

REPORT

for

**Road Safety Team
Dorset County Council**

Evaluation of the Dorset Driver Gold Initiative

Dr Carol Hawley

Division of Mental Health and Wellbeing

**Warwick Medical School
University of Warwick**

January 2015



CONTENTS

	Page
Executive Summary	3
Acknowledgements	15
1 Background	16
2 Method	19
2.1 Aims and objectives of the research	19
2.2 Recruitment	19
2.3 Driving theory course	20
2.4 One-to-one driving practical refresher sessions	21
2.5 Driver focus groups	22
2.6 Post first practical questionnaire	22
2.7 ADI Questionnaire	23
2.8 Final follow-up questionnaire	23
3 Results	25
3.1 Driving theory and results of pre- and post-questionnaires	25
3.2 One-to-one driving practical refresher sessions	35
3.3 Focus groups	42
3.4 Post-first practical questionnaire	55
3.5 Approved Driving Instructor questionnaires	59
3.6 Final follow-up questionnaire	65
4 Discussion	70
4.1 Aims and objectives of the study	70
4.2 Recruitment and study sample	70
4.3 Driving behaviours, skills and needs of senior drivers	71
4.4 Practical training for senior drivers	72
4.5 Driving confidence	73
4.6 Translation of new skills into driving practice	73
4.7 Approved Driving Instructors	74
4.8 Limitations	75
5 Conclusion and Recommendations	76
6 References	78
Appendices	81
Appendix I Dorset Driver Gold leaflet	82
Appendix II Dorset Driver Gold Pre-Course Questionnaire	84
Appendix III Dorset Driver Gold Post-Course Questionnaire	86
Appendix IV Dorset Driver Gold Focus Group Topic Guide	88
Appendix V Advanced Driving Instructor Questionnaire	90

EXECUTIVE SUMMARY

This report presents the findings of a research project which evaluated the utility and effectiveness of a training initiative aimed at senior drivers. A literature review indicated that drivers aged 75 and over have an increased risk of driving incidents. Dorset County Council developed a training course aimed at drivers aged 75 and over which offered both classroom-based training and on-road practical driving refresher sessions. As this was a pilot project, the course was offered free of charge. The aim was to recruit 100 senior drivers to the initiative, providing sufficient numbers for an evaluation of the project. Recruitment was by advertisements in local press, social media, leaflets, email alerts and the Dorsetforyou.com website.

A multi-method approach was taken using both qualitative and quantitative research methods which incorporated questionnaires, practical driving sessions, interviews, and focus groups. We used a pre- and post- intervention study design. Senior drivers were asked to rate their own driving ability, knowledge of the Highway Code and their confidence in driving before and after a classroom based course on driving theory. They then were taken out on a practical driving refresher session with a Dorset County Council Approved Driving Instructor (ADI). During this practical drive participants were informed of any driving faults or errors and instructed on how to correct these. The ADIs provided advice on driving safely. Each driver was scored on a range of categories and given a total score of driving competence. After the first drive, participants were asked to re-rate their driving confidence and ability.

Six months after the first drive, each driver was offered a second practical drive to assess driving errors or faults. They were re-scored on the same categories and given a total score. The two sets of scores were compared to see if drivers had learned and improved since the first practical session. One year after the initial classroom training, and after the practical drives, drivers were once again asked to rate their driving confidence and ability and to describe how their driving behaviour has changed.

The principal aims of the research were as follows:

- I. To measure the effectiveness of classroom and practical training on safe driving among senior drivers by assessing driving skills and confidence levels before and after training
- II. To evaluate the utility and acceptability of these training courses to senior drivers

In order to achieve these aims, the research project comprised of eight main elements:

1. Pre-course questionnaire to collect demographic data and driving history, confidence as a driver and assessment of own driving ability. Also to collect

data on the driver's expectations of the course and which areas of driving they wished to improve.

2. Post-course questionnaire to collect data on how useful participants found the course, whether they intend to alter their driving behaviour, and what other areas they would like to see covered in the course. Also to collect data on the knowledge participants had gained from the course and if their confidence as a driver had altered.
3. Practical drive with an Approved Driving Instructor (ADI) to assess driving and provide tuition and advice to correct any faults. Using a structured evaluation form, each participant was given a score on a range of categories, a total error score, and also a total score of driving ability.
4. Post-first practical questionnaire to collect data on how useful participants had found the driving refresher session and give their overall impressions of the course. Participants were asked to rate their confidence as a driver and their driving ability to see if this had changed after the driving practical session.
5. Second practical drive with an ADI approximately six months later to re-assess driving performance and see if participants had improved their driving and put into practice the training given at the first driving session. Each participant was given a score on each of the same range of categories, a total score of driving ability, and an error score. These scores were compared with those of the first practical session.
6. Focus groups were held with drivers who had taken part in both the theory and practical elements of the Dorset Driver Gold initiative. The main aims were: a) to discuss the findings of the questionnaires and practical drives; b) to explore the main driving issues for older drivers; c) to explore the benefits and limitations of the DDG; and d) to identify ways of reaching senior drivers who most need driving tuition and advice.
7. Survey of the views of ADIs after the first and second practical drives using both a questionnaire and interviews.
8. Final follow-up questionnaire to senior drivers who had completed at least one practical driving session.

Results

Recruitment to the DDG initiative was very successful and the target study sample of 100 was exceeded. A total of 144 senior drivers aged between 75 and 91 years took part in the study. The mean age was 79 years, two-thirds were male. One hundred and forty-one drivers completed at least one questionnaire relating to the theory session. One hundred and twenty-three had at least one practical driving refresher session, 72 drivers completed the final post-practical questionnaire. Fifteen drivers took part in the focus groups.

Data analyses were performed using two age groups: “younger” = 75 to 79 years (93 participants) and “older” = 80+ years (51 participants). The main results of each of the sub-studies are presented below

1. Pre-course questionnaire

The pre-course questionnaire gathered information on the driving history of respondents. Most respondents said they were the main driver in their household. The majority of drivers (60%) passed their driving test in the 1950s, 11% passed their test in the 1940s. Consequently most of the drivers taking part in this project had around 60 years of driving experience. The main reasons for currently driving were for leisure purposes, shopping, visiting friends or relatives, and going to appointments.

Approximately half of the respondents said that they did not restrict their driving and would drive anywhere. However, older drivers were significantly more likely to avoid unfamiliar roads. Women drivers were significantly more likely to restrict their driving in the dark and in bad weather.

When asked whether they were up to date with current driving regulations, just over one third of respondents said they had checked the regulations within the last year. 26% had not checked the regulations for over five years. Drivers were asked to rate their confidence as a driver on a scale of one (low) to ten (high). Most drivers rated their confidence highly, with a median score of 8 out of 10. Respondents were also asked to rate their ability as a driver. Again most rated themselves highly, with a median score of 8 out of 10.

Most respondents volunteered for the DDG course because they wanted to improve aspects of their driving. Overall, most wanted to improve their perception of hazards, their ability to negotiate roundabouts and improve the fuel economy of their vehicle. There were some gender differences: more women than men wanted to improve their motorway driving and speed awareness. Furthermore, significantly more older drivers than younger drivers wanted to improve their ability to negotiate junctions.

2. Post-course questionnaire

All respondents stated that they found the theory course useful. The majority (78%) said it was very useful. Most people (76%) said that they intended to make changes to the way they drive as a result of the theory course.

After they had attended the theory course, respondents were again asked to rate their confidence and ability as drivers. These ratings were compared to those given before the theory course. Most drivers improved their confidence and ability ratings after the theory course. However, regarding driving confidence, 29% reduced their self-rating after the course. For driving ability, 20% reduced their self-rating after the course. It is likely that these reductions in self-ratings are a result of increased awareness that their driving may not be as good as they previously thought.

Asked if they had gained all they had hoped for from the theory course, 121 people (98%) said yes, and three said no (2%). Five people did not answer the question. The three people who said no explained that they would have liked more thorough coverage of certain topics.

Most respondents (120, 98%) said they would recommend the course to others, only 2 people said they would not. Seven people did not answer this question. Of the two people who would not recommend the course one said they had no-one to recommend it to, and the other said none of their acquaintances would be interested.

3. First practical drive

The ADIs carried out one-to-one driving refresher sessions with the drivers who had attended one of the theory sessions. In 90% of cases the driving practical was carried out with the same ADI who delivered the theory session to that driver.

One hundred and twenty-three people were taken on a practical driving session, two thirds were men and one third were women. At the end of the practical session, the ADIs gave each driver an overall score of driving ability. The maximum possible score was 40. The mean score was 24/40. There was no significant difference in the performance of men and women or between older drivers and younger drivers.

The ADI ratings of car control, observation, signals and positioning, and speed awareness and planning were examined for all drivers. There were no significant differences in mean scores on any of these elements for older versus younger drivers. There was a statistically significant difference between male and female drivers for overall observation. Women had a lower mean score (4.59) than men (5.58).

The number of driving errors made by each driver was calculated by the ADIs and each driver was given an error score. The mean number of errors was 12 (SD = 7.98) with a range of zero errors to 43 errors, the median number was 10. Women made significantly more errors than men. There was no significant difference in the mean number of errors made by older drivers compared with younger drivers.

The number of miles driven by respondents was correlated with overall ability scores and error scores. There was a significant positive correlation between number of miles driven and overall driving ability, i.e. higher annual mileage was correlated with better driving ability scores. However, there was no significant correlation between miles driven and number of errors.

4. Post first practical questionnaire

Following the first practical drives, a brief questionnaire was sent to the 123 senior drivers who took part. Of these, 49 responded (40%). Respondents rated their confidence in driving and their driving ability. Again ratings were high with a median score of 8/10 for both confidence and ability. These ratings were compared with the

confidence and ability ratings provided immediately after the theory course. Half of the respondents increased their confidence score in the mid-course questionnaire after they had taken the driving practical session.

All respondents provided qualitative information on how the course had made a difference to their driving. All viewed the course positively, and many found the course helpful in improving their driving, increasing their confidence, raising their awareness of mistakes or bad driving habits and updating their knowledge.

5. Second practical drive

Seventy-six people were taken on a second practical drive by the ADIs, 23 were female and 53 were male. Just under two thirds were in the 75-79 age group and just over one third were in the 80+ age group.

At the end of the second practical session, the ADIs again gave each driver an overall score of driving ability. The mean score had increased to 29/40 with a range of 18 to 39, the median score was 26. There was no significant difference between men and women or between older and younger drivers.

The number of driving errors made by each driver was again calculated by the ADIs and each driver was given an error score. The mean number of errors had halved to 6 from 12 for the first drives. There was no significant difference between men and women. There was a higher mean number of errors made by older drivers compared with younger drivers but this did not reach statistical significance.

The ADI rated overall driving ability scores for each driver were compared between the first and second practical drives and expressed as a percentage change. Overall, there was a mean improvement in driving ability scores of 16%. Women showed a significantly greater improvement (22%) than men (14%).

The error scores for each driver were also compared between the first and second practical drives and expressed as a percentage change. Overall, there was a mean reduction in errors of 40%, with a range of 100% improvement to 29% worse. Women showed a greater reduction in errors than men: 54% reduction in error score for women, 33% reduction in error score for men. Younger drivers showed a greater reduction in errors between the first and second drive (48%) than older drivers (26%).

6. Focus Groups

Focus groups were used to triangulate and validate the results of the questionnaires and practical elements of the project and to further explore the views of senior drivers. Two focus groups were held in order to gather a rich and varied set of views, and to stimulate lively debate. Participants included male and female drivers who had taken part in both the theory and practical elements of the Dorset Driver Gold initiative. Fifteen senior drivers took part, nine in Focus Group 1 (seven men and two women) and six in Focus Group 2 (three men and three women). The focus

groups were led by the researcher using a structured topic guide to ensure that specific issues were explored. Participants also raised other issues and the discussions were wide-ranging. The following main areas were discussed:

Differences between male and female senior drivers

It was suggested that more men volunteered for the DDG course because they were the main driver in the household and women tended to drive less frequently:

Main issues for older drivers

The following were raised as important issues:

Over-estimation of own abilities

"We all think we are brilliant and perhaps we are not so brilliant as we think we are. So I found the driving part of the event much more useful than the classroom part, where he commented on my driving."

Driving in unfamiliar areas

"There is familiar driving, you know where you are going, ... but you go somewhere different and you have got a lot more visual things to take in at a distance, more traffic signs, signs that you are not used to."

Driver overload

"...going into busy junctions that I don't know, I can get an overload of information on road signs and things like that."

Navigation and lack of overhead signs

Some participants found a SatNav particularly helpful in navigating, but others did not and felt it diverted their attention from the road.

Driving at night

This was a particular problem on rainy nights:

"wet nights I won't go out. I won't do either. The reflections - the lights - it's just too confusing."

Junctions and roundabouts

Many participants stated that the ADIs had highlighted that they were making driving errors at road junctions and at roundabouts. Some participants found the use of a SatNav useful in planning ahead:

Speed awareness

Several participants mentioned that over the past few years speed limits have become more complex and can vary considerably on stretches of the same road. They commented that this was a distraction whereby checking the speed limits was taking their attention away from observing other traffic. Some participants found a SatNav useful in helping them stay within the speed limit:

Judging speed and distance

This was a problem brought up in the practical drives for many participants. Senior drivers often found it difficult to judge the speed of oncoming traffic.

Dazzling sun

Low sun in Winter months was seen as a particular problem. There was a discussion about the use of sun visors and how they are inadequate for shorter drivers. One driver highlighted that dazzling sun in the winter is a particular problem on certain local roads:

Main reasons for volunteering for the DDG course

Many drivers volunteered because they wanted confirmation that their driving is safe. *"I just wanted to make sure that I was driving safely."*

There was a general feeling among participants that those who volunteer for courses such as the DDG course will be competent drivers with awareness of road safety. Several people thought that the DDG course appealed to drivers who were already quite confident in their driving ability, and those who were less confident may stay away. Another suggestion was that some drivers, of any age, feel they are already good drivers and do not need extra tuition.

Some were encouraged to volunteer by family members:

"My wife thought it was time I went along..."

Others were encouraged by seeing an advertisement for the course in the local newspaper or in a trusted publication, such as the Age Concern newsletter.

Asked how to encourage other senior drivers to volunteer for the course, many participants felt that some drivers would be frightened of having their driving assessed in case they were found to be unfit to drive. They also believed that some people would avoid a driving course for fear of losing their licence. Some participants voiced suspicion that there was a 'hidden agenda' behind the DDG course, possibly part of an initiative by Government to target older drivers. This was suggested as a possible reason some older drivers did not volunteer for the course.

There was general agreement that placing a storyline about an older driver and road safety within a popular radio or television soap opera would raise public awareness about the importance of driving assessments for older drivers.

Main things volunteers hoped to get out of the course

The principal reasons for attending the course were to improve driving skills and confirm that their driving was safe. Participants in the focus groups were aware that there were some areas of their driving that could be improved. Participants said that they found the course very helpful. However there were some aspects of driving that were not touched on in the practical sessions. One of these was reversing and parking:

Did the course meet expectations?

All participants felt they had gained from the course. There was a wide-ranging discussion of the advice they had received from the ADIs and what they thought of it.

Overall driving skills

Some participants had updated their knowledge of driving by purchasing a copy of the most recent Highway Code. Another participant stated that he had not read the most recent Highway Code, but still owned a very out-dated copy:

Some participants received a check-list of areas of driving to address and they found this very helpful. Most demonstrated a willingness to take the advice given and to improve their driving.

The main areas of ADI advice were:

- Road Positioning
- Awareness of other road users
- Speed awareness
- Correct use of mirrors
- Correct use of gears and brakes
- Overtaking
- Navigational aids. Some participants were advised to get a SatNav to help them to get into the correct lane when coming up to junctions and roundabouts. However, some participants felt that this may add to driver 'overload'.

Most participants were satisfied that they had been 'passed' as fit to drive. They may not be perfect drivers, but they were not particularly unsafe drivers

Aspects of driving participants find most difficult

Driving at night was frequently mentioned as a problem for older drivers. This was to do with glare from oncoming headlights, and difficulties in judging speed and distance at night.

Road positioning was another area that was raised as a problem. There was agreement that roads have become more complicated in recent years, there are more roundabouts, more traffic lights and more complex junctions. This was seen as a problem for drivers of all ages, but more so for older drivers who may process information more slowly than younger drivers.

One female driver said that she became nervous and stressed when unable to navigate the road system:

Health and medications

The topics of health and medications in relation to driving were discussed. There was discussion in both focus groups about vision and driving. Several participants had suffered from cataracts. There were instances where participants had continued to drive whilst their eyesight was impaired because they had not been advised not to drive by doctors or optometrists.

In both focus groups there was debate about renewal of the driving licence at age 70. Several participants were unclear about the frequency of renewals, and several voiced concerns about the system of self-certification for fitness to drive:

"You fill in this three year renewal. You say everything is OK."

Giving up driving

This was an issue which most participants had thought about, and many knew of friends or relatives that they thought should give up driving. It was seen as a difficult subject and no-one wanted to be the one to tell someone they should stop driving. It was felt that a recommendation to cease driving would be best coming from someone in 'authority':

"I don't think [drivers] would have minded had they been told that. You know instead of making the decision themselves."

The alternatives to driving were discussed. Using public transport for the first time in years was seen as potentially difficult. Some participants raised the problem of cuts in public services and public transport. Another participant had already decided that when the time came to give up driving he would take taxis:

How much should be charged for future DDG courses and how should the courses be promoted?

There was a debate regarding how much money participants would be prepared to pay for such a course. In general, £50 was deemed too expensive, but £20 was considered a fair price. Participants felt that it was important to stress the benefits of the practical driving refresher training and to emphasise that it is not a driving test.

The participants were strongly in favour of the DDG courses and many had recommended the course to friends. Word-of-mouth was seen as a good way of promoting the DDG initiative.

Discussion of main results of the theory and practical aspects of the course

Participants felt that older drivers (80 and over) may not volunteer for a DDG course because they are concerned that the assessment is a test and if they failed they may lose their licence.

The theory sessions were found to be useful, but not especially so. All participants felt that the practical driving sessions were the most useful. However, they did agree that both parts of the course were probably helpful. One participant asked how many senior drivers had attended the DDG course. When told it was over 130 people she commented that there were now probably many better drivers in Dorset:

7. Approved Driving Instructor Questionnaire

The approved driving instructors completed a questionnaire which contained eleven open-ended questions. The aim was to gather feedback from ADIs on how this group of older drivers performed on the road and what specific training or advice should be offered to older drivers in order to improve road safety. Responses from the five individual ADIs were broadly similar.

ADIs identified physical problems as a factor affecting older drivers, for example health issues are more prevalent among older people. Slower reaction times were also highlighted as a particular problem among senior drivers. Another problem was

driving too slowly and causing impatience among following drivers who may then make risky overtaking manoeuvres:

Regarding mobility in general, the lack of good public transport links for those living in rural areas was highlighted as a problem which could force older drivers to keep driving even if they would prefer to give up.

With regard to driving errors, ADIs believed that the faults targeted on the DDG project are the ones most often found among senior drivers. These were identified as the concept of speed and distance; lane discipline; emerging and turning; and dealing with today's busy traffic filled roads.

It was seen as very important for older drivers to be able to retain their independence and have control of when and where they travel. Several ADIs said the main reason people volunteered for DDG was to achieve confirmation of their ability to drive. All ADIs stated that most of the people they took on a practical drive were reasonably competent drivers. None of the ADIs identified any gender differences except that slightly more male drivers volunteered for the practical element of the course.

All five ADIs felt that the volunteers were not representative of all older drivers on the road. There was a general feeling that the volunteers were more aware of the importance of road safety and the need to keep their driving skills up to date than the majority of senior drivers. It was also noted that unsafe drivers are a hard- to-reach group, particularly as they may worry that a driving assessment could result in the loss of their driving licence:

The ADIs agreed that the errors of most concern to them during the practical drives were:

- Observation (e.g. poor use of mirrors and failing to check blind spots, observation checks before emerging and when changing lanes, lack of observation at junctions and roundabouts)
- Speed (e.g. approaching junctions too fast)
- Road positioning (e.g. poor lane discipline)
- Signals (e.g. incorrect use and timing of signals)
- Planning (e.g. looking early and assessing)
- Reading the road (e.g. not using LADA: Look, Assess, Decide, Act)

Few drivers were considered by ADIs as unfit to drive and even fewer were advised to cease driving. One ADI commented that female drivers were more receptive to criticism than males. However none of the ADIs felt there were gender differences with regard to driving competence.

The ADIs provided advice to all of the senior drivers they assessed. At least one of the ADIs provided the advice in the form of a separate written check-list so that the driver could refer to it easily. After the first practical drives, all drivers received a report with their driving faults highlighted and advice on how to address these. The main aims of the second drive were to assess whether the advice had been acted

upon, and a reduction in the number of driving errors. In most cases, the ADIs reported that they saw an improvement at the second practical drive.

In order to improve road safety, there was general agreement that senior drivers should have regular driving assessments and regular driver education. The recommended frequency of refresher training or driving assessments varied from annually to every three or five years.

The main reason for not taking part in the second practical drive seemed to be that it was difficult for ADIs to contact the drivers. The first practical drives were usually booked on the day of the theory session, but booking the second drives depended on being able to reach the drivers. Another reason for not taking part in the second practical drive was that the drivers did not see any further benefit, feeling they had received advice and needed no more. However, many drivers used the second practical drive as an opportunity to demonstrate to the ADI that their driving had improved.

The ADIs had experience of accompanying drivers of all ages. In general, they did not find any significant differences in driving performance or faults between the DDG over 75 year olds, and younger drivers. However, Some ADIs said that they noticed slower response and reaction times in the DDG over 75 group:

Asked for examples which illustrate particular issues for older drivers and road safety, ADIs said that a recurring problem for senior drivers was not using their rear-view and door mirrors correctly. It was also suggested that many senior drivers have acquired 'bad driving habits' over the years, and that driving style and driving behaviour is very difficult to change.

