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# **Executive Summary**

'Safe Drive Stay Alive' (SDSA) is a series of emotionally-impactive live educational events aiming to reduce road casualties in young people, by increasing understanding of road risk and challenging unsafe attitudes and behaviour. SDSA was delivered in both Surrey and Greater Manchester (GM) in 2015, using similar approaches and materials. This independent evaluation measures these two schemes against their stated aims and objectives.

The evaluation has provided a unique insight into the efficacy of SDSA through the employment of large sample sizes; consistent monitoring over time; the use of a comparison group; and utilising an adolescent-based behaviour change model to measure against. Many evaluations of young and pre-driver education do not employ all or most of these elements.

The evaluation was conducted in three stages: before SDSA was delivered in November 2015; three months after attendance (February 2016); and twelve months after attendance (November 2016). Questionnaires were developed, based on the Prototype Willingness Model (PWM), which is an adolescent-based behaviour change theory, which seeks to explain what leads young people to engage in risky behaviours. The questionnaires were completed by a sample of students who experienced SDSA in Surrey and Greater Manchester and a comparison group from Surrey who did not attend SDSA (and whose responses should reflect what could be expected of the other groups if they had not attended SDSA).

Statistical tests were applied to the questionnaire responses and 'success' was measured against three observations:

- statistically significant differences before and after SDSA
- statistically significant differences between SDSA attendees and the comparison group
- similar responses before SDSA for both the comparison group and attending students.

There were no questions where the Greater Manchester intervention group met all three conditions. The comparison group were from Surrey and it could be that geographical differences between them and the Greater Manchester intervention group affected results. In many cases, the baseline for Greater Manchester was significantly lower than for both Surrey groups, suggesting that the Greater Manchester students held more positive views before attending SDSA. As such, the main results are focused on Surrey respondents. As the film and delivery of SDSA is similar in Surrey and Greater Manchester, the results for Surrey could reflect what we would expect to observe in Greater Manchester with the use of a local comparison group. Furthermore, findings in the 3-month report (using different tests) revealed similar results for both areas.

The findings provide some positive results. SDSA reduced the willingness of respondents to engage in certain risky driving behaviours:

- To use a mobile while driving
- To speed on motorways
- To speed on rural roads

It reduced the perceived likelihood of their friends to:

- Use a mobile while driving
- Speed on motorways
- Speed on rural roads
- Speed in towns
- Drink and drive

It reduced the perceived approval of their friends if the respondents:

- Exceeded the speed limit on motorways
- Exceeded the speed limit on rural roads
- Exceeded the speed limit in towns

The respondents' attitudes towards the following statements improved:

- If I am driving, I can handle a drink or two and still be safe
- If I drove sensibly, my friends would make fun of me

The results related to friends are important as subjective norms are thought to influence both behavioural willingness and behavioural intentions in the PWM. The improvements in social norms might suggest that they thought their friends had also been affected by the intervention (if they attended) and/or they no longer wanted their friends to be the types of people who would engage in these behaviours. Lastly, reporting friends' behaviours is often a reflection of the behaviour of the respondents themselves and therefore this could indicate a positive movement in their own disapproval and likelihood.

There were some behaviours where willingness to engage in the behaviour did not reduce. These include taking drugs or alcohol and driving, both of which had particularly low levels of willingness at the baseline stage. Additionally, willingness to speed in towns or not wear a seatbelt did not improve after SDSA by more than the comparison group.

There were also some behaviours related to social norms (friends' likelihood and approval), including taking drugs and driving or not wearing a seatbelt, which did not improve. These also had low levels at the baseline stage.

Attitudes towards certain behaviours did not improve to a statistically significant extent after SDSA. These included passenger related behaviours, such as challenging irresponsible behaviour; taking lifts from drink or drug drivers; understanding their responsibilities as a passenger; and seatbelt wearing. The strong driver focus in SDSA could mean that messages about passenger responsibility are not absorbed.

Lastly, the perceived vulnerability of respondents, where they feel more likely to be involved in a collision if they engage in risky behaviours, did not increase after SDSA. To increase vulnerability, highlighting the alternative consequences of risky behaviour could be effective, such as loss of freedom and mobility and the resulting social stigma. In addition to increasing perceived vulnerability, perceived efficacy could be explored. Credible coping mechanisms could be provided (either through SDSA itself or follow up lessons), with support to show attendees that they are capable of engaging in the safe behaviour.

The respondents, in general, provided positive feedback to SDSA 12 months after attendance. Over two-thirds thought that they had benefitted from attending SDSA. Whilst only one-sixth of Surrey's respondents reported that they still had their copy of the Young Drivers' Guide, this could be seen as positive 12 months after receiving it, especially as the 3-month evaluation revealed issues with distribution of the Guide.

It is recommended that consideration be given to:

- Increasing the passenger-related content
- Exploring ways to increase vulnerability through highlighting other consequences of risky behaviour
- Exploring ways to incorporate credible coping mechanisms into the intervention and ensure that the attendees believe they can engage in safe behaviours
- Promote the follow-up lessons to support SDSA
- Evaluate the follow-up lessons

# Introduction

'Safe Drive Stay Alive' (SDSA) is a series of live educational performance events, based around a series of short and emotive films interspersed with live speakers from each of the emergency services. It also includes presentations from members of families whose lives have been affected by a serious road traffic collision.

SDSA is usually delivered as a partnership project, involving fire and rescue services, police, ambulance services, NHS trusts and local authorities and is provided to young people in various locations across the country. The key messages of SDSA, which are to highlight the increased collision risk of young people, are consistent in different regions, although the film content and focus on specific behaviours do differ to reflect local circumstances.

SDSA has been delivered in Surrey for over 10 years and has reached over 100,000 attendees. In 2013/14, a new set of films were funded, a film company commissioned and filming and editing were completed, ready for the public viewing of the new films at the November 2014 performances. The new films were also used in the inaugural year of Greater Manchester's Safe Drive Stay Alive in 2014.

Given the use of the same film in Greater Manchester and Surrey and the partnership that has developed between the two sets of SDSA performances, it was deemed appropriate that the areas should jointly commission an independent evaluation of the intervention. This report sets out the methodology and the results of the evaluation conducted in 2015-17.

## **Aims and Objectives**

The main aim of SDSA in both areas is "to reduce the number of young people (16-25) who are killed or injured on the roads."

In Greater Manchester, the following objectives are specified:

"Through attendance at Safe Drive Stay Alive young people will be able to:

- Understand the risks which may lead to becoming a road casualty
- Understand the consequences and impact of risk taking on the roads
- Make a pledge about how they will keep themselves safe as road users
- Challenge unsafe attitudes and behaviour on the roads amongst their peers"

## Logic Model

The logic model overleaf shows how the inputs and outputs of Safe Drive Stay Alive will lead to the desired outcomes/objectives and therefore the overall aim. The evaluation is designed to test whether the aims and objectives are met and is therefore an outcome, not a process evaluation.

## **Assumptions**

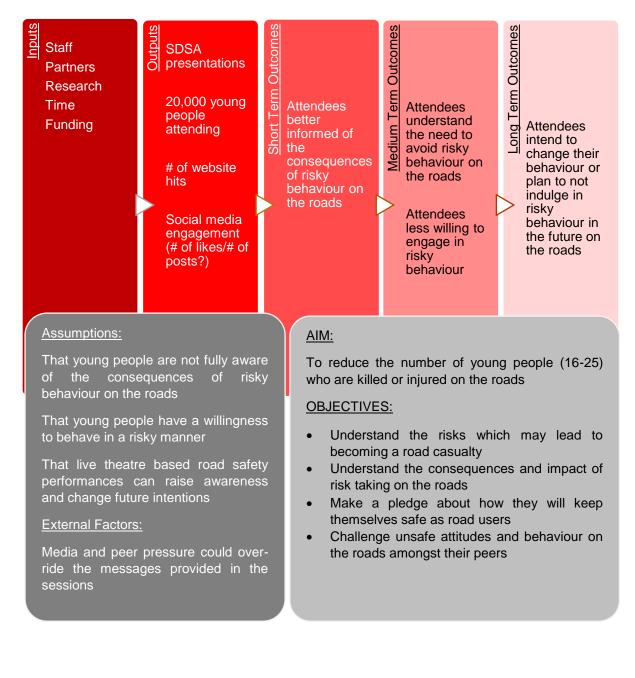
The logic model relies on the following assumptions being true for the inputs and outputs to lead to the desired outcomes:

- That SDSA attendees are not fully aware of the consequences of risky behaviour on the roads
- That young people have a willingness to behave in a risky manner
- That live theatre based road safety performances can raise awareness and change future intentions and willingness

If the above assumptions are not correct then SDSA will not be successful in meeting its objectives. These assumptions were tested within the baseline questionnaire in order to gauge awareness of the consequences of risky behaviour; the level of risky behaviour young people are willing to engage in; and how they feel towards young people who do engage in risky behaviours. Observed change post-intervention can test whether live theatre based road safety performances can raise awareness and change future intentions/willingness amongst attendees.

## External Influences

There could be external factors which might limit the way the inputs and outputs of Safe Drive Stay Alive lead to the desired outcomes/objectives. The most obvious and possibly strongest of these is the way that the media and peer pressure could over-ride the messages provided in the sessions. To try to understand these external influences, questions have been included to understand social norms.



# **Behaviour Change Models**

The approach adopted in this evaluation seeks to explore a behaviour change model specifically aimed at adolescents, called the Prototype Willingness Model (PWM)<sup>1</sup>. This model is explained fully in Appendix B – Prototype Willingness Model.

Evaluations of road safety schemes often focus on measuring behavioural intentions, as a predictor of likelihood to engage in the specific behaviour. The PWM suggests that intention is not always a good indicator of actual behaviour for adolescents as their behaviour, whilst willingly undertaken, is often not planned or intended. It is suggested that adolescents can find themselves in situations which facilitate risky behaviours and once in those situations, their willingness to engage in the behaviour will determine if they actually do it. Social norms and their views of the types of people who engage in risky behaviour shape their behavioural willingness as does their perceived personal vulnerability – whether or not they think they will be able to 'get away with it'. These concepts are the basis of the measures utilised to demonstrate the effectiveness of SDSA in Surrey and Greater Manchester.

## Methodology

A 'quasi experimental pre- and post- intervention with comparison group' study has been employed. In this evaluation design, intervention and comparison groups are used but the participants are not randomly allocated to the groups. Random allocation of participants was not possible because of the nature of the administration of SDSA where all of the schools/colleges in the area are invited to attend. Comparison groups were therefore drawn from schools/colleges in other authorities or schools/colleges who did not attend SDSA in 2015. The comparison group schools and colleges were selected to reflect the composition of the intervention group in terms of age, gender, ethnicity and socio-demographic backgrounds. The closer the comparison and intervention groups are in terms of these factors, the greater the chance that differences between the two groups found in relation to the desired changes are due to the intervention and nothing else. This is because they are more likely to be subject to the same external factors.

The strengths of this evaluation design are due to its quasi experimental nature. Observed changes in the comparison group provide information on what may have occurred in the normal course of events without the presence of the intervention. Statistical tests have been conducted to assess the significance of any change achieved by the intervention.

This evaluation design is easier to conduct than a full randomised controlled trial (RCT) and is the strongest design available in this situation where randomising participants is not possible.

The chosen data collection method is a questionnaire. For Greater Manchester, this was accessed via the online survey platform, *Prometheus* for Stages 1 and 2. For Surrey (and Greater Manchester at Stage 3), it was decided to use paper versions of the same questionnaire, which were then inputted into *Prometheus*. Hand-delivery and completion of paper questionnaires has previously resulted in higher response rates.

In order to achieve a 95% confidence level and 5% margin of error for the 8,000 attendees for Greater Manchester and the 12,000 in Surrey, the evaluation required a minimum sample size of 370 participants in each area who complete the pre-and post- questionnaires.

Whilst a comparison group of the same size is not essential, a large sample size is beneficial.

<sup>&</sup>lt;sup>1</sup> Gerrard et al, *A dual-process approach to health risk decision making: The prototype willingness model*, (Developmental Review 28 (2008) 29-61)

The questionnaire design for Surrey is shown in Appendix C – Questionnaire on page 50. The questionnaires in the Greater Manchester online version are identical in order and format for the pre-questionnaire. This is also the case for the post-questionnaire except that Q10, about the element of SDSA which has affected them the most, and Q11-Q14, about the Young Drivers Guide, were not included for Greater Manchester.

