

# Brainbox Research

## Comparison of Driver Alertness and the National Driver Improvement Scheme

Commissioned by the Association of Chief Police Officers for England, Wales and Northern Ireland, National Driver Offender Retraining Scheme and the Association of National Driver Improvement Service Providers.

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## 1. Executive Summary

The Driver Alertness course is a one-day offender retraining scheme for drivers who have been driving without due care and attention or without consideration for other road users. The course has been adapted from the National Driver Improvement Scheme by the strategic board for course development: Dr Fiona Fylan (Brainbox Research); Dr Helen Middleton (Sunderland University); and Professor Steve Stradling (Edinburgh Napier University). This report describes the results of a pilot outcome evaluation, which provides an indication of the relative effectiveness of the Driver Alertness course (DAC) and the National Driver Improvement Scheme (NDIS) and to develop methodology for a future larger-scale evaluation. We also describe our process evaluation, which explores providers' experiences of delivering the new course, and makes recommendations on how to improve the course delivery.

Data were collected from three consecutive courses run in the participating sites during the data collection period, from November 2009 to February 2010. A total of 751 clients took part in the research: 378 from DAC and 373 from NDIS. Clients completed three questionnaires: one before the course; one after the course; and a follow-up questionnaire two months after the course. A response rate of 29% was achieved at follow-up, which represents a very good response rate and gives us confidence that our findings are valid.

The research provides evidence that both courses have produced positive changes in attitudes, confidence to drive safely, and intentions to drive safely in the future. At follow-up 99% of clients reported that they had changed their driving: 22% that their driving had changed a great deal and over 40% that it had changed quite a lot. Clients described how the information and knowledge gained has raised their awareness of the hazards they should be looking out for on the road, and has made them more cautious drivers. They are now better able to anticipate how other road users may behave, and they are more aware of the importance of safe driving. While this is self-reported data, and may not accurately reflect actual driver behaviour, some clients noted that their passengers had commented on how much their driving had improved, suggesting that for at least some drivers there have been real changes in their driving. Over half of the clients gave permission for their driving records to be checked in the future to find out if they have received licence points or course invitations since the course. This will provide an additional objective measure of changes in driver behaviour.

There are very few statistically significant differences in changes produced by the two different types of course. We conclude that DAC achieves the same benefits as NDIS but in a shorter time period. Clients report a one-day course as more acceptable than a one-and-a-half-day course, so DAC may have a greater uptake rate than NDIS.

There is limited evidence that the course is more effective in drivers than in riders, which suggests that RIDE should be considered as the diversionary course of choice for motorcyclists.

Based on feedback from the providers we have made several recommendations as to how the delivery should be improved. This includes shortening the final session and providing a clearer framework for the in-car elements of the course.



## 2. Background and Methods



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Drivers who have been involved in a road traffic incident in which there is good evidence that they have committed an offence under Section 3 of the Road Traffic Act, 1988 (i.e. driving without due care and attention or driving without reasonable consideration for other road users) are often offered the option of attending a driver education course as an alternative to prosecution. The course comprises a combination of classroom-based presentations and activities, and sessions on the road with an Advanced Driving Instructor (ADI). The Driver Alertness course is a one-day scheme that is being piloted in ten different areas of England as an alternative to the one-and-a-half day course that has been offered nationally – the National Driver Improvement Scheme (NDIS).

The motivation for exploring an alternative course model was because of concerns about the uptake rate of NDIS, and research published which provides little support for its effectiveness in changing driver behaviour (Conner M and Liu F, Road Safety Research Report No. 64, Evaluation of the effectiveness of the National Driver Improvement Scheme, Department for Transport, 2005). It should be noted, however, that this research provides evidence that the course produces modest changes in attitudes and in self-reported behaviour, but not observed driver behaviour.

The Driver Alertness Course (DAC) has been adapted from the National Driver Improvement Scheme by the strategic board for course development: Dr Fiona Fylan (Brainbox Research); Dr Helen Middleton (Sunderland University); and Professor Steve Stradling (Edinburgh Napier University). In addition, Steve Garrod (Driving Instructors Association) advised on the in-car elements, and several road safety officers also provided input to the course.

The strategic board were free to develop a course with any format, subject to the principles underpinning driver offender retraining schemes:

- Affordability – potential clients must find the time and cost requirements reasonable.
- Availability – the course should be available in convenient locations, dates and times, and there should be sufficient capacity for all clients who choose to do the course.
- Acceptability – the course should have a citizen focus, it should take into account the police and ANDISP's corporate social responsibility commitments, and it should be acceptable politically.
- Proportionality – the course and its cost should be proportional to the behaviour that led to the road traffic incident.
- Equality and diversity – the course content, its administration and delivery should not discriminate against any group of people, and it should be applied equally.

- Human rights – no aspect of the courses should infringe upon any person’s human rights.
- Data protection and security of information – the way in which personal data are handled should comply fully with the Data Protection Act.
- Contractual integrity – the process of appointing course providers should comply with the law on procurement.
- Best value – the course and its procurement method should withstand public scrutiny under the principles of Best Value.
- Suitability – the courses must be fit for purpose and deliver demonstrable road safety benefits.

The course was piloted in ten different areas over a six-month period from November 2009. To enable a decision to be made about whether the course is rolled out nationally, the board were asked by NDORS to undertake a pilot evaluation of the course. The team have a good understanding of the two types of course and the psychological mechanisms by which they operate and were therefore best placed to compare the two versions. The team do not have a commercial interest in the new course and so there are no conflicting interests in them conducting the pilot evaluation.

There are two parts to this research:

- An outcome evaluation to identify the effectiveness of DAC in comparison to NDIS;
- A process evaluation to identify the practicality of running DAC.

The results are used to make recommendations about whether DAC should replace NDIS, and if so, changes to the content and delivery that are likely to make the course more successful. This pilot evaluation is also used to make recommendations about a full-scale evaluation of DAC, should it be adopted as the new national model.

## About the Driver Alertness Course

Driver Alertness is a one-day course that combines classroom activities with on-road sessions with ADIs. The course is underpinned by several social cognitive models of behavioural change, including Protection Motivation Theory, the Theory of Planned Behaviour, and Social Learning Theory. It also makes use of several psychological constructs, including self-efficacy and anticipated regret. It has been developed to enable car drivers to explore the way that they drive, the factors that contributed to their road traffic incident,

the areas that they would like to improve, and how they can overcome any barriers to implementing what they have learned during the course. The course encourages learning through discussion and discovery, and integral to the course is a client workbook in which clients make notes about what they want to change. There is a single workbook for both the classroom and in-car sessions. The course was not developed for motorcycle riders, as there is an alternative scheme – the RIDE scheme – that better caters for their needs.

The objectives of the course are:

- To re-calibrate drivers' perceptions of task difficulty;
- To help drivers avoid factors that reduce their driving competence;
- To increase drivers' awareness of the causes and consequences of collisions;
- To challenge drivers' dysfunctional beliefs;
- To enable drivers to identify their individual driving dangers and develop an action plan to stay safe on the roads.

The pilot course is a starting point, and a review group has been formed from the providers to identify how the course can be developed further, and what needs to change if it is rolled out nationally.

## Methods

Resources for the evaluation were limited, and the team was challenged to find a low-cost way of comparing the National Driver Improvement Scheme and Driver Alertness. The research is therefore kept as small-scale as possible and is designed to simply provide an answer as to which course is most effective and to pilot the measures to be used in any future full-scale evaluation of Driver Alertness.

### ***Participating areas and providers***

Ten areas took part in the Driver Alertness pilot. A further ten areas providing the National Driver Improvement Scheme volunteered to take part in the research. The areas and providers for each course type and the number of clients who participated in the research in each area are shown in Table 1.

**Table 1: Participating areas and providers.**

Driver Alertness Course		National Driver Improvement Scheme	
Area	Provider	Area	Provider
Devon and Cornwall	Devon County Council and PDS	Bedfordshire	AA Drivetech
Greater Manchester	Drivesafe	Cambridgeshire	Cambridgeshire County Council
Gwent	PDS	Cheshire	Cheshire West and Chester Council
Humberside	Hull City Council	Durham	Durham County Council
Lancashire	Lancashire County Council	Hertfordshire	Hertfordshire County Council
London	AA Drivetech	Kirklees	Kirklees Council
South Wales:	PDS	Norfolk	Norfolk County Council
South Yorkshire	TTC	West Midlands	Dudley Metropolitan Borough Council
Staffordshire	Staffordshire County Council	Warwickshire	Warwickshire County Council
Thames Valley	AA Drivetech	North Yorkshire	AA Drivetech

## Procedure

The most practical and cost-effective means of undertaking the research is by questionnaires with clients attending the two different types of course. Three questionnaires were developed for the purpose of the research: one to be completed before the course, one directly after the course, and one two months later. Each of the questionnaires are shown in the Appendix, and are described below.

**The pre-course questionnaire** contained items that address clients' decision to take the course rather than a prosecution, including their preferences for the cost and duration of course, and barriers to attending. A

core set of 15 questions, repeated in each of the questionnaires, measured the psychological predictors of driver behaviour, including attitudes, self-efficacy, and intentions.