It was recommended that training for senior drivers should focus on the main faults of all drivers, namely:

1. Look effectively before emerging at junctions
2. Use your mirrors especially before changing speed, direction or indicating.
3. Keep your distance
4. Avoid speeding, use a lower gear in town to help control speed.
5. Keep to your lane on roundabouts.
6. Avoid cutting corners.

8. Final follow-up Questionnaire

Following completion of the theory and practical elements of the Dorset Driver Gold course, a brief questionnaire was sent to the 123 senior drivers who had experienced at least one practical driving session, 72 drivers (59%) responded. Respondents again rated their confidence and driving ability. Again, the median score for both confidence and ability was 8/10. These ratings were compared with the confidence and ability ratings provided before the theory course. At this final follow-up questionnaire, 45% of respondents demonstrated an increase in confidence since completion of the course. Half of the respondents rated their driving ability more highly since completion of the course

Respondents were asked if they intended to make changes to the way they drive as a result of the course. All but two drivers said they would probably or definitely make changes.

Respondents also provided qualitative information on how the course had made a difference to their driving. All viewed the course positively, and most said that they found the course useful. Particular benefits were: improving their driving, raising their awareness of mistakes or bad driving habits, raising their awareness of speed and other road users; and increasing their confidence.

Study Limitations

Many of the senior drivers who volunteered for the DDG course appear to be a biased group. Most were already competent drivers and their motivation for volunteering was to gain confirmation of their driving ability.

There was a bias towards younger senior drivers volunteering for the DDG course. The course was advertised for drivers aged 75 and over. However, only 51 drivers aged 80 and over volunteered.

More men than women volunteered for the DDG course. This may be associated with the tendency for drivers who feel confident and competent to volunteer for an assessment of their driving skills.

Of the 123 people who had a first practical drive, only 76 had a second practical drive. Therefore the comparisons between first and second drives are made with a restricted group.

Conclusions

The DDG scheme achieved its objectives of successfully training a group of senior drivers and improving their driving skills and confidence as drivers. It was not possible to measure any impact on road safety, but most participants felt that they were better or safer drivers as a result of the on-road driving refresher sessions. Nearly all of the volunteers said that they would make changes to their driving as a result of the DDG course.

The evaluation of this initiative has demonstrated that the DDG scheme was well received by senior drivers. The scheme met most of the needs and expectations of the drivers who volunteered to be part of it. The DDG scheme was effective in that almost all drivers who took a second practical drive had improved their driving following the training and advice given in the first practical drives. Almost all drivers reduced the number of errors they had made in the first drive.

The drivers who volunteered for the DDG scheme were not typical of all older drivers. This view was supported both by the ADIs and by the drivers who took part. Some of the drivers who took part clearly needed some refresher training of their driving, but several others were already confident and competent drivers. These

competent drivers were already aware of the importance of road safety and were keen to have formal confirmation that they are good drivers. In the main, these drivers did receive this confirmation and therefore their own expectations of the course were met.

It was noted that more 'young' senior drivers volunteered for the DDG scheme than 'older' drivers. In future, it is recommended that the scheme is aimed at drivers aged 80 and over, which is also the age when accident rates begin to rise.

Other recommendations from the evaluation are as follows:

Delivery of the course:

- Aim for greater consistency of presentational styles for the theory course.
- Aim for consistency of scoring between ADIs.
- Aim for consistency of driving routes and experiences.
- Consider introducing reversing and parking to all driving refresher sessions.

Recruitment:

- It would be useful to restrict the DDG course to drivers aged 80 years and over.
- Stress course will benefit everyone, reduce fear that people will be stopped from driving
- Several drivers said they had already had some form of refresher training. It is recommended that the DDG course is restricted to those who have had no refresher training in the last 5 years.
- The focus groups suggested that a charge of £20 for the course was reasonable.

Feedback to drivers:

- All ADIs to provide a written checklist for drivers to take away outlining the main areas to improve/driving. This is especially important for those with memory problems.

Acknowledgements

I wish to thank the drivers and approved driving instructors who took part in this study. I also thank the following for their important contribution to the study: Robert Smith, Lacey Goodwin, Emma Selway, all from Dorset County Council and Laressa Robinson, Education Operations Manager, Dorset Police.

1 BACKGROUND

Over the past thirty years there has been growing awareness that the UK has an aging population. Improved life expectancy has led to an increase in the number of people living into their 80s and beyond. Driving became popular in the middle of the last century, and those who learned to drive in the 1940s, '50s and '60s are today's 'older drivers'. There have been significant changes to the road network in the past few decades, and the number of vehicles on the road has increased dramatically. In the UK, the system of driver licensing means that a person can pass their driving test and then their driving ability may never be assessed again. Although the driving license needs to be renewed when the driver reaches the age of 70, it is the responsibility of the driver to declare that they are fit to drive by means of self-certification. Whilst most people will make honest declarations, they may be unaware of physical or cognitive changes over time which may affect their ability to drive safely.

In the UK, the majority of adults hold a driving licence, and there are currently approximately 38 million licence holders, representing 72% of the adult population (Department for Transport, 2014a). In England, there are currently 4,109,038 licence holders aged 70 years and above, and 2,368,783 of these are aged 75 years or over (Department for Transport, 2014a). The proportion of people in the 70 and over age group who hold a driving licence has been steadily increasing year on year, from 15% in 1975 to 62% in 2013 (Department for Transport, 2014b). Figures from the Office for National Statistics (ONS) show that in the UK, there are 8.2 million people aged 70 and over. Over 5.6 million of these are aged 75 and over and they form 8% of the UK population, with over half a million aged over 90 years (ONS, 2014). The ONS estimates that the number of people aged 75 and over will rise to over 9 million by 2035 and represent 12.5% of the UK population. Consequently, the number of senior drivers on the road will continue to rise. Access to a car and the ability to drive is important to continuing mobility and quality of life for older drivers (Whelan et al 2006). It is therefore important to ensure that older drivers remain safe on the road.

As we age, there are changes in cognitive functions which can affect the ability to drive a car, particularly on busy roads. These changes include a decline in perception (sensory functions), cognition (perceptual speed) and physiological functions as well as an increasing risk of medical conditions which may impair fitness to drive (Anstey et al, 2005). These impairments may cause typical driving errors such as failing to yield right of way or when merging into moving traffic (AGILE, 2003). Preusser et al. (1998) examined accidents at intersections and found an exponential rise of the accident risk with increasing age, whereby drivers aged 85 and over had ten times the risk of middle-aged drivers. However, Langford et al. (2006) found that most drivers aged 75 years and older were generally safer than all other drivers. However, they found that only older drivers travelling less than 3,000 km per year did have higher crash rates.

The National Travel Survey (Department for Transport, 2014b) provides figures for annual miles driven by age group. For England in 2013, drivers aged 70 and over drove an average of 1,905 miles/year compared to 3,235 miles/year for drivers in all

age groups. However, in the 70+ age group, females have a far lower annual mileage rate than males, 863 miles/year compared to 3,223 miles/year. This differs from other age groups, where females drive approximately half the number of miles as males (4,209 for males and 2,291 for females). Older drivers have a higher rate of road accidents per mile driven compared to younger drivers (Department for Transport, 2014b). The risk of an accident increases for drivers aged over 70 and especially for drivers aged over 80 (ROSPA, 2013).

A review of the literature suggests that older drivers often regulate their driving and take fewer risks than younger drivers (Lang et al, 2013). Driving self-regulation is the driver's behavioural adaptation to maintain safe driving despite the decline in functioning with advancing age (Donorfio, et al, 2008). Some senior drivers use compensatory strategies such as the avoidance of difficult situations (e.g. driving at night, in bad weather, or during rush hours), or by increasing safety distances or reducing speed (Ball, et al., 1998, Donorfio, et al, 2009, Gabaude, et al, 2010, Holland & Rabbitt, 1992, Molnar & Eby, 2008). A key component between age-related functional decline and self-regulation is self-awareness of this decline. Driving adaptation to a specific situation depends on the self-awareness of abilities (Anstey, et al., 2005). However, it has been argued that some senior drivers may limit their driving not because they are aware of their driving ability, but because of changes in lifestyle (Molnar et al 2013).

Research has shown that older drivers can benefit from specific driver training (Unsworth & Baker, 2014). This training can be beneficial whether it is delivered using a driving simulator or through on-the-road training in real traffic. Casutt et al (2014) found that training sessions in a driving simulator increased cognitive and on-road driving performance in subjects with an average age of 72 years. Poschadel et al (2012) demonstrated that the driving competence of older drivers (aged 70 and over) can be improved by on-the-road training by a professional driving instructor. Bedard and colleagues (2004, 2008) coupled theoretical and educational training with on-the-road driving abilities training whereby a driving instructor gave feedback to participants on their driving performance. They found that following the training, participants had better driving knowledge regarding traffic rules and road safety, and better knowledge of which self-regulation strategies to use in order to counterbalance the effects of aging.

In 2013, Dorset had 78,618 residents aged 70 to 90 years and 54,013 residents aged 75 to 90 years (ONS, 2014). The county contains many areas of outstanding natural beauty and has an attractive coastline. These are some of the factors which have encouraged many people to move into the area upon retirement from work. These people wish to remain mobile and able to travel independently in their own cars. Much of the county is rural, and as in many other rural areas of the UK, public transport is limited or poor. Consequently there are significant numbers of older drivers in the county, and Dorset County Council and Dorset Police, who are key members of the Dorset Road Safe Partnership, decided to create a driver training course specifically aimed at these older drivers. In line with injury and collision statistics, the initiative was to be offered to people aged 75 and over. Further, in line with the research evidence, one-to-one driver training would be provided by professional driving instructors. The initiative was called Dorset Driver Gold (DDG)

and it was initially offered as a free pilot project pending an independent evaluation of the scheme. The aim being to roll out the scheme at a later date if the evaluation found it to be beneficial.

The objectives of the DDG initiative were to provide driver training to senior drivers within the county to improve their driving skills and thus to improve road safety. The aims of the evaluation were to measure the acceptability of the scheme to older drivers and demonstrate the effectiveness and utility of the DDG initiative.

2 METHOD

2.1 Aims and objectives of the study

- I To recruit 100 senior drivers to take part in a pilot project which offers training in driving theory and on-road driving performance
- II To identify the driving behaviours , driving skills, and driving needs in a group of senior drivers
- III To provide practical training for senior drivers to improve their safety on the road, update their skills and driving knowledge
- IV To increase driving confidence among senior drivers

2.2 Recruitment

Recruitment to the Dorset Driver Gold initiative was by advertisements placed by Dorset County Council (DCC). A copy of the advertisement is presented in Appendix I. Advertisements distributed as follows:

- Hospital advertising screen in A&E waiting room
- Press release to local newspapers (Dorset Echo, Bournemouth Echo, Western Gazette, Blackmore Vale, Bridport News)
- DCC mailing list of people who had expressed interest in Dorset Driver courses previously
- Dorsetforyou.com website and social media sites (Facebook and Twitter)
- Dorset Alert – Dorset Police community messaging service where residents can sign up for email or telephone alerts on things happening in their community/neighbourhood
- Through contacts with various local groups for older residents

The aim was to recruit 100 senior drivers to the initiative, which would provide sufficient numbers for an evaluation of the project. The initiative was advertised as a free pilot project aimed at drivers aged 75 and over. This age group was chosen based on current literature and vehicle collision statistics. The advertisement stated the following aims, criteria and benefits:

“We are looking for volunteers for a new free pilot project aimed at updating and improving your driving skills and confidence on the road

Are you 75 or over?

Do you live in Dorset?

Do you hold a full valid driving licence?

Do you have your own car?

Would you like to refresh and update your driving knowledge and skills and enjoy the benefits of driving for longer?

Dorset Driver Gold is a Dorset Road Safe Partnership pilot project, aimed at updating and improving your driving skills and confidence on the road. The project also hopes to achieve a reduction in the risks associated with drivers aged 75 and over. We are looking to recruit 100 volunteer drivers aged 75 and over to participate in the free pilot project, which will run in September 2013.

We would like to reassure you that this is not a test of your skills and knowledge but an opportunity for you to experience free driver training and for us to learn how successful the course is in achieving its aims.”

Response to the advertisements was good, with 153 people expressing an interest in taking part.

Inclusion criteria: Drivers aged 75 and over, living in Dorset, with a valid driving licence, own car.

Exclusion criteria: Drivers aged less than 75 years, living out of county, no valid driving licence. Exclusion from practical drive: failure of basic eye test.

2.3 Driving Theory Course

A series of driving theory courses were held at a range of locations in Dorset. There were seven courses in total, one in each of Dorchester, Poole, and Shaftesbury, and two courses in Weymouth and Bournemouth due to increased demand. The locations were originally chosen based on the areas where those who expressed interest in the course lived, as well as ensuring that the whole of the county was covered.

The courses were tailored towards senior drivers and information was presented on a range of driving related issues. The theory course was a 2 hour presentation. Each course was delivered by one of Dorset County Council's Approved Driving Instructor (ADIs). In total there were five individual ADIs, and all of them used the same Powerpoint slideshow. To ensure that the sessions were as similar to each other as possible, one ADI took responsibility for briefing the other ADIs on presentation content.

At the start of the session, each participant was given a questionnaire to complete (pre-course questionnaire, Appendix II). The questionnaire asked drivers about their driving history, annual mileage, reasons for driving, and the areas of their driving they wished to improve. They were also asked to rate their confidence and ability as a driver on a scale of one to ten.

After the course, each participant was given a second questionnaire to complete (post-course questionnaire, Appendix III). The questionnaire asked drivers how useful the course had been, were there any other items they would have liked, and asked to re-rate their confidence and ability as a driver.

At the end of the course, drivers were invited to sign up for the practical element of the Dorset Driver Gold initiative, which is the one-to-one driving practical refresher

session with an ADI. Drivers could either do this on the day, or arrange a time and date with the ADIs after the course.

2.4 One-to-one Practical Driving Sessions

The ADIs carried out one-to-one driving refresher sessions with the drivers who had attended one of the theory sessions. In 90% of cases the practical driving element was carried out by the same ADI who delivered the theory session to that driver. This was to ensure that drivers would have had an opportunity at the theory session to meet the ADI who would take them for their driving refresher session, rather than sign up for a practical drive with a 'stranger'. Each driving refresher session lasted for 90 minutes, and was conducted on local roads usually in the driver's own vehicle. Drivers were able to choose a day and time to suit themselves.

Each driver was offered two drives at different time periods. Each driving practical was conducted by the same ADI. The first drive took place soon after the theory session, and the second drive was offered approximately six months after the first drive. There were two main reasons for the six-month delay: Firstly to see if drivers retained the knowledge gained in the theory and first practical sessions over time. Secondly to examine whether the driver training and correction of errors taught at the first drive translated into improved driving performance at the second drive. Wherever possible, the second drive took place at the same time of day, in similar weather conditions, and on the same day of the week as the first drive.

The driving refresher sessions followed a structured and standardised format:

Prior to the on-the-road driving practical, ADIs carried out a routine documentation check to ensure the vehicle being used was insured, taxed, roadworthy, and had a valid MOT certificate if necessary. An eyesight test was performed to ensure that the driver met current standards for reading a car number plate at a distance of 20.5 metres. The ADI then explained that the drive was not an assessment or a test, but that it was an opportunity to refresh the driving knowledge and skills of the senior driver, and to put the theory session into a practical context.

At the start of the session, ADIs asked the drivers if there was anything they were particularly concerned about or wanted to spend time on during the session. It was explained that the ADI would provide a short written report for the driver at the end of the session.

The first 20 minutes of the practical drive was observational. This was an accompanied drive with the ADI giving simple directional instructions for the driver to follow. No coaching or instruction was normally given in this first part of the practical session, as the ADI was looking to identify driving strengths and weaknesses. Following this observational session, the vehicle was parked and there was a short de-brief session. At this point, the ADI would highlight any issues to be worked on for the remainder of the session, and praise where aspects of driving were good. For the remainder of the session (approximately 60 minutes), the ADI would "coach" the

driver where necessary, and also focus on any specific concerns identified by the driver. For example, the driver may have identified concerns regarding correct roundabout procedure, or approaching complex road junctions. Each individual ADI has their own coaching style, but the general content was delivered consistently across all ADIs.

At the end of the session, the ADI provided a brief written report for the driver to take home. The ADI also scored the driving performance of each driver using a standard marking sheet which itemises all of the elements covered in the practical drive. Drivers were then given an overall rating (better performance = higher score) and an error score (better performance = lower score).

2.5 Driver Focus Groups

Two facilitated focus groups were held with representatives of drivers who had attended the theory sessions and had at least one of the on-road practical refresher sessions with an ADI. Both focus groups were held in Dorchester, facilitated by the researcher and led by a topic-guide (Appendix IV). The topic-guide included nine main areas for discussion together with a series of prompts which were used to ensure that all relevant issues were covered. The discussions were wide-ranging as participants also raised issues of their own. When a topic was exhausted the researcher used the topic guide to re-focus the discussion. After the nine areas had been covered, participants were asked to comment on some main findings from the post-theory questionnaires and practical drives. All participants in the focus groups were encouraged to speak to ensure that a broad range of views were heard. The group discussions were transcribed verbatim and analysed using thematic content analysis.

The main purpose of focus group research is to draw upon respondents' attitudes, feelings, beliefs, experiences and reactions in a way which is not possible with other methods such as questionnaires or one-to-one interviews (Gibbs, 1997). These attitudes and beliefs are often revealed within the social gathering and interaction which being in a focus group entails. Focus groups are particularly useful for exploring people's knowledge and experiences, and can be used to examine not only what people think, but how and why they think that way (Kitzinger, 1995). Focus groups also offer the advantage of providing researchers with a large and rich body of data, whilst also allowing for interaction between participants and researchers, thus giving opportunities for clarification and follow-up questions.

2.6 Post First Practical Questionnaire

Following the first practical drives, a brief questionnaire was sent to all senior drivers who took part. This was distributed via email, or by post where an email address was not available. The three questions were:

1. In general, how confident do you feel as a driver on a scale of 1 to 10 (1 being 'not at all confident' and 10 being 'extremely confident')?

2. How do you rate your general ability as a driver on a scale of 1 to 10? (1 being 'poor' and 10 being 'excellent')?

3. What difference do you think taking part in this programme has made to you?

No reminders were sent to those who did not respond.

2.7 ADI Questionnaire

The ADIs work with drivers from a wide range of age groups. A brief questionnaire (Appendix V) was designed to identify the main issues for older drivers in the opinion of ADIs. They were also asked to comment on how older drivers differ from younger drivers. The questionnaires were sent to the ADIs via email, and each ADI provided a written response to each question. In some cases it was possible for the researcher to have a face-to-face discussion with ADIs (using Skype) to expand on the answers.

2.8 Final Follow-up Questionnaire

One year after the theory sessions, a second short questionnaire was sent to participants who had completed at least one practical driving session. The questionnaire was by email to those with a valid email address, and by post (including a freepost reply envelope) to those without email. There were four questions:

1. In general, how confident do you feel as a driver on a scale of 1 to 10 (1 being 'not at all confident' and 10 being 'extremely confident')?

2. How do you rate your general ability as a driver on a scale of 1 to 10? (1 being 'poor' and 10 being 'excellent')?

3. What difference do you think taking part in this programme has made to you?

4. Following this course do you intend to make changes to the way you drive? (a) Yes definitely; (b) Yes probably; (c) Not sure; (d) Unlikely.

2.8 Data analysis

Quantitative analysis was carried out using the Statistical Package for the Social Sciences (SPSS) version 21 (IBM Corporation 2012). Continuous data was analysed using comparison of means (independent samples t-test). Relevant numerical variables were analysed using Spearman-rank Correlations. Relationships between categorical data were analysed using Chi-squared cross-tabulations. For the purposes of comparative analyses drivers were divided into two age groups: 75 to 79 years, and 80+ years of age. Some analyses compared driving

performance against annual mileage. Here, a cut off value of 6000 miles was used which was close to the mean value of 5925 miles.

Focus groups were audio-recorded and transcribed verbatim. Conceptual thematic analysis was applied to the transcripts to examine the key issues for senior drivers.

3. RESULTS

A total of 144 senior drivers aged between 75 and 91 years took part in the study. The mean age of DDG volunteers was 79.2 years (standard deviation = 3.92), the median age was 78 years. Most people said that they heard about the DDG course from a newspaper or magazine advertisement (56%). Most people booked on the course via telephone, with 28% booking via the Internet and 25% booking via email.

One hundred and forty-one of the senior drivers completed at least one questionnaire relating to the theory session. One hundred and twenty-six had at least one driving practical session, 18 drivers had no driving practical session. Figure 1 shows the number of drivers completing various elements of the study. Fifteen senior drivers took part in the focus groups. Detailed results for each element of the study are presented below.

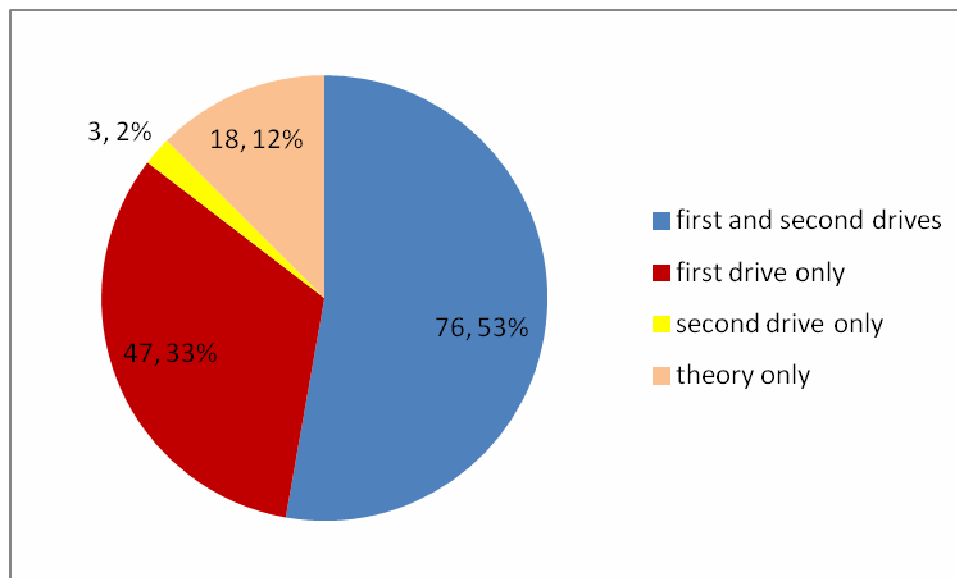


Figure 1: Number and percentage of drivers completing study elements (n = 144)

3.1 Driving Theory Sessions and Results of Pre- and Post-Course Questionnaires

One hundred and fifty-three senior drivers attended one of the driving theory sessions. Of these 144 (94%) completed at least one questionnaire. Of these, one hundred and twenty-six drivers (88%) completed both the pre- and post-course questionnaires. Sixteen drivers (11%) completed the pre-course questionnaire only, and two people (1%) completed the post-course questionnaire only.

