseen or intimidated by other road users.

At the same time, high response rates for factors such as riding too fast (84%), inexperienced or nervous riding (74%), and following too closely (68%) show that participants are also aware of how their own behaviours can increase crash risk.

In addition, environmental and mechanical factors such as poorly maintained roads (79%), bad weather conditions (77%), and poorly maintained motorcycles (50%) were also frequently mentioned. This suggests that participants recognise a range of risks, not limited to personal actions.

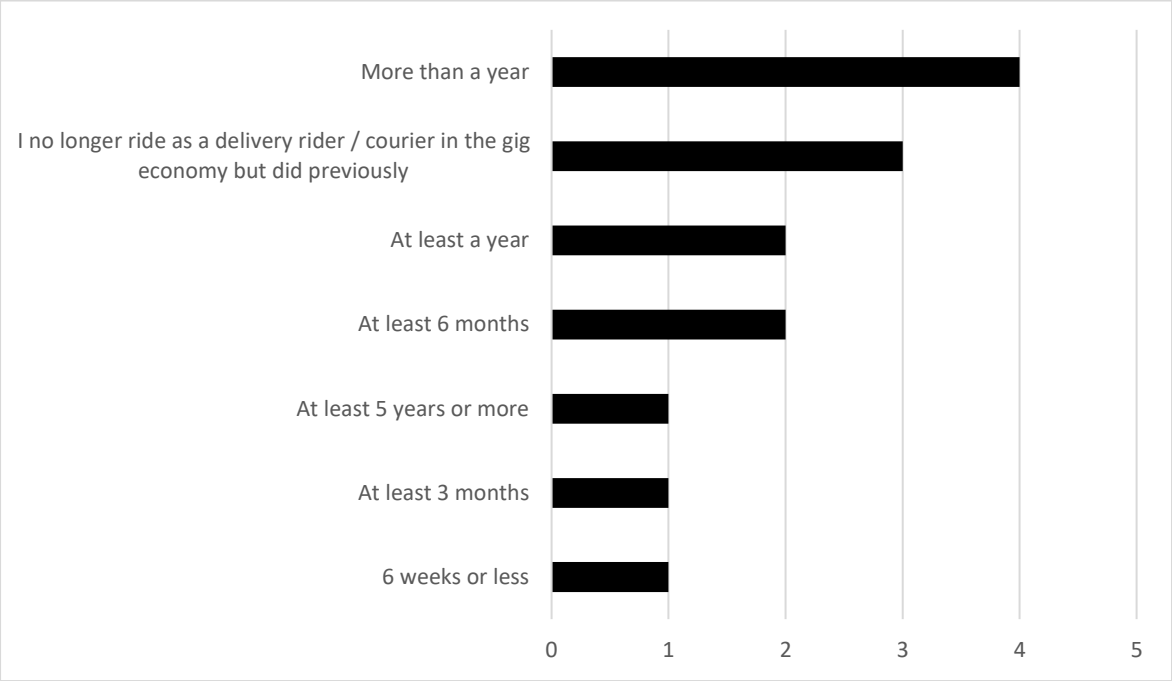
Overall, these results highlight the need for targeted rider education focusing on speed control, maintaining safe following distances, and building rider confidence. In addition, broader efforts to raise other road users' awareness of riders and to improve road conditions are also seen as important.

GIG ECONOMY RIDERS

Of the 250 riders who participated in the study, 14 also identified themselves as gig economy riders. Whilst this is a small sample, analysis into the ways they ride for work were examined.

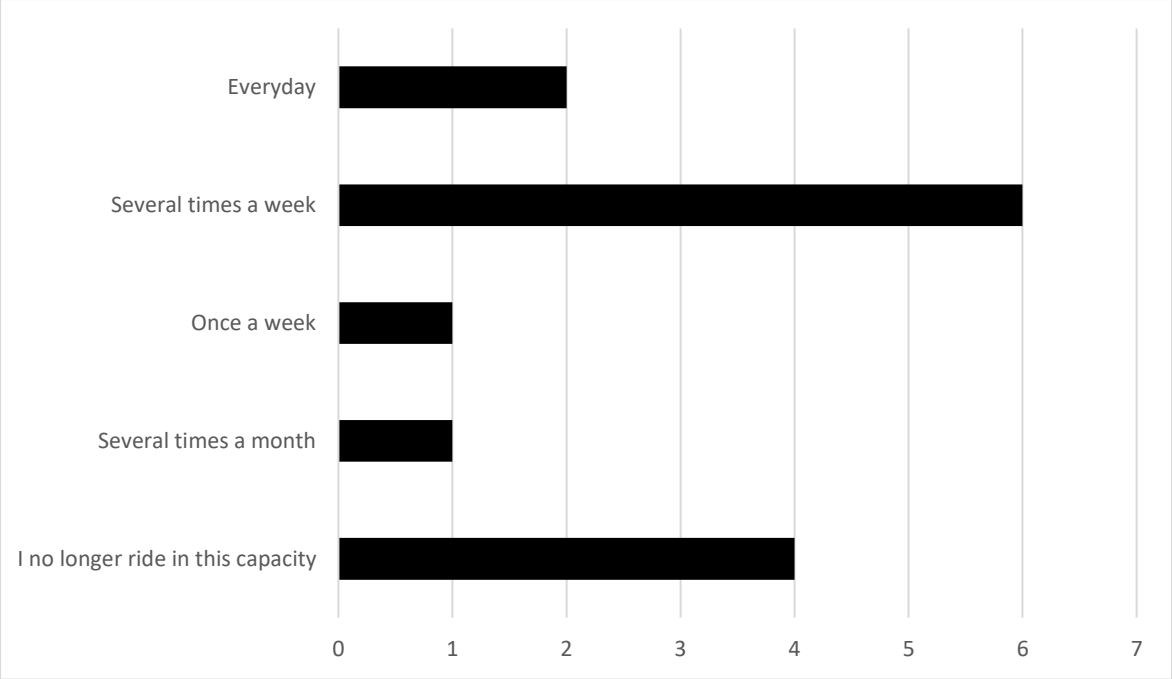
The duration of their work in the gig economy is presented in the figure below.

Figure 56 - How long the participants have worked as a delivery rider or courier in the gig economy



An analysis of the riding frequency among gig economy riders revealed that nearly half of them (6) reported riding a motorcycle several times a week (as shown in Figure 57). In addition, four riders stated that they no longer ride in this capacity.

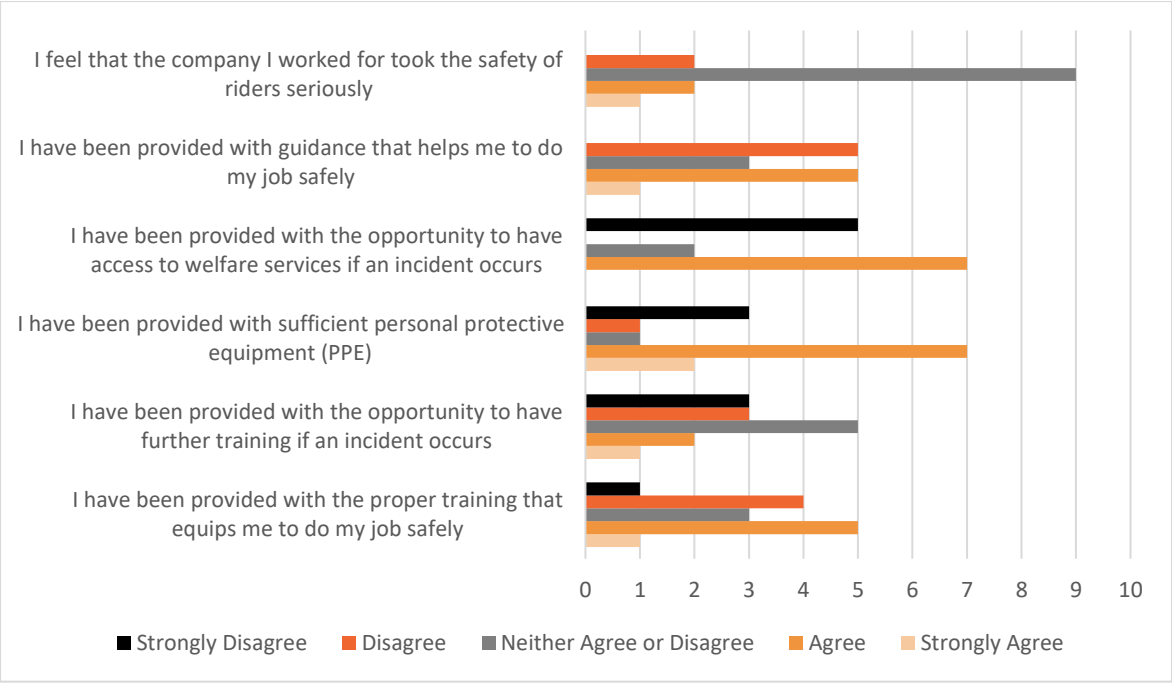
Figure 57 - Participants' motorcycle riding frequency as gig economy riders



The majority of the 14 participants (11) who are currently working or have previously worked in the gig economy reported delivering food (takeaway deliveries). Two participants stated that they delivered non-food items, while four participants reported delivering specialised goods such as medical or construction supplies.

Participants were then presented with several statements and asked to indicate the extent to which they agreed with each one.

Figure 58 - Agreement levels with statements about rider safety and support

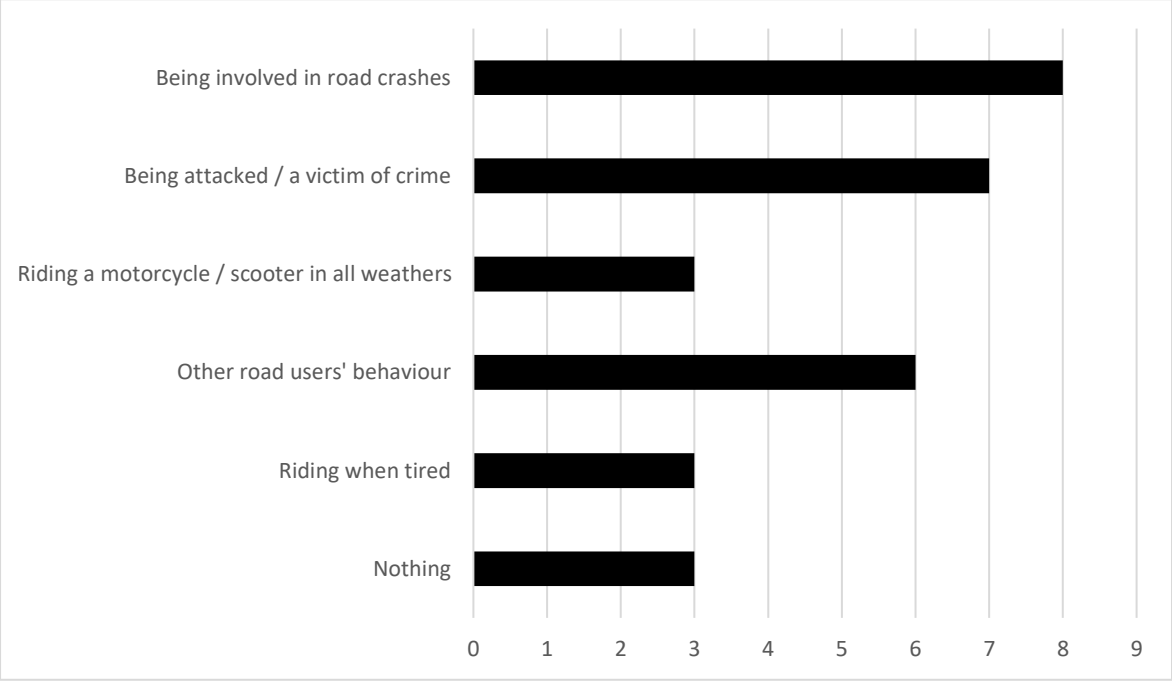


It should be noted that this is a small sample to draw strong conclusions from.