**The post-course questionnaire** contained items that address clients' perceptions and experiences of the course, the core set of 15 questions, and suggestions for ways of improving the course. The questionnaire also asked clients if they would be prepared for the researchers to check their driving record in the future to find out if they receive any future endorsements or course invites.

**The follow-up questionnaire** explored the extent to which clients were able to put things into practice, the most useful aspects of the course, whether they had taken any further training since the course, and the core set of 15 questions.

Data were collected from three consecutive courses run in the participating sites during the data collection period, from November 2009 to February 2010. Clients gave informed consent to participate in the research. Instructors read out a description of the evaluation research to clients. They were assured that only the researchers would have access to the data, and that individual responses would remain anonymous. They were told that while the researchers hoped that they would take part, they were not under any obligation to do so, and that they would not be treated any differently by the instructors if they decided not to. Those who chose to do so completed the pre-course and post-course questionnaire at the venue. They also printed their name and address on a blank envelope. Both questionnaires and the envelopes were returned to the research team. The envelopes were used to send the follow-up questionnaire to participating clients, and this approach meant that providers were not asked to release clients' personal details to the researchers.

The number of completed questionnaires received at each time point for each course is shown in Table 2. We understand from the providers that all clients chose to complete the pre-course questionnaire. Nearly all clients (99% of DAC and 93% of NDIS) completed the second questionnaire, and nearly a third completed the follow-up questionnaire (29% of DAC and NDIS).

**Table 2: The number of completed questionnaires returned.**

	<b>Pre-course</b>	<b>Post-course</b>	<b>Follow-up</b>
<b>DAC</b>	378	374	108
<b>NDIS</b>	373	345	109
<b>Total</b>	<b>751</b>	<b>719</b>	<b>217</b>

# 3. Results



## 3. Results

The results are presented in six sections. The first section explores clients' decision to attend the course, including their motivation to attend, any barriers to attending, and how much time and money they would be prepared to sacrifice in order to attend. The second section addresses clients' perceptions of the two different types of course. The third section explores the changes in behavioural predictors, including attitudes, that occur following the course, and compares DAC and NDIS. The fourth section explores clients' experiences of putting things into practice. The fifth section explores gender differences in the results. The final section reports on providers' experiences of running DAC, and recommendations for how to improve the process of delivering it.

### 3.1 Clients' decisions to attend the course

Clients were asked a series of questions about what was important in their decision to attend the course.

Aspects addressed were:

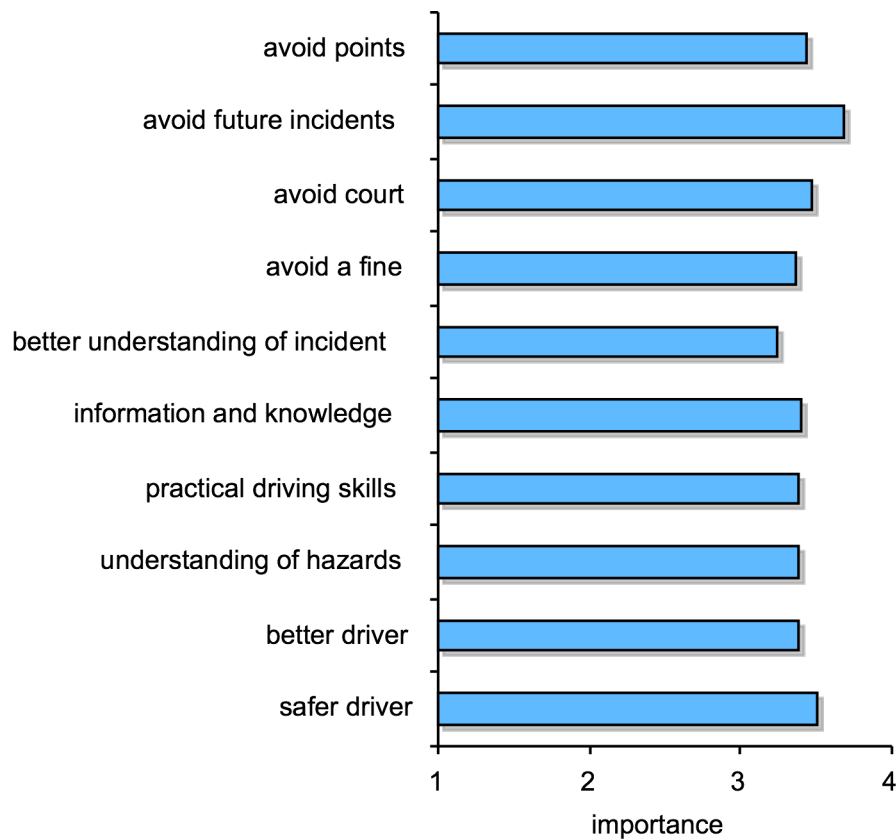
- wanting to avoid penalty points on their licence;
- not wanting to be involved in another incident or collision;
- wanting to avoid going to court;
- wanting to avoid getting a fine at court;
- getting a better understanding of what caused their incident;
- getting information and knowledge that will help them become a safer driver;
- getting practical driving skills that will help them become a safer driver;
- getting a better understanding of the hazards drivers face on the roads;
- anticipating that they will become a better driver;
- anticipating that they will become a safer driver.

They were asked whether each of these factors was not at all important, fairly important, very important, and extremely important. Responses were coded so that higher numbers indicate greater importance, and the average (mean) score for each factor is shown in Figure 1.

The results show that while all possible aspects of the course are important to clients, they are most motivated by the potential safety benefits: becoming a safer driver and avoiding being involved in another collision or incident. There were no statistically significant differences between the two course types.

Most of the clients (90%) reported that they used the information provided by the Police to contact the provider directly, rather than visiting the police NDORS website.





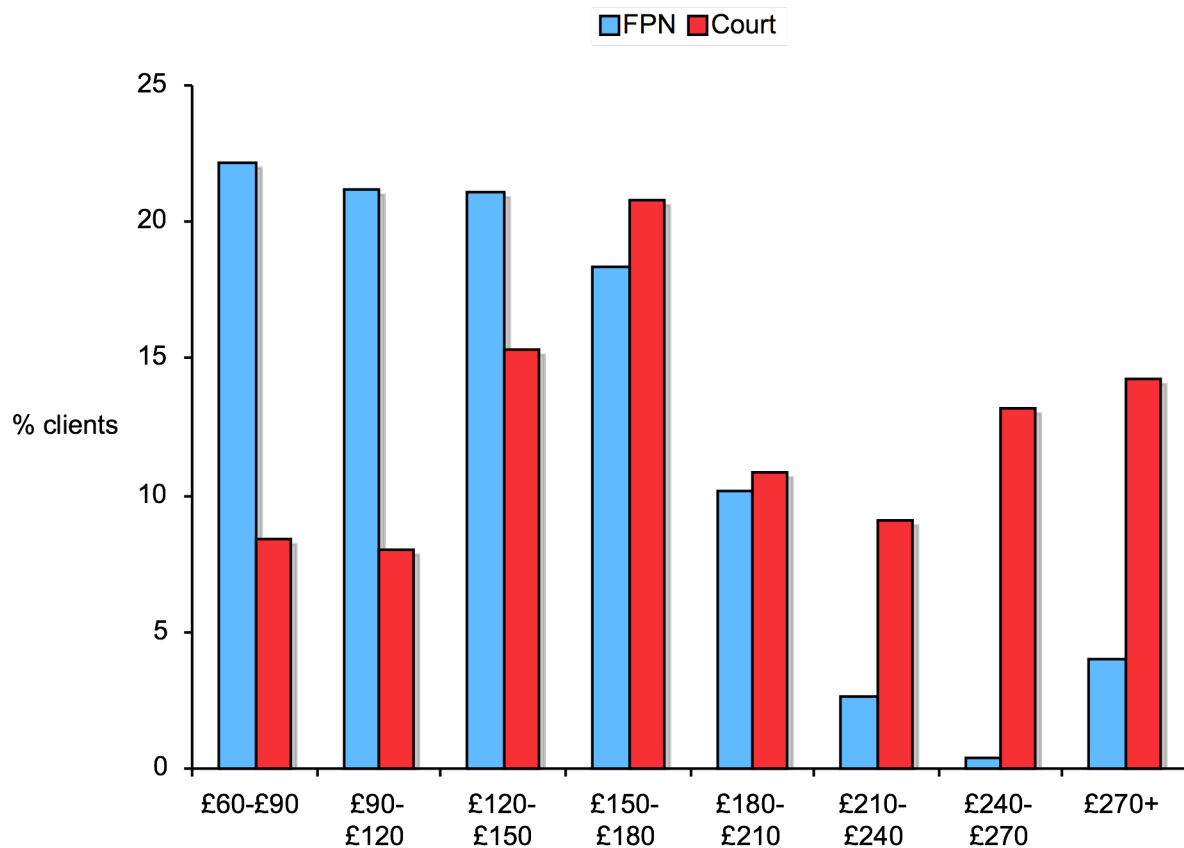
**Figure 1: Aspects important to clients when they decide whether to attend the course.**

Clients were also asked about how much they would be willing to pay for a course. They were asked about two different types of course – one as an alternative to a fixed penalty notice (£60) and three penalty points, and one as an alternative to an appearance at court, a possible three-to-six penalty points and an average fine of £250. They were asked to choose between amounts that ranged from £60-£90 to more than £270. The percentage of clients who gave each response is shown in Figure 2.