Of the 144 people who completed a questionnaire, 118 (82%) said they were the main driver in their household, 23 (16%) were not, and there was missing data for 3 (2%). For drivers aged 75 to 79, 81% said they were the main driver, and for drivers aged 80 and over, 88% were the main driver (Figure 2).

Two-thirds of the 144 respondents were male (98, 68%) and 46 were female (32%). There was no significant age difference between males and females. For the purpose of data analysis, participants were divided into two age groups: 75 to 79 years (93 participants) and 80+ years (51 participants). The majority of both males (68%) and females (67%) were in the 75 to 79 year old age group.. Figure 3 shows a breakdown of age and gender.

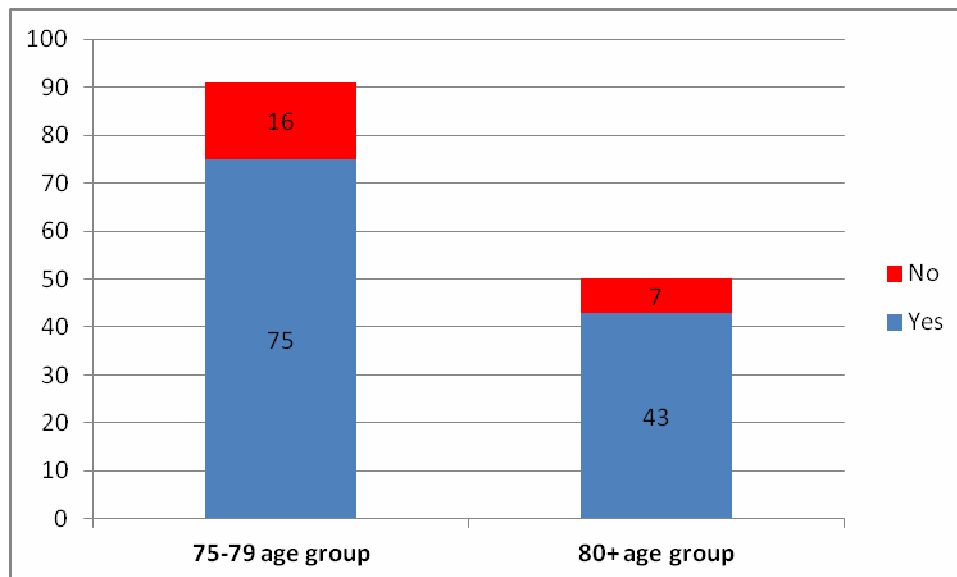


Figure 2: Are you the main driver in your household? (n = 141)

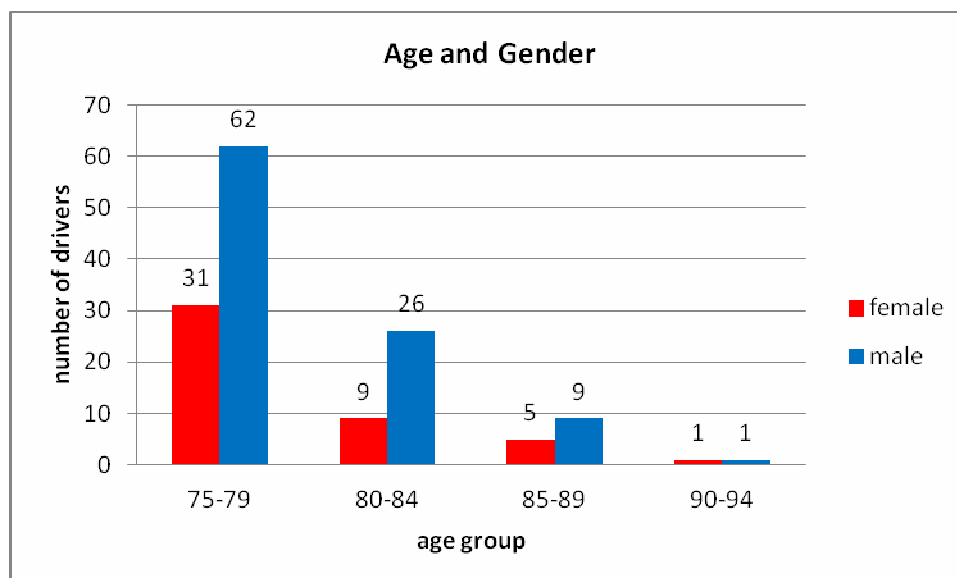


Figure 3: Age and gender of questionnaire respondents (n = 144)

3.1.1 Pre-course Questionnaire

A total of 142 people completed the pre course questionnaire. This questionnaire gathered information on driving history. In the results presented below, the totals do not always add up to 142 due to missing data for some questions.

The annual number of miles driven by respondents ranged from 800 miles per year to 15000 miles per year, the mean value was 5926 miles (SD = 2989.9). For some analyses, a cut off value close to the mean of 6000 miles was used.

The majority of respondents had passed their driving test in the 1950s (85 people, 60%). Two people said they had never taken a driving test, and one did not know when they had passed the test. Results are presented in Figure 4.

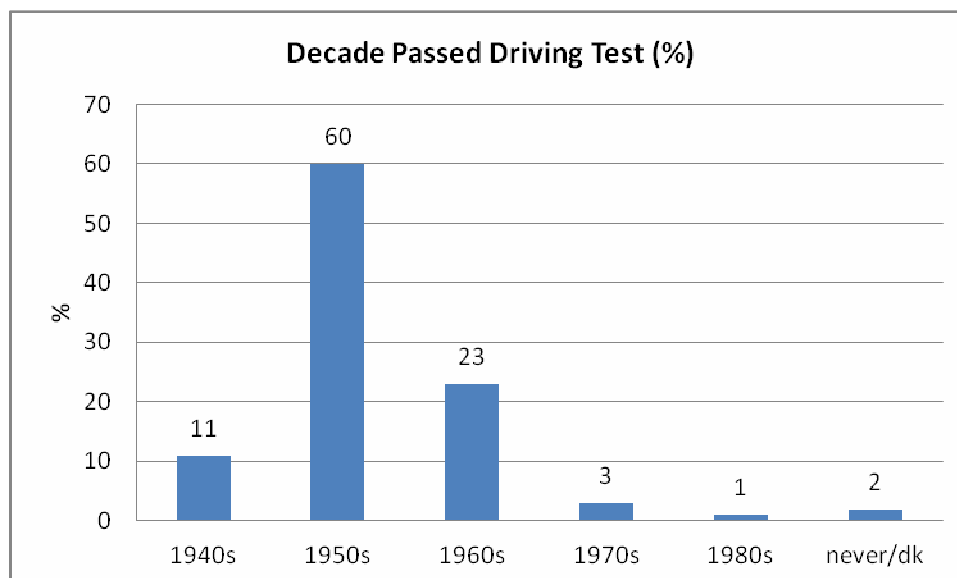


Figure 4: Decade in which driving test passed (n = 141)

Main reasons for driving

Most respondents said their main reasons for driving were for shopping or running errands, for leisure, to visit friends or relatives, or to attend appointments. Nearly half said a main reason for driving was to give lifts to other people. Four people were also volunteer drivers taking passengers to doctor or hospital appointments. Table 1 below shows the results for older and younger age groups. There was a significant difference in the proportion of older and younger people driving for leisure and driving to visit friends and relatives. More drivers in the 80+ group mainly used their car to visit friends and relatives.

Restricted driving

Respondents were asked if they avoided driving in certain conditions or on certain roads. Comparisons were made between older and younger drivers (Table 2) and between males and females (Table 3). Older drivers were significantly more likely to avoid unfamiliar roads than younger drivers. Women were significantly more likely to restrict their driving in the dark, on unfamiliar roads and in bad weather.

Self-rating of Driving Confidence and Driving Ability

Drivers were asked to rate their confidence as a driver and their general driving ability on a scale of one to ten where 1 is low and 10 is high. The mean rating for confidence was 7.96 (range: 3 to 10, median = 8, SD = 1.35). The mean rating for driving ability was 7.5 (range: 4 to 10, median = 8, SD = 1.23). Figure 5 shows the range of ratings provided by drivers.

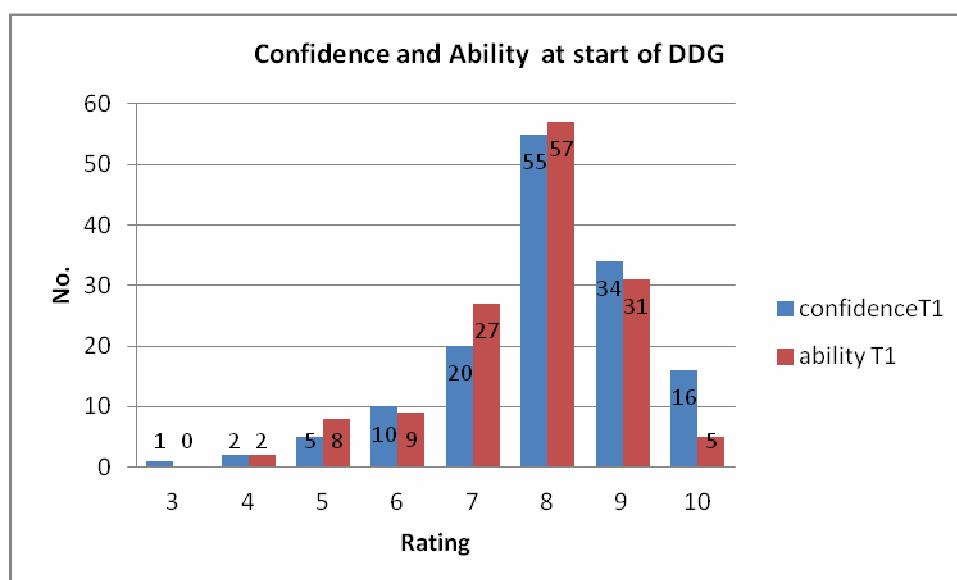


Figure 5: Drivers' self-ratings of their driving confidence and driving ability (n = 141)

Table 1: Main reasons for driving

Activity	Age 75-79	Age 80+	All Ages	Significant difference between age groups
Shopping or errands	80 (92%)	37 (88%)	117 (91%)	Not significant
Leisure	84 (97%)	36 (86%)	120 (93%)	0.024*
Work/voluntary work related	10 (12%)	2 (5%)	12 (9%)	Not significant
Visit friends or relatives	74 (85%)	41 (98%)	115 (89%)	0.032*
Appointments	70 (81%)	34 (81%)	104 (81%)	Not significant
Giving lifts to others	39 (45%)	17 (41%)	56 (43%)	Not significant
Volunteer driver for hospital/surgery	3 (3%)	1 (2%)	4 (3%)	Not significant
Other	4 (5%)	2 (5%)	6 (5%)	Not significant

* = significant at the 0.05 level.

Table 2: Avoids driving in certain conditions – Younger and Older drivers

Avoids driving	Age 75-79	Age 80+	All Ages	Significant difference between age groups
In the dark	18 (21%)	9 (21%)	27 (21%)	Not significant
In morning or evening rush hour	13 (15%)	9 (21%)	22 (17%)	Not significant
In bad weather	14 (16%)	12 (29%)	26 (20%)	0.098 (NS)
On busy roads	2 (2%)	4 (10%)	6 (5%)	0.068 (NS)
On unfamiliar roads	6 (7%)	8 (19%)	14 (11%)	0.038* $X^2 = 4.32$
On motorways	5 (6%)	5 (12%)	10 (8%)	Not significant
No, I drive anywhere	51 (59%)	20 (48%)	71 (55%)	Not significant

NS = not significant * = significant at the $p \leq 0.05$ level.

Table 3: Avoids driving in certain conditions – Females versus Males

Avoids driving	Females	Males	All	Significant difference between age groups
In the dark	15 (40%)	12 (13%)	27 (21%)	0.001** $X^2 = 11.19$
In morning or evening rush hour	8 (21%)	14 (15%)	22 (17%)	0.435 (NS)
In bad weather	12 (32%)	14 (15%)	26 (20%)	0.037* $X^2 = 4.37$
On busy roads	2 (5%)	4 (4%)	6 (5%)	0.831 (NS)
On unfamiliar roads	9 (24%)	5 (6%)	14 (11%)	0.002** $X^2 = 9.17$
On motorways	5 (13%)	5 (6%)	10 (8%)	0.138 (NS)
No, I drive anywhere	15 (40%)	56 (62%)	71 (55%)	0.022* $X^2 = 5.27$

NS = not significant * = significant at the $p \leq 0.05$ level. ** = significant at the $p \leq 0.01$ level

Frequency of eyesight test

Respondents were asked how frequently they had their eyes tested. The majority (90, 63%) said they had an eye test every year. Results are shown in Figure 6 below.

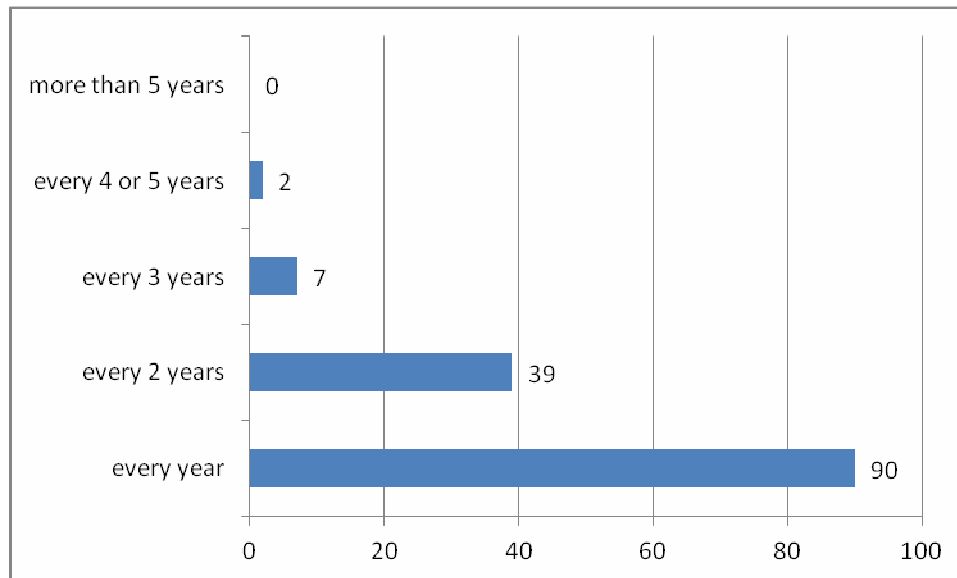


Figure 6: Frequency of eyesight tests (n = 138)

Keeping up to date with current driving regulations

Respondents were asked if they had taken part in any other driving courses in the last ten years, and 32% (41 people) said that they had. Sixteen of these people had taken a Dorset Driver course previously. These earlier courses were not aimed at older drivers, but were generic courses aimed at drivers aged 55+ years. A further ten people had taken a Driver Awareness course. Three others had taken a Institute of Advanced Motoring (IAM) course.

Respondents were asked how up-to-date they were with current driving regulations. Just under a quarter of drivers had checked recently, but 12% said they were not at all up-to-date. Figure 7 presents the results. There were no significant differences between male and female drivers or those in the younger and older age groups.

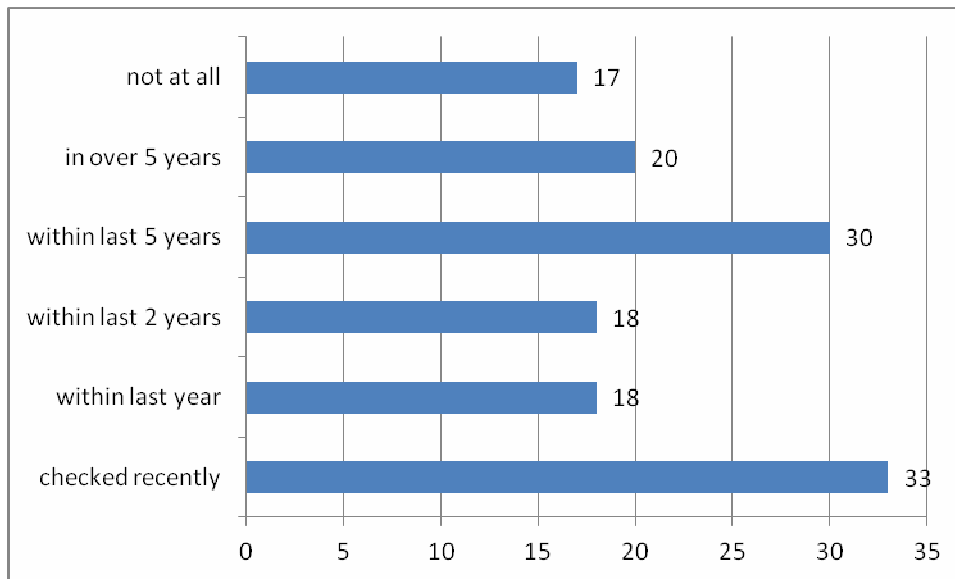


Figure 7: Number of drivers keeping up-to-date with current driving regulations (n = 136)

Aspects of driving respondents wish to improve

Respondents were asked to indicate which areas of driving they would like to improve. They could choose more than one aspect. Figure 8 presents the results. There was a significant difference between older and younger drivers with regard to wishing to improve negotiation of junctions: 36% of older drivers and 20% of younger drivers wanted to improve this ($p = 0.046$, $X^2 = 3.97$). There were also significant differences between males and females for two aspects of driving. More females wanted to improve motorway driving (34%) compared to males (11%) ($p = 0.002$, $X^2 = 9.87$), and more females wanted to improve their speed awareness (37%) compared to males (20%) ($p = 0.041$, $X^2 = 4.18$).

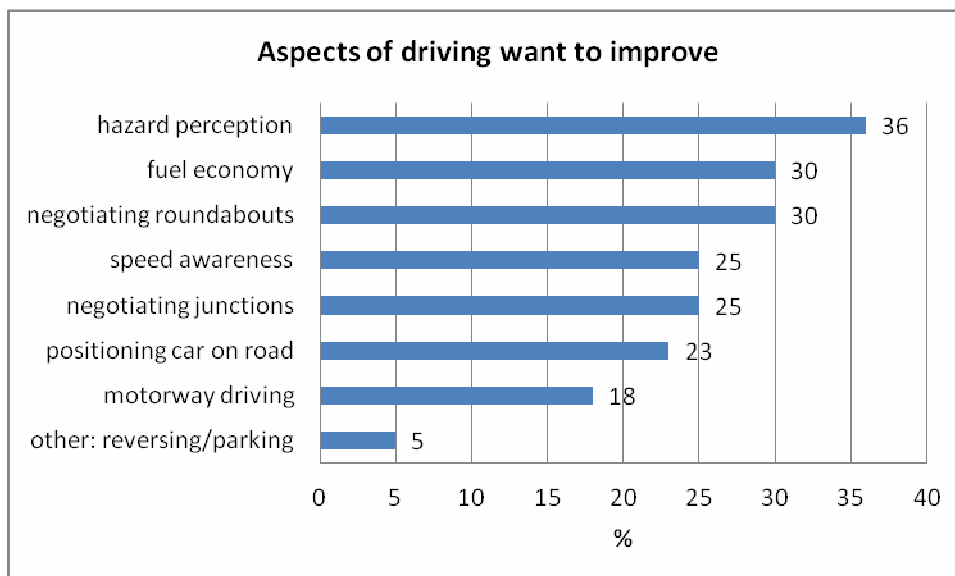


Figure 8: Aspects of driving respondents wished to improve (n = 129)

3.1.2 Post- theory course questionnaire

All respondents stated that they found the theory course useful. The majority said it was very useful (Figure 9). Asked if, as a result of the theory course, they intended to make changes to the way they drive, 98 people (76%) said they either definitely or probably would (Figure 10). Of these, fifty people said they would definitely make changes.

