

Evaluation of Devon County Council's 'Driving Safer for Longer' workshops

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Executive Summary

Devon County Council have been running 'Driving Safer for Longer' workshops since summer 2008. These workshops are targeted at older drivers in Devon and are intended to help older drivers drive safely for as long as possible. The workshops consider the effects of illness, medication and eyesight on driving, inform drivers of vehicle choices and modifications that are available, outline some of the risks to drivers and sources of help, support and advice. The University of Plymouth and Devon County Council collaborated to evaluate the effectiveness of these workshops against their stated aims and other outcomes. One hundred and sixty one workshop attendees participated in the evaluation. They completed questionnaires before and after the Driving Safer for Longer workshop. The questionnaires examined, knowledge of factors that might impact on safe driving (driving-related knowledge), knowledge and intentions in relation to support available for older drivers (support knowledge), and subjective evaluations of the workshop. It was found that workshop attendance increased driving-related knowledge and support knowledge (in particular intentions to access support). Participants' subjective evaluations of the workshop suggested that they would welcome more video clips, more information prior to attending the workshop and increased content. These findings suggest that the Driving Safer for Longer workshops are an effective tool for improving driving-related knowledge and support knowledge.

Evaluation of the current Driving Safer for Longer workshops used by Devon County Council

Introduction

There has been much research to suggest that cognitive abilities associated with driving may start to decline anywhere from the mid 50's (Birren and Schaie, 1996; Hedden and Gabrieli, 2004). Further, Eby, Trombley, Molnar and Shope (1998) suggest that along with cognitive declines associated with age, there are also declines in visual perception and psychomotor skills that might affect driving. Stutts, Stewart and Martell (1998) found an association between cognitive function and crash risk, suggesting that older drivers are more likely to have a crash if they have reduced cognitive function. This is supported by Anstey, Windsor, Luszcz & Andrews (2006) who also found cognitive measures to be a predictor of driving cessation.

Although some driving related abilities may undoubtedly decline with age, there are good reasons to support older people as drivers for as long as possible. Oxley and Whelan (2008) suggest that the cessation of driving by older adults can lead to adverse affects, such as a sense of loss of control, independence and social identification. This is supported by Eby, Molnar, Shope, Vivoda & Fordyce (2003) who suggest that driving is essential to emotional well-being. Benefits of prolonging driving cessation were found by Brayne, Dufouil, Ahmed, Denning, Chi, McGee, & Huppert (2000) who suggested that compared to non-drivers, drivers have less physical limitations, higher (better) scores on dementia screenings and are less likely to have near vision impairment. This suggests that it is beneficial to keep drivers driving for as long as possible. Councils in England run initiatives for older drivers to

help them drive safely and for as long as possible, and to this end Devon County Council have been running 'Driving Safer for Longer' (DSFL) workshops since July 2008. A list of all Devon County Council older driver initiatives can be found in appendix A.

Husband (2010) specified the need to evaluate such programmes to better understand whether they're having the desired impact on drivers. The University of Plymouth and Devon County Council collaborated to evaluate the effectiveness of the DSFL workshops against their stated aims and other outcomes. Although the ultimate indicator of effectiveness for any road safety initiative is a reduction in collisions, such evaluations are prohibitively costly and time consuming (Husband, 2010). Eby et al. (2003) developed a self-assessment workbook to increase older drivers' driving-related knowledge and self awareness (their workbook thus had similar aims to the DSFL workshops). They assessed the effectiveness of this workbook using self report questionnaires, and that is the evaluation approach adopted here too.

The DSFL workshops aim to consider the effects of illness, medication and eyesight on driving, the main risks affecting drivers (driving-related knowledge) and to consider the aids and vehicle choices that can assist older drivers, as well as sources of help support and advice (support knowledge). We assessed driving-related knowledge and support knowledge before and after the workshops to establish the extent to which the workshops increased knowledge in these areas.

