GODRIVE

Evaluation Report

June 2024

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ECM Research Solutions Ltd

About this report

This report has been prepared to summarise the results from an independent evaluation of the GoDrive intervention which was delivered to trial schools and colleges in the Thames Valley and Hampshire between November 2023 and March 2024. The author of this report was not involved in the design of the original GoDrive film, but did in September 2023 support and advise the team at Late Start Group Ltd on how the GoDrive intervention could be refreshed, which led to cutting down the length of the film and adding in four short facilitated sessions.

The GoDrive intervention refresh and evaluation was funded by Thames Valley Police and jointly commissioned with 17 road safety agencies across the south east region:

- Bracknell Forest Council
- Buckinghamshire County Council
- Hampshire County Council
- Hampshire Constabulary
- Hampshire & Isle of Wight Fire & Rescue Service
- Isle of Wight Council
- Milton Keynes City Council
- Oxfordshire County Council
- Oxfordshire Fire and Rescue Service
- Portsmouth City Council
- Reading Borough Council
- Royal Berkshire Fire and Rescue Service
- The Royal Borough of Windsor and Maidenhead
- Slough Borough Council
- Southampton City Council
- West Berkshire Council
- Wokingham Borough Council

For more information about the GoDrive intervention please visit www.godrive.org.uk.

About the author

Dr Elizabeth Box is Director of ECM Research Solutions Ltd. She is an accomplished transport researcher and commissioner with over two decades of experience and an excellent track record in influencing and contributing to road safety policy outcomes at the national level.

Elizabeth's doctorate in Transport Psychology focused on developing and trialling pre-driver education interventions grounded in behavioural science, with the resulting intervention being awarded a Prince Michael International Road Safety Award in 2023. On completing her doctoral studies Elizabeth founded ECM Research Solutions Ltd to provide consultancy services to public and private sector clients to support the development of high-quality evidence-based public safety interventions.

In addition to being Director of ECM Research Solutions Ltd, Elizabeth holds several other roles in the field of transport safety. Elizabeth is an advisor to a number of road safety industry and government project boards and is a judge for the Prince Michael International Road Safety Awards. She is also a Fellow of the Chartered Institute of Highways and Transportation, a technical champion for the organisation as well as a judge for the Institute's annual Road Safety Award. Elizabeth is also a Behavioural Science Consultant for the start-up Co-Pilot.

Acknowledgements

The author would like to thank Thames Valley Police for funding this research and the partner organisations for supporting the delivery of this evaluation study. In addition, the author is grateful to the schools/colleges throughout the study area for taking part in this intervention evaluation. Finally, the author would like to thank James Evans and Ellie Richards from Late Starter Group Ltd for supporting the evaluation survey data collection.

Disclaimer

This report has been prepared for the GoDrive funding and supporting organisations in the Thames Valley and Hampshire by Dr Elizabeth Box, Director of ECM Research Solutions Ltd. Any errors or omissions are the author's sole responsibility. The report content reflects the views of the author and not necessarily those of the research funding organisations.

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Executive summary

The GoDrive intervention, designed to replace the long-running Safe Drive Stay Alive (SDSA) programme, was evaluated for its effectiveness in improving road safety knowledge, attitudes, and intentions among students. The study used a controlled pre-post evaluation with participants randomly assigned to intervention, follow-up, and control groups. Data was collected through baseline and follow-up surveys and analysed using Mixed-Design ANCOVA to account for baseline knowledge and survey completion time.

GoDrive combines a 50-minute film with four facilitated activities, covering 11 key road safety topics. Students rated the intervention positively and the evaluation showed statistically significant beneficial road safety effects in several areas related to:

- Improved intentions for driving practice;
- Improved attitudes towards driving while fatigued;
- Greater willingness/likelihood to speak out as a passenger;
- Enhanced intentions for hazard perception practice; and
- Better risk perceptions regarding driving with multiple peer-aged passengers.

These effects were most pronounced in areas with the greatest scope for improvement, with fatigue whilst driving and speaking out addressed within the facilitated sessions. GoDrive's approach aligns with research showing that positively framed interventions which employ active learning strategies, such as group discussions and scenario-based learning, can be more effective than traditional methods. Future revisions may wish to extend further the time available for class-based activities.

In the absence of a Graduated Driver Licensing (GDL) system in Great Britain, GoDrive was found to address critical safety issues by sensitising young drivers to the risks of driving with peers and promoting extensive driving practice and hazard perception training before licensure. However, the intervention did not significantly impact all areas assessed, such as overall attitudes and intentions towards speeding and mobile phone use while driving. Future iterations should address these gaps and explore ways to strengthen perceptions of risk, particularly regarding speeding and late-night driving.

Limitations of the evaluation include a lower than expected response rate and reliance on self-reported data, which may introduce biases. The intervention's remote delivery also depended on varying levels of teacher and student engagement. Future research should focus on increasing engagement, potentially through more interactive and incentivised elements, and conducting longitudinal studies to assess the sustained impact on driving behaviours. Overall, GoDrive has proven effective in enhancing several road safety attitudes and intentions among young drivers.

1.0 Introduction

The evaluation of the GoDrive intervention outlined in this report assessed the effectiveness of GoDrive in improving road safety knowledge, attitudes, and intentions among students. The sections that follow outline the methodology, recruitment process, survey questions, data analysis, and the evaluation results. A discussion of these results, conclusions and implications for practice are also outlined.

2.0 Method

2.1 GoDrive

GoDrive consists of a 50 minute film which includes four facilitated activities to encourage active learning and support student attention levels. The intervention aims to improve knowledge, attitudes, perceptions of risk and intentions related to safe driving practices, encourage greater awareness of the probationary period and enhance participants ability to communicate safety concerns as passengers.

GoDrive was commissioned to replace the Safe Drive Stay Alive (SDSA) intervention that has run previously in the region for over 15 years. GoDrive as a film only intervention has run since 2020, with the refreshed version - evaluated here - including facilitated sessions. GoDrive covers 11 topics (See Table 2-1), and includes 4 facilitated sessions (See Table 2-2).