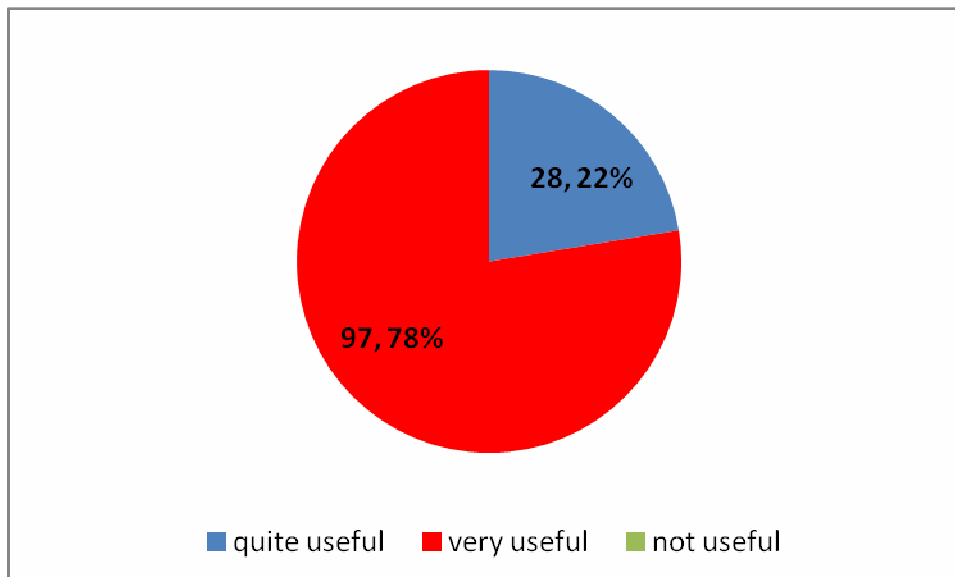


Figure 9: How useful did you find the theory course? (n = 125)

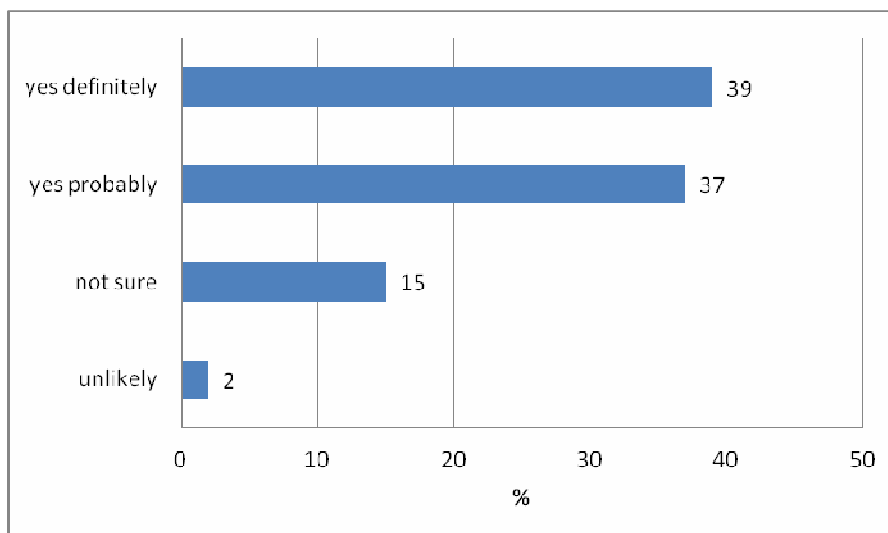


Figure 10: Do you intend to make changes to the way you drive? (n = 125)

Drivers were again asked to rate their confidence as a driver and their general driving ability on a scale of one to ten. The ratings were similar to those given previously. The mean rating for confidence was 7.76 (range: 4 to 10, median = 8, SD = 1.32). The mean rating for driving ability was 7.85 (range: 4 to 10, median = 8, SD = 1.17).

For each driver, the post-course ratings of confidence and ability were compared with their ratings before the theory course. This was to see if there had been a change in their self-ratings and if the change was positive (more confident, better driving ability) or negative (less confident, worse driving ability). The results are shown in Figures 11 and 12 below. For the majority of drivers, confidence levels remained unchanged. However, 29% of drivers rated their confidence more highly after the theory course. Fourteen drivers (11%) rated their confidence as lower. For driving ability, again most drivers did not alter their self-ratings. Twenty-five drivers rated their driving ability higher after the theory session and another 25 rated it lower.

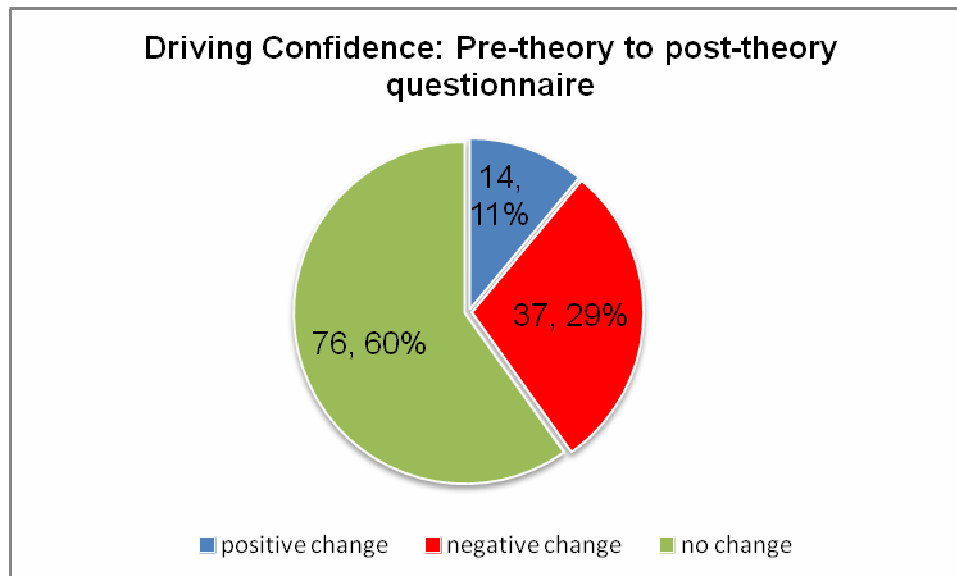


Figure 11: Changes in self-rating of driving confidence between pre- and post-theory course (n = 127)

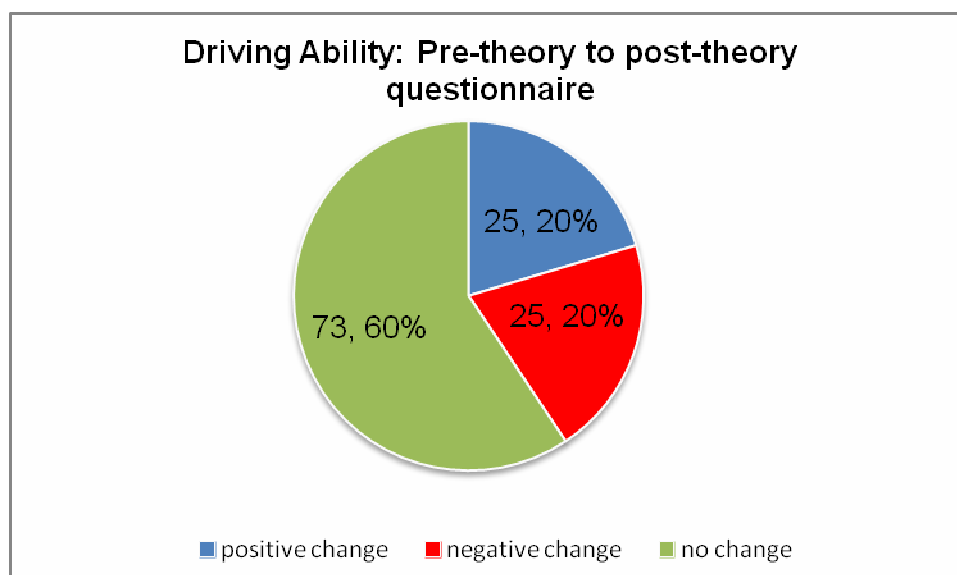


Figure 12: Changes in self-rating of driving ability between pre- and post-theory course (n = 123)

Drivers were asked if their knowledge of the highway code had improved following the theory course. Eighty-five people (67%) said that it had improved, 32 people

(25%) said it stayed the same, and only 10 people (8%) said it had not improved at all (Figure 13).

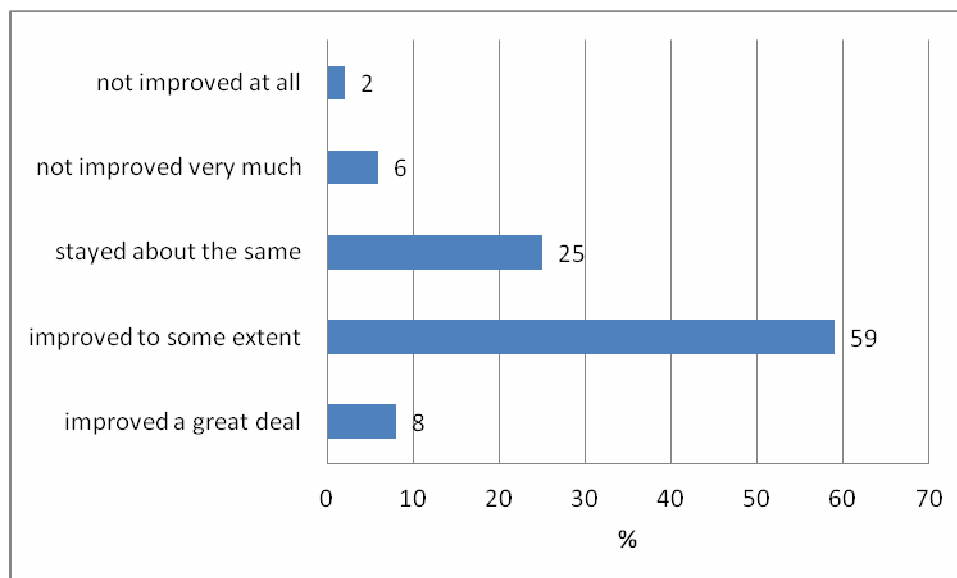


Figure 13: Has your knowledge of the Highway Code improved after taking this course (n = 127)

Asked if they had gained all they had hoped for from the theory course, 121 people (98%) said yes, and three said no (2%). Five people did not answer the question. The three people who said no explained that they would have liked more thorough coverage of certain topics (for example road signs).

Most respondents (120, 98%) said they would recommend the course to others, only 2 people said they would not. Seven people did not answer this question. The two people who would not recommend the course explained why this was: one said they had no-one to recommend it to, and the other said none of their acquaintances would be interested.

3.2 One-to-one Practical Driving Sessions

126 people booked a first practical driving session. Two of these sessions were cancelled due to ill health. One person failed the eyesight test and could not take the driving practical. Consequently, 123 people were taken for a practical driving refresher session by one of the ADIs.

76 people were taken on the second practical driving refresher session approximately 6 months after the first practical.

3.2.1. First practical drives

One hundred and twenty-three people were taken on a practical driving refresher session, 83 (67.5%) were men and 40 (32.5%) were women. At the end of the practical session, the ADIs gave each driver an overall score of driving ability. The maximum possible score was 40 and drivers were rated on car control, observation, signals and positioning and speed awareness. The mean score was 23.7 (SD = 5.9) with a range of 14 to 39. There was no significant difference in the performance of men and women. Men had a slightly higher mean score (24.2, SD = 5.9) compared with women (22.5, SD = 5.7). There was no significant difference in overall performance between older drivers (aged 80 and over) and younger drivers (aged 75-79 years). The younger group had a slightly higher mean score (24.1, SD = 6.1) compared with older drivers (22.9, SD = 5.6).

The ADI ratings of car control, observation, signals and positioning, and speed awareness and planning were examined for all drivers and then comparisons were made between older and younger drivers and between men and women. Figures 14 and 15 show the mean scores for different groups.

There were no significant differences in mean scores on any of these elements for older versus younger drivers. There was a significant difference between male and female drivers for overall observation. Women had a lower mean score (4.59, SD = 1.21) than men (5.58, SD = 1.39), which was statistically significant ($t = 3.799$, $p = 0.0001$).

The number of driving errors made by each driver was calculated by the ADIs and each driver was given an error score. The mean number of errors was 12 (SD = 7.98) with a range of zero errors to 43 errors, the median number was 10.

Women made significantly more errors than men ($t = -2.69$, $p = 0.008$). The mean number of errors for women was 14.8 (SD = 9.4) compared with 10.8 (SD = 6.9) for men. There was no significant difference in the mean number of errors made by older drivers (12.6, SD = 8.6) compared with younger drivers (11.8, SD = 7.6).

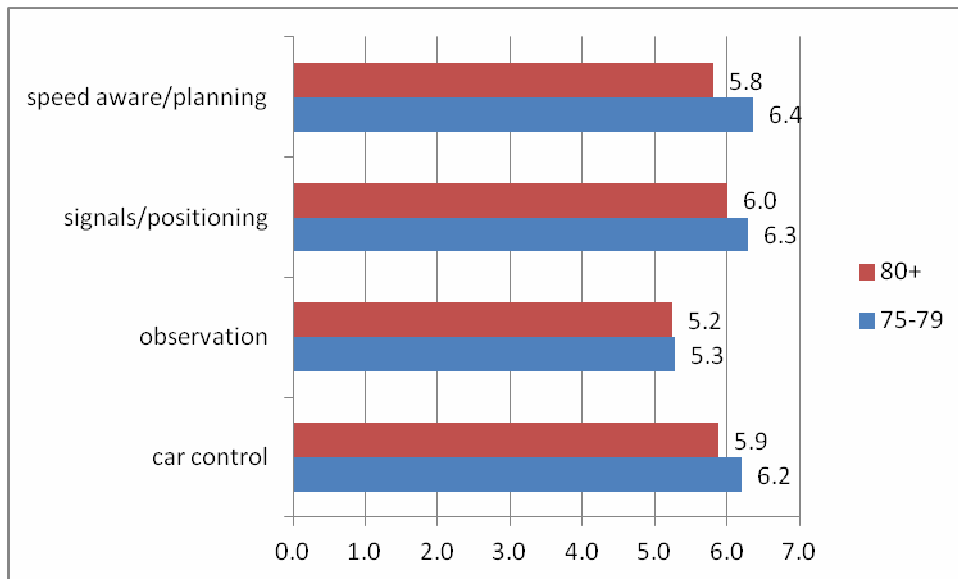


Figure 14: Comparison of mean scores between first and second practical drives for older and younger drivers (n = 120)

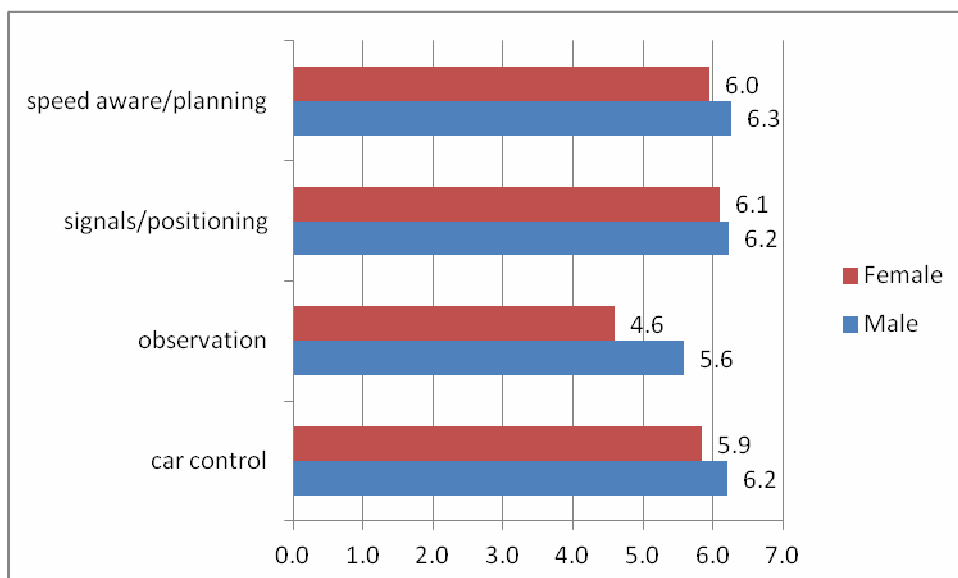


Figure 15: Comparison of mean scores between first and second practical drives for males and females (n = 120)

Overall driving scores and error scores were correlated with drivers' self-ratings of driving confidence and driving ability using Spearman's rho correlation coefficients. Overall driving scores showed a strong negative correlation with error scores ($r = -0.77$, $p = 0.0001$). Overall driving scores were not correlated with the drivers' first self-ratings of confidence or driving ability. However, they were correlated with the drivers' final ratings of confidence ($r = -0.32$, $p = 0.006$) and driving ability ($r = -0.46$, $p = 0.0001$). Similarly, error scores were not correlated with the drivers' first ratings, but they were correlated with their final ratings of ability ($r = -0.41$, $p = 0.0001$). There was a weaker correlation between error scores and final ratings of confidence ($r = -0.22$, $p = 0.06$).

The number of miles driven by respondents was correlated with overall ability scores and error scores. There was a significant positive correlation between number of miles driven and ADI rated overall driving ability ($r = 0.29$, $p = 0.001$). However, there was no significant correlation between miles driven and number of errors. There was also a significant difference in overall ability scores between drivers with an annual mileage of ≥ 6000 miles and those driving less than 6000 miles ($t = 2.46$, $p = 0.015$). Those driving ≥ 6000 miles had a mean ability score of 24.9 (SD = 6.2) compared with 22.3 (SD = 5.3). There was no significant difference for error scores.

ADI Reports following the practical driving sessions

After each practical driving session, the ADIs provided a brief report to each driver which highlighted aspects of driving that required attention. Some examples of the advice given by ADIs are provided below:

Drivers with few errors:

"The main area is mirrors, check left when moving, at roundabouts and junctions. Have 360 degree observation - be aware at all times." (number of errors = 5)

"Before moving off from parking or traffic queues always check left mirror then right and also at roundabouts look for 'silent' Hazards. Look further ahead and look for signs early so that you're in the correct position early." (number of errors = 6)

Drivers with several errors:

"One of the troubles is a general lack of early forward observation and planning in relation to potential hazards, this results in late braking. ...pay more attention to speed limits." (number of errors = 14)

"Controls – good. Observation - mirrors late or missed - must use more. Check blind spots every time before moving off. Signals - over used and poorly timed. Speed - slow down sooner for junctions especially right hand bends. Plan ahead - be proactive." (number of errors = 17)

Drivers with many errors:

"Control - Avoid coasting around corners. Engage gears earlier when approaching roundabouts. Observation - Use mirrors before changing speed, direction or indicating. Look effectively before emerging at junctions check blind spots before moving off. Positioning - Use correct lanes on roundabouts. Avoid cutting right - hand corners." (number of errors = 35)

"Control - Avoid Coasting around corners. Observation - Look right, left and right again BEFORE emerging at junctions. Use mirrors including door mirrors well before changing direction, speed or signalling. Beware of blind spots when moving off or changing direction. Positioning - Keep your distance (Only a fool breaks the 2 second rule, 4 when wet). Keep to your lane on roundabouts and approach more

slowly. Avoid cutting corners. Speed - Avoid approaching Junctions too fast.”
(number of errors = 30)

3.2.2. Second practical drives

Seventy-six people were taken on a second practical drive by the ADIs. Of these, 23 (30%) were female and 53 (70%) were male. The majority were in the 75-79 age group (47, 62%), compared to 29 (38%) in the 80+ age group.

At the end of the second practical session, the ADIs again gave each driver an overall score of driving ability. The maximum possible score was 40 and the mean score had increased to 28.7 (SD = 6.9) with a range of 18 to 39, the median score was 26. There was no significant difference between men and women. Men had a mean score of 28.8 (SD = 7.1) and women had a mean score of 28.4 (SD = 6.6). There was no significant difference in overall performance between older drivers (aged 80 and over) and younger drivers (aged 75-79 years). The younger group had a slightly higher mean score (29.6, SD = 7.3) compared with older drivers (27.1, SD = 6.1).

The number of driving errors made by each driver was again calculated by the ADIs and each driver was given an error score. The mean number of errors had halved to 6 from 12 for the first drives (SD = 5.97) with a range of zero errors to 19 errors, the median number was 6. Again, there was no significant difference between men and women. Men had a mean error score of 5.9 (SD = 4.5) and women had a mean error score of 6.1 (SD = 3.6). There was a difference in the mean number of errors made by older drivers (7.1, SD = 3.3) compared with younger drivers (5.3, SD = 4.5), but this did not reach statistical significance ($p = 0.08$).

The improvement in mean driving score and reduction in error score is shown in Figure 16 below.

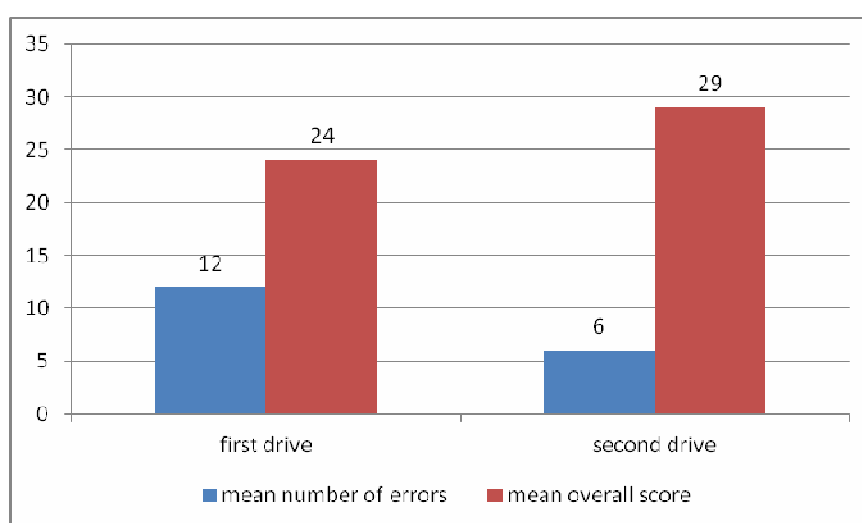


Figure 16: Comparison of mean driving scores and error scores between first and second practical drives

Changes in driving ability between first and second drives

The ADI rated overall driving ability scores for each driver were compared between the first and second practical drives and expressed as a percentage change. Overall, there was a mean improvement in driving ability scores of 16% (SD = 15.3). Figure 17 below illustrates the improved or worsened driving ability score on the second drive for each individual driver.