Method

Participants

All participants were attendees at Devon County Council's DSFL workshops. Attendees were recruited to the workshops through the Devon Drivers' Centre. They signed up to a workshop organised by a community group (e.g. Age Concern). While at the workshop, attendees were solicited to participate in the evaluation exercise. 103 males and 50 females aged between 50 and 81+ years ($M=67$) volunteered to participate.

Materials

Participants were each given two questionnaires, one to complete before the workshop (Pre-workshop questionnaire) and one after (Post-workshop questionnaire), both questionnaires are presented in Appendix B. Both questionnaires contained sections measuring demographic information, driving-related knowledge and support knowledge. The post-workshop questionnaire additionally contained a section for participants to subjectively evaluate the workshop. Some questions were adapted from those used by Eby et al. (2003) to evaluate their older driver self assessment workbook, other questions were included to evaluate specific aims and objectives of the DSFL workshops. Participants were also read instructions and were given a written copy of these upon request (Appendix C).

Pilot Work: Draft versions of the questionnaires were tested on six people between the ages of 56 to 81+ years. These participants were all female and had been driving regularly for over 25 years. On the basis of feedback, the overall length of the

questionnaires was reduced, question wording was Anglicised, the number of free response questions was reduced and Likert scales were favoured as the response scale.

Procedure

Attendees at the DSFL workshop who volunteered to participate in the evaluation were given a pack. Each pack consisted of the Pre- and Post- workshop questionnaires and an envelope addressed to Devon Driver's Centre. Instructions for the completion of the questionnaires were read by the workshop facilitator and a written version was provided on request. Participants were given 10 minutes to complete the Pre-workshop questionnaire before the facilitator started the DSFL programme. Instructions informed participants to place their completed Pre-workshop questionnaire in the envelope provided and not to return to it or change it once the workshop had started. At the end of the workshop, participants were reminded to complete the Post-workshop questionnaire, add it to their envelope and return the envelope to the facilitator. If participants were not able to complete the Post-workshop questionnaire at the time, they were able to take the pack away with them and post it onto the Devon Drivers' Centre. The Pre-workshop questionnaire took approximately five minutes to complete with the Post-workshop questionnaire taking approximately 10 minutes to complete.

Results and discussion

Demographics

There were 161 participants (103 male, 50 female, eight unknown). Demographics broken down by age and gender are shown in Table 1. The average number of years that participants had been driving regularly was 50.89 years, with a range of between 15 and 75 years.

Unknown age		50-55		56-60		61-70		71-80		81+	
Female	Male	Female	Male	Female	Male	Female	Male	Female	male	Female	Male
0	1	4	2	3	1	19	25	18	44	6	30
3		6		4		46		66		36	

Table 1. Demographics of participants.

Driving-related knowledge

Changes in driving-related knowledge were assessed by comparing the number of items that participants could list in response to a specific question before and after the workshop.

Illnesses that might impact on driving: Participants were asked to list any illnesses that might affect someone's driving. The mean number of illnesses listed by each participant was 2.82 before the workshop and 4 after the workshop. Participants were able to list more illnesses that might affect someone's driving after the workshop than before it. The most common illnesses newly identified as having

potential to impact on driving were, diabetes (N = 45), heart problems (N = 31), and epilepsy (N = 22).

Medicines that might impact on driving: Participants were asked to list any medicines that might affect someone's driving. The mean number of medicines listed by each participant before the workshop was 1.64 compared to 2.32 after the workshop. Participants were able to list more medicines that might affect someone's driving after the workshop than before it. The most common medicines newly identified as having potential to impact on driving were, 'all drugs' (N = 14), pain killers (N = 13), and illegal drugs (N = 12).

Ways in which eyesight might affect driving: Participants were asked to list any ways eyesight might affect someone's driving. The mean number of ways in which eyesight might affect driving listed by each participant was 2.01 before the workshop and 2.72 after the workshop. Participants were able to list more ways in which eyesight might affect driving after the workshops than before it. The most common newly identified ways in which eyesight might impact on driving were, tunnel vision (N = 8), night vision (N = 7) and dazzle (N = 7).

