Driver & Vehicle Standards Agency

Driving test changes in 2017: impact evaluation research findings

Contents

Introduction

Background

In late 2015 DVSA proposed the most comprehensive change to the car driving test in England, Scotland and Wales since the introduction of independent driving in 2010[1].

TRL were commissioned to conduct research into the proposed test spanning 2015-2017[2], which used a quasi-experimental design with 4300 learner drivers in order to assess learner drivers' experiences of learning to drive and their attitudes towards driving and collision risk.

Public consultation[3] was carried out throughout July and August 2016 to which 3953 responses were received. Combining the results of the trial study and the consultation, DVSA took the decision to introduce the changes to the car practical test in December 2017.

The four main changes made were:

- The independent driving section of the test was extended to 20 minutes;
- Candidates are now asked to follow instructions from a sat nav during the independent drive section of the test;
- The reversing manoeuvres were changed;
- Candidates are now asked a vehicle safety question while they are driving.[4]

These changes were introduced in order to ensure that the driving test was reflective of modern driving practices and to encourage more learner drivers and their instructors to practice on a wider range of roads and conditions. DVSA provides 3 reasons for implementing the changes:

- most fatal collisions happen on high-speed roads (not including motorways) - changing the format of the test will allow more of these types of roads to be included in driving test routes
- 52% of car drivers now have a sat nav - DVSA wants new drivers to be trained to use them safely
- research has shown that new drivers find independent driving training valuable - they can relate it to driving once they've passed their test [5]

Aims and objectives

This piece of research was commissioned on October 2017 by DVSA's then chief driving examiner in order to help evaluate the impacts of the changes made to the driving test in December 2017.

DVSA were particularly interested in:

- Increasing the variety of roads learner drivers were exposed to during learning and the test.
- Preparing young and novice drivers well for driving independently on Britain's roads.

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[1] Evaluation report regarding the introduction of independent driving can be found at: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/416799/independent-driving-evaluation.pdf

[2] Report can be found at: https://trl.co.uk/sites/default/files/PPR828%20Transforming%20the%20practical%20driving%20test%20-%20Final%20report.pdf

[3] Results of the public consultation can be found here: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/608857/improving-the-car-driving-test-response-to-consultation.pdf

[4] Taken from https://www.gov.uk/government/news/driving-test-changes-4-december-2017.

[5] Quote taken from https://www.gov.uk/government/news/driving-test-changes-4-december-2017

- Ensuring that new and novice drivers were well equipped for driving with sat nav technology.

Method

The size of the sample and large amount of quantitative data required to meet the aims of the research resulted in online questionnaire being the favoured method. Online survey building software was available to the DVSA research team and enabled the quick and easy distribution of the questionnaire to a large sample. The collection of data in this way also allowed for the collection and analysis of large amounts of quantitative data alongside smaller amounts of more in-depth qualitative data.

The research design used was a two time-point within-group measure, one questionnaire distributed around 2 weeks after candidates took their driving test and one approximately 6 months after passing the driving test. This allowed for the tracking of respondents' experiences and attitudes over their early driving career.

The questionnaires were designed and built by the DVSA research team using online software and incorporated 3 main sources:

- The information requirements of the chief driving examiner as quoted on the original research request.
- The information required by DVSA to inform its 5-year strategy, as identified by the Agency's Management Information team.
- Validated scales regarding the driving habits and experiences of learner and novice drivers.

Use of these three sources allowed the research team to fulfil the contemporaneous information needs of the DVSA alongside comparing ongoing trends from previous research.

An email invitation was designed that summarised why the research was taking part and emphasised the importance of completing the questionnaire for the improvement of the driving test.

Sampling

As the DVSA hold a monopoly over delivery of the car-driving test, we were able to gain access to the full population of test takers. Contact information is collected throughout the booking process and DVSA have permission to use this information for the purposes of research[6]. It was therefore deemed suitable to use the entire population of category B test takers between 11th December 2017 and 17th February 2018. Surveys were sent on a rolling weekly basis.

The driving test changes were introduced on December 4th, however sampling began one week later for two reasons;

- It gave driving examiners a week to get used to delivering the new test.
- There was industrial action in the week commencing 4th December resulting in cancelled tests and a reduced testing timetable.

[6] Time point 1 of this study was carried out before the introduction of the General Data Protection Regulation (GDPR) 2018.

The time point 1 survey was sent to 227,511 test takers.

Each respondent was provided with a unique 6-digit identifier that they were asked to enter upon opening the survey link. This allowed the researchers to filter out any incorrect reference numbers whilst also providing a link between responses at both time points.

The time point 2 survey was sent to approximately 6800 novice drivers who indicated at time point 1 that they would be happy for DVSA to contact them later for follow up research about their first 6 months of driving.

A number of qualifying questions were asked of respondents before they entered the surveys including 'have you taken a driving test since December 4th 2017?', these questions in conjunction with cleaning the sample and providing a 6-digit reference aimed to counteract possible corruption of data.

The link to begin both the surveys was positioned on a gov.uk page that was accessible to the public. It was hoped that the use of the words 'if you have received an invitation to take part…' alongside the qualifying questions would deter anybody who had not received an invitation from following the link and taking part in the survey thereby contaminating the data.

Ethical considerations

Informed consent

It is often hard to obtain informed consent through online questionnaires. In order to ensure that this was gained there were a number of measures put in place:

- A privacy notice was presented at the beginning of each survey that set out why the data was being collected, how it would be used and how respondents could contact the DVSA research team.
- Respondents were then required to agree to a set of statements confirming that they had read and understood the privacy notice and that they agreed to take part in the study; if they did not agree with the statements they were filtered out of the study.
- In order to take part at time point 2, respondents were first asked to indicate that they wished to take part in the next stage of the research and were asked to enter their email address twice.

Right to withdraw

All participants were given the right to withdraw their information. It was made clear in the privacy notice at the beginning of the surveys that respondents could contact the DVSA research team via email if they had any questions about the survey or they wished to withdraw their responses. The unique 6-digit number that was allocated to each respondent could then be used to find and delete their response. This was the same for both time point 1 and 2.

Alongside the right to withdraw, participants were also made aware at various points that their participation in the research was voluntary and they were under no obligation to take part.

Time point 1 results overview

The time point 1 online questionnaire received 18644 responses in total, however, after cleansing the dataset, 17016 responses were retained for analysis.

(Section summaries have been included at the beginning of each section of the report to allow for a quick and easy understanding of the main findings of each individual section.)

Demographics

A number of optional demographic questions were asked to allow comparison of the sample with the overall population of category B test takers from 11/12/2017 until 17/02/2018.

Section summary:

- There is a slight overrepresentation of females in the sample compared to test takers in the same timeframe.
- There is representation from all ethnic groups and all regions in England, Scotland and Wales.
- 2.7% of respondents felt they have a physical or mental health condition that might affect their driving.
- The overall age distribution of respondents is similar to that of test takers in the same timeframe.
- The national pass rate was 45.3% whereas the pass rate of respondents is 63.5%.

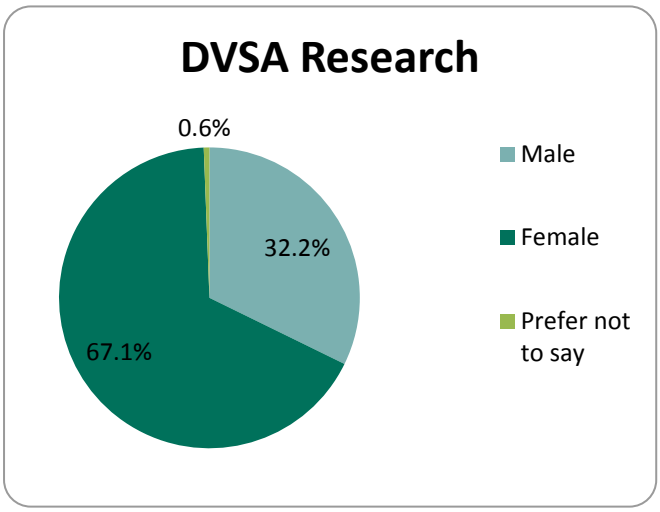


Figure 2

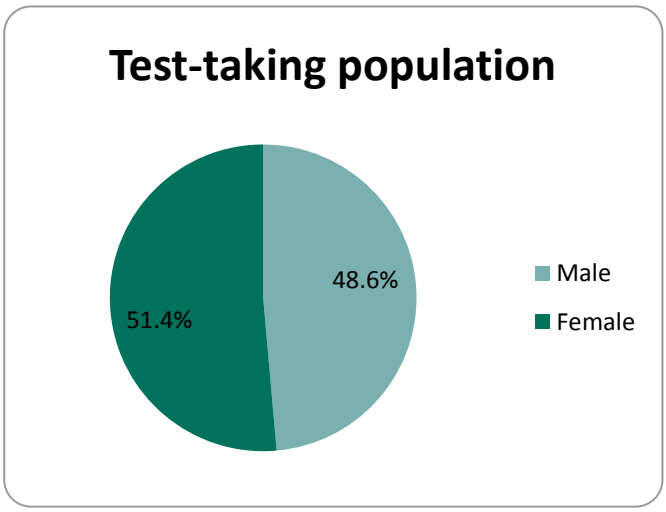


Figure 1

Gender identity of respondents was collected and compared to the gender identity of all test takers in this timeframe; presented in figures 1 and 2.

It is evident that there is an over representation of females in the sample for this research. This is an ongoing trend in research carried out by DVSA and is a consequence of the employment of self-selection questionnaires, to which females are likely to be more receptive.

Ethnic origin was also collected to ensure that the sample contained a wide range of ethnicities and was reflective of the population of the UK as a whole. Ethnicity data of test takers is not collected by

DVSA so the ethnic makeup of the sample obtained cannot be compared to official statistics, however we were satisfied that there was representation from every ethnic group.

There was also representation within the sample from all regions throughout England, Scotland and Wales.

Respondents were asked if they felt they had any mental or physical health conditions that affect or might affect their driving; 2.7% of respondents answered that they did.

The final demographic question asked respondents how old they were when they took their most recent driving test. This was compared to the age range of all category B test takers over the same timeframe and is presented in figure 3.

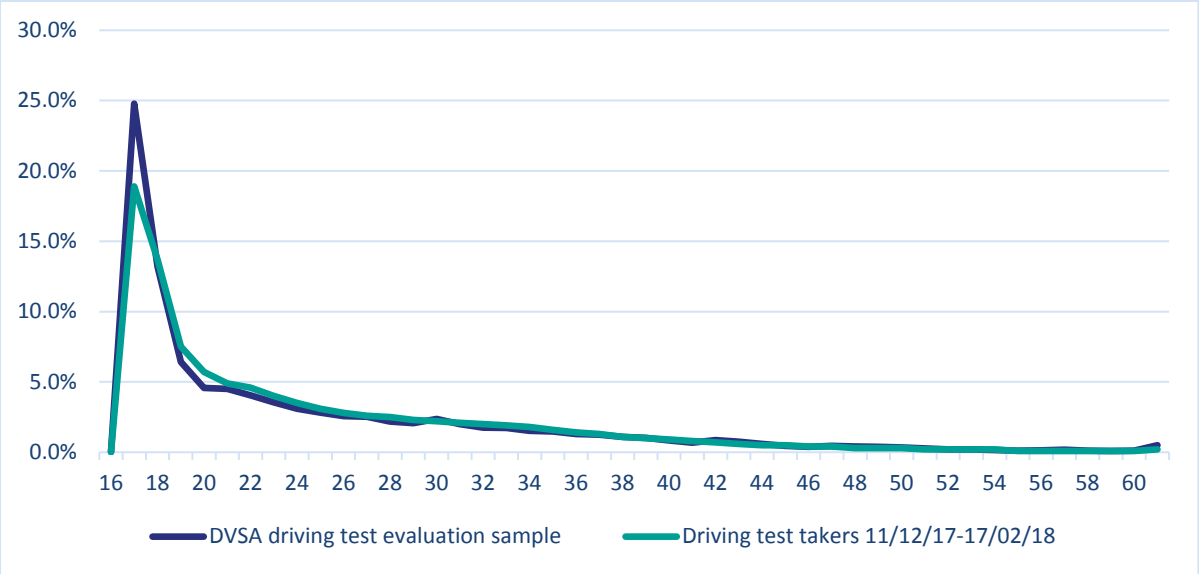


Figure 3

The sample achieved in this research had a slight over-representation of candidates aged 21 and under (53.5% compared to 45.8% test takers). However, it is felt that, as the overall age trend is similar, it is an acceptable representation of the test taking population.

It is important to consider the pass rate of the category B test in the timeframe that this survey was conducted. From 11/12/2017 until 17/02/2018, 45.3% of test takers passed their test whereas 63.5% of respondents to the survey passed their test. This is a consequence of self-selection bias[7] to which all online questionnaires are susceptible; those who passed and feel more positive about the experience are more likely to answer a questionnaire that asks them to reflect upon said experience.

There is also a difference in the pass rate of male and female respondents; 70.8% of male respondents passed their test as opposed to 60.1% of females who passed. Both of these figures are higher than the pass rate of the test taking population however the figures do reflect the consistent difference between male and female pass rates present in official figures[8].

[7] Self-selection bias is likely to occur in instances such as this where individuals select themselves to take part and can cause a biased sample, as certain demographic groups are more likely to self-select.
[8] https://www.gov.uk/government/statistics/driver-and-rider-testing-and-instructor-statistics-january-to-march-2018

Full data for all socio-demographic questions are presented in Appendix A.

Learning

The following section of the questionnaire asked respondents questions about their experiences of learning to drive including: who they learnt with, what aids they used and how long they spent learning, particularly on different road and in different weather types.

Section Summary:

- The largest proportion of respondents spent between 3 and 6 months learning to drive.
- 36.4% of respondents used a log book or driver's record.
- 98.6% of respondents used an Approved Driving Instructor (ADI).
- The mean number of hours spent learning with an ADI was 38.7
- 8.7% of respondents used the 'find your nearest' service to find their ADI.
- Recommendation from family, friends and online sources were the most common reasons for choosing an ADI.
- 47.3% of respondents had practice with friends/family.
- Learner drivers are now spending more time on a variety of roads and are learning how to use a sat nav alongside road signs.

How long had you been learning to drive when you took your most recent car driving test?

Answer Choice		Response Percent	Response Total
1	0 to 3 months	14.6%	2488
2	3 to 6 months	27.3%	4649
3	6 to 9 months	19.9%	3375
4	9 to 12 months	15.8%	2680
5	12+ months	22.4%	3808
		answered	**17000**

Table 1

The modal answer is 3-6 months followed by 12+ months; this is due to a number of respondents (4374) completing their third or more attempt at a driving test[9].

Respondents were asked if they used a logbook or driver's record during their driving lessons to keep track of their progress[10]; 36.4% answered that they had. After the introduction of the new

[9] A chi-square was carried out on the data and indicated that those who spent more than a year learning were significantly more likely to have just had their third or more attempt at a car driving test ($p<0.001$).
[10] A link was provided through which respondents could view an example logbook

driving test the official DVSA logbooks are yet to be updated, once updated, DVSA would encourage ADIs and learner drivers to use them or a similar app to help keep track of their learning progress.

Use of an Approved Driving Instructor (ADI)

98.6% (16770) of the respondents to the time point 1 questionnaire answered that they had used an ADI whilst learning to drive.

Respondents were asked approximately how many hours of practice they had with an ADI and were given a free text box in which to enter their answer. The initial data collected from this question contained a large amount of outliers, which were then discounted from the final analysis[11]. When analysing the spread of the data it became apparent that there were peaks at multiples of 10, this indicates the approximate nature of the data. Descriptive statistics of this data can be found in table 1 below and the full histogram of data can be seen at Appendix B.

Approximately how many hours of lessons have you had with a driving instructor since you began learning to drive?	
Mean	38.7
Median	35
Mode	40
Standard Deviation	21.2

Table 2

These figures are slightly lower than the research carried out by the Transport Research Laboratory (TRL) into the transformation of the practical driving test[12]. However, caution should be exercised when comparing the two datasets; we are unsure of the range of values in the TRL data and which outliers they may have discounted on analysis.

Of particular interest here is the relatively large standard deviation of 21.2[13], this means that 95% of respondents answered between 17.5 hours and 59.9 hours; indicating that the mean is not a particularly reliable indicator of the data.

It is worth noting here that only first time test takers took part in the TRL research. When only using the data for those on their first attempt at test the mean and modal hours spent with an ADI is 30.

As part of the 5-year strategy DVSA wants to know how candidates go about finding and choosing their ADI. Respondents were asked if they used DVSA's 'find your nearest' service, available through gov.uk. Only 8.7% of respondents answered that they has used the service. DVSA currently advise learners to use the service in order to find a reliable, certified ADI and often publicise the service on social media.

[11] Values of 0 were discounted and it was judged that as 96% of the sample answered below 105 any values above 105 were also discounted from the final analysis using SPSS recode into same variable function.
[12] TRL found a mean of 40.1 hours with a standard deviation of 38.6.
[13] The standard deviation is a measure of dispersion of values around the mean. 68% of all scores will fall within 1 standard deviation of the mean, 95% within two standard deviations and 99.7% within three standard deviations.

Candidates were then asked their main reasons for choosing their most recent ADI and were able to select from a number of options (figures do not equal 100% as respondents were asked to select all that apply). The results are presented in figure 4.

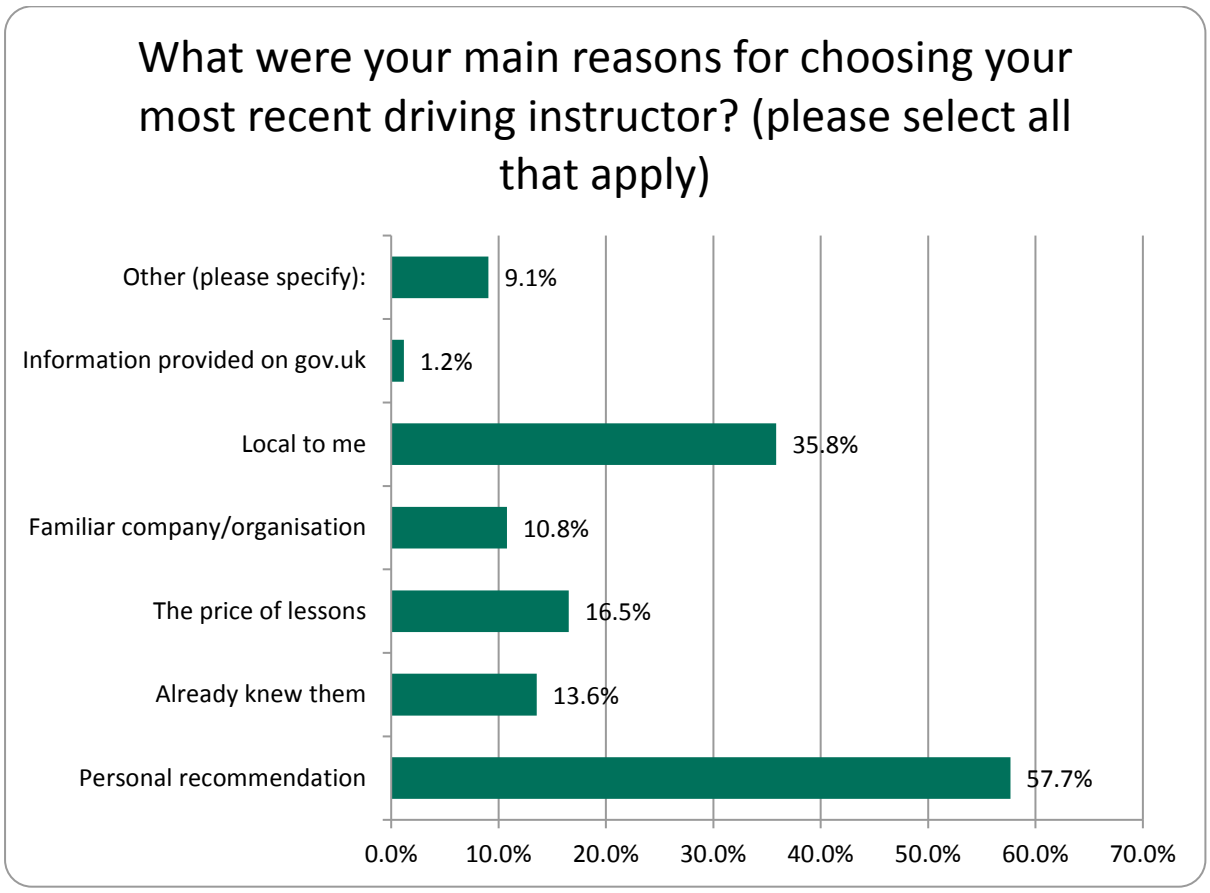


Figure 4

Those who answered 'other' to the above question were invited to leave a comment regarding their main reasons for choosing their ADI, 1490 comments were received and were thematically analysed; presented in table 2.

Theme	Explanation
Recommendation	By far the largest theme was recommendation, most of these could be incorporated into the option 'personal recommendations' in the above figure; the recommendations tended to come from friends, family or Facebook groups.
Reviews and reputation	Those who said that they chose their ADI as they had seen good reviews or they had a good reputation in the local area. The majority of these reviews were online through a search engine or the ADI's own website.
Availability/Flexibility	This group chose their ADI based upon either their ability to start lessons quickly or upon the flexibility of lessons. A large portion of this group were those who had other responsibilities so required lessons at specific times.
Previously known	These respondents chose an ADI that was previously known to them in some capacity, either related to them, or had some previous interactions with them.

Reasons out of control of the candidate	These candidates had been gifted lessons by relatives so were unable to choose their own instructor and went on to stay with the instructor that had been chosen for them. Another type of comment here were those who were allocated their instructor by the school that they approached for lessons and so felt that they did not have a choice.
Type of car or training provided	The type of car and training provided constitutes a large theme. This was mainly made up of those who wanted to learn in an automatic car or wanted to learn in the kind of car they or a family member already owned. This theme also consists of those who looked specifically for an ADI who provided either intense or short courses.
Gender	Those who were looking specifically for a female instructor, some respondents quote not feeling comfortable with a male instructor or having a bad experience with a male instructor previously.
'Online'	This theme specifically consists of those who simply stated 'Facebook' or 'google search' as their answer and did not elaborate any further. However, unsurprisingly most candidates in all the themes listed above mention finding their ADI through online sources, either Google, Facebook or LinkedIn reflecting that trusted sources of information have now moved online.

Table 3

When choosing which ADI to use, learner drivers are concerned with convenience, speed and internet based information. Many searched online for ADIs with particular characteristics, skills and even car type, sometimes using the accompanying reviews before making their decision. Information supplied on gov.uk was only chosen by 199 respondents and was not mentioned throughout the qualitative comments.

Aspects such as cost of lessons, first time pass rate of past pupils and familiarity of organisation had some effect on choice but most respondents were influenced by word of mouth. 9657 respondents selected 'personal recommendation' and a further large group of those who selected 'other' cited recommendation from a family member, friend or online group as a main reason for choosing their ADI.

Respondents were then asked if they had spent any time learning to drive with friends and family who were not ADIs; 47.3% (8040) answered that they had. They were then asked to estimate how many hours of learning they thought they have had with friends and family. They were provided with a free text box in which to enter their numerical answer. Again, as in the answers provided for hours spent practicing with an ADI there were a number of outliers that have been discounted from the final analysis[14]. The descriptive statistics are presented in table 3 and a histogram of the data can be seen at Appendix C.

[14] Values of 0 were discounted and as 97% of respondents answered 100 hours or below anything above 100 was discounted from the final analysis.

How many hours of practice have you had with friends or family since you began learning to drive?	
Mean	21.4
Median	15
Mode	10
Standard Deviation	21.9

Table 4

The high standard deviation coupled with the dispersion of the mean, median and mode reflect the disparate nature of the data. The most interesting piece of data here is the modal answer of 10. As with the hours spent learning with an ADI, respondents tend to group around multiples of 10 reflecting the approximate nature of the data.

Amount of time spent learning in different circumstances

The questionnaire included questions regarding the amount of time candidates had spent learning to drive in a variety of circumstances including road types and weather conditions.

The results from these questions are summarised in the below tables 4 and 5.

Thinking about all of your hours of practice before you took you most recent test, how much time did you drive…							
		Never	Less than 2 hours	2-4 hours	4-8 hours	More than 8 hours	Response total
1	…while following road signs	492 2.9%	2925 17.2%	3579 21.1%	3299 19.4%	**6671** **39.3%**	16966 100%
2	…on busy roads outside of town centres	312 1.8%	1670 9.9%	3130 18.5%	4056 24%	**7757** **45.8%**	16925 100%
3	…in a busy town centres	710 4.2%	2190 12.9%	3222 19%	3853 22.8%	**6956** **41.1%**	16931 100%
4	…on country roads	1749 10.3%	3277 19.4%	3671 21.7%	3642 21.5%	**4577** **27.1%**	16916 100%
5	…in quiet residential areas	153 0.9%	1923 11.4%	3419 20.2%	4089 24.2%	**7342** **43.4%**	16926 100%
6	…in other quiet areas	1558 9.2%	**4784** **28.3%**	3795 22.5%	3177 18.8%	3572 21.2%	16886 100%
7	…on fast dual carriageways	607 3.6%	3429 20.2%	**4501** **26.5%**	4230 24.9%	4196 24.7%	16963 100%

Table 5

Thinking about all of your hours of practice before you took you most recent test, how much time did you drive…							
		Never	Less than 2 hours	2-4 hours	4-8 hours	More than 8 hours	Response total
1	…independently	1568 9.2%	2781 16.4%	3233 19.1%	3145 18.5%	**6240** **36.8%**	16967 100%
2	…following instructions from a sat nav	1763 10.4%	**7287** **43.0%**	3983 23.5%	2209 13.0%	1701 10.1%	16943 100%
3	…on snow or ice	**9405** **55.6%**	5339 31.6%	1466 8.7%	402 2.4%	291 1.7%	16903 100%
4	…in the rain	412 2.4%	3815 22.5%	**5100** **30.1%**	3916 23.2%	3688 21.8%	16931 100%
5	…in the dark	2976 17.5%	3754 22.1%	3546 20.9%	2800 16.5%	**3884** **22.9%**	16960 100%

Table 6

The modal answer for each circumstance has been made bold.

The results we collected from these questions were compared with the data collected by TRL from their National Control Group 1 (NCG1) who completed the Learning To Drive Questionnaire (LTDQ) as part of their research into the transformation of the practical driving test. Some of the comparison graphs have been presented below (figures 5 to 9) where there is an interest from DVSA linked directly to the new driving test[15].

[15]Due to the nature of the questions asked in the two pieces of research in order to make the data comparable, only those respondents who carried out all of their training with a qualified ADI have been included. This equates to 633 respondents from NCG1 and 8833 from the current study.

It is of importance here that the research was carried out within two months of the implementation of the test changes (11 Dec - 17 Feb), therefore we may see these trends change over time as the effects of the test settle. The graphs of all of this data can be found in Appendix D.

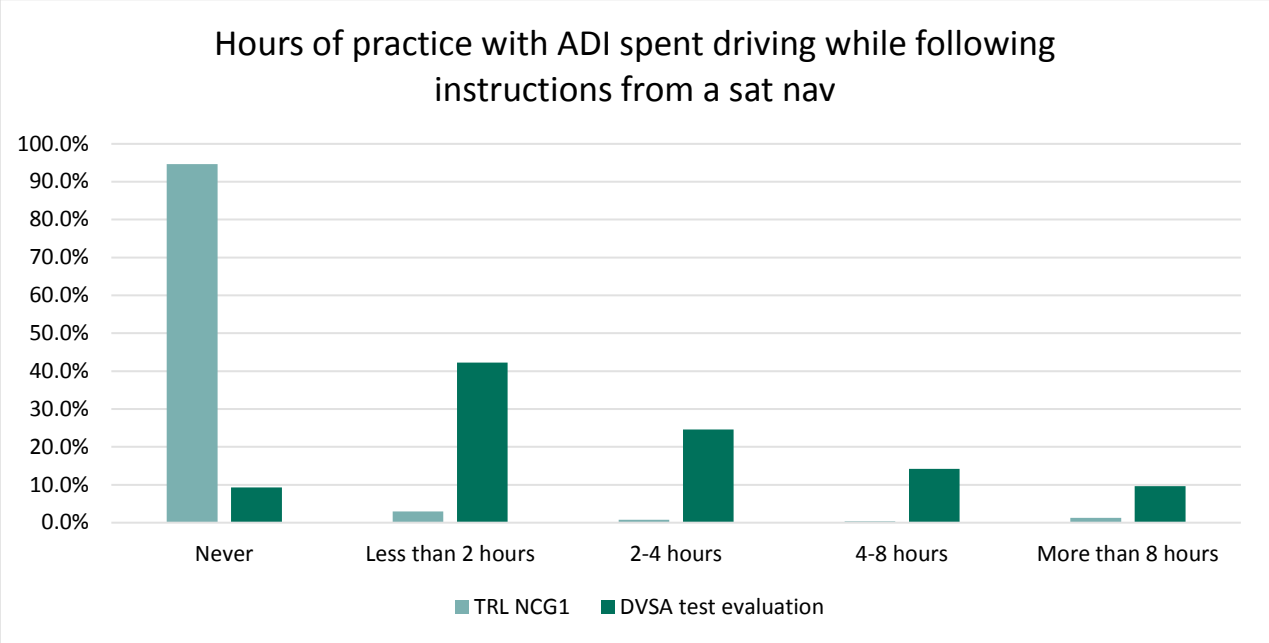


Figure 5

There has been an obvious increase in the amount of time candidates spend following instructions from a sat nav during their learning; only 1.6% of those in NCG1 spent more than 4 hours doing this as opposed to 23.8% (3910) of those taking the new test. On the other hand it is encouraging that less than a quarter of candidates spent more than 4 hours following a sat nav; candidates are still being taught to drive without relying upon instructions from the sat nav. This is further supported by figure 6 below which indicates that our respondents are still being taught to follow road signs as well as the sat nav rather than this kind of learning being replaced by following a sat nav.

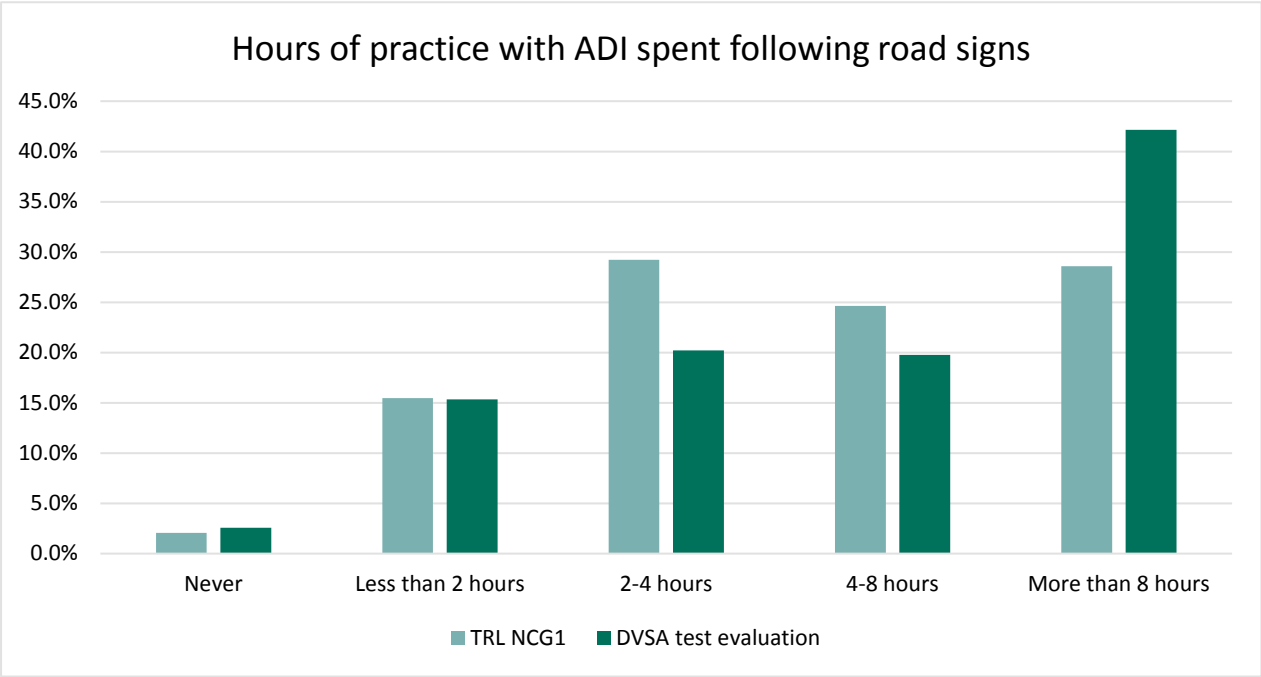


Figure 6

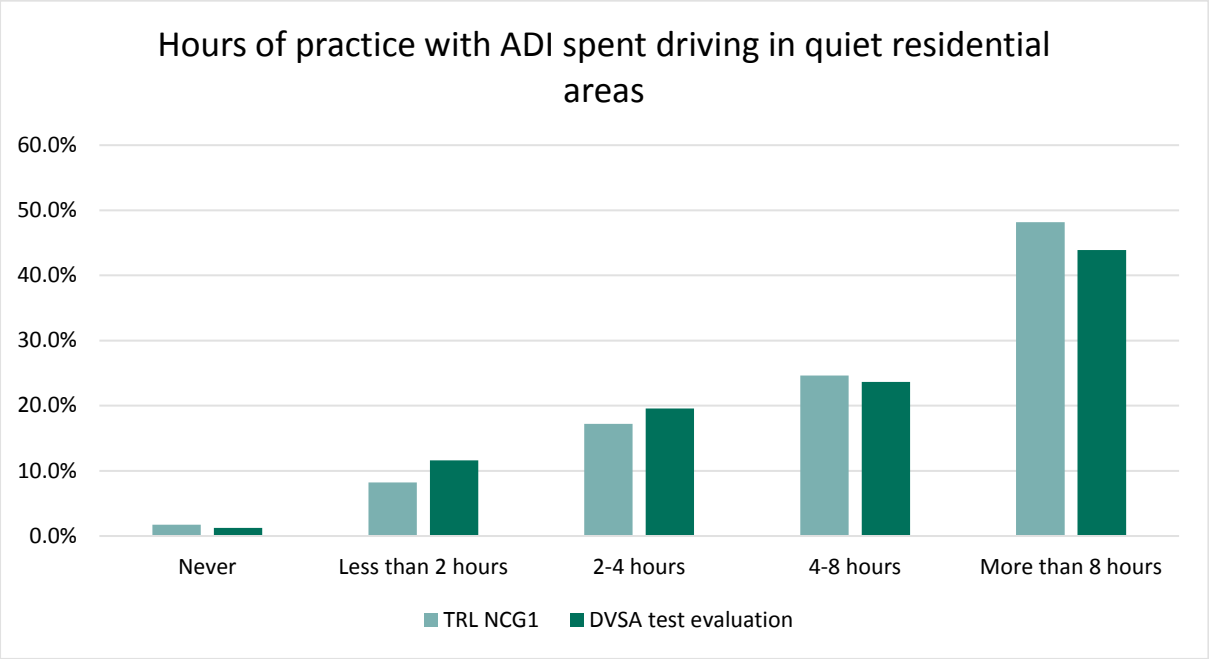


Figure 8

There has been a slight reduction in the number of candidates spending more than 4 hours learning to drive in quiet residential areas, 72.8% of those in NCG1 and 67.6% (5971) of those in DVSA 2018 research. This is also encouraging; however, it is likely that there will always be an amount of driving practice in quiet residential areas due to pick up/drop off and manoeuvres practice alongside early lessons whilst learning car control.