Approximately equal numbers of clients would be prepared to pay £60-£90 (22%), £90-£120 (21%) and £120-£150 (21%) for an alternative to a fixed penalty notice, with only a slight drop at £150-£180 (18%). A minority would be prepared to pay over £270 (4%): this group may be those who have nine points on their licence.

Clients would be prepared to pay more as an alternative to a court appearance, with the most common amount being £150-£180 (21%). There is a bimodal distribution, with another peak of clients who would be willing to pay over £270. Again, this may represent people who could lose their licence should they be awarded between three and six points at court.

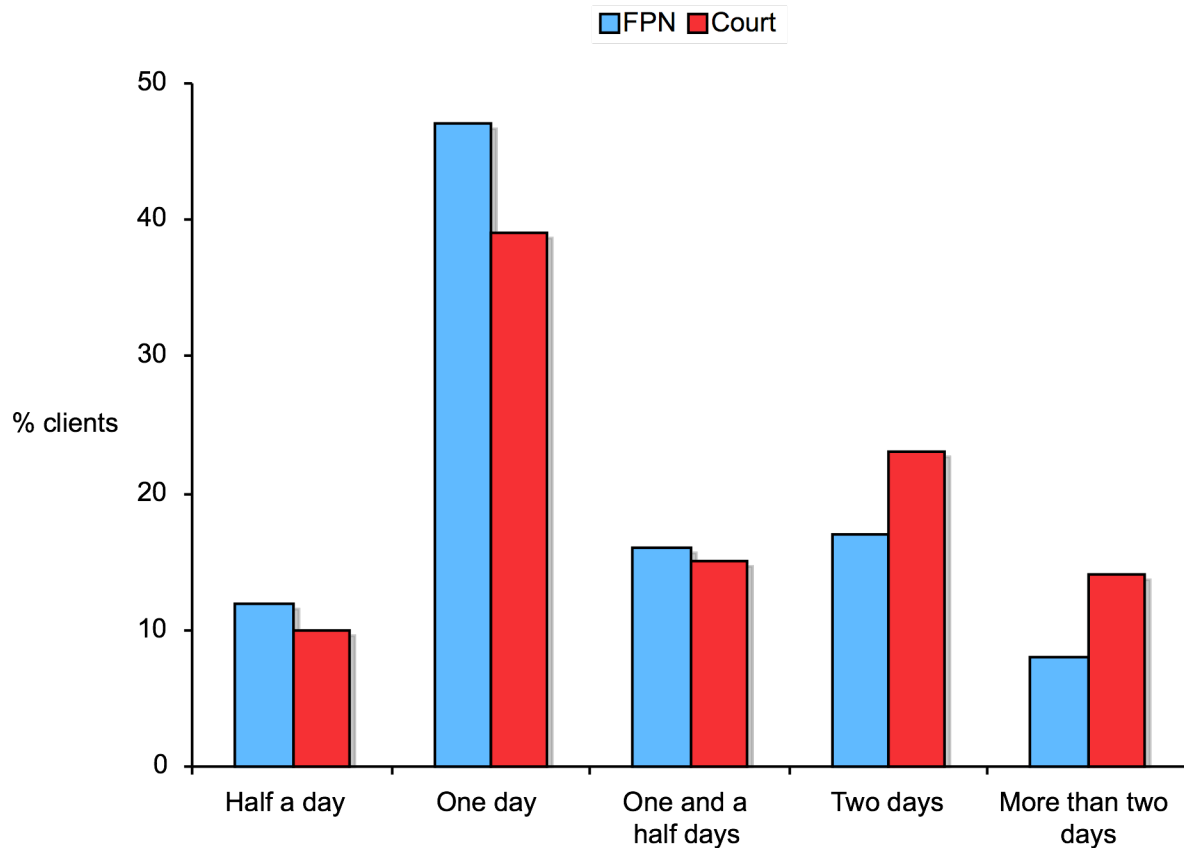




**Figure 2: How much clients would be prepared to pay for a course.**

Clients were also asked about how much time (excluding travelling) they would be willing to give up to attend the course. They were asked to choose from half a day (four hours), one day (eight hours), one and a half days, two days or more than two days. Again, they were asked about both different types of course. Their responses are shown in Figure 3. The most common response for both course types is one day, with a significant minority of clients (23%) willing to spend two days on a course to avoid a court appearance. It is clear that a one-day course is more acceptable than a one-and-a-half day course to the majority of clients.

While the course was developed for car drivers, seven clients who were riding a motorcycle when they had their incident attended participating courses. These clients were asked how far they would be willing to travel to attend a course just for motorbike / scooter / moped riders. They were given five options: up to 20 miles; 20-40 miles; 40-60 miles; 60-80 miles; or over 80 miles. Of these, 43% reported they would be prepared to travel up to 20 miles, and the remaining 57% reported that they would be willing to travel 20-40 miles. While there were only seven riders, and so the results must be interpreted with caution, this suggests that the majority of riders would be prepared to travel further to attend a scheme that is more suited to their needs.



**Figure 3: How much time clients would be prepared to give up to attend the course.**

Few clients reported that anything had deterred them from attending the course: only 17% of DAC clients and 20% of NDIS clients. A representative range of their responses is shown in Table 3. As well as difficulties taking the time to attend the course, usually due to work or childcare commitments, clients can be apprehensive about having their driving watched by the instructors and other clients. One client noted that they were afraid of failing the driving test: we have noted this response previously in our work on why people refuse the offer of a speed awareness course, and it indicates that the paperwork clients are sent can be misunderstood. Several clients were deterred because they do not believe that they were at fault, or do not think that they need a driving course.

**Table 3: Things that deterred clients from attending the course.**

<i>One and a half days is a long time and a big commitment.</i>	<i>A lot of practical driving, but if it is necessary then I don't mind.</i>
<i>I have great difficulty getting time of work.</i>	<i>Driving with strangers in the car.</i>
<i>Losing money due to time off work and paying a silly amount for the course.</i>	<i>Apprehension to being put in a car with an advanced driving instructor after having seven years of a clean licence.</i>
<i>Loss of earnings.</i>	<i>Driving an unfamiliar vehicle.</i>

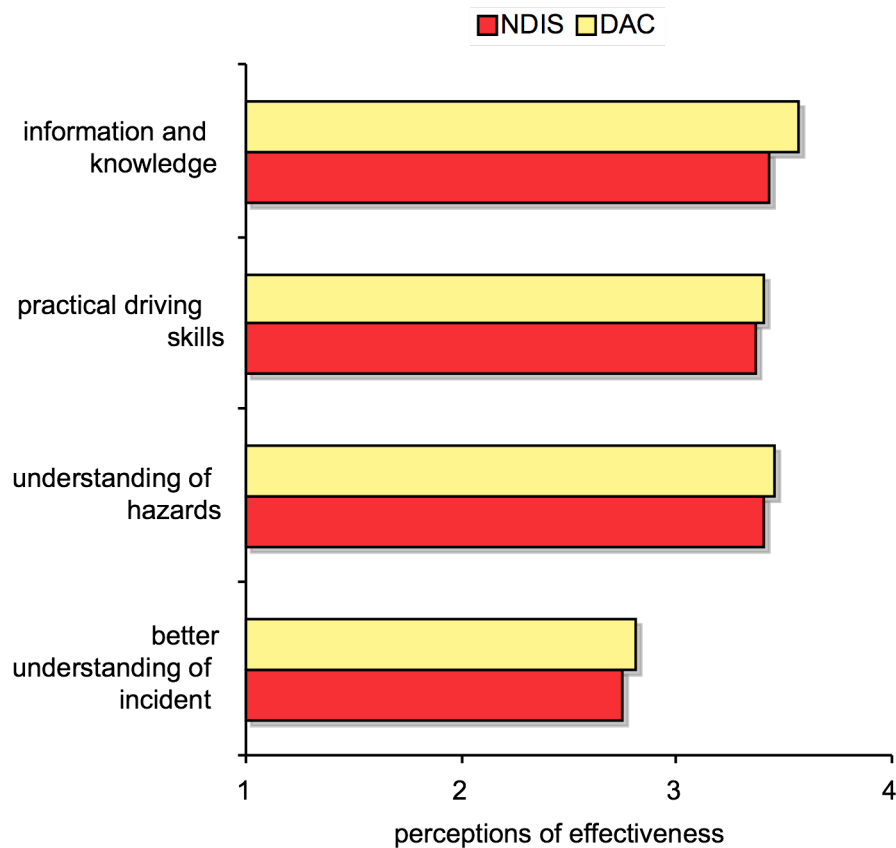
<i>Anxiety.</i>	<i>Fear of failing the driving test.</i>
<i>Cost.</i>	<i>Fear of being judged as a bad driver due to sex and age.</i>
<i>Classroom environment.</i>	<i>I haven't driven since my accident so I am really nervous.</i>
<i>Embarrassment.</i>	<i>Having to tell the wife.</i>
<i>I am very shy of meeting people.</i>	<i>I don't think I needed it.</i>
<i>The accident wasn't my fault.</i>	<i>How unprofessional the telephone operators were.</i>
<i>The hours are not suitable when you have small children.</i>	<i>Fear of the unknown – more information would help.</i>
<i>Childcare.</i>	<i>The thought of being told off.</i>
<i>Most drivers would benefit from weekend courses.</i>	<i>It could be taken as admitting the accident was your fault.</i>
<i>The nearest course is 80 miles away.</i>	<i>The feeling that I was offered this before the police had full investigated the accident.</i>
<i>The location. I do not have a car now so i had to get a taxi to drop me off in this remote location because no trains or buses come here. Somewhere more central would be appreciated.</i>	<i>The letter states that if people don't turn up they will have to rebook at their own expense and I think it can penalise people who make an honest effort to get there.</i>