Table 2-1 GoDrive film topics and segment aims

Topic	Aim of segment
Hazard perception	Improve knowledge of the importance of hazard perception. Demonstrate how to spot latent hazards. Encourage uptake of hazard perception practice.
Speed and distance	Improve knowledge of impact of speed and breaking distance. Increase intentions to drive within the speed limit. Improve attitudes to driving within the speed limit.
Rural roads	Increase feelings of vulnerability on rural roads, to effect attitudes about rural road safety.
Dealing with distraction	Increase intentions to manage distracted driving. Increase feels of control about managing distracted driving.
Fatigue and tiredness	Increase intentions to not drive whilst tired. Improve attitudes to not driving whilst tired.
Impaired driving – drink and drugs	Increase feelings of control to stay safe if a driver is influenced by drink/drugs.
Probationary period	Increase feelings of vulnerability to consequences during early licensure, to increase adherence to road rules.
Telematics	Promote telematics insurance consideration and uptake.
Seatbelts	Increase knowledge about how seatbelts work in conjunction with other vehicle technology (e.g., airbags). Increase intentions to speak up if someone in a car is not wearing a seat belt. Improve attitudes to wearing seatbelts.

Topic	Aim of segment
First Car	Increase knowledge of importance of buying safest car within available budget. Increase intentions to consider vehicle safety ratings as part of the purchasing process.
Insurance	Increase knowledge about legalities around insurance (i.e., fronting).

Table 2-2 Facilitated sessions added to the GoDrive intervention

Subject	Aim	Activity
Speeding	Encourage students to consider circumstances where they are most likely to speed and develop if-then plans to avoid.	Participants consider circumstances leading to speeding and create if-then plans to avoid these circumstances.
Fatigue	Increase intentions to not drive whilst tired, improve attitude to not driving whilst tired and increase awareness of susceptibility to tiredness.	Participants assess morningness/eveningness tendencies and implications for driving when tired.
Value of driving	Promote understanding of driving's personal benefits and responsibilities, highlighting how adhering to road rules during the probationary period preserves independence.	Participants reflect on driving's personal value and related costs. They consider the impact of losing their license on their freedoms, emphasising responsible driving.
Speaking up	Increase feelings of control to stay safe as a passenger if a driver is taking part in risk-taking activities.	Role-playing exercise where one participant dissuades a risk-taking driver.

GoDrive can be accessed using the following links:

- GoDrive intervention microsite
- GoDrive Facilitator Guide Video
- GoDrive Facilitator notes
- GoDrive film

GoDrive is due to be offered to all schools/colleges in the Thames Valley and Hampshire area following the completion of the evaluation trial.

2.1 Participants and Recruitment

The GoDrive evaluation was conducted as a controlled pre-post evaluation. All schools and colleges in the Thames Valley and Hampshire areas previously involved with SDSA were randomly allocated to the following three groups stratified by education type (school or college) and average school/college level disadvantage (above median or below median):

- Group 1: GoDrive only;
- Group 2: GoDrive with follow-up email communication; and
- Group 3: Wait-list control group.

2.2 Survey Measures

The baseline online survey was administered in the classroom at the start of the GoDrive session (for groups 1 and 2) and in class tutor time at wait-list control schools (group 3) over the same time period that the GoDrive intervention was being delivered to groups 1 and 2.

The follow-up survey was conducted 6-weeks after the intervention. This was sent via email to participants to complete, with reminders also sent to schools and colleges by the road safety partnerships to encourage participation. Participating students were also entered into a prize draw for ten £50 Amazon Vouchers to help maximise the response rate from participants.

Survey questions were be asked to measure demographic details; intentions, attitudes and perceptions of risk related to speed, fatigue, distraction and speaking up; intentions around driving practice and hazard perception training; as well as knowledge of the probationary period. Students were also asked about whether they found the GoDrive intervention useful (cognitive effect) and whether they expected there to be a beneficial effect from taking part (face validity). Annex A outlines the survey questions that were used, alongside measure references.

2.3 Data Analysis

Due to a lower than expected response rate from pupils the analytical approach used for this evaluation shifted from General Estimating Equation Modelling to a Mixed-Design ANCOVA. This alternative analysis includes both between-subjects (intervention vs. control group) and within-subjects (time: pre-test and post-test) factors, and integrates the covariates of baseline knowledge and survey complete time to control for potential confounders. This method is well-suited to the collected data and is specifically designed to discern the intervention's impact over time and across different groups, while accounting for variables that could influence the outcome. The analysis was conducted using SPSS version 29.

3.0 Results

3.1 Descriptives

A total of 2,155 participants from 43 schools/colleges returned a questionnaire at T1, following an initial request to participate in the study being sent to a total of 131 schools/colleges. Following survey matching across the study period (T1-T3, using surname and school/college attendance), valid data was collected for 186 participants (Control: n = 114, GoDrive: n = 72) from 26 schools/colleges (Control: n = 10, GoDrive: n = 16). This represents a significant drop out rate, which is thought to be related to the challenges of securing survey responses largely from email requests (at T2) rather than through teacher requests (at T1). The intervention was delivered remotely (i.e., by pre-recorded film) and therefore reliant on schools/college teachers to promote student survey completion as well as students responding to the surveys sent to their provided email address. The measurement sessions for the GoDrive trial are outlined in Figure 3-1 and the descriptive features of the sample are described in Table 3-2.