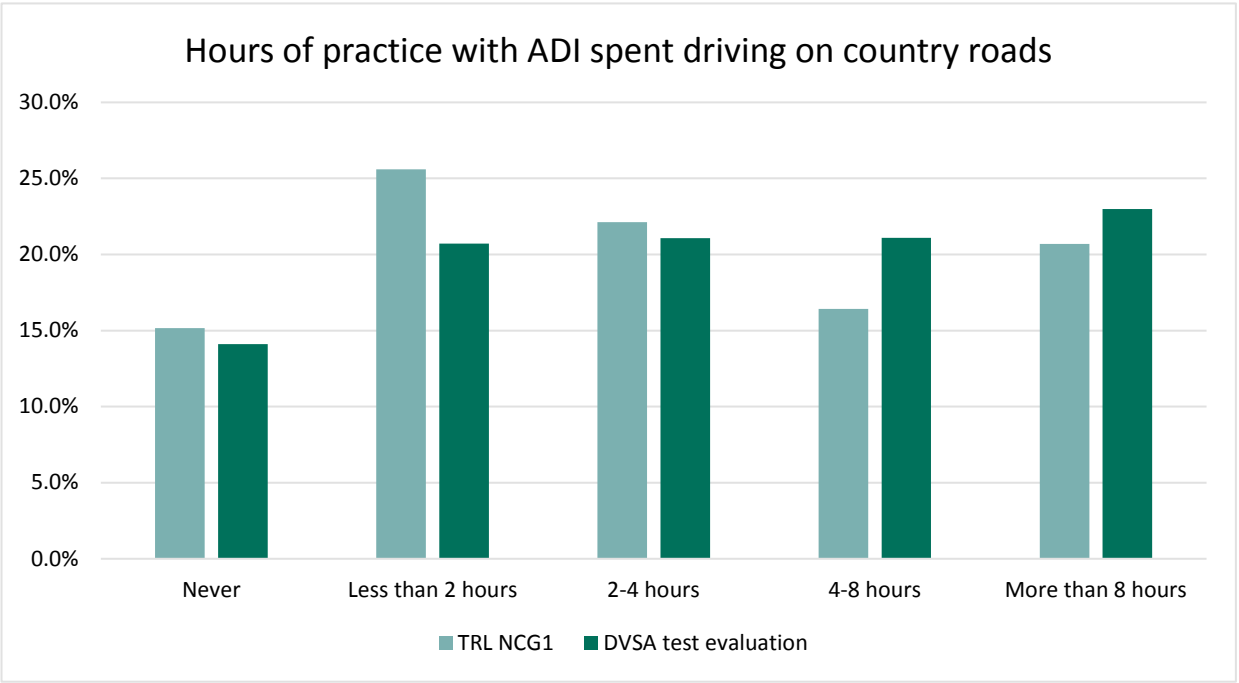


Figure 7

Figures 8 and 9 show an increase in the amount of candidates who report spending more than 4 hours practicing on country roads and fast dual carriageways; two of the most dangerous roads for novice drivers. 44.1% (3895) of those who responded to the DVSA 2018 research spent over 4 hours driving on country roads as opposed to 37.1% of those involved in NCG1. A similar pattern is found in those spending time on fast dual carriageways (50.2% and 46.5% respectively).

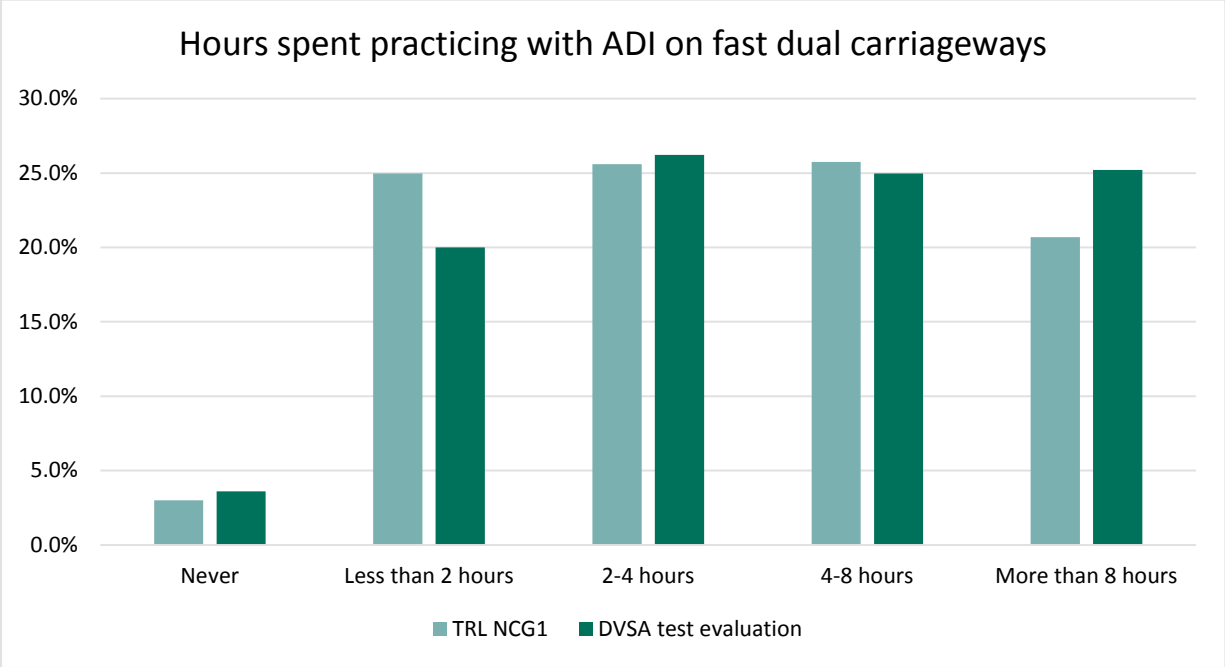


Figure 9

These figures indicate that learner drivers taking the new driving test are spending more time on a wider variety of roads whilst learning to follow a sat nav and road signs. This is encouraging; however, it would be useful to track this going forward to help DVSA to understand if this is an ongoing trend or an anomalous finding.

The test

This section of the time point 1 questionnaire asked candidates to reflect on what happened during their test and how they feel about the new style driving test.

Section summary:

- 82.8% of respondents found the length of the independent drive 'just right'.
- 4 in 5 were asked to follow a sat nav as part of their test.
- The manoeuvre candidates were asked to complete most often was the pull up on the right manoeuvre.
- 28.8% of respondents were asked to carry out an emergency stop with males being significantly more likely to be asked.
- 17.5% of respondents had their ADI in the car during their test.
- 82.3% of respondents' ADI attended the end of test debrief.
- Males show significantly higher pre-test confidence but both genders were more confident that they were good enough to drive on the road unsupervised than they were that they would pass their test.

Respondents were asked to let us know what attempt their most recent driving test was.

Was your most recent driving test your…			
Answer Choice		**Response Percent**	**Response Total**
1	…first attempt	43.6%	7419
2	…second attempt	30.7%	5218
3	…third or more attempt	25.7%	4374
		answered	**17011**

Table 7

The modal answer was first attempt followed by second attempt. 56.4% (9592) of respondents had previously had a driving test, it is impossible to tell if these previous attempts were the new or old style test.

82.8% (14078) of those who responded to the survey found the independent drive section of the test just the right length with 15.1% (2572) finding it too long and 2% (347) too short. It is encouraging that the vast majority of respondents felt that it was just right.

During the independent drive 81.9% (13916) of the respondents were asked to follow directions from a sat nav; this is in line with the published recommendation from DVSA that 1 in 5 candidates be asked to follow road signs.

Respondents were then asked to leave any further feedback they had about the independent drive section of the driving test; 4254 comments were received. Positive responses were thematically analysed separately from negative responses in order to present the amount of data in an accessible way.

It is worth noting prior to the presentation of this analysis that there were many dichotomous views expressed regarding the practical test and independent drive. This could be due to a number of reasons; however it is likely that cognitive bias regarding whether the respondent passed or failed their most recent test played a part in their response.

Positive Theme	Explanation
Realistic	This group of respondents believe that the 20-minute independent drive incorporating the sat nav reflects a more realistic driving experience. It enables them to feel as though they are driving in a car alone rather than taking a test. Alongside this, they recognise the invaluable nature of being skilled in using a sat nav on modern roads. Adding to the feeling of the independent drive being realistic was the ability to carry out 'show-me' questions and manoeuvres during this section of the test. They felt that this made it feel like a driving scenario that may happen after passing their practical test.
Less pressure	This theme is related to the above theme of the independent drive feeling more like real-life driving. The new, longer independent drive helps the candidates to feel more relaxed and less under pressure than when following instructions from an examiner. It gives the candidate more time to focus on what they are doing rather than listening for and remembering a series of verbal instructions.
Ability to show skill	The independent drive helped candidates to feel more confident in their test performance. They state that the length and mode of carrying out the independent drive gave them a chance to show off their skills whilst allowing the examiner to focus on their driving rather than what instructions they would be giving next. Therefore, they felt that the examiner was able to make a fairer judgement of their driving.
Clarity of instruction	These candidates felt that the instructions given by the sat nav were of benefit to them during their test. Not only were they more standardised than those provided by instructors, they were clear and repeated so candidates felt under less pressure to remember them. The ability to glance at the screen to remind themselves of the direction they were going was also cited as a benefit to candidates on their test. Included in this theme was praise for the examiners who, where the sat nav was not quite clear, were quick to correct the sat nav and offer additional, clearer direction. They praise the ability to double-check directions with the examiner where there was misunderstanding; however, the ability to confirm with an examiner needs to be clearly communicated to all candidates.

Additional needs	A number of candidates with either dyslexia or anxiety praise the introduction of the sat nav for making the test more relaxed and easier to understand.
Yes, no expansion	This group of candidates were positive about the changes made to the independent drive section of the test (length of time and introduction of sat nav) but did not go on to expand upon their statement. Within this group, some state that they found the independent drive easy; this could be interpreted as both positive and negative for road safety and driver testing.

Table 8

These responses were not only provided by those who used a sat nav during their independent drive but there was also praise for the length of the independent drive from those who did not use sat nav. It is important to recognise that they also acknowledged the importance of learning to drive without the sat nav and many felt that they would have been prepared for both eventualities (following sat nav or road signs).

Negative Theme	Explanation
Sat nav faults	A substantial group of those who were not happy with the independent drive part of the test cited issues with the sat nav as the main reason. They found that the sat nav gave unclear or incorrect instructions that were difficult to follow and often led to the examiner asking the candidate to ignore the sat nav and providing explanatory or contradictory directions. They also found that the sat nav gave incorrect speed limits on a number of roads leaving them unsure as to whether they should be following the sat nav or the road signs.
Examiner faults	The ability of the examiners to confidently and correctly set up and use the sat nav was another reason some respondents cited. They felt that the examiners were unsure how to turn the sat nav on, position the sat nav, zoom in on the roads and turn the volume up and down leading to an unnecessary amount of 'fiddling' with the sat nav. It is hoped that as this research was carried out within 2 months of the introduction of the changes, these problems have been ironed out as the examiners have got used to the new test.
'Show me' and manoeuvres	A small group mentioned that they found the fact that they could be asked to perform manoeuvres and 'show me' questions during the independent part of the test very distracting. In some cases, they felt that it was dangerous to ask candidates to do this as it meant that their attention was being taken away from the road.
Additional needs	In contradiction to the positive comments there were a number of candidates who felt that their additional needs were not being catered for or were being ignored by the implementation of the new test. This is particularly true of those with dyslexia who felt that splitting their focus between the road, satnav, controls and examiner made the test unnecessarily difficult for them.

Positioning of sat nav	The positioning and security of the sat nav in the car also contributed toward the negative feeling. The sat nav was sometimes placed where the examiner could see the screen clearly but the candidate felt as though they could not see clearly and was therefore averting their gaze from the road for too long. Some respondents felt that they should be asked where they would like the sat nav positioned. There were a few respondents who discussed the security of the sat nav and the fact that it fell from the dashboard or moved around causing disruption and confusion. Again, this is something that we hope would have become less of an issue as examiners became used to delivering the test with the sat nav.
Sat nav as a distraction	There was a worry expressed that the sat nav was too distracting to be a part of the practical test and that it would lead to candidates becoming too reliant upon the screen and not the road ahead. This was a particular problem when the sat nav was left on throughout the parts of the test that they were not asked to follow the sat nav, they felt that at these points the sat nav should be turned off completely and even removed. DVSA are looking into the training of examiners around this.
Length	Some respondents found that 20 minutes was too long for the independent drive and that it made them nervous, they felt as though there is nothing that can be seen in 20 minutes that cannot be seen in 10 minutes. This answer was provided by those who completed the independent drive both with and without the sat nav. They also felt that examiners should make it clear when the independent drive begins and ends.
No, no expansion	Like those who answered positively there were a group of respondents who answered negatively about the independent drive section of the test but did not expand any further upon why they felt that way.

Table 9

There were several additional issues raised throughout the answers that were not directly related to the independent drive. These are summarised in the table below:

Theme	Explanation
Practice prior to test	This theme highlights issues with the pre-test practice of the candidates. There was a small number of respondents who had either no or very little practice with a sat nav prior to their test. Some cited their instructor not wanting to teach using a sat nav as reasoning for this whereas some had failed their test prior to the changes and did not have much time to practice before their retake after the changes had been enforced. Other candidates mention that they had not had much practice on certain road types before; mainly dual carriageways or country roads.

Information provided	This theme draws together a variety of issues relating to the information the candidate was given regarding the test by their ADI or other sources. There were 3 main issues here: • Some were not aware that they were able to confirm directions from the sat nav with their driving examiner. • Some expected that every test was conducted using sat nav so were surprised when they were the 1 in 5 candidates asked to follow road signs. • The final knowledge gap was those who did not know that they could be asked to carry out their manoeuvres as part of their independent drive.
Layout of test	This group did not make comments pertaining directly to the independent drive but instead focussed on the timing of the drive in relation to the rest of the test. This group are split in their views with some feeling that having the independent drive at the beginning of the test allowed them to ease into the test format. Whereas, others felt that having it at the beginning of the test put them at a disadvantage and put them under too much pressure to begin with.
Additional changes	Although generally positive about the changes this group suggested what they felt would improve the effectiveness of the test. Some suggest a 'half and half' approach to the independent drive with 10 minutes following a sat nav and 10 following road signs, they felt this would give good examples of both. Others said that they would have liked to set the destination on the sat nav themselves as this would have made it feel more realistic and it is unlikely that they would follow a satnav without preprograming the destination themselves. An additional group felt as though they should be given the choice to follow road signs rather than a sat nav as they were unlikely to use a sat nav following their test, this was mainly a view of the older respondents.

Table 10

Respondents were asked to think about the manoeuvres that they were asked to perform on test.

Table 11 below shows the amount of respondents who were asked to complete each manoeuvre; candidates were allowed to choose more than one therefore percentages do not add up to 100%

Please let us know which manoeuvre(s) you were asked to perform on your test			
Answer Choice		**Response Percent**	**Response Total**
1	Parallel park at the side of the road	28.8%	4877
2	Drive into parking bay and reverse out	29.0%	4910
3	Reverse into parking bay and drive out	20.9%	3548
4	Pull up on the right-hand side of the road	38.8%	6573
		answered	**16959**

Table 11

The manoeuvre that candidates were asked to perform most often was the new pull up on the right-hand side of the road manoeuvre with 38.8% (6573) of respondents asked to complete it, every other manoeuvre was completed by under 30% of respondents.

Respondents were then asked if they were requested to complete an emergency stop as part of their driving test, this was not included in the manoeuvres section as candidates can be asked to complete it alongside their manoeuvres. 28.8% (4890) of respondents said that they were asked to complete an emergency stop during their test. Males were significantly more likely to be asked to complete an emergency stop as part of their test[16].

Like the independent drive section of the test, respondents were invited to leave qualitative feedback about the manoeuvres they were asked to complete. 2173 comments were received.

Again, like the comments left regarding the independent drive section of the test there were a large amount of different, often contradictory, viewpoints expressed. This led to the comments first being split into two group representing those who had a positive experience and those who had a negative experience; these have been presented in tables 12 and 13:

Negative Theme	Explanation
Issue with knowledge/practice	**Of candidates** – There were a number of issues with the knowledge of candidates and their practice prior to taking their test. This mainly revolved around what manoeuvres they could be asked to complete and how many of them they could be asked to complete in a test. It is expected that, as the test has now been implemented for over a year, this should no longer be an issue.
	Of examiners – This group felt that the examiners did not have an in-depth knowledge of how and where the new manoeuvres should be carried out. This led to contradictory advice and marking particularly if candidates were able to correct their positioning while bay parking. It is expected that this is a teething problem and has now been rectified.
Previous manoeuvres	These comments related to the removal of the turn in the road and reverse around the corner manoeuvres. Whether they were positive or negative about the new manoeuvres this group felt that the old manoeuvres were still relevant to today's driving and so should be reinstated; this was particularly true of turn in the road.
Right hand side of the road	**Safety concerns/highway code** – A small number of respondents felt that the manoeuvre posed a threat to road safety and was against the highway code. For this reason, they did not believe it should be included in the driving test and learner drivers should not be persuaded to learn and carry out the manoeuvre.
	Unexplained – There were a number of concerns expressed regarding the pull up on the right side of the road manoeuvre. This group tended not to explain why they did not like the

[16] A chi square test was carried out which indicated that males were statistically significantly more likely to be asked to complete an emergency stop as part of their test ($p<0.001$).

	manoeuvre but simply stated that they did not think it should be in the test or that they did not enjoy it.
	Easy – This group believed that this manoeuvre did not feel like a manoeuvre at all and was too easy to be included in a driving test. They believe it to be especially easy when compared to the other manoeuvres candidates are asked to carry out.
Location of manoeuvre	These comments related to the location candidates were asked to carry out their manoeuvres during the test. Most were unhappy about being asked to perform the manoeuvre on a busy or narrow road. Others were not happy that they were asked to carry out the manoeuvre (mainly bay parking) in the test centre car park as it made them feel under pressure. This is contradicted by those who were positive about their experience.
Timing of manoeuvre	This relates closely to the location of the manoeuvre but tended to revolve around whether or not candidates were asked to complete their manoeuvre at the beginning of the test. This group were unhappy about being asked to being their test by completing a manoeuvre as they felt it did not let them settle into the situation and therefore they did not perform to the best of their ability.
Not relevant	Some respondents stated that they did not see how these manoeuvres, particularly the pull up on the right hand side of the road manoeuvre was relevant to their everyday driving. They state that they do not see when they will need to use the manoeuvres and thought the old manoeuvres were much more relevant.

Table 12

Positive Theme	Explanation
Number of manoeuvres asked to carry out	Some candidates felt that learner drivers should be asked to complete a consistent number of manoeuvres during their test. Some believe it would be more useful to complete each manoeuvre during a test so they are able to see what they may need more practice on whereas some felt that they should just be asked to complete one and it should be the same for all candidates. This would offer consistency.
Relevance	These respondents felt that the new manoeuvres were relevant to real life driving and that they would use them a lot upon passing their test. This related to all of the manoeuvres but particularly to the bay park. Some candidates state that they know people who have been driving for years yet cannot comfortably and confidently bay park. This has helped them to feel confident going forward in their driving career.
Instructions given	This group was complimentary of the driving examiners and felt that they were given clear and concise instructions throughout completing their manoeuvres, which helped them to relax and perform well.
Easy – with practice	Some candidates state that they found the manoeuvres easy to complete as they had practiced them a lot with their driving

	instructor before taking the test and were therefore well prepared.
Location of manoeuvre	These comments were contradictory to those provided by candidates who were negative about their experience of the manoeuvres. They state that they were asked to complete their manoeuvres in a very suitable place; some were grateful to have completed them on a busy road or in a busy car park as it was realistic.
Timing of manoeuvre	Again, these comments were in contradiction to those who provided comments that were more critical of their experience. In particular in relation to being asked to carry out the manoeuvres at the beginning of the driving test. Some candidates felt that this helped them to relax for the rest of the test and perform to the best of their ability
No expansion	This group of respondents were positive about their experience with the manoeuvres but did not expand upon comments that they were good or they enjoyed them.

Table 13

In conclusion, there are a number of contradictory viewpoints regarding experience of manoeuvres, it needs to be borne in mind that these views can be affected by pass rate and the particular manoeuvres that candidates were asked to perform. It is hoped that some of the concerns regarding practice, and knowledge of examiners have become less of a concern over time as the test has become routine to learners, instructors and examiners alike.

ADI's accompanying their pupils on test is an initiative that DVSA are looking to promote as it could help them to give feedback to their pupils and act upon this feedback in any further lessons they provide. During this piece of research respondents were asked if their ADI was present in the car during their test, 17.5% (2926) answered that they were. Research carried out by the DVSA research team in 2017 found that ADIs accompanied 16.6% of respondents on their driving test. This is a slight increase and could be due to the curiosity of ADIs as to how the new driving test works. It is worth monitoring this figure over time.

This was followed by a question regarding the presence of the ADI at the end of test debrief; 82.3% (13790) of respondents answered that their ADI attended the debrief, this figure was 79% in 2017 so again, a small increase. It is recommended that DVSA monitor these figures to identify any trends that may be attributable to the introduction of the new-style driving test.

Respondents were then asked to think back to before their last driving test and rate how confident they were that they would pass their test and how confident they are that they were a good enough driver to drive on the road unsupervised. They were presented with a 5-point scale from very confident (5) to not at all confident (1), the results of this are presented in figure 10.

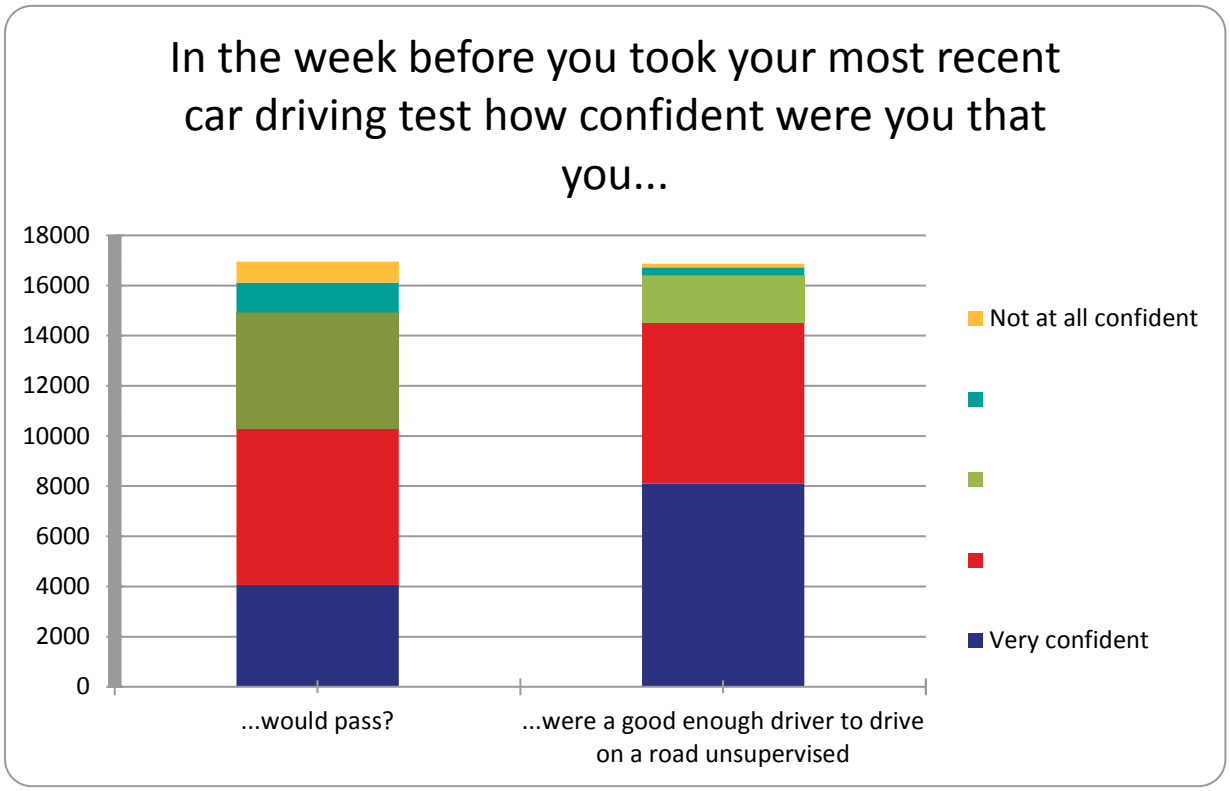


Figure 10

Respondents appear to be more confident that they were a good enough driver to drive on the roads unsupervised than they were that they would pass the test; this could be due to a number of reasons including pre-test nerves and myths about the test. There are small proportions who were 'not at all confident' in either statement.

Each of the statements were coded into interval variables with not confident at all being equal to a score of one and very confident equalling a score of 5. This enabled the use of statistical tests to identify any differences in gender, these are summarised in tables 14 & 15:

In the week before you took your most recent driving test how confident were you that you…would pass?	
Male mean score	3.97
Female mean score	3.54
Difference in mean scores	-.425

Table 14

In the week before you took your most recent driving test how confident were you that you…were a good enough driver to drive on the road unsupervised?	
Male mean score	4.47
Female mean score	4.23
Difference in mean scores	-.242

Table 15

For both statements, males are statistically more confident that females[17] although there is less of a difference between the genders when it comes to being good enough to drive on the road unsupervised. Wider research suggests that cognitive test anxiety affects the test performance of females more than that of males; this is particularly important when reviewing the differing pass rates between the genders.

The issue of recall regarding how people were feeling before their test alongside the subjectivity of the scale could bring the validity of the questions into question however, with such a large sample it is believed that this risk is an acceptable one and overall trends will still be identified.

Now that you have passed….

Section summary:

- Respondents were very confident in their ability as novice drivers.
- Males are significantly more confident than females in their abilities post-test, this same pattern was found in pre-test confidence.
- The biggest difference in the genders was found in the question 'how confident are you that you will be a skilful driver?"
- Very few respondents felt that they need 'a lot of improvement' in any driving skills.
- Parking was the skill in which most respondents felt they needed either a lot of some improvement.
- Perceived levels of improvement needed were notably lower among the 2018 respondents than the respondents to NCG1 in both driving on country roads and following a sat nav.

The penultimate section of the questionnaire was only presented to the 10795 respondents who passed their most recent driving test and were now able to drive independently. It focused on the confidence of the respondents in their own driving and how much improvement they felt they needed in a variety of situations.

Respondents were first asked to rate their confidence in 6 statements regarding their ability now that they had passed their test from 'not at all confident' to 'very confident'.

[17] Independent samples t-tests were run on both statements; $p<0.001$ for both. Non-parametric tests were also run using the median scores for each gender and indicated a significant difference.

Figure 11 shows the confidence ratings in response to each statement.

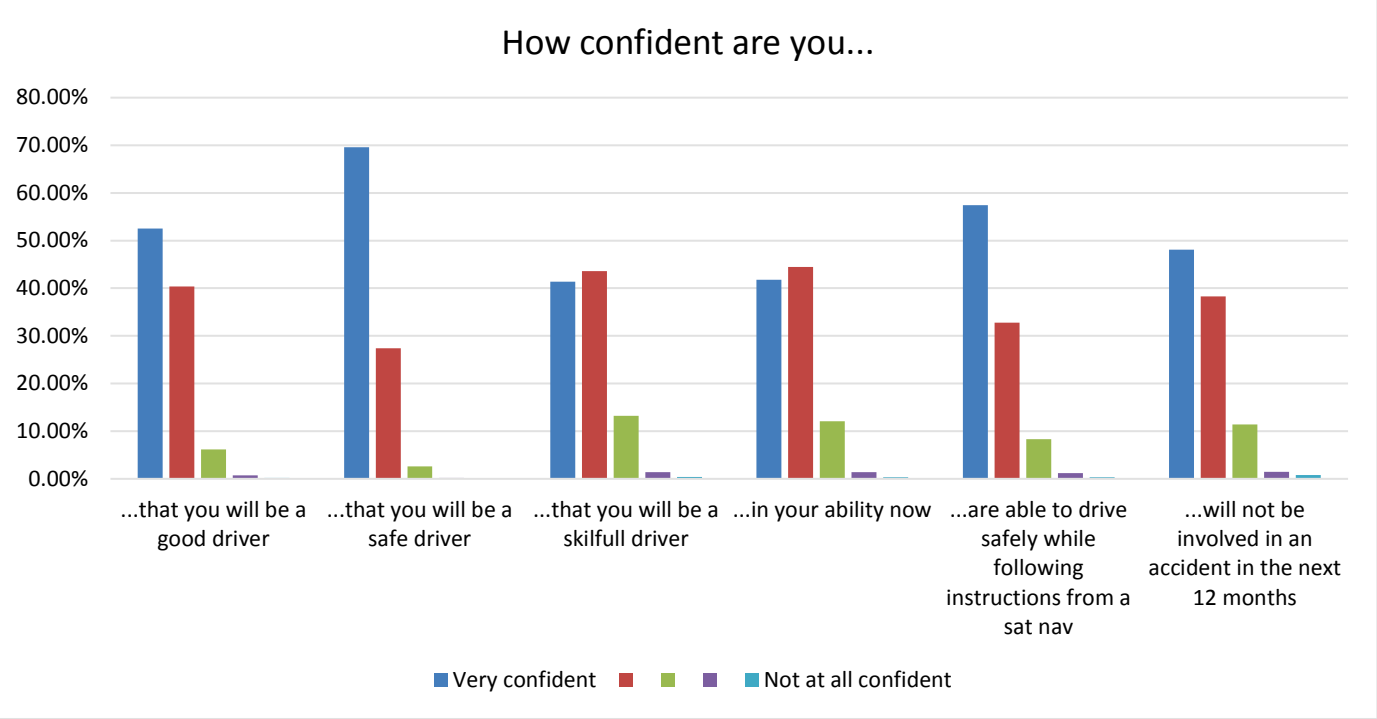


Figure 11

The highest confidence levels are shown in the '…that you will be a safe driver' statement with 97% (10471) of respondents choosing either very confident or the next option down. The lowest levels of confidence are in the '…will not be involved in an accident in the next 12 months' statement with 2.3% (248) choosing either not confident at all or the option next to it. This could be due to the ambiguous wording of the statement; accident may imply that others drivers' skills and abilities could be involved. It may be worth, in future research, ensuring that the statement is directional and implies that the respondent would be the cause of the collision.

Of particular interest to DVSA in relation to the changes made to the driving test is '…are able to drive safely while following instructions from a sat nav'. The figures for this statement are shown in table 16:

How confident are you that you are able to drive safely while following instructions from a sat nav?		
Answer Choice		**Response Percent**
1	Not confident at all (1)	0.3%
2	2	1.2%
3	3	8.3%
4	4	32.8%
5	Very confident (5)	57.4%

Table 16

Unfortunately, direct comparison with NCG1 is not possible as a 6-point scale was employed in the TRL research. However, looking at these results in isolation we can see that there are high levels of confidence amongst the respondents, something DVSA were hoping for through the introduction of the sat nav into the practical driving test.

Cronbach's Alpha and principal component analysis were carried out on all 6 statements, these indicated that all statements weighted towards a single factor and demonstrated high internal reliability (alpha=0.833). For the purposes of this research, this factor has been called 'post-test confidence'.

The replies to each statement were given a score from 1 (not at all confident) to 5 (very confident) to allow for more robust statistical analysis; respondents could therefore score between 30 and 6 on their levels of overall post-test confidence. The descriptive statistics are presented in table 17:

Post-test confidence scores	
Mean score:	26.38
Median score:	27
Mode score:	30
Standard deviation:	3.173

Table 17

2325 respondents scored 30; this is the highest score and indicates that they chose 'very confident' for all 6 post-test confidence indicators.

Males in the sample were significantly more confident than females[18]; this reflects the results of the pre-test confidence statements that were presented previously.

Both genders scored similarly on the question 'how confident are you that you will be a safe driver?' indicating that there is equal importance placed on being a safe driver by both genders. However, there is a slight difference between the genders on both 'how confident are you that you will be a good driver?'[19] And 'how confident are you in your ability now?'[20] with males being significantly more confident on both.

The most interesting of the 4 questions when comparing the genders is 'How confident are you that you will be a skilful driver?' the mean scores for both genders are presented in table 18.

How confident are you that you will be a skilful driver?	
Male mean score	4.38
Female mean score	4.17
Difference in mean scores	-0.214

Table 18

The mean score for males' confidence in this question is significantly higher than that of the females[21]. It is unclear why there is such a prominent difference between the genders for this

[18] An independent samples t-test and non-parametric equivalent were run on the data, which both indicated a significant difference in confidence levels between the genders.
[19] Mean difference -0.181 ($p<0.00$)
[20] Mean difference -0.133 ($p<0.00$)
[21] An independent samples t-test was run on this data ($p<0.001$). Non-parametric equivalent tests confirmed this finding.

question; however, it could be due to the cultural connotations of the word skilful. It is not possible to conclude whether females are personally less confident in their skill or do not attach as much importance to skill as males do.

These questions were followed by matrices of different driving skills and respondents were asked to indicate whether they thought they required no, some or a lot of improvement in each of the skills; those that are of direct interest to DVSA in relation to the new car driving test are presented in table 19. The full data can be found in Appendix E.