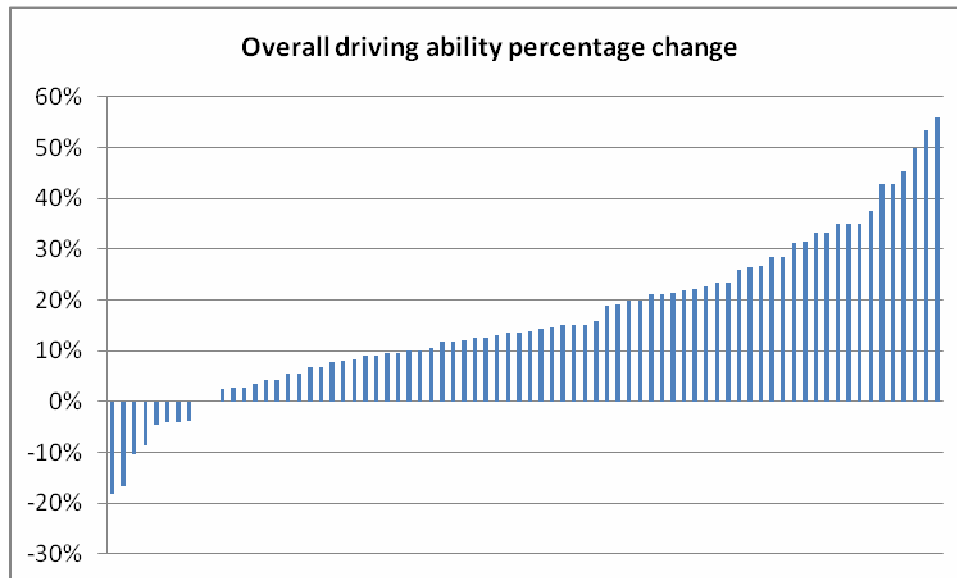


Figure 17: Percentage change in driving ability scores between first and second practical drives for each individual driver

The percentage increase between first and second practical driving sessions was significantly different for men and women. Women improved by a mean of 21.5% (SD = 13.8) compared to an improvement of 13.8% (SD = 15.4%) for men ($t = -2.07$, $p = 0.04$).

The error scores for each driver were also compared between the first and second practical drives and expressed as a percentage change. Overall, there was a mean reduction in errors of 40% (SD = 51.5), with a range of 100% improvement to 29% worse. The two drivers with increased error scores were both male. Figure 18 below illustrates the improved or worsened error score on the second drive for each individual driver.

Most drivers reduced the number of driving errors they made (65 people, 87%). Five drivers did not show any change in number of errors, five drivers made more errors on the second drive.

There was no significant difference between men and women regarding the reduction in errors between first and second drives. However, women showed a greater reduction in errors than men: 54% reduction in error score for women (SD = 23.2), 33% reduction in error score for men (SD = 59.1).

There was difference in error reduction between older and younger drivers, but the difference did not reach statistical significance ($p = 0.06$). Younger drivers showed a greater reduction in errors between the first and second drive (48%, SD = 32.7) than older drivers (26%, SD = 70.4).

There was no difference in error reduction between drivers with higher annual mileage (39%) and drivers with lower annual mileage (40%). Both groups reduced their number of errors by an equal amount.

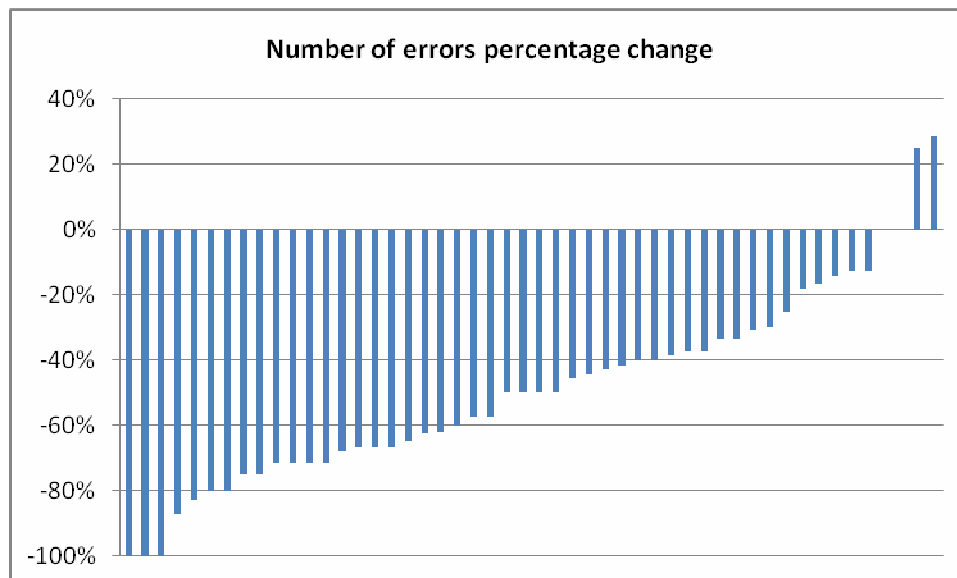


Figure 18: Percentage change in error scores between first and second practical drives for each individual driver

ADI Reports following the second practical driving refresher sessions

Most drivers showed an improvement between the first and second drive, and most had worked to address the faults highlighted by the ADIs. After the second practical drive, the ADIs presented each driver with a brief report. Some examples are presented below. Firstly there are examples of drivers who had made improvements and significantly reduced their driving errors. Secondly there are examples of drivers who had made some improvements but were still making some errors. Thirdly there are examples of drivers who had yet to make improvements. Areas most frequently highlighted as requiring improvement were use of mirrors, general observation, and planning ahead.

Good improvement since first drive:

“A good overall improvement with regard to use of all three mirrors, gave the correct signals and lane discipline at roundabouts. Much more active with observation and planning throughout his driving. Using mirror-signal-manoevre routine and developed block gear changing. Good effort.” (number of errors = 4)

"Notice signs earlier by looking further ahead and adjusting speed in good time."
(number of errors = 2)

Medium improvement since first drive:

"XXX showed a good improvement with regard to observation skills and the use of all mirrors at junction roundabouts. However, still needs to pay more attention to speed limits and giving the correct signals at roundabouts." (number of errors = 8)

"A good positive driver, good progress throughout showing forward observation and planning. Still needs to improve 1) correct signals at roundabouts. 2) slow down more when approaching hazards." (number of errors = 6)

Need for further improvements since first drive:

"Control: use 5th gear, use parking brake at lights, observation: look effectively before emerging, check blind spots before moving off, mirrors generally ok, speed - ok, awareness: don't tell other road users - what to do." (number of errors = 12)

"Control: generally good, observation: junctions good, mirrors sometimes late or missed, positioning: drove too close to the vehicle in front on one occasion otherwise distance was ok, speed ok." (number of errors = 11)

3.3 Focus Groups

Fifteen senior drivers took part in the focus groups. In Focus Group 1 (FG1) there were nine participants: seven men and two women. In Focus Group 2 (FG2) there were six participants: three men and three women. The focus groups were led by the researcher using a structured topic guide to ensure that specific issues were explored. By allowing participants to raise other points important to them, the discussions were wide-ranging. The topic-guide was used to re-focus the discussion when a topic became exhausted. Care was taken to include all participants so that all of their views were heard. The results are presented under the headings of the topic guide.

3.3.1. Do you feel there are differences between male and female senior drivers?

More men than women volunteered for the DDG course. Reasons for this were explored in the focus groups. It was suggested that more men volunteered because they were the main driver in the household and women tended to drive less frequently:

"Ladies probably don't [drive so much] because I know myself that I don't drive all that much because whenever we go out my husband drives and it probably isn't until you are on your own... [that ladies drive]"

This could also be a problem for female drivers who took the practical driving refresher session, but then did not have much opportunity to practice the advice given by the ADI.

"I have only been out once since we went on that course when I actually drove." (female driver, FG1)

"I drive mainly because I am hither and thither so I use the car a lot, but if I go out with my husband then he usually drives." (female driver, FG1)

3.3.2. What are the main issues for older drivers?

Several issues were raised. These are summarised under the following headings with comments from participants.

Over-estimation of own abilities

"We all think we are brilliant and perhaps we are not so brilliant as we think we are. So I found the driving part of the event much more useful than the classroom part, where he commented on my driving." (male driver FG2)

However, this view was not supported by everyone:

"Contrary to what you think, I don't think I am a good driver, or brilliant driver but [I came on this course because] you acknowledge that you have weaknesses and that you are willing to take advice from somebody." (male driver FG2)

Driving in unfamiliar areas

"I would divide driving into two areas. There is familiar driving, you know where you are going, you are local, and I suppose it goes for everybody else, but you go somewhere different and you have got a lot more visual things to take in at a distance, more traffic signs, signs that you are not used to." (male driver FG2)

"You are driving almost in two different ways, locally you know where you are going, you know what you are doing, what to expect, where the hazards are, where the schools are. [In unfamiliar places] all of a sudden it's 'where am I going exactly?'" (male driver FG2)

Driver overload

"...going into busy junctions that I don't know, I can get an overload of information on road signs and things like that." (male driver, FG1)

"I can't listen to the Sat Nav or look at it and read the road signs and I do sometimes end up going twice around the roundabout to find the right way." (male driver, FG1)

Navigation and lack of overhead signs

"There are not enough overhead signs, if they are just in the road itself then you can get traffic built up on top and you can't see anything when you are coming up to a junction you want to pick up a lane that you want - you just don't know which one to go into, because you know they are covered up by other traffic." (male driver, FG1)

Some participants found a SatNav particularly helpful in navigating:

"Sat Navs take some of the tension off ... when you are driving somewhere strange. You have not got to look out for the signs and where do I turn next and all that sort of thing." (male driver, FG2)

Driving at night

"The only problem is, your night sight goes off as you mature shall we say. Because I ride or drive in the dark on a dry night but wet nights I won't go out. I won't do either. The reflections - the lights - it's just too confusing." (male driver, FG1)

One driver commented that since he had his cataracts treated his night vision had become worse and he was more affected by dazzling headlights.

"I have certainly noticed that and I don't like night driving so much, although I do it when I have to and as you say, particularly if there are wet roads and extra dazzle, it makes quite a difference." (male driver, FG1)

Junctions and roundabouts

Many participants stated that the ADIs had highlighted that they were making driving errors at road junctions and at roundabouts.

"So we have proved the point - that they were right, you know, it is with older people, junctions and roundabouts." (male driver, FG1)

Some participants found the use of a SatNav useful in planning ahead:

"It's very useful to have a SatNav to say there's a roundabout coming up and take the appropriate exit from the roundabout. ... it increases your confidence and allows you to concentrate on other things, because it's one thing you haven't got to worry about, you know there is a roundabout coming up." (male driver, FG2)

Speed awareness

Some participants found a SatNav useful in helping them stay within the speed limit:

"One of the benefits I find with a SatNav is that mine dings at me if I go faster than the speed of the road." (male driver, FG2)

Judging speed and distance

"I found that the main problems I have is overtaking - I find it very difficult to judge the speed of oncoming traffic." (male driver, FG1)

Dazzling sun

There was a discussion about the use of sun visors and how they are inadequate for shorter drivers, usually females. One lady described being unable to see correctly because of dazzling sun, and not knowing how to raise her driving seat.

"The sun was lovely but it was facing me, and coming back it was even worse because it was about 3 o'clock in the afternoon and the sun had gone down. I really must find out how I can get my seat to come up so that I can get that little bit higher than the visor." (female driver, FG2)

Another driver highlighted that dazzling sun in the winter is a particular problem on certain local roads:

"The sun coming out of our village up the hill is absolutely dreadful at this time of the year. In fact there are two places where it is absolutely blind." (female driver, FG2).

3.3.3. What were the main reasons you volunteered for this course?

Many drivers volunteered because they wanted confirmation that their driving is safe.

"I just wanted to make sure that I was driving safely." (female driver, FG1)

"I went on this course because although I thought I was a good driver, ... if they had said to me, no - you are rubbish - well then I would have given up my licence but that didn't happen thank goodness but I was very pleased I went." (female driver, FG2)

One participant had attended several driving refresher courses in the past. Each time the motivation was confirmation that he was a safe driver:

"The reason I came on the course is to make sure that although I think I am a marvellous driver, I want somebody else to sit by me - not a member of my family - and actually say 'you shouldn't be driving' now this gives me confidence to go on for another year." (male driver, FG2)

Conversely, one participant stated that he had never received any driving tuition:

"I have never had any instruction. I was 16 - 17 - I must have been to get a licence. I cycled nine miles into town ... and took the test." (male driver, FG2)

There was a general feeling among participants that those who volunteer for courses such as the DDG course will be competent drivers with awareness of road safety. As one gentleman put it:

"If we were rotten drivers we wouldn't come on it would we?" (male driver, FG1)

Some participants voiced suspicion that there was a 'hidden agenda' behind the DDG course, possibly part of an initiative by Government to target older drivers. This was suggested as a possible reason some older drivers did not volunteer for the course.

"The government is saying 'we had better test these 70 year old drivers' you know, none of us want that, well we don't because ... we have all come out on the better side of good from our course... but [there] may be the hidden agenda on top there at the Ministry of Transport." (male driver, FG1)

Some were encouraged to volunteer by family members:

"My wife thought it was time I went along..." (male driver, FG1)

Others were encouraged by seeing an advertisement for the course in a trusted publication:

"I download the Age Concern newsletter once a month ... and on a particular month you managed to get your advert ... in their newsletter and I thought that's a good idea, it's time I did that. So I did it. That's what brought me into it." (male driver, FG1)

Asked how we can reach the senior drivers who did not volunteer for the course many participants felt that some drivers would be frightened of having their driving assessed in case they were found to be unfit to drive. They also believed that some people would avoid a driving course for fear of losing their licence.

"But I think if I was a bit frightened about it all, I would have thought I don't know about that - I wouldn't have volunteered at all, and there must be a lot of people out there who will not come on your courses ever." (male driver, FG1)

"I think a lot of people haven't gone on that course because they think 'oh yes, they are going to take my licence away'." (female driver, FG2)

"Losing the licence is the greatest fear." (male driver, FG2)

Others thought that the DDG course appealed to drivers who were already quite confident in their driving ability, and those who were less confident may stay away. Another suggestion was that some drivers, of any age, feel they are already good drivers and do not need extra tuition.

"I think the folk who lack in confidence who won't come anyway ... Those who are very confident, ... I am sure all of us probably thought, we aren't perfect drivers, I am sure we will learn something, but there are those of us of our age who know it all and they wouldn't come on this course." (male driver, FG1)

There was general agreement that placing a storyline about an older driver and road safety within a popular radio or television soap opera would raise public awareness about the importance of driving assessments for older drivers.

"I think perhaps it would be good to use the soaps, what people look at, as it were, in their normal lives, as opposed to them being got at and in danger of being humiliated. Whereas if it becomes a story that people like on the Archers, people actually hear about and know about, I guess it might be more easy to overcome their doubts and fears." (male driver, FG1)

3.3.4. What were the main things you hoped to get out of the course?

The principal reasons for attending the course were to improve driving skills and confirm that their driving was safe. Participants in the focus groups were aware that there were some areas of their driving that could be improved. One participant summed it up as follows:

“Eradicate the little mistakes that have obviously crept in over many years of driving.”
(female driver, FG2)

Participants said that they found the course very helpful. However there were some aspects of driving that were not touched on in the practical sessions. One of these was reversing and parking:

“I think on the driving part they should have said 'try reversing in that space'.”
(female driver, FG2)

“I was quite disappointed they didn't do parking.” (female driver, FG2)

Some participants thought it would have been useful to have been taken to unfamiliar areas on the practical driving session:

“When it came to the practical, I suggested ... going to a strange place. If you didn't go to a town that you knew ... that might be beneficial because you are in a strange place.” (male driver, FG2)

Another participant, who had been on similar courses in the past, said that he wanted a driving session on country roads:

“One of the things about this test was I didn't go on any country roads, previous years I have been taken in the country but this particular instructor seemed almost as if he was instructing a learner driver.” (male driver, FG2)

3.3.5. Did you feel you got what you needed?

All participants felt they had gained from the course. There was a wide-ranging discussion of the advice they had received from the ADIs and what they thought of it. The main areas of advice are presented below:

Overall driving skills

Some participants had updated their knowledge of driving by purchasing a copy of the most recent Highway Code.

“I bought a Highway Code and I haven't looked at the Highway Code for years and that was one of the most important things that came out of it for me.” (male driver, FG1)

Another participant stated that he had not read the most recent Highway Code, but still owned a very out-dated copy:

“I haven't read the Highway Code in its latest version - I don't know what the latest version is. The last Highway Code - and this is true - I must admit I found it, it had got how when driving a horse and trap to indicate with your whip that you are going to be overtaking.” (male drive, FG2)

Some participants received a check-list of areas of driving to address and they found this very helpful. Most demonstrated a willingness to take the advice given and to improve their driving:

The driving session *“was so personal - one-to-one and you know the five points, I keep that on my dashboard and I stop and think 'oh have I done that today'. So I am trying to improve that.”* (male driver, FG1)

In the advert for the course *“You signified two particular points about older people. One was junctions and one was roundabouts and I wouldn't be surprised if most of us, if not all of us, didn't find that those were on the list when he gave it to us.”* (male driver, FG1)

Positioning

“I thought all the points that he raised with me both in the class and more important on the practical were very very good. There were things that I had never heard of before, for example, the space between the tarmac and tyre when you stop.” (male driver, FG1)

“When I was going straight on I was coming too close to the centre of the roundabout instead of going round it.” (male driver, FG1)

“One thing I was told - I was driving too near the middle of the road, so I have been trying to drive using my mirror and sort of getting more to the left but on these country roads, (a) it's very rough, (b) you get branches sticking out occasionally.” (female driver, FG2)

Awareness of other road users

“Another thing he mentioned, which I hadn't been doing, coming up to a junction, ... coming up to a main road, yes you look right, you look left and then right again, I wasn't doing that. I am now doing it.” (male driver, FG1)

Speed awareness

“It has made me aware of the speed limits because when I started driving ... you just drove anywhere at any old speed, and now as time has gone on it's all limited in different areas and it changes dramatically.” (male driver, FG1)

“I am more aware of speed and I used to go too fast and now I have reduced that.” (male driver, FG1)

Correct use of mirrors

There was considerable debate about use of door and rear-view mirrors and the advice given by ADIs. Some participants said that they were using their mirrors more since the driving practical. Others found using their mirrors took their attention away from the road and made them feel more nervous. Some drivers felt they already used their mirrors enough.

"I have started using my left hand mirror more, especially at traffic junctions." (male driver, FG1)

"I have found it quite difficult to use my left hand mirror an awful lot because I think I have been mostly used to using my right hand mirror and the centre mirror and as I am trying hard to use it, to some extent I find that a distraction from the road." (female driver, FG1)

"I thought personally that I used my mirrors quite enough but he didn't think I used either of them enough." (male driver, FG1)

"He said always check both mirrors, cyclists on the left as you say and motorbikes etc on the right, which I thought was a really valid point. So I am consciously trying to look - use my mirrors more and I think those were excellent points." (female driver, FG1)

Participants did not always agree with the advice given by ADIs:

"One of the things he picked up on me was not looking in the left hand mirror on a roundabout. Now I understand exactly what he was saying but again nine tenths of what you do is judgement." (male driver, FG2)

Correct use of gears and brakes

The ADIs advised many drivers to change their driving style when slowing the car down. Most senior drivers were taught to slow down by changing down the gears prior to braking. In the practical sessions, they were advised to use the brakes and not the gears. This advice was accepted by some, but resisted by others:

"One of the things he said about our age group, he said that you tend to use your gears to slow down ... rather than your brakes. He said brakes are for braking, gears are for going." (male driver, FG1)

"I use both to start with, going down through the gears and I am using my brakes at the same time, that's me, and I don't intend to change either." (male driver, FG1)

One participant suggested that older drivers should use automatic cars:

"I think elderly people ought to be encouraged to get cars which cater for your slowness of reaction and an automatic is an obvious one, and they are very good nowadays." (male driver, FG2)

Conversely, another participant warned that changing to an automatic car could cause problems:

"A lot of ... elderly people ... buy a car with an automatic gear box. What they didn't realise is that some automatic cars, if you take your foot off the brake, they creep, so they used to park up, leave it in reverse, take their foot off the brake and back the car went." (male driver, FG2)

Overtaking

Several participants stated that overtaking other vehicles could be a problem for them. One participant suggested that the course would be more effective if the theory sessions included examples of the consequences of dangerous driving.

"I think ... when you go to these courses they should have the films to show you - I know you said some people don't like it, but I have seen these films and now if I am going to overtake I remember what happened." (female driver, FG2)

Navigational aids

Some participants were advised to get a SatNav to help them to get into the correct lane when coming up to junctions and roundabouts. However, some participants felt that this may add to driver 'overload', when added to the already complex instrumentation panels in modern cars.

"One thing my Instructor said was that it was a good idea to get a SatNav, well I haven't got one and I feel if I get one it will only add to the overload again." (male driver, FG1)

"I can't listen to the Sat Nav or look at it and read the road signs and I do sometimes end up going twice around the roundabout to find the right way." (male driver, FG1)

Confirmation of fitness to drive

Most participants were satisfied that they had been 'passed' as fit to drive. They may not be perfect drivers, but they were not particularly unsafe drivers. As one driver put it:

"I know I am not a very good driver but I don't think I am a bad driver. Where I fitted in the scale, I don't know. After one session ... things were identified that were identified as a weakness. There was nothing that said that's horrendously dangerous." (male driver, FG2)

3.3.6. What aspects of driving do you find most difficult?

Driving at night was frequently mentioned as a problem for older drivers. This was to do with glare from oncoming headlights, and difficulties in judging speed and distance at night.

Road positioning was another area that was raised as a problem. There was agreement that roads have become more complicated in recent years, there are more roundabouts, more traffic lights and more complex junctions. This was seen as a problem for drivers of all ages, but more so for older drivers who may process information more slowly than younger drivers.

One female driver said that she became nervous and stressed when unable to navigate the road system:

"You tend to get terribly het-up, at least I do, when I don't know where I am going. Trying to see the road signs on the road, the signs up here at the same time, traffic lights..." (female driver, FG2)

3.3.7. Health and medications

The topics of health and medications in relation to driving were discussed. It was apparent that the ADI presented this topic slightly differently. Some covered it in some detail, whereas others were brief. There was discussion in both focus groups about vision and driving. Several participants had suffered from cataracts. There were instances where participants had continued to drive whilst their eyesight was impaired because they had not been advised not to drive by doctors or optometrists.