The questions themselves were designed to test elements of the Prototype Willingness Model as discussed in the Logic Model, Behaviour Change Models and Appendix B – Prototype Willingness Model sections. As can be seen from the questionnaire, there are questions asking about willingness to engage in different driver behaviours, if respondents were with a group of friends their age and could drive as they liked.

There are also four questions designed to test social norms, which explore family/parents' likelihood to engage in certain risk behaviours as well as their disapproval levels if the young person engaged in the behaviours themselves. The same likelihood and disapproval questions are asked about friends, to demonstrate any differences in how they think their friends think, compared to their family.

Understanding the influence of peers verses family members is particularly important for this age group. Research has shown that young drivers have increased collision risk when carrying same age-passengers or those in their 20s and early 30s whilst conversely, collision risk is reduced when carrying older passengers (35 years and over).<sup>2</sup>

"It is presumed that older passengers offer a protective effect through helpful co-piloting and encouragement of safer driving behaviours. For teen drivers with same-age passengers the reasons are thought to relate to what Allen and Brown (2008) call the 'perfect storm'. This involves age-related factors such as propensity to engage in risky behaviours, desire to please peers and in-group pressures combined with driver inexperience and associated risks such as poor hazard perception and calibration of actual and perceived demand."<sup>3</sup>

The questionnaire also asks respondents about personal vulnerability in the form of a question about likelihood to crash if they carried out certain behaviours. Their attitudes to these behaviours are also explored in a set of agree/disagree statements.

<sup>2</sup> Kinnear et al., *Novice drivers: Evidence Review and Evaluation – PPR673,* (Transport Research Laboratory, 2013), p.64

<sup>&</sup>lt;sup>3</sup> *ibid.*, p.64

# **Findings**

This section summarises the findings of the analysis of questionnaires completed by the target audience at three stages: before SDSA was delivered; three months after SDSA; and twelve months after SDSA. The questionnaires were completed by three groups: students from Greater Manchester who experienced SDSA; students from Surrey who experienced SDSA; and students from Surrey who did not experience SDSA.

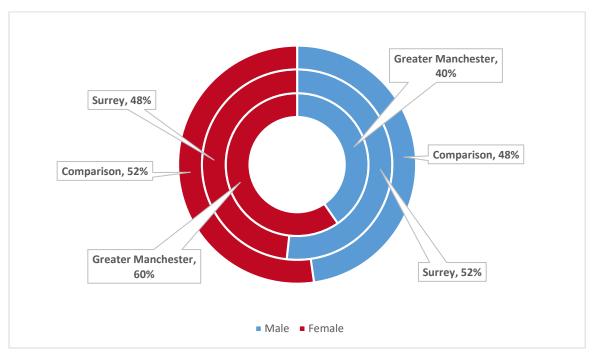
# **Sample Sizes**

The evaluation achieved the following sample sizes:

Group	Pre	3 months	12 months
Surrey	1,257	946	728
Greater Manchester	909	963	368
Comparison	308	482	479

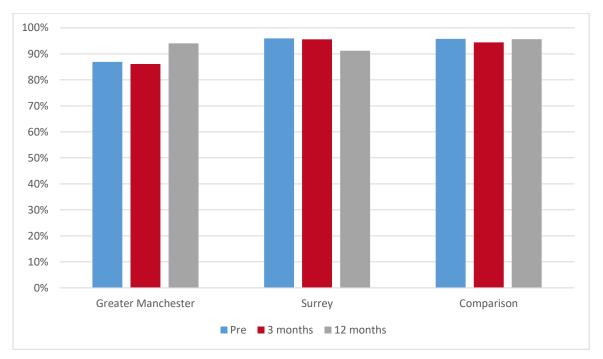
At the pre-stage, there were some gender differences between the three groups, with Greater Manchester having the lowest percentages of male respondents and Surrey the highest. This could have been due to differences in methodology (paper verses online questionnaires). At twelve months, 55% of the respondents from Greater Manchester were male, as were 54% of those from Surrey.





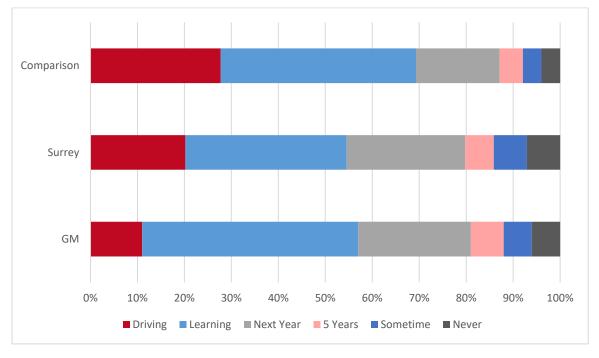
Over 85% of the respondents, at all three stages and in all three groups, were within the target audience age range of 16 or 17 years (for pre- and three months) and 17 or 18 years (for twelve months).

Figure 2- Percentage of respondents in target age group



Similar percentages of respondents were driving or learning to drive at twelve months, although the comparison group had a higher percentage of respondents who had passed their driving test already.





## **ANOVA tests**

The one-way analysis of variance test (ANOVA)<sup>4</sup> has been used to analyse the results of this SDSA evaluation. This test is used to determine whether there are any statistically significant differences between the means of three or more independent groups. A post hoc test is used

<sup>&</sup>lt;sup>4</sup> <u>https://statistics.laerd.com/statistical-guides/one-way-anova-statistical-guide.php</u>

to determine which specific groups differed from one another. In this case, Tukey's honestly significant difference (HSD)<sup>5</sup> post hoc test was used, which uses a number that represents the distance between groups, to compare every mean with every other mean.

## **Results**

The results of the statistical testing can be found in tables in Appendix A - Results Data Tables on page 21. Items in column 'sig.' have been highlighted in yellow where there is a statistically significant difference between the baseline and the three month or twelve-month post stages and/or between the intervention and comparison groups. Statistically significant differences between the intervention and comparison groups at the baseline period are highlighted in blue. This is because differences at the baseline stage could affect subsequent post intervention results.

Whilst the tests were conducted on all nine groups, the appendix only shows results where relationships are relevant (for the three time periods for Surrey and Greater Manchester and both intervention groups against the comparison at each time period).

## **Positive Findings**

'Success' is based on finding three conditions within the ANOVA tests:

- 1. That the baseline results for the intervention and comparison groups are NOT statistically significantly different (which indicates that the groups are starting from the same position)
- 2. That there is a statistically significant difference between the baseline and at least one of the post-stages for the intervention group
- 3. That there is a statistically significant difference between the intervention and comparison groups for at least one of the post-stages

There are no measures where the Greater Manchester intervention group meets all three conditions. The comparison group is based in Surrey and it could be that geographical diversity is responsible for differences between the Greater Manchester intervention group and the Surrey comparison group. In many cases, the baseline for Greater Manchester was significantly lower than for both Surrey groups. In addition, the methodology was changed from online questionnaires at baseline and three months post to paper versions at twelve months post. For several measures, there were increases at twelve months but this could also be due to the methodology change.

Given these uncertainties, the results are focused on Surrey interventions. As the film and delivery of SDSA is similar in Surrey and Greater Manchester, the results for Surrey could reflect what we would expect to observe in Greater Manchester, if a local comparison group and a consistent data collection method had been present. Furthermore, findings in the three-month report (using different tests) revealed similar results for both areas.

## Willingness:

The three conditions were met for three out of the seven willingness measures

• <u>Willingness to use mobile phone:</u> Statistically significant reduced willingness at three and twelve months compared to baseline period and against comparison group at three months

<sup>&</sup>lt;sup>5</sup> <u>http://www.statisticshowto.com/post-hoc/</u>

- <u>Willingness to speed on motorways:</u> Statistically significant reduced willingness at three and twelve months compared to baseline period and against comparison group at twelve months
- <u>Willingness to speed on rural roads</u>: Statistically significant reduced willingness at three and twelve months compared to baseline period and against comparison group at twelve months

## Friends' Likelihood:

The three conditions were met for five out of the seven friends' likelihood measures

- <u>Friends' likelihood to drink and drive</u>: Statistically significant reduction in perceived likelihood of friends to drink and drive at three and twelve months compared to baseline period and against comparison group at twelve months
- <u>Friends' likelihood to use mobile phone and drive:</u> Statistically significant reduction in perceived likelihood of friends to use mobile and drive at three and twelve months compared to baseline period and against comparison group at twelve months
- <u>Friends' likelihood to speed on motorways:</u> Statistically significant reduction in perceived likelihood of friends to speed on motorways at three and twelve months compared to baseline period and against comparison group at twelve months
- <u>Friends' likelihood to speed on rural roads:</u> Statistically significant reduction in perceived likelihood of friends to speed on rural roads at three and twelve months compared to baseline period and against comparison group at twelve months
- <u>Friends' likelihood to speed in towns:</u> Statistically significant reduction in perceived likelihood of friends to speed in towns at three months compared to baseline period and against comparison group at twelve months

## Friends' Approval:

The three conditions were met for three out of the seven friends' approval measures

- <u>Friends' approval of speeding on motorways:</u> Statistically significant reduction in perceived approval of friends if they speed on motorways at three and twelve months compared to baseline period and against comparison group at twelve months
- <u>Friends' approval of speeding on rural roads:</u> Statistically significant reduction in perceived approval of friends if they speed on rural roads at three and twelve months compared to baseline period and against comparison group at twelve months
- <u>Friends' approval of speeding in towns:</u> Statistically significant reduction in perceived approval of friends if they speed in towns at three and twelve months compared to baseline period and against comparison group at twelve months

## Attitudes to Risky Behaviours:

The three conditions were met for two out of the eleven attitudes measures

- <u>Can handle a drink or two and still be safe</u>: Statistically significant reduction in agreement of being able to drink and drive at three and twelve months compared to baseline period and against comparison group.
- <u>If I drove sensibly, my friends would make fun of me</u>: Statistically significant reduction in agreement that friends would make fun of them at three and twelve months compared to baseline period and against the comparison group at three months

## Other Measures

## Willingness:

The three conditions were not met for four out of the seven willingness measures

- <u>Willingness to drink alcohol and drive</u>: Statistically significant difference to comparison group at three months but no statistically significant difference from baseline to post stages for intervention groups
- <u>Willingness to take drugs and drive</u>: No statistically significant differences over time or compared to comparison group but statistically significant differences at baseline to the comparison group. Both Greater Manchester and Surrey had lower willingness than the comparison before the intervention.
- <u>Willingness to not wear seatbelt</u>: No statistically significant differences over time for intervention groups but significant difference at three months between Surrey and comparison group.
- <u>Willingness to speed in towns</u>: No statistically significant differences over time for intervention groups but significant difference at twelve months between Surrey and comparison group. Reductions in willingness for Greater Manchester at three months but then increases at twelve months (although not significant).

## Parental Likelihood:

The three conditions were not met for any of the seven parental likelihood measures

• There were no measures which met all three conditions for parental likelihood to engage in the risky behaviours. However, this is to be expected, given that the parents were not exposed to the intervention.

## Friends' Likelihood:

The three conditions were not met for two of the seven friends' likelihood measures

- <u>Friends' likelihood to take drugs and drive:</u> No statistically significant differences over time or between intervention and comparison groups
- <u>Friends' likelihood to not wear seatbelt:</u> Statistically significant differences over time but not between intervention and comparison groups

## Family Approval:

The three conditions were not met for any of the seven family approval measures

• There were no measures which met all three conditions for family approval to engage in the risky behaviours. However, this is to be expected, given that family members were not exposed to the intervention.

## Friends' Approval:

The three conditions were not met for four of the seven friends' approval measures

- <u>Friends' approval of drinking and driving:</u> There were statistically significant reductions in perceived approval of friends if they drank and drove at three and twelve months compared to the baseline period and against the comparison group at twelve months. However, there was also a statistically significant difference between the baselines of the intervention and comparison group, with Surrey's intervention group reporting lower friends' approval at the pre-stage.
- <u>Friends' approval of taking drugs and driving:</u> There were statistically significant reductions in perceived approval of friends if they take drugs and drive at three and twelve months compared to the baseline period but no significant difference to the comparison group.
- <u>Friends' approval of using mobile and driving:</u> There were statistically significant reductions in perceived approval by friends if they use a mobile while driving at three and twelve months compared to the baseline period but no significant difference to the comparison group for Surrey. For Greater Manchester, there were significant differences at three months compared to the baseline and the comparison group, although approval at the baseline stage was particularly low.