- When evaluating participants' responses, it is notable that only a small number of riders felt that their company takes rider safety seriously, with just three selecting "agree" or "strongly agree."
- Similarly, six riders reported receiving guidance related to job safety (five "agree", one "strongly agree").
- Seven participants agreed that they had been given the opportunity to access welfare services in the event of an incident.
- Nine participants reported being provided with sufficient personal protective equipment (seven "agree", two "strongly agree"), while four stating that they had not been provided with such equipment (three "disagree", one "strongly disagree").
- In response to the statement *"I have been provided with the opportunity to have further training if an incident occurs,"* six riders disagreed (three "disagree", 3 "strongly disagree") and 3 agreed (2 "agree", 1 "strongly agree").
- Finally, six participants five "agree", one "strongly agree") felt that they had received proper training to do their job safely. However, five participants disagreed with this statement (four "disagree", one "strongly disagree").

Although the number of gig economy riders in this sample is small (14), the responses offer some preliminary insights into perceived gaps in safety-related support. Only three participants felt that their company takes rider safety seriously, and six reported receiving any form of safety guidance. While the majority indicated they had access to personal protective equipment and welfare services, fewer reported opportunities for further training following incidents. These findings, though based on a limited sample, suggest a need for further investigation into how safety, welfare, and training provisions are implemented and experienced by gig economy riders.

Figure 59 - What worries the participants about working as a delivery rider/courier in the gig economy



Finally, gig economy riders were asked what worries them most about working as a delivery rider/courier in the gig economy, as shown in Figure 59.

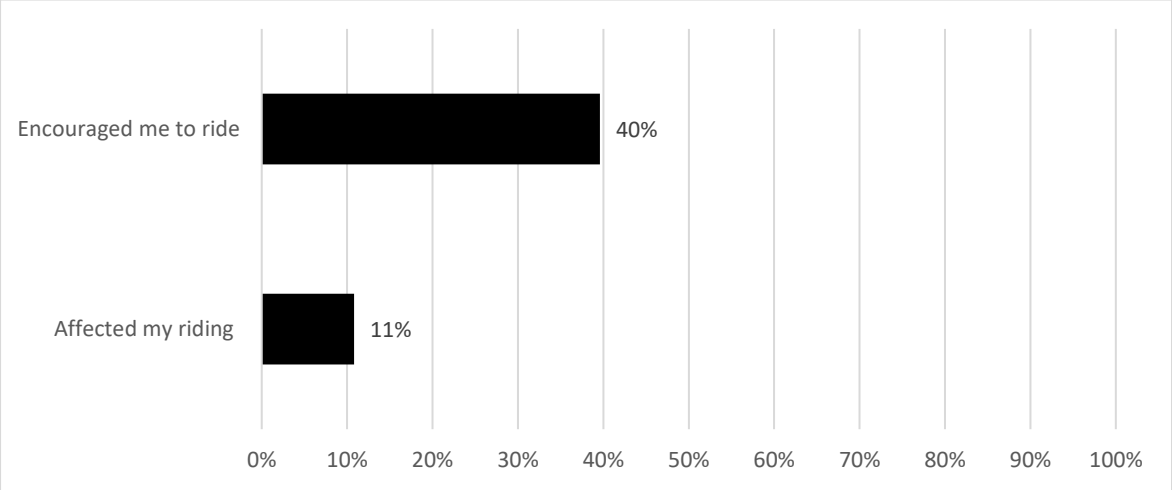
- The most frequently reported concern was being involved in road crashes, mentioned by eight participants.
- This was followed by the fear of being attacked or becoming a victim of crime, reported by seven participants.
- The third most common concern was the behaviour of other road users, cited by six participants.
- Additionally, riding when tired and riding a motorcycle or scooter in all weather conditions were each mentioned by three participants.
- Three participants stated that nothing in particular worried them about this work.

These responses suggest that safety-related concerns are a major source of worry for gig economy riders, with road crashes and personal security topping the list. These findings highlight the importance of addressing both physical safety and wider environmental risks in the gig economy delivery context.

DRIVING EXPERIENCES IN THE CONTEXT OF THE PANDEMIC

The majority of participants (84%) reported that they began riding after the first national lockdown. However, only a small proportion (11%) stated that the pandemic had affected their riding, while less than half (40%) said that it had encouraged them to ride.

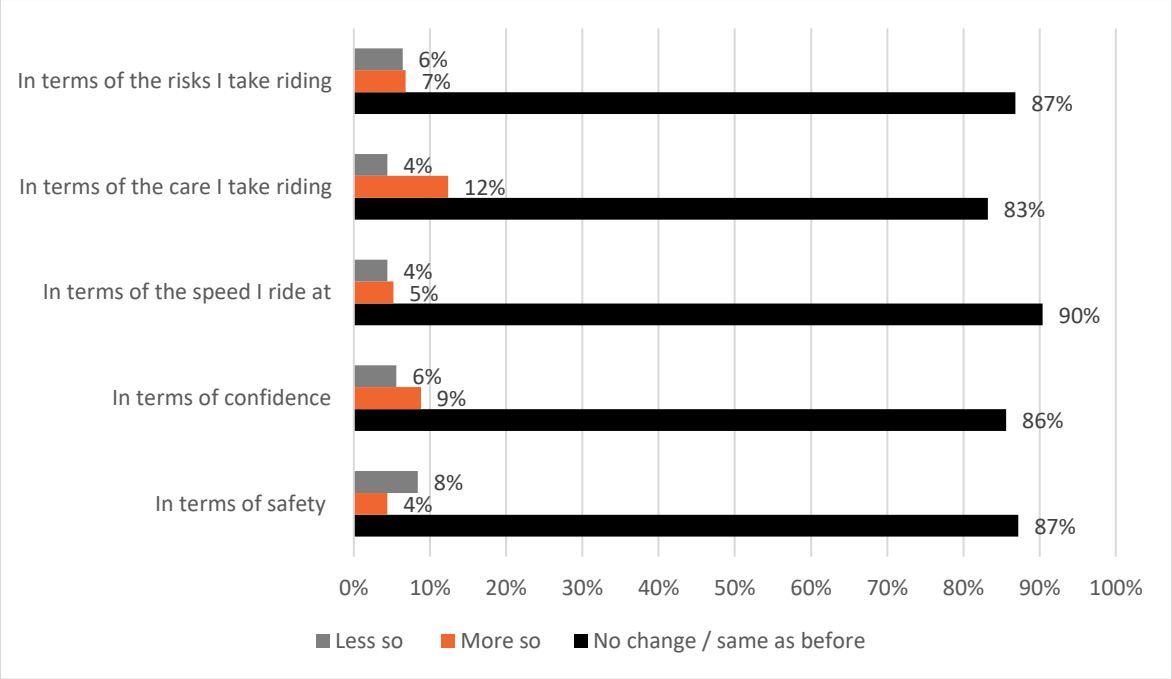
Figure 60 - How the pandemic influenced riding behaviour



Some aspects of riding behaviour that may have been influenced by the pandemic were explored in more detail. Participants were asked to reflect on how their riding experience may have been affected by the pandemic, using a list of possible areas of impact to guide their responses.

Overall, the majority of participants reported that their riding experience in the areas listed remained the same as before the pandemic, with no significant changes. However, when looking at the figures, the greatest change after the pandemic appeared in the level of care participants reported taking while riding. In this area, 83% stated that their behaviour had not changed, 12% reported being more careful, and 4% reported being less careful than before the pandemic. By contrast, the area with the least reported change was participants' speeding habits. In response to this item, 90% stated that there had been no change in their behaviour, while 5% reported riding at higher speeds and 4% reported riding at lower speeds since the pandemic.

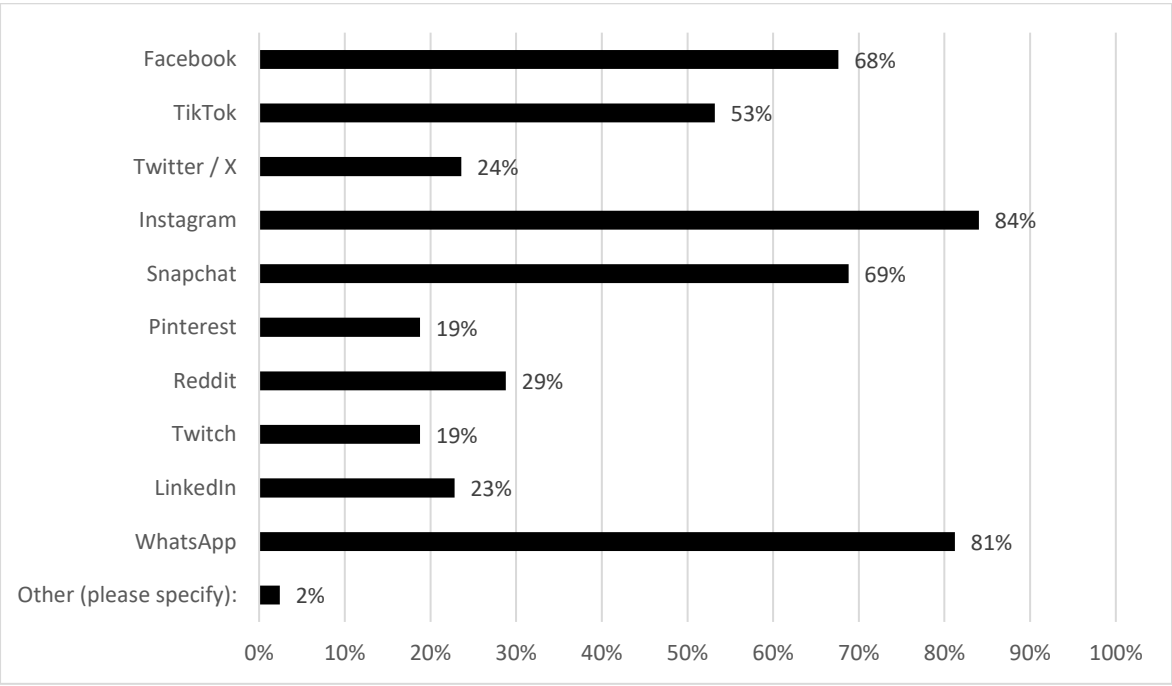
Figure 61 - How the pandemic influenced riding experience from different perspectives



SOCIAL MEDIA PLATFORMS

To help identify effective ways for NYRF to engage with young riders, participants were asked which social media platforms they use. Among respondents, Instagram was the most commonly used platform, selected by 84% of participants. This was followed by WhatsApp (81%), with Snapchat (69%) and Facebook (68%) also being frequently mentioned. This is slightly different to the results from 2020 where Facebook was the most popular platform, rather than Instagram.