Figure 3-1 Measurement sessions for GoDrive evaluation

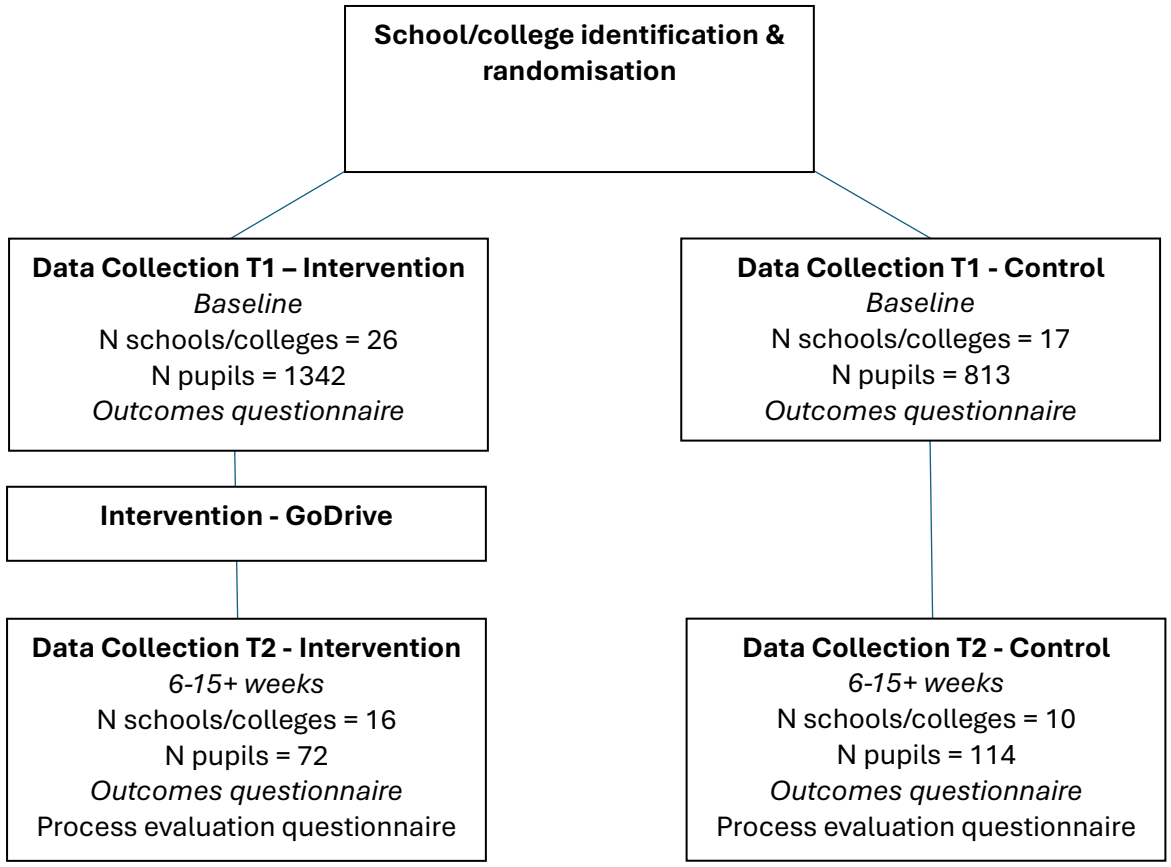


Table 3-1 Descriptive statistics of participants in the GoDrive evaluation

		Control group		Intervention	
		T1 only	**T1 & T2**	**T1 only**	**T1 & T2**
N schools		17	10	26	16
N participants		813	114	1342	72
Age (*SE*)		16.52 (.024)	16.39 (.049)	16.68 (.018)	16.56 (.076)
Gender	Male (%)	352 (43.3)	49 (43.0)	606 (45.2)	27 (37.5)
	Female (%)	419 (51.5)	59 (51.8)	669 (49.9)	38 (52.8)
	Unknown (%)	42 (5.2)	6 (5.3)	67 (5.0)	7 (9.7)
Driving stage	Passed test or currently learning (%)	212 (26.1)	30 (26.3)	544 (40.5)	28 (38.9)
	Learning in the next 12 mnths–5 yrs (%)	501 (61.6)	75 (65.8)	696 (51.9)	39 (54.2)
	Maybe learning at some point or never learning (%)	100 (12.3)	9 (7.9)	102 (7.6)	5 (6.9)
No. household cars	Low (0-1 cars) (%)	211 (26.0)	22 (19.3)	299 (22.3)	23 (31.9)
	Medium (2-3 cars) (%)	518 (63.7)	77 (67.5)	887 (66.1)	41 (56.9)
	High (4-5+ cars) (%)	84 (10.3)	15 (13.2)	156 (11.6)	8 (11.1)
Ethnicity	White (%)	606 (74.5)	89 (78.1)	1046 (77.9)	58 (80.6)
	Non-white (%)	186 (22.9)	24 (21.1)	244 (18.2)	11 (15.3)
	Unknown (%)	21 (2.5)	1 (0.9)	52 (3.9)	3 (4.2)
Education type	College (%)	359 (44.2)	27 (23.7)	54 (4.0)	2 (2.8)
	School (%)	454 (55.8)	87 (76.3)	1288 (96.0)	70 (97.2)
Disadvantage level	Below median (%)	406 (49.9)	97 (85.1)	1194 (89.0)	66 (91.7)
	Above median (%)	407 (50.1)	17 (14.9)	148 (11.0)	6 (8.3)

The chi-square tests for association that were conducted to determine differences in the proportion of socio-demographic categorical variables for 1) control participants at T1 only and those that had responded at T1&T2; 2) intervention participants at T1 only and those that had responded at T1&T2; and 3) T2 responses for control and intervention groups found some differences in group characteristics. Some groups were not well represented within the final T2 data analysis (i.e., Control T1 only vs T1&T2 responses: education type X2 (1) = 16.01, p <.001, and disadvantage level (i.e., above or below median school level disadvantage) X2 (1) = 46.26, p <.001)), with colleges and those from above median school level disadvantage being less represented in the final T1&T2 sample. There was no other socio-demographic differences found between the control and intervention groups of those that responded at T1&T2.

A two-way ANOVA was conducted to examine the effects of condition (Intervention/control) and response (T1 only/T1&T2 responses) at T1 for all survey scale items. The results show that there were several measures (See Table 3-2) where there was a statistically significant difference between the survey responses received at T1 by those participants who completed the T1 survey only and those who completed the survey at T2 as well as between the intervention and control group responses. This indicates that participants who completed the survey at all measurement periods had safer views on some measures in comparison to those who discontinued involvement in the study at T1 and that GoDrive intervention respondents provided less safe views than control respondents at T1. These findings should be borne in mind in the interpretation of the results.

Table 3-2 Two-Way Anova results for effect of condition (Intervention/Control) and response (T1 only/T1&T2 responses) on survey items

Variable	Condition	df	F	p	ηp^2
INT_SPEED1	INT/CONT	1	5.556	.018	.003
INT_MOB	T1 only/T1&T2	1	10.846	.001	.005
ATT_SPEED	INT/CONT * T1 only/T1&T2	1	5.927	.015	.003
ATT_MOB	T1 only/T1&T2	1	4.543	.033	.002
RISKPER_9	INT/CONT	1	4.679	.031	.002
KNOW	INT/CONT * T1 only/T1&T2	1	4.828	.028	.002

Table 3-3 Reliability & mean scores for survey measures, at T1 and T2 for control and intervention groups