 <u>Friends' approval of not wearing a seatbelt</u>: There were statistically significant reductions in perceived approval of friends if they don't wear a seatbelt at three and twelve months compared to the baseline period but no significant difference to the comparison group for Surrey. For Greater Manchester, there were significant differences at three months compared to the baseline and the comparison group, although approval at the baseline stage was particularly low.

## **Collision Vulnerability:**

The three conditions were not met for any of the six collision vulnerability measures

<u>There were no measures were all three conditions for collision vulnerability were met.</u> This will be discussed later in the Passenger Behaviour

The measures which improved by a statistically <u>significant amount all concentrate on driver</u> behaviours, such as speeding, drinking and driving or using a mobile phone. Passenger related behaviours, such as challenging irresponsible behaviour; taking lifts from drink or drug drivers; understanding their <u>responsibilities as a passenger</u>; and seatbelt wearing did not improve by a statistically significant amount.

There is a strong focus in SDSA on the behaviours of drivers and given the age of the target audience (16 to 18 years), many will be pre-drivers. <u>It could be that the intervention should be adapted to include a passenger focus.</u>

• Vulnerability section. There were improvements in how likely they felt it was that they would be involved in a collision if they engaged in risky behaviours but these improvements were also observed amongst the comparison group.

## Attitudes to Risky Behaviours:

The three conditions were not met for nine out of the eleven attitudinal measures

- <u>35mph in a 30mph is normally quite safe:</u> There were statistically significant reductions in agreement at three and twelve months compared to the baseline period but no statistically significant difference to the comparison group
- <u>It is never safe to use cannabis and drive</u>: There were no significant increases in disagreement over time or against the comparison group. Greater Manchester had a more positive baseline than the comparison group.
- <u>More likely to crash if I drive fast</u>: No change in agreement over time or compared to the comparison group.
- <u>I will sometimes use my mobile phone at the wheel</u>: There were statistically significant reductions in agreement at three and twelve months compared to the baseline period but no significant difference to the comparison group
- <u>Would accept a lift from drink/drug-driver as would feel I have no choice</u>: There were no statistically significant reductions in agreement over time although there was a difference at three months with the comparison group for both Greater Manchester and Surrey.
- <u>As a passenger, I could challenge someone who was driving a car irresponsibly</u>: No change in agreement over time or compared to the comparison group.
- <u>Understand have a responsibility to behave safely as a passenger:</u> No change in agreement over time or compared to the comparison group. Baselines were more positive for both Surrey and Greater Manchester than the comparison group
- <u>Don't wear a seatbelt for short journeys</u>: There were statistically significant reductions in agreement at three and twelve months compared to the baseline period but no significant difference to the comparison group

• <u>Driving whilst tired isn't very high risk</u>: There were statistically significant reductions in agreement at three months compared to the baseline period but no significant difference to the comparison group

## Passenger Behaviour

The measures which improved by a statistically significant amount all concentrate on driver behaviours, such as speeding, drinking and driving or using a mobile phone. Passenger related behaviours, such as challenging irresponsible behaviour; taking lifts from drink or drug drivers; understanding their responsibilities as a passenger; and seatbelt wearing did not improve by a statistically significant amount.

There is a strong focus in SDSA on the behaviours of drivers and given the age of the target audience (16 to 18 years), many will be pre-drivers. *It could be that the intervention should be adapted to include a passenger focus.* 

## Vulnerability

As discussed in Appendix B – Prototype Willingness Model, the adolescent-based model includes personal vulnerability as a predictor of both behavioural intentions and behavioural willingness. Personal vulnerability is the perceived risk that the individual believes they will be subjected to if they engage in the risky behaviour. The less conditional vulnerability they feel, the more willing they will be to engage in the risky behaviour.

Interventions such as SDSA could be effective by demonstrating the consequences (threat) of certain risky behaviours, and this demonstration then produces an emotional response and an increased awareness of the danger. Models such as the Extended Parallel Process Model (EPPM) explain how interventions such as SDSA might change the behaviour – through the perceived threat and their perceived efficacy.

- Perceived threat, which has two components:
  - Severity beliefs about the magnitude of the threat
  - Susceptibility beliefs about how likely the threat is to impact one *personally*.
- Perceived efficacy, which also has two components:
  - Response efficacy beliefs about how effective the recommended behaviour will be
  - Self-efficacy beliefs about one's own ability to perform the recommended behaviour (compare perceived behavioural control' in the Theory of Planned Behaviour)<sup>6</sup>.

Three types of response are envisaged, based on the model. If the perceived threat and perceived efficacy are high, then the target audience may take steps to reduce the risk (as hoped for). If perceived efficacy is low, then the audience may instead seek to control the emotion (which is likely to be fear) by avoiding or ignoring the message or denying the personal relevance of the message. Lastly, if the perceived threat is low then there may be no response.

The results from the evaluation appear to indicate that one of the two perceived threat components could be missing: 'susceptibility'. If this is the case, then it could be that the response to the intervention is limited overall. The issue with susceptibility is not that young drivers (especially young men) are unaware of what would happen if they were involved in a collision, but that they believe it is unlikely. This presents an issue for communicating with them as "communications that challenge young male's own self-belief in their driving are likely

<sup>&</sup>lt;sup>6</sup> Carey, R., McDermott, D. & Sarma, K., 2013. The impact of threat appeals on fear arousal and driver behavior: a meta-analysis of experimental research 1990-2011. *PLoS One*, 8 (5)(e62821)

to be ignored."<sup>7</sup> Some research has suggested that focusing on alternative threats might make the target audience feel more susceptibility. Instead of focusing purely on the physical threats of injury and death, threats can also be social, psychological or financial.<sup>8</sup> These threats could include losing their freedom or mobility or the social stigma related to that loss. It should be remembered that the risk needs to be one which they can relate to and is realistic to them – loss of freedom to attend university may have a greater personal impact on them than the threat of being sent to prison (as prison seems like an 'unlikely' scenario to them, based on their own self-belief).

In addition to the susceptibility component of the EPPM, perceived efficacy could be explored. Credible coping mechanisms could be provided (either through SDSA itself or via follow up lessons), with support to show attendees that they are capable of engaging in the safe behaviour. Coping mechanisms could include how to respond to peer pressure or techniques to reduce distraction levels.

Given the findings that SDSA does seem to influence social norms, an additional focus on alternative threats to death and injury, particularly related to social disadvantages, could potentially improve personal vulnerability. Credible coping mechanisms could be incorporated into SDSA to improve perceived efficacy to behave safely.

## Feedback on SDSA

A number of questions were asked, requesting feedback on SDSA 12 months after attendance.

There were high levels of agreement with the following statements:

- I feel that I have benefited from attending a Safe Drive Stay Alive performance
  - o 71% of Greater Manchester respondents agreed or strongly agreed
  - o 66% of Surrey respondents agreed or strongly agreed
- I am now more aware of my responsibilities as a driver/future driver
  - 80% of Greater Manchester respondents agreed or strongly agreed
  - o 68% of Surrey respondents agreed or strongly agreed
- For Surrey respondents, 48% felt that the family speakers had affected their behaviour in a car the most

Follow up work was discussed:

- For Surrey respondents, 5% reported doing follow up work after SDSA attendance and this mainly involved talks with tutors or participating in the evaluation
- A specific follow up lesson was available in Greater Manchester and 19% of respondents reported having this session.

The Young Driver's Guide is given to attendees in Surrey. Questions were asked about how useful they found it:

• 36% of the respondents reported receiving a copy of the Guide

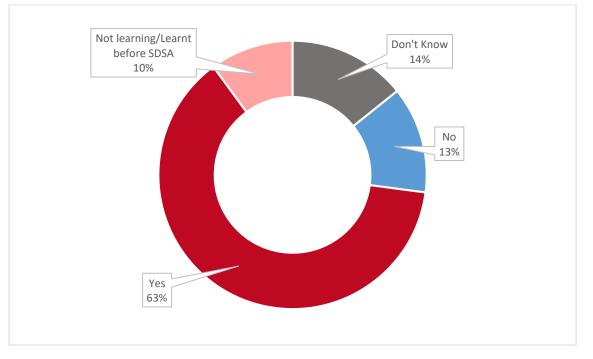
<sup>&</sup>lt;sup>7</sup> Collins, E. et al., 2008. *Rural road safety: drivers and driving*, s.l.: Scottish Government Social Research.

<sup>&</sup>lt;sup>8</sup> Lewis, I., Watson, B. & White, K. M., 2008. An Examination of Message-Relevant Affect in Road Safety Messages: Should Road Safety Advertisements aim to make us Feel Good or Bad?. *Transportation Research*, Volume 11, pp. 403-417.

- 18% of the respondents reported that they still had their copy of the Guide
- 9% of the respondents reported that their parents had looked at the Guide 'very often', 'quite often' or 'occasionally'
- 13% of the respondents reported that they had looked at the Guide 'very often', 'quite often' or 'occasionally'
- 12% of the respondents 'strongly agreed' or 'agreed' that their parents had found the Guide useful
- 14% of the respondents 'strongly agreed' or 'agreed' that they had found the Guide useful

For Greater Manchester respondents, there was a question about whether they thought that SDSA had affected their attitudes as they started to learn to drive. Sixty-three percent of respondents agreed that it had.





A free text question was asked of both sets of attendees. For Surrey, the question asked if the respondents had any comments/suggestions for the SDSA team and for Greater Manchester, the respondents were asked what their lasting impressions of SDSA were.

For Surrey, there were 41 comments and suggestions, although several were about participating in the evaluation. Comments related to SDSA itself included:

The family speakers had a very big impact

Very helpful. Made me realise safety is very important

You are doing a wonderful job and a great service.

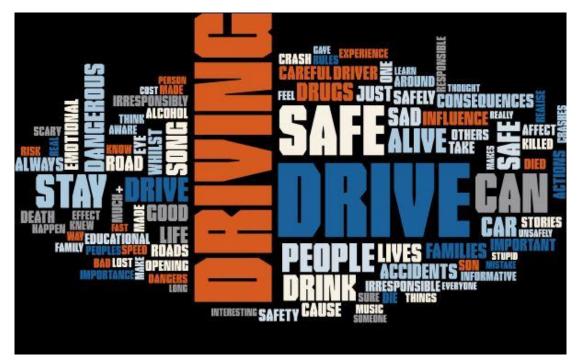
Some of the respondents did not like the loud music at the beginning and one suggested that people should be given a more emphasised option to leave the room. Another respondent thought that more emergency services stories should be included and another suggested that

an interactive exhibition would be a useful addition. Figure 5 shows a Word Cloud of the Surrey respondents' comments and suggestions.



Figure 5 - Surrey respondents' comments and suggestions

Figure 6 - Greater Manchester respondents' lasting impressions of SDSA



For Greater Manchester, there were 219 respondents who answered the question asking for their lasting impressions of SDSA. Figure 6 is a Word Cloud of these responses. Many of the comments related to the song as well as simply saying 'safe drive stay alive'. There were also many comments about drink-driving, taking drugs and driving, and speeding. Comments included:

To be careful as not everybody is safe on the roads, one mistake could cost a life.

It's not just down to how you drive, everyone needs to take responsibility for their own actions before, during and after driving

The families who came up and talked about their only children who had been killed in accidents due to unsafe driving

It was a very emotional experience and made me think differently about how to drive

Being safe when driving is extremely important because if you're driving unsafely and something happens e.g. a crash and someone gets seriously hurt/killed it's not only affecting the driver and passengers in both cars, but also the families, emergency departments etc.

The smallest things can cause devastation. Twenty seconds on the phone can be the difference between life and death.

That if I drive irresponsibly it is not only my life I put at risk. It has made me look at driving as a bigger responsibility and on my lessons I stay aware of all the danger and try to drive as safe as possible.