### **3.2 Clients' perceptions of the course**

After the course, clients completed a series of questions about their experience of the course. They were asked the extent to which:

- the course provided them with information and knowledge that will help them drive more safely;
- the course provided them with practical driving skills that will help them become a safer driver;
- the course gave them a better understanding of the hazards drivers face on the road;
- the course helped them to understand what caused their incident.

They were able to choose from not at all, a little, quite a lot, or a great deal, and responses were coded so that higher scores indicate the course gave them more information, skills, understanding, etc. Mean scores for the two types of course are shown in Figure 4.



**Figure 4: Perceptions of course effectiveness.**

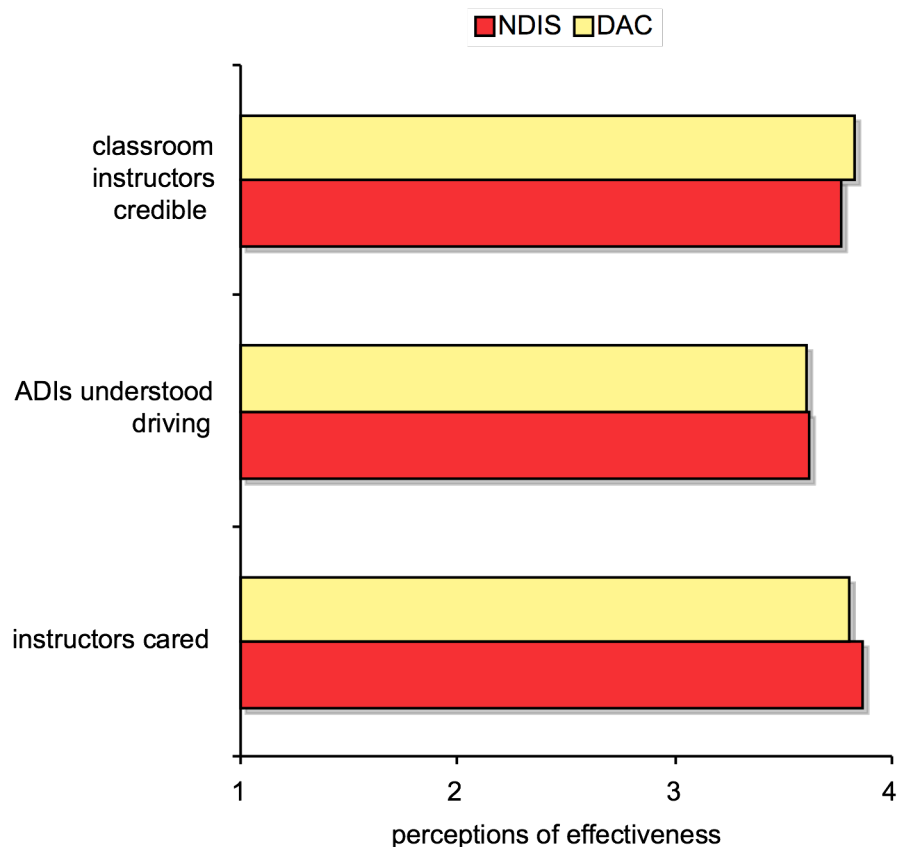
The results show that across all the areas, clients who attended DAC perceived the course as being more effective. However, only perceptions of the course providing information and knowledge that will help clients drive more safely reached statistical significance ( $t = 2.65, p = 0.008$ ).

While there were only seven motorcyclists in the dataset, and so the results should be interpreted with caution, the mean scores across each of these areas is lower for motorcycle riders than for drivers, and significantly lower for helping riders gain information and knowledge that will help them drive more safely, for providing better understanding of the hazards that drivers face on the roads, and for helping them understand what caused their incident. This suggests that the course is more effective for drivers than motorcyclists.

Because there is evidence in the educational literature that instructors who are perceived as being more knowledgeable and caring are more likely to change behaviour, clients were also asked about their perceptions of the instructors, specifically the extent to which:

- the classroom instructors knew what they were talking about;
- the driving instructors understood their driving;
- the instructors cared that you stay safe on the road.

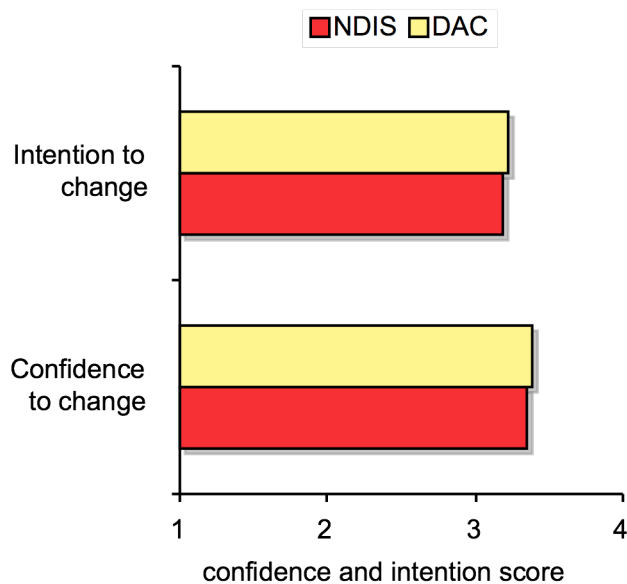




**Figure 5: Perceptions of the instructors.**

There is very little difference between the two courses in perceptions of the instructors. Perceptions from both courses are extremely positive, with nearly all clients giving the highest score. The only statistically significant result is that NDIS clients believed more that the instructors cared that they stayed safe on the roads ( $t = 2.01, p = 0.045$ ).

Clients were also asked about how confident they were that they could apply what they had learned on the course. The psychological construct, termed self-efficacy, is an important predictor of behavioural change: if people feel more confident in their ability to put things into practice they are more likely to try. They were also asked whether the course will change their behaviour. Responses were coded so that higher scores indicate greater confidence and greater intentions to change, and the mean responses are shown in Figure 6.



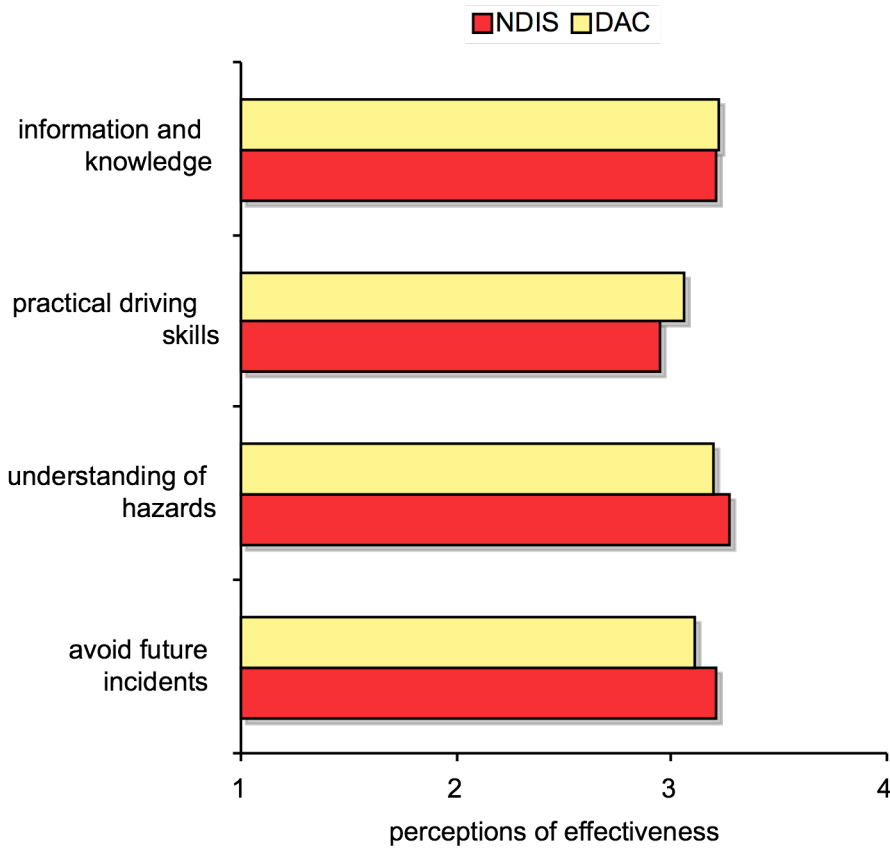
**Figure 6: Perceptions of whether the course will change driving, and confidence to apply what was learned.**

The two courses have very similar results, with mean scores between 3 (quite confident, and the course will change their driving quite a lot) and 4 (clients have a great deal of confidence, and believe the course will change their driving a great deal). There are no significant differences between the two courses.