"I have had both my eyes done: cataracts, and I continued to drive until I had them done. I didn't realise how bad my eyesight had got. Although I was going regularly to the Optician and he didn't say you can't drive ... I can see so much better now, I didn't realise how bad I was... and I had been going to the hospital regularly every six months and they never said to me 'you are not good enough to drive' " (female driver, FG1)

One participant mentioned a friend who was visually impaired, but continued to drive:

"She is blind in one eye and going blind in the other eye and I say 'are you sure that you should be driving' and she said 'oh yes they say it's all right you know'." (female driver, FG2)

In both focus groups there was debate about renewal of the driving licence at age 70. Several participants were unclear about the frequency of renewals, and several voiced concerns about the system of self-certification for fitness to drive:

"We don't know - we don't know how good we are. We think we are good." (female driver, FG2)

"You fill in this three year renewal. You say everything is OK." (Male driver, FG2)

"Now I get an annual eyesight test and it could happen that I fill in the driving thing and I am not due for an eye test for 10 months. Nobody when they fill in this form actually thinks - 'Oh well I haven't had an eye test. I had better go and have an eye test first'." (male driver, FG2)

3.3.8. Most people say driving is very important to them but for all of us there will come a time when we should probably give up driving.

One participant felt that she was thinking of giving up driving:

"I am getting to the age where I think possibly the car is going to have to go, though he [the ADI] seems to think I am alright for a few more years yet driving". (female driver, FG2)

Some participants knew of friends who were giving up driving for various reasons.

"I know two people who are giving up driving, they are now in their 90s and they have decided to do it themselves because of various reasons, one because of eyesight - a sign in itself, and the other because he thinks he is getting slower in his mid 90s." (male driver, FG1)

Regarding being advised to cease driving:

"I don't think either [drivers who decided to give up driving] would have minded had they been told that. You know instead of making the decision themselves." (male driver, FG1)

Several participants knew of older drivers who may be unfit to drive but had no intention of giving up driving:

"[He] is 88 who admits that for a number of years he has been extremely colour blind. He would not envisage giving up his licence for one moment." (male driver, FG2)

One participant described a friend she felt was unfit to drive:

"I can see things that are not quite right but you can't say anything obviously, and some people are much more frightened on the roads. she went ... somewhere the other day and got completely lost and you know didn't like it because she didn't get into the right lane at a roundabout, so she turned round and came home." (female driver, FG2)

Others knew of people who were unaware of their fitness to drive:

"A lady who was 92 and the only reason she stopped driving was because of her arthritis in one hand prevented her from squeezing the petrol pump but apart from that she thought she was fine." (male driver, FG2)

Using public transport for the first time in years was seen as potentially difficult. One participant said that he was planning ahead by accompanying a friend in using buses.

"I promised with [person who is giving up driving] that I will use the buses with him because I should use it more. So I am going to practice." (male driver, FG1)

However, some participants raised the problem of cuts in public services and public transport. One driver had moved to a bungalow on a bus route in preparation for giving up driving, only to find that the bus route had been changed:

"You say you go on public transport that's while it's there. I chose my bungalow ... because it was adjacent to a public transport route and close to the doctors and a chemist. Now they have taken away that bus route." (male driver, FG2)

Another participant had already decided that when the time came to give up driving he would take taxis:

"... at the end of the day when I do have to cease driving then I shall go to taxis." (male driver, FG2)

3.3.9. The courses you have been on were free because they were a pilot to see how useful they are. How much should be charged in future and how should the courses be promoted?

There was a debate and show of hands for how much money participants would be prepared to pay for such a course. In general, £50 was deemed too expensive, but £20 was considered a fair price. However, several participants made the point that they would pay £20 because they knew how useful the course is, but that others may not appreciate the benefits of the course. Participants felt that it was important to stress the benefits of the practical driving session and to emphasise that it is not a driving test.

"You would need to play the practical side of 'here is an expert' ... play up that bit because I didn't realise how important that was going to be to me until I did it and an hour of that chap's time was terrific." (male driver, FG1)

"There are those of us of our age who know it all and they wouldn't come on this course, they wouldn't dream of it and if you want to charge £50, no way." (male driver, FG1)

"So you have to put the positive part of what the instructor does, those who are a bit fearful will think it is a sort of test you know and they might fail. I know that's rubbish but they do think that yes." (male driver, FG1)

It was felt that promoting the DDG course using potential benefits such as 'improve your knowledge' would not attract older drivers. It would be more powerful to stress the improvement to practical driving skills.

The participants were unanimously in favour of the DDG courses and many had recommended the course to friends. Word-of-mouth was seen as a good way of promoting the DDG initiative.

“Could you keep us informed about any future courses so that we can tell other people because ... I had friends who were interested.” (male driver, FG1)

One participant suggested that positive quotes from participants could be used to advertise future DDG courses:

“Could you possibly persuade the Echo to let you put an article in, quoting some of the comments that have been made - anonymously I hope?” (male driver, FG2)

3.3.10. Discussion of main results of the theory and practical aspects of the course

The participants were told that most of the drivers who volunteered for DDG were aged under 85 years. They were asked how older drivers could be encouraged to attend. Participants felt that older drivers may be more concerned that the driving session is a test and if they failed they may lose their licence.

The theory sessions were found to be useful, but not especially so. All participants felt that the practical driving sessions were the most useful. However, they did agree that both parts of the course were probably helpful. One participant asked how many senior drivers had attended the DDG course. When told it was over 130 people she commented that there were now probably many better drivers in Dorset:

“I was wondering how many, so perhaps 130 better drivers.” (female driver, FG1)

3.4 Post First Practical Questionnaire

Following the first practical drives, a brief questionnaire was sent to the 123 senior drivers who took part. Of these, 49 responded (40%). Respondents rated their confidence in driving (range of 5 to 10, median = 8.0, mean = 7.8, SD = 1.33) and their driving ability (range of 5 to 10, median = 8.0, mean = 7.5, SD = 1.16). Ratings were made on a scale of 1 to 10 where 1 is poor and 10 is excellent. Figure 19 shows the range of ratings for both confidence and driving ability. These ratings were compared with the confidence and ability ratings provided after the theory course. Half of the respondents increased their confidence score in the mid-course questionnaire after they had taken the driving practical refresher session. Results are presented in Figures 20 and 21 below.

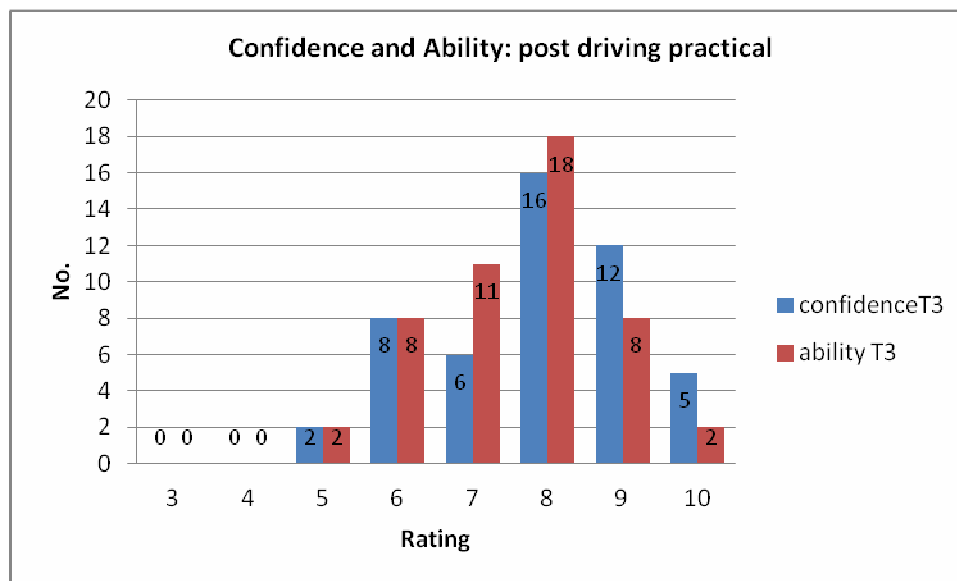


Figure 19: Drivers' self-ratings of driving confidence and ability post driving refresher sessions (n = 49)

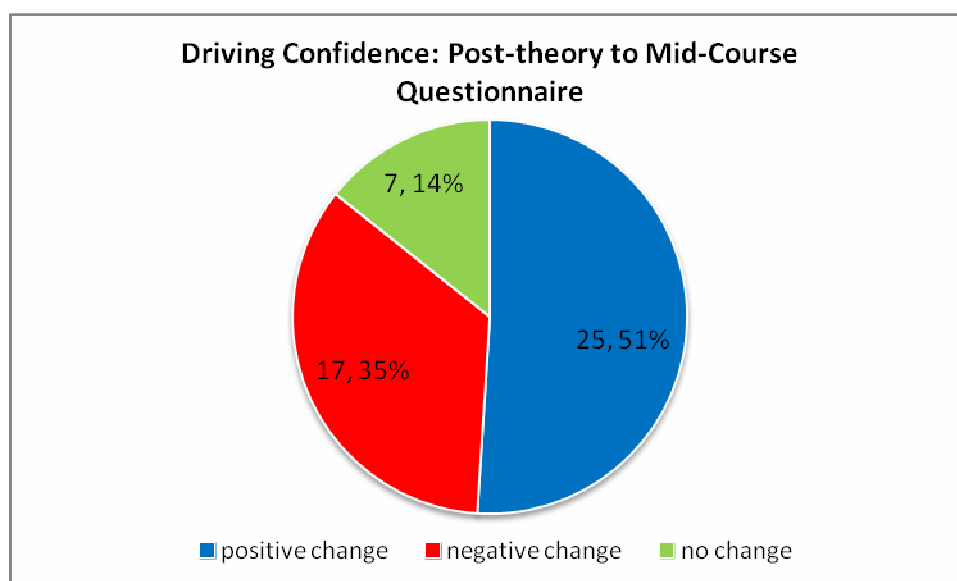


Figure 20: Changes in self-rating of driving confidence between post-theory course and at the mid-course questionnaire (post driving sessions) n = 49

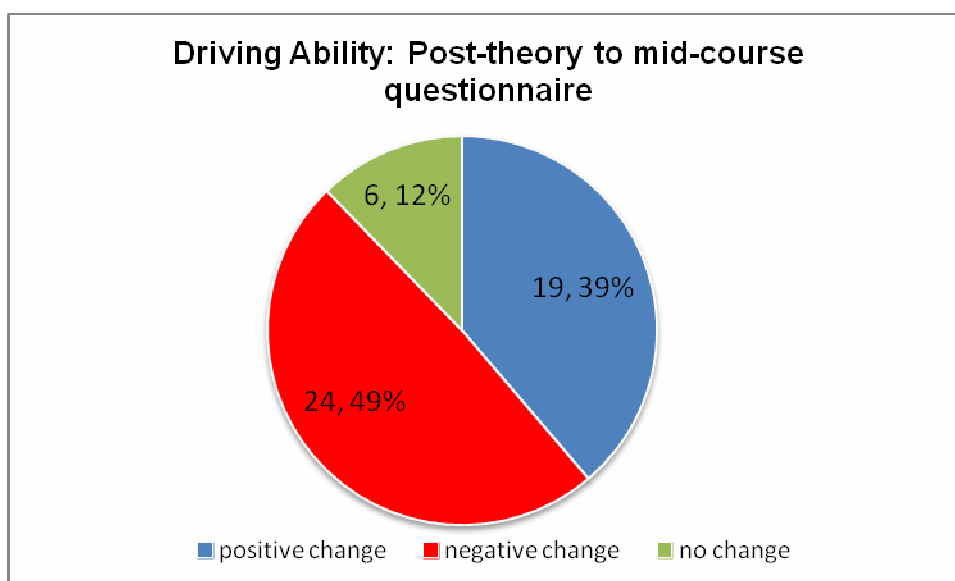


Figure 21: Changes in self-rating of driving ability between post-theory course and at the mid-course questionnaire (post driving sessions) n = 49

All respondents provided qualitative information on how the course had made a difference to their driving. All viewed the course positively, and many found the course helpful in improving their driving and in raising their awareness of mistakes or bad driving habits. Some quotations illustrate the benefits identified by respondents under broad themes of overall impressions; improvements to driving; reassurance of driving competence; increased confidence; identifying bad habits; and updating knowledge.

Overall impression of the course

“Overall ...I think everyone our age should have the opportunity to attend such a refresher course.” (female driver)

“... appreciate that having a fairly clean driving record is not the same as being a good driver and programmes such as Dorset Driver Gold are very valuable in giving an opportunity to correct errors and improve driving technique.” (female driver)

“I believe that the practical driving advice given to me on the road tuition was invaluable in that it pointed up the five points where I could improve. And I have that list in my car to check how I am taking note and acting upon that advice. ... I think that programme, especially the practical road driving and observance by an expert, was excellent.” (male driver)

Improvements to driving

“The course helped refresh one’s memory and inform about driving and the highway code; very useful. The practical drive was most useful in that four areas of my driving could be improved.” (male driver)

"The course has made a vast difference to my driving. I feel much more AWARE and my CONCENTRATION has improved no end." (male driver)

"I had problems I was not aware of, some of these were pointed out and have been addressed." (male driver)

Reassurance of driving competence

"It has given me confidence in my driving ability and the assessment has reassured me that I should continue to drive." (male driver)

"Course has reassured me and my wife of my ability & alertness, to continue driving for some years. Very useful refresher after 60 years since taking the driving test. Many thanks for the opportunity." (male driver)

Increased confidence

"Am confident that I am a good driver having been assessed and am trying to improve on the points on which I was criticised." (female driver)

"Taking part in this programme has improved my driving (more aware of my 'failings') and also confirmed that I am a capable driver..... As one ages it's difficult to assess what bad habits, if any, one has acquired and this exercise restores confidence." (female driver)

Identifying bad driving habits

"The course was very helpful in identifying my weaknesses and helping me do something about them. Most valuable was the drive with [ADI] and what she pointed out." (male driver)

"Confirmed my opinion of myself as a reasonably safe driver and it also highlighted some 'faults' that I had acquired over the years!" (female driver)

"Made me realise the bad habits I've got into over the years." (male driver)

Updating knowledge

"More awareness of other road users. Updated on some differences between modern cars and those I learned to drive on." (male driver)

"I think it has made me more aware of some traffic matters and more aware that I need to be careful and observant." (female driver)

However, two respondents described negative or missing aspects of the course:

Negative aspects

“Taking part in the programme has made me think about my driving but it has had the unfortunate side effect of making me less confident on roundabouts although I do not consider myself to be a menace to the driving community.” (male driver)

“The practical session was especially good, though I was surprised my reversing / parking skills were not assessed, as many our age I feel lack confidence in this which on our crowded streets is a most important capability, especially parking against a pavement in a tight space.” (female driver)

3.5 ADI Questionnaire

The approved driving instructors completed a questionnaire which contained eleven open-ended questions (Appendix V). The aim was to gather feedback from ADIs on how this group of older drivers performed on the road and what specific training or advice should be offered to older drivers in order to improve road safety. The questionnaire also collected information on how representative of older drivers this group of drivers were. Responses from the five ADIs were broadly similar. Responses to specific questions and further recommendations are summarised below.

3.5.1. As an ADI, what do you see as the main problems for older drivers compared to drivers aged under 70?

ADIs identified physical problems as a factor affecting older drivers, for example health issues are more prevalent among older people. Slower reaction times were also highlighted as a particular problem among senior drivers:

“The main problem I see is their later reaction times to what's happening ahead of them because they don't see what they're looking at and so react later to the situation.” (ADI 5)

Another problem was driving too slowly and causing impatience among following drivers who may then make risky overtaking manoeuvres:

“Slowing down in general on open roads which holds up other drivers, therefore encouraging other drivers to take an unnecessary risk to overtake.” (ADI 5)

Regarding mobility in general, the lack of good public transport links for those living in rural areas was highlighted as a problem. If there are few alternatives to driving, then those whose might otherwise have given up driving continue to drive in order to remain independent.

With regard to driving errors, ADIs believed that the faults targeted on the DDG project are the ones most often found among senior drivers. These were identified as the concept of speed and distance; lane discipline; emerging and turning; and *“dealing with the sheer volume of traffic on our roads compared to when these drivers were more active behind the wheel.”* (ADI 1)

3.5.2. In your opinion, what were the main reasons/motivations for the volunteers taking part in the practical drives? Were there any gender differences?

It was seen as very important for older drivers to be able to retain their independence and have control of when and where they travel. Several ADIs felt that for many senior drivers a major motivation for volunteering was to achieve confirmation of their ability to drive. All ADIs stated that the vast majority of the people they took on a practical drive were reasonably competent drivers.

"The drivers that volunteered tended to be drivers that were proud of their driving but at the same time thought it would be useful to let someone check that they were safe, and update their existing skills." (ADI 3)

"They were all keen to have someone look at their driving in an unbiased and professional way and to hope to improve their skills as they found driving more stressful today." (ADI 5)

None of the ADIs identified any gender differences except that slightly more male drivers volunteered for the practical element of the course.

3.5.3. In your opinion, are the volunteers you took on practical drives representative of all older drivers on the road?

All five ADIs felt that the volunteers were not representative of all older drivers on the road. There was a general feeling that the volunteers were more aware of the importance of road safety and the need to keep their driving skills up to date than the majority of senior drivers. Several of the volunteers themselves made this point, suggesting that many of their peers would benefit from the course. The views of ADIs are reproduced below:

"In my opinion the drivers were not representative of all older drivers, they were keen to get someone to look at their driving as previously explained and thought driving safely was important to them." (ADI 3)

"Not at all as they were there to improve their skills. The majority hadn't attended any further training since passing their test or even looked at a Highway Code until this course. Quite a few commented that the ones who didn't attend the drive were the ones that perhaps should have been on the course and the drives." (ADI 5)

It was also noted that the people whose driving is unsafe are a hard- to-reach group, particularly as they may worry that a driving assessment could result in the loss of their driving licence:

"I have always felt that those drivers who really need our coaching don't come anywhere near such a project for fear of losing their licence, most know they have a problem if they faced up to reality." (ADI 1)

3.5.4. In the practical drives, which driver errors do you believe are the most worrying or dangerous?

The ADIs agreed that the errors of most concern to them during the practical drives were:

Observation (e.g. poor use of mirrors and failing to check blind spots, observation checks before emerging and when changing lanes, lack of observation at junctions and roundabouts)

Speed (e.g. approaching junctions too fast)
Road positioning (e.g. poor lane discipline)
Signals (e.g. incorrect use and timing of signals)
Planning (e.g. looking early and assessing)
Reading the road (e.g. not using LADA: Look, Assess, Decide, Act)

Examples of unsafe driving were:

“... at roundabouts with regard to looking and moving, there was a delay in processing information and activating movement. Also the correct use and timing of signals.” (ADI 2)

“... as she entered the roundabout she veered violently right and we found ourselves in the right lane with no checks in her mirror, ... this lady changed lanes completely as she entered without realizing she was doing it.” (ADI 3)

3.5.5. Were there any drivers who you believed were probably unfit to drive? Were there any gender differences?

Overall, very few drivers were considered unfit to drive and even fewer were advised to cease driving by the ADIs. One driver failed the eyesight test and was not allowed to take the practical drive. Most of the volunteers were considered fit to drive if they acted on the advice provided after the driving practical. One ADI commented that female drivers were more receptive to criticism than males. However none of the ADIs felt there were gender differences with regard to driving competence.

“There were two who I felt should discontinue driving, one male and one female.” (ADI 1)

“I feel most of the drivers were fit to drive, however just now and again one or two of them would make a serious error and other road users would have to work around them.” (ADI 2)

3.5.6. What recommendations or advice did you offer to drivers who did not perform well?

The ADIs provided advice to all of the senior drivers they assessed. Some volunteers required more advice than others. At least one of the ADIs provided the advice in the form of a separate written check-list so that the driver could refer to it easily. After the first practical drives, all drivers received a report with their driving faults highlighted and advice on how to address these. The main aims of the second drive were to assess whether the advice had been acted upon, and a reduction in the number of driving errors. In most cases, the ADIs reported that they saw an improvement at the second practical drive.

The method of advising drivers who did not perform well differed between the ADIs as shown below:

“Those I felt were not likely to improve I advised to cease driving. All other drivers whom I could reach I gave remedial advice during the session which did make an improvement. They were advised to continue with the advice given with a view to looking again on the second session. All did improve.” (ADI 1)

“With regard to all drivers that I felt were struggling to change their driving behaviour, I gave them a check list of their errors and told them to work down the list one at a time to correct them.” (ADI 2)

“I advised them to prioritize the main points of their driving faults. Getting them to slow down was advice I offered a lot of the drivers. I felt that they felt pressurized to do things quickly because they did not want hold other road users up.” (ADI 3)

“I got the drivers to prioritize on correcting the main faults which I thought were putting them at most risk.” (ADI 4)

“To go away and study the Highway Code and to maybe think about having further training to help achieve a good standard.” (ADI 5)

3.5.7. What specific training or advice do you think should be offered to older drivers more generally in order to improve road safety?

There was general agreement among ADIs that senior drivers should have regular driving refresher sessions. Furthermore, it was suggested that all drivers would benefit from regular driver education. The recommended frequency of refresher training or driving assessments varied:

“I think some form of driving assessment process should be in place on a three or five year rotation, similar to that now being introduced in other countries. As an absolute minimum there should be an eyesight test when their licence is renewed every three years.” (ADI 1)

“Maybe their driving could be monitored annually.” (ADI 2)

“I think they should take regular training as should all drivers but most people think they do not need it.” (ADI 3)

“Regular refresher courses should be compulsory for all older drivers over 75 years of age.” (ADI 4)

“More courses like we are offering and to consider taking a refresher training session with a professional instructor when they reach a certain age if they find that driving is making them nervous or stressful.” (ADI 5)

3.5.8. We know that some drivers did not take up the offer of the first free practical drives. What reasons did they give?

Most senior drivers who attended the theory sessions did accept the offer of a free practical drives. The decision to accept or decline the offer was made by individual drivers and those who did not sign up for a practical tended not to give reasons to the ADIs. After the theory presentations, each ADI presented a slide with their contact details, and those present could either sign up on the day, or contact the ADI at a later date. It was stressed that the practical session was not a test but would give the drivers suggestions and tips for safer driving.

“They did not offer any reasons, most of the drivers in my group took up the offer. I told the drivers on the theory session that it would be a very good thing to do and that they would not be judged or tested, just assessed and given a few tips to help them reduce their risk of having a collision.” (ADI 3)

3.5.9. The drop-out rate was higher for the second practical drives. What reasons did they give for not taking part a second time?