Figure 62 - Social media platforms used by participants



SOURCES OF INFORMATION ABOUT RIDING

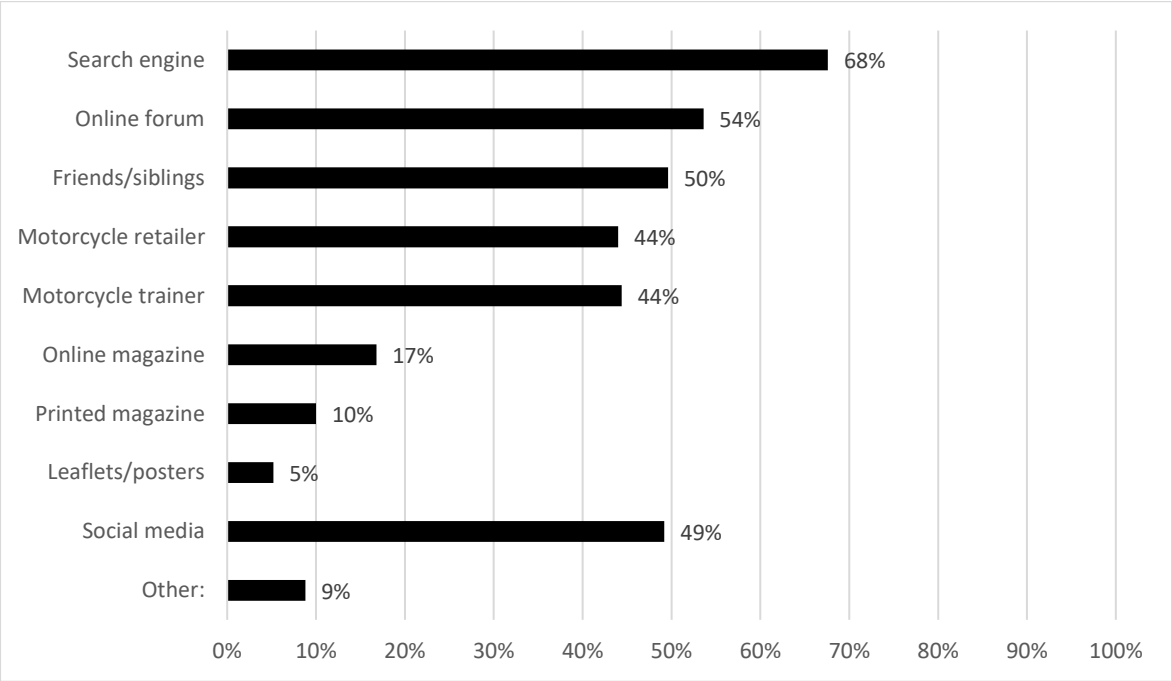
Participants were asked which channels they used to access information related to riding:

- 68% reported using search engines (59% in 2020)
- 54% referred to online forums (55% in 2020)
- 50% sought advice from friends or siblings (38% in 2020)
- 49% used social media (not asked in 2020)
- 44% consulted motorcycle retailers and trainers. (42% in 2020)

Among the less commonly used sources were:

- Online magazines (17%, 24% in 2020)
- Printed magazines (10%, 15% in 2020)
- Other sources (where they were asked to state which ones and cited: experienced motorcycle users in the family (especially fathers), YouTube, and other official and recognised training sources) (9%, 5% in 2020)
- Leaflets/posters (5%, 4% in 2020)

Figure 63 - Where participants look for information about riding



YOUNG RIDERS' APP

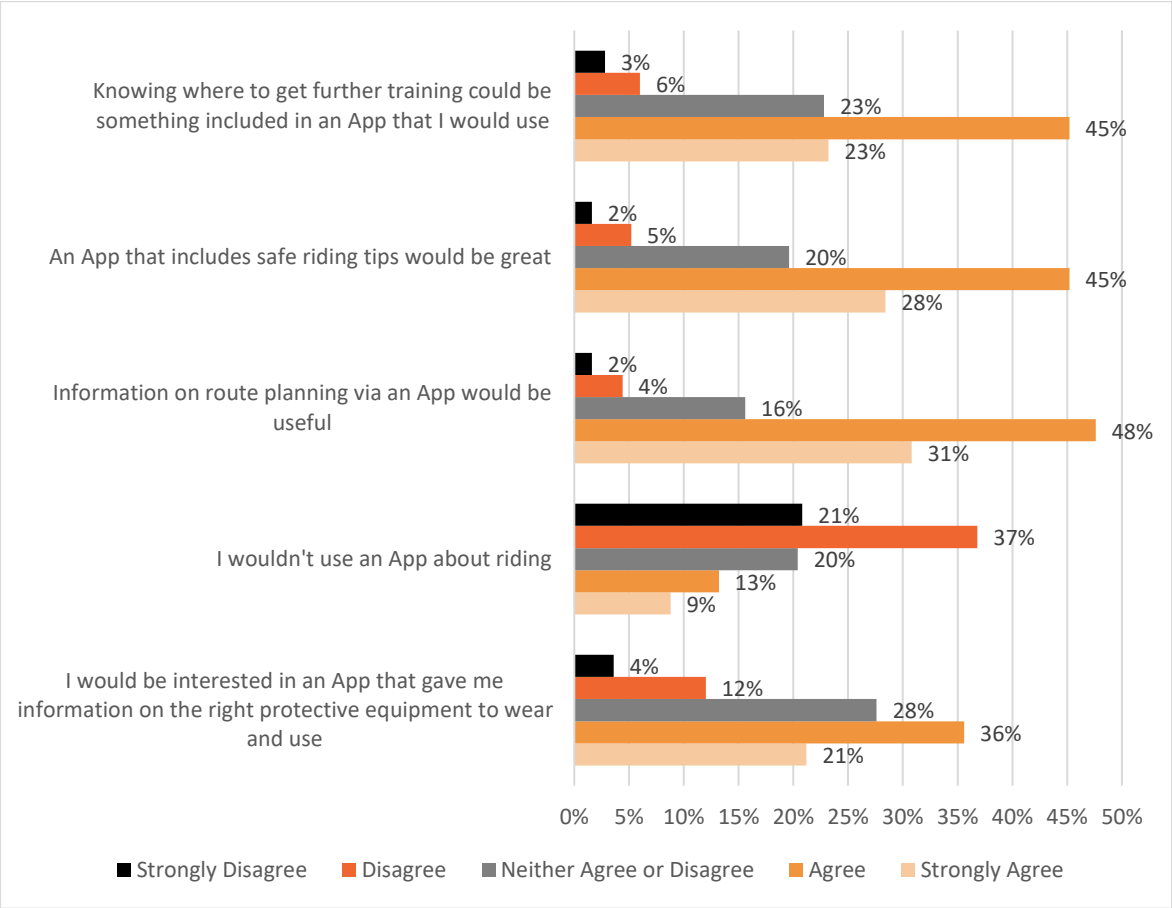
To understand whether participants would be interested in an app that provides advice and information about motorcycling, a number of questions were asked regarding a potential Young Riders' App (as shown in Figure 64).

- Only 9% of participants strongly agreed and 13% agreed with the statement "*I wouldn't use an app about riding*." Around 20% selected "neither agree nor disagree." From this perspective, more than half of the participants appeared to have a positive attitude toward using such an app. This is even more positive than in 2020, where 20% were not interested in using an app and 31% didn't agree or disagree.

- Participants were most receptive to the idea of accessing information on route planning via the app: 48% agreed and 31% strongly agreed that such a feature would be useful. This is similar to 2020 (75%)
- This was followed by the statement that an app providing safe riding tips would be great, with 45% agreeing and 28% strongly agreeing (70% in 2020).
- Participants also showed a strong tendency to use an app that provides information on where to access further training, with 45% agreeing and 23% strongly agreeing (64% in 2020).
- Finally, more than half of the participants showed a high level of agreement with using an app that provides information on the correct protective equipment to wear and use, with 36% agreeing and 21% strongly agreeing (50% in 2020).

These findings suggest that most young rider participants would be open to using a motorcycling-related app, particularly one that offers practical and safety-focused content. Interest was especially high for features such as route planning, safe riding tips, further training opportunities, and guidance on protective equipment.

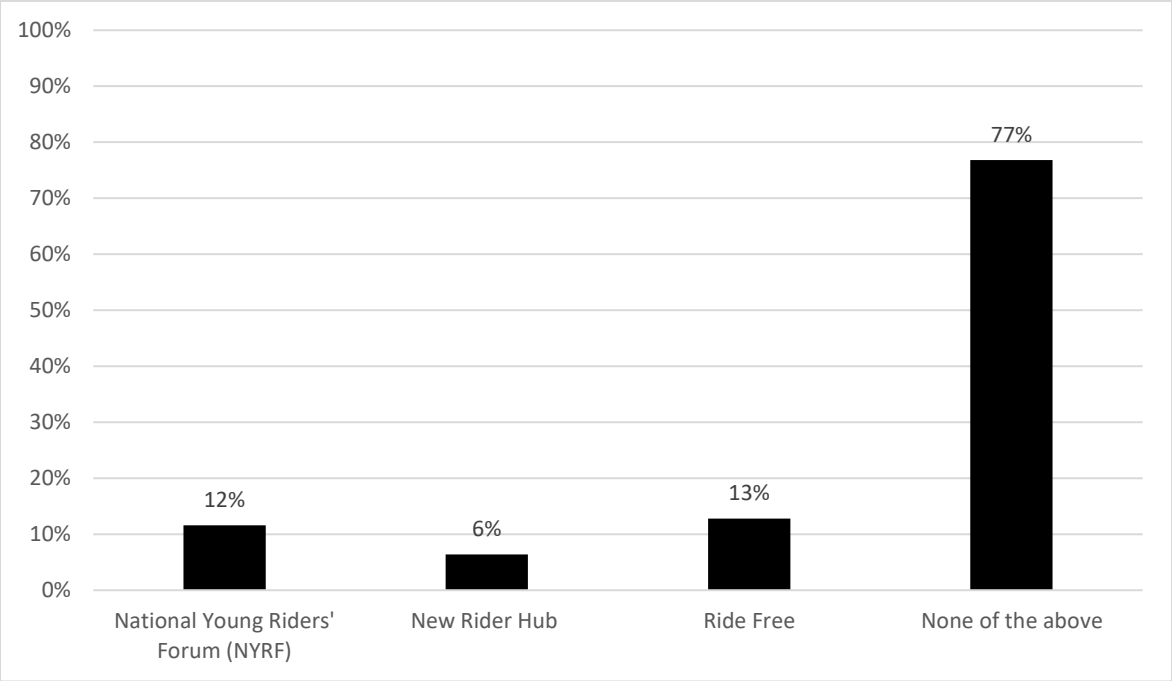
Figure 64 - How much do the respondents agree with the following statements about a young riders' app



RIDER SUPPORT AND ENGAGEMENT INITIATIVES

Participants were asked whether they were familiar with specific rider support and engagement initiatives.

Figure 65 - Participants' Familiarity with Rider Support and Engagement Initiatives



The large majority (77%) reported that they had no knowledge of these initiatives. However, 13% of participants stated that they were familiar with Ride Free; 12% with the National Young Riders' Forum; and 6% with the New Rider Hub (NYRF's website) meaning NYRF had a combined visibility of 18% for this survey group. Increasing visibility and outreach efforts may help ensure that as many young riders as possible can benefit from these resources.

This question was not a prompt to determine levels of brand awareness but more to understand (unprompted) whether these young riders generally know about these schemes through their formal names. In the review of activities delivered since the last report, it is clear from social media reach and views of posts and videos that there are high levels of engagement with NYRF outputs. More brand building with this audience could raise awareness of the Forum itself, but the most important outcome is engagement with the group's main outputs.

GIG ECONOMY RIDERS – A GROWING CHALLENGE

This project also sought to elicit any insights, either from the qualitative or quantitative exercise, around gig economy rider risks. The gig economy, and the use of power-two-wheeler travel for those who undertake work in the sector, have grown significantly in recent years. The sub-set of questions around gig economy risk for riders in the online questionnaire received fourteen responses. Nonetheless, these responses do indicate that occupational safety management and the risk for young riders are salient issues for those who identified as 'gig economy riders' in the questionnaire (see **Gig economy riders**).

The gig economy in this instance refers to motorcyclists or moped users who receive payment for courier or delivery work on a flexible non-contractual basis, often getting paid per 'gig' or at a 'piece rate' (per delivery or job completed etc.) Companies provide these riders (who are classed as self-employed) with offers of work which includes (but is not limited to) delivery of parcels and food orders. There are few, if any, formal obligations in place between the rider and the companies or brokers involved. As they are not covered by most statutes of employment law, their rights are often limited, usually just covering some protection for health and safety purposes and against discrimination. They are therefore often responsible for managing their own work in a way that does not incur safety risks for themselves or other road users. Research into delivery rider injuries (McKinley, Mitchell, & Bertenshaw, 2022) has shown that young riders, often male and under 30 years of age (especially the 17-24 cohort) are a demographic group disproportionately involved in motorcycle courier collisions. Common risk factors include limited rider experience; pressures associated with gig economy work; risky behavioural norms; and insufficient use of protective equipment. Occupational motorcyclists have long been at greater risk of road traffic injury compared to other motorcyclists (Christie N. , 1996). Several research projects in recent years have looked specifically at delivery rider risk in the gig economy, and how the role of operational business models company practice for these workers affects their levels of safety. This is against a backdrop of gig economy risk as a growing policy issue, with the steady growth of digital platforms (often app-based services) and markets within which this type of work is prevalent (Work and Pensions Select Committee, 2017).