Vehicle choices available to assist driving: Participants were asked to list any vehicle choices or aids that are available to assist driving. The mean number of vehicle choices listed by each participant was 1.8 before the workshop and 3.02 after the workshop. Participants were able to list more vehicle choices after the workshop than before it. The most common vehicle choices newly identified were, mirrors (N = 66) cushions (N = 28) and steering wheel aids (N = 27).

Risks relating to automatic cars: Participants were asked to list any risks related to automatic cars. The mean number of risks related to automatic cars listed by each

participant before the workshop was 0.98 and after the workshop was 1.33. Participants were able to list more risks associated with automatics after the workshop than before it. The most common newly identified risks relating to automatic cars were, inadvertent acceleration or 'runaway' problems (N = 45), the changeover from manual to automatic (N = 6) and right and left foot use (N = 4).

Other risks that might impact on driving: Participants were asked to list as many other risks that they could think of that might affect driving. The mean number of risks listed by each participant before the workshop was 3.17 compared to 4.23 after the workshop. Participants were able to list more risks after the workshop than before it. The most common newly identified risks were the weather (N = 15) and other road users (N = 13).

In relation to the aims of the workshop, attendance increased participants' awareness of the illnesses, medicines and eyesight issues that might impact on driving, as well as vehicle choices and aids, the risks associated with automatic cars and general risks. Statistical analysis (paired samples t-tests presented in Appendix D) showed that these increases in knowledge were statistically significant in all cases.

Support Knowledge

Participants responded to specific questions about their knowledge of support available on Likert scales ranging from 1(strongly disagree) to 5 (strongly agree). Their pre- and post-workshop responses are shown in Figure 1.