It is likely that the main reason for not taking part in the second practical drive is that it was difficult for ADIs to contact the drivers. The first practical drives were usually booked on the day of the theory session, but booking the second drives depended on being able to reach the drivers:

“A lot of the clients couldn't be contacted. There are a large number of older people who leave their phones on answer-phone for fear of cold callers but then don't pick up the messages or don't ring back. All of my clients were phoned at least three times to book in and at least 30% couldn't be reached.” (ADI 1)

Another reason for not taking part in the second practical drive was that the drivers did not see any further benefit. They had received advice on the first occasion and saw no need to repeat the experience. However, for many drivers, the second practical drive was seen as an opportunity to demonstrate to the ADI that their driving had improved. Other reasons for not taking part in the second drive were illness, holidays, or moving out of area.

3.5.10. The drivers involved in Dorset Gold (DG) are older than drivers you usually accompany. Were there any significant differences in performance in the DG group compared to drivers in their 60s and early 70s?

The ADIs had experience of accompanying drivers of all ages. In general, they did not find any significant differences in driving performance between the DDG over 75 year olds, and those in their 60s and early 70s.

“The drivers were much the same as younger drivers in terms of their ability to drive. Most drivers have the same faults regardless of age.” (ADI 3)

Some ADIs said that they noticed slower response and reaction times in the DDG over 75 group:

"They were not as responsive as young drivers and took more time to think things through." (ADI 2)

"... their reactions times are slower but the vast majority of them were really quite sharp for their age." (ADI 5)

3.5.11. Do you have any examples that highlight particular issues for older drivers and road safety?

A recurring problem for senior drivers was not using their rear-view and door mirrors correctly:

"A lot of the drivers were not using mirrors before doing anything, therefore I introduced the Mirror Signal Manoeuvre back into their driving." (ADI 2)

It was also suggested that many senior drivers have acquired 'bad driving habits' over the years, and that driving style and driving behaviour is very difficult to change:

"It is very difficult to change a driver's behaviour, you can assess and advise but drivers will soon forget and revert back to their normal driving style. ... I found that on the second drive the drivers were very keen to show off their new found skills and most of the drivers had improved." (ADI 3)

It was recommended that training for senior drivers should focus on the main faults of all drivers, namely:

7. Look effectively before emerging at junctions "Look once, look twice, think bike".
8. Use your mirrors especially before changing speed, direction or indicating.
9. Keep your distance "Only a fool breaks the 2 second rule" (4 seconds when wet).
10. Avoid speeding, use a lower gear in town to help control speed.
11. Keep to your lane on roundabouts.
12. Avoid cutting corners.

3.6 Final Follow-up Questionnaire

Following completion of the theory and practical elements of the Dorset Driver Gold course, a brief questionnaire was sent to the 123 senior drivers who had experienced at least one driving refresher session. Of these, 72 drivers responded (58.5%). Seventy-one respondents rated their confidence in driving (range of 2 to 10, median = 8.0, mean = 8.27, SD = 1.4) and their driving ability (range of 2 to 10, median = 8.0, mean = 8.06, SD = 1.36). Ratings were made on a scale of 1 to 10 where 1 is poor and 10 is excellent. The ratings for driver confidence and driver ability are presented below in Figure 22. These ratings were compared with the confidence and ability ratings provided before the theory course. At this final follow-up questionnaire, 45% of respondents demonstrated an increase in confidence since completion of the course. Half of the respondents rated their driving ability more highly since completion of the course. Results are presented in Figures 23 and 24 below.

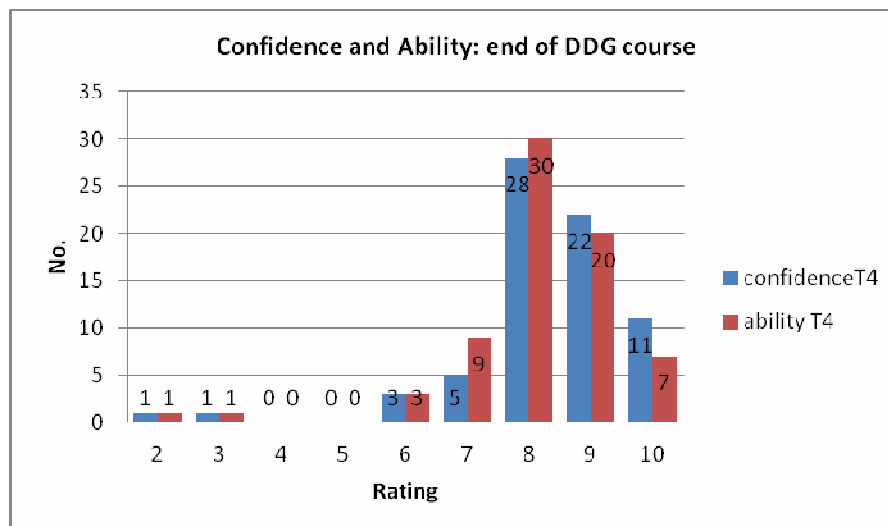


Figure 22: Drivers' self-rating of driving confidence and ability (post driving sessions) (n = 71)

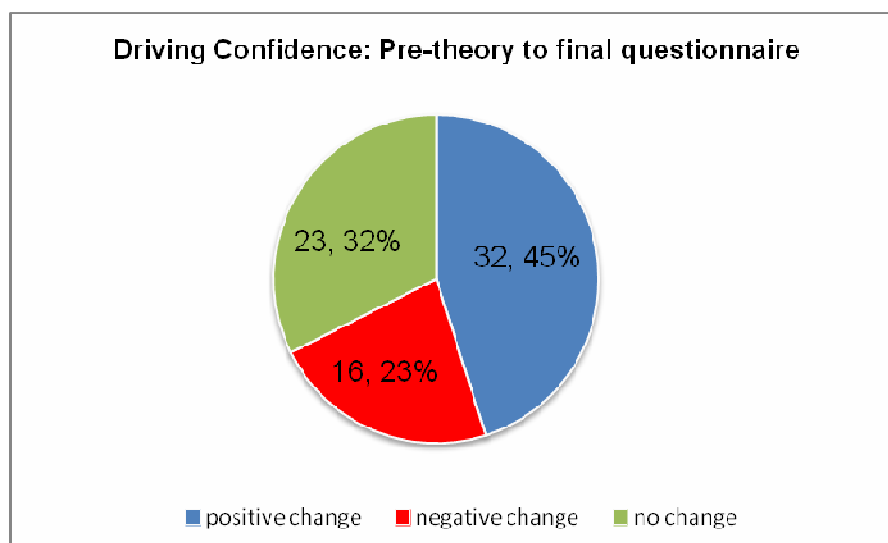


Figure 23: Changes in self-rating of driving confidence between pre-theory course and at the final questionnaire (post driving sessions) (n = 71)

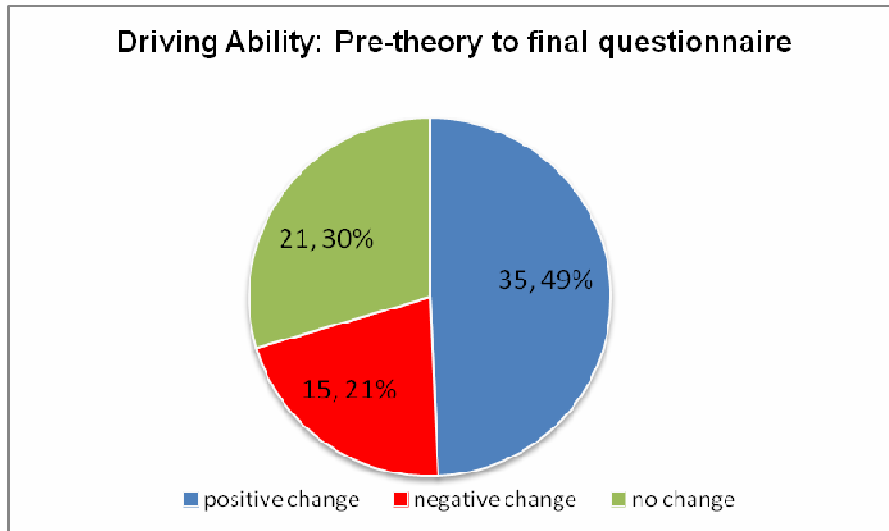


Figure 24: Changes in self-rating of driving ability between pre-theory course and at the final questionnaire (post driving sessions) (n = 71)

Respondents were also asked whether they intended to make changes to the way they drive as a result of the course. All but two drivers said they would probably or definitely make changes. Results are presented in Figure 25 below.

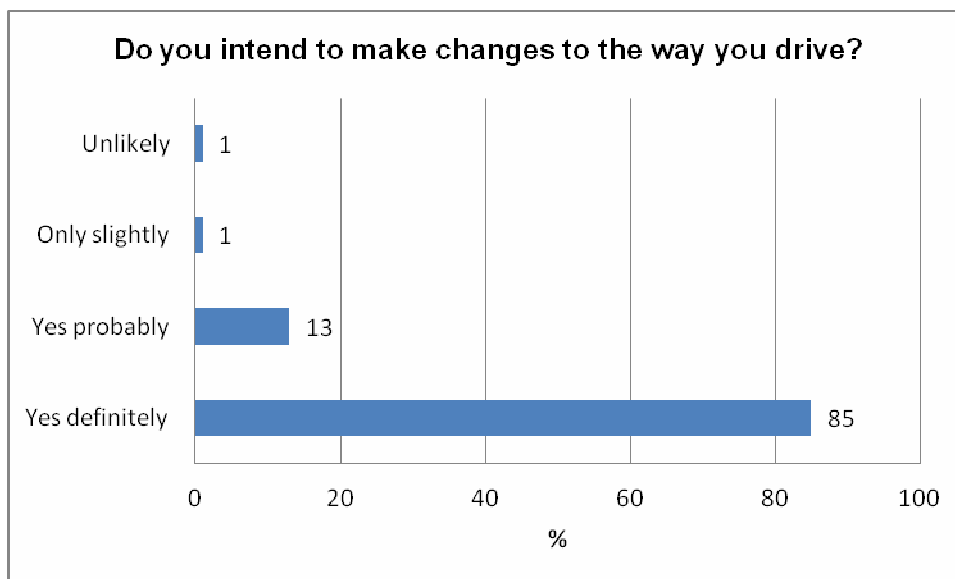


Figure 25: Intention to make changes to the way drive (n = 72)

Respondents provided qualitative information on how the course had made a difference to their driving. All viewed the course positively, and again most found the course useful in improving their driving and in raising their awareness of mistakes or bad driving habits.

Some quotations illustrate the experiences of respondents under broad themes of reasons for taking part; overall experience; improvements to driving; raising awareness of speed and other road users; and increased confidence.

Reasons for taking part

"I personally think that this sort of course is invaluable to any motorist, particularly to older motorists who live in a rural area and who need their car for their independence." (female driver)

"I have noticed how some of the driving of one or two of my friends is perhaps not quite as good as it used to be. Although I felt quite confident myself I thought it would be a good idea and a good opportunity to put myself through the test just in case I was not up to scratch after all these years... I discovered that a couple of things had slipped by the wayside so thanks for that." (male driver)

Overall experience

"Overall a very positive experience and I feel I am a safer driver and everything he advised I have followed without exception." (female driver)

"Overall; the course and test was an excellent idea and I think (hope!?) has made me a more cautious and careful driver, and should be repeated for all elderly drivers." (male driver)

"Brought me up to date with current thinking on driving standards. Have held a driving licence for sixty years. I needed to improve observation." (male driver)

"Overall, very worthwhile exercise. It should be a compulsory exercise every five years for drivers over 60, to renew the driving licence." (male driver)

"I think a refresher of this sort is extremely valuable, to make me aware of the bad habits that I have developed over time." (female driver)

"I also found that the theory evening helped us oldies understand more about the proliferation of lines painted on the roads these days and to hear about problems that others in the meeting were experiencing." (male driver)

"I listened to the constructive criticism given and was quite thrilled at being signed off as safe and receiving a Certificate!!" (male driver)

Improvements to driving

"Made a difference. I found the course very interesting and approaching junctions and roundabouts very informative. I took the course last year, theory and practical and will look again for a refresher in the future." (female driver)

"This programme has enabled me to be much more observant and less complacent." (male driver)

"It showed me some of my bad habits that had developed over the years and made me brush up on the Highway Code." (male driver)

"Made me more aware of changes since I passed my driving test, both changes to vehicle technology, changes to road traffic legislation, and also some changes to recommended driving practices (e.g. use of gears and brakes)." (male driver)

"It has made me realise a couple of errors I was consistently making." (female driver)

"It has alerted me to potential dangers e.g., signalling intentions at traffic islands and generally making greater use of rear view mirrors." (male driver)

"I check my mirrors more often, especially at roundabouts, am a bit more compliant with speed limits." (male driver)

Raising awareness of speed and other road users

"More aware of surroundings and speed approaching junctions etc." (male driver)

"Made me sharper & looking all round more & giving cyclists more clearance. I recommend it to all my aged friends." (male driver)

"I am more aware of my driving, and remember the prompt saying e.g. Only a fool breaks the 2 second rule." (male driver)

Increased confidence

Better awareness and confidence. I have definitely made improvements since the course. It was invaluable to me. (female driver)

it gave me a lot of reassurance and confidence and useful advice which I now use to advantage. (male driver)

"Given me more confidence." (female driver)

"It gave me confidence that my driving was reasonable, other than the possible improvements suggested." (male driver)

For some individuals, taking the course helped them to make a decision about continuing driving:

Facilitated decision-making about continuing driving

"Gave me assurance that I can continue driving (now 82 years old) and no reason to stop." (male driver)

"It made me realise just how poor my driving was in modern times - I have given up driving." (male driver)

Uncertainty whether the course is reaching the right audience

It was suggested that people who are already competent drivers will be most likely to volunteer for a practical driving session, and that the course may not be reaching unsafe drivers:

"A worthwhile course but directed at the converted. I am aware of many drivers both young and elderly who would benefit more." (male driver)

4 DISCUSSION

The DDG initiative is a comprehensive training package aimed at senior drivers aged 75 and over. The evaluation was multi-faceted and it explored both the acceptability and effectiveness of a driver training programme for senior drivers. The DDG course provided classroom- based theory training followed by one-to-one practical drives with an ADI. Each volunteer had their driving assessed by an ADI and were then instructed on how to improve their driving skills and reduce any driving errors. Approximately six months later, drivers were invited to take a second practical drive with the same ADI. Their driving was re-assessed and advice given to improve driving skills and further reduce errors. After each practical drive, the drivers were given an overall driving score as well as more detailed feedback on their driving. After each stage of the DDG course, drivers were asked to complete feedback questionnaires and to rate their confidence as drivers and also their driving ability.

4.1 Aims and objectives of the study

- I To recruit 100 senior drivers to take part in a pilot project which offers training in driving theory and on-road driving performance
- II To identify the driving behaviours , driving skills, and driving needs in a group of senior drivers
- III To provide practical training for senior drivers to improve their safety on the road, update their skills and driving knowledge
- IV To increase driving confidence among senior drivers

4.2 Recruitment and study sample

The DDG initiative proved popular with senior drivers, and recruitment to the pilot project proved to be extremely successful. The first aim of the study was achieved. The target number of 100 senior drivers was exceeded and 144 drivers were included in the evaluation study. This allowed all aspects of the course to be evaluated with an acceptable level of confidence.

The most effective way of recruiting senior drivers to take part in a refresher course on driving was via newspaper or magazine advertisements. Approximately half of the volunteers booked their place on the course by telephone, and the other half used electronic means by email or by booking online. Two thirds of volunteers were men. This was somewhat surprising, as it had been expected that older women may be less confident drivers and thus would be particularly interested in a refresher course.

The DDG course was offered to drivers aged 75 years and over. It was hoped that older drivers would be attracted to the course to refresh their driving skills. Although volunteers came from a wide age range of 75 to 91 years, the median age was 78 years. For the purpose of data analysis volunteers were divided into two age groups: 75 to 79 years and 80 years and over. However, these were unequal groups as

there were 93 people in the younger age group and 51 in the older age group. Consequently, elderly senior drivers were under-represented. Given the popularity of the initiative, it may have been possible to set recruitment targets for numbers of men and women and older and younger drivers. This would have produced more equal groups for the analysis carried out as part of the evaluation.

4.3 Driving behaviours, skills and needs of senior drivers

The pre- and post-theory course questionnaires gathered data on the driving skills and experience of the volunteers and their main reasons for driving. Most of the volunteers passed their driving test in the 1950s and 1960s. Thus, most of the drivers had over 50 years of driving experience. During that time, of course, the volume of traffic on the roads has changed dramatically. As some drivers pointed out in the focus groups, years ago there were few speed limits. Today, the speed limit on a single stretch of road can vary many times within a few miles. Several of the senior drivers cited speed awareness as a problem, and this was confirmed in the on-the-road driving practical sessions. Many ADIs said that adhering to speed limits was a common cause of driver error.

Most of the volunteers said that they were the main driver in their household. Only 23 people said they were not the main driver. Of these, some were women who said that they did not have much opportunity to drive, or to put the advice of the ADIs into practice, because their husbands did most of the driving.

Volunteers were asked what were their main reasons for driving. The majority of respondents said that they used their car to do the shopping, to run errands, to attend appointments and to visit friends and relatives. 56 people used their car to give lifts to other people. In the focus groups, some people said that they were the main driver among their group of friends, and that they often drove others around. Twelve people used their car to drive to their place of work, either paid or voluntary. Four people were volunteer drivers for their local hospital or doctors' surgery.

Respondents were asked if they avoided driving in certain conditions, such as on motorways or busy roads, in rush hour, in bad weather or in the dark. Fewer people than expected said they avoided driving in the dark. However, more women than men avoided driving in the dark, on unfamiliar roads or in bad weather. More older than younger drivers avoided driving in bad weather, on busy roads and on unfamiliar roads. This finding is consistent with that of other studies, which have reported that older drivers voluntarily restrict their driving and drive within their own capabilities (Lang et al., 2013). However, it has been argued that some senior drivers may limit their driving not because they are aware of their driving ability, but because of changes in lifestyle or preferences (Molnar, Eby, Charlton, Langford, Koppel, Marshall & Mann-Son-Hing, 2013).

Respondents were asked if they kept up to date with current driving regulations. A quarter of respondents said they had checked recently. In the focus groups, several drivers said they had checked the regulations and/or read the highway code after they had signed up for the DDG course. This indicates that many of the volunteers were motivated to perform well.

4.4 Practical training for senior drivers to improve their safety on the road and update their skills

123 people were taken for a practical driving session by one of the ADIs. Approximately 6 months later, 76 people were taken for the second practical driving session, usually with the same ADI. The reasons for not taking part in the second practical session were not routinely collected. Normally, the ADIs would contact 'their' drivers some months after the first driving practical session and arrange a mutually convenient time for the second session. It was noted by some of the ADIs that it was difficult to reach some of the drivers by telephone, and that if messages were left, the driver did not always ring back. Consequently, it did require a certain amount of perseverance from the ADI to make the second appointment. Even when a appointment was made, some ADIs commented that drivers would forget about the appointment. Some ADIs made a point of ringing the driver a day or two before the second practical to remind them it was taking place. In some other cases, an ADI would speak to the driver on the telephone, but the driver did not wish to have a second practical session. They did not have to give a reason, but some ADIs commented that drivers sometimes said that they did not feel there was much point in having a second practical session, especially if they had achieved what they wanted which was confirmation that their driving was safe.

In the pre-theory questionnaire, respondents were asked which driving skills they wanted to improve as a result of the DDG course. The most popular choices were perception of driving hazards, improving fuel economy, negotiating roundabouts, negotiating junctions and speed awareness. The results of the on-the-road sessions confirmed the need for training in these areas. The ADIs pointed out errors among many of the drivers regarding approaching and negotiating roundabouts and junctions. The ADIs also highlighted many errors regarding speed perception and speed awareness among the volunteers.

At the end of each on-the-road driving session, the ADI gave each driver an overall driving score, where the maximum score was 40. Between the first and second practical sessions there was a modest increase in driving scores from 24/40 to 29/40. For individual drivers, almost all drivers improved their driving score, the average increase was 16%. However, women made significantly more gains than men, with an average increase of 22% compared to 14% for men.

After the practical session, ADIs also gave each driver an error score which was the number of driving errors they made during the driving session. Between the first and second practical sessions there was a significant reduction in errors from a mean of 12 errors per person to 6 errors per person. Overall there was a mean reduction in errors of 40%. All but 4 drivers reduced the number of errors they made. Two of these had the same number of errors on the first and second drives, and two drivers had a higher number of errors on the second drive.

There was very high satisfaction with the practical driving sessions. Respondents were asked what they found most useful about the DDG course. All drivers found

the one-to-one driving refresher sessions particularly valuable. As one person put it: *"I think that programme, especially the practical road driving and observance by an expert, was excellent."* (male driver)

4.5 Driving confidence

At the start of the DDG course, and before the theory presentations, volunteers were asked to rate their confidence as a driver. Most volunteers rated their confidence as high, with a median rating of 8 out of 10. Most drivers rated their confidence between 7 and 10. They were also asked to rate their ability as a driver. Again, most drivers rated their driving ability as high, with a median rating of 8 out of 10. These results suggest that many of the people who volunteered for the course already believed they were good drivers. Because of this, it would be difficult to demonstrate improvements in driving confidence and driving ability as a result of the DDG course.

For the majority of drivers, confidence levels remained unchanged between the pre- and post-theory course. However, 29% of drivers rated their confidence more highly after the theory course, 11% rated their confidence as lower. For driving ability, again most drivers did not alter their self-ratings. 20% of drivers rated their driving ability higher after the theory session and another 20% rated it lower.