Following the Work and Pensions' Select Committee's Report on *Self Employment and the Gig Economy* in 2017, Nicola Christie and Heather Ward conducted a mixed method study to explore the experiences of risk and risk management amongst gig economy riders and drivers, as well as to gather the views of managers to understand how safety is taken into account within the business models for this type of work (Christie & Ward, 2018). The in-depth interviews (n=48) and survey responses (n=200) confirmed key risk factors perceived by gig economy riders themselves, including frequently reported levels of fatigue, mobile phone distraction, speeding, and red-light violations. The interviews with gig economy riders especially highlighted the long hours; lack of training, safety advice and protective equipment; physical and mental pressures to deliver at excessive pace and fulfil many orders (with unstable loads); negative incentives to ride in poor weather; all alongside the accrual of high mileage (hence greater exposure). These were seen as common place when working as a motorcycle delivery rider, with strong feelings that this mix of factors compromised their own safety as riders as shown in research on gig economy drivers (Christie & Ward, 2019).

The research also looked at the business dynamics and culture of safety surrounding gig economy rider work, reflecting on the views of company managers and their thoughts on practice and implications for rider safety. There was an overarching sense of not taking direct responsibility for safety, with managers stating that the 'life of the parcel' was sometimes seen as more important than

the life of the rider or driver. Managers noted the ethos of companies around commitments to safety were at odds with operational realities of contracting gig economy riders, with some stating that communication on key aspects of safety management about advice to riders about regular breaks and mobile phone distraction were inconsistent or not provided. This research put forward several recommendations to industry and reflected on the how "generating a safety culture involves leadership and accountability and a conversation between a manager and the people they manage – the digital gig economy of transport services is [as it stands] unlikely to provide a bedrock of such a culture to flourish" (Christie & Ward, 2018).

Additional research focused on motorcycle food delivery services has come to similar conclusions when comparing the experiences of gig economy and employed delivery riders (Christie & Ward, 2023). This work highlighted the heterogeneity of personas amongst this group, who collectively fall into the 'young riders' cohort. This includes those for whom the pandemic cut off previous opportunities to paid employment and who were amongst the most 'under pressure' for extra money due to their financial situation; those in part time or full-time work; and students looking for ways to help fund their studies. Whilst many of the risk factors were like those seen in previous research, there were several differences recorded between the experience of gig and employed motorcycle delivery riders. Firstly, employed riders were far more likely to say they were provided with sufficient protective equipment whilst gig riders often reported that they simply received a waterproof or similar jacket which offered no protection. Secondly, whilst all employed riders interviewed agreed there was at least some level of safety or risk management from their employer; for gig riders, there was "no discernible risk management in place" (Christie & Ward, 2023). Similarly, those with formal contracts of employment overwhelmingly said that the relationship they had with their employers was 'real' and that corporate image and representation, culture and support, and monitoring were all heavily important for their respective company when it came to matters of safety for them as riders. This included being encouraged to take breaks; undertake mandatory safety training; not being expected to work in treacherous conditions; and to actively report collisions and discuss associated issues with management. Conversely, multiple gig riders indicated that they had no tangible relationship with service providers or brokers, with a sense of little to no level of obligation between them when things went wrong (operational or health and safety related).

The development of insight in this area demonstrates that gig economy riders, who have been shown to disproportionately be young males often from poorer socio-economic as well as ethnic minority backgrounds, face multiple complex risks. The nature of motorcycle delivery work in the gig economy is heavily connected to experiences of safety. This includes prevailing business models; legal parameters and organisational culture; in addition to the behavioural implications of the 'gig economy' system for riders; all of which have implications for the safety of this growing demographic who are often at the edges of the labour market.

This presents a challenge for all stakeholders involved in this area (as a growing element of young rider's experience with road risk), which is distinct from those not riding for work. It could be that riding for work is not directly the remit of NYRF, it will work with other relevant partners where appropriate and those who are best placed to leverage their influence.

SEGMENTATION

GROUPING RESPONDENTS

Segmentation analysis was conducted on the survey respondents (not the interview participants, although some of the interview participants were recruited via the survey).

A deep learning algorithm was used to segment motorcyclists into groups based on the similarity of their questionnaire responses. A deep autoencoder neural network was used to spatially arrange motorcyclists so that those with more similar responses are closer together, and those who differ more are further apart. This technique takes a holistic approach, using all of the data available from the questionnaires, whilst also accounting for interdependencies between responses to different questions. Once the motorcyclists are arranged, a hierarchical clustering algorithm is used to form distinct groups of similar motorcyclists. The cluster hierarchy also provides super-groups of motorcyclists that show which of these groups are similar to each other. One of the major benefits of this technique is that it allows respondents to be grouped without researcher bias.

The naming of the clusters themselves is a subjective exercise, which followed on from the objective exercise of initially grouping the data points into clusters of shared characteristics based on the segmentation methodology described.

CLUSTERS

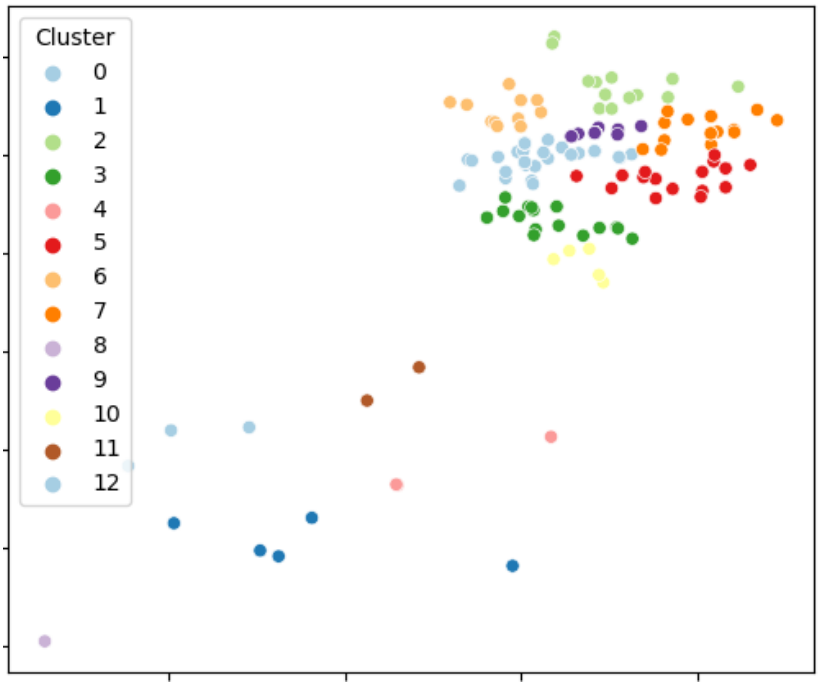
Figure 66 shows the way that the survey respondents were grouped by the system into 13 different clusters. The members of each cluster share common characteristics and responded to questions in the same way. As can be seen in Table 8, respondents are not evenly distributed across the clusters.

Table 8 - Number of respondents per cluster

Cluster No.	**0**	**1**	**2**	**3**	**4**	**5**	**6**
Cluster Name	**Safety-Conscious Youngsters**	**Former Delivery Rider**	**Young Commuter**	**Larger Bike Commuter**	**Car Aspirant**	**Younger Pleasure Rider**	**College Commuter**
No. of respondents	62	5	15	23	3	29	12

Cluster No.	**7**	**8**	**9**	**10**	**11**	**12**
Cluster Name	**Family Influence**	**Worried Gig Rider**	**Second Hand Machines**	**Experienced Pleasure Rider**	**PPE is not for me**	**Supportive Employer**
No. of respondents	21	1	69	5	2	3

Figure 66 - Cluster analysis of survey respondents



Manual analysis of the clusters revealed that there were also common characteristics between clusters, allowing them to be brought together in overarching groups. The creation of these overarching groups will assist road safety practitioners understand the similarities and differences between the different clusters.

The clustering of this sample produced a very different grouping of segments to the analysis from the previous study. There were three Groups in the previous analysis: experienced riders, inexperienced riders, and inexperienced car aspirants. In this study, there were also three groups: experienced riders, young inexperienced riders, and delivery riders. Compared to the last time, the group of young inexperienced riders is significantly larger and accounts for three-quarters of respondents. This demonstrates that the sample is quite different to the previous work.

Table 9 provides a summary of Group 1, who are described as 'More Experienced Riders on Larger Motorcycles'. There are two clusters here and these align with the older riders from the casualty analysis. These clusters account for 11% of all participants and are riders who are most often in their early twenties and have completed the CBT and two-part test. Their age, training, and experience levels mean that they tend to be quite confident riders, but they also think there is room for improvement for the CBT. They tend to have been interested in motorcycling for a while and have family members who are interested in motorbikes. They generally have safe attitudes to riding; they use PPE and always wear their helmet chin strap, as well as riding by assuming other road users have not seen them.

Table 9 - Group 1: More experienced riders on larger motorcycles

Group 1	These clusters are more experienced and have undertaken more training than other clusters. They tend to think the CBT could be improved.
Percentage of respondents	11%
Media preferences	Facebook, Instagram, WhatsApp
Sources of riding information	Online forum, social media, search engines, online magazines
Features in a riding app	Route planning, safety tips, further training, advice on protective equipment

Cluster 3	**Larger Bike Commuter**
Percentage of respondents	9%
Characteristics	19-24 years old Have always been interested in bikes Family members are interested in bikes Ridden off-road for years Uses a motorcycle to commute Wears PPE Bought bike new from retailer Bought their helmet new from retailer and always uses the chin strap Aware of SHARP ratings Would like hazard perception and the theory test as part of CBT Don't think CBT took too long Confident in most situations Always assumes others haven't seen them Do basic vehicle checks Feel safe filtering Never close follow
Cluster 10	**Experienced Pleasure Rider**
Percentage of respondents	2%
Characteristics	Some females Have always been interested in bikes Family members are interested in bikes Ridden off-road for years Completed CBT and two-part test Motorcycles over 125cc Rides for pleasure, work and commuting Thinks public transport is too slow or expensive Wears PPE Bought their bike second hand online Always uses the chin strap Got advice on fitment of their helmet Would wear a dropped helmet Would like hazard perception and the theory test as part of CBT Would like post-CBT support Don't think that CBT gave them the skills to be a safe rider Don't think CBT took too long Confident on country roads Always assumes others haven't seen them Feel intimidated when not given enough space Do basic vehicle checks Think young rider crashes are due to riding too fast, inexperience, poor road maintenance, and other vehicles

Table 10 provides a summary of Group 2, who are described as Young Inexperienced Riders. These motorcyclists have only completed the CBT but are enthusiastic about riding and have been interested in motorcycling for a while. There is a real opportunity to engage with these individuals at the start of their riding career, as they are asking for support to help them gain experience and increase their confidence. The cluster differences this time relate to gender, journey purpose, where they go for support, and where they bought their motorcycle. Overall, they account for 84% of survey respondents and accounts for five clusters.