Variable	Cronbach's α		Baseline Only T1 Mean *(SE)*		Intervention evaluation T1 Mean(*SE*)		Intervention evaluation T2 Mean(*SE*)	
	T1	T2	Control (n = 813)	Intervention (n = 1342)	Control (n = 114)	Intervention (n = 72)	Control (n = 114)	Intervention (n = 72)
INT_SPEED1	-	-	2.05 (.056)	2.25 (.046)	2.10 (.140)	2.49 (.201)	1.88 (.116)	1.79 (.149)
INT_SPEED2	-	-	4.84 (.069)	4.99 (.052)	4.97 (.176)	5.03 (.225)	4.75 (.182)	4.47 (.239)
INT_FATIG	-	-	3.22 (.058)	3.34 (.044)	3.24 (.128)	3.08 (.180)	3.01 (.119)	2.57 (.162)
INT_MOB	-	-	1.85 (.051)	1.89 (.041)	1.49 (.082)	1.54 (.130)	1.45 (.066)	1.35 (.084)
INT_SPKOUT	0.87	0.85	3.41 (.060)	3.59 (.045)	3.55 (.148)	3.33 (.191)	3.22 (.133)	2.78 (.135)
INT_HZDPER	-	-	3.68 (.062)	3.90 (.050)	3.68 (.153)	3.79 (.205)	3.44 (.140)	2.96 (.185)
INT_PRAC	-	-	3.25 (.064)	3.68 (.052)	3.81 (.187)	3.58 (.212)	3.82 (.169)	2.64 (.193)
ATT_SPEED	-	-	2.18 (.046)	2.50 (.039)	2.43 (.126)	2.29 (.149)	2.21 (.085)	1.96 (.126)
ATT_FATIG	-	-	2.09 (.041)	2.22 (.033)	2.08 (.085)	2.26 (.138)	2.20 (.090)	1.93 (.111)
ATT_MOB	-	-	1.60 (.038)	1.67 (.031)	1.38 (.064)	1.62 (.130)	1.44 (.078)	1.43 (.088)
RISKPER	0.78*	0.74	19.45 (0.157)	19.96 (.130)	18.86 (.314)	19.69 (.579)	18.10 (.303)	17.74 (.454)
KNOW	-	-	0.744 (.015)	0.79 (.011)	0.68 (.044)	0.75 (.051)	0.84 (.034)	0.90 (.035)

* 0.82 baseline only

3.2 Views of young drivers

What follows is a presentation of the survey results from the baseline survey, which attracted 2369 responses. Figure 3-2, shows that respondents held largely safe views, with the least safe intentions held related to fatigue, speaking out, learner practice, hazard perception and speed intentions. Figure 3-3 also shows largely safe perceived risk ratings, with the least safe views held in relation to driving with 2+ passengers and driving a car over 10 years old. It is important to note that there was a wide variation of response for each of these measures, so it is not possible to say that these mean differences are statistically significant, but these results do provide an indication of the difference in views across these measures.

Figure 3-2 Baseline mean responses to attitude and intention survey measures (n = 2369)

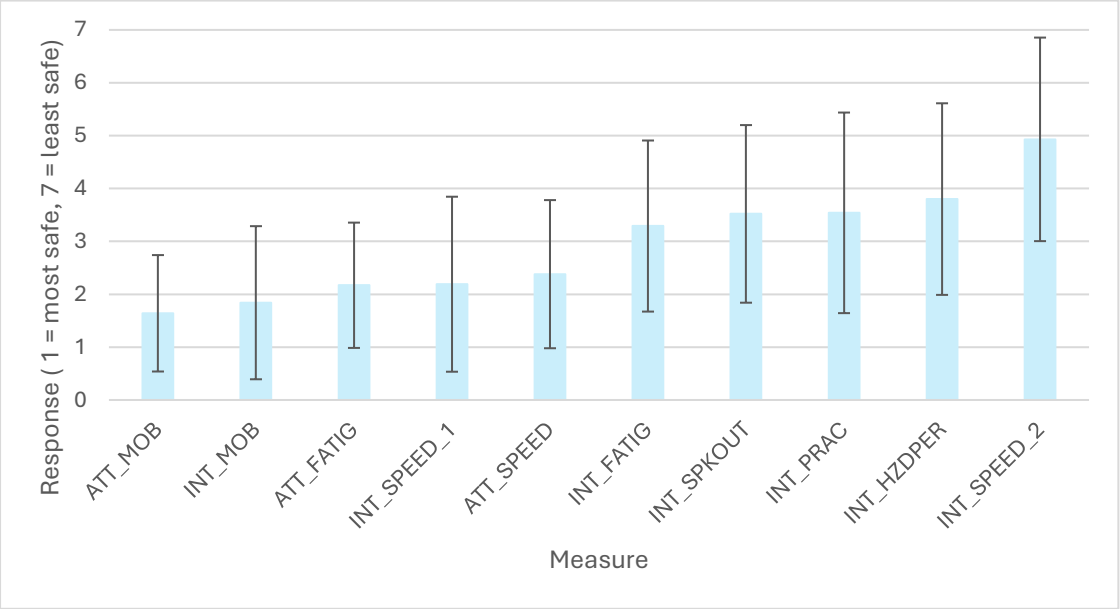
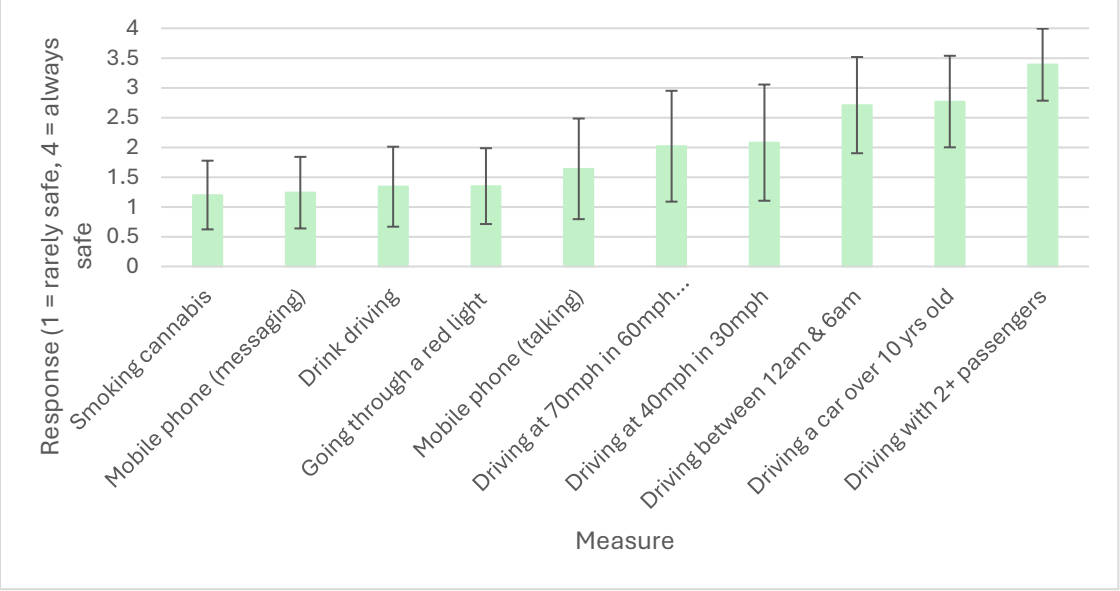
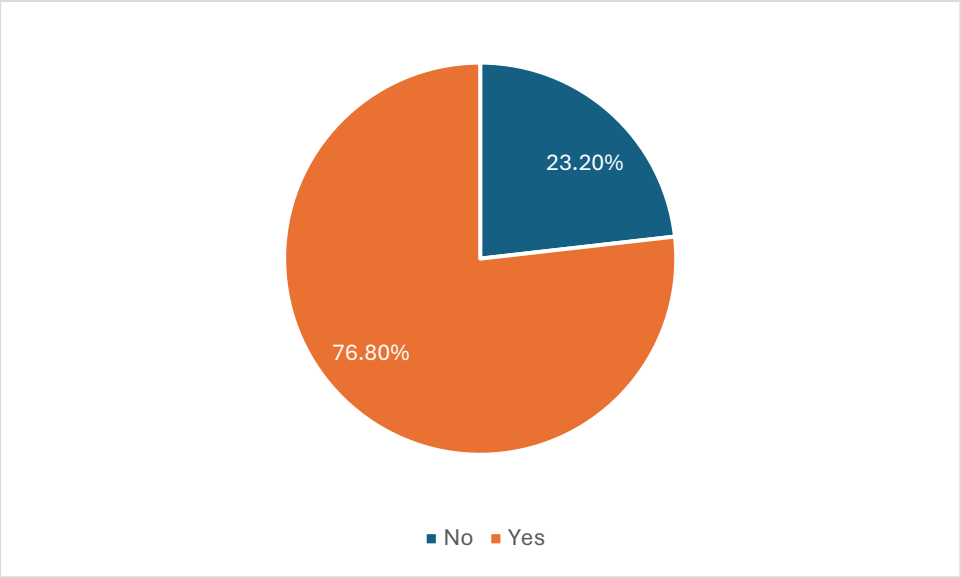