## Conclusions

This evaluation has provided a unique insight into the efficacy of Safe Drive Stay Alive through the employment of large sample sizes; consistent monitoring over the long term; the use of a comparison group; and utilising an adolescent-based behaviour change model. Many evaluations of young and pre-driver education do not employ all or most of these elements.

The findings provide some positive results. SDSA reduced the willingness of respondents to engage in certain risky driving behaviours; improved some attitudes; and appeared to affect social norms, through reducing the likelihood of their friends to participate in risky behaviours or approve if the respondent themselves engaged in the behaviours. This latter finding is important as subjective norms are thought to influence both behavioural willingness and behavioural intentions in the Prototype Willingness Model. The improvements in social norms might suggest that they thought that their friends had also been affected by the intervention (if they attended) and/or they no longer wanted their friends to be the types of people who were engaging in these behaviours. Lastly, reporting friends' behaviours is often a reflection of the behaviour of the respondents themselves and therefore this could indicate a positive movement in their own disapproval and likelihood.

There were some measures where no or limited statistical significance was observed. Unsurprisingly, this included the likelihood of their parents to engage in risky behaviours or to have changed their approval levels if the respondent acted in a risky manner. As the parents and family members were not exposed to the intervention, it is unlikely that their behaviour would have changed.

There were some behaviours where willingness to engage in the behaviour did not reduce. These include taking drugs or alcohol and driving, both of which had particularly low levels of willingness at the baseline stage. However, willingness to speed in towns or not wear a seatbelt did not improve, over and above the comparison group, after SDSA. There were also some behaviours related to social norms (friends' likelihood and approval), including taking drugs and driving and not wearing a seatbelt which did not improve. These also had low levels at the baseline stage.

Attitudes towards some behaviours also did not improve to a statistically significant extent (over and above changes observed amongst the comparison group). These included passenger related behaviours, such as challenging irresponsible behaviour; taking lifts from drink or drug drivers; understanding their responsibilities as a passenger; and seatbelt wearing. The strong driver focus could mean that messages about passenger responsibility are not absorbed and this could be something to consider in the future.

Lastly, the perceived vulnerability of respondents did not increase after SDSA. Personal vulnerability is where the target audience feel that they are more likely to be involved in a collision if they engage in the risky behaviours. Behaviour change models seek to explain how interventions such as SDSA might work and these could be explored to increase perceived vulnerability. Incorporating alternative consequences to risky behaviour, including loss of freedom and mobility and the resulting social stigma could be effective. In addition to increasing perceived vulnerability to negative consequences, perceived efficacy could be explored. Credible coping mechanisms could be provided (either through SDSA itself or follow up lessons), with support to show attendees that they are capable of engaging in the safe behaviour.

The respondents, in general, provided positive feedback to SDSA twelve months after attendance. Over two-thirds thought that they had benefitted from attending SDSA and free text feedback included positive comments. Whilst only one-sixth of Surrey's respondents reported that they still had their copy of the Young Drivers' Guide, this could be seen as positive 12 months after receiving it, especially as the 3-month evaluation revealed issues with distribution of the Guide.

Finally, it is recommended that consideration be given to:

- Increasing the passenger-related content
- Exploring ways to increase vulnerability through highlighting other consequences of risky behaviour
- Exploring ways to incorporate credible coping mechanisms into the intervention and ensure that the attendees believe they are able to engage in safe behaviours
- Promote the follow-up lessons to support SDSA
- Evaluate the follow-up lessons

# **Appendix A - Results Data Tables**

#### **Multiple Comparisons**

### **Alcohol Willingness**

(I) Group	(J) Group	Mean			95% Confide	ence Interval
Cloup	Croup	Difference (I-J)	Std. Error	Sig.	Lower Bound	Upper Bound
PreGM	3GM	020	.037	1.000	13	.09
	12GM	121	.040	.059	24	.00
	PreC	246*	.043	<mark>.000</mark>	38	11
3GM	3C	228*	.044	<mark>.000</mark>	37	09
12GM	12C	081	.047	.738	23	.07
PreS	3S	.072	.029	.254	02	.16
	12S	.065	.032	.504	03	.16
	PreC	086	.043	.552	22	.05
3S	3C	159 <sup>*</sup>	.038	<mark>.001</mark>	28	04
12S	12C	107	.040	.161	23	.02

\*. The mean difference is significant at the 0.05 level.

### **Drug Willingness**

(I) Group	(J) Group	Mean			95% Confide	ence Interval
Croup	Croup	Difference (I-J)	Std. Error	Sig.	Lower Bound	Upper Bound
PreGM	3GM	009	.030	1.000	10	.08
	12GM	077	.032	.292	18	.02
	PreC	153 <sup>*</sup>	.035	.000	26	04
3GM	3C	072	.036	.565	18	.04
12GM	12C	.009	.039	1.000	11	.13
PreS	3S	029	.024	.953	10	.05
	12S	008	.026	1.000	09	.07
	PreC	132 <sup>*</sup>	.036	<mark>.006</mark>	24	02
3S	3C	031	.031	.986	13	.07
12S	12C	041	.033	.948	14	.06

### Mobile phone Willingness

(I) Group	(J) Group	Mean			95% Confide	ence Interval
Croup	Croup	Difference (I-J)	Std. Error	Sig.	Lower Bound	Upper Bound
PreGM	3GM	.081	.052	.825	08	.24
	12GM	115	.056	.505	29	.06
	PreC	266*	.061	<mark>.000</mark>	45	08
3GM	3C	172	.063	.135	37	.02
12GM	12C	.089	.067	.922	12	.30
PreS	3S	.206*	.041	<mark>.000</mark>	.08	.33
	12S	.228 <sup>*</sup>	.045	<mark>.000</mark>	.09	.37
	PreC	149	.061	.272	34	.04
3S	3C	179 <sup>*</sup>	.054	<mark>.025</mark>	35	01
12S	12C	137	.056	.272	31	.04

\*. The mean difference is significant at the 0.05 level.

### Motorway Speeding Willingness

(I) Group	(J) Group	Mean			95% Confide	ence Interval
Croup	Croup	Difference (I-J)	Std. Error	Sig.	Lower Bound	Upper Bound
PreGM	3GM	.084	.064	.925	11	.28
	12GM	131	.070	.629	35	.09
	PreC	435*	.075	<mark>.000</mark>	67	20
3GM	3C	359*	.078	<mark>.000</mark>	60	12
12GM	12C	129	.083	.827	39	.13
PreS	3S	.205*	.051	. <mark>002</mark>	.05	.36
	12S	.263*	.055	<mark>.000</mark>	.09	.44
	PreC	199	.076	.175	43	.04
3S	3C	244*	.067	<mark>.008</mark>	45	04
12S	12C	287*	.070	<mark>.001</mark>	50	07

### **Rural Speeding Willingness**

(I) Group	(J) Group	Mean			95% Confide	ence Interval
Croup	Croup	Difference (I-J)	Std. Error	Sig.	Lower Bound	Upper Bound
PreGM	3GM	.136	.059	.335	05	.32
	12GM	195	.064	.061	39	.00
	PreC	380*	.069	<mark>.000</mark>	59	17
3GM	3C	388*	.072	<mark>.000</mark>	61	17
12GM	12C	137	.076	.680	37	.10
PreS	3S	.176*	.047	<mark>.006</mark>	.03	.32
	12S	.229 <sup>*</sup>	.051	<mark>.000</mark>	.07	.39
	PreC	143	.070	.509	36	.07
3S	3C	191 <sup>*</sup>	.061	<mark>.048</mark>	38	.00
12S	12C	324*	.065	<mark>.000</mark>	52	12

\*. The mean difference is significant at the 0.05 level.

### No Seatbelt Willingness

(I) Group	(J) Group	Mean			95% Confide	ence Interval
Croup	Croup	Difference (I-J)	Std. Error	Sig.	Lower Bound	Upper Bound
PreGM	3GM	.106	.059	.689	08	.29
	12GM	110	.063	.706	30	.08
	PreC	129	.066	.581	33	.08
3GM	3C	185	.060	.052	37	.00
12GM	12C	.119	.064	.630	08	.32
PreS	3S	.068	.040	.728	05	.19
	12S	.129	.043	.067	.00	.26
	PreC	152	.059	.187	33	.03
3S	3C	171*	.051	<mark>.025</mark>	33	01
12S	12C	143	.054	.171	31	.03

\*. The mean difference is significant at the 0.05 level.

### **Town Speeding Willingness**

(I) Group	(J) Group	Mean			95% Confide	ence Interval
Croup	Croup	Difference (I-J)	Std. Error	Sig.	Lower Bound	Upper Bound
PreGM	3GM	.078	.054	.884	09	.25
	12GM	164	.059	.121	35	.02
	PreC	394*	.064	<mark>.000</mark>	59	20
3GM	3C	334*	.066	<mark>.000</mark>	54	13
12GM	12C	218 <sup>*</sup>	.070	. <mark>049</mark>	43	.00
PreS	3S	.089	.044	.507	05	.22
	12S	.059	.047	.942	09	.21
	PreC	200	.065	.052	40	.00
3S	3C	151	.057	.158	33	.02
12S	12C	247*	.059	<mark>.001</mark>	43	06

\*. The mean difference is significant at the 0.05 level.

#### Parental Likelihood Alcohol

(I) Group	(J) Group	Mean			95% Confide	ence Interval
Croup	Croup	Difference (I-J)	Std. Error	Sig.	Lower Bound	Upper Bound
PreGM	3GM	082	.050	.780	24	.07
	12GM	076	.054	.895	24	.09
	PreC	125	.058	.436	30	.06
3GM	3C	152	.060	.218	34	.03
12GM	12C	155	.064	.274	35	.04
PreS	3S	.000	.040	1.000	12	.12
	12S	.060	.043	.897	07	.19
	PreC	.076	.059	.932	11	.26
3S	3C	033	.052	.999	19	.13
12S	12C	090	.054	.772	26	.08

### Parental Likelihood Drugs

(I) Group	(J) Group	Mean			95% Confide	ence Interval
Croup	Croup	Difference (I-J)	Std. Error	Sig.	Lower Bound	Upper Bound
PreGM	3GM	081	.038	.463	20	.04
	12GM	075	.042	.690	20	.05
	PreC	009	.045	1.000	15	.13
3GM	3C	003	.046	1.000	15	.14
12GM	12C	.035	.049	.999	12	.19
PreS	3S	084	.031	.133	18	.01
	12S	041	.033	.946	14	.06
	PreC	036	.045	.997	18	.10
3S	3C	027	.040	.999	15	.10
12S	12C	025	.042	1.000	16	.10

### Parental Likelihood Mobile Phone Use

(I) Group	(J) Group	Mean			95% Confide	ence Interval
Croup	Croup	Difference (I-J)	Std. Error	Sig.	Lower Bound	Upper Bound
PreGM	3GM	.059	.063	.991	14	.26
	12GM	028	.069	1.000	24	.19
	PreC	076	.074	.983	31	.15
3GM	3C	115	.077	.860	35	.12
12GM	12C	057	.082	.999	31	.20
PreS	3S	.179*	.051	<mark>.012</mark>	.02	.34
	12S	.307*	.055	<mark>.000</mark>	.14	.48
	PreC	.218	.075	.088	01	.45
3S	3C	.059	.066	.993	15	.26
12S	12C	098	.069	.890	31	.12

\*. The mean difference is significant at the 0.05 level.

### Parental Likelihood Motorway Speeding

(I) Group	(J) Group	Mean			95% Confide	ence Interval
Cloup	Cloup	Difference (I-J)	Std. Error	Sig.	Lower Bound	Upper Bound
PreGM	3GM	012	.069	1.000	23	.20
	12GM	095	.075	.941	33	.14
	PreC	318*	.081	<mark>.003</mark>	57	07
3GM	3C	216	.084	.199	48	.04
12GM	12C	227	.089	.212	50	.05
PreS	3S	.197*	.055	<mark>.011</mark>	.03	.37
	12S	.264*	.060	<mark>.000</mark>	.08	.45
	PreC	.040	.082	1.000	21	.29
3S	3C	067	.072	.991	29	.16
12S	12C	229	.076	.063	46	.01

\*. The mean difference is significant at the 0.05 level.