Table 10 – Group 2: Young Inexperienced Riders

Group 2	These clusters are inexperienced in that they have only completed CBT. They identify themselves as motorcyclists. There is an opportunity to provide support to them as they gain experience and increase their confidence.
Percentage of respondents	84%
Media preferences	Facebook, Instagram, WhatsApp, TikTok, Snapchat
Sources of riding information	Search engine, friend/sibling (Cluster 7), social media (Cluster 2)
Features in a riding app	Route planning, safety tips, advice on protective equipment, further training
Cluster 0	**Safety-Conscious Youngsters**
Percentage of respondents	25%
Characteristics	16-18 years More females Have always been interested in motorbikes CBT only Geared up to 125cc Ride for errands Need a motorcycle to get to school, college, or work Wears PPE Bought their motorcycle new from a retailer Always uses the chin strap and wouldn't use a damaged helmet Aware of SHARP ratings Would like hazard perception as part of CBT Would like post-CBT support Thinks CBT gave them the skills to be a safe rider Don't think CBT took too long Not confident on the faster roads Safe attitudes
Cluster 2	**Young Commuter**
Percentage of respondents	6%
	17-19 years Have always been interested in bikes CBT only Geared up to 125cc Commutes Wears PPE Bought their motorcycle new from a retailer Bought their helmet new from retailer Wouldn't share a helmet with friends Always uses the chin strap Chose helmet based on looks and got advice on fitment Would like pre-learning for CBT Thinks CBT gave them the skills to be a safe rider Don't think CBT took too long Confident on residential roads and in town Always assumes others haven't seen them

	Do basic vehicle checks Feels safe filtering Never close follows Thinks young rider crashes are due to riding too fast, bad weather, inexperience, poor road maintenance, and other vehicles
Cluster 5	**Younger Pleasure Rider**
Percentage of respondents	12%
Characteristics	16-18 years Have always been interested in motorbikes Ridden off-road for years Motorcycles over 125cc Rides for pleasure Wears PPE Always uses the chin strap Aware of SHARP ratings Don't think CBT took too long Confident on residential roads Always assumes others haven't seen them Do basic vehicle checks
Cluster 6	**College Commuter**
Percentage of respondents	5%
Characteristics	16-18 years Some females Have always been interested in motorbikes CBT only Geared up to 125cc Riding for pleasure or commuting Need a motorcycle to get to school, college, or work Wears PPE Always uses chin strap Aware of SHARP ratings Don't think the CBT took too long Confident on residential roads Always assumes others haven't seen them Doesn't get involved in informal races Do basic vehicle checks Don't close follow Think young rider crashes are due to close following, riding too fast, bad weather, inexperience, and poor road maintenance Aware of NYRF
Cluster 7	**Family Influence**
Percentage of respondents	8%
Characteristics	16-24 years Some females Have always been interested in motorbikes Family members are interested in bikes CBT only Geared up to 125cc Rides for pleasure Wears some PPE Bought their bike second-hand from friends Always uses chin strap Would like pre-learning for CBT Don't think the CBT took too long Confident on residential roads Always assumes others haven't seen them

	Feels safe filtering Thinks young rider crashes are due to riding too fast Goes to friends or siblings for riding information
Cluster 9	**Second Hand Machines**
Percentage of respondents	28%
Characteristics	16-24 years Have always been interested in motorbikes Geared up to 125cc Rides for pleasure Wears PPE Bought their bike second hand from a retailer or online Bought their helmet new from a retailer Always uses chin strap Thinks CBT gave them the skills to be a safe rider Don't think the CBT took too long Always assumes others haven't seen them Doesn't get involved in informal races Do basic vehicle checks

Table 11 - Group 3: Delivery Riders

Group 3	The members of these clusters have all been, or are currently, delivery riders. Whilst the clusters are small, there are distinctions in terms of PPE wearing and support from their employers.
Percentage of respondents	6%
Media preferences	Twitter, Snapchat, WhatsApp, LinkedIn, Facebook , Instagram, TikTok (Cluster 12)
Sources of riding information	Online magazine, search engine, online forum, friend/sibling, social media, motorcycle trainer/retailer (Cluster 11)
Features in a riding app	Route planning, safety tips, advice on further training, protective equipment, wouldn't use app (Clusters 4 & 11)
Cluster 1	**Former Delivery Rider**
Percentage of respondents	2%
Characteristics	Some females Have always been interested in motorbikes CBT only Geared up to 125cc Ride for many different purposes Not interested in getting a car Sometimes wears jeans Sometimes wears an everyday jacket Bought their motorcycle new from a retailer Bought their helmet new from a retailer Always uses chin strap Would wear a damaged or dropped helmet Got helmet fitment advice Was guided by SHARP rating Would like pre-learning for the CBT and hazard perception and a theory test as part of CBT Don't think the CBT gave them the skills to be a safe rider Don't think the CBT took too long Confident on residential roads Think they have enough knowledge to ride confidently Always assumes others haven't seen them Gets intimidated when not given enough space Do basic vehicle checks

	Feels safe filtering Never close follows Think young driver crashes are due to riding too fast, bad weather, inexperience, riding tired, poor motorcycle maintenance, and poor road maintenance No longer a deliver rider Delivered takeaways Didn't get proper training and wouldn't get further training after an incident Did get PPE Didn't get safety guidance and didn't think the company took safety seriously
Cluster 4	**Car Aspirant**
Percentage of respondents	1%
Characteristics	19-24 years CBT and two-part test Ride a Twist n go or geared bike up to 125cc Rides for multiple purposes Aspires to car ownership but can't afford one Rides as part of work Public transport is too slow or expensive Doesn't wear PPE and sometimes wears jeans Bought their bike second hand, either from friends or a retailer Bought their helmet second hand from friends Bought their helmet based on looks Would wear a dropped helmet Was guided by SHARP rating Would like CBT over several days Would like hazard perception as part of CBT Would like post-CBT support Doesn't think CBT gave them the skills to be a safe rider Doesn't feel confident on faster roads Gets intimidated when not given enough space Doesn't get involved in informal races Does close follow Thinks the reasons for young rider crashes are riding too fast, inexperience, other motorcyclists, poor motorcycle maintenance, poor road maintenance, traffic congestion, other vehicles Delivers takeaways, groceries, specialised goods Did get PPE and access to welfare services Did get safety guidance and thinks their company takes safety seriously
Cluster 8	**Worried Gig Rider**
Percentage of respondents	0.4%
Characteristics	Have always been interested in bikes CBT and two-part test MC over 125cc Rides for shopping, errands, pleasure, commuting, work Wears PPE Bought their bike second hand from a retailer Bought their helmet new from retailer Wouldn't use a damaged helmet Chose helmet based on looks Aware of SHARP ratings Got advice on helmet fitment Would wear a dropped helmet Would like hazard perception and theory test as part of CBT Would like post-CBT support Doesn't think CBT gave them the skills to be a safe rider

	Doesn't think CBT took too long Always assumes others haven't seen them Gets involved in informal races Feels safe filtering Never close follows Thinks all of the reasons contribute to young rider crashes Delivers takeaways Didn't get proper training and wouldn't get further training after an incident Didn't get PPE and doesn't get access to welfare services Didn't get safety guidance
Cluster 12	**Supportive Employer**
Percentage of respondents	1%
Characteristics	Has always been interested in bikes Ridden off-road for years CBT and two-part test Rides for shopping, errands, delivery rider, commuting Not interested in getting a car Sometimes wears PPE Bought bike new from retailer or online Bought helmet new from retailer Chose helmet based on looks Aware of SHARP rating Got advice on fitment Thinks CBT gave them the skills to be a safe rider Doesn't think CBT took too long Confident on country roads Reports safe riding behaviours Delivers takeaways, groceries or specialised goods Did get support from employer
Cluster 11	**PPE is not for me**
Percentage of respondents	1%
	Has always been interested in bikes CBT only Geared bike up to 125cc Rides for errands, pleasure and work Rides as a delivery rider, because there is no public transport, and needs to get to work Doesn't wear PPE Sometimes wears jeans Bought bike new from retailer Wouldn't use a damaged helmet Would like post-CBT support Thinks CBT gave them the skills to be a safe rider Doesn't think CBT took too long Confident in towns and on residential roads Never close follows Thinks all of the reasons contribute to young rider crashes Delivers takeaways Did get support from employer

FOCUS GROUPS & INTERVIEWS

Several virtual focus groups and mini-interviews were held with participants of the questionnaire. Microsoft Teams was used for the sessions. As with the previous project, these interactions provided opportunities to follow up on issues raised, and trends found within, the answers given to the surveys (See **Young Rider Online Questionnaire**).

These sessions were designed to draw out qualitative themes and delve deeper into the thoughts and experiences of young riders. A number of questions were similar to those asked as part of interviews held for the previous research project; some of which were grounded in the survey questions around influences, attitudes, beliefs, the licensing process, and reflections on peers' experiences of safety as young riders. In addition, this was an opportunity to ask about their experiences of riding since the pandemic and the implications of this on their travel, as well as riding for work or similar commercial activities.

The target group once again proved difficult to engage with, with high rates of dropouts for the focus groups organised between June and August 2025. Whilst over twelve different dates were initially offered to participants who indicated they would be happy to engage in a follow-up discussion, very low numbers of respondents actually turned up (despite high levels of registration). Whilst three of these hour-long focus groups generated insightful discussions amongst the small number of attendees, the decision was made to change the format to try to increase participation. Instead, more informal 'mini-interviews' were proposed by the project team, comprising of shorter 20-minute discussions. This approach managed to secure a handful of additional discussions with survey participants about their experiences as young riders (total sample n = 11).

Before starting the discussion, the aims, objectives, and purpose of the research were discussed, as well as gaining verbal consent from the participants. Participants were made aware that their names or other personal identifiers would not be included in the research. It was also made clear that anything they said would be kept strictly confidential and would only be used to elicit themes and talking points. The discussions were audio recorded and transcribed where permission was granted. The key points raised by participants in these discussions have been grouped according to overarching themes containing closely related sentiments and reflections.

Influences and motorcycle use

When asked about what influenced them to get into motorcycling, those who answered came under one of three groups:

1. Riding as a social activity
2. Riding as a convenience
3. Riding before getting a car licence.

The first group was comprised of those for whom motorcycle use is an inherently social activity, often with friends or as part of social group. Interestingly, this group were more likely to say that they valued motorcycle clubs or similar groups that they were members of.

The second group were those for whom motorcycling was more of a convenience, often for work, college, or similar practical journeys in cities (London and Manchester were mentioned). This group expressed a reluctance towards using public transport or car use, citing the comparable ease, convenience and affordability of motorcycle use compared these other options for their day-to-day travel. Key sentiments here were also that riding a motorcycle as opposed to the alternatives was a

"timesaving" exercise and a "cool" thing to do, with insurance premiums for cars citied as a financial reason why motorcycling was more appealing whilst commuting to college work.

The third group, which only comprised of two of the participants, also owned a car or were riding on the route to acquiring their full car driver's license.

An overarching theme from all three groups (when asked about what influenced them to get into motorcycling and travel this way regularly), was the sense of fun, independence and thrill of riding; all things that were perceived to be lacking for them in other modes of transport. Social riding for fun, often in a group, was a very common answer. On this observation, a number of participants felt that learning from those they went out with socially on motorcycle journeys was valuable, especially looking to those with more experience than themselves. The 'Cost-of-Living Crisis' post-pandemic was also cited consistently as an influence in taking up motorcycling, as was congestion and parking costs associated with other types of vehicles.

Licencing and Accreditation

Participants offered several thoughts on motorcycle licensing, often around CBT or acquisition of follow-up licenses to ride more powerful machines ('A' type licenses). A small number of participants did express their interest in simply sticking with machines up 125cc, with little appetite for acquiring the relevant licenses to ride larger motorcycles. Opinions on CBT were largely positive, with sentiments put forward that it was enjoyable and comprehensive as a gateway to riding and further motorcycle licenses. Conversely, several of the respondents noted improvements they felt would improve CBT. Firstly, there was a feeling that "there was not much to it" in terms of the content and difficulty of CBT, with the view put forward on multiple occasions that CBT should include more "elements". Suggestions included more information and guidance on pre-empting risk; the role of speed; dealing with different road environments and conditions and surfaces whilst out riding; as well communication of the consequences for not riding safely. Notably, young male participants noted on three occasions that "shocking" or "sobering" messages or media content should be used as a communications point more generally, although not anything "too graphic" or "distressing".

Participants also put forward a number of salient points around progression to more advanced licenses, alongside their experiences with non-mandatory courses or accreditations. Two of the participants noted that there is an attitude amongst young riders that once they have the opportunity to undertake advanced licenses to ride more powerful machines, that a "125cc attitude" can take hold whereby riders feel they can ride anything (owing to a sense of 'invincibility'). On the specifics of license progression to these higher 'A' licenses, participants felt that safety advice and consistent messaging on "tips and tricks" is needed. For some this was connected to that same sense of needing to communicate risk and responsibility throughout the licensing process, starting with CBT and moving through the 'A' licenses, whether around behaviour or the use of personal protective equipment (PPE). A handful of the participants stated that they had been on, or heard of, BikeSafe and IAM Roadsmart courses either when prompted, or as an offshoot to discussions about courses they had undertaken themselves.