Now that you have passed your driving test how much do you think you need to improve your ability in each of the following areas?				
	No improvement needed	Some improvement needed	A lot of improvement needed	Total
Reversing	4522 42%	**5870** **54.5%**	374 3.5%	10766 100%
Parking	3488 32.4%	**6256** **58.2%**	1010 9.4%	10754 100%
Finding your way by following directions on road signs	**5986** **55.6%**	4440 41.2%	347 3.2%	10773 100%
Driving on country roads	**7299** **67.9%**	3139 29.2%	314 2.9%	10752 100%
Finding your way by following directions from a sat nav	**7928** **73.7%**	2686 25%	145 1.3%	10759 100%
Joining with moving traffic on a motorway or fast dual carriageway	4676 43.5%	**4791** **44.6%**	1283 11.9%	10750 100%

Table 19

These responses were compared with the results from TRL NCG1 in order to ascertain any changes between the two groups however; we are unable to tell at this point if any changes are as a direct result of the test.

The results of the two groups follow the same pattern for three of the driving skills; reversing, joining with moving traffic on a motorway or dual carriageway and following directions from road signs.

The level of improvement needed by both groups in parking follow a similar but interesting pattern. Illustrated in figure 12:

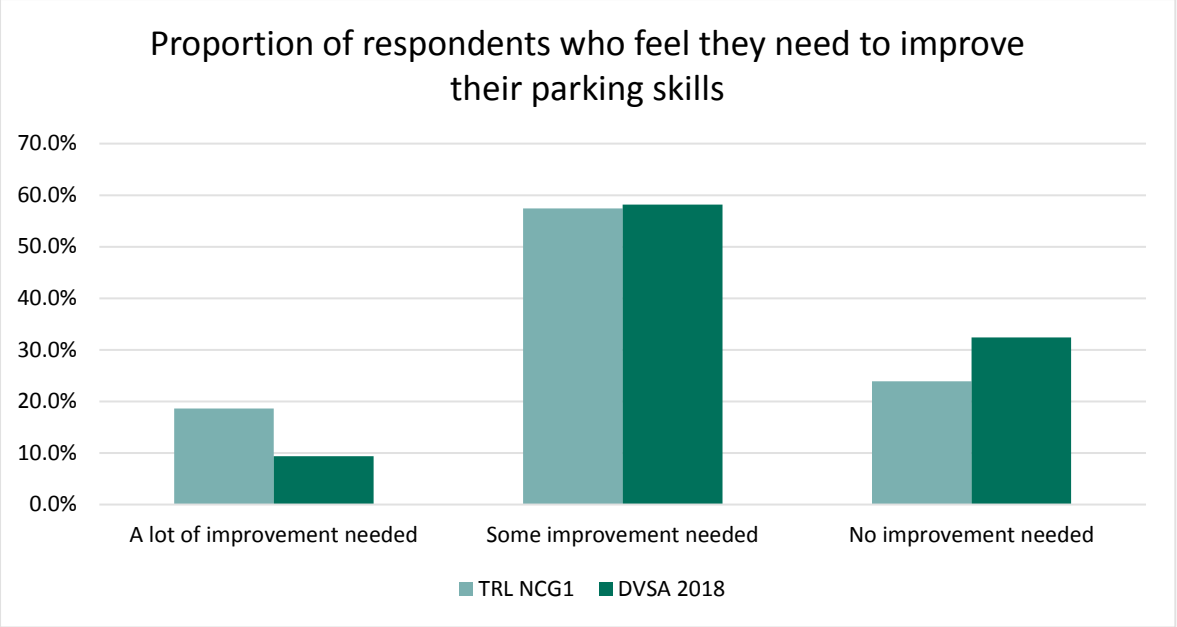


Figure 12

More than any other skill parking was the one for which the majority of respondents felt they needed some or a lot of improvement. It would be hoped that the new parking manoeuvres introduced into the driving test in December 2017 would help to improve novice drivers' confidence in parking; this should be monitored in the coming years.

Both driving on country roads and following instructions from a sat nav were driving skills targeted through the introduction of the new driving test; the differences in the perceived levels of improvement in these skills needed by each cohort reflect this.

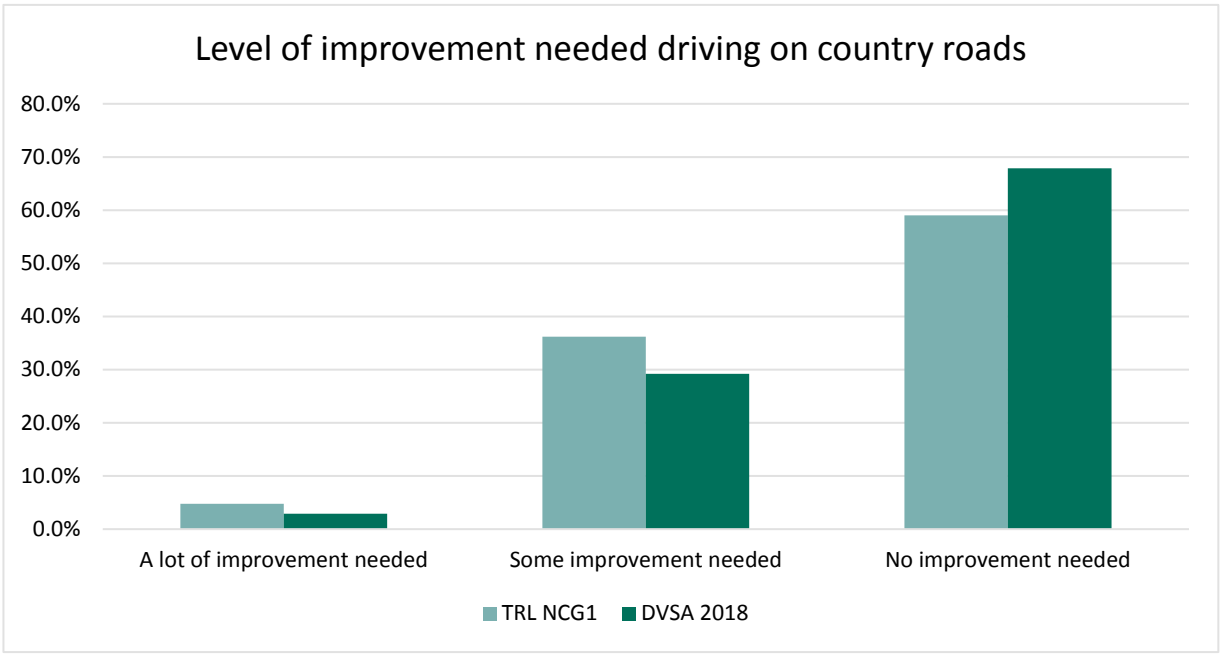


Figure 13

59% of NCG1 felt that they needed no improvement driving on country roads, this number is 67.9% (7329) for those who took part in the DVSA research 2018; an 8.9% difference. There is also a 2% difference between the percentage of each group who felt they needed a lot of improvement (4.8% of NCG1 and 2.9% (313) of DVSA 2018).

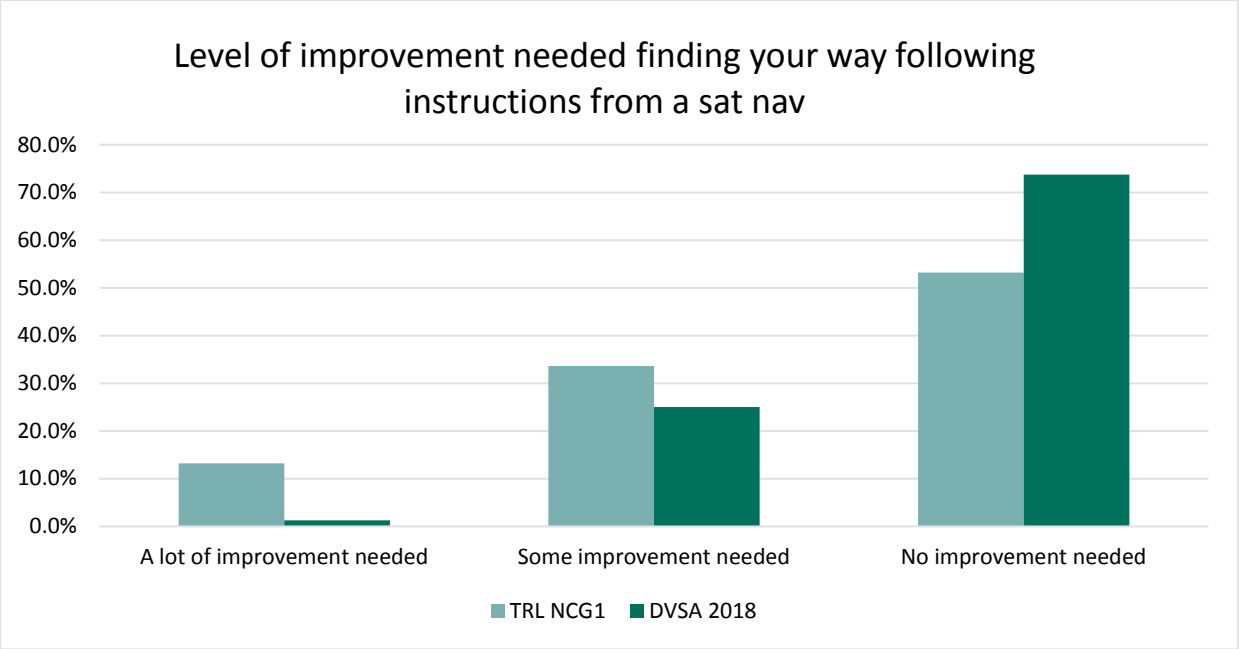


Figure 14

Only 1.3% (140) of the respondents to our research felt that they needed a lot of improvement following instructions from a sat nav, this is compared to 13.2% of those from NCG1. The difference is even starker when looking at those who feel that they need no improvement, the figures for this are 73.7% (7955) and 53.2% respectively reflecting the main change made to the practical driving test in 2017.

Attitudes and risk propensity

The final section of the questionnaire focussed upon attitude towards risk and sensation seeking of the respondents.

Section summary:

- Respondents showed high levels of agreement with non-risky statements regarding driving however this could be affected by social desirability bias.
- The spread of answers regarding risky attitudes towards elements of driving does not enable reliable conclusions to be drawn at this point.
- Respondents showed relatively low sensation seeking however this could be affected by social desirability bias.

Respondents were first asked to indicate how far they agreed with a series of statements about driving on a scale from strongly agree to strongly disagree. These have been used in previous research with learner and novice drivers and are intended to measure driver attitudes to aspects like speeding and driving style.

Answers have been summarised in table 20.

Please indicate how much you agree or disagree with the following statements						
	Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly Disagree	Total
Decreasing the motorway speed limit is a good idea	895 5.3%	2305 13.7%	5281 31.3%	**5476** **32.5**	2895 17.2%	16852 100%
Even at night-time on quiet roads it is important to keep within the speed limit	**11235** **66.7%**	4354 25.8%	756 4.5%	397 2.4%	110 0.7%	16852 100%
Drivers who cause accidents by reckless driving should be banned from driving for life	3897 23.1%	**4752** **28.2%**	4576 27.2%	3172 18.8%	455 2.7%	16852 100%
People should drive lower than the speed limit when it is raining	4799 28.5%	**8446** **50.1%**	2746 16.3%	777 4.6%	84 0.5%	16852 100%
Cars should never overtake on the inside lane even if a slow driver is blocking the outside lane	4577 27.2%	**6217** **36.9%**	4092 24.3%	1685 10%	281 1.7%	16852 100%
In towns where there are lots of pedestrians the speed limit should be 20mph	4670 27.7%	**7075** **42%**	2910 17.3%	1938 11.5%	259 1.5%	16852 100%
Penalties for speeding should be more severe	2577 15.3%	4404 26.1%	**5849** **34.7%**	3278 19.5%	744 4.4%	16852 100%
Increasing the motorway speed limit is a good idea	1570 9.3%	5271 31.3%	**6066** **36%**	2609 15.5%	1336 7.9%	16852 100%

Table 20

The modal answer to each statement has been highlighted in bold in order to enable the identification of any patterns in the data. In most of the statements, respondents opt for the middle three options rather than showing any strong agreement or disagreement. This is particularly obvious in figures 15 and 16:

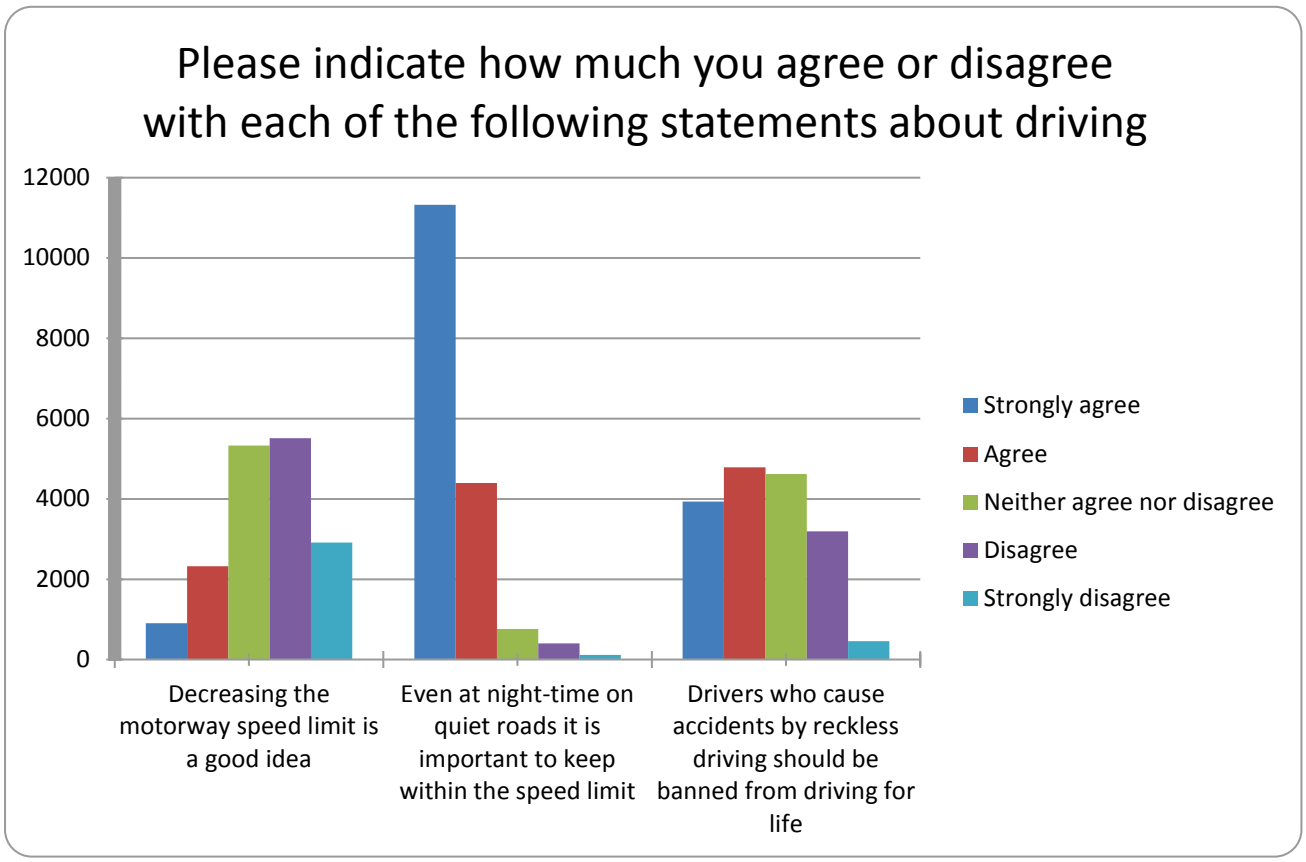


Figure 16

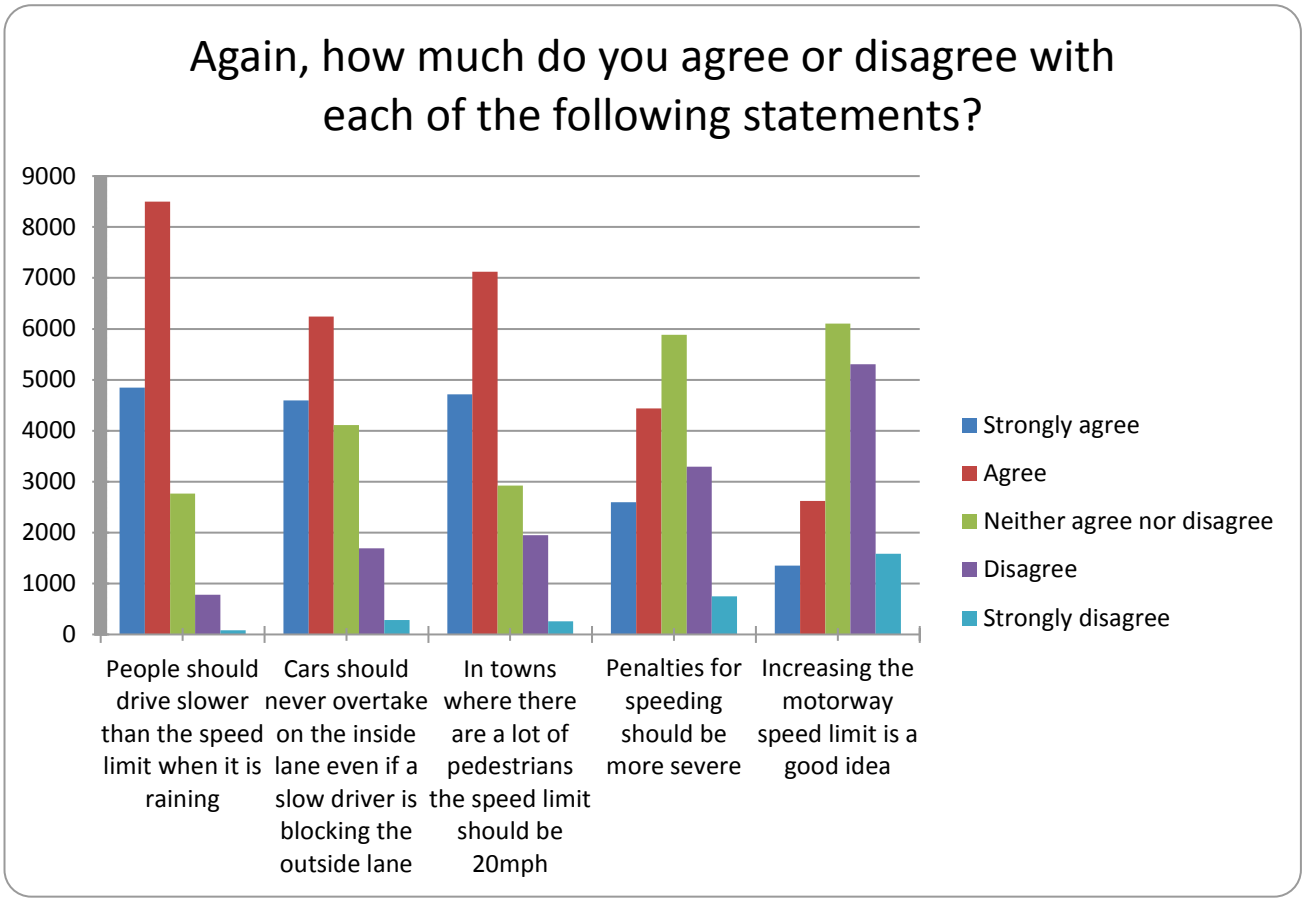


Figure 15

Factor analysis was run on the data; this indicated that all of the statements are weighted towards one factor, which, for the purposes of this report, has been called 'Driving attitudes'.

The data was then converted to numerical values where strong agreement was equal to 5 and strong disagreement was equal to 1; the final statement was reverse coded. They were then added together to create the variable 'Driving attitudes' with the maximum score of 36 (least risky) and a minimum score of 12 (most risky). The descriptive data for this variable are summarised in table 21.

Descriptive statistics for variable 'driving attitudes'	
Mean	28.72
Median	29
Mode	29
Standard deviation	4.6

Table 21

Although many answers tend to be grouped around the middle options, there is a general tendency for respondents to sway towards the least risky options, as illustrated by the mean, median and mode being around 29. It is not possible to tell at this point if this could be a result of social desirability bias[22].

The same questions were asked of the respondents to time point 2. This will enable a comparison of attitudes of novice drivers over the first 6 months of their independent driving career[23].

5-point scales were then used which asked respondents to rate how well a series of statements that are unrelated to driving described them from 'not at all' to 'very well'. These scales have been used in past research into young drivers and crash involvement to measure the sensation seeking behaviour of respondents[24].

The scales were coded with 'not very well' being equal to score of 1 and 'very well' equalling a score of 4 (there were two reverse coded items in the scales within which 'not very well' became a score of 4 and 'very well' became a score of 1).

Factor analysis was completed on the sensation seeking scale, however this indicated that there were 2 factors present and therefore the scale cannot be statistically analysed as loading towards one factor 'sensation seeking'. The 5 statements that loaded towards one factor were:

- When I listen to music I like it to be loud
- If I were to go to an amusement park, I would prefer to ride the roller coasters or other fast rides
- I like the feeling of standing next to the edge of a high place and looking down
- I like a movie where there are a lot of explosions and car chases

[22] Social desirability bias is "a distortion of data that is caused by respondents' attempts to construct an account that conforms to a socially acceptable model of belief or behaviour" (Bryman 2008, p699).
[23] Scales will be converted to numerical values to enable a same samples t test to identify any significant differences between the attitudes of the drivers at the two time points.
[24] One statement was removed from use in this research, this was 'I can see how it must be exciting to be in a battle during a war'; this was excluded as it was felt it had very outdated male connotations. The statements were therefore presented to respondents as two scales of 4 statements rather than 3 scales of 3 statements each.

- It would be interesting to see a car accident happen.

Only one statement regarding gambling loaded onto the second factor and the two statements about cold water and working well under pressure did not load to either factor[25].

Consequentially, all future analysis carried out on the 'sensation seeking' scale within this report will only take into account the 5 factors that load onto the first factor with other 3 statements being disregarded.

Cronbach's alpha was used to measure the internal reliability of the 'sensation seeking' scale, this indicated an acceptable level of internal reliability (=0.581) there was no improvement upon this score with the removal of any of the statements.

Each respondents' scores were added together to create a single score for sensation seeking, the highest sensation seeking score being 20 and the lowest sensation seekers scoring 5. The descriptive data for this variable are summarised in the table below:

Descriptive statistics for variable 'sensation seeking'	
Mean	10.4
Median	10
Mode	11
Standard deviation	2.9

Table 22

It can be concluded from this data that most respondents are scoring low on the sensation seeking scale but social desirability bias should again be taken into account.

The sensation seeking data will come into more use when looking at crash risk in the following chapters.

[25] The minimum coefficient was set to 0.3 as this is deemed acceptable.

Time point 2 results overview

Time point 2 received 2289 responses, a response rate of 33%.

Demographics

Like the time point 1 sample there is an over-representation of female respondents (69.9%). This again is reflective of responses to past DVSA research and is a risk of self-completion online questionnaires.

There is again representation from all ethnic groups although a larger percentage at time point 2 identify as English/Welsh/Scottish/Northern Irish/British (84.3%, 1928).

2.9% (66) of the respondents reported that they have a disability that does or could affect their driving, roughly the same proportion as those at time point 1.

The age range of the time point 2 sample is slightly younger than that achieved at time point 1, with 57.6% (1320) of the sample aged between 17 and 21.

The full socio-demographic data of the sample can be found at Appendix F.

The test

Respondents were asked to think back to their test and how well they feel it has prepared them for their first 6 months of driving independently on Britain's roads.

Section summary:

- 81.2% of respondents felt that the test prepared them well for driving on Britain's roads.
- Respondents see their lack of motorway training as a disadvantage and feel this is a great addition to the learning to drive process.
- Comments indicate that the addition of sat nav and new manoeuvres, particularly those around parking, have been received well and reflect real life driving.
- Novice drivers also feel that, although the test prepared them well for the roads there is a big difference when driving independently that should not be underestimated.

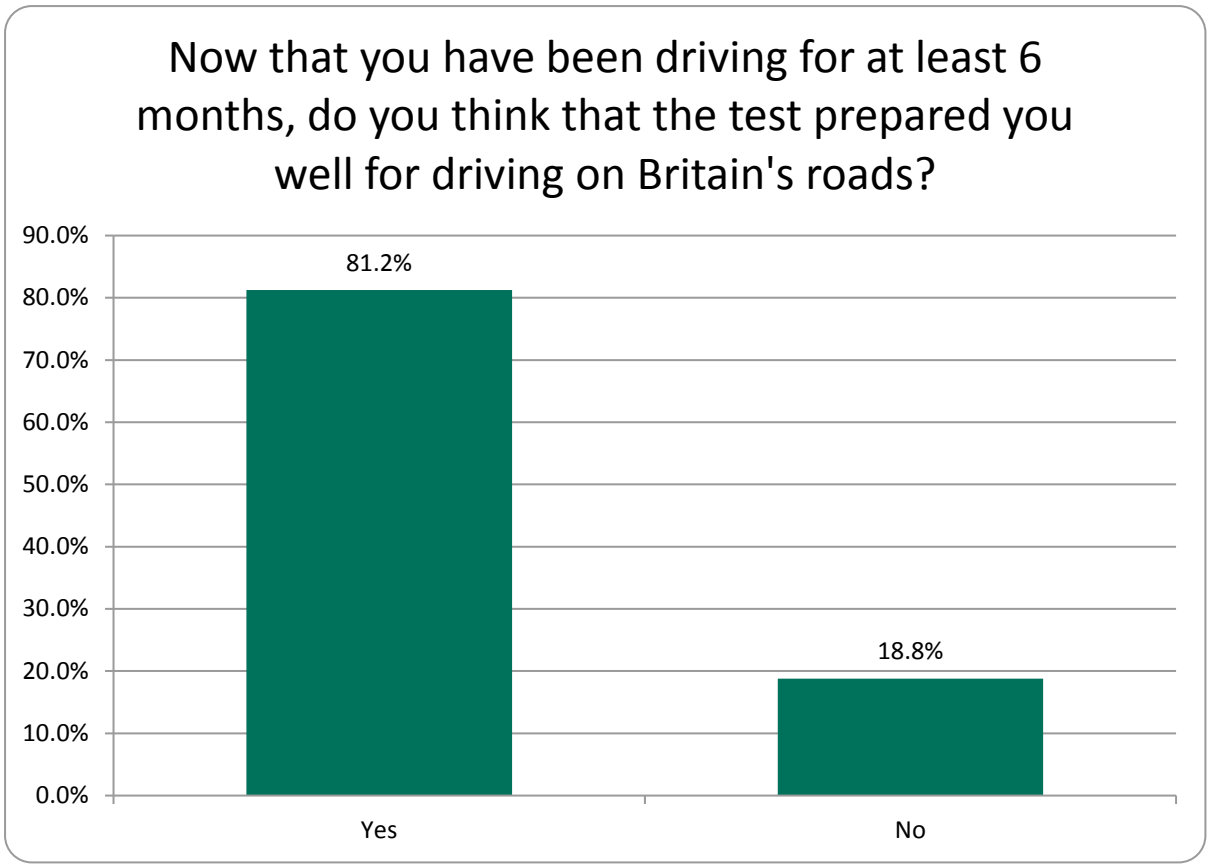


Figure 17

Figure 17 shows that 81.2% (1852) of respondents thought that the test prepared them well for driving on Britain's roads. This is encouraging for DVSA.

Respondents were then invited to expand upon their answer and let us know why they had chosen either yes or no. 1379 responses were received, these were first filtered into those who answered 'yes' and those who answered 'no' and were thematically analysed, this is presented in tables 23 and 24.

Comments where the respondent answered 'no' to the previous question (389):

Theme	Explanation
Motorway driving	This was the largest group, they lamented the lack of motorway driving in the test and lessons and feel that they would have benefitted from this throughout their learning. June 2018 saw the introduction of legislation enabling ADI's to take their learners onto motorways, it is hoped that this will have counteracted some of the comments left here.
Taught to pass (Rote learning)	These respondents felt as though they were taught to simply pass the test rather than taught to drive on the roads after their test. Some of these mentioned that their learning involved what seemed to be just driving the routes that the driving test would take.
Other drivers/road users	This theme relates to the actions of other drivers on the roads, the respondents understand that where the test and lessons have taught them to control a car they are not prepared for

	the unpredictability of experienced drivers who seem to have less regard for them now they are not driving a car with 'L' plates.
Type of roads	This relates closely to those who felt disadvantaged by the lack of motorway learning but includes more road types such as a lack of learning on narrow country roads and in busy town centres. This would appear that some ADIs are not including these roads in their training as much as their candidates would like or need them to. DVSA wants to encourage learners to feel empowered to ask their ADI for the training they feel they need.
Learn after the test	This comprised a large group of respondents who answered that although the test and learning taught them the basics of driving the main bulk of their skills and confidence were learnt after the test. They feel that driving after the test is a completely different experience particularly when you are driving on you own with no ADI or instructor. They believe that there is nothing like that experience which can be duplicated in the driving test.
Other elements	Some mentioned other elements of driving that they would like to see in the test, these related to more practical car care elements such as filling up with petrol and changing a tyre.

Table 23

Comments where the respondent answered 'yes' to the previous question (988):

Theme	Explanation
Reflective of real life	This was the largest group of comments, the respondents felt that the test and preparation for the test is reflective of the modern driving experiences they have had so far. The sat nav and new manoeuvres were specifically mentioned here as invaluable additions needed by new drivers to be able to navigate Britain's roads.
Covers everything	This group do not expand much upon the feeling that the test covered everything that they needed to enable them to be a safe driver. It is inclusive of the rules of the road including knowledge of the highway code, the meaning of road signs and markings and the ability to deal with a range of situations they would encounter when driving.
Confident or comfortable	Those who said that the lessons leading up to and passing the test has helped them to feel confident and comfortable in a range of situations when driving. Some quote feeling confident straight away while others report taking a while longer for their confidence to grow as they needed time to adjust to driving alone.
Range of road types/weather conditions	This group praise the test for the inclusion of many different types of roads such as country roads and busy town centres. They don't just focus on the test but also upon the number of different roads they visited during their training also, this is reflected in chapter one of this report. There is mention of the lack of motorway practice within these comments.

Yes, but…	This comprised quite a large group of respondents and includes three sub-groups which relate closely to three themes which appeared amongst those who answered no to the previous question: • Those who felt that, although they got to practice and test on a variety of roads, they would have benefitted from the addition of motorway driving. • Those who felt that, although the test prepared them for the basics of driving on the roads, it is the after test experience that has given them real confidence in their driving. • This group answered yes and felt that they were prepared for driving on Britain's roads but that there are a number of other 'experienced' drivers on the road who make it much more difficult for new drivers.

Table 24

An interesting group were those who mentioned that they had previously failed a test; they have not been included in the tables as they do not directly answer the above question but it was felt that their input was important for DVSA. This group, more often than not, acknowledge their gratitude that they failed their previous attempts. This is because their experiences have helped them to learn further and cement good driving practices. This could be used in order to support and encourage ADIs to carry out accurate and realistic mock tests with their candidates where faults can be identified before test.

Although respondents are grateful for different road types they were able to gain experience on during learning and their test, one of the main elements running through both of these tables is the feeling of lack of motorway experience. It is hoped that this has now been counteracted with the introduction of legislation allowing learner drivers to drive on motorways.

Novice drivers recognise the value of the learning they received in the lead up to the test and experiences on test but feel that driving independently after the test is also a time of learning and consolidation of skills they have been taught

The first 6 months

This section asked respondents about their first 6 months of driving, it includes questions regarding further training, use of in-car technologies and questions regarding when, where and why they drive.

Section summary:

- 7.3% of respondents have done further training since passing their test, the most common being on road with an instructor.
- 37.5% of respondents had driven every day since passing their test followed by 33.2% who have driven 4-6 days a week.
- 3.5% of respondents had not driven at all since passing their test.
- Respondents are most likely to drive to get to and from their place of work or study and least likely to drive as part of their work.
- Only 5% of respondents never carry passengers with 38.8% sometimes carrying passengers.
- Respondents have driven on a wide range of roads however; they are most likely to have never driven on a motorway.
- 86.3% of respondents use a sat nav at least 'sometimes' when driving.

Additional training

7.3% (167) of respondents told us that they had done some further training since they passed their test.

They were then asked what type of further training they had completed. They were presented with a number of options alongside an 'other' box if they felt none of the options sufficiently described their training. The results are presented in figure 18 (percentages do not add up to 100% as respondents were able to choose multiple options.)

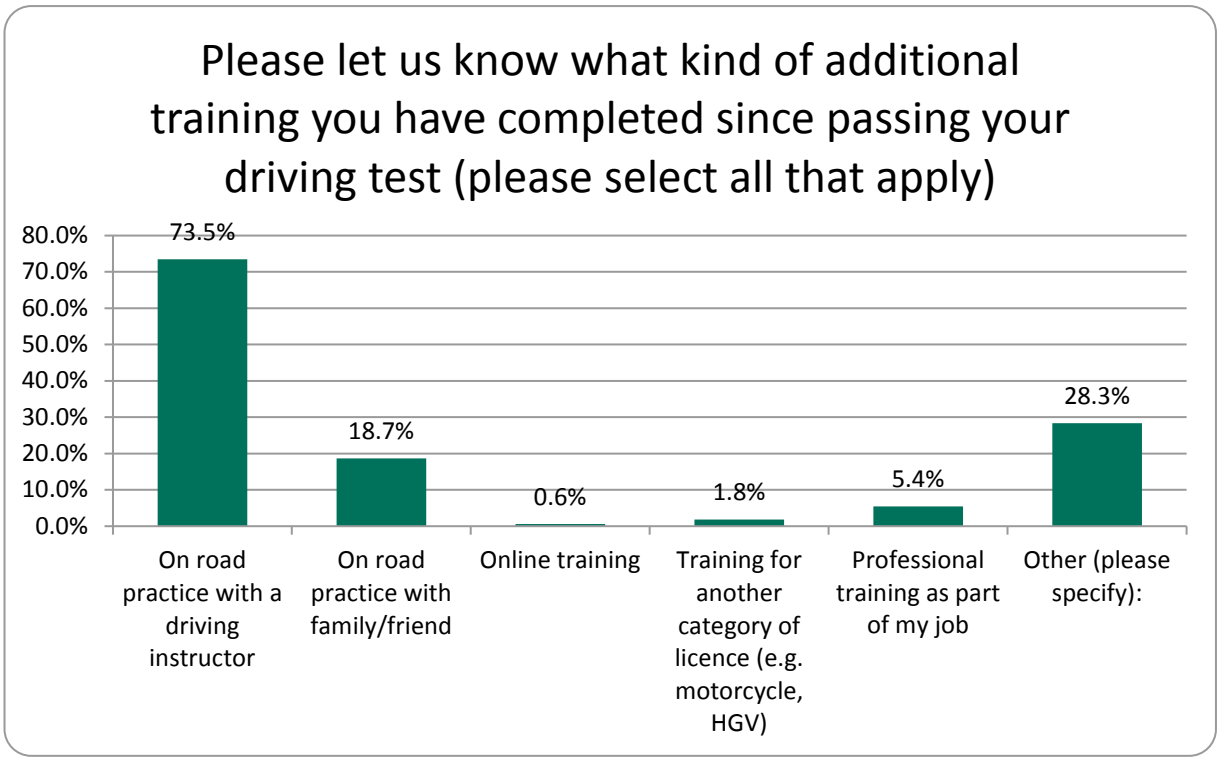


Figure 18

46 comments were received against 'other'; however, it was felt that as 42 of these were either 'pass plus' or 'motorway lessons' they would belong in 'On road practice with a driving instructor'. The other 4 comments are below:

- Driving Seminar with my works insurance company
- skid pan training
- I have begun the IAM Roadsmart Advanced Course
- A police course - safe driving

Why and with who our respondents drive

We were interested to know if respondents had regular access to a vehicle, they were again presented with a set of options alongside an 'other' option to which they could leave a comment.