### Parental Likelihood Rural Speeding

(I) Group	(J) Group	Mean			95% Confide	ence Interval
Croup	Croup	Difference (I-J)	Std. Error	Sig.	Lower Bound	Upper Bound
PreGM	3GM	.022	.065	1.000	18	.22
	12GM	153	.071	.434	37	.07
	PreC	324*	.076	<mark>.001</mark>	56	09
3GM	3C	304*	.079	. <mark>004</mark>	55	06
12GM	12C	228	.084	.140	49	.03
PreS	3S	.155	.052	.071	01	.32
	12S	.169	.056	.067	01	.34
	PreC	.025	.077	1.000	21	.26
3S	3C	087	.068	.933	30	.12
12S	12C	201	.071	.108	42	.02

\*. The mean difference is significant at the 0.05 level.

## Parental Likelihood No Seatbelt

(I) Group	(J) Group	Mean			95% Confide	ence Interval
Croup	Croup	Difference (I-J)	Std. Error	Sig.	Lower Bound	Upper Bound
PreGM	3GM	.011	.051	1.000	15	.17
	12GM	095	.056	.748	27	.08
	PreC	017	.060	1.000	20	.17
3GM	3C	085	.062	.915	28	.11
12GM	12C	.063	.066	.990	14	.27
PreS	3S	010	.041	1.000	14	.12
	12S	.060	.045	.919	08	.20
	PreC	.019	.061	1.000	17	.21
3S	3C	027	.054	1.000	19	.14
12S	12C	055	.056	.988	23	.12

### Parental Likelihood Speeding Towns

(I) Group	(J) Group	Mean			95% Confide	ence Interval
Croup	Croup	Difference (I-J)	Std. Error	Sig.	Lower Bound	Upper Bound
PreGM	3GM	060	.062	.988	25	.13
	12GM	116	.068	.738	33	.09
	PreC	222	.073	.057	45	.00
3GM	3C	205	.075	.141	44	.03
12GM	12C	277*	.080	<mark>.016</mark>	53	03
PreS	3S	.070	.050	.896	08	.22
	12S	.089	.054	.777	08	.26
	PreC	.067	.073	.992	16	.30
3S	3C	046	.065	.999	25	.16
12S	12C	192	.068	.108	40	.02

\*. The mean difference is significant at the 0.05 level.

#### Friends Likelihood Alcohol

(I) Group	(J) Group	Mean			95% Confide	ence Interval
Croup	Cloup	Difference (I-J)	Std. Error	Sig.	Lower Bound	Upper Bound
PreGM	3GM	.092	.058	.810	09	.27
	12GM	020	.063	1.000	22	.17
	PreC	311*	.068	<mark>.000</mark>	52	10
3GM	3C	237*	.070	<mark>.021</mark>	45	02
12GM	12C	160	.074	.436	39	.07
PreS	3S	.175*	.046	<mark>.005</mark>	.03	.32
	12S	.250*	.050	. <mark>000</mark> .	.09	.41
	PreC	138	.069	.538	35	.08
3S	3C	147	.060	.262	33	.04
12S	12C	257*	.063	<mark>.002</mark>	45	06

\*. The mean difference is significant at the 0.05 level.

### Friends Likelihood Drugs

(I) Group	(J) Group	Mean			95% Confide	ence Interval
Croup	Croup	Difference (I-J)	Std. Error	Sig.	Lower Bound	Upper Bound
PreGM	3GM	.036	.054	.999	13	.20
	12GM	068	.059	.966	25	.11
	PreC	183	.063	.090	38	.01
3GM	3C	091	.065	.901	29	.11
12GM	12C	.048	.070	.999	17	.26
PreS	3S	.020	.043	1.000	11	.15
	12S	.116	.047	.242	03	.26
	PreC	147	.064	.344	35	.05
3S	3C	040	.056	.999	21	.13
12S	12C	100	.059	.751	28	.08

#### Friends Likelihood Mobile Phone Use

(I) Group	(J) Group	Mean			95% Confidence Interval	
Croup	Croup	Difference (I-J)	Std. Error	Sig.	Lower Bound	Upper Bound
PreGM	3GM	.232*	.064	<mark>.010</mark>	.03	.43
	12GM	.011	.070	1.000	21	.23
	PreC	184	.075	.261	42	.05
3GM	3C	115	.078	.866	36	.13
12GM	12C	.015	.083	1.000	24	.27
PreS	3S	.315*	.052	<mark>.000</mark>	.15	.47
	12S	.416 <sup>*</sup>	.056	<mark>.000</mark>	.24	.59
	PreC	065	.076	.995	30	.17
3S	3C	079	.067	.962	29	.13
12S	12C	270*	.071	<mark>.004</mark>	49	05

\*. The mean difference is significant at the 0.05 level.

### Friends Likelihood Motorway Speeding

(I) Group	(J) Group	Mean			95% Confide	ence Interval
Croup	Cloup	Difference (I-J)	Std. Error	Sig.	Lower Bound	Upper Bound
PreGM	3GM	.142	.065	.403	06	.34
	12GM	038	.070	1.000	26	.18
	PreC	321*	.076	<mark>.001</mark>	56	09
3GM	3C	242	.079	.053	49	.00
12GM	12C	177	.083	.456	44	.08
PreS	3S	.235*	.052	<mark>.000</mark>	.07	.40
	12S	.220 <sup>*</sup>	.056	<mark>.003</mark>	.05	.39
	PreC	177	.077	.335	41	.06
3S	3C	190	.067	.110	40	.02
12S	12C	291 <sup>*</sup>	.071	<mark>.001</mark>	51	07

\*. The mean difference is significant at the 0.05 level.

### Friends Likelihood Rural Speeding

(I) Group	(J) Group	Mean			95% Confide	ence Interval
Cloup	Croup	Difference (I-J)	Std. Error	Sig.	Lower Bound	Upper Bound
PreGM	3GM	.137	.063	.423	06	.33
	12GM	083	.068	.952	30	.13
	PreC	258 <sup>*</sup>	.074	<mark>.014</mark>	49	03
3GM	3C	275*	.076	<mark>.010</mark>	51	04
12GM	12C	201	.081	.238	45	.05
PreS	3S	.202*	.050	<mark>.002</mark>	.05	.36
	12S	.196 <sup>*</sup>	.055	<mark>.010</mark>	.03	.37
	PreC	080	.075	.978	31	.15
3S	3C	162	.065	.242	37	.04
12S	12C	303*	.069	<mark>.000</mark>	52	09

\*. The mean difference is significant at the 0.05 level.

#### Friends Likelihood No Seatbelt

(I) Group	(J) Group	Mean			95% Confide	ence Interval
Croup	Croup	Difference (I-J)	Std. Error	Sig.	Lower Bound	Upper Bound
PreGM	3GM	.117	.060	.582	07	.30
	12GM	060	.066	.992	26	.14
	PreC	225*	.071	<mark>.039</mark>	44	01
3GM	3C	152	.073	.488	38	.07
12GM	12C	.133	.078	.742	11	.37
PreS	3S	.201*	.048	<mark>.001</mark>	.05	.35
	12S	.312 <sup>*</sup>	.052	<mark>.000</mark>	.15	.47
	PreC	121	.072	.756	34	.10
3S	3C	132	.063	.477	33	.06
12S	12C	135	.066	.516	34	.07

### Friends Likelihood Speeding Towns

(I) Group	(J) Group	Mean			95% Confide	ence Interval
Croup	Cloup	Difference (I-J)	Std. Error	Sig.	Lower Bound	Upper Bound
PreGM	3GM	.088	.062	.889	10	.28
	12GM	067	.067	.986	28	.14
	PreC	307*	.072	<mark>.001</mark>	53	08
3GM	3C	222	.075	.075	45	.01
12GM	12C	209	.080	.177	46	.04
PreS	3S	.181*	.050	<mark>.008</mark>	.03	.33
	12S	.141	.054	.178	03	.31
	PreC	152	.073	.491	38	.08
3S	3C	160	.064	.239	36	.04
12S	12C	261*	.068	<mark>.004</mark>	47	05

\*. The mean difference is significant at the 0.05 level.

### Family Approval Alcohol

(I) Group	(J) Group	Mean			95% Confide	ence Interval
Croup	Cloup	Difference (I-J)	Std. Error	Sig.	Lower Bound	Upper Bound
PreGM	3GM	004	.037	1.000	12	.11
	12GM	052	.040	.930	18	.07
	PreC	196 <sup>*</sup>	.043	<mark>.000</mark>	33	06
3GM	3C	208*	.045	<mark>.000</mark>	35	07
12GM	12C	073	.047	.836	22	.07
PreS	3S	024	.029	.997	11	.07
	12S	.040	.032	.940	06	.14
	PreC	104	.043	.288	24	.03
3S	3C	097	.038	.218	21	.02
12S	12C	073	.040	.674	20	.05

### Family Approval Drugs

(I) Group	(J) Group	Mean			95% Confide	ence Interval
Croup	Croup	Difference (I-J)	Std. Error	Sig.	Lower Bound	Upper Bound
PreGM	3GM	019	.032	1.000	12	.08
	12GM	041	.034	.961	15	.07
	PreC	076	.037	.507	19	.04
3GM	3C	117	.038	.060	24	.00
12GM	12C	015	.041	1.000	14	.11
PreS	3S	040	.025	.810	12	.04
	12S	027	.027	.986	11	.06
	PreC	082	.037	.410	20	.03
3S	3C	102	.033	.051	20	.00
12S	12C	034	.035	.986	14	.07

\*. The mean difference is significant at the 0.05 level.

### Family Approval Mobile

(I) Group	(J) Group	Mean			95% Confide	ence Interval
Croup	Cloup	Difference (I-J)	Std. Error	Sig.	Lower Bound	Upper Bound
PreGM	3GM	.101	.045	.377	04	.24
	12GM	.009	.049	1.000	14	.16
	PreC	179 <sup>*</sup>	.052	<mark>.019</mark>	34	02
3GM	3C	124	.054	.362	29	.05
12GM	12C	.034	.058	1.000	15	.21
PreS	3S	.137*	.036	<mark>.004</mark>	.03	.25
	12S	.245 <sup>*</sup>	.039	<mark>.000</mark>	.12	.37
	PreC	049	.053	.991	21	.12
3S	3C	030	.047	.999	18	.11
12S	12C	072	.049	.867	22	.08

### Family Approval Motorway Speeding

(I) Group	(J) Group	Mean			95% Confide	ence Interval
Croup	Croup	Difference (I-J)	Std. Error	Sig.	Lower Bound	Upper Bound
PreGM	3GM	.070	.050	.904	09	.23
	12GM	012	.055	1.000	18	.16
	PreC	256*	.059	<mark>.000</mark>	44	07
3GM	3C	261*	.061	<mark>.001</mark>	45	07
12GM	12C	114	.065	.705	31	.09
PreS	3S	.106	.040	.170	02	.23
	12S	.223 <sup>*</sup>	.044	<mark>.000</mark>	.09	.36
	PreC	040	.059	.999	22	.14
3S	3C	081	.052	.827	24	.08
12S	12C	133	.055	.271	30	.04

\*. The mean difference is significant at the 0.05 level.

### Family Approval Rural Speeding

(I) Group	(J) Group	Mean			95% Confide	ence Interval
Croup	Croup	Difference (I-J)	Std. Error	Sig.	Lower Bound	Upper Bound
PreGM	3GM	.094	.048	.567	05	.24
	12GM	.003	.052	1.000	16	.16
	PreC	167	.056	.067	34	.01
3GM	3C	289*	.058	<mark>.000</mark>	47	11
12GM	12C	144	.061	.316	33	.05
PreS	3S	.083	.038	.414	03	.20
	12S	.174*	.041	<mark>.001</mark>	.05	.30
	PreC	.011	.056	1.000	16	.19
3S	3C	101	.050	.519	25	.05
12S	12C	136	.052	.182	30	.03

#### Family Approval No Seatbelt

(I) Group	(J) Group	Mean			95% Confide	ence Interval
Croup	Croup	Difference (I-J)	Std. Error	Sig.	Lower Bound	Upper Bound
PreGM	3GM	.049	.042	.964	08	.18
	12GM	.020	.045	1.000	12	.16
	PreC	137	.049	.113	29	.01
3GM	3C	119	.051	.315	28	.04
12GM	12C	.005	.054	1.000	16	.17
PreS	3S	.083	.033	.249	02	.19
	12S	.171*	.036	<mark>.000</mark>	.06	.28
	PreC	080	.049	.794	23	.07
3S	3C	096	.044	.401	23	.04
12S	12C	089	.046	.580	23	.05

\*. The mean difference is significant at the 0.05 level.