Experience, Confidence, and Risk

A core theme that emerged in the discussions centred on the relationship between experience, confidence, and risk; especially through the lens of rider competence, as young riders acquire more on-road riding time. There was, across the discussions, a sense that the freedom and independence of "being out on the open road" made the feelings of vulnerability and exposure to risk exciting for some of the participants. There was even acknowledgement of the "risk-taking personality" amongst young riders, and that "overconfidence" was a problem amongst their peers. A nuanced point was

made that whilst training was key to competency, overconfidence was something that still accrued naturally over time for many young riders as they acquired more experience and skills.

Whilst there was mention that those with experience are a valuable source of information, others felt that you "just had to get out there" in order to learn how to be safe. Participants who had been involved in a collision whilst out riding said that the incident had a tangible negative impact on their confidence. A related point put forward was that there was "safety in numbers" when it came to riding in a group with other motorcyclists, with some noting that this aligned with the sense of "community spirit" and "camaraderie" amongst motorcyclists. On discussions about risk, there was a clear divide between the participants: those who were proud of their accredited protective gear that they said they always wore whilst riding; and those who admitted to regularly not wearing protective gear and visible clothing. This was a notable point of cognitive dissonance with almost universal recognition that protective gear and making yourself visible was critical to safe riding.

Support and Trusted Information

A key talking point in the discussions centred on who young riders go to for support and what constitutes a trusted source of information for motorcycle safety and PPE advice. An overarching point of agreement amongst participants was that purchasing PPE online was a "minefield" and that it was better if you knew of an "in-person supplier" locally who sold accredited gear that met certified standards of safety and was on hand to discuss motorcycle safety issues. Interestingly, a couple of participants pushed back against the idea that "family and friends" were always a trusted source of information, citing that friends with riding experience were valuable but that family members were more likely to be critical of them using a motorcycle regularly in the first place. Whilst many participants were clearly advocates for the accredited PPE they had; others were not aware of any accredited suppliers. Instagram and TikTok were cited as popular platforms where there were an array of materials and guidance available, with common recognition that online content was "questionable" when it came to safety advice.

Learning what constitutes safe motorcycling from fellow riders, especially those who are older and "have been there and done that" was mentioned alongside the view (put forward by a couple of participants), that public sector individuals and organisations "who deal with the consequences" of motorcycle collisions are among the best placed to deliver training and education. Local Fire and Rescue Services were singled out as particularly credible in these discussions. Similar sentiments were put forward around police administration of BikeSafe courses, which was identified (without prompting) as a trusted source of training by a couple of participants who had attended one of these courses. There was also reference to international media (adverts and campaigns) that participants felt were effective publicity. Media from Australia was mentioned, specifically adverts that "made it clear" what the consequences of motorcycle collisions were. Multiple participants noted in relation to media representation that there was a risk of creating "negative stereotypes" of motorcyclists, when a "bigger issue" was the role of other larger vehicles and their drivers, whose behaviour was seen to be a risk to young riders.

Young Riders and the Gig Economy

This exercise also sought to gather any insight on young rider risk for those who use their powered two-wheeler in the gig economy (temporary courier or delivery service work without permanent employment contracts). Whilst all but one of the participants said they had not worked in the gig economy for motorcycle courier or delivery type work, there was nonetheless a sense that these riders were at an increased risk due to their roles and the "pressure" to deliver goods in a timely manner. Those participants based in cities stated anecdotally that they had seen delivery riders engage in "riskier" behaviour than they themselves would, with some suggestion that these opinions are based

on having knowledge of friend who worked in this area. This exercise confirmed that whilst young riders in the gig economy may be a hard-to-reach segment, there is a prevailing view that this type of work engenders additional risk for those who undertake it. Further research on this is considered in **Gig Economy Riders – A Growing Challenge.**

ACTIVITIES REVIEW

A previous report for NYRF exploring the safety of young riders (Kaur, Fosdick, & Smith, 2020) set out 17 evidence-based recommendations designed to understand young rider collision issues and to support the development of effective interventions. Each of these recommendations has been considered within the framework of the Safe System. They are categorised under the following themes:

- overall approach
- engagement
- training
- websites and apps
- campaigns
- further research.

The following sections takes each of the 17 recommendations in turn and assesses how the NYRF has used the recommendation in its work, using information supplied by the Forum.

OVERALL APPROACH

For NYRF members and other stakeholders to use this report as a guide when creating interventions targeting young riders, working with colleagues to drill down into their local young rider collision issues.

Since its publication, the report has been the subject of detailed discussion at NYRF meetings. The workstreams were prioritised, and actions were taken accordingly. All NYRF members were involved in the implementation of the recommendations. A working group was established to oversee the progress of each recommendation, and the working document was updated with each activity resulting from it. Additionally, in March 2021, the report was launched nationally at the PTW Riders Online event, hosted by Road Safety GB from 8th to 26th March 2021[9] and made publicly available on the Shiny Side Up website[10].

Overall, the report is the outcome of one of the first research projects focused on young motorcyclists, and it has been reported that many organisations have used its conclusions to guide their activities in their local areas. The report also has been used by NYRF facilitators, along with key stakeholders, as a consistent piece of research evidence on which NYRF base their activities, grant applications, and future initiatives.

When considering all these activities, it can be observed that the first recommendation in the project has been effectively implemented. Regularly addressing the recommendations in the report; using them to guide activities; informing other organisations and individuals about the report to broaden its impact; and breaking the report into smaller sections to increase the likelihood of it being read in full; are actions that have contributed to the effective delivery of the recommendations. NYRF has a diverse range of members including Department for Transport, Driver and Vehicle Standards Agency,

[9] https://roadsafetygb.org.uk/ptwevent/programme/
[10] https://shinysideup.co.uk/downloads/Understanding-young-riders-NYRF.pdf

Motorcycle Action Group, Mental Health Motorbike, British Motorcyclists Federation, National Highways and many road safety partnerships, local authorities, police forces and fire and rescue services.

Consider that there is diversity between young riders, with their interests, motivations, experience, behaviour and attitudes differing. Interventions will need to be tailored according to the type of rider who is the target.

In line with this recommendation, 10 infographics were created based on findings from the research report. These infographics were delivered through social media campaigns over several weeks, with individual graphics being released weekly according to a pre-planned schedule. The campaign was launched with a press release that explained its objectives and provided additional details. A dedicated campaign page was also created on the website, showcasing the infographics, key messages, and further information on each topic.

The individual infographics were shared on social media platforms with accompanying taglines and distributed to forum members and key stakeholders for further dissemination and promotion. The campaigns covered a variety of topics, including weather and road conditions (e.g., icy or wet roads, low sun, and darkness); seasonal events (such as weddings and festivals); and motorcycle-related subjects like personal protective equipment (PPE), bike maintenance, and riding while impaired. The series of infographics was also uploaded to the NYRF section of the website, allowing other organisations to access and use them freely. Many road safety organisations across the UK took advantage of this resource. They were widely adopted and shared by various organisations, amplifying their impact.

Various sources were used alongside infographics to deliver the recommendation, ensuring outreach to young riders from diverse backgrounds — including students, workers, those using motorcycles for different purposes (e.g., leisure, sport), and individuals from economically disadvantaged areas. Social media platforms were used to engage young riders who reflected the demographic diversity of NYRF target audiences.

At the conclusion of the campaign, an evaluation report was created to reveal its impact. This report detailed the campaign's reach, including metrics such as total views, through-plays, website visits, and the performance of individual infographics. This allowed the team to identify which topics resonated most and learn which content was more popular. Overall, the evaluation found that this approach was an effective and low-cost way to engage young riders. The research also provided evidence for targeting specific topics and age groups (16-24), ensuring the diversity of young riders was addressed in line with the recommendation.

By tailoring the infographics based on the findings of the research report and disseminating them through multiple channels, the campaign effectively reached its target audience while providing valuable materials for use by other organisations.

To target the youngest segments of young riders (16 to 21 years old) as these are the motorcyclists most at risk of collision involvement. Furthermore, the segmentation, surveys and interviews suggest that these are the riders requiring the most support. They have less experience and have undergone less training, providing an opportunity for engagement and assistance before poor habits or attitudes are developed.

As part of this initiative, the "Ready to Ride Film" was created for young students who are already motorcyclists or considering becoming one, within the Young Drivers package. This educational film

lasts 40 minutes, divided into sections, and is interactive, featuring "challenges" and Q&A audience sessions led by young people for young riders in schools, colleges, and other educational institutions. The content of this film was developed by the Education Working Group, which includes ROSPA, DVSA, approved motorcycle instructors, and Biker Down representatives. Additionally, the film was pilot tested in schools and colleges in regions such as Kent, Sussex, and Warwickshire, and feedback was gathered. The film was launched at the National Road Safety Conference in 2023. To further reach young riders with the message, several segments of the film were shared as short clips on social media.

The challenges in reaching young riders through motorcycle training and interventions were discussed, specifically the difficulty of getting the resource into educational institutions and the scarcity of motorcycle instructors. Since young people's primary interest tends to be in driving cars, organising relevant training and reaching young people interested in motorcycles has proven difficult.

Despite these challenges, the recommendation was carefully delivered through the creation of an educational content and a film, designed with the target audience in mind and developed in collaboration with various professionals.

ENGAGEMENT

Identify ways in which to engage with gig economy and delivery riders, who may not identify as motorcyclists. Working with businesses may be the more effective method of engagement.

To address recommendation, a series of Highway Code films was created, depicting various urban street scenes and highlighting highway code rules, regulations, and Road Traffic Law. Before producing these films, a survey was conducted with compulsory basic training (CBT) motorcycle instructors and students to identify knowledge gaps from their perspectives. Several key issues were highlighted, including a lack of understanding of the Highway Code (particularly the 'hierarchy of road users'); poor awareness of traffic priority; English being a second language for some students; unfamiliarity with urban road layouts; and limited knowledge of Road Traffic Law.

Based on these findings, six films were developed covering topics such as speed limits, pedestrian crossings and priority, traffic signals, junctions, right turns, and keep-left bollards. These films use short, fast, and simple animations set to age-appropriate music, delivering clear and impactful messaging.

The films were pre-launched at the National Road Safety Conference on November 2024 and were released nationally at the end of January, coinciding with the RSGB Motorcycle Conference on February 13, 2025, in Birmingham. In addition to their national release, the films were shared on social media platforms and featured on the New Rider Hub. They included additional informational notes explaining the Highway Code rules, regulations, and RTA law illustrated in the films. There are plans to evaluate the films, measuring knowledge of traffic law and offences; and intentions to change their attitudes and behaviour in relation to complying with traffic laws (such as traffic signals and speed limits). It will also explore whether the films encouraged them to access further information on traffic laws, such as looking at the Highway Code.

The films are getting good views on TikTok and other partnerships are re-sharing them, with the Highway Code film page on the New Rider Hub one of the most viewed pages this year.

Beyond this example, previous initiatives have also been undertaken specifically within the GIG economy. For instance, collaborations with 'Just Eat' and 'Ride To' have helped promote the DVSA RideFree resource through rider hubs and interactive training. Additionally, engagement has extended to use other evidence bases and interventions from Transport for London and the Metropolitan Police.

From this perspective, valuable initiatives have been developed to engage with GIG economy workers and delivery riders. These efforts highlight the importance of targeted engagement strategies within this sector, ensuring road safety initiatives effectively reach and support this group.

Identify effective ways to engage with young riders who are using a motorcycle for the first time to commute to school, college or an apprenticeship. Whilst working with educational establishments is one option, the numbers of young riders per institution may be small.