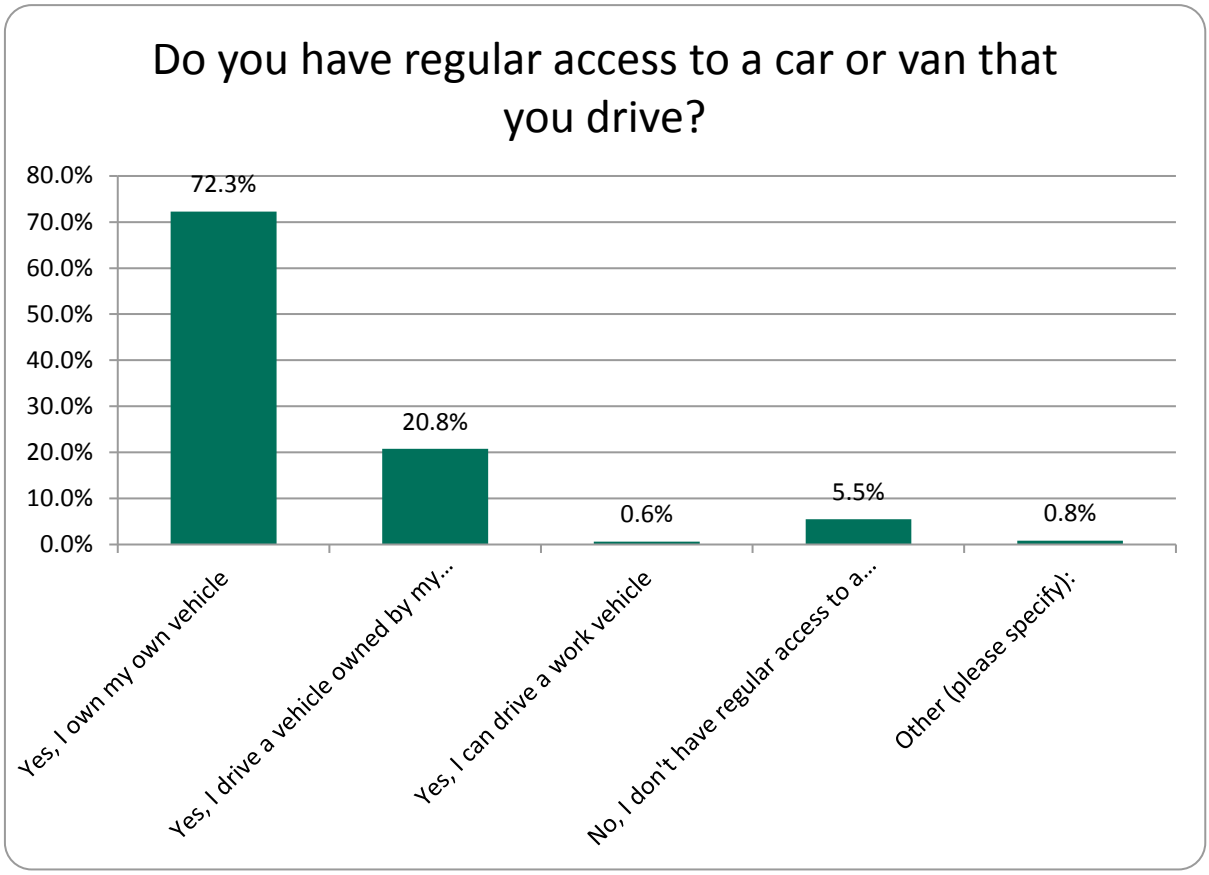


Figure 19

1655 respondents had access to their own vehicle with a further 475 being able to drive a vehicle owned by their parents or other relatives.

18 comments were received, these can be condensed into 3 themes:

- Access to car owned by family/partner
- Own and work vehicles
- Hire or lease cars

In order to ensure that respondents were not asked further questions that were irrelevant to them they were asked how often they had driven in the past 6 months, answers have been summarised at figure 20:

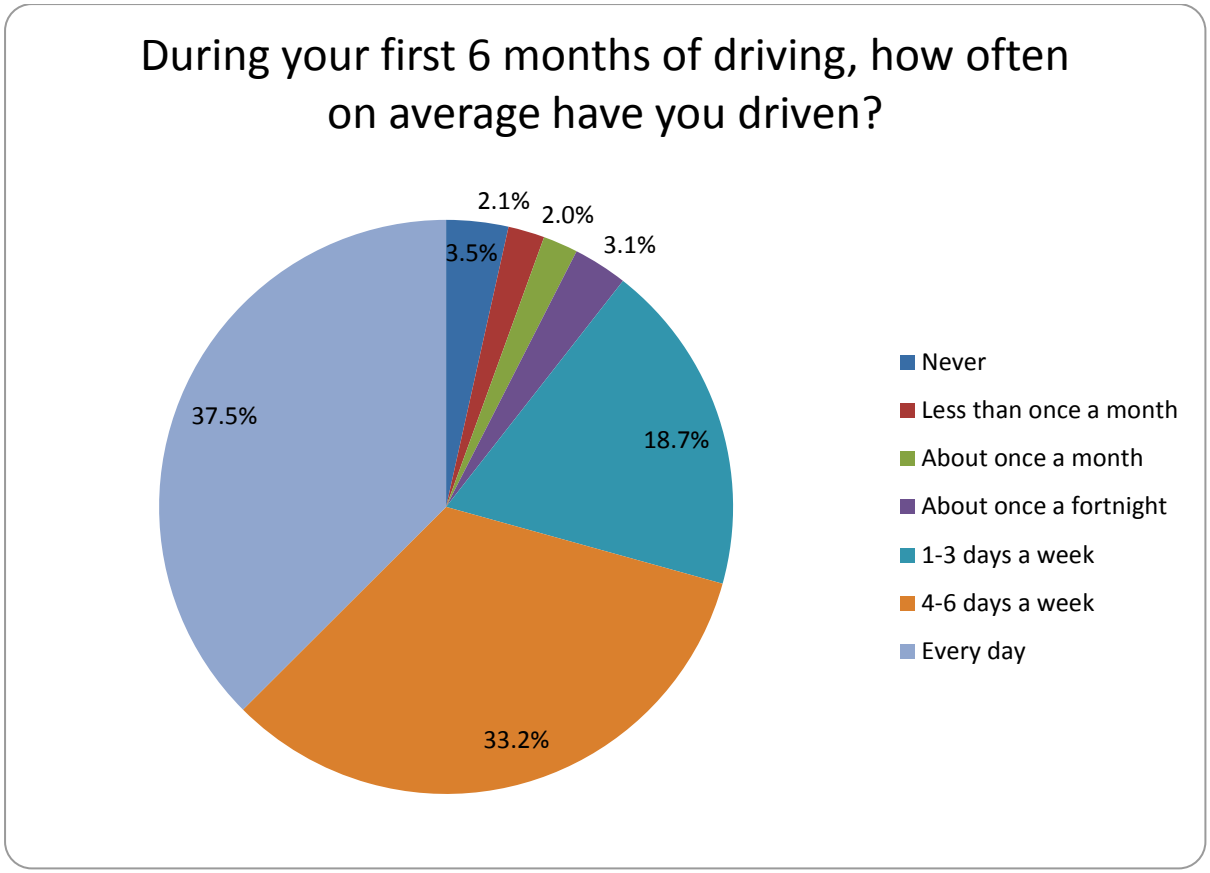


Figure 20

The most common answer was every day (858) followed by 4-6 days a week (760).

The 3.5% (80) respondents who answered 'never' were disqualified from the next set of questions regarding what they drive for and where and when they drive.

The remaining 2209 respondents were first asked how often they drove for the following 4 reasons; to get to and from their place of work or study, as part of their work, for social reasons and for other personal reasons. Overall, the question did not yield any surprising results and tend to support the answers to the previous question.

60.6% (1310) of the respondents never drove as part of their work; this is unsurprising as they only have 6 months of independent driving experience however, nearly 25% of the sample drive more than once a week as part of their work.

In opposition to this is are those who drive to get to and from their place of work or study, only 17.4% (381) never drive for this reason compared to 73.9% (1621) who drive at least once a week for this reason.

The reason for which the respondents are least likely to never drive is for social reasons; only 2.3% (51) respondents answered this way. A stacked bar chart of the data for all options can be found at Appendix G.

The carrying of passengers, particularly peers is often a risk factor with new drivers so DVSA were interested to know how often the respondents carried passengers when they drove.

Only 1.4% (32) of respondents never carried passengers when they drove, the most common answer was 'sometimes' with 38.8% (856) answering this way. Only 5% (111) of respondents carried passengers every time they drove. Full data for this can be found at Appendix H.

Where our respondents drive

Respondents were then asked how often, in their first 6 months of driving, they had driven on a variety of road types and in a variety of weather conditions. Unfortunately, due to an administrative error (there was a mistake in the wording of the scale options) the data is not directly comparable with that gathered by TRL.

During your first 6 months of driving, how often on average did you drive…							
		Never	Less than 2 hours	2-4 hours	4-8 hours	More than 8 hours	Response total
1	…on busy roads outside of town centres	49 2.3%	362 16.8%	395 18.3%	374 17.4%	**973** **45.2%**	2153 100%
2	…in a busy town or city centre	78 3.6%	437 20.3%	430 20%	392 18.2%	**816** **37.9%**	2153 100%
3	…on country roads	168 7.8%	480 22.3%	378 17.6%	366 17%	**761** **35.3%**	2153 100%
4	…in quiet residential areas	14 0.7%	350 16.5%	444 20.6%	395 18.3%	**950** **44.1%**	2153 100%
5	…in other quiet areas	368 17.1%	**833** **38.7%**	408 19%	247 11.5%	297 13.8%	2153 100%
6	…on fast dual carriageways	90 4.2%	357 16.6%	415 19.3%	441 20.5%	**850** **39.5%**	2153 100%
7	…on motorways	545 25.3%	388 18.0%	307 14.3%	330 15.3%	**583** **27.1%**	2153 100%

Table 25

The most interesting figure in this table is that 545 (25.3%) of respondents reporting having never driven on a motorway in their first 6 months of driving. This links in well with previous comments regarding their lack of confidence on motorways due to lack of training; it could be that this is causing them to self-regulate, choosing not to drive on motorways. However, this could also be due to geographical constraints.

The full data regarding time candidates spent driving in different weather conditions can be found at Appendix I.

Technology

In recent years, due to technological innovation there has been an increase in the amount of automation and technology available for use when driving. DVSA were interested to know whether this was being used by novice drivers, particularly as technology has been incorporated into the driving test in the form of a sat nav.

Respondents were given the option of a number of in-car technologies and asked to select any and all they currently use, as they were able to choose more than one percentages do not equal 100%.

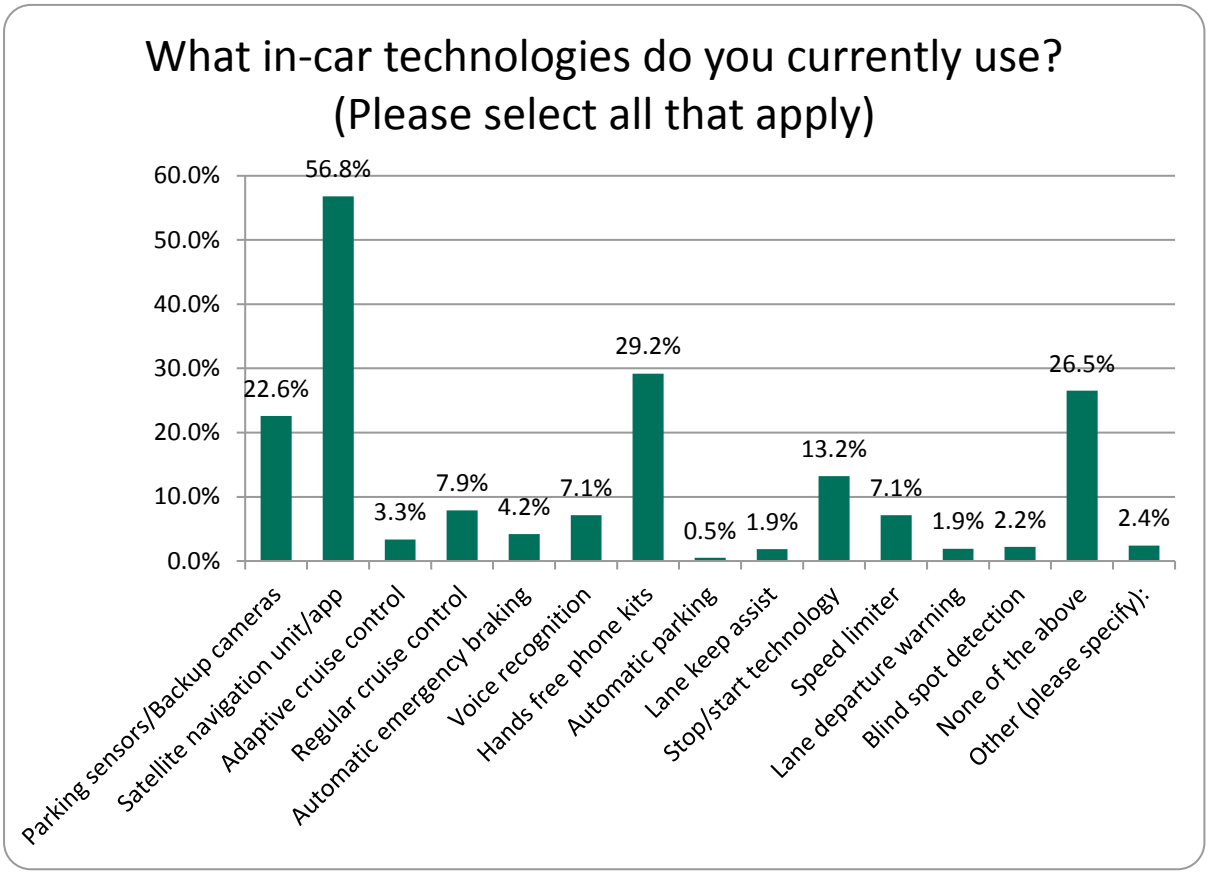


Figure 21

It is not surprising that over half of the respondents (1242) report using a sat nav given that they are now trained to use them as part of the test. However, it is surprising that over 25% (580) of respondents report not using any of the listed in-car technologies.

Those who selected other and left a comment can be sorted into 4 different categories:

- Black box (there is a question later in the survey which asks about the use of a black box)
- Dash cam
- Hill-start assist
- Entertainment technology such as Bluetooth and aux cables.

It can be concluded from this that there are a wide variety of in-car technologies being used by novice drivers from the beginning of their driving careers with sat navs being the most commonly used.

Respondents were then asked how often they used a sat nav or sat nav app in their car, including apps on smart phones and other devices.

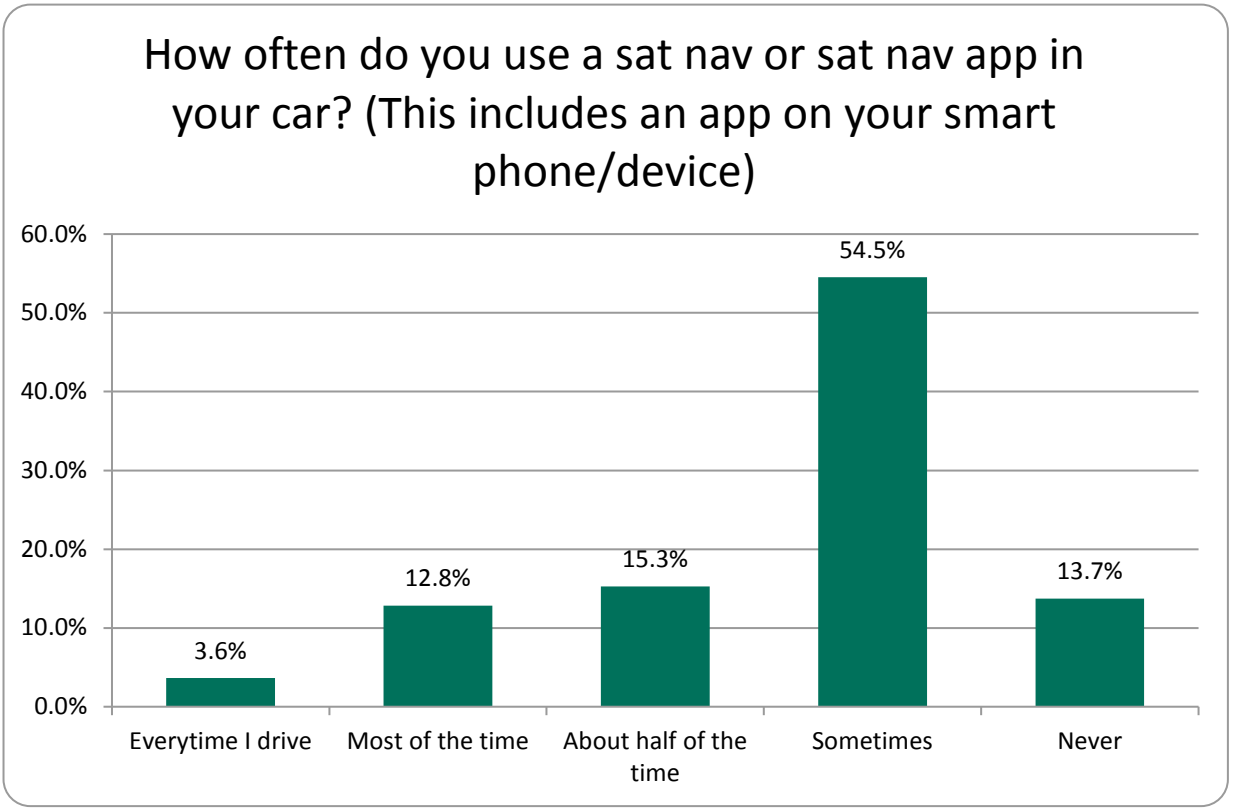


Figure 22

The answers to this question contradict those to the previous question as only 13.7% (303) report never using a sat nav or sat nav app. This could be due to the ordered nature of the options, they may have felt that they do not use the sat nav enough to report it in the previous questions; it could also be due to the explicit inclusion of apps on phones and other smart devices in this question.

The majority (86.3%/1903) of respondents use a sat nav at least 'sometimes' while they are driving, It is not possible to tell if this is reflective of real life driving practices or if these candidates are more likely to have used a sat nav whilst driving as they have been trained to do so.

The final question about the use of technology whilst driving asked respondents if they were a named driver on a telematics or black box insurance policy. 39% (860) answered that they were and a further 49 were not sure. The aim of a black box insurance policy is to encourage drivers to be safer on the roads in exchange for discounts and rewards.

Confidence

The next section of the questionnaire repeated a number of questions that were asked in time point 1 regarding confidence and levels of improvement needed in a range of driving skills; this allowed for within group comparisons that will be presented in chapter 3.

Section summary:

- There has been an overall reduction in confidence levels of candidates within their first 6 months of driving.
- Respondents have high levels of confidence when using a sat nav.
- Males are significantly more confident than females in all aspects.
- Candidates feel they need most improvement on parking, closely followed by joining with moving traffic on a motorway or fast dual carriageway
- 64% of respondents feel they need no improvement driving on country roads.
- 1.5% (34) of respondents answered that they felt that needed a lot of improvement driving while following instructions from a sat nav compared to 5.5% of NCG1&2.

Only those who answered all sections were included in the analysis to ensure reliability of the data, this meant that 2189 responses were included.

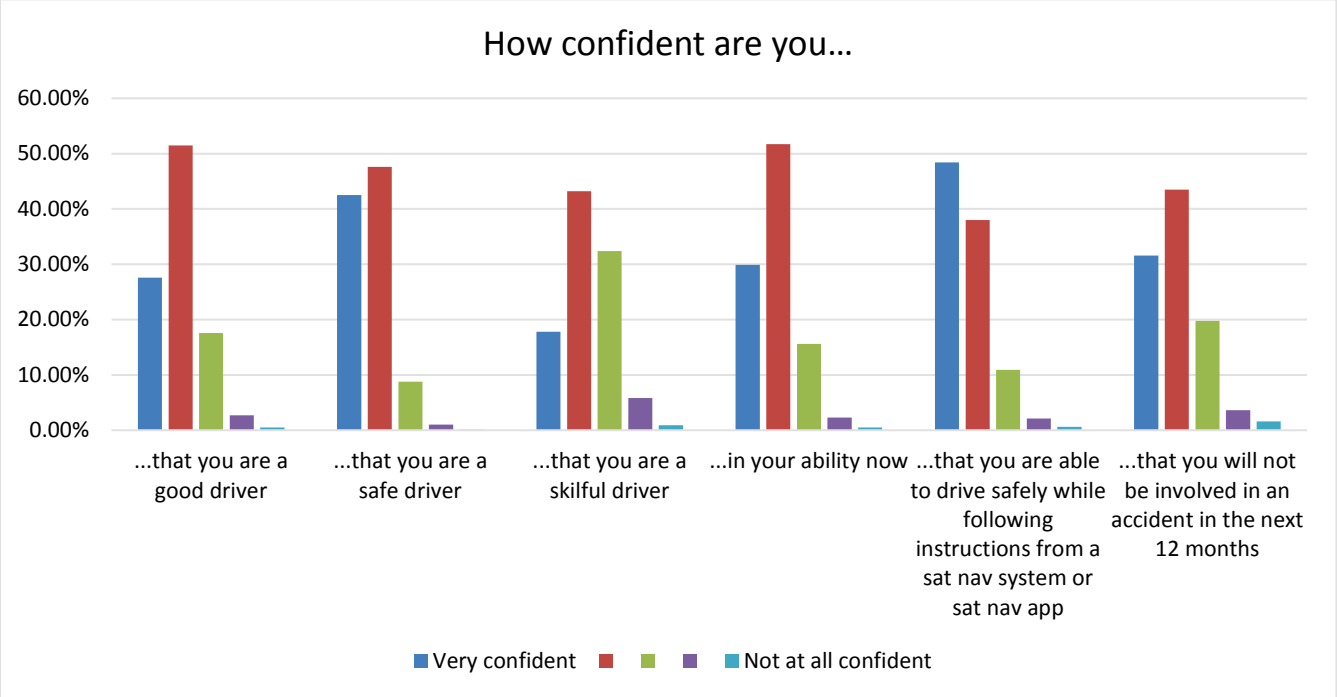


Figure 23

At first glance, figure 23 shows an overall reduction in confidence levels for each statement since time point 1; this will be explored in further detail in the following chapter.

Despite the fall in overall confidence levels, like time point 1 the highest confidence levels are exhibited for the statement "…that you will be a safe driver" with 90.1% (1986) of respondents choosing either 'very confident' or 'confident'. However, at time point 2 the lowest confidence is

shown in "…that you are a skilful driver" with only 61% (1347) selecting the same 2 options and 6.6% (146) choosing the two lowest confidence levels.

The data for the statement '…that you are able to drive safely while following instructions from a sat nav' are presented in table 26 below:

How confident are you that you are able to drive safely while following instructions from a sat nav?		
Answer Choice		**Response Percent**
1	Not confident at all (1)	0.6%
2	2	2.1%
3	3	10.9%
4	4	38.0%
5	Very confident (5)	48.4%

Table 26

There are still high levels of confidence among respondents that they can drive safely using a sat nav; this is encouraging for DVSA.

Like in time point 1 the replies to each statement were given a score from 1 to 5 with 1 being equal to not confident at all and 5 being equal to very confident. These scores were added together to create a variable called "6 months post-test confidence"[26]. The highest possible confidence score was 30 and the lowest score is 6. The descriptive statistics for this are in the table below:

Post-test confidence scores	
Mean score:	24.47
Median score:	25
Mode score:	24
Standard deviation:	3.643

Table 27

All descriptive statistics are very close together with an acceptable standard deviation, 285 respondents chose the modal answer of 24.

The highest difference between the mean scores of the genders was on the statement '…that you are a skilful driver'[27] reflecting the findings of timepoint 1, the smallest difference between the genders was for '…that you will not be involved in an accident in the next 12 months'[28].

Like time point 1, this was followed with a set of questions relating to how much improvement the candidates felt that they needed on a range of driving skills; no improvement, some improvement or

[26] Factor analysis was run on the statements, it was found that they all weighted strongly towards one factor. Cronbach's alpha was then performed on this scale which indicated very good internal reliability (=0.884).
[27] Mean difference -0.31 (p=0.00)
[28] Mean difference -0.09 (p=0.00)

a lot of improvement. Full data for the question can be found in appendix J, the skills of most interest to DVSA in relation to changes to the driving test are presented in table 28 with modal answers highlighted in bold:

Now that you are at least 6 months on from passing your test how much do you think you need to improve your ability in each of the following areas?				
	No improvement needed	Some improvement needed	A lot of improvement needed	Total
Reversing	912 41.3%	**1193** **54.1%**	102 4.6%	2207 100%
Parking	675 30.6%	**1305** **59.1%**	227 10.3%	2207 100%
Finding your way by following directions on road signs	1050 47.6%	**1051** **47.7%**	104 4.7%	2205 100%
Driving on country roads	**1425** **64.7%**	701 31.8%	77 3.5%	2203 100%
Finding your way by following directions from a sat nav	**1648** **74.8%**	522 23.7%	34 1.5%	2204 100%
Joining with moving traffic on a motorway or fast dual carriageway	**1191** **54.0%**	806 36.6%	207 9.4%	2204 100%

Table 28

10.3% (227) of respondents felt that they needed a lot of improvement in their parking skills making it the skill in which respondents felt they needed the most improvement.

This is closely followed by joining with moving traffic on a motorway or fast dual carriageway for which 9.4% (207) respondents answered they needed a lot of improvement; this is not a surprising finding considering the previous comments and answers provided throughout this research. We would expect to see a change in this figure following the introduction of legislation allowing learners on motorways. Further research is to be conducted into this in 2019.

These responses were compared with the results of TRL's NCG1 & NCG2 answers to their novice driver questionnaire (NDQ) in order to ascertain any notable difference between the two groups. Similar to time point 1, perceived needed levels of improvement among both groups followed the same pattern for most of the skills.

There is negligible difference between the two groups when it comes to perceived level of improvement needed when driving on country roads, around 64% of both groups felt they needed no improvement on these roads.

Only 4.7% (104) respondents to the DVSA research answered that they required a lot of improvement finding their way by following road signs compared to 7.7% of those in NCG 1&2. This lends support to the case that although candidates are spending time learning to drive using a sat nav they still feel confident using road signs while driving.

The largest difference between the two groups can be seen in figure 24, this shows the perceived level of improvement needed following instructions from a sat nav. Only 1.5% (34) of respondents to the DVSA 2018 research answered that they felt that needed a lot of improvement, this contrasts with 5.5% of NCG1&2. The opposite pattern is seen for those who felt they needed no improvement with 74.8% (1648) and 63.4% (1337) of the groups answering this way respectively. Like the results at time point 1 this is highly reflective of the largest change made to the driving test in 2017.

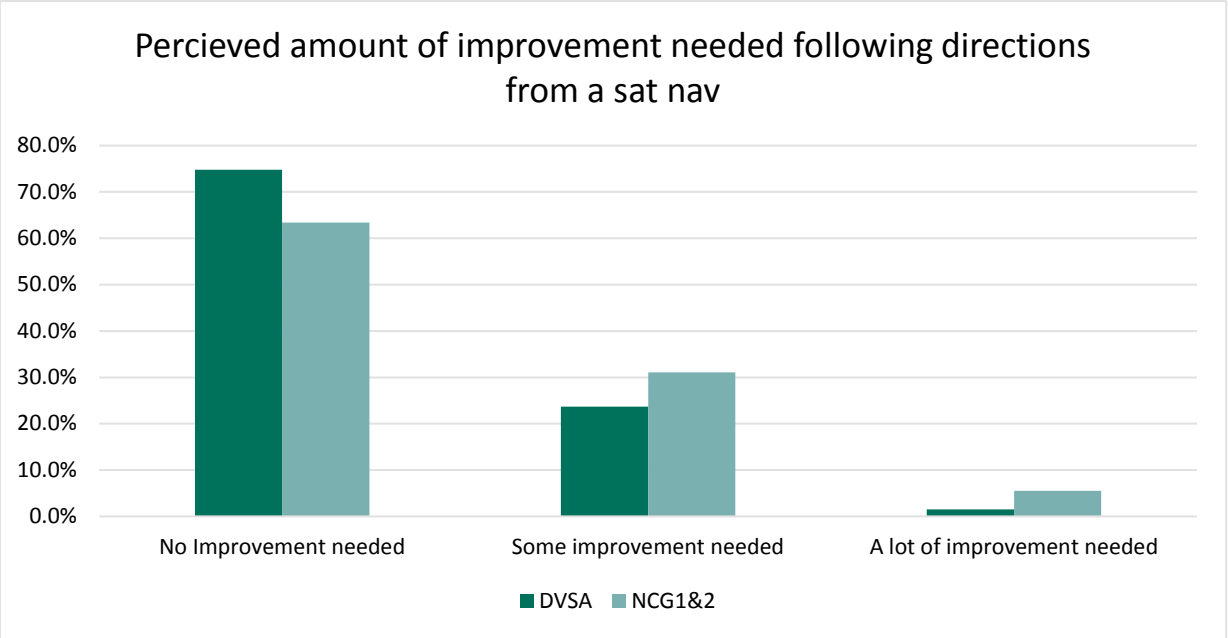


Figure 24

Collisions

This section of the questionnaire asked respondents questions about any collisions they may have had since passing their driving test. It includes questions regarding where the collisions happened, who/what else was involved and what the purpose of the journey was.

It is worth noting here that due to the nature of our self-selecting sample and reliance on memory, there is a high chance that the amount and seriousness of collisions are underestimated and therefore ability to generalise these findings beyond the sample achieved is limited.

Section summary:

- 71.1% of respondents had had the impression of a near miss at least once in their first 6 months of driving independently.
- 87.4% of respondents were not involved in a collision during their first 6 months of having a driving licence with 0.3% of respondents involved in 3 or more collisions.
- The most common journey purposes on which collisions occurred were 'travelling to and from your place of work/study' or 'travelling for personal reasons'.
- Collisions were most likely to occur in town and city centres and in car parks, service areas or petrol stations.
- They are least likely to occur on motorways and fast dual carriageways.
- 228 collisions involved other cars and vans whereas 2 involved pedestrians or motorbikes.

Respondents were first asked how many times they had felt that they had a near miss in their first 6 months of driving. The largest proportion (59.6%, 1316) answered that they felt that they had had this impression once or twice, followed by 28.9% (639) who answered that they had never had the impression of a near miss. Only 1.8% (39) of respondents answered that they had this impression 6 or more times during their first 6 months of driving.

From here respondents were asked to let us know how many collisions they had been involved in in their first 6 months of having a driving licence; as we are only interested in the car practical test it was specified that these collisions were when they were driving a car or a van. The results are shown in figure 25.

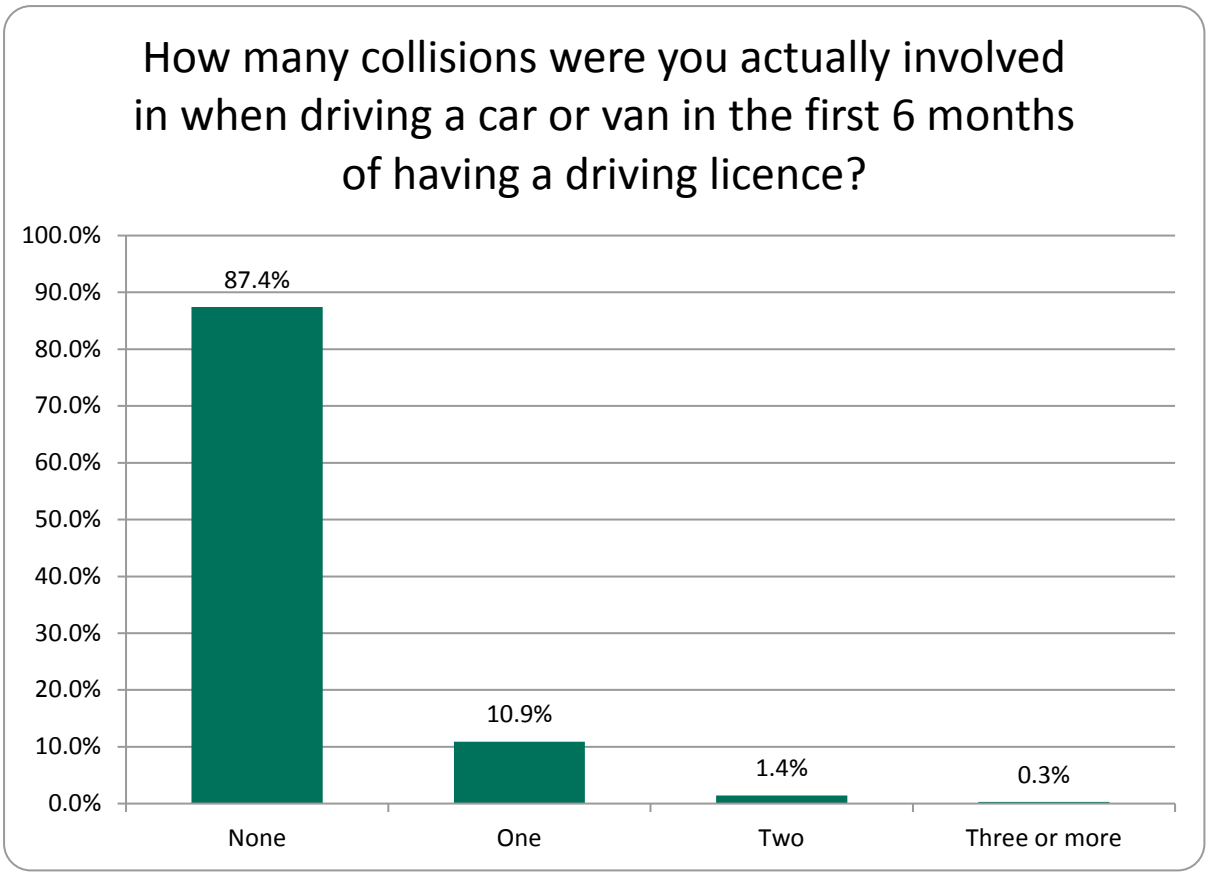


Figure 25

87.4% (1931) of the respondents answered that they have had no collisions in their first 6 months with only 0.3% (6) of respondents reporting three or more.