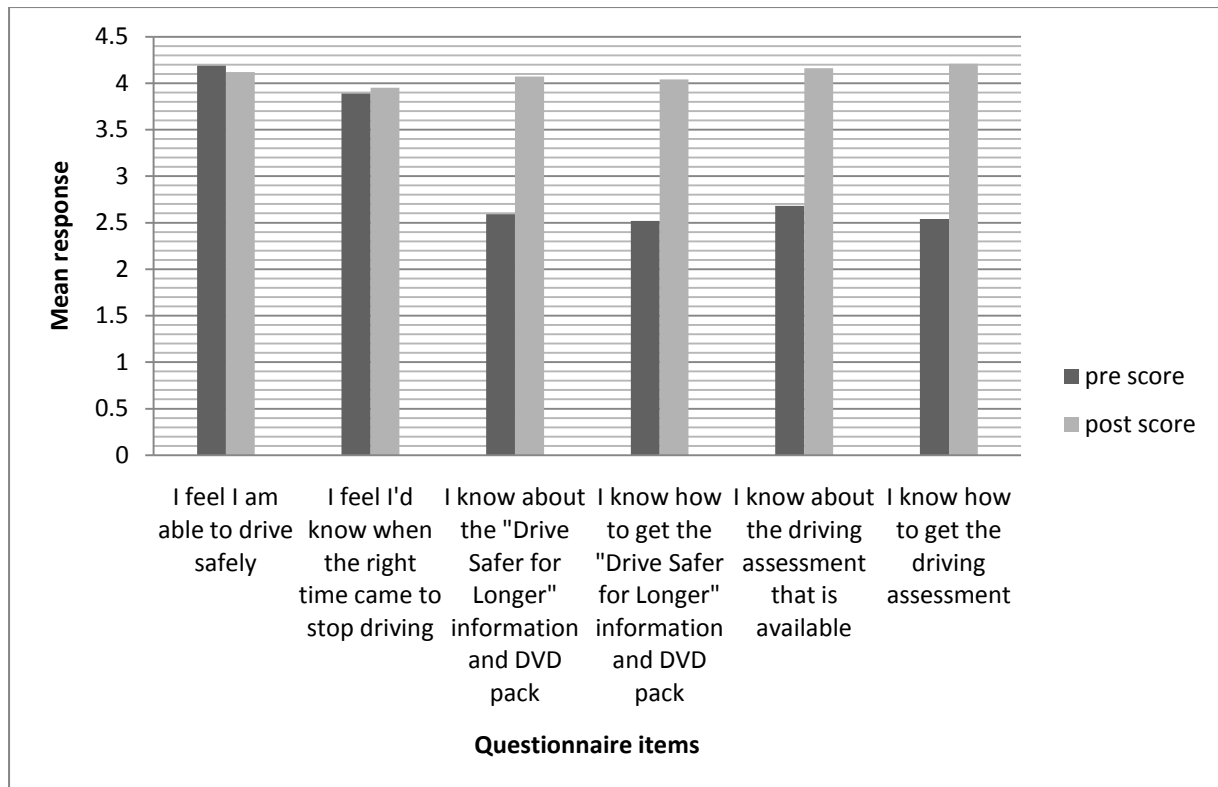


Figure 1. Mean pre- and post- workshop responses for knowledge of support.

Figure 1 shows that participants felt somewhat less confident in their ability to drive safely after the workshop, but slightly more able to know when the right time would be to stop driving. Additionally, workshop attendance increased participant's awareness of the "Driving Safer for Longer" information and DVD pack and how to get it and the driving assessment and how to get it. Statistical analysis (a paired samples t-test presented in Appendix E) showed that all of these changes in support knowledge were statistically significant except for the feeling they'd know when to stop driving.

Participants were invited to indicate their agreement to items that evaluated their post-workshop intentions to access support on Likert scales ranging from 1 (Strongly disagree) to 5 (Strongly agree). The items relating to these themes, plus a summary

of the responses are presented in Table 2 below. Items achieving 75% agreement or more are flagged in green to indicate a particularly positive evaluation, whereas items achieving 25% disagreement or more are flagged in red to indicate a particularly negative evaluation.

Post-workshop intentions to access support were generally positive with agreement to all items above 64%. Those items relating to using the information, reading take-home information, initiating discussion with family/friends and recommending the workshops to others were particularly positively rated. Of specific interest is the high rating for the intention to read take home materials, suggesting that a self-assessment workbook, similar to that used by Eby et al. (2003) might be a useful supplement to the DSFL workshops. There were no items eliciting a particularly negative evaluation.

	N	Strongly disagree	Disagree	Neither agree/disagree	Agree	Strongly agree	Mean	% agree	% disagree
I will be able to use what I learnt in the workshop in the future	143	1	0	9	95	38	4.18	93	1
I am likely to read the take home information	133	1	5	11	80	36	4.09	87	5
The workshop could be useful for helping to start discussion with family members who drive	135	0	4	25	91	15	3.87	79	3
I would recommend the workshop to older adult friends or family members who drive	135	1	0	10	87	37	4.18	92	1
Finishing the workshop made me more likely to get the "Driving Safer for Longer" information and DVD pack	118	1	7	32	56	22	3.77	66	7
Finishing the workshop made me more likely to take the driving assessment	118	1	9	33	62	13	3.65	64	8
Finishing the workshop made me more likely to get other sources of help, support and advice	120	0	5	34	72	9	3.71	68	4

Table 2. Intentions to access support

Subjective Evaluation of the DSFL Workshop

Participants were invited to indicate their agreement to items that subjectively evaluated the workshop on Likert scales ranging from 1 (Strongly disagree) to 5 (Strongly agree). Items were grouped into those relating to the Content and Understandability of the workshop and Knowledge Exchange. The items relating to these themes, plus a summary of the responses are presented in Tables 3 and 4 below. Items achieving 75% agreement or more are flagged in green to indicate a particularly positive evaluation; those achieving 25% disagreement or more are flagged in red to indicate a negative evaluation.