### ***3.3 Influence of the course on behaviour***

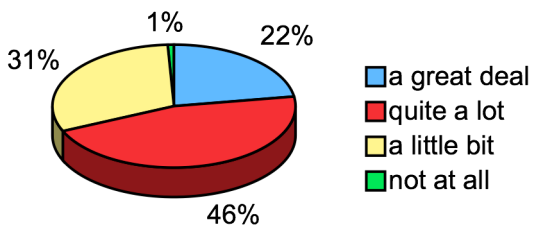
Clients were asked a series of questions about how effective the course had been in helping their driving. The same questions were used as in the previous questionnaires. Responses were coded so that higher scores indicate greater perceived effectiveness. The mean scores for both course types are shown in Figure 7.

These results show that both DAC and NDIS clients reported that the course has helped them to become safer drivers. There were no significant differences between the two courses. Mean scores were between 3 (the course has helped quite a lot) and 4 (the course has helped a great deal) so these results are extremely encouraging.

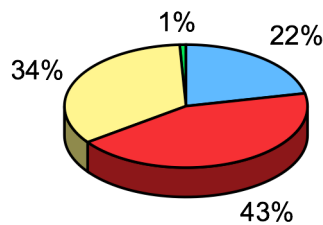


**Figure 7: Perceptions of course effectiveness.**

Clients were also asked whether or not the course has changed their driving. The percentage giving each response (not at all, a little bit, quite a lot, or a great deal) is shown in Figures 8 (DAC) and 9 (NDIS). The pattern of responses is very similar between the two courses, with 99% reporting they had changed their driving.



**Figure 8: The percentage of DAC clients who have changed their driving.**



**Figure 9: The percentage of NDIS clients who have changed their driving.**



It should be noted that the questionnaire assesses self-reported behaviour rather than observed behaviour, and previous research has shown that NDIS has a positive effect on self-report behaviour but not on objectively assessed driving. In the future it may be possible to compare the number of points or course invites clients have received: 328 clients (59%) gave their permission for the researchers to check their driver details to find this out.

The core set of 15 questions that measure behavioural predictors were factor analysed to identify subscales, and four were present in the data<sup>1</sup>. All were coded so that higher scores indicate safer responses.

1. Engagement with a driver's safety responsibilities (It's important that I anticipate better what other road users will do, I'm confident I will be able to improve my driving in the future, in the future I will take more responsibility for the way I drive, in the future I will make more effort to watch out for hazards on the road). This factor measures DAC course objective *to increase drivers' awareness of the causes and consequences of collisions*.
2. Armed with safety techniques (I know how to avoid driving situations that put me at greater risk of crashing, I know how to avoid getting distracted when I'm driving, I know exactly what I can do to avoid being involved in a collision in the future, collisions on the road can almost always be avoided, even minor collisions on the road cause a lot of hassle). This factor measures two DAC course objectives: *to help drivers avoid factors that reduce their driving competence*; and *to enable drivers to identify their individual driving dangers and develop an action plan to stay safe on the roads*.
3. Arrogance (I'm already a good driver; there's little I can do to improve, most collisions are due to bad luck rather than driver error, I don't mind making other drivers brake sharply, It's not important if I break a few traffic laws). This factor measures DAC course objective *to challenge drivers' dysfunctional beliefs*.
4. Realistic about driving difficulties (It takes a lot of concentration for me to spot all the hazards on the road, unless I'm careful I can easily become distracted when driving). This factor measures the course objective *to re-calibrate drivers' perceptions of task difficulty*.

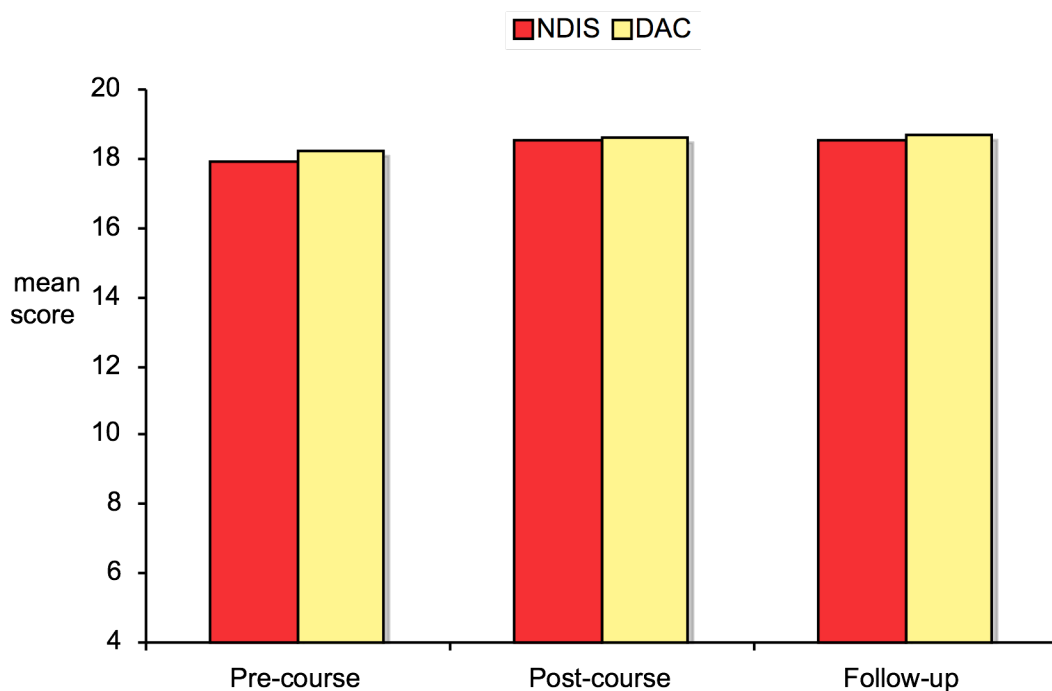
The scores for clients' engagement with a driver's safety responsibilities are shown in Figure 10. Scores are high before the course, and there is only a very slight increase after the course. A mixed ANOVA with time as the repeated measures variable and type of course as the between subjects variable showed that there was no significant change in engagement with driving responsibilities over the three time points, and no

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<sup>1</sup> A principle components analysis showed four factors with eigenvalues greater than 1. Details are shown in Appendix 5.4.

differences between DAC and NDIS. This might indicate that drivers who choose to attend the course rather than go to court already have a desire to become a safer and more responsible driver.

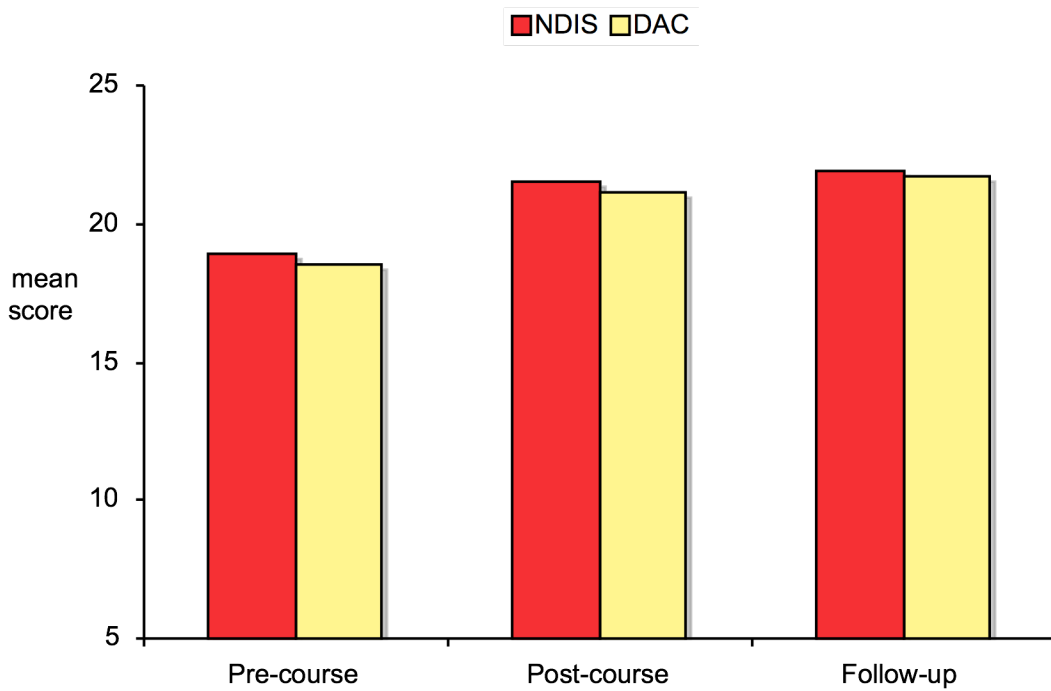
The scores from the follow-up questionnaire are particularly interesting as these questions were worded so that they reflected actual change in self-reported behaviour, rather than intention to change. This pattern of results indicates that drivers actually (believe they have) put things into practice.