Although it is recognised the data is not directly comparable, these findings were compared to TRL's NCG2 as the samples were taken at the same time of year (January 2018 and January 2016 respectively).

A higher proportion of respondents to the DVSA research reported no collisions, 87.4% compared to 85.2% of NCG2.

Furthermore, of NCG2 5.9% of the sample didn't drive (in the first 6 months post-test) whereas only 3.5% of our sample didn't drive during their first 6 months of driving. This indicates that our sample are driving more, but of those who are driving, fewer are reporting collisions.

Respondents were asked some basic details about the collisions in which they were involved. Those who had reported no collisions skipped straight to the next section regarding driving attitude and risk propensity.

For every collision (1st, 2nd, 3rd and only) the most common journey purposes were 'travelling to and from your place of work/study' or 'travelling for personal reasons'. This is unsurprising as they were the two most popular purposes for which our respondents reported driving earlier in the questionnaire. Those who answered 'other' were asked to specify what the purpose of their journey was to which only a few comments were received, some were deemed to fit into the personal reasons category and the others tended to fall into 3 categories:

- Parking up or in a car park
- Was not driving at the time
- Running errands

Respondents were than asked where the collisions happened, there were 327 collisions reported overall, the answers have been collated and are presented in figure 26 below:

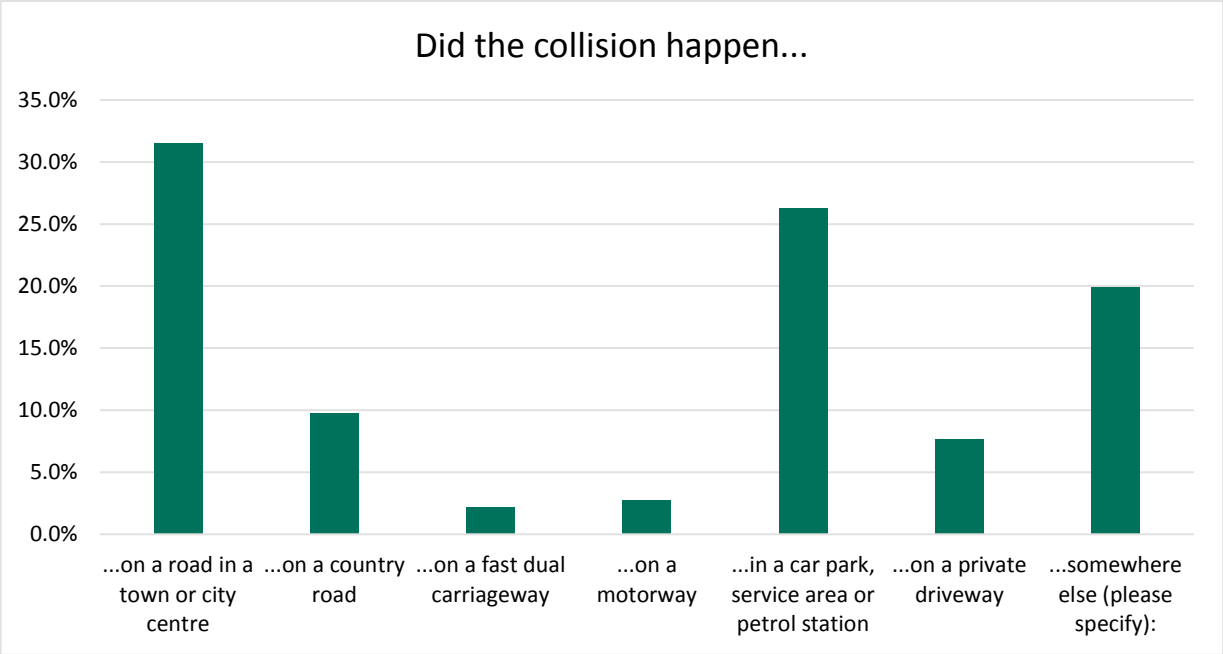


Figure 26

Collisions were most likely to happen on a road in a town or city centre (31.5%, 103 collisions happened on this type of road). This is followed by 26.3% (86) that happened in a car park, service area or petrol station; this is particularly interesting when looking at the amount of improvement respondents feel they need parking in which over 58% felt they needed at least some improvement.

Less than 10 of the reported accidents happened on each of fast dual carriageways and motorways (9 and 7 respectively). This again links to previous questions in which 25.3% (545) of candidates had never driven on a motorway, however, this is not the case for fast dual carriageways on which 39.5% (850) of respondents had driven for over 8 hours. It is not possible to tell if this low amount of collisions is a result of the increased levels of practice learner drivers are receiving on these roads.

Overall, the areas that the collisions are reported to have happened indicate that the majority may have been at low speed with relatively little damage inflicted, although this cannot be confirmed.

65 (19.9%) respondents selected the 'somewhere else' option and were asked to specify where this was; 65 comments were received and these can be grouped into 6 additional answers, these are listed in descending order:

- On a roundabout
- On a residential street
- On an industrial estate
- On a side/quiet road

- At a junction
- While stationary

324 respondents went on to let us know what else was involved in the collision other than their own vehicle, they were given a number of options and their answers are presented in below figure 27:

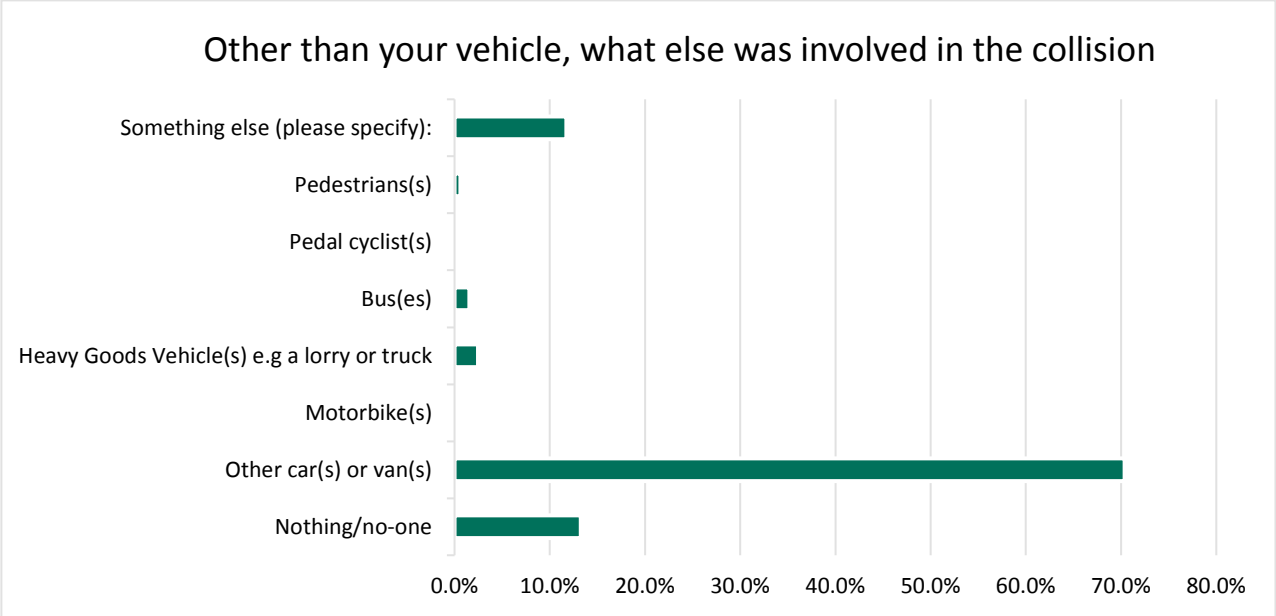


Figure 27

The vast majority of collisions reported involved other cars or vans (70.4%, 228) with none involving either pedal cyclists of motorbikes. Only two of those reported involved pedestrians.

38 comments were received from those who selected 'something else'; these have been thematically grouped;

- Stationary street furniture including things like posts, bollard, walls and bushes
- Other cars (this could be incorporated into the above option)
- Street design including kerbs and traffic islands
- Small animals e.g. birds

Collision data will be used further in the following chapter in relation to a number of factors.

Attitudes and risk propensity

The final section of the time point 2 questionnaire mirrored that of the time point 1 survey and focussed on the respondents' attitudes towards risk and sensation seeking.

This enables the attitudes of respondents to be tracked overtime on their journey from learner to novice driver. These answers will also be used in chapter 3 in relation to the number of collisions respondents have been involved in.

Section summary:

- Agreement with the statements regarding driving behaviours exhibits the same patterns as that shown at time point 1.
- Respondents show relatively low risky behaviour and sensation seeking however, this could be affected by social desirability bias.
- Further conclusions will be drawn in chapter 3 relating to collisions and change over time.

Respondents were presented with the same set of statements relating to risky driver behaviour as they were in time point 1.

Answers have been summarised in figures 28 and 29 below, the full table of data can be found in appendix K.

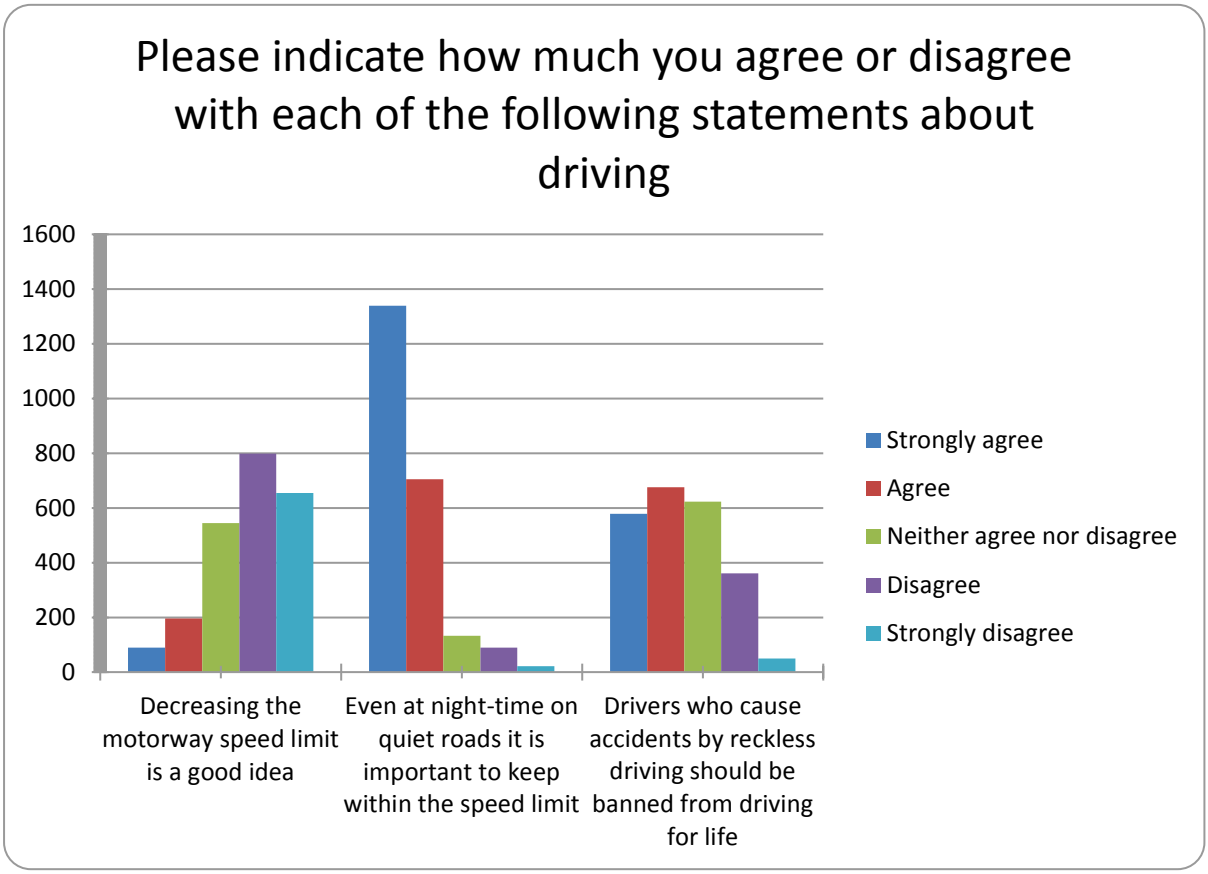


Figure 28

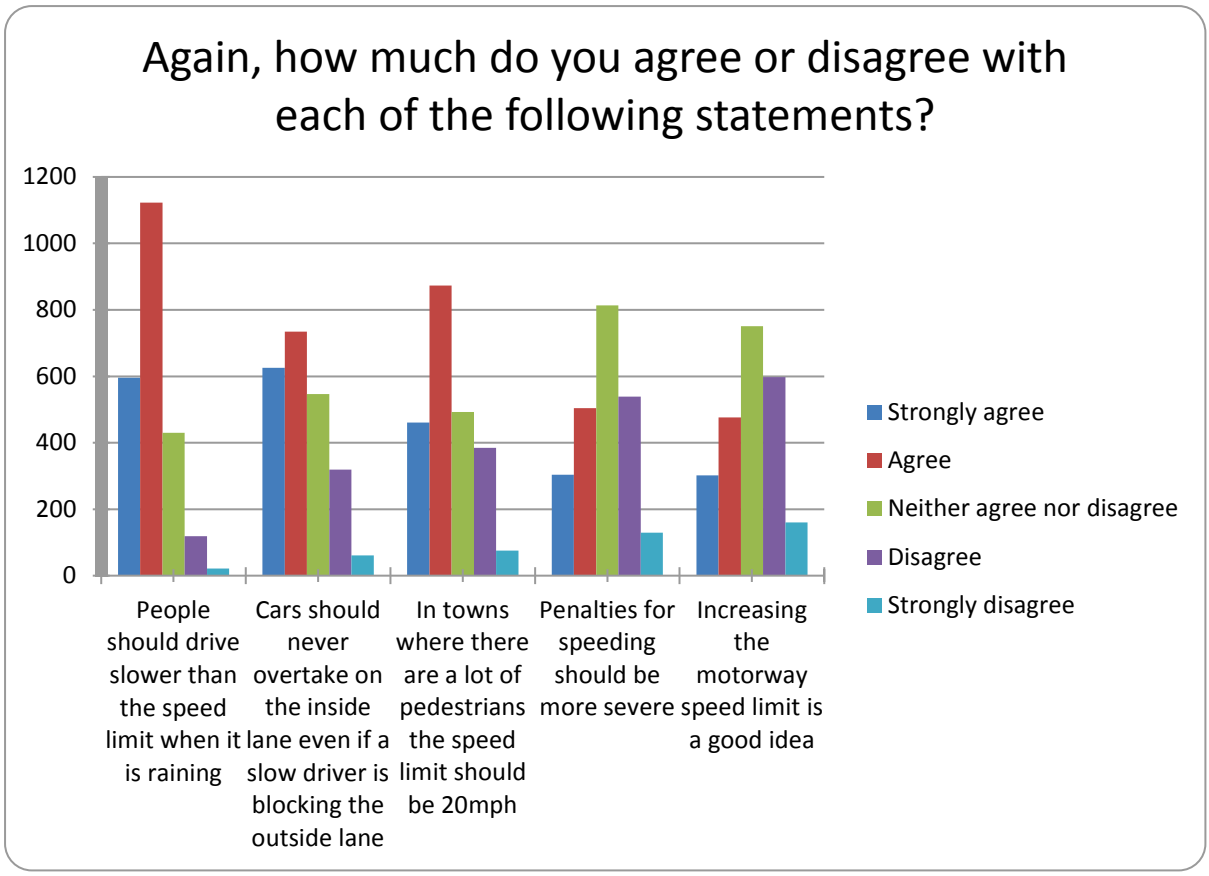


Figure 29

Both graphs reflect the same overall patterns of agreement that were present at time point 1. It is again important to take into account the possible effects that social desirability bias may have on the data for these questions.

The 'driving attitudes' factor was again employed[29] and answers converted to numerical values where strong agreement was equal to 5 and strong disagreement was equal to 1; the final statement reverse coded. Therefore, like in time point 1 the maximum score for driver attitude is 36 (least risky) and the lowest score is 12 (most risky). Only those who had provided an answer to all items in the scale were included in this analysis, this equates to 2278 respondents.

Descriptive statistics are presented below:

Descriptive statistics for variable 'driving attitudes'	
Mean	27.5
Median	28
Mode	30
Standard deviation	5.05

Table 29

This again shows that the respondents are grouping around the least risky options with the mean, median and mode all grouped between 27 and 30. However, the standard deviation of 5 indicates

[29] I did not deem it necessary to re-run factor analysis (page 34) as the questions are the same as those used at time point 1 and reflect the same patterns. Cronbach's alpha suggested high internal reliability (0.755).

some deviation from this range. These figures will be compared to those gathered at time point 1 within chapter 3.

5-point scales were then used which asked respondents to rate how well 8 statements that are unrelated to driving described them from 'not at all' to 'very well'. The scales were coded with answers of 'not at all' being equal to a score of 1 and 'very well' equalling a score of 4 (there were two reverse coded items in the scales within which 'not at well' became a score of 4 and 'very well' became a score of 1). The responses of 2271 respondents were used in the analysis of the scale as they fully completed the scale.

Due to previous factor analysis on the data which indicated that only 5 statements loaded onto the factor 'sensation seeking', only the below have been included in the analysis:

- When I listen to loud music I like it to be loud.
- If I were to go to an amusement park, I would prefer to ride the roller coasters or other fast rides.
- I like the feeling of standing next to the edge of a high place and looking down.
- I like a movie where there are a lot of explosions and car chases.
- It would be interesting to see a car accident happen.

Cronbach's alpha was run on the data which indicated an acceptable level of internal reliability (alpha=0.548).

Like at time point 1 scores were added together to create a single score for the variable 'sensation seeking'. The highest possible score was 20 and the lowest 5; the descriptive statistics have been summarised below:

Descriptive statistics for variable 'sensation seeking'	
Mean	10.9
Median	11
Mode	12
Standard deviation	2.8

Table 30

Again, we see a similar pattern to that shown at time point 1 in that respondents are mainly grouped around the middle of the scale. Social desirability should be considered a possible confounding factor here.

Chapter three – further statistical tests

The following section will use statistical tests to explore some of the results presented in chapters 1 and 2 in further detail. This will include the effects of pre-test practice and confidence on pass rate along with how the attitudes and behaviours differ between those who have and have not had at least one collision in their first 6 months of driving.

It would be advantageous to keep in mind when reviewing this section, the possible effects the self-selecting sample can have on the data including the high proportion of females and the high pass rate of the respondents.

Section summary:

- Those who had practice with friends and family were 1.5 times more likely (at best) to pass their most recent driving test attempt.
- Those who exhibited the highest level of pre-test confidence that they would pass the test were the most likely to fail their most recent driving test.
- Levels of confidence at the point of test pass and 6 months into their driving career have decreased by a mean of 1.49 points and the modal answer decreased from 30 to 24.
- Levels of confidence in each statement of the scale decreased with the smallest decreases being in the questions '…in your ability now' and '…that you are able to drive safely while following instructions from a sat nav system or sat nav app'.
- There have been negligible changes in the attitudes of our respondents to risky driving behaviours.
- Age and gender of our sample do not have significant affect upon the likelihood of the respondent to have had a collision in their first 6 months of driving.
- Those who have had a collision in their first 6 months of driving had higher sensation seeking attitudes and less positive attitudes towards safe driving behaviours at test pass.

Pre-test practice

Practice with an ADI

Unfortunately, the non-normal distribution of the data regarding the hours of practice respondents had with ADIs along with the large number of extreme outliers (see Appendix B) does not facilitate the use of robust statistical tests. This prevents concrete claims to a relationship between the number of hours practice a respondent has had with an ADI and the likelihood of them passing their driving test.

A recommendation for those wishing to conduct further research into the area would be to use a multiple-choice question format consisting of answer ranges to enable respondents to approximate how many hours they spent practising with an ADI whilst providing the researchers with usable, ordinal data.

Practice with friends and family

An investigation into the effects of practice with friends and family upon pass likelihood found a significant relationship between the two variables. This found that 5547 of the 8036 (69%) candidates who practiced with friends and family passed their test; and that 5242 of the 8956

(58.5%) of those who did not practice with friends and family passed their most recent attempt at a driving test. A chi-square test indicated a statistically significant association between practice with friends and family and test pass ($p<0.001$). However, the large sample size can cause an artificial inflation of significance indicated by chi square so caution needs to be exercised when using this test. The magnitude of the association was found to be 0.11 (11%); a small effect.

Further investigation (odds ratio) into the association between pass likelihood and practice with friends and family was carried out. This found that the odds of test pass of those who had practice with friends and family was (at best estimate) 1.5 times that of individuals who had not had practice with friends and family during their learner journey. The 95% confidence interval (1.48, 1.68) does not cross 1; this increases confidence that this is a real effect present in the data.

Confidence levels

Pre-test confidence and pass rate

As discussed in the results to time point 1 candidates were asked to rate their confidence in the question "In the week before you took your most recent car driving test how confident were you that you would pass?" on a scale from 'not confident at all' (1) to 'very confident' (5). Spread of the answers was checked for normality before any tests were conducted.

The data collected was treated as an ordinal variable and was used to explore the association between pre-test pass confidence and actual test pass. The results of the cross-tabulation of the two variables are presented in table 31 and figure 30.

		Pass	Fail	Total
Confidence would pass	Not at all confident	546 65.3%	290 34.7%	836 100%
	2	786 66%	405 34%	1191 100%
	3	2989 64.6%	1637 35.4%	4626 100%
	4	4194 67.2%	2045 32.8%	6239 100%
	Very confident	**2251** **55.5%**	**1806** **44.5%**	4057 100%

Table 31

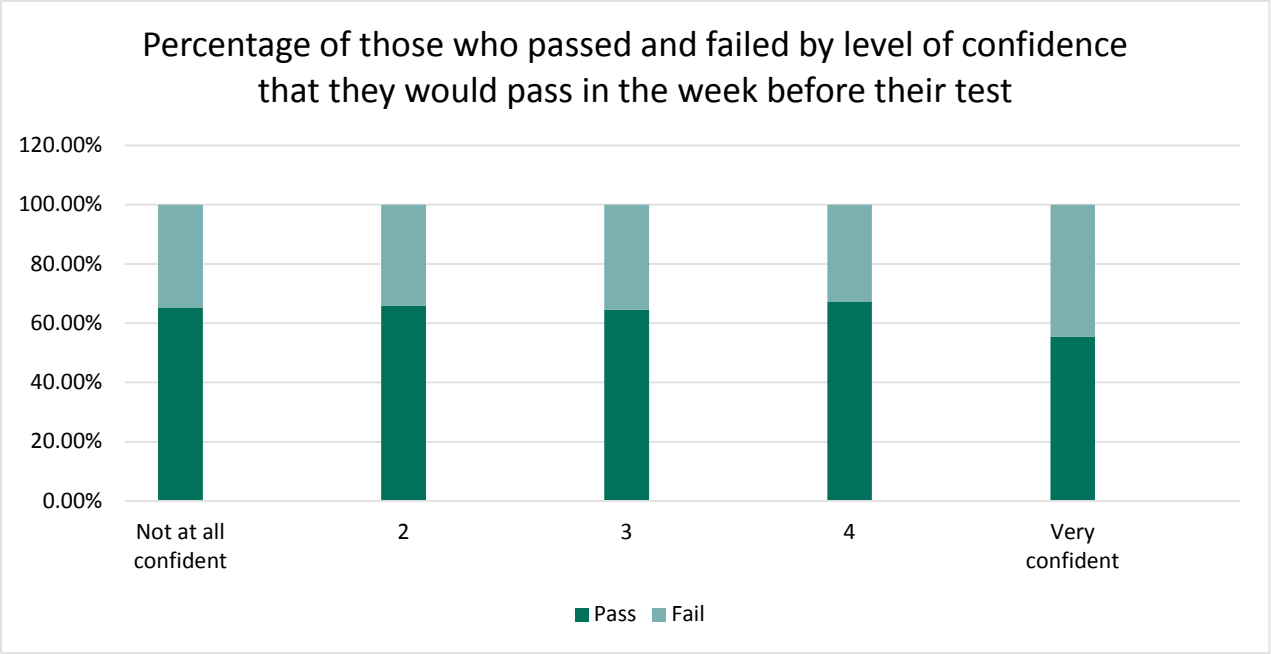


Figure 30

The data reflects a very interesting pattern indicating that those who report being most confident that they would pass in the week before they took their most recent test have the lowest pass rate. The groups with the highest pass rate are those who chose the options 2 and 4.

It is not possible to glean why this may be from the data collected although the subjectivity of the question and answers may affect the answers of respondents.

Change in confidence levels from time point 1 to time point 2

Following the initial presentation of the confidence levels of respondents and the apparent reduction between time points 1 and 2 (presented on page 46), further exploration was carried out into how they had changed. Again, the scores of each respondent were added up to create one, scale variable, the highest a respondent could score was 30 and the lowest they could score is 6. The descriptive statistics for each time point are presented below:

	Time point 1	**Time point 2**
Mean confidence:	25.96	24.47
Median confidence:	26	25
Mode confidence:	30	24
Standard deviation:	3.17	3.64

The most notable difference here is the change in the modal answer between the time points, reducing from 30 (the highest possible score) to 24, a reduction of 6 confidence points. There is also a reduction in the mean of 1.49 points; a paired samples t-test indicates that this is a significant reduction ($p<0.001$).

The reduction in levels of confidence is consistent across all 6 of the statements that constitute the scale. The biggest reduction in mean confidence was seen in the question 'How confident are you

that you are a skilful driver?' (a reduction of 0.43); the questions that showed the least reduction are 'How confident are you in your ability now?' (0.07) and 'How confident are you that you are able to drive safely while following instructions from a sat nav system or sat nav app?' (0.09).

As previous tests had indicated that males were significantly more confident than females further investigation was carried out into the effect of gender on the reduction in overall confidence levels. It was found that the confidence levels of respondents of both genders had decreased significantly, however females experienced a sharper decline in confidence in their first 6 months of driving. Figure 31 is a line plot of the mean confidence levels of both genders at time points 1 and 2; this illustrates the decline in confidence levels visually.

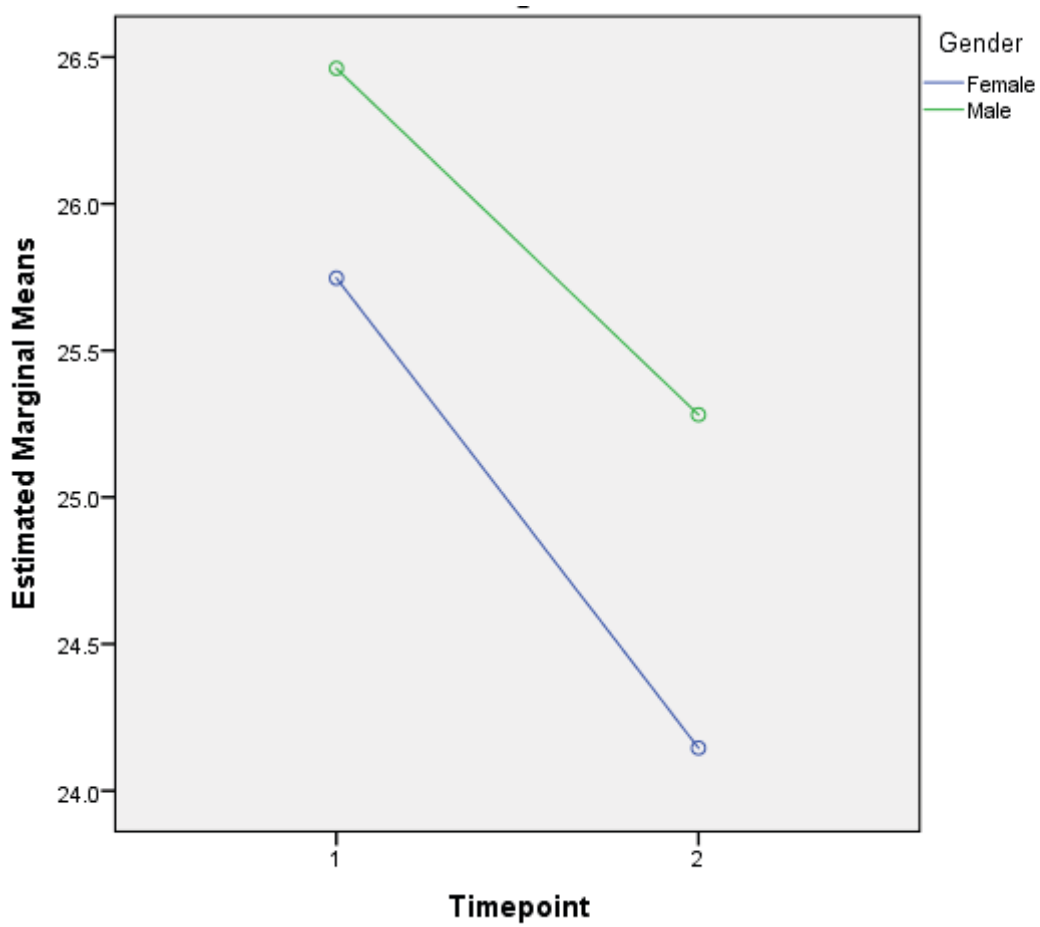


Figure 31

Attitudes and behaviours

Change in attitudes to driving behaviours over time

Further analysis was carried out into the results of the questions regarding attitudes towards risky driving behaviours. As at time points 1 & 2 the overall score of each respondent was calculated by adding up their response to each of the statements. The highest a respondent could score was 36 (least risky attitudes) and the lowest 12 (most risky attitudes).

The descriptive statistics for both time points have been summarised in table 32 below:

	Time point 1	Time point 2
Mean score:	28.26	27.48
Median score:	28	28
Modal score:	30	30
Standard deviation:	4.58	5.01

Table 32

There has been a slight reduction in the mean score of the respondents (0.78) which indicates a slightly more risky attitude to driving behaviours however, the larger standard deviation indicates a wider spread of data. Of particular importance is the larger standard deviation at time point 2; this indicates that although there is a slightly lower mean there is also a wider spread of data at this time point.

The above table also shows that the median and modal scores have both remained the same between the time points. A Pearson's correlation was carried out on the data and this indicated a high and significant level of correlation ($R=0.710$, $p<0.001$), meaning that those who scored highly at time point 1 also scored highly at time point 2. Therefore, we can conclude that there has been no significant change in the attitudes to risky driver behaviours within our sample.

As stated previously in this report it needs to be borne in mind the effects that social desirability bias can have on data of this kind particularly amongst a self-selecting sample.

Sensation seeking attitudes

Unfortunately, the data regarding sensation-seeking attitudes was found to load onto more than one factor at time point 2 and therefore could not be used to analyse the overall change in sensation seeking behaviours since time point 1.

It is unclear why this is, however it is recommended that further research be carried out into the applicability of the scale, and in particular some of the items, to contemporary learner and novice drivers.

Collision risk

The proportion of our respondents at time point 2 who reported having at least one collision is 12.6% (278), this is larger than the figure found by TRL in their research into the transformation of the practical test. Of their control groups who responded to the novice driver questionnaire (NDQ) 9% (192) had at least one collision in their first 6 months of driving.

It is not possible to infer any concrete conclusions as to why the difference between the samples exists.

Age, gender and collision risk

Age and gender have been shown in previous research to be strong predictors in the collision risk of novice drivers in their first 6 months; however, our research shows no significant difference between any of the groups.

Respondents were split into 3 age groups, younger (aged 17-24); Middle (aged 25-49); and older (aged 50+). A chi-square was used to investigate a relationship between age and collision risk (no

collision, at least one collision). There was no significant finding, the percentages of each age group that has had at least one collision is presented in table 32. This data is highly skewed by the large amount of young drivers we have in our sample at time point 2; 1412 (69%) of our sample was aged 17-24.

Age group	Number who have had at least one collision
Younger (17-24)	12.8% 181
Middle (25-49)	10.5% 64
Older (50+)	12.1% 4

Table 33

Collision risk of those who identified as male and female was also reviewed and the data is presented in the below table.

Gender	Number who have had at least one collision
Male	11.9% 76
Female	12.8% 191
Prefer not to say	2 20%

Table 34

Whilst reviewing this table it is important to keep in mind that the sample at time point 2 was 69.9% (1496) female, 29.8% (640) male and 0.4% (10) prefer not to say therefore we are more likely to have captured females who have had a collision than males.

Sensation seeking behaviours and collision risk

An investigation was carried out into the sensation seeking behaviour scores at time point 1 of those who had and had not had at least one collision in their first 6 months of driving.

For those who had at least one collision their mean sensation seeking score was 11.07, 0.4 higher than those who had not had a collision in their first 6 months of driving. An independent samples t test was carried out and indicated that this is in fact a significant difference (p=0.028).

In conclusion, those in our sample who had a collision in their first 6 months of driving scored significantly higher on sensation seeking at the point of test pass than those who had not had a collision in their first 6 months of driving.

Driving attitudes and collision risk

A similar test was carried out on the attitudes towards driving statements; those who scored higher on this scale were found to have safer attitudes towards driving behaviours.