	N	Strongly disagree	Disagree	Neither agree/disagree	Agree	Strongly agree	Mean	% agree	% disagree
I was well informed about the aims and objectives of the workshop	143	1	5	11	79	47	4.16	88	4
I achieved the aims and objectives of the workshop	131	1	2	29	79	20	3.89	76	2
The content of the workshop was suitable for my needs	147	2	1	13	99	32	4.07	89	2
The workshops were easy to understand	142	1	2	2	89	48	4.27	96	2

Table 3. Content and understandability of the workshop.

The percentage of respondents agreeing with the content and understandability items were above 75% for all cases indicating that the workshop content was rated as appropriate and understandable.

	N	Strongly disagree	Disagree	Neither agree/disagree	Agree	Strongly agree	Mean	% agree	% disagree
The workshop made me aware of changes that can affect my driving	124	1	0	14	90	19	4.02	88	1
I discovered changes in myself that I had not been aware of before	120	3	20	60	31	6	3.14	31	19
Now that I have finished the workshop, I am planning to make changes in the way I drive	122	1	8	46	59	8	3.53	55	7
Now that I have finished the workshop, I am more likely to have a doctor check my seeing, thinking or movement abilities	155	9	31	39	32	4	2.92	31	35
The activities in the workshop gave me enough information about my driving	141	3	5	28	81	24	3.84	74	6
I know about other sources of help, support and advice that are available	123	0	4	17	87	15	3.92	83	3
I know how to get other sources of help, support and advice	122	0	2	17	89	14	3.94	84	2

Table 4. Knowledge exchange

The most positively rated items of knowledge exchange were increased awareness of changes that might affect driving, sources of help and how to access them. The one item that achieved poor levels of agreement was the intention to visit a doctor for a check up. This is therefore a possible area of improvement for future workshops. There may be many possible explanations for wishing to not see the doctor that could be addressed, for example feeling like they visit too often, not wanting to take up doctors time for this type of assessment.

Participants were invited to indicate agreement with a list of suggested changes to workshop content of format by ticking a box, 61 participants answered this question. The number of participants indicating different changes is shown in Figure 2.