**Figure 10: Change in engagement with a driver’s safety responsibilities over the three time points.**

The scores for the armed with safety techniques scale at the three different time points are shown in Figure 11. There is a clear increase in clients’ safety techniques from before the course to after the course, and this is maintained at follow-up.

A mixed ANOVA with time as the repeated measures variable and type of course as the between subjects variable showed that after the course there was a significant increase in safety techniques ( $F(1, 186) = 68.17, p < 0.001$ ). There is no difference between DAC and NDIS. For both courses the increase in safety techniques is maintained at follow up.

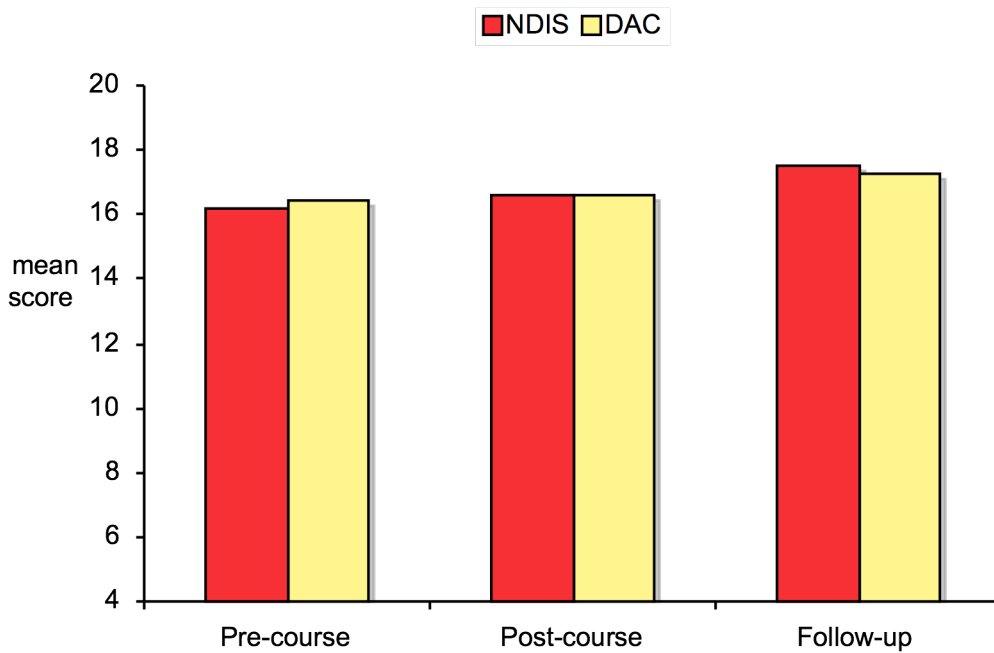


**Figure 11: Change in safety techniques over the three time points.**

The scores for driver arrogance are shown in Figure 12. Responses are coded so that higher scores indicate less arrogance, so it is hoped that scores increase following the course.

A mixed ANOVA with time as the repeated measures variable and type of course as the between subjects variable showed that after the course there was a significant increase in scores, indicating that drivers are less arrogant after the course than before ( $F(1, 186) = 11.50, p < 0.001$ ). There is no difference between DAC and NDIS.

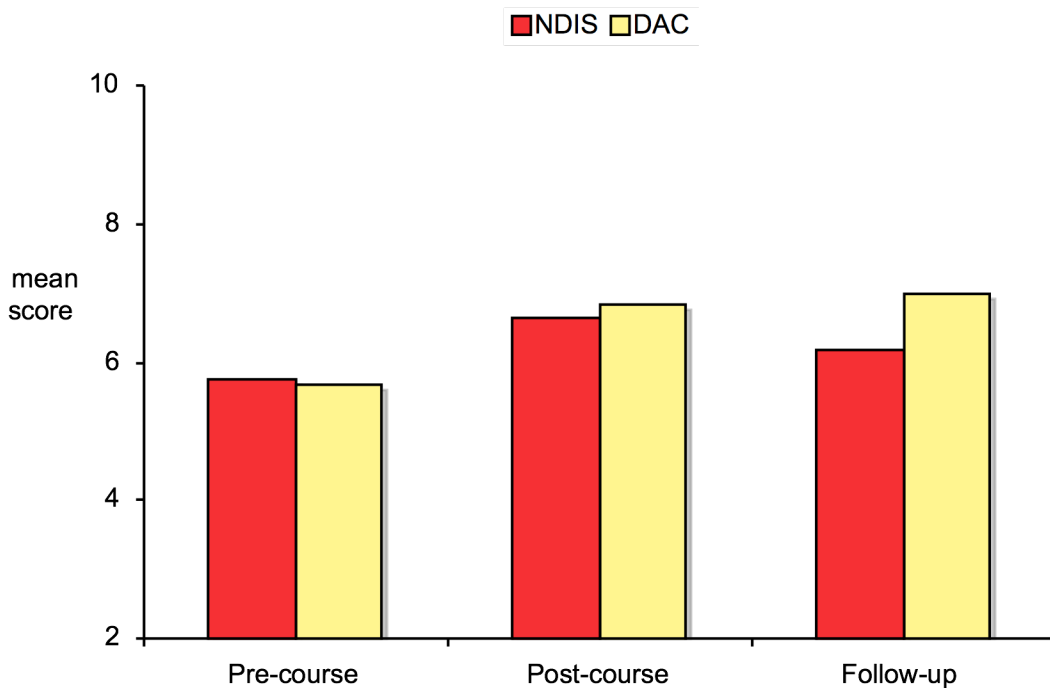




**Figure 12: Change in driver arrogance over the three time points.**

The scores for task difficulty at the three different time points are shown in Figure 13. There is a clear increase from before the course to after the course, and this is maintained at follow-up. The increase is larger in DAC than in NDIS, and interestingly, the scores increase further at follow-up for DAC, although not for NDIS.

A mixed ANOVA with time as the repeated measures variable and type of course as the between subjects variable showed that after the course there was a significant increase in how difficult a task clients believe driving to be ( $F(1, 186) = 9.70, p < 0.001$ ). There is no difference between DAC and NDIS, although there is a trend for scores to be higher at follow-up for DAC than for NDIS.



**Figure 13: Change in perceived task difficulty over the three time points.**

Clients were asked whether they had undertaken any further driver training since attending their course, but none reported having done so. This is a disappointing result, as it is hoped that the course would motivate drivers to seek out additional training.

### ***3.4 Clients’ experiences of putting things into practice***

In the follow-up questionnaire clients were asked a series of open questions about why the course had, or had not, helped them drive more safely, which parts of the course they found most useful, and whether they faced any difficulties in applying what they learned on the course.

Clients described how the information and knowledge gained has raised their awareness of the different things they should be looking out for on the road, and made them more cautious drivers. It has helped them better anticipate how other road users might behave, and become more aware of the importance of safe driving. This is illustrated in the following quote from a DAC client.

*It’s made me think what an undervalued part of my job it was - how I rushed from A to B without enough thought.*

Clients were also clear about the benefits of the practical driving skills they developed during the course. They described specific examples of how their driving had improved, and two clients noted how their passengers had commented on how much their driving had improved since attending the course. Clients described how they have implemented their improved hazard detection and anticipation skills, and they are now safer and more patient drivers. Representative quotes of how the course has changed their driving are shown in Table 4.

**Table 4: comments about how clients have changed their driving.**

DAC	NDIS
<i>Being more aware of what could happen in different situations.</i>	<i>Keeping much more alert and notice of other drivers.</i>
<i>It's made me think ahead more.</i>	<i>More careful and watchful.</i>
<i>I am more observant with near or distant road users 'making last minute changes'.</i>	<i>More calm, take my time.</i>
<i>Better understanding of action I take on the road.</i>	<i>Keeping much more alert and notice of other drivers.</i>
<i>I am a lot more tolerant. I do not get upset about minor things.</i>	<i>I found the information I gained from the course both easy and extremely useful to apply in my future driving skills.</i>
<i>I am slower, allowing more space, more relaxed and knowledgeable about traffic signs as I had misread one when I had the accident.</i>	<i>I drive much more economically now which means I am less rushed and safer and more aware of the road.</i>
<i>I drive at a better and more relevant speed and I learned more about weight distribution and best practice for cornering.</i>	<i>I drive with anticipation and take no risks.</i>

Nearly all DAC and NDIS clients reported that they had experienced no difficulties in applying what they had learned during the course. Many commented that they had found it simple and straightforward. Only 5% of clients noted that they had experienced difficulties, for example trying to break bad habits, that other drivers become angry when they brake early as they don't understand that it is necessary, or that they are still have to make a conscious effort to drive more safely. For example:

*At first but started coming together after a couple of days.*

*It's hard to instantly break habits, but with knowing the results of what can happen if you do mess up, I'm trying to change.*

*Difficult to look everywhere at once to notice potential hazards.*

### 3.5 Gender differences

Our previous work has often shown that driver behaviour interventions are more effective in females than in males. To explore this we analysed the results of the post-course questionnaire to identify whether or not the course is more effective in females than in males, and whether this is any different for the two courses. Table 5 shows the mean scores for each of the questionnaire items on perceived effectiveness. Scores for males and females are shown separately for the two different courses. The Comparisons columns show p values for significant differences between groups and gender. Non-significant differences are indicated by ns.