Respondents who had at least one collision during their first 6 months of driving had a mean score of 27.48 on this scale, those who had not had a collision scored 28.36. This is a difference of 0.873 and shows that those in our sample who had not had a collision had more positive attitudes towards safe driving behaviours.

An independent samples t test indicated that this is a significant difference ($p=0.004$)[30].

It is recommended that further work in this area consider the use of a logistic regression model in order to assess the probability of collision in the first 6 months of driving based on sensation seeking behaviours and driving attitudes at test pass.

[30] Please note that carrying out a second independent samples t test on the collision data can inflate the chances of an incorrect significant result from 5% to 10%.

Evaluation

This short conclusion will reintroduce the three main aims stated on page 3 of this report and explore them in relation to the data presented.

Main aim 1: To increase the variety of roads learner drivers are exposed to during their learning and their practical driving test

Comparing the reported learning experience of our respondents with those of National Control Group 1 (NCG1) used by the Transport Research Laboratory (TRL) in their research into the transformation of the practical test seems to lend support to the argument that learners are experiencing a wider range of roads than they were before the introduction of the changes to the test.

There has been a small increase in the percentage of pupils reporting spending more than 4 hours learning to drive on both country roads and fast dual carriageways.

Respondents to this research also report feeling as though they need less improvement driving on country roads than those in NCG1 immediately post-test although this gap narrows at 6 months post-test.

This indicates a more varied learner experience, although this cannot be causally linked to the new test these initial figures are promising for the DVSA.

Main aim 2: To prepare young and novice drivers well for driving independently on Britain's roads

The vast majority (81.2%) of respondents to this piece of research answered that they felt the test had prepared them well for driving on Britain's roads. Of those who answered that it had not, motorway driving and lessons appeared in their reasoning often; they lament their lack of motorway driving experience throughout their learner journey. This is also mentioned by those who did feel that the test had prepared them well as something that would have helped them further.

Those who answered that the test prepared them well also felt that the test was realistic and reflective of real life driving and that they had had experience on a variety of roads so felt confident and comfortable.

Main aim 3: To ensure that new and novice drivers were well equipped for driving with widely used technology such as sat nav.

There is a stark increase in the percentage of pupils using a sat nav during their lessons; however, there are not too many hours spend using a sat nav indicating that pupils are still being taught to drive using road signs. This is supported by the number of each sample who report spending more than 4 hours following road signs.

86.3% of the respondents to this research reported using a sat nav at least sometimes within their first 6 months of having passed their driving test. As mentioned earlier respondents to this research had spent more time learning whilst using a sat nav and were in turn more confident when using a sat nav once they had passed their test than those in NCG1 of TRL's research. This difference continued into the time point 2 answers of both sets of candidates (at time point 2 the answers of our sample were compared with those of both NCG1&2).

Other findings of interest

There are several findings within this research which, although they do not fit neatly into the above three aims, they and their implications should be considered. These are summarised below:

Most collisions reported by our sample in the first 6 months of driving independently are low impact collisions that are occurring in locations such as car park and slow residential streets.

Those who are the most confident that they will pass before they take their test have the lowest pass rate followed by those who chose the middle, or neutral option.

High sensation seeking scores and more negative attitudes to safe driving behaviours are associated with a higher risk of collision in the 6 months after test pass.

Those who had practice with friends and family during their learner journey are at best 1.5 times more likely to have passed their most recent driving test attempt.

Limitations of the current study

It is important to recognise the limitations of the design of this research.

The online methods employed mean that the sample of respondents was completely self-selecting from the population. A self-selecting sample can introduce bias into results collected. It is recognised that females and those who passed their test are more likely to be open to responding to survey invitations and therefore completing this survey. This has led to an over-representation of these groups within our final sample, as illustrated by the demographic information. There is a chance that this had biased the data collected and therefore in some respects can limit the generalisability of the findings. However, the larger the sample size the more confidence we can have in the results collected. The large sample size achieved at time point 1 of this research (17016) was deemed to reduce the risk of self-selecting bias to an acceptable level; however, caution should be exercised when generalizing the results beyond the sampled population.

As recognised at various points within the report, results, particularly those relating to driving attitudes and sensation seeking can be affected by social desirability bias. This means, “An answer that is perceived to be socially desirable is more likely to be endorsed than one that is not” (Bryman, p123). Therefore, if pupils think that one answer is preferred by DVSA over another they may be more inclined to answer in this way. This may have influenced the results of the attitudinal scales although this is not quantifiable. It is hoped that the anonymity of the survey (which respondents were reminded of throughout the completion of the survey) may have encouraged respondents to answer truthfully therefore reducing the effects of social desirability bias.

The use of validated scales that have been used in many research projects with novice and learner drivers previously, lends itself to ensuring that the data collected is reliable. However, as explored in the report and the recommendations below, further validation should be carried out of these scales to ensure that they are applicable to contemporary learner and novice drivers.

Recommendations for further research

Throughout this report there have been several areas introduced requiring either further research or ongoing monitoring. This would help DVSA to inform current and future campaigns and policies around learner and novice drivers.

Only 1.2% or 199 respondents to this research had used information provided on gov.uk to help them to find and choose their Approved Driving Instructor. If DVSA wish to encourage people to use this service to help them find reliable and up-to-date information to help them select an ADI it is advised that further promotion of the service is carried out alongside ongoing monitoring of the amount of learner drivers that use the service.

It is recommended that further monitoring be carried out of the types of roads on which learner drivers are learning; this would help to identify any patterns or trends. It would also help in identifying any permanent changes that occurred after the introduction of the changes to the driving test in 2017.

Another finding of this piece of research that DVSA may want to monitor is the amount of ADIs who accompany their candidates on their practical test. The 17.5% of candidates who reported their ADI accompanying them on test is a small increase since DVSA research in 2017. It would be beneficial for DVSA to monitor this as the increase could be a result of the changes to the test or could be an ongoing pattern.

The final recommendation for further monitoring of figures presented in this report are those around novice drivers' confidence when parking. It is hoped that introduction of bay parking manoeuvres and pull up on the right into the practical test would help to raise their confidence. This would need to be monitored alongside the number of collisions taking place in car parks and other areas such as these to ensure that raised confidence levels were not contributing to a rise in collisions.

Motorway driving was an issue raised multiple times throughout this report relating to the preparedness of new drivers and the driving experiences of novice drivers. There is already research planned to take place in 2019 regarding the popularity and prevalence of motorway driving. DVSA should take the results of this research into account along with the effects that this might have on the preparedness of novice drivers to drive on Britain's roads.

Two additional recommendations for further statistical testing relate to the validation of the sensation seeking scales (page 62) and the effects of driving attitudes and sensation seeking on collision risk in the first 6 months of driving (page 64).

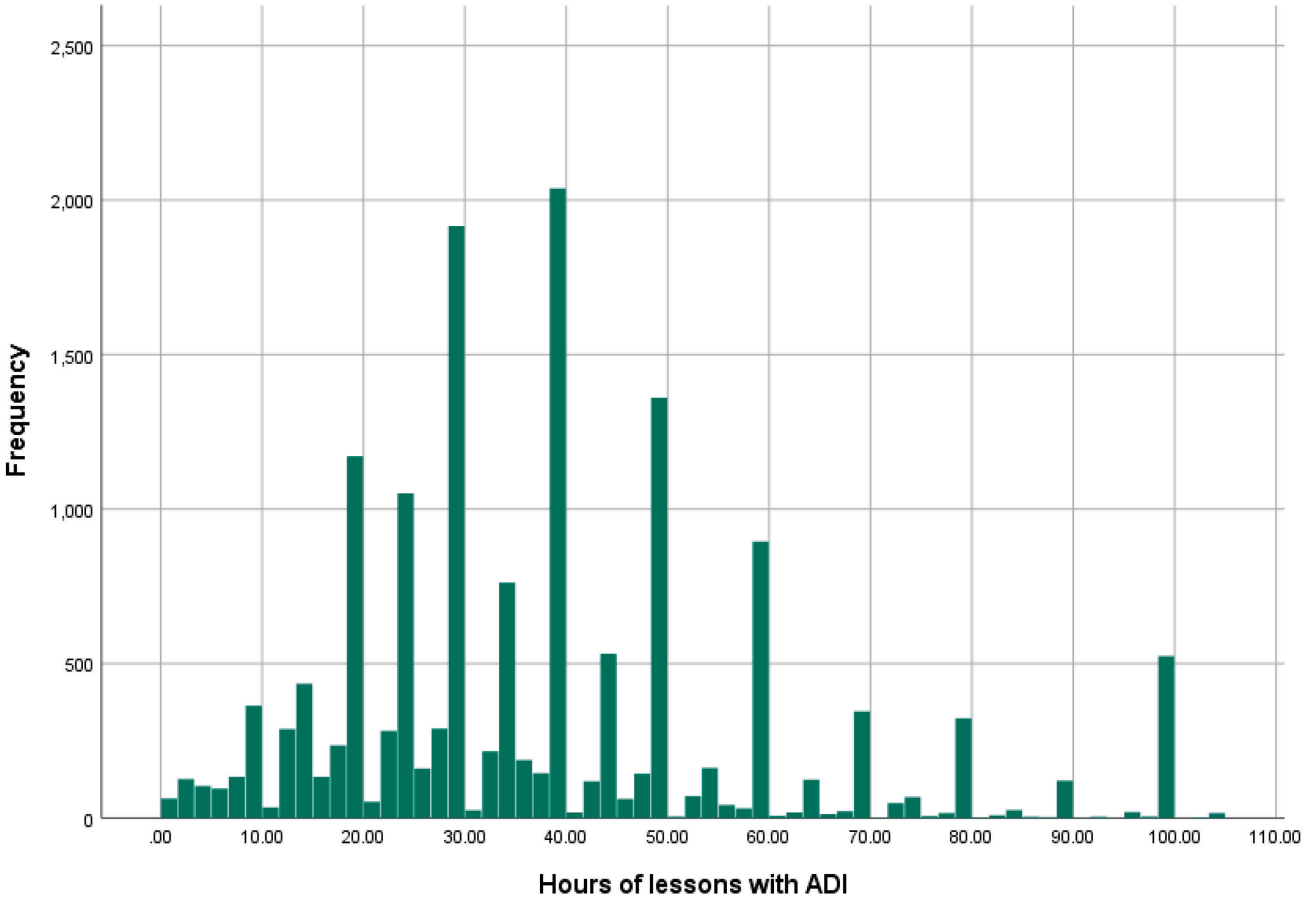
Appendices

Appendix A – Socio-demographic data time point 1

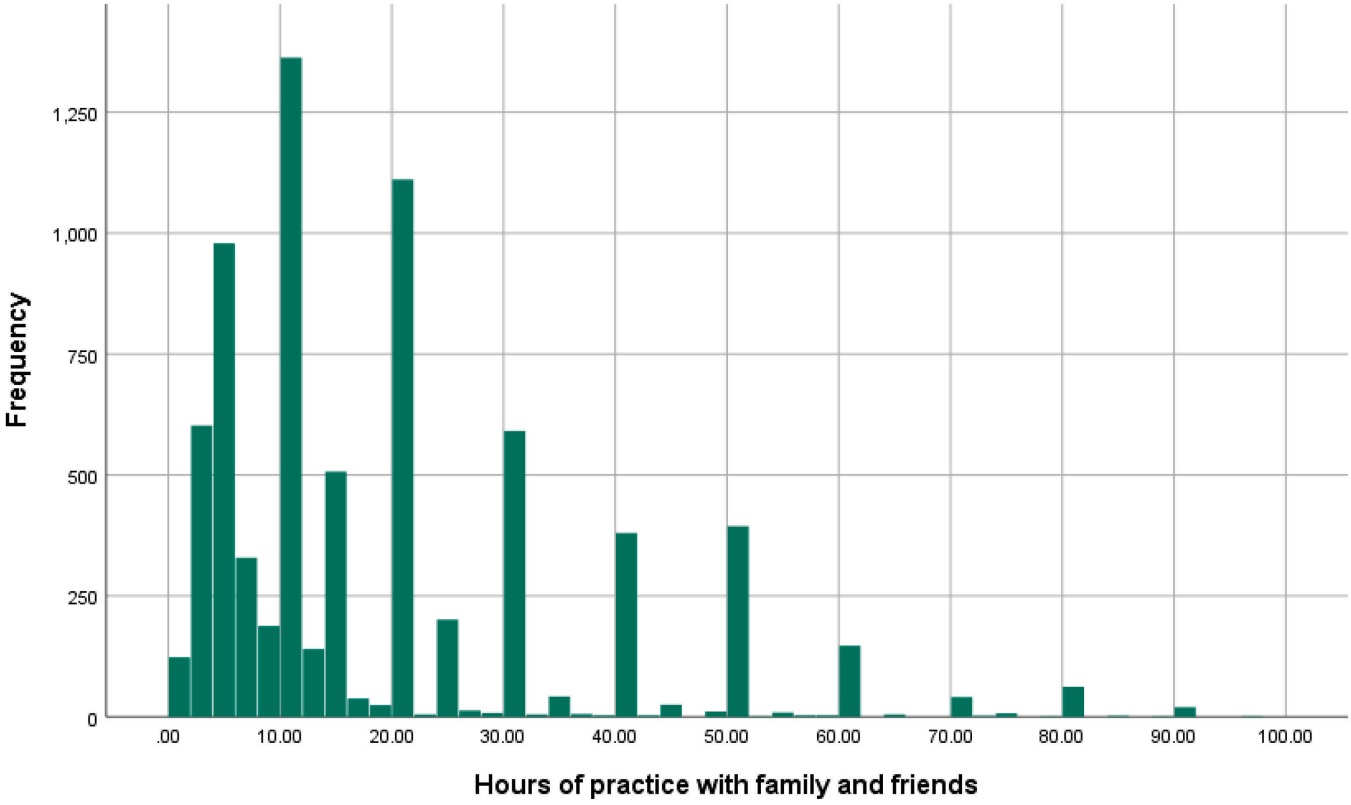
What best describes your ethnic group?			
Answer Choice		**Response Percent**	**Response Total**
1	English/Welsh/Scottish/Northern Irish/British	68.6%	11659
2	White Irish	0.6%	98
3	White gypsy or Irish traveller	0.1%	11
4	Any other white background	6.1%	1029
5	White and black Caribbean	1.0%	167
6	White and black African	0.5%	92
7	White and Asian	1.0%	171
8	Any other mixed/multiple ethnic background	1.2%	200
9	Indian	4.2%	713
10	Pakistani	3.4%	581
11	Bangladeshi	1.4%	240
12	Chinese	1.1%	187
13	Any other Asian background	1.7%	297
14	African	3.9%	661
15	Caribbean	1.0%	176
16	Any other black/African/Caribbean background	0.7%	116
17	Arab	1.0%	176
18	Any other ethnic group	0.9%	150
19	Prefer not to say	1.6%	265
		answered	**16989**

Do you have any physical or mental health conditions that you feel affect, or might affect, your driving?			
Answer Choice		**Response Percent**	**Response Total**
1	Yes	2.7%	456
2	No	95.8%	16267
3	Prefer not to say	1.5%	255
		answered	**16978**

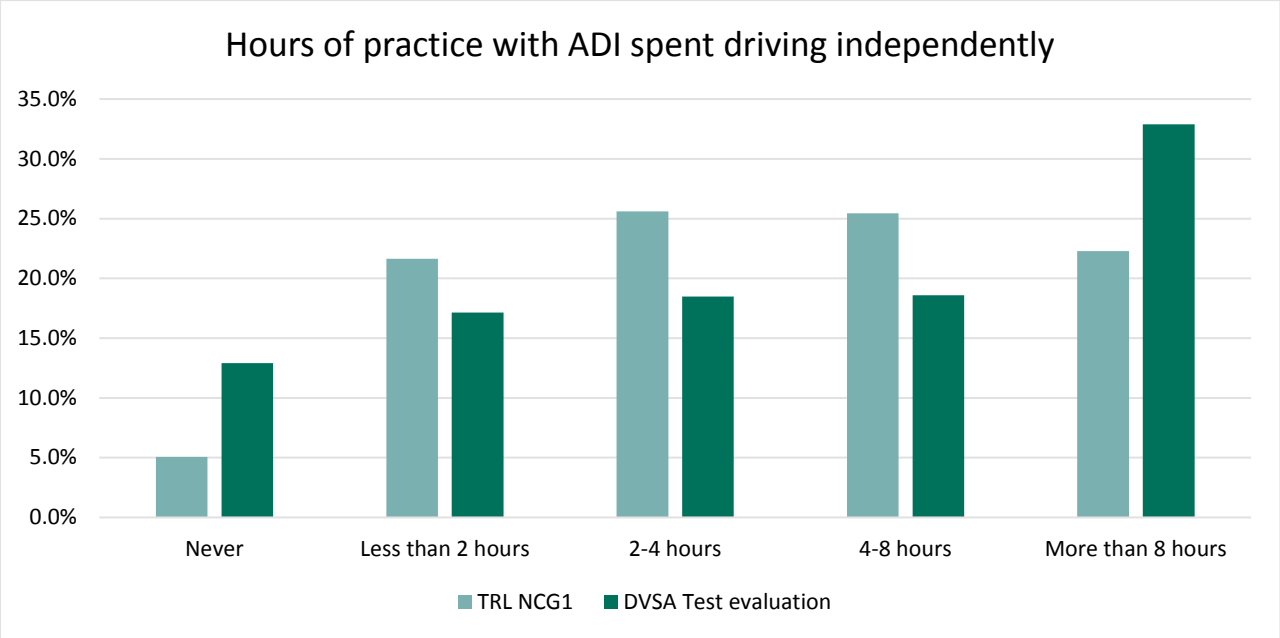
Appendix B – Hours spent practising with an ADI

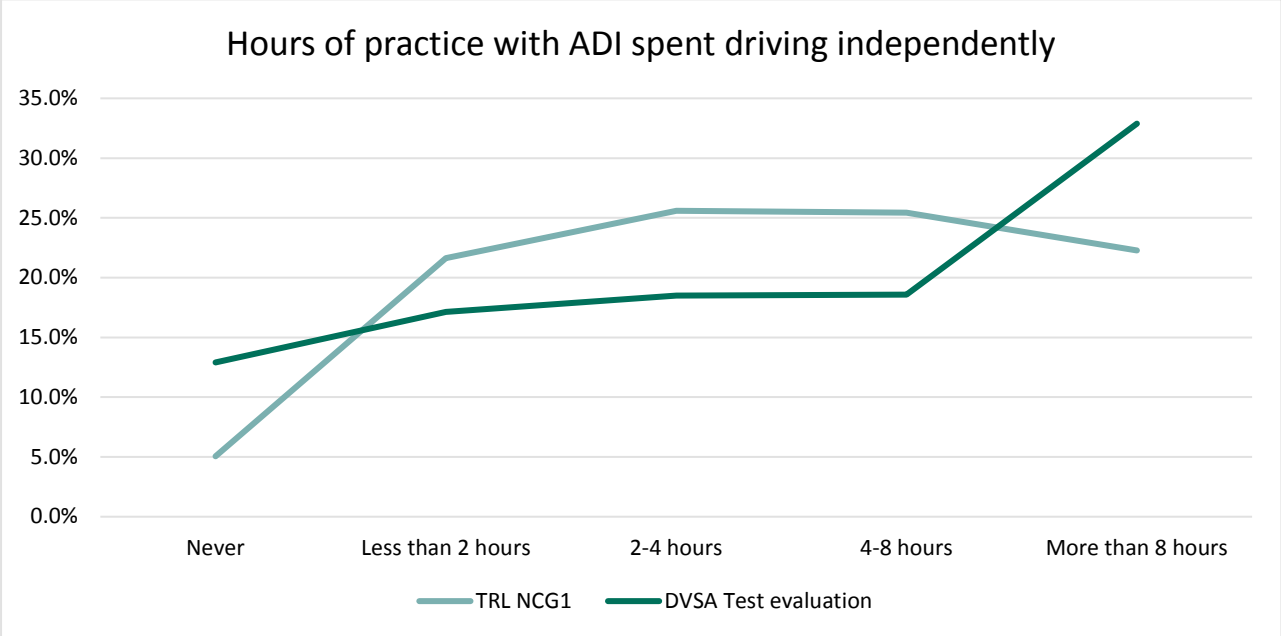


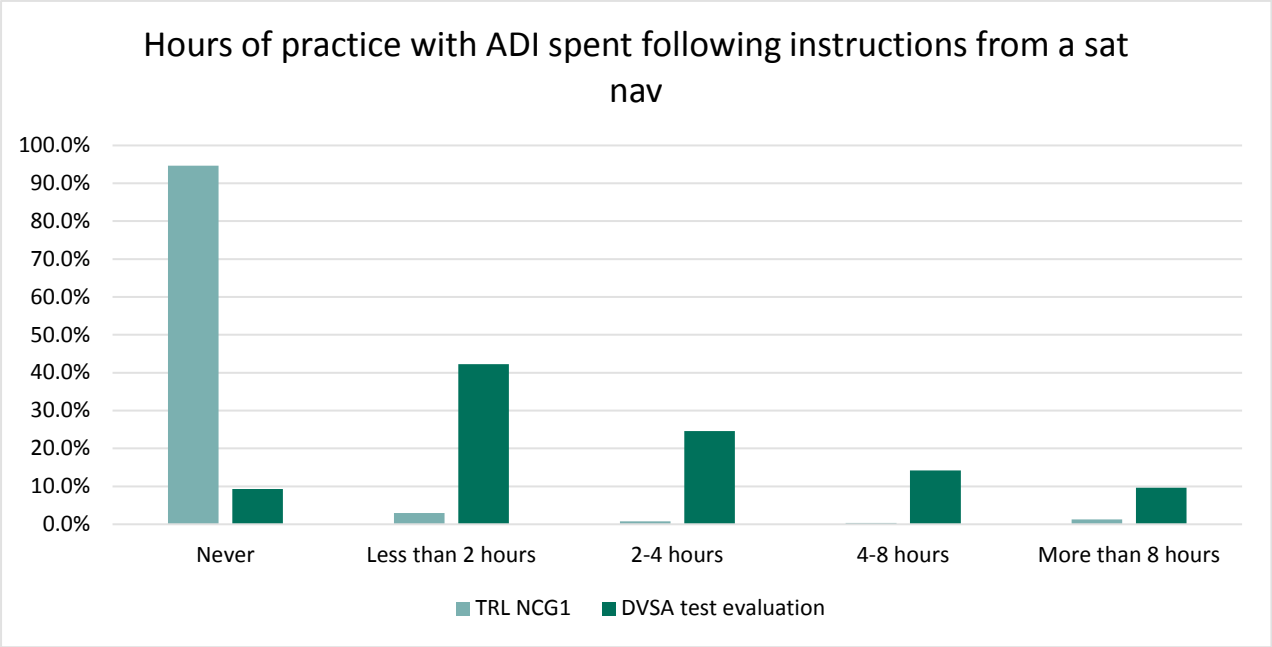
Appendix C – Hours spent practising with friends and family

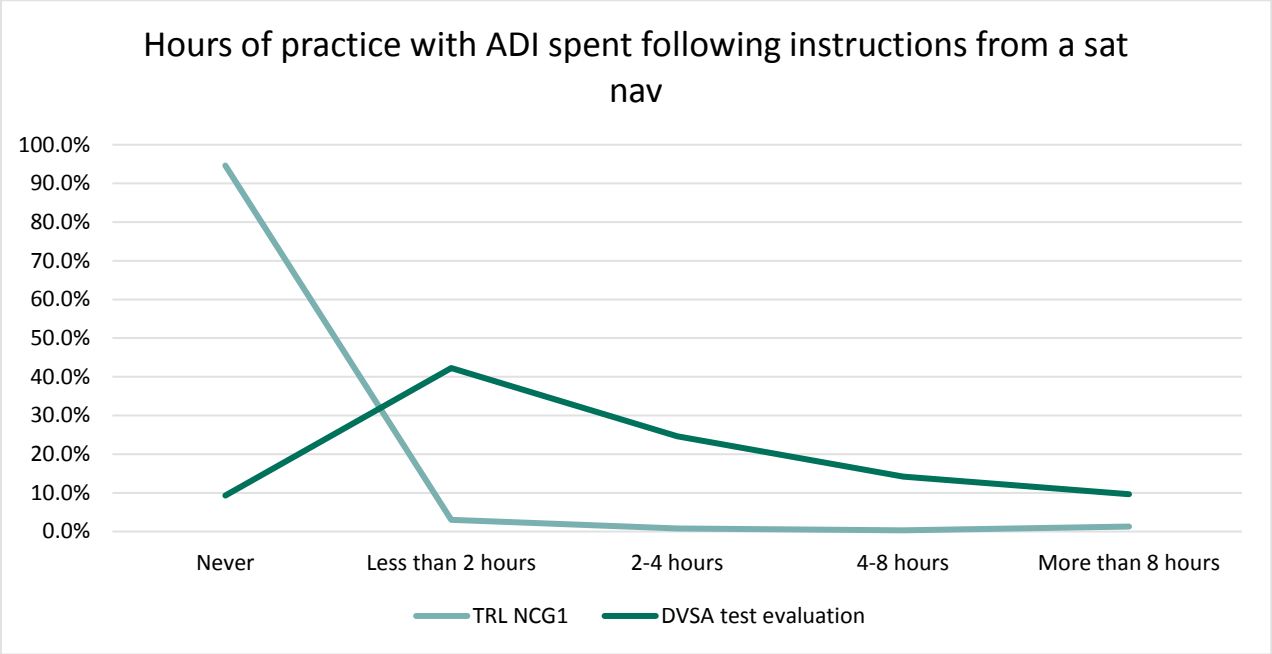


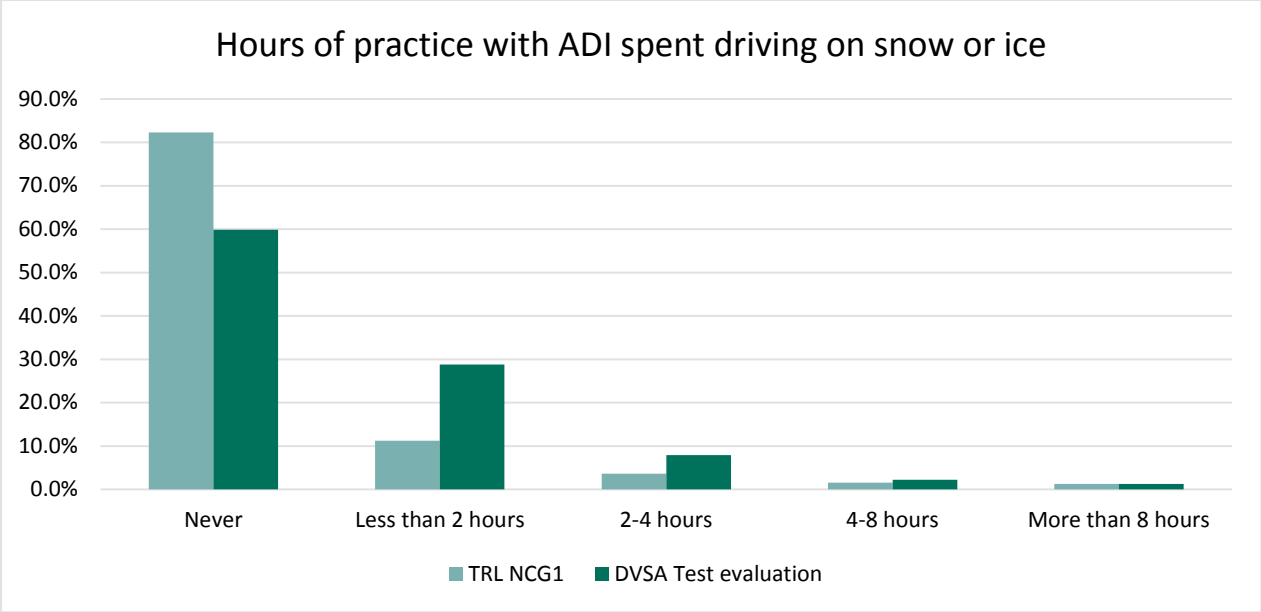
Appendix D – Hours of practice with an ADI in different circumstances, comparison between DVSA research and TRL NCG1 data.

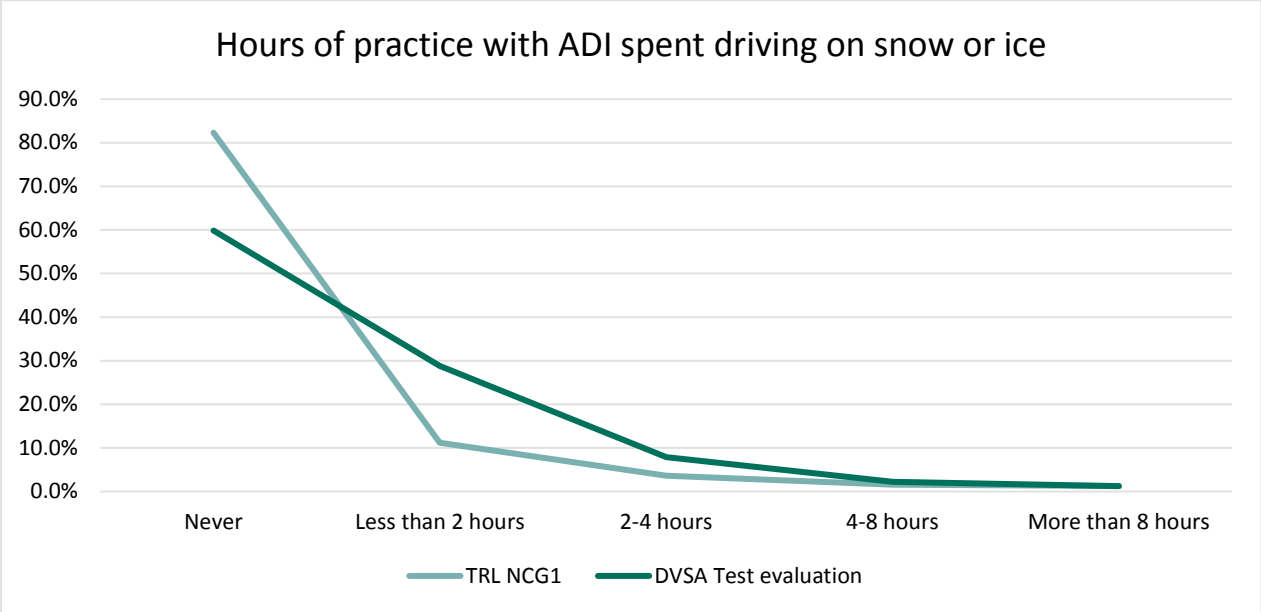


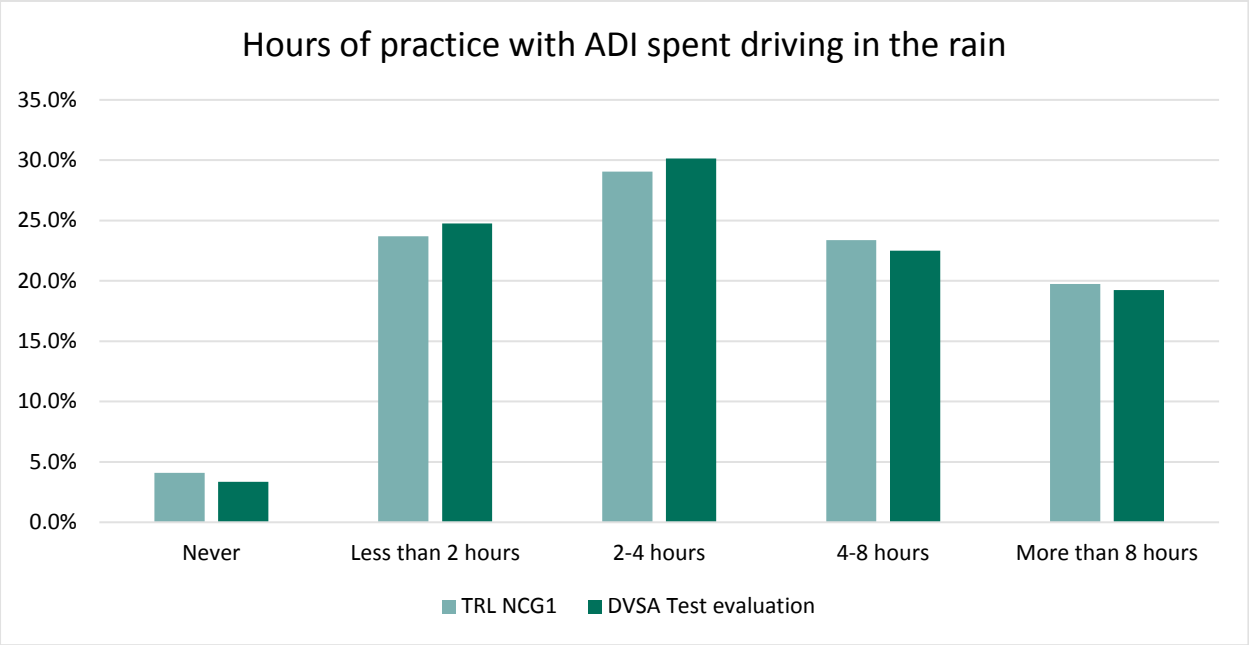


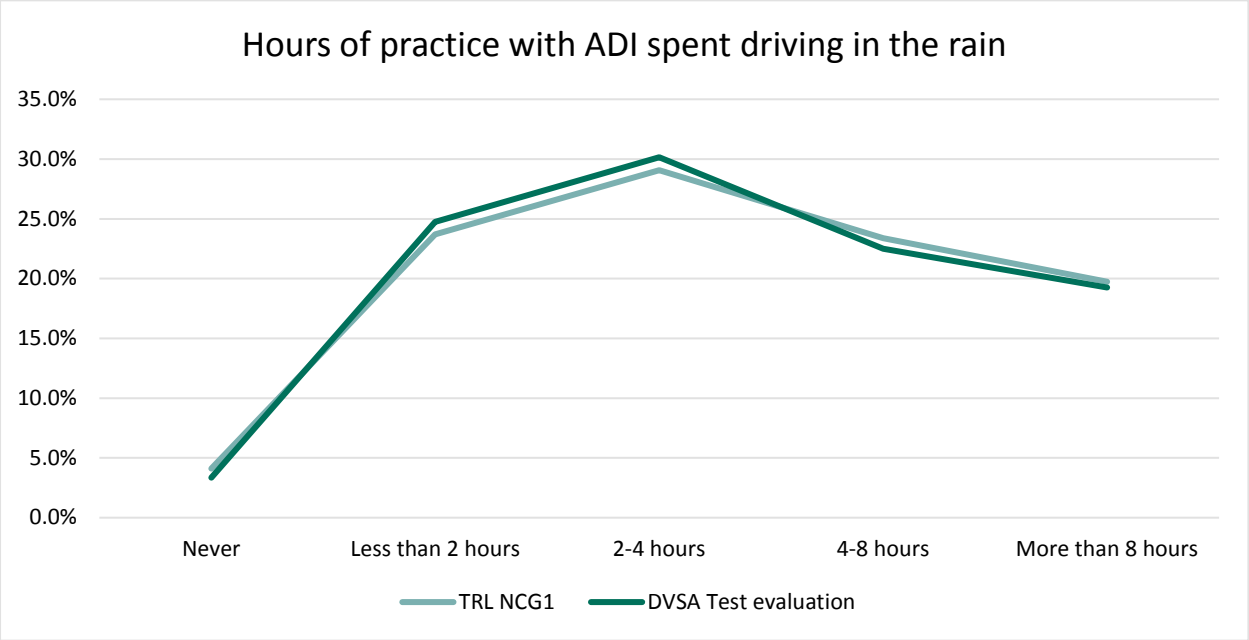

Hours of practice with ADI spent following instructions from a sat nav
100.0%
90.0%
80.0%
70.0%
60.0%
50.0%
40.0%
30.0%
20.0%
10.0%
0.0%
Never
Less than 2 hours
2-4 hours
4-8 hours
More than 8 hours
TRL NCG1
DVSA test evaluation