### Family Approval Town Speeding

(I) Group	(J) Group	Mean			95% Confide	ence Interval
Croup	Croup	Difference (I-J)	Std. Error	Sig.	Lower Bound	Upper Bound
PreGM	3GM	.075	.046	.787	07	.22
	12GM	050	.050	.986	21	.11
	PreC	219 <sup>*</sup>	.054	<mark>.002</mark>	39	05
3GM	3C	275*	.056	<mark>.000</mark>	45	10
12GM	12C	121	.059	.513	31	.06
PreS	3S	.062	.037	.766	05	.18
	12S	.126*	.040	<mark>.043</mark>	.00	.25
	PreC	028	.054	1.000	20	.14
3S	3C	071	.048	.868	22	.08
12S	12C	107	.050	.460	26	.05

### Friends Approval Alcohol

(I) Group	(J) Group	Mean			95% Confide	ence Interval
Croup	Croup	Difference (I-J)	Std. Error	Sig.	Lower Bound	Upper Bound
PreGM	3GM	.132	.051	.188	03	.29
	12GM	041	.056	.998	21	.13
	PreC	409*	.060	<mark>.000</mark>	59	22
3GM	3C	308*	.062	<mark>.000</mark>	50	12
12GM	12C	087	.066	.926	29	.12
PreS	3S	.167*	.041	<mark>.001</mark>	.04	.29
	12S	.298 <sup>*</sup>	.044	<mark>.000</mark>	.16	.43
	PreC	190 <sup>*</sup>	.060	<mark>.043</mark>	38	.00
3S	3C	124	.053	.312	29	.04
12S	12C	207*	.056	<mark>.006</mark>	38	03

\*. The mean difference is significant at the 0.05 level.

### **Friends Approval Drugs**

(I) Group	(J) Group	Mean			95% Confide	ence Interval
Croup	Cloup	Difference (I-J)	Std. Error	Sig.	Lower Bound	Upper Bound
PreGM	3GM	.080	.049	.780	07	.23
	12GM	018	.053	1.000	18	.15
	PreC	241*	.057	<mark>.001</mark>	42	06
3GM	3C	146	.059	.252	33	.04
12GM	12C	.001	.063	1.000	20	.20
PreS	3S	.127*	.039	<mark>.033</mark>	.01	.25
	12S	.195*	.042	. <mark>000</mark> .	.06	.33
	PreC	145	.058	.229	32	.03
3S	3C	097	.051	.613	25	.06
12S	12C	117	.054	.421	28	.05

#### Friends Approval Mobile Phones

(I) Group	(J) Group	Mean			95% Confide	ence Interval
Croup	Croup	Difference (I-J)	Std. Error	Sig.	Lower Bound	Upper Bound
PreGM	3GM	.260*	.053	<mark>.000</mark>	.10	.42
	12GM	.033	.058	1.000	15	.21
	PreC	299*	.062	<mark>.000</mark>	49	11
3GM	3C	284*	.064	<mark>.000</mark>	48	08
12GM	12C	.051	.069	.998	16	.26
PreS	3S	.306*	.043	. <mark>000</mark> .	.17	.44
	12S	.406*	.046	<mark>.000</mark>	.26	.55
	PreC	096	.063	.846	29	.10
3S	3C	126	.055	.353	30	.05
12S	12C	119	.058	.514	30	.06

\*. The mean difference is significant at the 0.05 level.

### Friends Approval Motorway Speeding

(I) Group	(J) Group	Mean			95% Confide	ence Interval
Croup	Cloup	Difference (I-J)	Std. Error	Sig.	Lower Bound	Upper Bound
PreGM	3GM	.197*	.055	<mark>.011</mark>	.03	.37
	12GM	.006	.061	1.000	18	.20
	PreC	352 <sup>*</sup>	.065	<mark>.000</mark>	55	15
3GM	3C	304*	.067	<mark>.000</mark>	51	10
12GM	12C	104	.072	.881	33	.12
PreS	3S	.225*	.044	<mark>.000</mark>	.09	.36
	12S	.314*	.048	<mark>.000</mark>	.16	.46
	PreC	135	.066	.506	34	.07
3S	3C	114	.058	.559	29	.07
12S	12C	194*	.061	<mark>.038</mark>	38	01

\*. The mean difference is significant at the 0.05 level.

## Friends Approval Rural Speeding

(I) Group	(J) Group	Mean			95% Confide	ence Interval
Croup	Croup	Difference (I-J)	Std. Error	Sig.	Lower Bound	Upper Bound
PreGM	3GM	.197*	.054	<mark>.009</mark>	.03	.36
	12GM	.006	.060	1.000	18	.19
	PreC	330*	.064	<mark>.000</mark>	53	13
3GM	3C	316*	.066	<mark>.000</mark>	52	11
12GM	12C	144	.071	.512	36	.07
PreS	3S	.238*	.044	<mark>.000</mark>	.10	.37
	12S	.298 <sup>*</sup>	.047	<mark>.000</mark>	.15	.44
	PreC	085	.064	.923	29	.11
3S	3C	113	.057	.551	29	.06
12S	12C	192*	.060	<mark>.036</mark>	38	01

\*. The mean difference is significant at the 0.05 level.

## Friends Approval Seatbelt

(I) Group	(J) Group	Mean			95% Confide	ence Interval
Croup	Cloup	Difference (I-J)	Std. Error	Sig.	Lower Bound	Upper Bound
PreGM	3GM	.182*	.052	<mark>.012</mark>	.02	.34
	12GM	005	.057	1.000	18	.17
	PreC	260 <sup>*</sup>	.061	<mark>.001</mark>	45	07
3GM	3C	259 <sup>*</sup>	.063	<mark>.001</mark>	45	06
12GM	12C	.082	.067	.952	13	.29
PreS	3S	.247*	.041	<mark>.000</mark>	.12	.38
	12S	.368*	.045	<mark>.000</mark>	.23	.51
	PreC	083	.061	.916	27	.11
3S	3C	147	.054	.140	31	.02
12S	12C	113	.057	.547	29	.06

\*. The mean difference is significant at the 0.05 level.

## Friends Approval Town Speeding

(I) Group	(J) Group	Mean			95% Confide	ence Interval
Croup	Croup	Difference (I-J)	Std. Error	Sig.	Lower Bound	Upper Bound
PreGM	3GM	.193 <sup>*</sup>	.053	<mark>.009</mark>	.03	.36
	12GM	021	.059	1.000	20	.16
	PreC	311*	.063	. <mark>000</mark>	51	12
3GM	3C	322*	.065	<mark>.000</mark>	52	12
12GM	12C	119	.070	.742	33	.10
PreS	3S	.229*	.043	<mark>.000</mark>	.10	.36
	12S	.287*	.046	. <mark>000</mark> .	.14	.43
	PreC	082	.063	.933	28	.11
3S	3C	128	.056	.344	30	.05
12S	12C	198 <sup>*</sup>	.059	<mark>.022</mark>	38	02

\*. The mean difference is significant at the 0.05 level.

## **Collision Vulnerability Alcohol**

(I) Group	(J) Group	Mean			95% Confide	ence Interval
Croup	Croup	Difference (I-J)	Std. Error	Sig.	Lower Bound	Upper Bound
PreGM	3GM	009	.067	1.000	21	.20
	12GM	.073	.072	.985	15	.30
	PreC	075	.078	.989	32	.17
3GM	3C	.050	.081	1.000	20	.30
12GM	12C	.061	.086	.999	20	.33
PreS	3S	.100	.053	.631	07	.26
	12S	.187 <sup>*</sup>	.058	<mark>.033</mark>	.01	.37
	PreC	041	.079	1.000	28	.20
3S	3C	025	.069	1.000	24	.19
12S	12C	018	.073	1.000	24	.21

## **Collision Vulnerability Drugsl**

(I) Group	(J) Group	Mean			95% Confide	ence Interval
Croup	Croup	Difference (I-J)	Std. Error	Sig.	Lower Bound	Upper Bound
PreGM	3GM	.002	.069	1.000	21	.22
	12GM	.117	.075	.827	12	.35
	PreC	.146	.081	.676	10	.40
3GM	3C	.230	.084	.129	03	.49
12GM	12C	.202	.089	.360	07	.48
PreS	3S	.057	.055	.983	11	.23
	12S	.189 <sup>*</sup>	.060	<mark>.041</mark>	.00	.37
	PreC	.014	.082	1.000	24	.27
3S	3C	.043	.072	1.000	18	.27
12S	12C	003	.075	1.000	24	.23

\*. The mean difference is significant at the 0.05 level.

## **Collision Vulnerability Mobile Phone**

(I) Group	(J) Group	Mean			95% Confide	ence Interval
Croup	Croup	Difference (I-J)	Std. Error	Sig.	Lower Bound	Upper Bound
PreGM	3GM	.066	.062	.979	13	.26
	12GM	.128	.067	.609	08	.34
	PreC	144	.072	.553	37	.08
3GM	3C	029	.075	1.000	26	.20
12GM	12C	.092	.080	.965	15	.34
PreS	3S	.182*	.049	<mark>.007</mark>	.03	.34
	12S	.340*	.054	<mark>.000</mark>	.17	.51
	PreC	088	.073	.956	31	.14
3S	3C	090	.064	.896	29	.11
12S	12C	065	.068	.990	27	.15

## **Collision Vulnerability Motorway Speeding**

(I) Group	(J) Group	Mean			95% Confide	ence Interval
Cloup	Croup	Difference (I-J)	Std. Error	Sig.	Lower Bound	Upper Bound
PreGM	3GM	.154	.066	.323	05	.36
	12GM	.094	.072	.928	13	.32
	PreC	146	.077	.623	39	.09
3GM	3C	149	.080	.646	40	.10
12GM	12C	006	.085	1.000	27	.26
PreS	3S	.156	.053	.080	01	.32
	12S	.256 <sup>*</sup>	.057	<mark>.000</mark>	.08	.43
	PreC	038	.078	1.000	28	.20
3S	3C	043	.069	1.000	26	.17
12S	12C	060	.073	.996	29	.16

\*. The mean difference is significant at the 0.05 level.

## Collision Vulnerability Rural Speeding

(I) Group	(J) Group	Mean			95% Confide	ence Interval
Croup	Cloup	Difference (I-J)	Std. Error	Sig.	Lower Bound	Upper Bound
PreGM	3GM	.166	.065	.213	04	.37
	12GM	.110	.071	.826	11	.33
	PreC	047	.076	1.000	28	.19
3GM	3C	128	.079	.794	37	.12
12GM	12C	055	.084	.999	32	.21
PreS	3S	.173*	.052	.025	.01	.34
	12S	.272*	.056	<mark>.000</mark>	.10	.45
	PreC	.055	.077	.999	18	.29
3S	3C	034	.068	1.000	24	.18
12S	12C	115	.071	.803	34	.11

## Collision Vulnerability Town Speeding

(I) Group	(J) Group	Mean			95% Confide	ence Interval
Croup	Croup	Difference (I-J)	Std. Error	Sig.	Lower Bound	Upper Bound
11	12	.125	.064	.560	07	.32
	13	.106	.069	.840	11	.32
	31	094	.074	.940	33	.14
12	32	106	.077	.908	34	.13
13	33	069	.082	.996	32	.19
21	22	.094	.051	.654	06	.25
	23	.203 <sup>*</sup>	.055	<mark>.007</mark>	.03	.37
	31	005	.075	1.000	24	.23
22	32	.016	.066	1.000	19	.22
23	33	077	.070	.974	29	.14

\*. The mean difference is significant at the 0.05 level.