**Table 5: Gender differences in perceived course effectiveness.**

	DAC		NDIS		Comparisons	
	Male	Female	Male	Female	Group	Gender
1 Not at all – 4 A great deal						
To what extent do you think that the classroom instructors knew what they were talking about?	3.81	3.79	3.75	3.81	ns	ns
To what extent do you think that the instructors cared that you stay safe on the road?	3.79	3.77	3.85	3.85	.039	ns
To what extent do you think the drivers understood your driving?	3.59	3.56	3.58	3.68	ns	ns
Did the course provide you with information and knowledge that will help you drive more safely?	3.57	3.51	3.36	3.58	ns	.094
Did the course give you a better understanding of the hazards drivers face on the road?	3.45	3.43	3.29	3.60	ns	.012
Did the course provide you with practical driving skills that will help you become a safer driver?	3.38	3.43	3.28	3.53	ns	.009
How confident are you that you can apply what you have learnt on the course?	3.35	3.44	3.33	3.36	ns	ns
Do you think that the course will change your driving?	3.18	3.28	3.08	3.34	ns	.002
Did the course help you to understand what caused your incident?	2.78	2.85	2.64	2.97	ns	.014

### 3.6 Process evaluation

A review group, chaired by one of the DAC providers, met several times during the pilot, either face-to-face or in teleconferences. The following points were made.

1. All the providers think that DAC is a better product than NDIS and would like to see it continue.
2. They all report that the final classroom session is too long, and clients are too tired to take in the material presented. They believe it is important to include this material but believe that it needs to be addressed earlier in the day. Notes clients make in the workbook could then be shared with the driving instructor, who could address each of the barriers to safe driving while in the car. Providers suggested that an appropriate alternative would be when drivers return to the classroom, they do the "what do I need to change to make me a better driver?" activity. It should include a session on identifying the barriers that drivers face to applying what they have learned, and a focus on the importance of being a positive influence on the roads.
3. All the providers agreed that the limit point demonstration is too difficult for clients to grasp in the classroom, and that it is better covered in the car.
4. All the providers agreed that the driving simulation video was too research-oriented, and that the junction slide alone is ok to make the point.
5. There were copyright difficulties with the Moonwalking Bear video, which demonstrates the effect of divided attention. Some providers had received permission from TfL to use this and others had not. It was suggested that the DAC manual could contain three different options – providers either purchase a licence to use the original gorilla video, or they gain permission to use the Moonwalking Bear video, or they substitute an alternative task.
6. All the providers agreed that there is a little too much content, and both clients and trainers get very tired, and that it is often a struggle to fit it all in.
7. The providers agreed that the workbook is a core element of the course, and that the instructors need to be aware of ways of making it accessible for clients who might have literacy difficulties, e.g. they can draw rather than write.
8. More consistency is needed on the in-car section of the course. While guidance was issued, this was not available at the start of the pilot, so that some variations in practice emerged. There should be a log to note what happened during the in-car sessions.

Once the data collection period finished, providers were able to action these changes, and to adapt the session timings to make them fit better with their local needs. At the final meeting, the group discussed the changes to timings they had made but no consensus was reached over the best timetable for the course.

Providers discussed how to motivate clients to undertake further driver training after the course. They highlighted that there are no readily accessible options for clients, as IAM and RoSPA often have long waiting lists, and that many drivers would like to continue training, but do not wish to become an Advanced



Driver. Providers discussed how it might be possible to develop their own courses that any interested clients could access.

Providers discussed the advice they would give to new providers, should DAC become a national course.

- Overcoming the loss of the feel-good factor that ADIs experience when seeing clients improving. ADIs can be reassured that they still see an improvement but they don't need to mark it onto a sheet. ADIs now see a change in the way clients think, which the instructors find even more rewarding.
- There is a need to hone in-car instructors, as they get into a comfort zone about a particular route. They need to understand that they should have several different routes that will address the different aspects of driving that clients have difficulty with.
- There is a need for a consistent standard for instructors. Providers suggested that there could be shared training days, rather than each individual provider arranging training just for their own instructors.
- As the content is tailored around individual clients' needs, the course needs to be flexible, but this means that there is more danger of it drifting from the original framework. There is a need for careful monitoring of the course.

# 4. Conclusions and Recommendations



## 4. Conclusions and Recommendations

1. The results provide evidence that both DAC and NDIS produce changes in attitudes towards safe and responsible driver behaviour, and in confidence to drive safely and responsibly. Both courses produce intentions to drive more safely and responsibly in the future.
2. At follow-up, 99% of clients on both types of courses reported that they had changed their driving as a result of the course. A total of 22% reported that their driving had changed a great deal, and over 40% that their driving had changed a lot. While this is self-reported behaviour, and so may not reflect actual driving behaviour, there is evidence from the open questionnaire items that clients have changed their driving, and some noted that their passengers had commented positively on the way in which their driving had improved.
3. Clients did not report any difficulties in applying what they had learned, and many noted how the course had been a very worthwhile experience. Some noted that it had taken a lot of effort not to fall back into their old habits, but they had persevered.
4. The research showed that DAC clients had significantly higher ratings on believing the course gave them information and knowledge that would help them stay safe on the roads. NDIS clients had significantly higher ratings on believing the instructors cared that they stayed safe on the road. There were no other statistically significant differences between the two courses.
5. The research thus provides evidence that DAC achieves the same results as NDIS but in a shorter period of time. A one-day course is more acceptable to clients than a one-and-a-half day course.
6. While only seven motorcycle riders participated in the research, there is some evidence that the course is more effective in drivers than in riders. The majority of participating motorcyclists would be prepared to travel up to 40 miles to attend a course specifically for motorcyclists. RIDE should therefore be considered to be the diversionary course of choice for motorcyclists.
7. Should DAC be adopted nationally, some changes are required to the content and the timings. The final session should be shorter, and should focus on changes that clients need to make in order to become a better driver, on identifying any barriers that drivers face to applying what they have learned, and focus on the importance of being a positive influence on the roads. There should be much more guidance about the content of the in-car sections of the course.
8. To increase uptake, clients should be made aware that there is no driving test, and that previous clients have found the course very worthwhile. Providers may wish to consider offering weekend courses.

# 5. Appendices



## 5.1 Pre-course questionnaire

### 1. About your decision to attend the Driver Alertness course

We want to know your thoughts on the Driver Alertness course you are going to attend: this will help us improve future courses. Everything you say is anonymous – we will summarise what people tell us but nobody will find out what individual people said. There are no right or wrong answers – we just want to know what you think.

#### 1. Please tick the boxes to tell us how important each aspect was in your decision to accept the course.

	Not at all important	Fairly important	Very important	Extremely important
I want to avoid penalty points on my licence				
I want to avoid being involved in another incident / collision				
I want to avoid going to court				
I want to avoid getting a fine at court				
I think I will get a better understanding of what caused my incident				
I think I will get information and knowledge that will help me drive more safely				
I think I will get practical driving skills that will help me be a safer driver				
I think I will get a better understanding of the hazards drivers face on the road				
I think I will become a better driver				
I think I will become a safer driver				

#### 2. How did you choose which course to attend? (please circle one)

I visited the Police NDORS website

I used the information provided by the Police to contact the provider directly

#### 3. How much would you be willing to pay for this course as an alternative to a fixed penalty notice (£60) and three penalty points (please circle one)

£60-£90    £90-£120    £120-£150    £150-£180    £180-£210    £210-£240    £240-£270    £270+

#### 4. How much would you be willing to pay for this course as an alternative to an appearance at court and a possible 3 – 6 penalty points and average fine of £250? (please circle one)

£60-£90    £90-£120    £120-£150    £150-£180    £180-£210    £210-£240    £240-£270    £270+

#### 5. How much time (excluding travelling) would you be willing to give up to attend this course as an alternative to a fixed penalty notice and three penalty points? (please circle one)

Half a day (4 hours)    One day (8 hours)    One and a half days    Two days    More than two days

#### 6. How much time (excluding travelling) would you be willing to give up to attend this course as an alternative to an appearance at court? (please circle one)

Half a day (4 hours)    One day (8 hours)    One and a half days    Two days    More than two days

7. Is there anything that puts you off attending the course?  Yes  No If yes, please tell us what

.....

.....