Figure 3-3 Baseline mean responses to perceived risk survey measures (n = 2369)



In addition, at baseline the majority (over three quarters) of survey respondents had knowledge about the implications of the New Drivers Act (See: Figure 3-4)

Figure 3-4 Knowledge of the New Drivers Act, T1



Analysis was also conducted to establish whether there was any difference in these results by age and gender of respondents. It was found that females held safer views for six of the survey items, four of which were related attitudes and perceived risks associated with speeding (See Figures B1 – B6, Annex B). Some differences were also found for four measures by age. Whilst the perceived risk associated with travelling at 40mph in a 30mph limit became safer with age alongside attitudes to fatigue, overall speeding attitudes became slightly worse with age, and respondents also held less safe attitudes towards driving a car older than 10 years old (See Figures B7 – B10, Annex B). Some specific combined gender and age effects were also found (See Figures B11 – B13, Annex B).

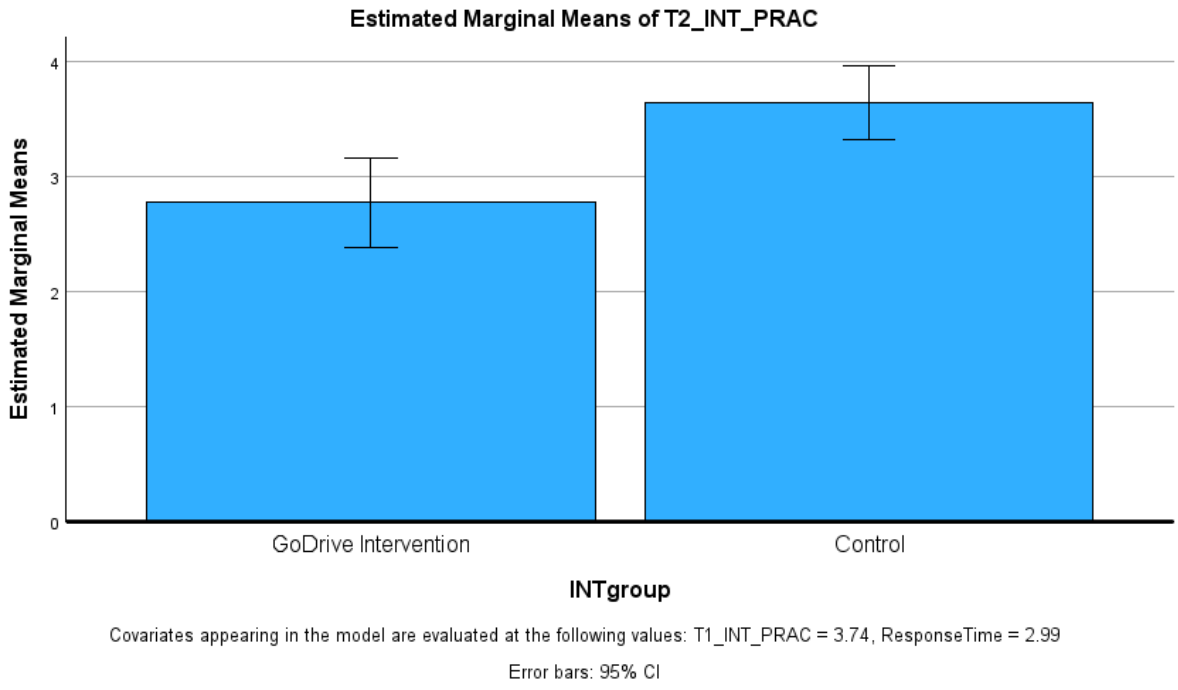
3.3 GoDrive outcome evaluation results

The GoDrive intervention was found to have significant effects on participants over and above the control group for (in order or strength of effect):

- Intentions for driving practice: $F(1, 163) = 11.516$, $p < .001$, partial $\eta 2 = .07$.
- Attitudes to driving whilst fatigued: $F(1, 163) = 6.722$, $p = .010$, partial $\eta 2 = .04$.
- Intentions to speaking out as a passenger: $F(1, 163) = 5.692$, $p = .018$, partial $\eta 2 = .03$.
- Intentions for hazard perception practice: $F(1, 163) = 5.233$, $p = .023$, partial $\eta 2 = .03$.
- Risk perceptions associated with travelling two or more peer aged passengers: $F(1, 163) = 5.162$, $p = .024$, partial $\eta 2 = .03$.