## Attitudes 35mph in a 30mph

(I) Group	(J) Group	Mean			95% Confide	ence Interval
Croup	Croup	Difference (I-J)	Std. Error	Sig.	Lower Bound	Upper Bound
PreGM	3GM	.222*	.064	<mark>.015</mark>	.02	.42
	12GM	.175	.070	.239	04	.39
	PreC	232 <sup>*</sup>	.075	<mark>.049</mark>	46	.00
3GM	3C	233	.078	.068	47	.01
12GM	12C	139	.084	.771	40	.12
PreS	3S	.279*	.051	<mark>.000</mark>	.12	.44
	12S	.315*	.056	<mark>.000</mark>	.14	.49
	PreC	016	.076	1.000	25	.22
3S	3C	075	.067	.972	28	.13
12S	12C	063	.071	.994	28	.16

\*. The mean difference is significant at the 0.05 level.

## Attitudes Cannabis is never safe when driving

(I) Group	(J) Group	Mean			95% Confide	ence Interval
Croup	Croup	Difference (I-J)	Std. Error	Sig.	Lower Bound	Upper Bound
PreGM	3GM	.122	.085	.885	14	.39
	12GM	.170	.094	.680	12	.46
	PreC	.278	.100	.120	03	.59
3GM	3C	062	.104	1.000	39	.26
12GM	12C	099	.112	.994	45	.25
PreS	3S	.036	.069	1.000	18	.25
	12S	.017	.075	1.000	21	.25
	PreC	.346*	.101	<mark>.018</mark>	.03	.66
3S	3C	.092	.090	.984	19	.37
12S	12C	.122	.094	.935	17	.41

\*. The mean difference is significant at the 0.05 level.

#### Attitudes Can handle a drink or two

(I) Group	(J) Group	Mean			95% Confide	ence Interval
Croup	Cloup	Difference (I-J)	Std. Error	Sig.	Lower Bound	Upper Bound
PreGM	3GM	.045	.065	.999	16	.25
	12GM	222*	.071	<mark>.047</mark>	44	.00
	PreC	378*	.076	<mark>.000</mark>	61	14
3GM	3C	408*	.079	<mark>.000</mark>	65	16
12GM	12C	.025	.085	1.000	24	.29
PreS	3S	.244*	.052	<mark>.000</mark>	.08	.41
	12S	.344*	.056	<mark>.000</mark>	.17	.52
	PreC	107	.077	.899	35	.13
3S	3C	336*	.068	<mark>.000</mark>	55	13
12S	12C	271*	.072	. <mark>005</mark>	49	05

## Attitudes More likely to crash if drive fast

(I) Group	(J) Group	Mean			95% Confide	ence Interval
Croup	Croup	Difference (I-J)	Std. Error	Sig.	Lower Bound	Upper Bound
PreGM	3GM	035	.061	1.000	22	.15
	12GM	.101	.067	.851	11	.31
	PreC	.189	.071	.168	03	.41
3GM	3C	.140	.074	.620	09	.37
12GM	12C	.025	.080	1.000	22	.27
PreS	3S	.011	.049	1.000	14	.16
	12S	.010	.053	1.000	15	.17
	PreC	.179	.072	.242	04	.40
3S	3C	.085	.064	.923	11	.28
12S	12C	.106	.067	.819	10	.31

## Attitudes Friends will male fun if drive responsibly

(I) Group	(J) Group	Mean			95% Confide	ence Interval
Croup	Croup	Difference (I-J)	Std. Error	Sig.	Lower Bound	Upper Bound
PreGM	3GM	.118	.056	.473	06	.29
	12GM	004	.062	1.000	20	.19
	PreC	180	.066	.145	39	.03
3GM	3C	260*	.069	<mark>.005</mark>	47	05
12GM	12C	003	.074	1.000	23	.23
PreS	3S	.182*	.045	<mark>.002</mark>	.04	.32
	12S	.240*	.049	<mark>.000</mark>	.09	.39
	PreC	100	.067	.864	31	.11
3S	3C	244*	.059	<mark>.001</mark>	43	06
12S	12C	167	.062	.157	36	.03

\*. The mean difference is significant at the 0.05 level.

#### Attitudes Will sometimes use mobile at wheel

(I) Group	(J) Group	Mean			95% Confide	ence Interval
Croup	Croup	Difference (I-J)	Std. Error	Sig.	Lower Bound	Upper Bound
PreGM	3GM	.117	.062	.627	08	.31
	12GM	017	.068	1.000	23	.20
	PreC	205	.073	.110	43	.02
3GM	3C	162	.076	.446	40	.07
12GM	12C	.140	.081	.729	11	.39
PreS	3S	.322*	.050	<mark>.000</mark>	.17	.48
	12S	.473 <sup>*</sup>	.054	<mark>.000</mark>	.30	.64
	PreC	028	.073	1.000	26	.20
3S	3C	191	.065	.083	39	.01
12S	12C	172	.069	.228	39	.04

\*. The mean difference is significant at the 0.05 level.

#### Attitudes No choice but to take lift

(I) Group	(J) Group	Mean			95% Confidence Interval	
Croup	Cloup	Difference (I-J)	Std. Error	Sig.	Lower Bound	Upper Bound
PreGM	3GM	.093	.048	.586	06	.24
	12GM	053	.053	.986	22	.11
	PreC	180 <sup>*</sup>	.056	<mark>.038</mark>	35	01
3GM	3C	218*	.059	<mark>.006</mark>	40	04
12GM	12C	062	.063	.987	26	.13
PreS	3S	.102	.039	.174	02	.22
	12S	.073	.042	.719	06	.20
	PreC	131	.057	.339	31	.05
3S	3C	179 <sup>*</sup>	.051	<mark>.012</mark>	34	02
12S	12C	140	.053	.178	31	.03

\*. The mean difference is significant at the 0.05 level.

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#### Attitudes Challenge as a passenger

(I) Group	(J) Group	Mean			95% Confidence Interval	
Croup	Croup	Difference (I-J)	Std. Error	Sig.	Lower Bound	Upper Bound
PreGM	3GM	.026	.068	1.000	19	.24
	12GM	018	.076	1.000	25	.22
	PreC	032	.081	1.000	28	.22
3GM	3C	203	.084	.269	46	.06
12GM	12C	161	.090	.692	44	.12
PreS	3S	002	.055	1.000	17	.17
	12S	085	.060	.891	27	.10
	PreC	.126	.082	.834	13	.38
3S	3C	016	.072	1.000	24	.21
12S	12C	.065	.076	.995	17	.30

\*. The mean difference is significant at the 0.05 level.

## Attitudes Aware of passenger responsibilities

(I) Group	(J) Group	Mean			95% Confide	ence Interval
Cloup	Cloup	Difference (I-J)	Std. Error	Sig.	Lower Bound	Upper Bound
PreGM	3GM	.161	.059	.137	02	.34
	12GM	.082	.065	.943	12	.28
	PreC	.275*	.069	<mark>.002</mark>	.06	.49
3GM	3C	.082	.072	.970	14	.31
12GM	12C	.112	.077	.878	13	.35
PreS	3S	.058	.048	.951	09	.21
	12S	.036	.052	.999	12	.20
	PreC	.251*	.070	<mark>.011</mark>	.03	.47
3S	3C	.160	.062	.199	03	.35
12S	12C	.134	.066	.515	07	.34

\*. The mean difference is significant at the 0.05 level.

#### Attitudes Sometimes don't wear seatbelt

(I) Group	(J) Group	Mean			95% Confide	ence Interval
Croup	Cloup	Difference (I-J)	Std. Error	Sig.	Lower Bound	Upper Bound
PreGM	3GM	.356*	.082	<mark>.001</mark>	.10	.61
	12GM	.166	.088	.625	11	.44
	PreC	.096	.092	.982	19	.38
3GM	3C	204	.084	.270	47	.06
12GM	12C	.205	.090	.359	07	.48
PreS	3S	.217*	.055	<mark>.003</mark>	.05	.39
	12S	.387*	.060	<mark>.000</mark>	.20	.57
	PreC	048	.081	1.000	30	.20
3S	3C	209	.072	.092	43	.02
12S	12C	160	.076	.475	40	.08

\*. The mean difference is significant at the 0.05 level.

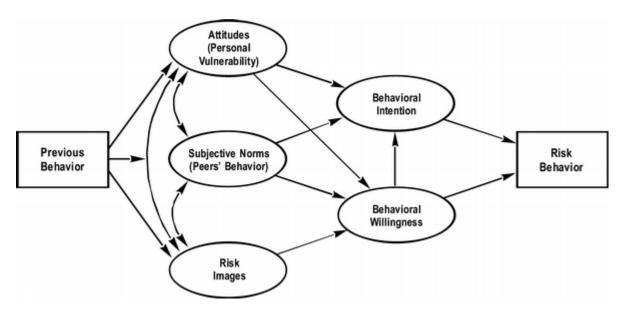
## Attitudes Driving tired isn't high risk

(I) Group	(J) Group	Mean			95% Confide	ence Interval
Croup	Croup	Difference (I-J)	Std. Error	Sig.	Lower Bound	Upper Bound
PreGM	3GM	.120	.061	.557	07	.31
	12GM	.045	.067	.999	16	.25
	PreC	094	.071	.926	32	.13
3GM	3C	156	.074	.475	39	.07
12GM	12C	015	.080	1.000	26	.23
PreS	3S	.169*	.049	<mark>.016</mark>	.02	.32
	12S	.139	.053	.178	03	.30
	PreC	053	.072	.998	28	.17
3S	3C	164	.064	.201	36	.03
12S	12C	068	.068	.985	28	.14

\*. The mean difference is significant at the 0.05 level.

## **Appendix B – Prototype Willingness Model**

Many road safety interventions are founded on the Theory of Planned Behaviour, which works as a model to explain behaviour as the result of a decision-making process, founded on attitudes. It suggests that risk behaviour is intentional and premeditated. There is evidence that the relationship between intentions and behaviour is weaker amongst younger subjects. "For example, Beck and Ajzen (1991) suggested that few young children intend to engage in some risk behaviours (e.g. use illicit drugs), and thus, the low variance in intention restricts the usefulness of the intention construct as a predictor of future behaviours."<sup>9</sup> Given the findings of previous evaluations in Thames Valley, where SDSA respondents had positive intentions towards risky driving behaviours, both before and after the intervention, it would seem that using intentions alone to measure effectiveness of SDSA might not reflect actual subsequent behaviour.



Source: Gerrard et al, A dual-process approach to health risk decision making: The prototype willingness model (Developmental Review 28 (2008) 29-61)

The prototype willingness model (PWM) is a dual-processing model which is based on an assumption that there are two types of decision making involved in health behaviour: a reasoned path (similar to that described in the Theory of Planned Behaviour) "which involves more analytic processing; and a social reaction path that is image-based and involves more heuristic processing. The social reaction path was hypothesised in an attempt to explain adolescents' unintended behaviour, specifically their unplanned decisions to start, continue, or stop behaviours that can put their health at risk. It incorporates two new constructs: *risk prototypes*, which are images of people who engage in risky behaviours (e.g. the typical smoker), and *behavioural willingness* – an openness to engaging in risky behaviour."<sup>10</sup>

The first basic assumption is that adolescent risk behaviour is usually undertaken willingly but that it is often not planned or intended. It is often the case that when they are asked, as in Thames Valley's SDSA evaluation 2013, if they intend to engage in risky behaviour in the

<sup>&</sup>lt;sup>9</sup>Gerrard et al, A dual-process approach to health risk decision making: The prototype willingness model, (Developmental Review 28 (2008) 29-61) p.34

<sup>&</sup>lt;sup>10</sup> *ibid.,* p. 35

future, most will say no, even if they have engaged in that behaviour in the past. "This discrepancy between intentions and behaviour is not a misrepresentation or lack of awareness of their intentions. Instead, it is a reflection of the nature of their risk behaviour and the decision making involved: rather than being premeditated or reasoned, much of it is a reaction to common risk-conducive situations."<sup>11</sup> It suggests that adolescents find themselves in situations which facilitate, although do not demand, risky behaviours. Once in these situations, it is frequently not a reasoned decision making process which determines their behaviour, but it is instead based on their willingness to undertake the behaviour.