The Ready to Ride film also aligns with this recommendation in the report, which focuses on identifying effective ways to engage young riders who are using a motorcycle for the first time. Besides that, another initiative discussed under this recommendation is National Young Rider Day. This event was organised twice, on 27th June 2023, and 1st October 2024. NYRF Day was promoted across the Road Safety industry through NYRF members and key stakeholders such as Road Safety GB, DVSA, Department for Transport (DfT), National Police Chiefs' Council (NPCC), National Fire Chiefs Council (NFCC), and National Highways. The webinar was open for registration prior to the event and heavily promoted across various platforms and media channels to reach as many young riders as possible. A comprehensive evaluation was conducted at the end of the event. This National Day and webinar involved a wide range of motorcycle and youth charities and organisations, industry experts, and the young riders themselves. However, the event organisers emphasised that any young rider event requires much more effort compared to events for young drivers. They also highlighted that such events could be negatively impacted by weather conditions.

Look to accessing, and engaging with, young riders on social media platforms such as Instagram, Snapchat and TikTok.

To achieve this, a dedicated social media presence and New Rider Hub were created under the contract with Stennik Advertising Ltd, focusing on reaching young riders via platforms like Instagram. Additionally, key stakeholders supported this initiative by sharing posts. As part of this effort, a NYRF Instagram account was created, utilising both paid advertising and organic posts to reach target audiences. The NYRF YouTube channel was also refreshed, and recorded webinar presentations were uploaded to YouTube. For social media campaigns, snippets from the "Ready to Ride" series were shared on Instagram with interactive content to boost engagement.

The effectiveness of these initiatives is reported by Stennik Advertising Ltd. These reports include data on views, visitors, engagements, through-plays, and other relevant metrics. Additionally, engagement numbers can be compared with those of other organisations to identify which types of social media campaigns are most successful. Overall, it can be said that the necessary efforts have been made regarding this recommendation. However, to further increase follower count and engagement, additional actions could be considered.

TRAINING

Liaise with DVSA on the findings and discuss the support surrounding CBT that young riders would like.

Work collaboratively with trainers to access and engage with this group as young riders tend to approach their trainers for support. This could involve encouraging training bodies to deliver the DVSA's RideFree scheme and promoting the scheme to increase participation amongst young riders.

There were two recommendations which related to CBT training. One was related to working collaboratively with trainers to reach young riders and engage them in the process of promoting their safety. In this context, it was emphasised that encouraging training institutions to offer the DVSA's

Ridefree program for CBT students and promoting the programme could help increase participation among young riders. The DVSA is the approved body for all CBT instructors, and the approved CBT instructors are the only body that can teach the DVSA syllabus to young motorcyclists and issue their CBT certificate for them to ride their first motorcycle. The other recommendation focused on liaising with the DVSA to discuss the findings and exchange ideas about the support young riders would like during the CBT process. By identifying their expectations and challenges, the aim is to make the CBT process more accessible and effective.

As part of these recommendations, it was important to assess whether promoting RideFree and convincing more people to complete it was successful. To achieve this, meetings were initially held with the DVSA to discuss the resource and determine how many young riders had registered and completed it. A tick box was added to the DVSA resource to allow riders who found RideFree through NYRF to log it, enabling the measurement of success in increasing the number of young riders finding and logging into RideFree. RideFree is an existing DVSA online resource for CBT students that is not mandatory but, in the absence of a theory test for young motorcycle riders as part of their CBT syllabus, is useful and contains sections on hazard perception, the Highway Code, and PPE.

A dedicated page was then created within the New Rider Hub with a link to the RideFree resource, and an infographic was designed to promote RideFree on social media. After this stage, Ridefree was included in many promotional activities, including the NYRF Day Webinars. Data from the DVSA shows that more young riders were successfully encouraged to complete RideFree.

In addition to this initiative, a NYRF flyer was produced, which could be displayed or handed out at public events across the country by Mental Health Motorbike Charity and MAG representatives. Furthermore, the RideFree and NYRF New Rider Hub logos were added to the Project Apex motorcycle simulator, allowing young riders using the simulator to be directed to NYRF/RideFree. Finally, the new riders' survey conducted as part of this project repeats questions about the CBT course and further support for riders after their CBT.

The intervention leaders mentioned that reaching young riders directly and encouraging them to log into a somewhat clunky public service resource and complete RideFree posed a challenge. To address this, they worked with DVSA and Ride To, a commercial motorcycle company, to improve the user experience. These efforts resulted in a number of improvements that enhanced the performance of RideFree.

Creating online theory-based and hazard perception resources and/or presentation on 'what could go wrong' to assist those new to riding.

Another recommendation that could be considered within the scope of the RideFree promotion and DVSA partnership intervention is the development of online theory-based and hazard perception resources for beginners, as well as presentations on what could go wrong while riding. In line with this objective, another project being implemented is "The View from the Saddle," a collaboration between the Road Safety Trust, DVSA, Esitu Solutions, Nottingham Trent University, NYRF members, and the Road Safety GB network. The project aims to produce a high-quality, motorcycle-specific hazard perception test tailored to the needs of riders.

As part of the project, a series of short hazard films targeting young riders have been produced (and, at the time of writing, will be released shortly). These films are shot in urban areas with low-speed limits (20/30 mph) using 125cc motorcycles, an approach that has not been undertaken before. The NYRF Research Report highlights that young riders are most likely to be involved in collisions in these environments. By producing new films that depict up-to-date hazards identified by industry experts,

the project seeks to enhance young riders' awareness and knowledge. The films are planned to be distributed via NYRF's social media channels and website. Additionally, some or all of the films may be integrated into a new DVSA resource, potentially forming part of a mandatory theory test for young and new riders. These films will also be shared with NYRF members, who have the capacity to reach a large number of young riders through their networks. Throughout the project, organisers have highlighted the challenges of filming motorcycles in live traffic conditions. They have also emphasised the potential for unintended hazards to arise, which need to be carefully managed during production.

Provide support on how to filter appropriately

One of the key recommendations made was to provide support on how to filter appropriately. Filtering is not part of the CBT syllabus, meaning young riders are not taught how to filter on their motorcycles. This is because filtering is considered a risky manoeuvre, and young riders generally lack the necessary knowledge, experience, and skills to do it safely. However, the NYRF Research Report found that young riders do engage in filtering and that it is a common factor in collisions they are involved in. As a result, the report recommended that NYRF provide support on this topic. To address this, the NYRF/MAG film was produced, depicting a young rider on a small motorcycle commuting to work. The rider interacts positively and courteously with other road users while filtering through slow-moving traffic.

Furthermore, SSUP's Know the Dangers films, which highlight filtering and Sorry Mate I Didn't See You (SMIDSY)-type crash scenarios in urban environments, were incorporated into social media campaigns and various webinars. The NYRF/MAG film was officially released on a designated day, accompanied by a press release explaining its core message and objectives. It was then uploaded to the NYRF website, where it became available for viewing and downloading. While NYRF members acknowledge that direct training on filtering is not part of their role, they emphasise the importance of providing positive imagery and awareness to support young riders in understanding this aspect of riding safely.

WEBSITES AND APPS

The creation a website or app aimed at young riders with key and accurate information regarding the different tests and what you can and cannot do and lots of quick videos on maintenance would be extremely helpful.

The app could include route planning, safe riding tips, and information on training and protective clothing

In line with these recommendations, research was conducted to determine whether a new website or an app would be the most suitable resource. After careful consideration, it was decided that an independent new rider website (https://newriderhub.net/) would be the best option and could serve as the foundation for NYRF communications.

The New Rider Hub was launched on April 25, 2022, and since then, new campaigns have been introduced, and existing ones have been refreshed to increase followers, visits, and page engagement. Additionally, in line with the recommendations, this website contains safe riding information and articles on PPE. Social media platforms have been actively used for campaigns, which has helped drive traffic to the website. Website and social media activity is measured quarterly, and reports on performance are generated. To promote the launch of the new website, a digital and printed promotional flyer was designed and widely distributed to riders, road safety partnerships, and other stakeholders.

The website and social media platforms are regularly updated with fresh content from sources such as Tyre Safe**,** NPCC**,** and road safety partnerships. As the NYRF website contains key information, it

serves as a channel of communication for riders and other organisations. However, it has been emphasised that with additional financial resources, the website could be further improved.

CAMPAIGNS

Focus on PPE as young riders admitted to not always wearing it all – perhaps as a campaign showing the consequences of not wearing PPE (although not based on fear appeal)

Highlighting the importance of their visibility and bike light maintenance, alongside adopting good road positioning and approach speeds will help reduce their risk at night-time and at junctions.

The New Rider Hub website provides detailed information on these recommendations. Additionally, infographics on PPE; the risks of not wearing it (or not wearing it properly); and junction safety have been shared as part of NYRF's latest social media campaign. Another initiative addressing these recommendations is the Young Rider Webinar, delivered by NYRF members, covering key topics such as obtaining a license, PPE, bike maintenance, and understanding collision dangers through engaging presentations. The previously mentioned Ready to Ride film also includes dedicated sections covering PPE and junction safety. Finally, as part of the series of Highway Code films that depict various urban street scenarios while highlighting traffic regulations and road laws, one film focuses specifically on approaching junctions, while another highlights how to make a right turn at a junction.

Investigate which online forums they use to access information, exploring partnerships and cross-referencing of materials and resources.

One of the key recommendations was to investigate which online forums young riders use to access information, explore potential partnerships, and cross-reference materials and resources. A thorough investigation was conducted, but no dedicated online platform for young riders was found. As a result, the "Ask Andy" feature was introduced as part of the New Rider Hub, allowing young riders to ask questions about any aspect of motorcycle riding; incidents they had experienced; or any concerns they had. NYRF members, including the DVSA and Police, agreed to respond to these questions to ensure consistent and professional answers. The NYRF facilitator monitored the emails generated by the feature, ensuring they were acknowledged and replied to in a timely manner.

This initiative was inspired by the Young Rider Survey in the NYRF Research Report, where young riders highlighted their first CBT trainer as their primary source of support and mentorship in their riding journey. However, the feature did not attract many young riders. Instead, it drew more mature and experienced riders, who asked complex and questions of a subjective nature, such as filtering on solid white lines. These enquiries required time-consuming responses and often led to prolonged email exchanges, which were later copied and shared on social media—further fuelling debates.

FURTHER RESEARCH

Undertake exploratory work to understand where motorcycles are purchased from, given a third said they bought theirs second hand and 12% online. Advice on motorcycle purchase could be included in an app or website.

One of the recommendations was to conduct research on where riders purchase their motorcycles. It was suggested that advice on motorcycle purchasing could be incorporated into an app or website. As part of this recommendation, NYRF reached out to some local retailers but received little response. However, advice on buying the first motorcycle was included on the New Rider Hub and the education film. Additionally, a NYRF digital and paper flyer was designed, which could be distributed to retail outlets for display, promoting both NYRF and the New Rider Hub.

This recommendation was given long-term priority and remains a work in progress. NYRF has established contact with the National Retail Motorcycle Federation and will collaborate with them in the future. Progress continues through the website and NYRF meetings.

A key consideration in this discussion was the limited influence a forum like NYRF can have on riders who choose to buy their motorcycles online or second-hand from friends. However, regardless of where a motorcycle is purchased, emphasis can be placed on the importance of bike checks and maintenance. Additionally, collaboration with law enforcement was highlighted as a means to address the issue of low-quality or faulty motorcycles being purchased online.

Undertake further research to explore why 44% of survey respondents thought that drink and drugs were a factor in young rider collisions and whether this is due to their own behaviour, the observed behaviour of others or based on other information (or misinformation).

Impaired riding is a key theme for NYRF. It was highlighted in the previous report, and through collaboration with police forces across the country. NYRF have identified that recreational drug habits formed during the pandemic lockdown have persisted among young male riders. All partners recognise this as a critical issue and incorporating it into resources is essential to reducing young rider crashes involving impairment.

Additionally, infographics on impairment have been developed, focusing on summer events, football, and the Christmas period. To enhance messaging, NYRF worked with Nottinghamshire Police to capture photographs of young riders undergoing breath and drug tests. These impaired riding and breath and drug testing infographics have been shared with the public and used in national campaigns, in collaboration with police forces, the National Roads Policing Operations, and Intelligence (NRPOII).

Furthermore, the Ready to Ride campaign includes a dedicated section covering impairment-related topics, reinforcing the importance of raising awareness among young riders.