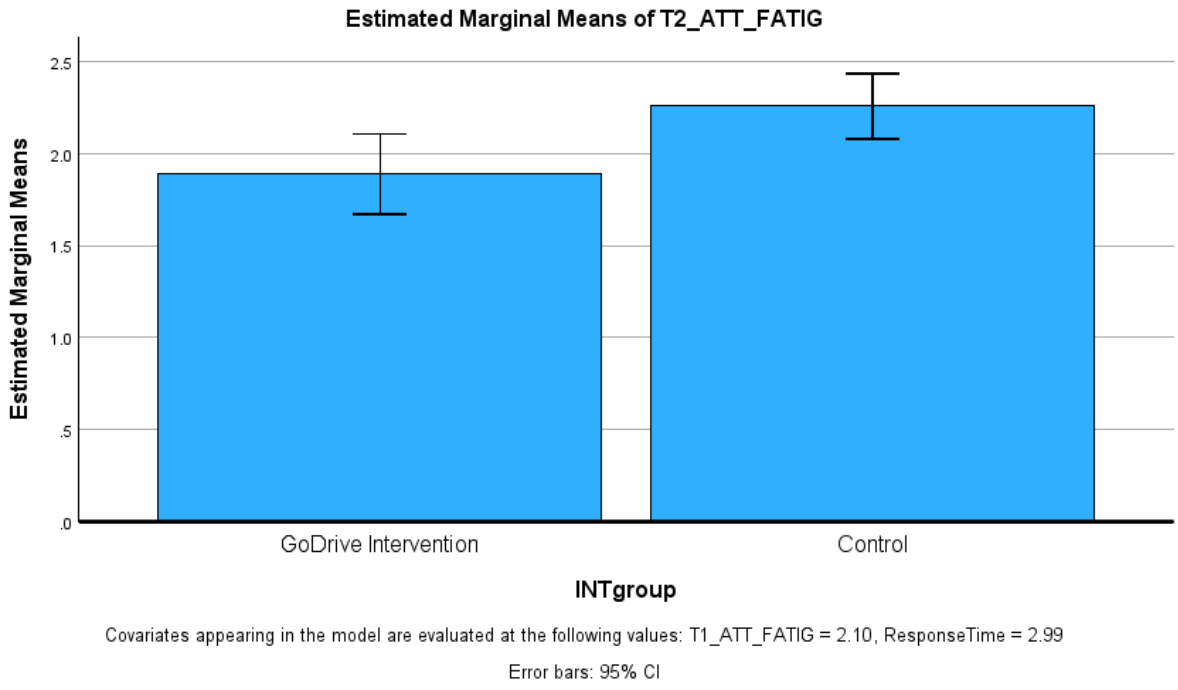
The intervention also had an effect on driving whilst fatigued intentions which approached statistical significance ($F(1, 163) = 3.763$, $p = .054$, partial $\eta 2 = .02$). It is interesting to note that the greatest effects were observed for those measures that were less safe at baseline and on measures known to be crucial for systematic change in this group, such as increased practice, hazard perception, and restricting the number of peer aged passengers in vehicles (i.e. aligning with Graduated Driver Licensing principles). Additionally, fatigue, which is not widely recognised by road users as a significant risk, showed an improvement in attitudes for GoDrive participants, which highlights the value of addressing this issue within this intervention. The increased strength of intentions to speak out is also an important finding, indicating a positive shift towards proactive safety behaviours in intervention participants over and above the control group. In the Figures that follow which illustrate these results, lower scores indicate safer responses.

Figure 3-5 Intentions to practice for 100 hours over a 12 months period, T2



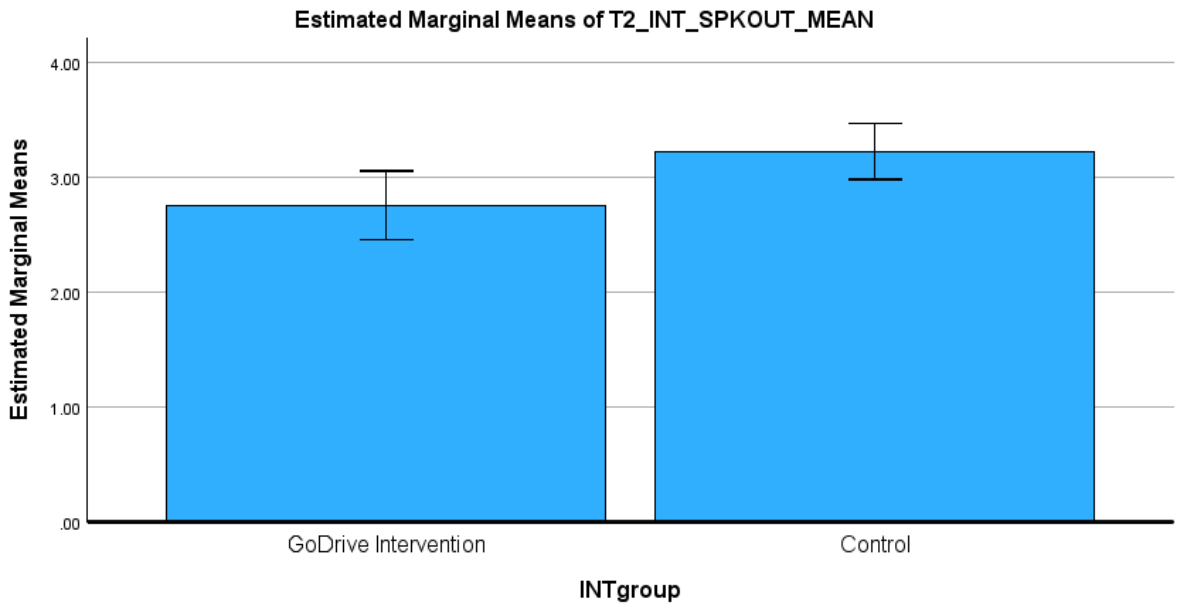
$F(1, 163) = 11.516$, $p < .001$, partial $\eta 2 = .07$.