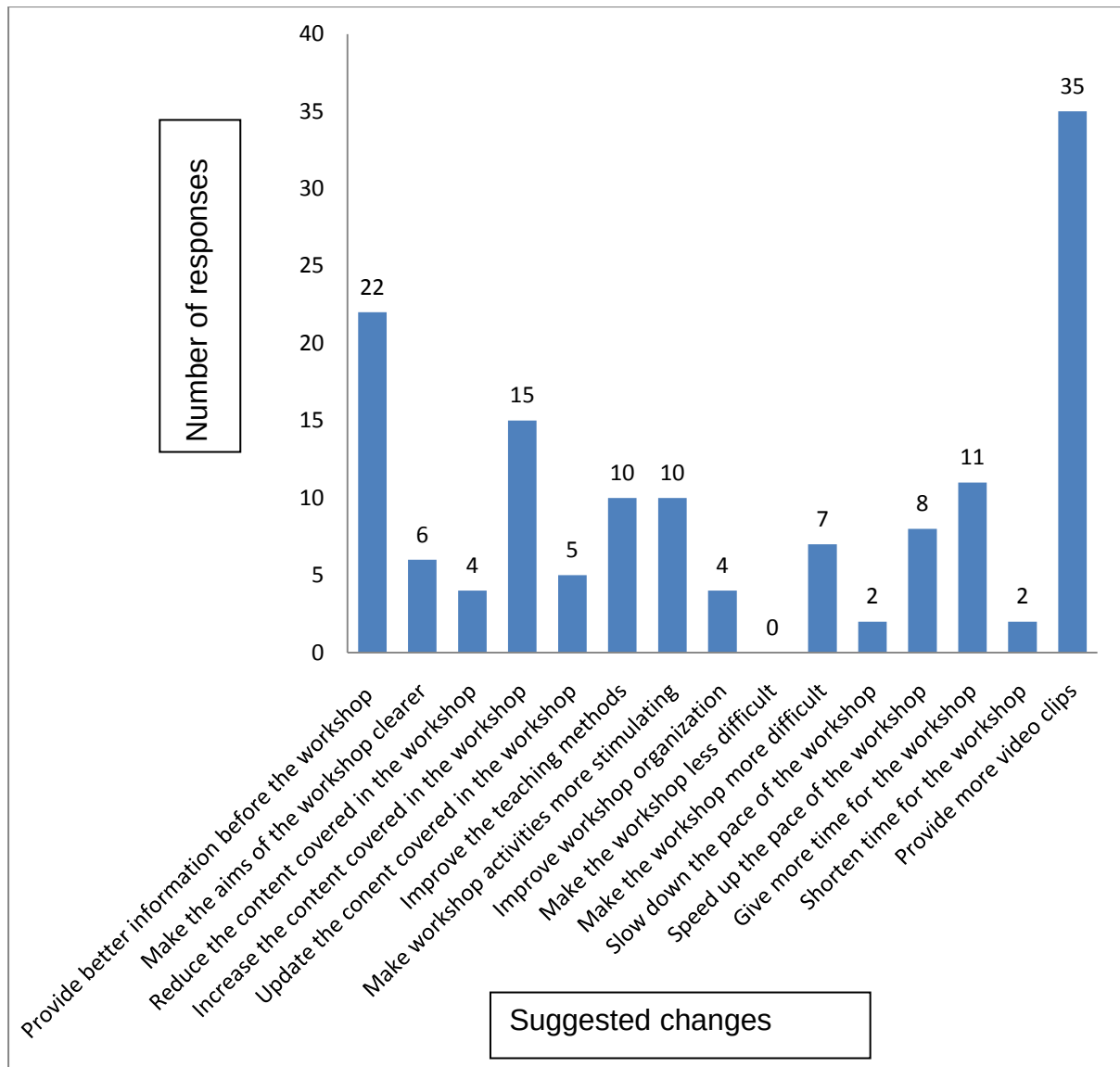


Figure 2. Suggested changes to DSFL workshop.

Adding more video clips and improving the pre-workshop information were the most commonly suggested changes.

Conclusion

The evaluation of the DSFL workshop indicated that workshop attendance increased driving-related knowledge, support knowledge and intentions to access support. It was also found that the content and understandability of the workshops were generally high. In general these findings suggest that the DSFL workshops are successful in achieving their aims.

There are some qualifications to this conclusion however. The first is that the post workshop evaluation was conducted immediately after the workshop and so it is not known how long the increases in knowledge and intention that have been demonstrated will last. In addition, the changes that have been evidenced here are changes in knowledge and intention, and it is not known how these will impact on actual behaviour or on collision involvement.

Although we acknowledge that there are limitations in our research, our subsequent research is addressing these issues by evaluating older driver initiatives with a 3 month follow-up. This will tell us if knowledge is retained at 3 months and if the intention to change behaviour resulted in change.

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Appendix A – Devon County Council older driver initiatives

Devon County Council Driving Safer For Longer services

The Devon County Council older driver initiatives include:

Driving Safer For Longer workshop: A friendly 2 hour workshop covering medicines, health, driving and reducing dependence on the car. These are offered throughout Devon.

Back to driving: These are tailored to suit individual needs from either the individuals home or on the purpose built off road training circuit in either the individuals or instructors vehicle.

Practical driving skills: A 1 hour drive in the individual's vehicle to review driving abilities, with confidential feedback and friendly local driving advisors.

Roadfit assessment: Doctor referred assessed drive to help individuals cope safely with medical conditions. This includes a shared report with the GP and can be from the individual's home.



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Appendix B – Before and after workshop questionnaires



DEVON ROAD CASUALTY REDUCTION PARTNERSHIP

ID Number

Before-Workshop Questionnaire

We are interested in how much you know about driving and driving-related issues. Please take a few minutes to complete this questionnaire.

Date of workshop:

Location of workshop:

Gender: Male ☐ Female ☐

Age: 50 – 55 ☐ 56 – 60 ☐ 61 – 70 ☐ 71 – 80 ☐ 81 + ☐

How long have you been driving regularly?