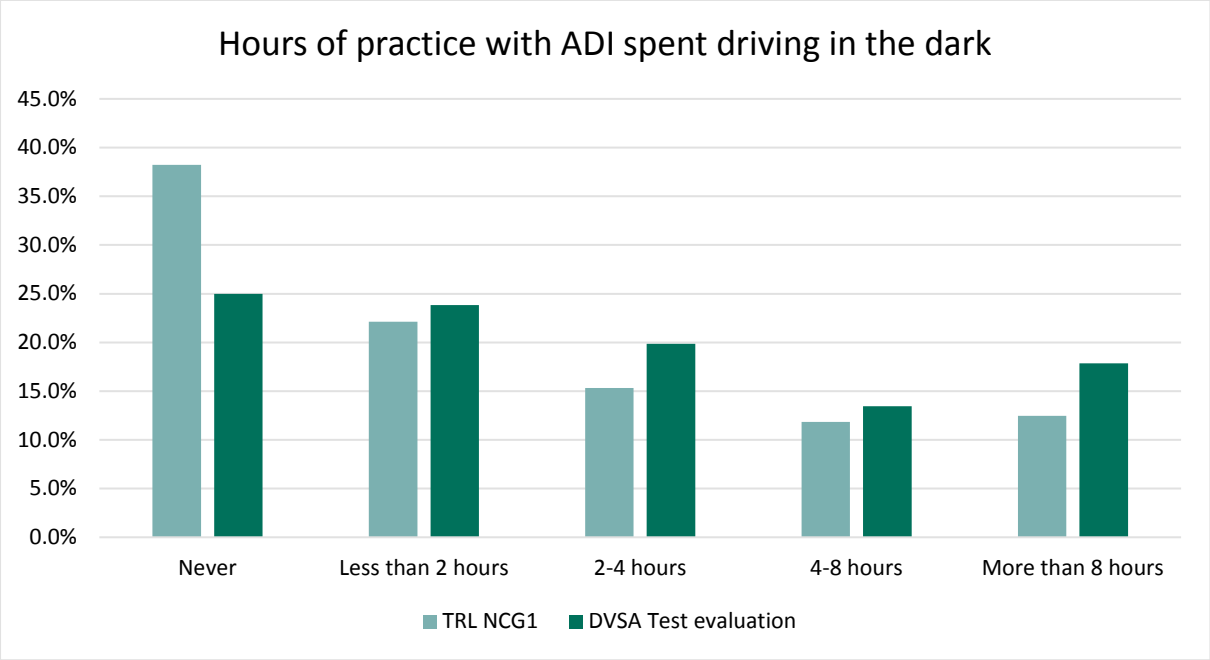

Hours of practice with ADI spent following instructions from a sat nav
100.0%
90.0%
80.0%
70.0%
60.0%
50.0%
40.0%
30.0%
20.0%
10.0%
0.0%
Never
Less than 2 hours
2-4 hours
4-8 hours
More than 8 hours
TRL NCG1
DVSA test evaluation

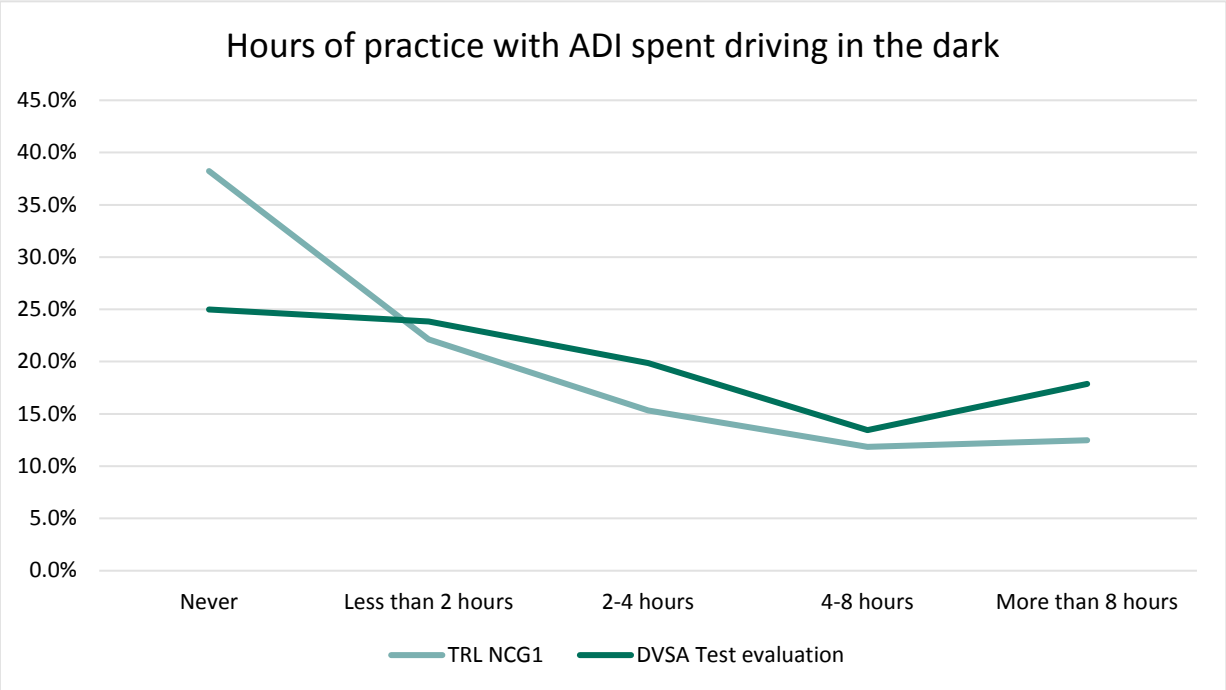

Hours of practice with ADI spent driving on snow or ice
90.0%
80.0%
70.0%
60.0%
50.0%
40.0%
30.0%
20.0%
10.0%
0.0%
Never
Less than 2 hours
2-4 hours
4-8 hours
More than 8 hours
TRL NCG1
DVSA Test evaluation

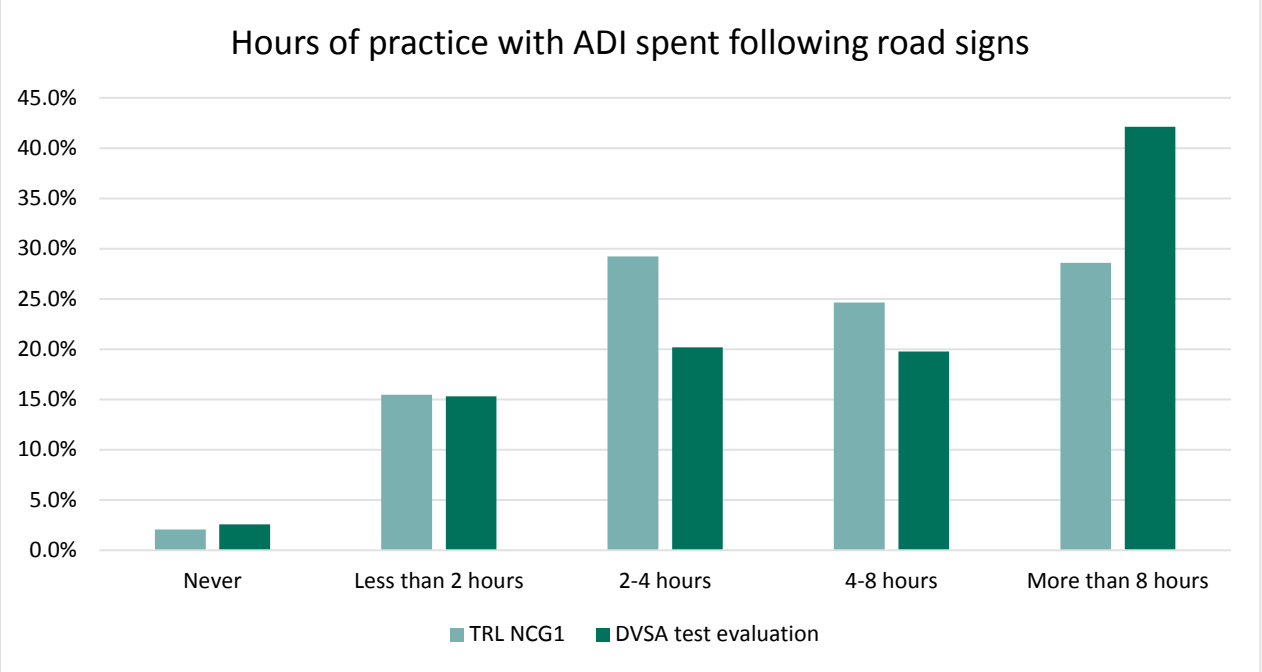

Hours of practice with ADI spent driving on snow or ice
90.0%
80.0%
70.0%
60.0%
50.0%
40.0%
30.0%
20.0%
10.0%
0.0%
Never
Less than 2 hours
2-4 hours
4-8 hours
More than 8 hours
TRL NCG1
DVSA Test evaluation

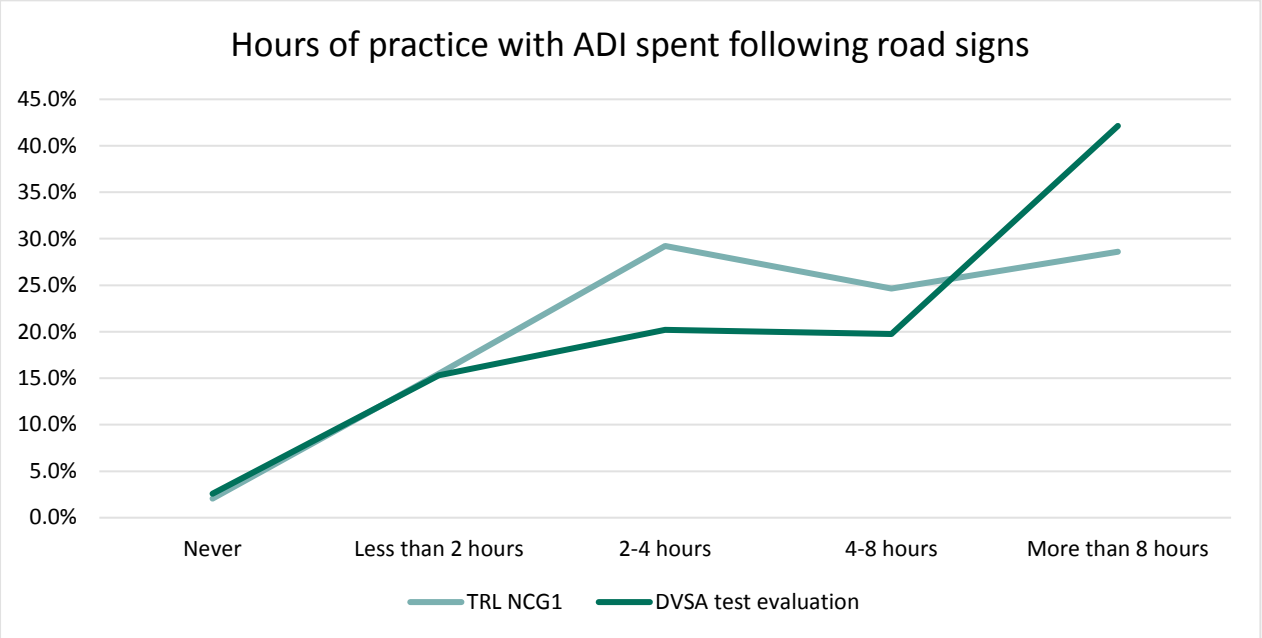

Hours of practice with ADI spent driving in the rain
35.0%
30.0%
25.0%
20.0%
15.0%
10.0%
5.0%
0.0%
Never
Less than 2 hours
2-4 hours
4-8 hours
More than 8 hours
TRL NCG1
DVSA Test evaluation

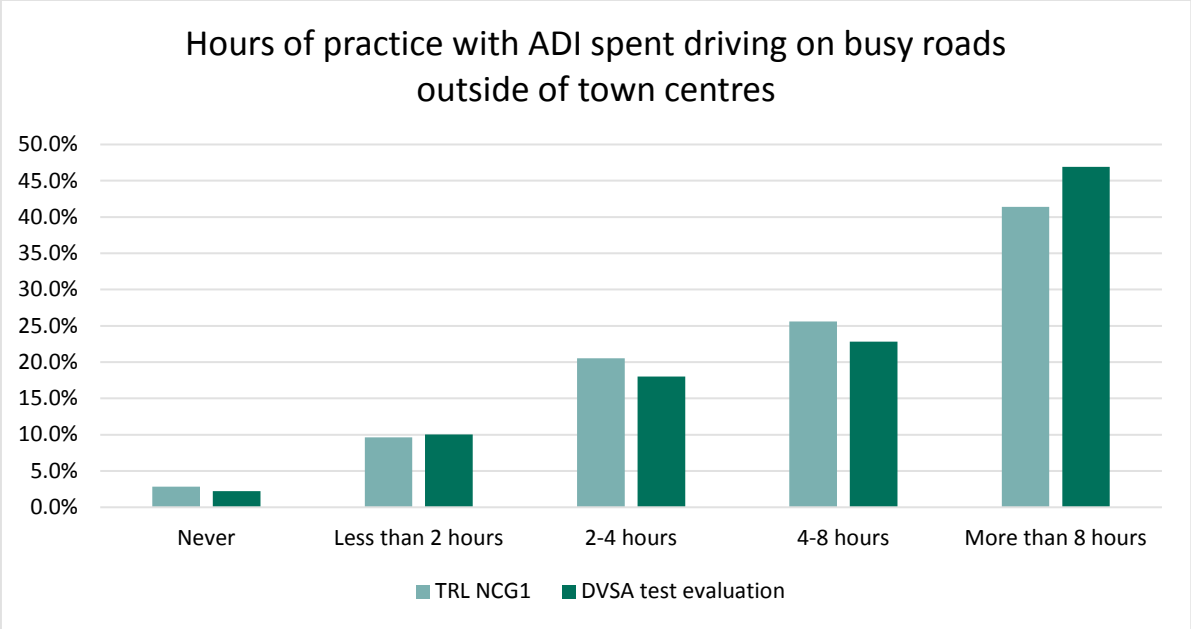

Hours of practice with ADI spent driving in the rain
35.0%
30.0%
25.0%
20.0%
15.0%
10.0%
5.0%
0.0%
Never
Less than 2 hours
2-4 hours
4-8 hours
More than 8 hours
TRL NCG1
DVSA Test evaluation

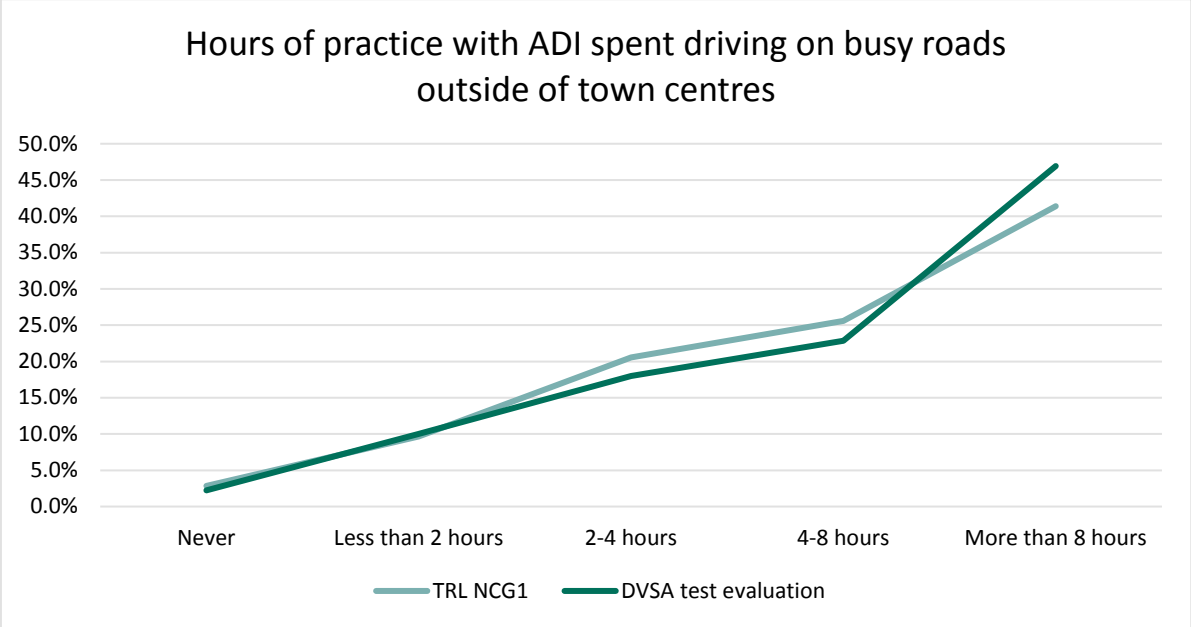

Hours of practice with ADI spent driving in the dark
45.0%
40.0%
35.0%
30.0%
25.0%
20.0%
15.0%
10.0%
5.0%
0.0%
Never
Less than 2 hours
2-4 hours
4-8 hours
More than 8 hours
TRL NCG1
DVSA Test evaluation

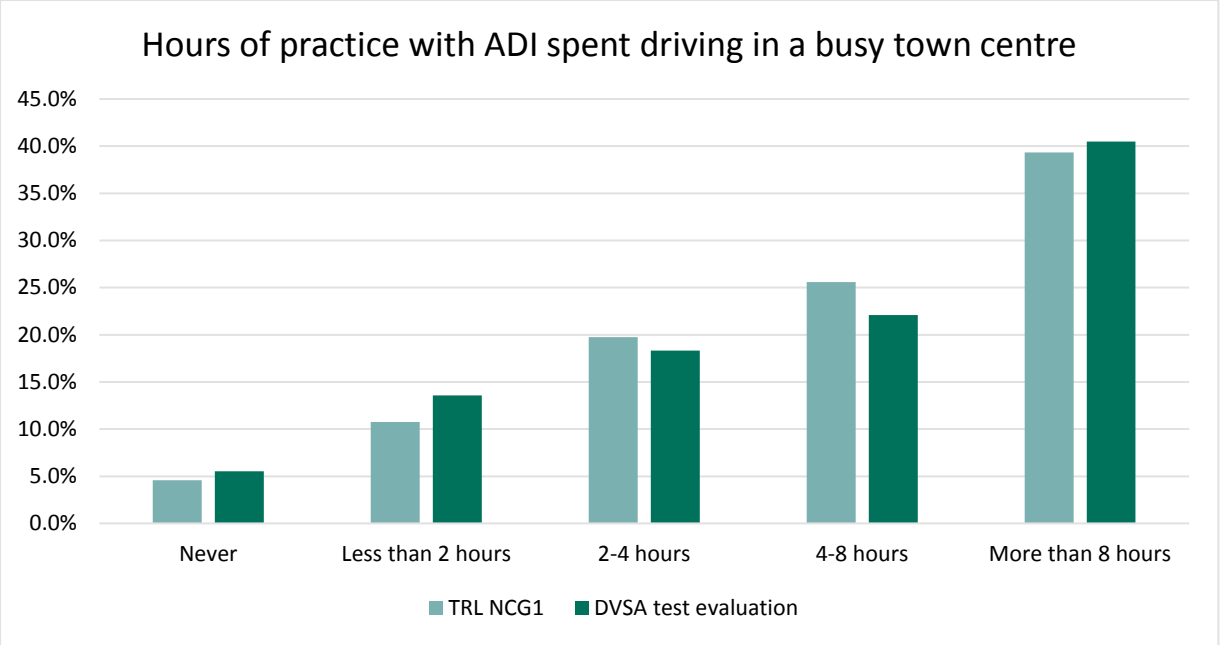

Hours of practice with ADI spent driving in the dark
45.0%
40.0%
35.0%
30.0%
25.0%
20.0%
15.0%
10.0%
5.0%
0.0%
Never
Less than 2 hours
2-4 hours
4-8 hours
More than 8 hours
TRL NCG1
DVSA Test evaluation

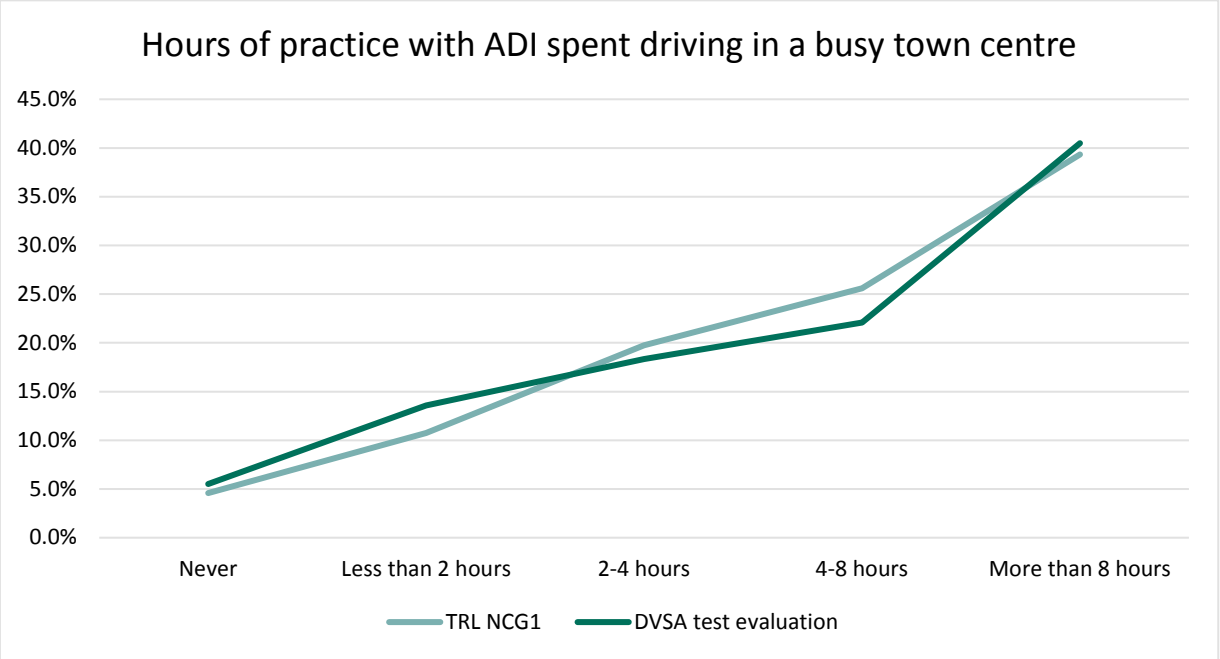

Hours of practice with ADI spent following road signs
45.0%
40.0%
35.0%
30.0%
25.0%
20.0%
15.0%
10.0%
5.0%
0.0%
Never
Less than 2 hours
2-4 hours
4-8 hours
More than 8 hours
TRL NCG1
DVSA test evaluation

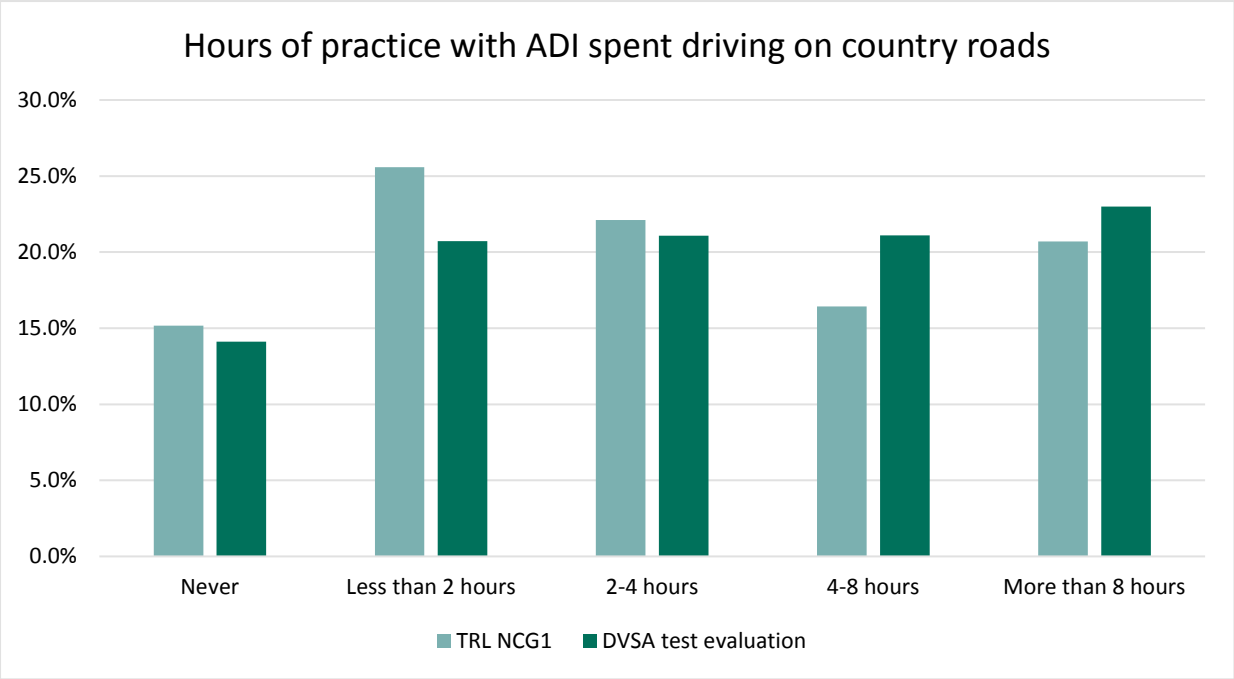

Hours of practice with ADI spent following road signs
45.0%
40.0%
35.0%
30.0%
25.0%
20.0%
15.0%
10.0%
5.0%
0.0%
Never
Less than 2 hours
2-4 hours
4-8 hours
More than 8 hours
TRL NCG1
DVSA test evaluation

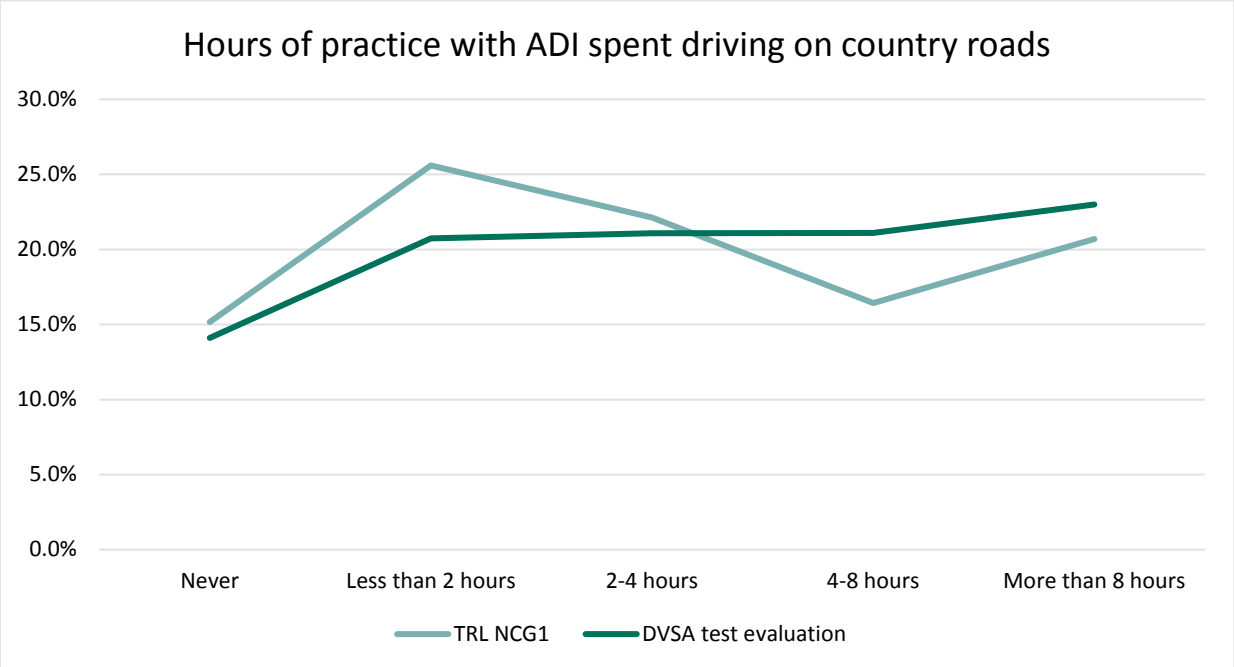

Hours of practice with ADI spent driving on busy roads outside of town centres
50.0%
45.0%
40.0%
35.0%
30.0%
25.0%
20.0%
15.0%
10.0%
5.0%
0.0%
Never
Less than 2 hours
2-4 hours
4-8 hours
More than 8 hours
TRL NCG1
DVSA test evaluation

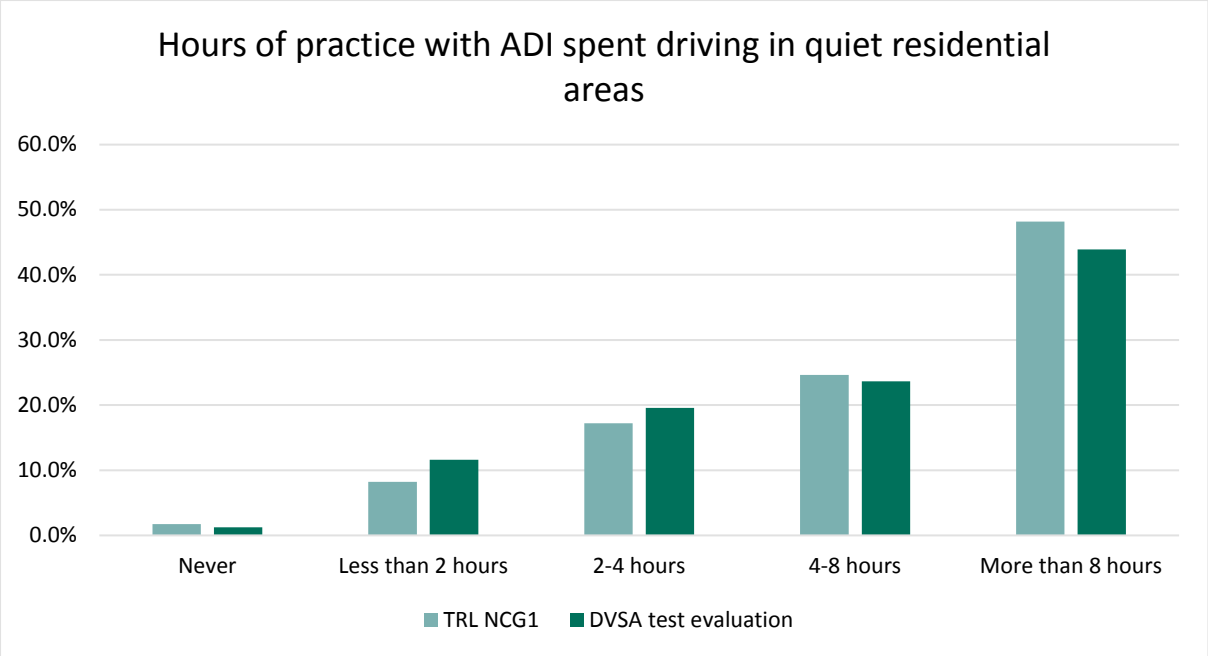

Hours of practice with ADI spent driving on busy roads outside of town centres
50.0%
45.0%
40.0%
35.0%
30.0%
25.0%
20.0%
15.0%
10.0%
5.0%
0.0%
Never
Less than 2 hours
2-4 hours
4-8 hours
More than 8 hours
TRL NCG1
DVSA test evaluation