Figure 3-6 Attitudes to driving whilst tired, T2



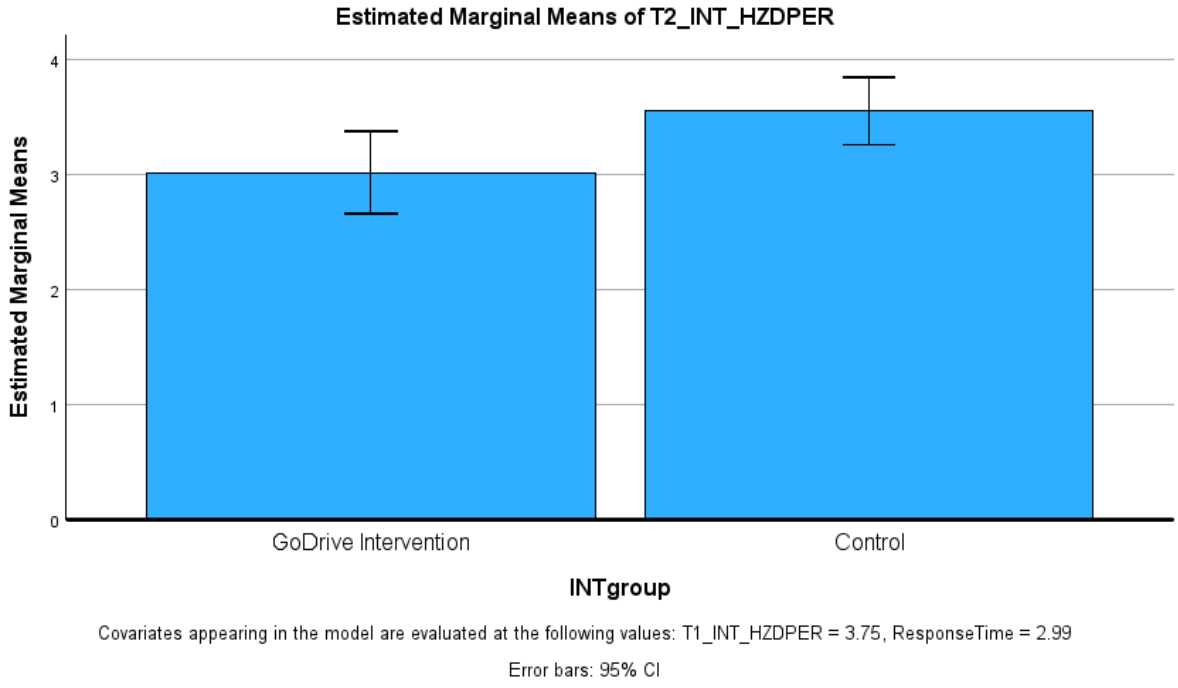
$F(1, 163) = 6.722$, $p = 0.010$, partial $\eta 2 = .04$.

Figure 3-7 Intention to speak out as a passenger, T2



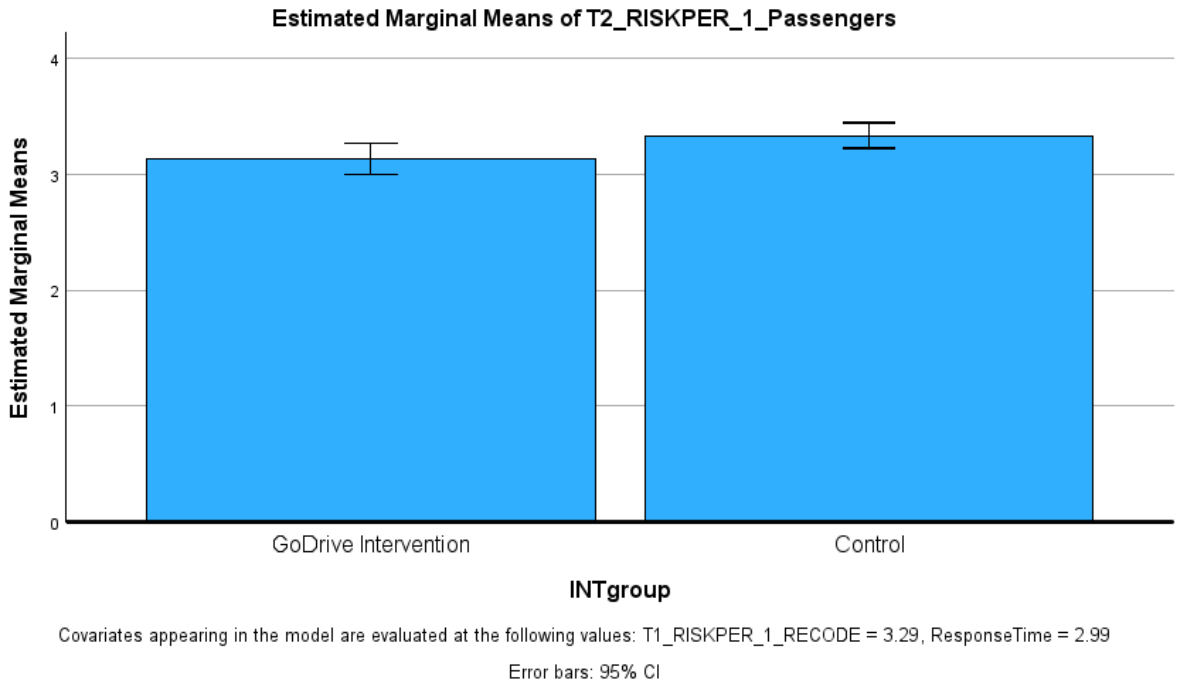
$F(1, 163) = 5.692$, $p = .018$, partial $\eta 2 = .03$.

Figure 3-8 Intention to practice hazard perception, T2



$F(1, 163) = 5.233$, $p = .023$, partial $\eta 2 = .03$.

Figure 3-9 Risk perception for driving with 2 or more passengers, T2



$F(1, 163) = 5.162$, $p = .024$, partial $\eta 2 = .03$.

There were also some differential effects by gender and age. Males provided safer responses than females in the Intervention group to the question 'I would like to drive within the speed limit at all times', whereas pattern was reversed in the control group (See Figure C1, Annex C). A similar interaction between group and gender was found for the second speed measure 'I expect that it is inevitable that I will driver over the speed limit sometimes' (See Figure C2, Annex C). Both these findings indicate that the GoDrive intervention had a more positive effect on males than females for these speed measures, which is important given young male drivers have less safe attitudes and intentions related to speed (See Annex B).

For perceptions of risk associated with mobile phone use, there was difference found for both age and gender. These results show that there were safer attitudes in the intervention group for 17 & 18 year olds, whereas there was the opposite finding for the control group. Males also held slightly less safe road safety risk perceptions around mobile phone use than females in the intervention group. There were also some differential effects found by intervention, age and gender (See Figure C6, Annex C), with mobile phone intentions improving over time for young males from the control group, and worsening for those in the intervention group. It should however be noted that these were small changes, with a small effect, with overall safe intentions expressed.