Please list any illnesses that might affect someone's driving

.....

Please list any medicines that might affect someone's driving

.....

Please list any ways eyesight might affect someone's driving

.....

continued over...

Please list any vehicle choices or aids that are available to assist driving

.....

.....

Please list any risks related to automatic cars

.....

.....

Please list as many other risks that you can think of that might affect driving

.....

.....

Instructions

Please circle your response to the following items on a scale of 1 to 5, where 1 indicates strongly disagree and 5 indicates strongly agree.

	Strongly disagree	Disagree	Neither agree/disagree	Agree	Strongly agree
I feel I am able to drive safely	1	2	3	4	5
I feel I'd know when the right time came to stop driving	1	2	3	4	5
I know about the "Drive Safer for Longer" information and DVD pack that is available	1	2	3	4	5
I know how to get the "Drive Safer for Longer" information and DVD pack	1	2	3	4	5
I know about the driving assessment that is available	1	2	3	4	5
I know how to get the driving assessment	1	2	3	4	5
I know about other sources of help, support and advice that are available	1	2	3	4	5
I know how to get other sources of help, support and advice	1	2	3	4	5

Thank you for your time and comments.

Please put the questionnaire in the envelope provided.



DEVON ROAD CASUALTY REDUCTION PARTNERSHIP

ID Number

After-Workshop Questionnaire

Instructions

Please circle your response to the following items on a scale of 1 to 5, where 1 indicates strongly disagree and 5 indicates strongly agree. Please also include any additional comments you may have.

Workshop content (please circle your response)

	Strongly disagree	Disagree	Neither agree/disagree	Agree	Strongly agree
I was well informed about the aims and objectives of the workshop	1	2	3	4	5
I achieved the aims and objectives of the workshop	1	2	3	4	5
The content of the workshop was suitable for my needs	1	2	3	4	5
The activities in the workshop gave me enough information about my driving	1	2	3	4	5
The workshops were easy to understand	1	2	3	4	5
I will be able to use what I learnt in the workshop in the future	1	2	3	4	5
I am likely to read the take home information	1	2	3	4	5

continued over...

	Strongly disagree	Disagree	Neither agree/disagree	Agree	Strongly agree
The workshop could be useful for helping to start discussion with family members who drive	1	2	3	4	5
I would recommend the workshop to older adult friends or family members who drive	1	2	3	4	5

Self-awareness and general knowledge

Please list any illnesses that might affect someone's driving

.....

.....

Please list any medicines that might affect someone's driving

.....

.....

Please list any ways eyesight might affect someone's driving

.....

.....

Please list any vehicle choices or aids that are available to assist driving

.....

.....

Please list of any risks related to automatic cars

.....

.....

Please list as many risks that you can think of that might affect driving

.....

.....

continued over...

(Please circle your response)

	Strongly disagree	Disagree	Neither agree/disagree	Agree	Strongly agree
The workshop made me aware of changes that can affect my driving	1	2	3	4	5
I discovered changes in myself that I had not been aware of before	1	2	3	4	5
Now that I have finished the workshop, I am planning to make changes in the way I drive	1	2	3	4	5
Now that I have finished the workshop, I am more likely to have a doctor check my seeing, thinking or movement abilities	1	2	3	4	5
I feel I am able to drive safely	1	2	3	4	5
I feel I'd know when the right time came to stop driving	1	2	3	4	5
I know about the "Drive Safer for Longer" information and DVD pack that is available	1	2	3	4	5
I know how to get the "Drive Safer for Longer" information and DVD pack	1	2	3	4	5
Finishing the workshop made me more likely to get the "Drive Safer for Longer" information and DVD pack	1	2	3	4	5
I know about the driving assessment that is available	1	2	3	4	5
I know how to get the driving assessment	1	2	3	4	5
Finishing the workshop made me more likely to take the driving assessment	1	2	3	4	5

continued over...