"The second major assumption of the model is that children and adolescents have clear cognitive representations or social images (prototypes) of the *type* of person their age who engages in specific risk behaviours, e.g. the "typical" smoker or drinker their age. Although some of these images have a visual component, they are primarily characterological, e.g. the type of person your age who smokes cigarettes... Adolescents realise that if they engage in the behaviours in public or with friends, they will acquire aspects of the image themselves – they would be seen by others as being a drinker, or a smoker, or a drug user. These images are related to adolescents' willingness to engage in risk behaviours, and their subsequent behaviour, i.e. the more favourable their image, the more willing they are to accept the social consequences associated with the behaviour, including being seen by others as someone who engages in the behaviour."<sup>12</sup>

Within the diagram of the model shown at the beginning of this appendix, 'Attitudes (personal vulnerability)' are also shown to affect willingness. It is the perceived risk – the perception of the extent to which the person is vulnerable to the various risks associated with the behaviour. "In the prototype model, this construct is a *conditional* perception of vulnerability, measured in the subjunctive, e.g. "If you were to drink and drive what are the chances that *you* would have an accident?", rather than an absolute assessment, e.g. "How dangerous is it to drink and drive?" The less conditional vulnerability an adolescent feels, the more willing s/he will be to engage in the risk behaviour."<sup>13</sup>However, this relationship doesn't appear to be based on a lack of information – instead, high willingness adolescents are likely to be optimistic about their ability to get away with risky behaviours compared to others and are also more likely to process risk information in a superficial manner by focusing on the gains and not the possible losses. "The more willing a young person is to engage in risk behaviours, the less likely s/he is to think about the consequences associated with that behaviour."<sup>14</sup>

Elsewhere in the model, subjective norms or perceptions of what others are doing are associated with both greater intention and greater willingness, in the same way that positive attitudes towards a risk behaviour are associated with more intention and willingness to engage in the behaviour. Analysis indicated that "social influence factors (e.g. friends' use) were significantly stronger predictors of willingness than intention, reflecting their position in the social reaction path. Conversely, parenting style (e.g. communication with one's children about substances) and, interestingly, parental use, were both antecedent to intention, but not willingness."<sup>15</sup>

Given the evidence that suggests a combination of factors affect the likelihood of adolescents to engage in certain risk behaviours, the Prototype Willingness Model has been used to create questions for the SDSA evaluation. It incorporates questions on willingness, intentions,

<sup>&</sup>lt;sup>11</sup> *ibid*., p. 36

<sup>&</sup>lt;sup>12</sup> *ibid*., p. 37

<sup>&</sup>lt;sup>13</sup> *ibid*., p.39

<sup>&</sup>lt;sup>14</sup> *ibid*., p. 39

<sup>&</sup>lt;sup>15</sup> *ibid*., p. 44

attitudes, subjective norms and behaviour to see if SDSA has any effect on any of these elements of the model. As stated before, intentions are often positive in young people but willingness, vulnerability, social norms and attitude could be better indicators of likelihood to engage in risky behaviour.

## Appendix C – Questionnaire

## **Pre-Questionnaire**



We need your help! We are interested in finding out your thoughts on various driving and passenger behaviours so please take a few minutes to answer the questions in this survey.

We will not find out who you are or share your answers with anyone else so please answer all the questions on your own and as honestly as possible.

Please answer these questions regardless of whether or not you have a full driving licence. For some of these questions, we are interested in your thoughts on how you would drive if you did have a licence. Please read each question carefully and if you don't understand any of them, please ask your tutor.

Suppose you were with a group of people your age and you could drive how you liked. How willing would YOU be to do the following things? Please select the most appropriate response for each statement

	Very Willing	Quite Willing	Not Sure	Not Very Willing	Not at all Willing
Drink alcohol before driving					
Use your mobile to make calls or message while driving					
Take drugs and drive					
Not wear your seatbelt					
Exceed the speed limit in towns					
Exceed the speed limit on motorways					
Exceed the speed limit on rural roads					

How likely are YOUR PARENTS to do the following while driving? Please select the most appropriate response for each statement

	Extremely Unlikely	Unlikely	Not Sure	Likely	Extremely Likely
Drink alcohol before driving					
Use their mobile to make calls or message while driving					
Take drugs and drive					
Not wear their seatbelt					
Exceed the speed limit in towns					
Exceed the speed limit on motorways					
Exceed the speed limit on rural roads					

# How likely are YOUR FRIENDS to do the following while driving? Please select the most appropriate response for each statement

3

	Extremely Unlikely	Unlikely	Not Sure	Likely	Extremely Likely
Drink alcohol before driving					
Use their mobile to make calls or message while driving					
Take drugs and drive					
Not wear their seatbelt					
Exceed the speed limit in towns					
Exceed the speed limit on motorways					
Exceed the speed limit on rural roads					

If you were to do the following things while driving, what are the chances that YOU would have a collision? Please select the most appropriate response for each statement

	Extremely Unlikely	Unlikely	Not Sure	Likely	Extremely Likely
Drink alcohol before driving					
Use your mobile to make calls or message while driving					
Take drugs and drive					
Exceed the speed limit in towns					
Exceed the speed limit on motorways					
Exceed the speed limit on rural roads					

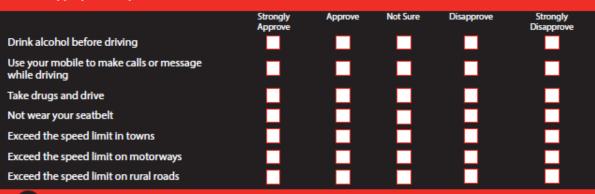
**5** What would YOUR FAMILY think if YOU did the following while driving? Please select the most appropriate response for each statement

	Strongly Approve	Approve	Not Sure	Disapprove	Strongly Disapprove
Drink alcohol before driving					
Use your mobile to make calls or message while driving					
Take drugs and drive					
Not wear your seatbelt					
Exceed the speed limit in towns					
Exceed the speed limit on motorways					
Exceed the speed limit on rural roads					
			-		



# What would YOUR FRIENDS think if YOU did the following while driving? Please select the most appropriate response for each statement

6



#### 7 How much do you agree with the following? Please select the most appropriate response for each statement

	Strongly Agree	Tend to Agree	Neither Agree or	Tend to Disagree	Strongly Disagree
If I am driving, I can handle a drink or two and still be safe			Disagree		
As a driver, I will sometimes use my mobile phone at the wheel					
It is never safe to use cannabis and drive					
I sometimes don't wear a seatbelt for short journeys					
I understand that I have a responsibility to behave safely as a passenger					•
I think 35mph in a 30mph limit is normally quite safe					
Driving whilst tired isn't very high risk					
If I was offered a lift by someone who I knew had taken drugs or had been drinking, I would accept as I would feel I have no choice				•	
I'm more likely to crash if I drive fast					
As a passenger, I could challenge someone who was driving a car irresponsibly					
If I drove sensibly, my friends would make fun of me	-			-	•
8 About You					
Do you plan to learn to drive?					
	12 months	Yes, In the next 5 years		be at some	No, Never
lam: Da	ate of birth:			Home Po	ostcode
Female Male Please check that you have answered all t	he questions	before return	ning this sur	vey to your tu	itor. Thank you!

## **Post-Questionnaire**



We need your help! We are interested in finding out your thoughts on various driving and passenger behaviours so please take a few minutes to answer the questions in this survey.

We will not find out who you are or share your answers with anyone else so please answer all the questions on your own and as honestly as possible.

Please answer these questions regardless of whether or not you have a full driving licence. For some of these questions, we are interested in your thoughts on how you would drive if you did have a licence. Please read each question carefully and if you don't understand any of them, please ask your tutor.

Suppose you were with a group of people your age and you could drive how you liked. How willing would YOU be to do the following things? Please select the most appropriate response for each statement



How likely are YOUR PARENTS to do the following while driving? Please select the most appropriate response for each statement

	Extremely Unlikely	Unlikely	Not Sure	Likely	Extremely Likely
Drink alcohol before driving					
Use their mobile to make calls or message while driving					
Take drugs and drive					
Not wear their seatbelt					
Exceed the speed limit in towns					
Exceed the speed limit on motorways					
Exceed the speed limit on rural roads					

How likely are YOUR FRIENDS to do the following while driving? Please select the most appropriate response for each statement

	Extremely Unlikely	Unlikely	Not Sure	Likely	Extremely Likely
Drink alcohol before driving					
Use their mobile to make calls or message while driving					
Take drugs and drive					
Not wear their seatbelt					
Exceed the speed limit in towns					
Exceed the speed limit on motorways					
Exceed the speed limit on rural roads					

If you were to do the following things while driving, what are the chances that YOU would have a collision? Please select the most appropriate response for each statement

4

	Extremely Unlikely	Unlikely	Not Sure	Likely	Extremely Likely
Drink alcohol before driving					
Use your mobile to make calls or message while driving					
Take drugs and drive					
Exceed the speed limit in towns					
Exceed the speed limit on motorways					
Exceed the speed limit on rural roads					

What would YOUR FAMILY think if YOU did the following while driving? Please select the most appropriate response for each statement

	Strongly Approve	Approve	Not Sure	Disapprove	Strongly Disapprove
Drink alcohol before driving					
Use your mobile to make calls or message while driving					
Take drugs and drive					
Not wear your seatbelt					
Exceed the speed limit in towns					
Exceed the speed limit on motorways					
Exceed the speed limit on rural roads					



What would YOUR FRIENDS think if YOU did the following while driving? Please select the most appropriate response for each statement

	Strongly Approve	Approve	Not Sure	Disapprove	Strongly Disapprove
Drink alcohol before driving					
Use your mobile to make calls or message while driving					
Take drugs and drive					
Not wear your seatbelt					
Exceed the speed limit in towns					
Exceed the speed limit on motorways					
Exceed the speed limit on rural roads					

How much do you agree with the following? Please select the most appropriate response for each statement

	Strongly Agree	Tend to Agree	Neither Agree or	Tend to Disagree	Strongly Disagree
If I am driving, I can handle a drink or two a still be safe	ind 🔲		Disagree		
As a driver, I will sometimes use my mol phone at the wheel	pile				
It is never safe to use cannabis and drive					
I sometimes don't wear a seatbelt for sh journeys	ort				
I understand that I have a responsibility behave safely as a passenger	to 📃				
I think 35mph in a 30mph limit is norm quite safe	ally				
Driving whilst tired isn't very high risk					
If I was offered a lift by someone who I kn had taken drugs or had been drinking, I wo accept as I would feel I have no choice		•			
I'm more likely to crash if I drive fast					
As a passenger, I could challenge someowho was driving a car irresponsibly	one				
If I drove sensibly, my friends would make of me	fun				
8 About You					
Do you plan to learn to drive?					
I have already Yes, I am passed my test Currently learning	Yes, in the next 12 months	Yes, In the nex 5 year		/be at some	No, Never
lam:	Date of birth:			Home Po	ostcode
Female Male					

		-		• •		
As you recently attended the Safe D event. Please select the most appro					to ask you about 1	the
	Strongly Agree	Tend to Agree	Neither Agree or Disagree	Tend to Disagree	Strongly Disagree	
I feel that I have benefitted from attending a Safe Drive Stay Alive performance						
I am now more aware of my responsibilities as a driver/future driver						
A theatre style venue, away from school or college, provides the best environment to 'experience' a Safe Drive Stay Alive performance		•		•	•	
From the performance of Safe Drive St most was: (Please choose 1 option)	ay Alive that	I attended, th	e thing that ha	as affected my be	haviour in a car the	2
The films The emergency service	speakers	The farr	nily speakers	None in	particular	
I received a copy of the Young Drive	er's Guide					
Yes No If no, go to Question	15					
12 How often have you and your pare	nts looked a	t the Young I	Driver's Guide	e since you rece	ived it?	
	Very Often	Quite Often	Occasionally	Hardly at all	Not at all	
Since I received it, I have looked at the guide						
My parents have looked at the guide						
13 I still have my copy of the Young Dr	iver's Guide					
Yes No						
14 How much do you agree with the fo	ollowing sta	tements?				
	Strongly Agree	Tend to Agree	Neither Agree or	Tend to Disagree	Strongly Disagree	
The guide has been useful to me			Disagree			
My parents found the guide useful						
15 I would like to add the following co	omment/su	ggestion for	the Safe Driv	ve Stay Alive Te	am.	
16 Have you done any work in school, Yes No If so, what did you	-	a follow up t	o Safe Drive S	Stay Alive?		
Please check that you have answered all t	the question	ns before re	turning this s	survey to your	tutor. Thank you	!

**-(** 56 **)**