8. For each question tick a box to show us how much you agree or disagree with each statement

	Strongly disagree	Slightly disagree	Not sure	Slightly agree	Strongly agree
It takes a lot of concentration for me to spot all the hazards on the road					
Unless I'm careful I can easily become distracted when driving					
I'm already a very good driver: there's little I can do to improve					
I know how to avoid driving situations that put me at greater risk of crashing					
I know how to avoid getting distracted when I'm driving					
I know exactly what I can do to avoid being involved in a collision in the future					
Collisions on the road can almost always be avoided					
Most collisions are due to bad luck rather than driver error					
Even minor collisions on the road cause a lot of hassle					
I don't mind making other drivers brake sharply					
It's not important if I break a few traffic laws					
It's important that I anticipate better what other road users will do					
I am confident I will be able to improve my driving in the future					
In the future I will take more responsibility for the way I drive					
In the future I will make more effort to watch out for hazards on the road					

**About you**

What is your date of birth? ..... What is your gender?  Male  Female

What is your driver licence number .....

What were you driving or riding when you had your incident / collision? (please tick one)

Car  Van  HGV  Motorbike  Scooter / moped

**If motorbike/ scooter / moped, how far would you be prepared to travel to be on a course just for motorbike / scooter / moped riders rather than one that is mainly drivers?** (please circle one)

Up to 20 miles                      20-40 miles                      40-60 miles                      60-80 miles                      More than 80 miles

**Thank you for completing this questionnaire. Please bring it along to the course with you.**

## 5.2 Post-course questionnaire

### 2. Tell us what you thought of the course

We want to know what you thought of the course so that we can improve future courses. Everything you say is anonymous – we will summarise the things that people tell us but nobody will find out what individual people said. There are no right or wrong answers – we just want to know what you think. The questionnaires will be sent to the research team and the instructors will not read what you have said.

#### About the course

For each question, circle the answer that matches what you think, and use the space provided to tell us more.

1. Did the course provide you with information and knowledge that will help you drive more safely?

**Not at all**

**A little bit**

**Quite a lot**

**A great deal**

.....  
.....

2. Did the course provide you with practical driving skills that will help you become a safer driver?

**Not at all**

**A little bit**

**Quite a lot**

**A great deal**

.....  
.....

3. Did the course give you a better understanding of the hazards drivers face on the road?

**Not at all**

**A little bit**

**Quite a lot**

**A great deal**

.....  
.....

4. Did the course help you to understand what caused your incident?

**Not at all**

**A little bit**

**Quite a lot**

**A great deal**

.....  
.....

5. Do you think that the course will change your driving?

**Not at all**

**A little bit**

**Quite a lot**

**A great deal**

.....  
.....

6. How confident are you that you can apply what you have learnt on the course?

**Not at all**

**A little bit**

**Quite a lot**

**A great deal**

.....  
.....

7. To what extent do you think that the classroom instructors knew what they were talking about?

**Not at all**

**A little bit**

**Quite a lot**

**A great deal**

.....  
.....

8. To what extent do you think that the driving instructors understood your driving?

**Not at all**

**A little bit**

**Quite a lot**

**A great deal**

.....  
.....

9. To what extent do you think that the instructors cared that you stay safe on the road?

**Not at all**

**A little bit**

**Quite a lot**

**A great deal**

.....  
.....

10. Which parts of the course were most useful for you?

.....  
.....

11. Is there anything that we could improve upon?

.....  
 .....

12. Is there anything extra that would be useful for us to include on the course?

.....  
 .....

13. For each question tick a box to show us how much you agree or disagree with each statement

	Strongly disagree	Slightly disagree	Not sure	Slightly agree	Strongly agree
It takes a lot of concentration for me to spot all the hazards on the road					
Unless I'm careful I can easily become distracted when driving					
I'm already a very good driver: there's little I can do to improve					
I know how to avoid driving situations that put me at greater risk of crashing					
I know how to avoid getting distracted when I'm driving					
I know exactly what I can do to avoid being involved in a collision in the future					
Collisions on the road can almost always be avoided					
Most collisions are due to bad luck rather than driver error					
Even minor collisions on the road cause a lot of hassle					
I don't mind making other drivers brake sharply					
It's not important if I break a few traffic laws					
It's important that I anticipate better what other road users will do					
I am confident I will be able to improve my driving in the future					
In the future I will take more responsibility for the way I drive					
In the future I will make more effort to watch out for hazards on the road					

**About you**

What is your date of birth? ..... What is your gender?  Male  Female

What is your driver licence number .....

In the future we may wish to track whether or not you receive any future course invitations, or any points on your licence. To do this we would need your permission. Would you allow us to check your details in the future for our research purposes? Only the researchers would see your individual details.  
 Yes  No

**Thank you for completing this questionnaire. Please place it in the envelope before you leave.**





## 5.3 Follow-up questionnaire

### 3. Tell us about your driving since the course

Dear Sir / Madam,

A couple of months ago you attended a Driver Alertness or Driver Improvement course, and you may remember completing some questionnaires about what you thought of the course. This is the final questionnaire the research team would like you to complete. This time we want to know whether you have changed your driving since attending the course. Everything you say is anonymous – we will summarise the things that people tell us in research reports but nobody will find out what individual people said. There are no right or wrong answers – we just want to know what you think. Only the researchers will see what you have written on the questionnaire.

If you have any queries or concerns you can contact Dr Fiona Fylan on 0113 238 0157 or email her at [fiona@brainboxresearch.com](mailto:fiona@brainboxresearch.com)

#### About the course

For each question, circle the answer that matches what you think, and use the space provided to tell us more about what you think.

13. Did the course provide you with information and knowledge that has helped you drive more safely?

**Not at all**

**A little bit**

**Quite a lot**

**A great deal**

.....

.....

14. Did the course provide you with practical driving skills that have helped you drive more safely?

**Not at all**

**A little bit**

**Quite a lot**

**A great deal**

.....

.....

15. Did the course give you a better understanding of the hazards drivers face on the road?

**Not at all**

**A little bit**

**Quite a lot**

**A great deal**

.....

.....

16. Did the course help you to avoid future incidents on the road?

**Not at all**

**A little bit**

**Quite a lot**

**A great deal**

.....

.....

17. Has the course changed your driving?

**Not at all**

**A little bit**

**Quite a lot**

**A great deal**

.....

.....

18. Did you face any difficulties in applying what you learned on the course?

.....

.....

19. Which parts of the course have you found most useful?

.....

.....

.....

20. Have you undertaken any further driver training since attending the course?  Yes  No  
 If yes, please tell us what

.....

9. For each question tick a box to show us how much you agree or disagree with each statement

	Strongly disagree	Slightly disagree	Not sure	Slightly agree	Strongly agree
It takes a lot of concentration for me to spot all the hazards on the road					
Unless I'm careful I can easily become distracted when driving					
I'm already a very good driver: there's little I can do to improve					
I know how to avoid driving situations that put me at greater risk of crashing					
I know how to avoid getting distracted when I'm driving					
I know exactly what I can do to avoid being involved in a collision in the future					
Collisions on the road can almost always be avoided					
Most collisions are due to bad luck rather than driver error					
Even minor collisions on the road cause a lot of hassle					
I don't mind making other drivers brake sharply					
It's not important if I break a few traffic laws					
Since the course I have tried to anticipate better what other road users will do					
Since the course I have improved my driving					
Since the course I have taken more responsibility for the way I drive					
Since the course I have made more effort to watch out for hazards on the road					

10. Have you been involved in any collisions or incidents on the road since your course?  Yes  No

11. Have you received any penalty points since your course?  Yes  No

**About you**

What is your date of birth? ..... What is your gender?  Male  Female

What is your driver licence number? .....

Finally, please tell us which course you attended Date ..... Venue .....

**Thank you for completing this questionnaire. Please return it in the reply-paid envelope (Brainbox Research, 46 Town Street, Gildersome, Leeds LS27 7AA).**

## 5.4 Factor analysis of Attitude Data (Time 1)

Extraction method: Principle Components Analysis. Rotation Method: Varimax with Kaiser Normalization

Items	Components			
	1	2	3	4
In the future I will take more responsibility for the way I drive A	.918			
In the future I will make more effort to watch out for hazards on the road A	.908			
I am confident I will be able to improve my driving in the future A	.861			
Its important if I anticipate better what other road users will do A	.614			
I know how to avoid getting distracted when I'm driving A		.791		
I know exactly what to do to avoid being involved in a collision in the future A		.767		
I know how to avoid driving situations that put me at greater risk of crashing A		.755		
I'm already a very good driver: there's little I can do to improve D		-.519	.404	
Collisions on the road can almost always be avoided A		.477		
Even minor collisions on the road cause a lot of hassle A		.393		
I don't mind making other drivers brake sharply D			.789	
Its not important if I break a few traffic laws D			.696	
Most collisions are due to bad luck rather than driver error D			.648	
It takes a lot of concentration for me to spot all the hazards on the road A				.849
Unless I am careful I can easily become distracted when driving A				.845

N = 664

KMO = .754

Variance accounted for by four factors: 59.5%

**Brainbox Research**



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