	Strongly disagree	Disagree	Neither agree/disagree	Agree	Strongly agree
I know about other sources of help, support and advice that are available	1	2	3	4	5
I know how to get other sources of help, support and advice	1	2	3	4	5
Finishing the workshop made me more likely to get other sources of help, support and advice	1	2	3	4	5

How would you improve the workshop? (Please tick any that apply)

- | | |
|---|---|
| ☐ Provide better information before the workshop | ☐ Make the workshop less difficult |
| ☐ Make the aims of the workshop clearer | ☐ Make the workshop more difficult |
| ☐ Reduce the content covered in the workshop | ☐ Slow down the pace of the workshop |
| ☐ Increase the content covered in the workshop | ☐ Speed up the pace of the workshop |
| ☐ Update the content covered in the workshop | ☐ Give more time for the workshop |
| ☐ Improve the teaching methods | ☐ Shorten the time for the workshop |
| ☐ Make workshop activities more stimulating | ☐ Provide more video clip examples |
| ☐ Improve workshop organization | |

Please provide any additional comments or suggestions you may have:

.....

.....

.....

.....

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.....

.....

Thank you for your time and comments.

Please put the questionnaire in the envelope provided and hand to your workshop instructor.

Appendix C – Instructions



The University of Plymouth and Devon County Council are currently evaluating the Drive Safer for Longer workshop and would appreciate it if you could take a few moments to fill out these questionnaires.

You should have a pack containing two questionnaires, an envelope and a contact card. Both questionnaires should have the same number in the box on the top right hand corner of the front cover. Please point this out to an instructor if this is not the case.

Please complete the before-workshop questionnaire at any point before the workshop starts and then place it into your envelope. Please do not return to that questionnaire or change your answers during the workshop.

Once the workshop has finished please complete the after-workshop questionnaire and add this to the envelope along with your completed contact card.

Once both questionnaires are in the envelope please seal it and pass it back to the workshop instructor.

You are by no means obliged to complete these questionnaires but we do very much appreciate it. Your responses will help us to improve future workshops.

Thank you for your time and we hope you enjoy the workshop.

Appendix D – Driving-related knowledge paired samples t test

Paired Samples Test								
	Paired Differences					t	df	Sig. (2-tailed)
	Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
				Lower	Upper			
Pair 1 before_illnesses - after_illnesses	-1.22464	1.35635	.11546	-1.45295	-.99632	-10.607	137	.000
Pair 2 before_medication - after_medication	-.72727	.89443	.08131	-.88826	-.56628	-8.944	120	.000
Pair 3 before_eyesight - after_eyesight	-.72059	.90833	.07789	-.87463	-.56655	-9.252	135	.000
Pair 4 before_vehiclechoices - after_vehiclechoices	-1.26891	1.47693	.13539	-1.53702	-1.00080	-9.372	118	.000
Pair 5 before_automatics - after_automatics	-.41667	.55567	.05671	-.52926	-.30408	-7.347	95	.000
Pair 6 before_otherrisks - after_otherrisks	-1.22449	1.70826	.17256	-1.56697	-.88201	-7.096	97	.000

Appendix E – Support knowledge paired samples t test

Paired Samples Test									
		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
Pair 1	safelypre - safelypost	.13559	.50494	.04648	.04354	.22765	2.917	117	.004
Pair 2	stoppre - stoppost	-.07965	.55326	.05205	-.18277	.02348	-1.530	112	.129
Pair 3	packpre - packpost	-1.55340	1.53219	.15097	-1.85285	-1.25395	-10.289	102	.000
Pair 4	getpackpre - getpackpost	-1.64286	1.36412	.13780	-1.91635	-1.36937	-11.922	97	.000
Pair 5	assessmentpre - assessmentpost	-1.60000	1.35592	.12928	-1.85623	-1.34377	-12.376	109	.000
Pair 6	getassessmentpre - getassessmentpost	-1.75926	1.31753	.12678	-2.01059	-1.50793	-13.877	107	.000