CONCLUSIONS

Through analysing national collision data; conducting online surveys and semi-structured interviews with young motorcyclists; and segmenting the data, we have gained interesting insights into young riders. As with the previous work, it has become very clear that there is no such thing as a 'young rider'. Instead, there are a range of types of individuals who choose to ride a motorcycle for a range of reasons; who have different experience levels; and who have different attitudes towards motorcycling and behave in different ways. For road safety practitioners, this is important. Interventions will need to be tailored to specific types of young rider, thinking about their motivations, attitudes and needs.

This group continues to be an at-risk cohort in the casualty data. Whilst there have been reductions in young rider casualty numbers in recent years, the years analysed contained the Covid period and young motorcyclists remain over-represented compared to young car drivers, especially when traffic is taken into account.

Many of the collision circumstances identified previously continue to feature, with similar profiles of young rider casualties involved in collisions in similar ways. The messages emphasised by NYRF since the previous report continue to be relevant: focusing on urban collisions, conflicts with cars, visibility at junctions, inexperience, and protective clothing. The backgrounds of those involved indicate that budgets might be tight and this could influence young riders' attitudes towards training and protective equipment.

The responses to the survey and interviews align well to the collision analysis. Those who participated in this research are aware of their vulnerabilities as motorcyclists, displaying good knowledge about the importance of helmet choice, maintenance and wearing it correctly. Survey respondents reported riding on the assumption that other road users had not seen them and that they feel intimated when not given enough space.

In the qualitative discussions, similar themes emerged to last time. This covered experience, confidence, and risk, with a feeling that overconfidence and risk-taking attitudes can increase vulnerability, alongside levels of inexperience.

Whilst most survey participants purchased their helmet new, rather than second-hand, only half were aware of SHARP ratings. There was increase in the wearing of PPE, compared with 2020, although those in the interviews felt that purchasing equipment online was challenging, as it was difficult to identify the safest equipment.

Like last time, around half of the survey respondents believed that the CBT did not give them all the skills they need to be a safe rider and believed that including a hazard perception test and pre-learning before the CBT would have helped them to be more prepared. In the interviews, like last time, there were mixed feelings about whether CBT should be enhanced with many finding it a positive experience and a good gateway to riding. However, there were several who felt that additional elements could be added to CBT, particularly about pre-empting risk; dealing with different road environments and conditions; speed; and the consequences of risky riding.

This report brings together collision analysis with insights from young motorcyclists themselves. There are clear opportunities to combine the findings from these different sources to provide the support they would like, and the support they need, in order to reduce the risks identified in the collision analysis.

LESSONS LEARNED

It is clear that this group remains a difficult cohort to engage with. This is true for engaging in research and communicating road safety messages to them. It means that the insights from the survey and focus groups may not be representative of the wider young rider community (given that there is no such thing as a young rider community, given the reasons why they use this form of transport). The ones who engaged with this process are most likely to view themselves as motorcyclists and have been interested in riding for a long time. Many have family members interested in motorcycling. This will influence their attitudes to safety compared to those who don't identify as motorcyclists and who would not have engaged in this research.

As a minority group, it is difficult to connect with young riders in places like schools and colleges, in the same ways as road safety professionals do with novice drivers. Furthermore, the diversity of young riders means that different approaches will be required to get the right messages to the right individuals. The gig economy cohort is particularly difficult to connect with and the best route to influencing their safety may be through their employers, or through regional or Government at-work policies.

Despite these challenges, it is clear that the NYRF continues to use an evidence-based approach in designing and delivering interventions and have recognised that a one-size-fits-all solution is not appropriate. Understanding the problem fully; identifying and locating the target audience; and tailoring the message all remain the most important lessons learned. Achieving economies of scale and amplifying efforts through a coordinated approach, through organisations like NYRF, are also likely to be the most effective ways of tackling young rider risk.

RECOMMENDATIONS

Ten of the previous 17 recommendations are still relevant:

- For NYRF members and other stakeholders to use this report as a guide when creating interventions targeting young riders, working with colleagues to drill down into their local young rider collision issues.
- To target the youngest segments of young riders (16 to 21 years old) as these are the motorcyclists most at risk of collision involvement. Furthermore, the segmentation, surveys and interviews suggest that these are the riders requiring the most support. They have less experience and have undergone less training, providing an opportunity for engagement and assistance before poor habits or attitudes are developed.
- Identify effective ways to engage with young riders who are using a motorcycle for the first time to commute to school, college or an apprenticeship. Whilst working with educational establishments is one option, the numbers of young riders per institution may be small.
- Liaise with DVSA on the findings and discuss the support surrounding CBT that young riders would like.
- Highlighting the importance of their visibility and bike light maintenance, alongside adopting good road positioning and approach speeds will help reduce their risk at night-time and at junctions.
- Look to accessing, and engaging with, young riders on social media platforms such as Instagram, Snapchat and TikTok.
- Work collaboratively with trainers to access and engage with this group as young riders tend to approach their trainers for support. This could involve encouraging training bodies to

deliver the DVSA's RideFree scheme and promoting the scheme to increase participation amongst young riders.

- Provide support on how to filter appropriately.
- Investigate which online forums they use to access information, exploring partnerships and cross-referencing of materials and resources.
- Consider that there is diversity between young riders, with their interests, motivations, experience, behaviour and attitudes differing. Interventions will need to be tailored according to the type of rider who is the target.

An additional three recommendations focus on protective equipment:

- Work with DfT's SHARP rating initiative to promote the helmet assessment and rating programme
- Provide advice on how to find good quality PPE, perhaps providing a guide as to what to look out for and what the minimum equipment used should be
- Continue to enhance the New Rider Hub and explore the potential of an app could include route planning, safe riding tips, and information on training and protective clothing.

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APPENDIX A: SELECTED ACORN GROUPS

16 to 18 Under Acorn Groups		
M **Family Renters**	**Q** **Limited Budgets**	**S** **Cash-strapped Families**
These are younger working families with average incomes, living in socially rented houses. Key attributes are: • Terraced or semi-detached houses • Renting • Presence of children • Skilled manual worker • Income support	These are young families and single parents with a high proportion socially renting their semi-detached home. Key attributes are: • Semi-detached houses • Social renting • 2+ children • Single parent • High unemployment	These are families and single parents with young children in socially rented houses, often claiming benefits Key attributes are: • Social renting • Presence of children • 3+ children • Single parent • High unemployment • Very low disposable income • Low value properties

19 to 21 Under Acorn Groups		
S **Cash-strapped Families**	**P** **Tenant Living**	**H** **Metropolitan Surroundings**
These are families and single parents with young children in socially rented houses, often claiming benefits Key attributes are: • Social renting • Presence of children • 3+ children • Single parent • High unemployment • Very low disposable income • Low value properties	These are students and young adults starting out, privately renting in house shares Key attributes are: • Proportion aged 18-24 • Flats • Students • High rental costs • House shares • Singles Heaviest internet usage	These are mixed neighbourhoods, who privately rent their terraced homes, found predominantly in London Key attributes are: • Semi-detached or terraced house • 3+ bedrooms • Lower level of disposable income • Presence of children • High use of social media

22 to 24 Under Acorn Groups		
H **Metropolitan Surroundings**	**N** **Urban Diversity**	**P** **Tenant Living**
These are mixed neighbourhoods, who privately rent their terraced homes, found predominantly in London Key attributes are: • Semi-detached or terraced house • 3+ bedrooms • Lower level of disposable income • Presence of children High use of social media	These are young families and students in ethnically diverse urban centres. Key attributes are: • Young children • 3+ children • Students • House shares • Renting • Shared ownership • Low disposable income • High unemployment • High use of social media	These are students and young adults starting out, privately renting in house shares Key attributes are: • Proportion aged 18-24 • Flats • Students • High rental costs • House shares • Singles • Heaviest internet usage

19 to 21 Over Acorn Groups		
S **Cash-strapped Families**	**Q** **Limited Budgets**	**M** **Family Renters**
These are families and single parents with young children in socially rented houses, often claiming benefits Key attributes are: • Social renting • Presence of children • 3+ children • Single parent • High unemployment • Very low disposable income • Low value properties	These are young families and single parents with a high proportion socially renting their semi-detached home. Key attributes are: • Semi-detached houses • Social renting • 2+ children • Single parent • High unemployment	These are younger working families with average incomes, living in socially rented houses. Key attributes are: • Terraced or semi-detached houses • Renting • Presence of children • Skilled manual worker • Income support

22 to 24 Over Acorn Groups		
Q **Limited Budgets**	**S** **Cash-strapped Families**	**P** **Tenant Living**
These are young families and single parents with a high proportion socially renting their semi-detached home. Key attributes are: • Semi-detached houses • Social renting • 2+ children • Single parent • High unemployment	These are families and single parents with young children in socially rented houses, often claiming benefits Key attributes are: • Social renting • Presence of children • 3+ children • Single parent • High unemployment • Very low disposable income • Low value properties	These are students and young adults starting out, privately renting in house shares Key attributes are: • Proportion aged 18-24 • Flats • Students • High rental costs • House shares • Singles • Heaviest internet usage

APPENDIX B: CONTRIBUTORY FACTOR GROUPINGS

Injudicious Action	Driver Errors or Reactions	Driver Impairment or Distraction	Behaviour or Inexperience	Other
Traffic Contraventions	**Manoeuvre Errors**	**Substance Impairments**	**Nervous Behaviour**	**Vehicle Defects**
Disobeyed automatic traffic signal	*Poor turn or manoeuvre*	*Impaired by alcohol*	*Nervous, uncertain, or panic*	*Tyres illegal, defective, or under-inflated*
Disobeyed double white lines	*Failed to signal or misleading signal*	*Impaired by drugs (illicit or medicinal)*	*Learner or inexperienced driver/rider*	*Defective lights or indicators*
Disobeyed 'Give way' or 'Stop' signs or markings	*Passing too close to cyclist, horse rider or pedestrian*		*Inexperience of driving on the left*	*Defective brakes*
Disobeyed pedestrian crossing facility			*Unfamiliar with model of vehicle*	*Defective steering or suspension*
Illegal turn or direction of travel				*Defective or missing mirrors*
				Overloaded or poorly loaded vehicle or trailer
Speed Choices	**Control Errors**	**Distraction**	**Unsafe Behaviour**	**Road Surface**
Exceeding speed limit	*Sudden braking*	*Driver using mobile phone*	*Aggressive driving*	*Poor or defective road surface*
Travelling too fast for conditions	*Swerved*	*Distraction in vehicle*	*Careless, reckless or in a hurry*	*Deposit on road (e.g., oil, mud, chippings)*
	Loss of control	*Distraction outside vehicle*		*Slippery road (due to weather)*
Close Following	**Observation Error**	**Health Impairments**	**Pedal Cycle Behaviour**	**Affected Vision**
Following too close	*Failed to look properly*	*Uncorrected, defective eyesight*	*Vehicle travelling along pavement*	*Stationary or parked vehicle(s)*
	Failed to judge other person's path or speed	*Illness or disability, mental or physical*	*Cyclist entering road from pavement*	*Vegetation*
			Not displaying lights at night or in poor visibility	*Road layout (e.g., bend, winding road, hill crest)*
			Cyclist wearing dark clothing at night	*Buildings, road signs, street furniture*
	Junction Errors	**Fatigue Impairment**	**Pedestrian Behaviour**	*Dazzling headlights*
	Junction overshoot	*Fatigue*	*Crossing road masked by stationary or parked vehicle*	*Dazzling sun*
	Junction restart (moving off at junction)		*Failed to look properly*	*Rain, sleet, snow or fog*
			Failed to judge vehicle's path or speed	*Spray from other vehicles*
			Wrong use of pedestrian crossing facility	*Visor or windscreen dirty or scratched*
			Dangerous action in carriageway (e.g., playing) *Careless, reckless or in a hurry* *Impaired by alcohol* *Impaired by drugs (illicit or medicinal)* *Pedestrian wearing dark clothing at night* *Disability or illness, mental or physical*	*Vehicle blind spot*

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