At the final follow-up after both the theory and practical sessions, 45% of respondents rated their confidence more highly since completion of the course. Half of the respondents rated their driving ability more highly since completion of the course

Ratings of driving confidence were discussed in the focus groups. Several people said that they had volunteered for the DDG course because they wanted confirmation that they were 'as good a driver as I think I am'. This suggests that many of the volunteers already felt competent drivers and for a significant proportion of drivers the practical sessions confirmed this. At the focus groups, several people suggested that the DDG course was not reaching the people who need it most. As one driver put it: *"If we were rotten drivers we wouldn't come on it would we?"* When asked how to attract less competent drivers, it was suggested that there should be initiatives to raise awareness of fitness to drive among older drivers by using advertisements and incorporating an unfit older driver in the storyline of a popular soap opera. Both of these initiatives would be prohibitively costly, but cheaper options could be explored.

4.6 Translation of new skills into driving practice

Following the theory course, respondents were asked if they intended to make changes to the way they drive. The vast majority (76%) said they either definitely or probably would. Only two people said it was unlikely that they would make any changes.

At the final follow-up, after both theory and practical elements of the DDG course, an even greater majority of respondents (98%) said that they would make changes to the way they drive as a result of the course.

There was overwhelming praise for the course, and all of the senior drivers who completed the final questionnaire were very positive. It is, however, possible that those who were less positive did not complete the final questionnaire. One person found the course useful, but as a result had decided to cease driving as he felt his driving was not up to current standards. The aim of the DDG course was to raise confidence and improve the driving skills of older drivers. However, for this person the course was still successful as it made him aware that it was time to stop driving for his own safety and that of other road users.

Many of the respondents stated that they would recommend the DDG course to others, and many have already done so. In the focus groups several people said that they had mentioned the course to their friends and those friends wanted to take the course themselves. Although the drivers in the focus group often knew of other drivers whose driving needed some improvement, they were unsure how to encourage those drivers to take the course. Again, the notion was raised of not reaching those drivers who really need training.

4.7 Approved Driving Instructors

Five ADIs delivered the DDG course. Each ADI presented at least one theory session and each ADI took drivers for on the road practical refresher sessions. The theory session was delivered using the same Powerpoint presentation. However, each ADI presented in a slightly different way and some spent more time on certain elements, for example the effect of medications on driving, or approaching junctions. For the practical drives, the ADI differed in their choice of driving route. One ADI had a standard route for most drivers, starting at the same point. Other ADIs tailored the driving route for each driver as many of their routes started at the driver's own home. For this reason, not all drivers had exactly the same journey, but most encountered the full range of driving conditions: urban, rural, dual-carriageways, roundabouts, traffic lights, etc.

Although five different ADIs took senior drivers for the driving practical sessions, care was taken to make sure that the assessments were standardised. All ADIs used the same assessment form. However, the identification of driving errors and creation of an overall driving ability score is somewhat subjective. Consequently, there may have been small differences in the ratings given by different ADIs. However, these differences did not affect the overall results, particularly as most drivers were assessed by the same ADI and each ADI was consistent in his or her ratings and scores.

The ADIs felt that many of the drivers who volunteered for the DDG course were competent drivers and probably not representative of most older drivers. Many said that a major reason for volunteering was for confirmation of their fitness to drive. As one ADI stated: *"The drivers that volunteered tended to be drivers that were proud of*

their driving but at the same time thought it would be useful to let someone check that they were safe, and update their existing skills."

The skill and expertise of the ADIs was applauded by many of the drivers who took a practical drive. As one driver put it: *"I didn't realise how important that was going to be to me until I did it, and an hour of that chap's time was terrific."*

All ADIs provided feedback and advice to the drivers after the practical drives. However, the way in which this feedback was given varied between ADIs. One ADI commented that some senior drivers were unable to take in all of the advice and tuition given after the first practical drive. To solve this he devised a checklist of about 10 main points to focus on and gave it to the driver to take home. He advised the drivers to work through the list one at a time correcting their faults and errors. At the second drive, some drivers brought the checklist and had it on the dashboard.

4.8 Limitations

The DDG evaluation study has a number of limitations. Firstly, it is acknowledged that the senior drivers who volunteered for the DDG course appear to be a biased group. Most were already competent drivers and their motivation for volunteering was to gain confirmation of their driving ability. Both the ADIs and drivers in the focus groups voiced the opinion that the DDG course was not reaching the senior drivers who need driver training. However, an assessment of the number of driving errors recorded and the wide range of driving ability scores on the practical drives does suggest that many of the senior drivers on the DDG course did require refresher training, and did benefit from the course.

There was a bias towards younger senior drivers volunteering for the DDG course. The course was advertised for drivers aged 75 and over, but the hope was that many drivers aged 80 and over would volunteer. As it was, only 51 drivers aged 80 and over volunteered. Research suggests that people aged over 80 have a higher incidence of blameworthy crash involvement than those aged 75 to 79. It was suggested that future DDG courses should be offered exclusively for those aged 80 and over.

More men than women volunteered for the DDG course. This may be associated with the tendency for drivers who feel confident and competent to volunteer for an evaluation of their driving. Those drivers who are less confident in their driving ability may be unwilling to be assessed. In the focus groups, it was suggested that many people will view the driving practical session as a 'test' which will put some drivers off. As one person put it: *"I think a lot of people haven't gone on that course because they think 'oh yes, they are going to take my licence away'."*

The female drivers in the focus groups were quite confident drivers, and one lady said she was the designated driver for outings among her friends as she was seen as a good driver. Also in the focus groups, there was some suspicion that the DDG course was a means of 'weeding out' unfit older drivers. This was, of course, not the case, and future DDG courses should stress that the driving practical session is not a test and not an attempt to take older drivers off the road.

Of the 123 people who had a first practical drive, only 76 had a second practical drive. Therefore the comparisons between first and second drives are made with a restricted group.

5 CONCLUSION AND RECOMMENDATIONS

The DDG scheme achieved its objectives of successfully training a group of senior drivers and improving their driving skills and confidence as drivers. It was not possible to measure the impact on road safety, but most participants felt that they were better or safer drivers as a result of the on-road driving sessions.

The DDG scheme was well received by senior drivers, and met most of the needs and expectations of the drivers who volunteered to be part of it. The effectiveness of the DDG scheme was demonstrated by the finding that almost all drivers who took a second practical drive had improved their driving since the first practical drives. Almost all drivers reduced the number of errors they had made in the first drive. Importantly, almost all drivers who took the DDG course said that they would make changes to their driving as a result.

The DDG course has made an important contribution to road safety among senior drivers in Dorset. As one senior driver put it, if over 130 people have taken the DDG course then that is *“perhaps 130 better drivers”*. The DDG initiative achieved its aims of recruiting high numbers of senior drivers, improving driving ability and confidence and reducing the number of driving errors for those who took the on-the-road sessions. A number of recommendations have emerged following the independent evaluation which are presented below.

Delivery of the course:

- Aim for greater consistency of presentational styles.
- Aim for consistency of scoring between ADIs. The ADIs should meet and agree on scoring protocols.
- Aim for consistency of driving routes and experiences. Some drivers said they were not taken on certain types of roads, others said they wanted tuition on reversing and parking which was not routinely covered on the course.
- Consider introducing reversing and parking to all driving refresher sessions. The ADIs said that they covered the areas each driver wanted, but not all drivers were aware that they could choose elements to cover.

Recruitment:

- It would be useful to restrict the DDG course to drivers aged 80 years and over.
- Stress that the course will benefit everyone, reduce the fear that people will be stopped from driving

- Several drivers said they had already had some form of refresher training. It is recommended that the DDG course is restricted to those who have had no refresher training in the last 5 years.
- The focus groups suggested that although drivers who had been on the DDG course saw that it was very valuable, those who had not been on the course would likely find a cost of over £20 prohibitive.
- Recruitment for the second drives was sometimes difficult as some senior drivers were difficult to reach by telephone. As almost half of the volunteers booked the course by electronic means, perhaps email reminders about the second drive would be helpful.

Feedback to drivers:

- All ADIs to provide a written checklist for drivers to take away outlining the main areas to improve/driving. This is especially important for those with memory problems.
- It is important to give praise and be positive with senior drivers.

14. References

AGILE (Aged people integration, mobility, safety and quality of life enhancement through driving) (2003). Deliverable 2.1: Inventory of assessment and decision criteria for elderly drivers, including particular age-related disabilities. Brüssels.

Anstey, K. J., Hofer, S. M., & Luszcz, M. A. (2003). A latent growth curve analysis of late-life sensory and cognitive function over 8 years: evidence for specific and common factors underlying change. *Psychol. Aging* 18, 714–726. doi: 10.1037/0882-7974.18.4.714.

Anstey, K. J., Wood, J., Lord, S. & Walker, J. G. (2005). Cognitive, sensory and physical factors enabling driving safety in older adults. *Clinical Psychology Review*, 25, (1), 45-65.

Ball, K., Owsley, C., Stalvey, B., Roenker, D. L., Sloane, M. E. & Graves, M. (1998). Driving avoidance and functional impairment in older drivers. *Accident Analysis and Prevention*. 30, (3), 313-322.

Casutt, G., Theill, N., Martin, M., Keller, M., & Jäncke, L. (2014) The drive-wise project: driving simulator training increases real driving performance in healthy older drivers. *Front. Aging Neurosci*, 6, doi: 10.3389/fnagi.2014.00085.

Department for Transport (2014a) *Transport Statistics Bulletin: National Travel Survey 2013*. London: Transport Statistics.

<https://www.gov.uk/government/statistics/national-travel-survey-2013> accessed November 2014.

Department for Transport (2014b) *Driving Licence Data*. Data.gov.uk.

<http://data.gov.uk/dataset/driving-licence-data> accessed November 2014.

Donorfio, L. K., D'Ambrosio, L. A., Coughlin, J. F. & Mohyde, M. (2009). To drive or not to drive, that isn't the question-the meaning of self-regulation among older drivers. *Journal of safety research*, 40, (3), 221-226.

Donorfio, L. K., Mohyde, M., Coughlin, J. & D'Ambrosio, L. (2008). A qualitative exploration of self-regulation behaviors among older drivers. *Journal of aging & social policy*, 20, (3), 323-339.

Eby, D. W., Molnar, L. J., Shope, J. T., Vivoda, J. M. & Fordyce, T. A. (2003). Improving older driver knowledge and self-awareness through self-assessment: The driving decisions workbook. *Journal of safety research*, 34, (4), 371-381.

Gabaude, C., Marquié, J.-C. & Obriot-Claudel, F. (2010). Self-regulatory driving behaviour in the elderly: relationship with aberrant driving behaviours and perceived abilities. *Le Travail Humain*, 73, (1), 31-52.

Gibbs, A. (1997) Focus groups. Social Research Update, Issue 19: <http://sru.soc.surrey.ac.uk/SRU19.html>.

Holland, C. A. & Rabbitt, P. M. A. (1992). People's Awareness of their Age-related Sensory and Cognitive Deficits and the Implications for Road Safety. *Applied Cognitive Psychology*, 6, (3), 217-231.

IBM Corporation (2012) *IBM SPSS Statistics for Windows, Version 21.0*. Armonk, NY: IBM Corporation.

Kitzinger, J. (1995). Qualitative research: Introducing focus groups. *British Medical Journal*, 311: 299-302.

Lang, B., Parkes, A., Fernandez Medina, K. (2013) *Driving Choices for the Older Motorist: The role of self-assessment tools*. Transport Research Laboratory/RAC Foundation. Royal Automobile Club Foundation, London.

Langford, J., Methorst, R., & Hakamies-Blomqvist, L. (2006). Older drivers do not have a high crash risk – A replication of low mileage bias. *Accident Analysis and Prevention*, 38, 574-578.

Molnar, L. J. & Eby, D. W. (2008). The relationship between self-regulation and driving-related abilities in older drivers: an exploratory study. *Traffic Injury Prevention*, 9, (4), 314-319.

Molnar, Eby, Charlton, Langford, Koppel, Marshall & Mann-Son-Hing, (2013) Driving avoidance by older adults: Is it always self-regulation? *Accident Analysis and Prevention*. 57: 96-104

Office for National Statistics (2014) *Population Estimates for UK, England and Wales, Scotland and Northern Ireland, Mid-2013*. <http://www.ons.gov.uk/ons/publications/re-reference-tables.html?edition=tcm%3A77-322718> accessed November 2014.

Poschadel, S., Boenke, D., Blöbaum, A., & Rabczinski, S. (2012). Ältere Autofahrer: Erhalt, Verbesserung und Verlängerung der Fahrkompetenz durch Training. Eine Evaluation im Realverkehr. *Mobilität und Alter, Band 06. Eine Schriftenreihe der Eugen-Otto-Butz-Stiftung*.

Preusser, D. F., Williams, A. F., Ferguson, S. A., Ulmer, R. G., & Weinstein, H. B. (1998). Fatal crash risk for older drivers at intersections. *Accident Analysis and Prevention*, 30, 151-159.

ROSPA (2013) <http://www.rospace.com/statistics/>

Unsworth, C.A. & Baker, A. (2014). Driver rehabilitation: A systematic review of the types and effectiveness of interventions used by occupational therapists to improve on-road fitness-to-drive. *Accident Analysis & Prevention* 71, 106-114.

Whelan, M., Langford, J., Oxley, J., Koppel, S., & Charlton, J. (2006). The elderly and mobility: a review of the literature. Monash University, Accident Research Center, Report no 255.

APPENDICES

Appendix I

Dorset Driver Gold Advert

Dorset Driver Gold Guide for OLder Drivers

Are you a driver aged 75 or over?

We are looking for volunteers for a new free pilot project aimed at updating and improving your driving skills and confidence on the road.

Is this course right for me?

- Are you 75 or over?
- Do you live in Dorset?
- Do you hold a full valid driving licence?
- Do you have your own car?
- Would you like to refresh and update your driving knowledge and skills and enjoy the benefits of driving for longer?

If you answered 'yes' to all the above, then this course is right for you.

Research

Research suggests that:

- Drivers over 75 appear to have higher incidence of crash involvement at junctions when turning right than those aged 55-74
- Over 75's may have greater difficulty judging oncoming vehicle speed and distance – safety margins
- Over 75's may suffer information overload at complex junctions or roundabouts

The project

Dorset Driver Gold is a Dorset Road Safe Partnership pilot project, aimed at updating and improving your driving skills and confidence on the road. The project also hopes to achieve a reduction in the risks associated with drivers aged 75 and over.

We are looking to recruit 100 volunteer drivers aged 75 and over to participate in the free pilot project, which will run in September 2013.

The project is made up of two parts; a theory course and two practical driver observations.

Theory

The theory course is a 2 hour presentation, delivered by one of Dorset County Council's Approved Driving Instructors (ADIs) at various locations across the county.

Practical

An ADI will carry out the driver observations, which last 90 minutes each. These will be conducted on local roads in your own vehicle.

The first driver observation takes place after the theory course, on a day and time to suit you.

The second observation will be approximately six months after the first, in order for the ADI to assess your retained knowledge, skills and confidence from your first observation.

You will be asked to complete a short questionnaire before and after the training.

What's in it for me?

We would like to reassure you that this is not a test of your skills and knowledge but an opportunity for you to experience free driver training and for us to learn how successful the course is in achieving its aims.

Sign up

If you would like to be a part of our new project, contact us:

Web: www.dorsetforyou.com/roadsafety/gold

Email: roadsafety@dorsetcc.gov.uk

Call: 01305 224558

Appendix II Pre-Course Questionnaire

Date of course _____
Participant Number:.....

Venue _____
Presenter _____

To help us with future courses, please could you complete this questionnaire **before the presentation** and take it along to the course with you. There is a post-course questionnaire attached to this page, which should be completed at the end of the course and returned to the presenter.

1. Age group

- 75 - 79 ☐
85 - 89 ☐
80 - 84 ☐
90 - 94 ☐
95 + ☐

2. Gender Male ☐ Female ☐

3. Approximately how many miles do you drive in a year?

4. When did you pass your driving test?

5. Are you the main driver in your household? Yes ☐ No ☐

6. What are your main reasons for driving? (tick all that apply)

- Shopping or errands ☐
Visiting friends or relatives ☐
Leisure ☐
Going to appointments ☐
To /from workplace ☐
Giving lifts to other people ☐
Other ☐ (please specify)

7. In general, how confident do you feel as a driver on a scale of 1 to 10? Please circle a number below.

Not at all confident 1 2 3 4 5 6 7 8 9 10
Extremely confident

8. Do you avoid driving in any of the following conditions? (tick all that apply)

- In the dark ☐ In morning or evening rush hour ☐ In bad weather ☐
On busy roads ☐ On unfamiliar roads ☐ Motorways ☐ No, I drive anywhere ☐

9. How do you rate your general ability as a driver on a scale of 1 to 10?

Please circle a number below

Poor 1 2 3 4 5 6 7 8 9 10 Excellent

10. Approximately how often do you have an eyesight test?

- Every year ☐ Every 2 years ☐ Every 3 years ☐ Every 4 or 5 years ☐
More than 5 years ☐

11. What made you decide to come on this course?

.....
.....

12. Which aspects of your driving would you like to improve? Tick all that apply

Negotiating roundabouts ☐ Negotiating junctions ☐ Fuel economy ☐

Positioning your car on the road ☐ Hazard perception ☐ Motorway driving ☐

Speed awareness ☐ Other ☐ please specify

13. How up to date are you with current driving regulations (e.g. the Highway Code, DVLA website)?

I checked recently ☐

Within the last year ☐

Within the last 2 years ☐

Within the last 5 years ☐

In over 5 years ☐

Not at all ☐

14. Have you taken part in any driving courses in the last 10 years?

(e.g. Institute of Advanced Motorists (IAM), RoSPA, Driver Awareness Scheme or refresher course)

Yes ☐ No ☐

If 'Yes' please state type of training

.....

Appendix III Post-course questionnaire

Participant Number:.....

Please complete this section after the presentation and return to the presenter.

1. Here is a list of the topics covered in the course. Please rate how useful these were to you

	Very useful	quite useful	not useful
What makes a good driver?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Are you concentrating?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Distractions	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Health and vehicle checks	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Highway code	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Motorway driving	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Roundabouts	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Road markings	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Safety margins	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
What is a hazard?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Observation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Collisions	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

2. If there any other topics you would have liked us to have covered on this course what are these?

.....

3. In general, how useful was this course to you? (Select one only)

Very useful ☐ Quite useful ☐ Not useful ☐

4. Now you have taken this course do you intend to make changes to the way you drive?

Yes definitely ☐ Yes probably ☐ Not sure ☐ Unlikely ☐

If you said yes, what changes do you plan to make?

.....

5. How confident do you now feel as a driver? (Please circle a number below)

Not at all confident 1 2 3 4 5 6 7 8 9 10
Extremely confident

6. How do you now rate your general ability as a driver on a scale of 1 to 10? Please circle a number below

Poor 1 2 3 4 5 6 7 8 9 10 Excellent

7. How much, if at all, do you feel that your knowledge of the Highway Code has improved after taking this course?

Stayed about the same ☐
Not improved at all ☐
Not improved very much ☐
Improved to some extent ☐
Improved a great deal ☐

8. Did you gain all that you hoped to from this course?

Yes ☐ No ☐ If no, please explain

9. Will you recommend the course to other drivers?

Yes ☐ if yes, why is this?.....
No ☐ if not, why is this?.....

Thank you for taking the time to complete this feedback form.

Appendix IV

Focus Groups : Topic Guide

1. Do you feel there are differences between male and female senior drivers?
 - Driving style
 - Experience
 - Confidence
 - Skill
 - Reasons for travel
2. What are the main issues for older drivers?
3. What were the main reasons you volunteered for this course?
 - Free
 - Felt needed the course
 - Family member/friend suggested you attend?
 - Are there ways we can recruit more women?
4. What were the main things you hoped to get out of the course?
5. Did you feel you got what you needed?
 - If not what was missing?
6. What aspects of driving do you find most difficult?
 - Negotiating roundabouts
 - Negotiating junctions
 - Town driving
 - Dual carriageways/motorways
 - Rural driving
 - Parking
 - Other??
7. Health and medications
 - Do any of you have any health or physical problems which can interfere with driving?
 - How?
 - Do you think any of these health issues may restrict your driving?
 - What would you do if you were feeling unwell and needed to go somewhere?
 - Has your doctor or pharmacist ever said that your medications may affect fitness to drive?
 - Vision – issues for seniors
8. Most people say driving is very important to them but for all of us there will come a time when we should probably give up driving.
 - When do you think people should consider giving up driving?
 - How will you know when the time comes?

9. The courses you have been on were free because they were a pilot to see how useful they are. If you had to pay for these courses would you have still taken the course?

How much would you be prepared to pay for the course?

Theory/classroom

On road course

Results from questionnaires to feedback:

1. Two thirds of participants were men

Why do you think this is?

2. 90% were aged under 85 years.

We are hoping to reach drivers over 85 as well. How do you think we can attract them?

What issues do you think there are for drivers over 85 years?

3. People avoid driving in various conditions

In the dark

In bad weather

In rush hour

Any others, school start and finish times?

4. Least useful topics were alternatives to driving – why?

Younger age group?

Don't want to think about it?

5. 80% of those who went on the course said they would definitely or probably make changes to the way they drive.

What would you change?

How common are driving problems among senior drivers, or your friends?

Accidents?

Thank you very much for taking part in this focus group and helping us to improve these courses.

Appendix V

ADI QUESTIONNAIRE

1. As an ADI, what do you see as the main problems for older drivers compared to drivers aged under 70?
2. In your opinion, what were the main reasons/motivations for the volunteers taking part in the practical drives? Were there any gender differences?
3. In your opinion, are the volunteers you took on practical drives representative of all older drivers on the road? If not, in what ways are they different?
4. In the practical drives, which driver errors do you believe are the most worrying or dangerous? Any examples?
5. Were there any drivers who you believed were probably unfit to drive? Were there any gender differences?
6. What recommendations or advice did you offer to drivers who did not perform well?
7. What specific training or advice do you think should be offered to older drivers more generally in order to improve road safety?
8. We know that some drivers did not take up the offer of the first free practical drives. What reasons did they give?
9. The drop-out rate was higher for the second practical drives. What reasons did they give for not taking part a second time?
10. The drivers involved in Dorset Gold (DG) are older than drivers you usually accompany. Were there any significant differences in performance in the DG group compared to drivers in their 60s and early 70s?
11. Do you have any examples or anecdotes you can share with us, that highlight particular issues for older drivers and road safety?