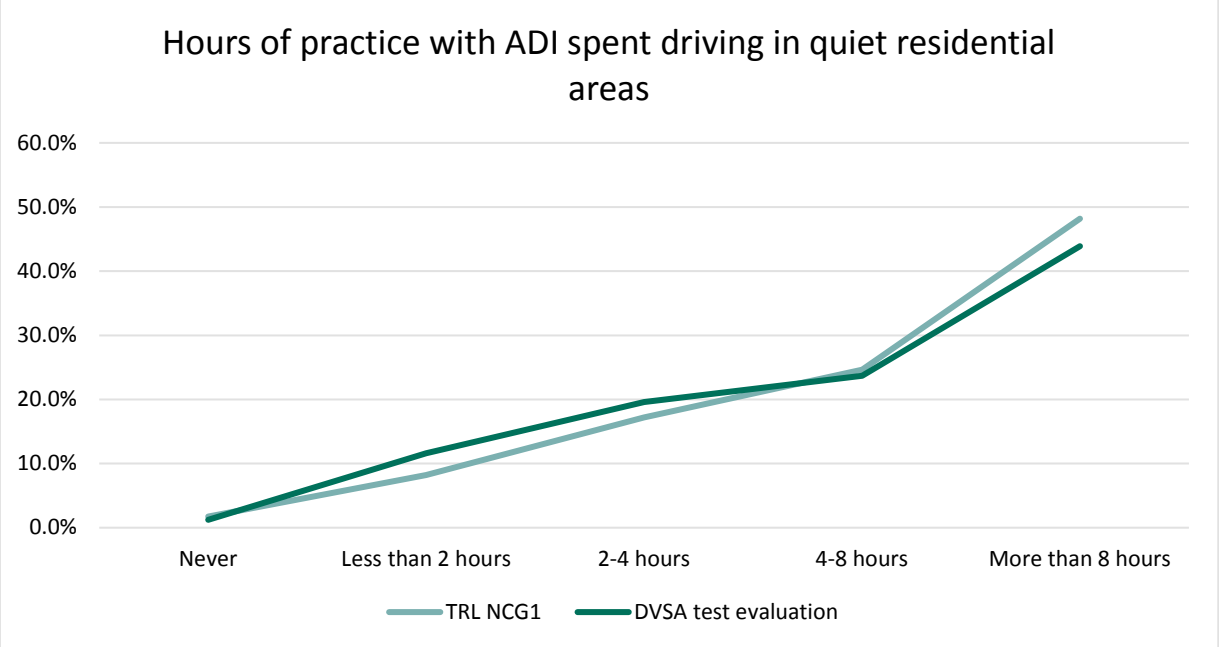

Hours of practice with ADI spent driving in a busy town centre
45.0%
40.0%
35.0%
30.0%
25.0%
20.0%
15.0%
10.0%
5.0%
0.0%
Never
Less than 2 hours
2-4 hours
4-8 hours
More than 8 hours
TRL NCG1
DVSA test evaluation

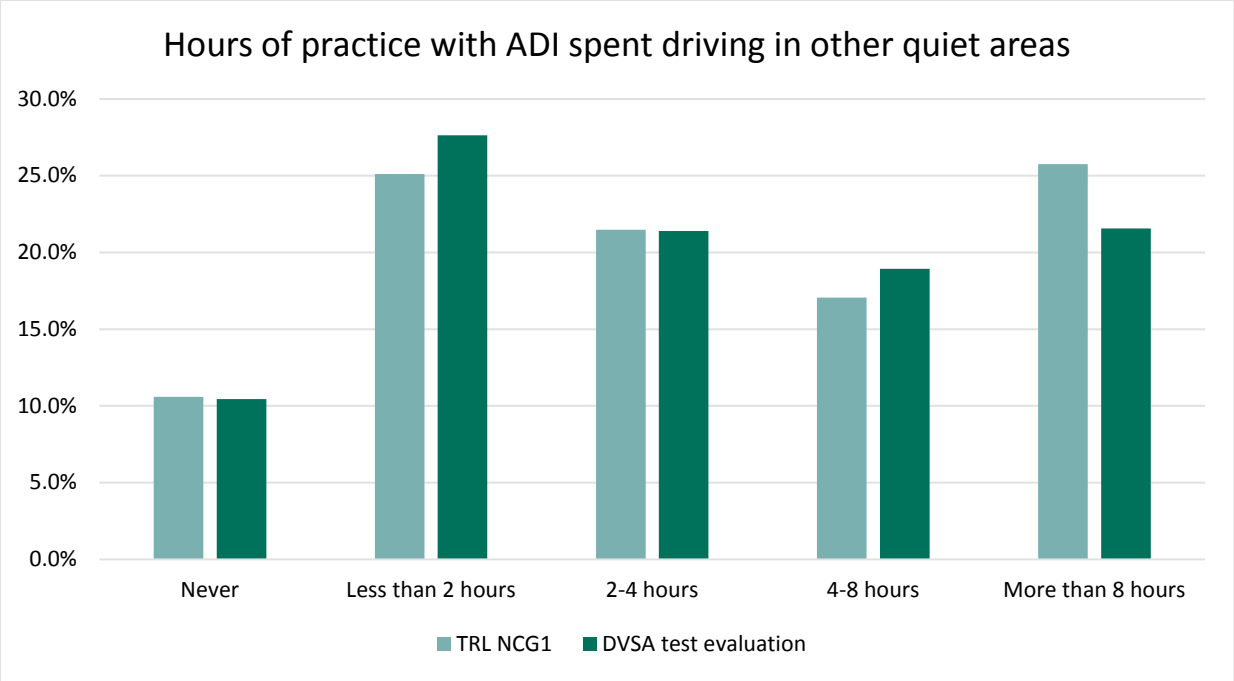

Hours of practice with ADI spent driving in a busy town centre
45.0%
40.0%
35.0%
30.0%
25.0%
20.0%
15.0%
10.0%
5.0%
0.0%
Never
Less than 2 hours
2-4 hours
4-8 hours
More than 8 hours
TRL NCG1
DVSA test evaluation

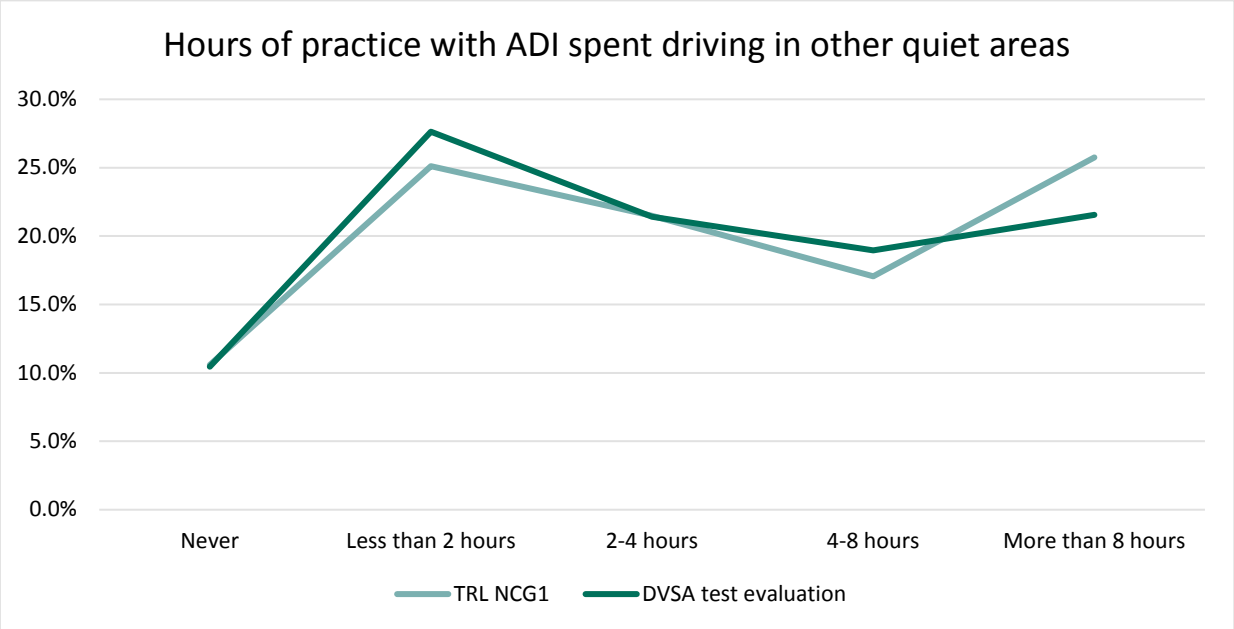

Hours of practice with ADI spent driving on country roads
30.0%
25.0%
20.0%
15.0%
10.0%
5.0%
0.0%
Never
Less than 2 hours
2-4 hours
4-8 hours
More than 8 hours
TRL NCG1
DVSA test evaluation

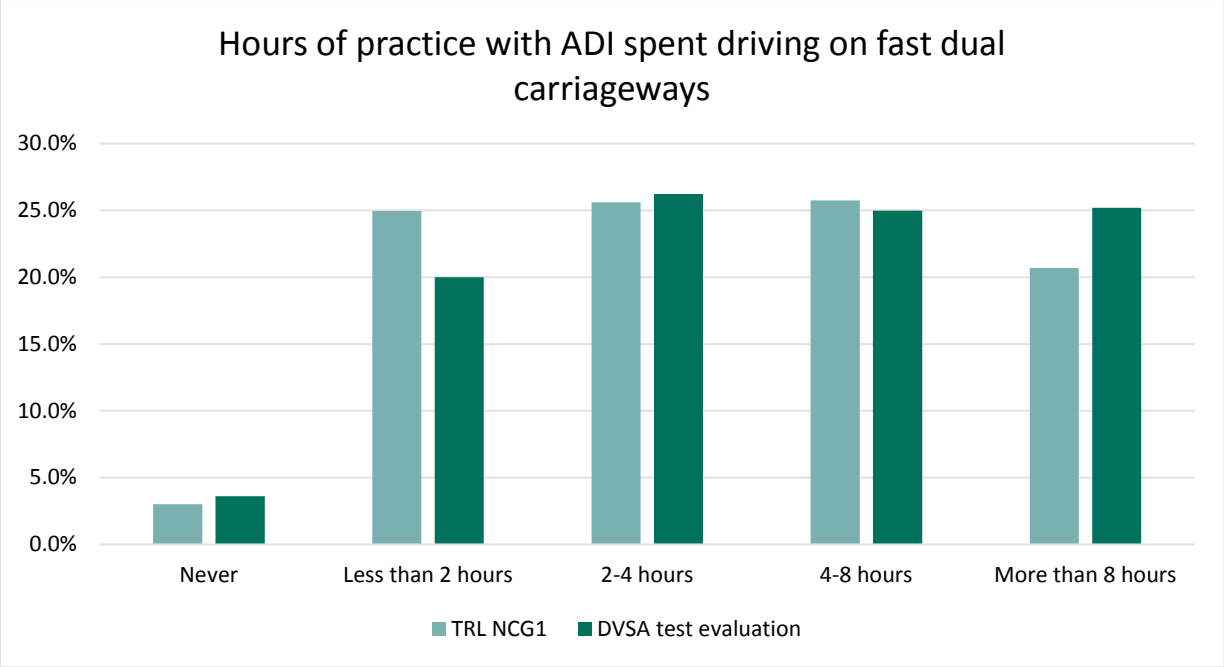

Hours of practice with ADI spent driving on country roads
30.0%
25.0%
20.0%
15.0%
10.0%
5.0%
0.0%
Never
Less than 2 hours
2-4 hours
4-8 hours
More than 8 hours
TRL NCG1
DVSA test evaluation

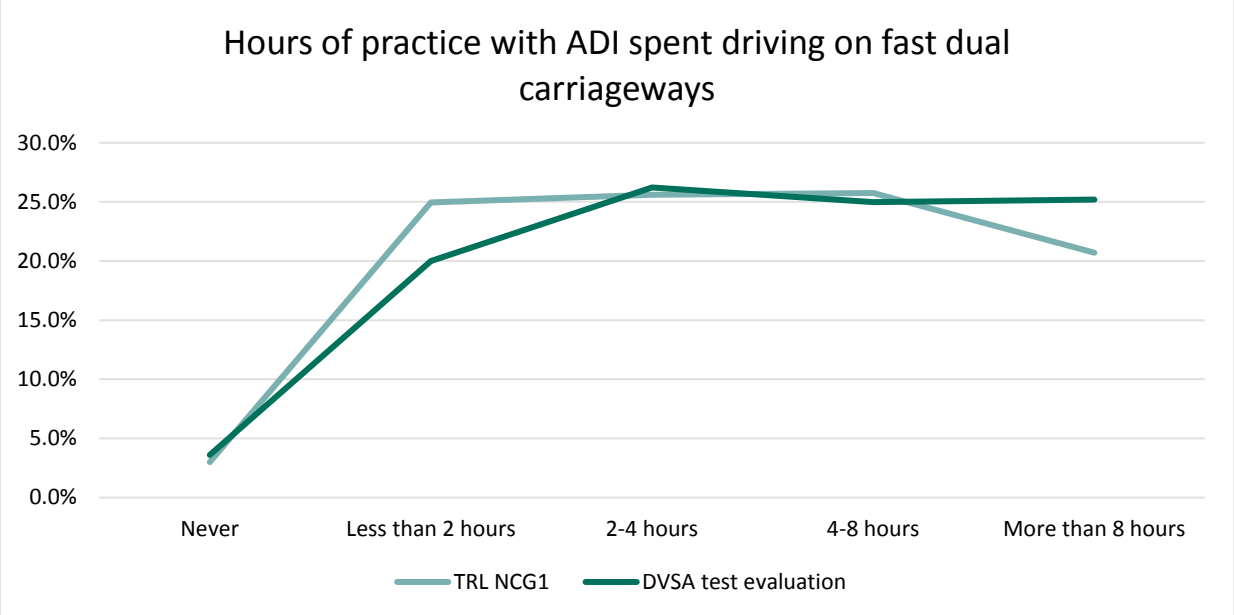

Hours of practice with ADI spent driving in quiet residential areas
60.0%
50.0%
40.0%
30.0%
20.0%
10.0%
0.0%
Never
Less than 2 hours
2-4 hours
4-8 hours
More than 8 hours
TRL NCG1
DVSA test evaluation


Hours of practice with ADI spent driving in quiet residential areas
60.0%
50.0%
40.0%
30.0%
20.0%
10.0%
0.0%
Never
Less than 2 hours
2-4 hours
4-8 hours
More than 8 hours
TRL NCG1
DVSA test evaluation


Hours of practice with ADI spent driving in other quiet areas
30.0%
25.0%
20.0%
15.0%
10.0%
5.0%
0.0%
Never
Less than 2 hours
2-4 hours
4-8 hours
More than 8 hours
TRL NCG1
DVSA test evaluation


Hours of practice with ADI spent driving in other quiet areas
30.0%
25.0%
20.0%
15.0%
10.0%
5.0%
0.0%
Never
Less than 2 hours
2-4 hours
4-8 hours
More than 8 hours
TRL NCG1
DVSA test evaluation

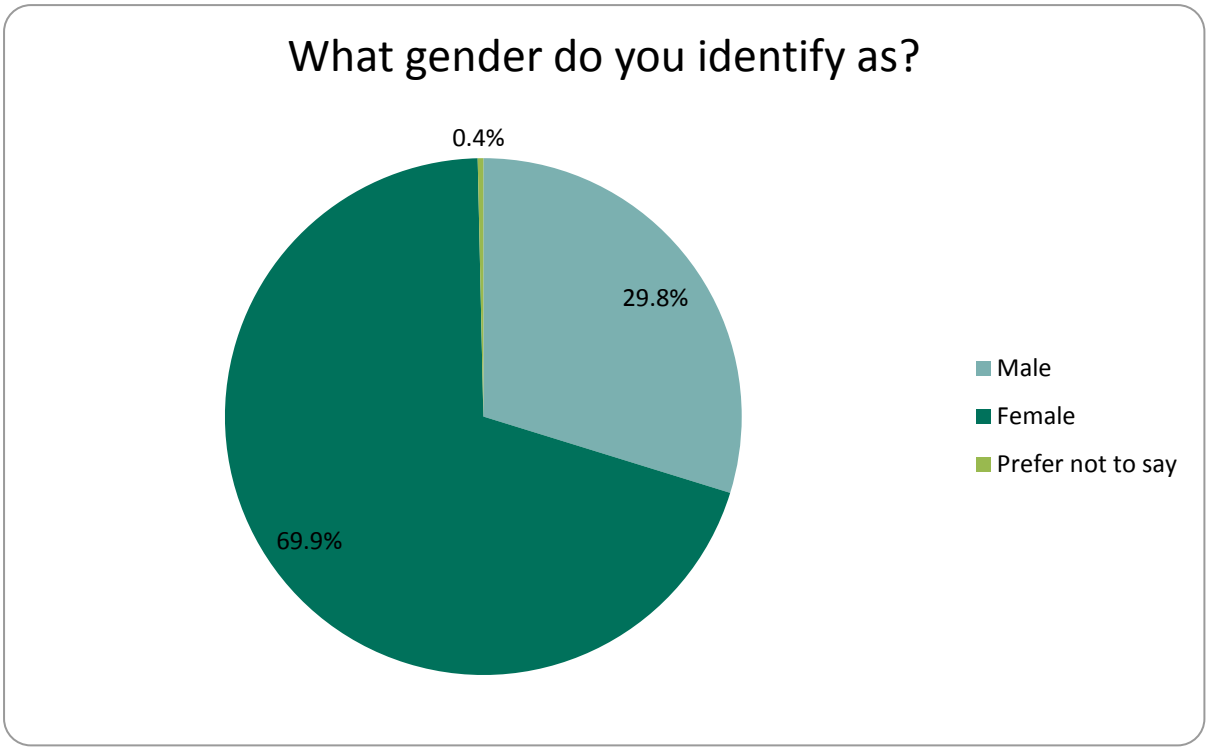

Hours of practice with ADI spent driving on fast dual carriageways
30.0%
25.0%
20.0%
15.0%
10.0%
5.0%
0.0%
Never
Less than 2 hours
2-4 hours
4-8 hours
More than 8 hours
TRL NCG1
DVSA test evaluation


Hours of practice with ADI spent driving on fast dual carriageways
30.0%
25.0%
20.0%
15.0%
10.0%
5.0%
0.0%
Never
Less than 2 hours
2-4 hours
4-8 hours
More than 8 hours
TRL NCG1
DVSA test evaluation

Appendix E – Perceived amount of improvement needed in all areas of ability at time point 1

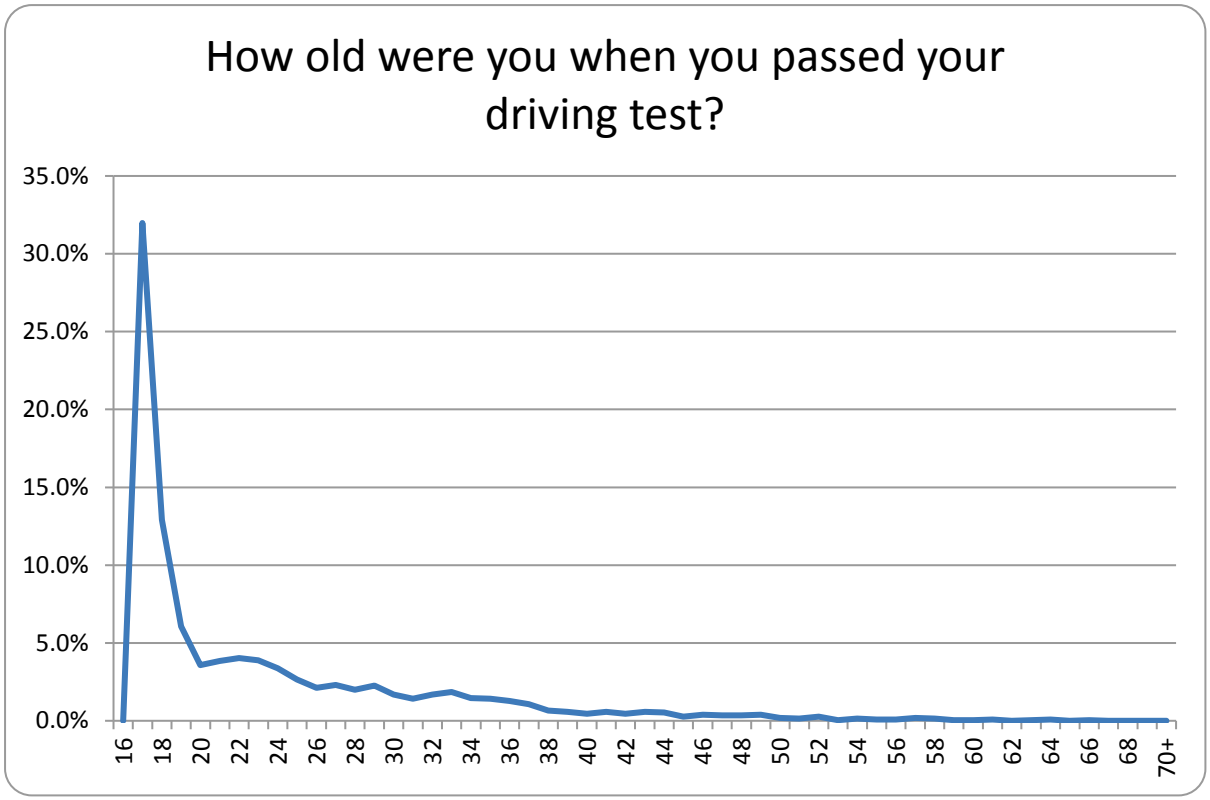
Now that you have passed your driving test how much do you think you need to improve your ability in each of the following areas?				
	No improvement needed	Some improvement needed	A lot of improvement needed	Total
Reversing	4522 42%	**5870** **54.5%**	374 3.5%	10766 100%
Pulling out of junctions	**8273** **76.9%**	2428 22.6%	61 0.5%	10762 100%
Judging the speed of other traffic	**6940** **64.5%**	3654 34%	161 1.5%	10755 100%
Parking	3488 32.4%	**6256** **58.2%**	1010 9.4%	10754 100%
Anticipating what other drivers are going to do	5030 46.7%	**5445** **50.6%**	287 2.7%	10762 100%
Use of car controls	**8069** **74.9%**	2592 24.1%	112 1%	10773 100%
Driving in the dark	**6318** **58.7%**	3842 35.7%	607 5.6%	10767 100%
Driving in heavy traffic	**7601** **70.6%**	2963 27.5%	204 1.9%	10768 100%
Using roundabouts	**6469** **60.1%**	4041 37.5%	253 2.4%	10763 100%
Overtaking	**5203** **48.4%**	4683 43.6%	861 8%	10747 100%
Joining with moving traffic on a motorway or fast dual carriageway	4676 43.5%	**4791** **44.6%**	1283 11.9%	10750 100%
Spotting hazards	**7383** **68.6%**	3312 30.2%	68 0.6%	10763 100%
Finding your way by following directions on road signs	**5986** **55.6%**	4440 41.2%	347 3.2%	10773 100%
Driving on country roads	**7299** **67.9%**	3139 29.2%	314 2.9%	10752 100%
Driving on your own	**7292** **67.8%**	3106 28.9%	363 3.3%	10761 100%
Finding your way by following directions from a sat nav	**7928** **73.7%**	2686 25%	145 1.3%	10759 100%
Driving on high speed roads	**6341** **58.9%**	4010 37.2%	416 3.9%	10767 100%

Appendix F – Socio-demographic data at time point 2

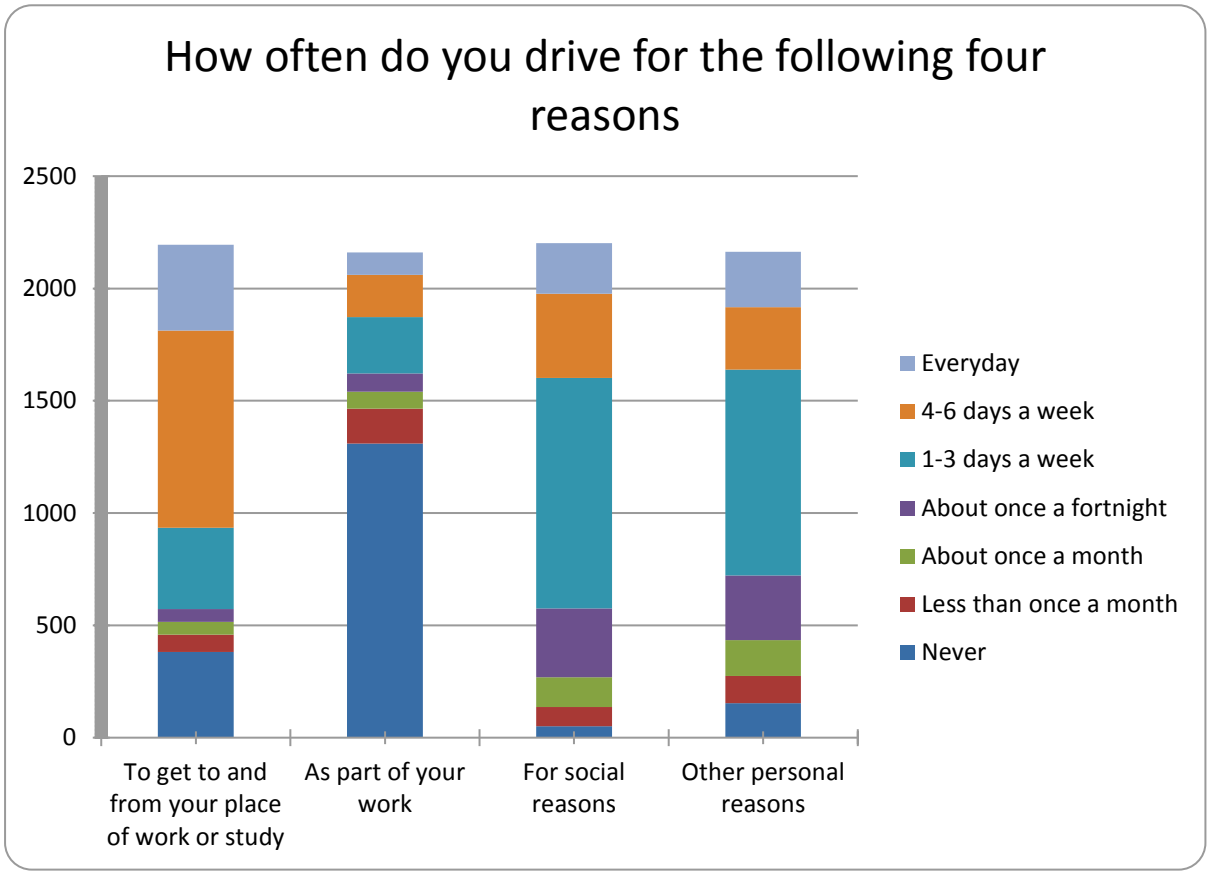


Do you have any physical or mental health conditions that you feel affect, or might affect, your driving?			
Answer Choice		**Response Percent**	**Response Total**
1	Yes	2.9%	66
2	No	95.8%	2192
3	Prefer not to say	1.3%	31
		answered	**2289**

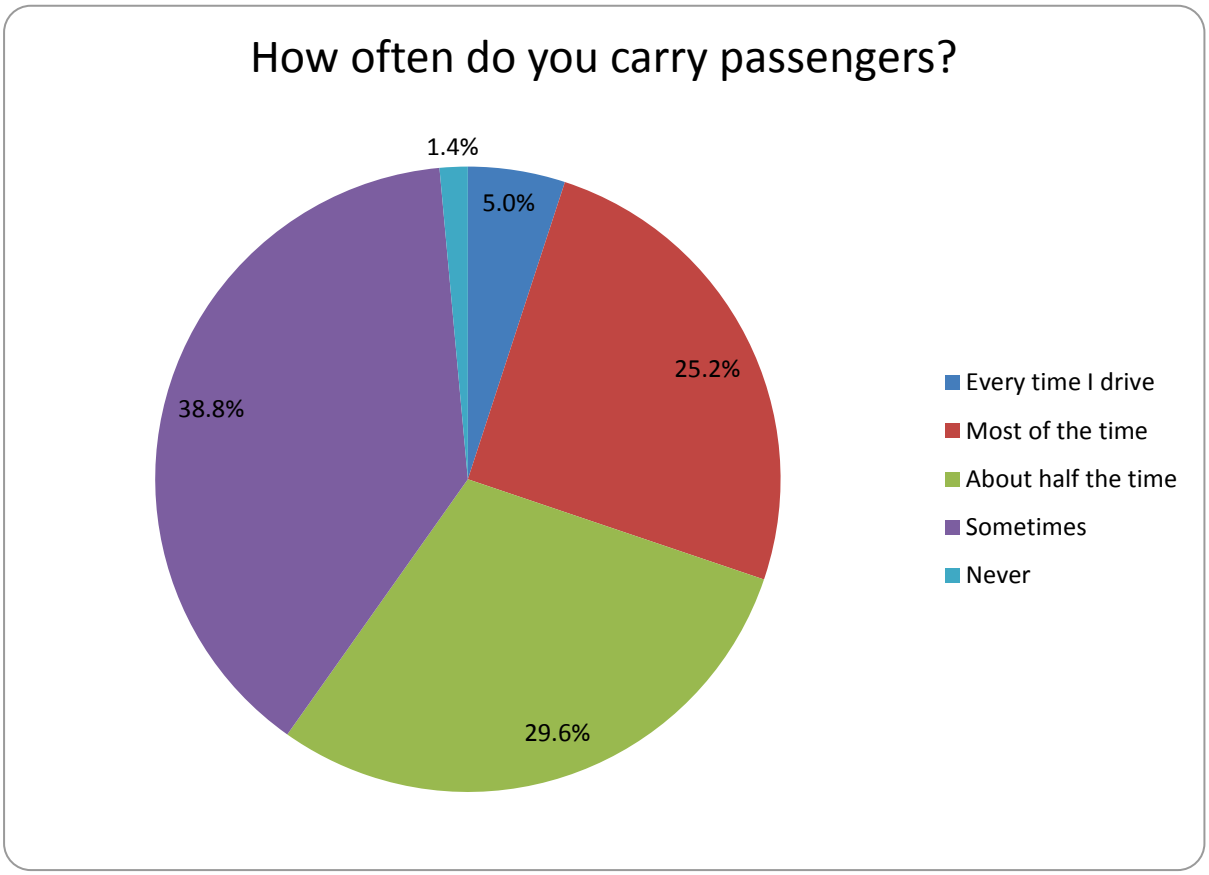
What best describes your ethnic group?			
Answer Choice		**Response Percent**	**Response Total**
1	English/Welsh/Scottish/Northern Irish/British	84.3%	1928
2	White Irish	0.7%	17
3	White gypsy or Irish traveller	0.0%	1
4	Any other white background	4.0%	92
5	White and black Caribbean	0.9%	20
6	White and black African	0.1%	3
7	White and Asian	0.8%	18
8	Any other mixed/multiple ethnic background	0.8%	18
9	Indian	1.5%	34
10	Pakistani	1.3%	29
11	Bangladeshi	0.5%	11
12	Chinese	0.5%	12
13	Any other Asian background	0.7%	17
14	African	1.5%	35
15	Caribbean	0.5%	11
16	Any other black/African/Caribbean background	0.3%	8
17	Arab	0.3%	7
18	Any other ethnic group	0.4%	10
19	Prefer not to say	0.7%	18
		answered	**2289**


How old were you when you passed your driving test?
35.0%
30.0%
25.0%
20.0%
15.0%
10.0%
5.0%
0.0%
16
18
20
22
24
26
28
30
32
34
36
38
40
42
44
46
48
50
52
54
56
58
60
62
64
66
68
70+

Appendix G – How often respondents drive for specific reasons



Appendix H – How often respondents carry passengers when they drive



Appendix I – Time spent driving in different weather conditions in first 6 months of driving.

		Again, during your first 6 months of driving, how often on average did you drive…						
		Never	Less than once a month	About once a fortnight	1-3 days per week	4-6 days per week	Every day	Response total
1	…on snow or ice	906 41.2%	**982** **44.6%**	131 6%	114 5.2%	46 2.1%	21 1%	2200 100%
2	…in the rain	22 1.0%	321 14.6%	**837** **38.0%**	752 34.2%	195 8.9%	73 3.3%	2200 100%
3	…in the dark	78 3.5%	298 13.5%	463 21.0%	**795** **36.1%**	402 18.3%	164 7.5%	2200 100%
4	…in fog	844 38.4%	**938** **42.6%**	224 10.2%	139 6.3%	29 1.3%	26 1.2%	2200 100%

Appendix J – Perceived amount of improvement needed in all areas of ability at time point 2

Now that you have passed your driving test how much do you think you need to improve your ability in each of the following areas?				
	No improvement needed	Some improvement needed	A lot of improvement needed	Total
Reversing	912 41.3%	**1193** **54.1%**	102 4.6%	2207 100%
Pulling out of junctions	**1813** **82.2%**	387 17.6%	5 0.2%	2205 100%
Judging the speed of other traffic	**1513** **68.6%**	670 30.4%	21 1.0%	2204 100%
Parking	675 30.6%	**1305** **59.1%**	227 10.3%	2207 100%
Anticipating what other drivers are going to do	**1156** **52.5%**	1012 46.0%	34 1.5%	2202 100%
Use of car controls	**1737** **78.7%**	451 20.4%	18 0.8%	2206 100%
Driving in the dark	**1529** **69.5%**	605 27.5%	67 3.0%	2201 100%
Driving in heavy traffic	**1592** **72.3%**	571 25.9%	38 1.8%	2201 100%
Using roundabouts	**1536** **69.8%**	631 28.7%	33 1.5%	2200 100%
Overtaking	**1253** **57.1%**	821 37.4%	120 5.5%	2194 100%
Joining with moving traffic on a motorway or fast dual carriageway	**1191** **54.0%**	806 36.6%	207 9.4%	2204 100%
Spotting hazards	**1527** **69.4%**	669 30.4%	5 0.2%	2201 100%
Finding your way by following directions on road signs	1050 47.6%	**1051** **47.7%**	104 4.7%	2205 100%
Driving on country roads	**1425** **64.7%**	701 31.8%	77 3.5%	2203 100%
Driving on your own	**1890** **85.9%**	276 12.5%	35 1.6%	2201 100%
Finding your way by following directions from a sat nav	**1648** **74.8%**	522 23.7%	34 1.5%	2204 100%
Driving on high speed roads	**1481** **67.1%**	639 29.0%	87 3.9%	2207 100%

Appendix K – Levels of agreement with statements about risky driving

Please indicate how much you agree or disagree with the following statements						
	Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly Disagree	Total
Decreasing the motorway speed limit is a good idea	90 3.9%	196 8.6%	545 23.9%	**798** **34.9%**	655 28.7%	2284 100%
Even at night-time on quiet roads it is important to keep within the speed limit	**1339** **58.5%**	705 30.8%	133 5.8%	89 3.9%	22 1%	2288 100%
Drivers who cause accidents by reckless driving should be banned from driving for life	579 25.3%	**676** **29.5%**	623 27.2%	361 15.8%	50 2.2%	2289 100%
People should drive lower than the speed limit when it is raining	596 26%	**1123** **49.1%**	430 18.8%	119 5.2%	21 0.9%	2289 100%
Cars should never overtake on the inside lane even if a slow driver is blocking the outside lane	626 27.4%	**734** **32.1%**	547 23.9%	319 13.9%	61 2.7%	2287 100%
In towns where there are lots of pedestrians the speed limit should be 20mph	461 20.2%	**873** **38.2%**	493 21.6%	385 16.8%	75 3.2%	2287 100%
Penalties for speeding should be more severe	304 13.3%	504 22%	**813** **35.5%**	539 23.5%	129 5.7%	2289 100%
Increasing the motorway speed limit is a good idea	302 13.2%	476 20.8%	**751** **32.9%**	598 26.1%	160 7%	2287 100%