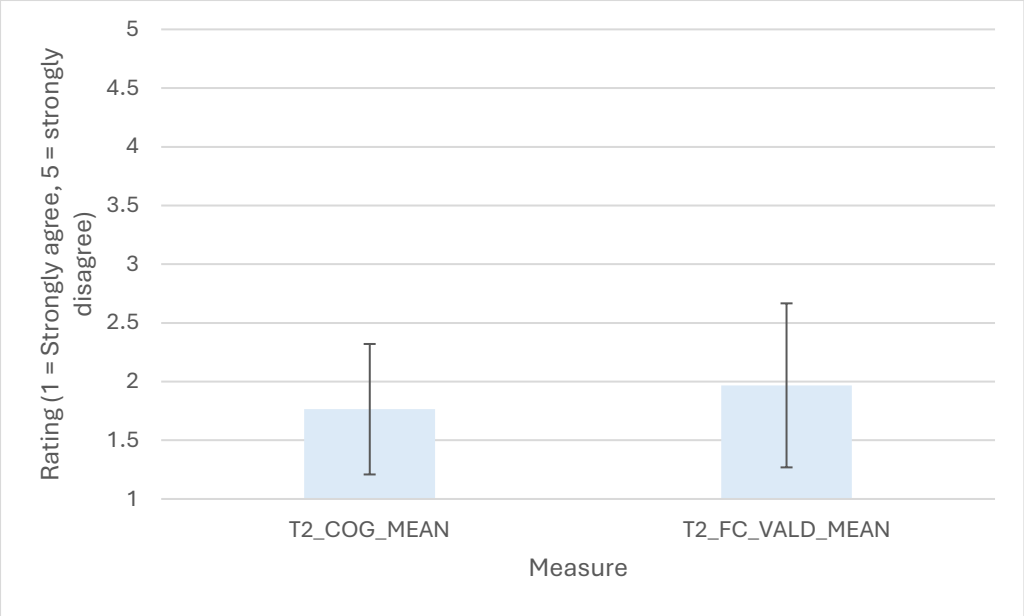
Overall, this outcome evaluation has found that GoDrive enhanced several critical safety attitudes and intentions, particularly in areas where initial responses demonstrated a potential for improvement. These findings suggest that the intervention was successful in fostering a more safety-conscious mindset among participants, in several areas. Whilst not all measures showed an improvement (particularly those which were already very safe at baseline), these results underscore the role of GoDrive in advancing road safety among young drivers.

3.4 GoDrive Process evaluation results

Respondents were also asked their views on the cognitive value of the intervention (i.e., whether it was useful, informative, important, credible and interesting) and whether they thought they had

benefited from the intervention. This was measured by five separate survey items for each construct, which were combined to a final score following reliability analysis (Cronbach's Alpha: COG_MEAN =.82 , FC_VALD_MEAN = .89). Figure 3-10 below shows how respondents either agreed or strongly agreed that the GoDrive intervention was both valuable and beneficial.

Figure 3-10 Mean scores for GoDrive Intervention, T2 (n = 62)



There was no statistically significant difference between these scores by gender or age, which suggests that the intervention was considered appropriate by all genders and ages that responded.

4.0 Discussion and conclusions

This evaluation has found that students rated the GoDrive positively and that the intervention had a statistically significant positive effects on participants' intentions and attitudes in several areas compared to the control group:

- Intentions towards driving practice;
- Attitudes to driving whilst fatigued;
- Intentions to speak out as a passenger;
- Intentions towards hazard perception practice; and
- Risk perceptions associated with travelling two or more peer aged passengers.

The greatest effects were observed in areas where baseline responses indicated the most potential for improvement. The results of this evaluation align with existing research on the effectiveness of educational interventions in road safety. Similar studies have demonstrated that positively-framed, multi-faceted programmes combining information dissemination with active learning strategies can significantly improve safety-related attitudes and behaviours (e.g. Box & Dorn, 2023) with interactive content and the development of personal resilience skills in intervention designs showing promise in improving the effectiveness of interventions (e.g. Griffin et al., 2004). These findings are consistent with the observed benefits of GoDrive, which integrates facilitated sessions to actively engage students and reinforce the information presented in the GoDrive film. GoDrive's unique approach using short facilitated sessions alongside a film, adds valuable insights into how different educational methods can complement each other to enhance overall intervention efficacy. The facilitated sessions encourage active participation, allowing students to discuss their thoughts, ask questions, and engage in role-playing activities that reinforce the film's content. For example, one of the facilitated activities in GoDrive involves students creating "if-then" plans to avoid speeding. This activity not only reinforces the information presented in the film but also helps students develop practical strategies they can use in real-life situations. This aligns with recommendations from Gollwitzer (1999) who suggests that creating implementation intentions (i.e., "if-then" plans) can significantly increase the likelihood of performing safe behaviours. Future revisions may wish to extend further the time available for class-based activities.

In the absence of a Graduated Driver Licensing (GDL) system in Great Britain, it is crucial to sensitise young and novice drivers to the specific risks associated with driving during early licensure. The evaluation results have also found that the GoDrive intervention addresses this need by encouraging consideration of the risks associated with driving with multiple peer-aged passengers as well as promoting a sufficient level of driving practice and hazard perception training during the learning to drive phase.

Whilst the evaluation found that the GoDrive intervention had a positive impact on several important measures, it did not have an impact on all. For instance, no statistically significant difference was found between the intervention and control groups on the survey measurements for speed attitudes and speed intentions, although the GoDrive intervention did have a more positive effect on males than females, which is important given young male drivers have less safe attitudes and intentions related to speed. Given the potential to make improvements to these speed measures (see section 3.2), future iterations of the GoDrive intervention should seek to address speeding in a more comprehensive and impactful manner.

Over three-quarters of respondents at baseline reported understanding the implications of the New Drivers Act, meaning that the role of interventions such as GoDrive maybe more important for reminding rather than introducing participants to this law and its implications. In addition, no significant difference was found between intervention and control groups for attitudes or intentions towards mobile phone use whilst driving, possibly due to respondents reporting very safe responses at baseline. Again, it is important to consider the potential role that interventions like GoDrive have for maintaining and reinforcing these safety supportive views. Mobile phone use whilst driving is recognised to be a prominent contributor to distraction-related collisions (Cazzulino et al., 2014), with texting and messaging being a common activity among this demographic (Delgado et al., 2016). Young, inexperienced drivers have been found to be more adversely affected when engaged in secondary tasks within a vehicle than their more experienced counterparts (Klauer et al., 2015), and therefore future revisions of the GoDrive intervention should seek to support young people to act on their reported positive intentions. This could be achieved through activities that help build supportive habits as well identifying and addressing facilitators and/or barriers to achieving the desired behaviour. These levers have been identified in a recent review of determinants of behaviour (Albarracin et al, 2024) as having greater impacts on behaviours than seeking to influence knowledge, attitudes, beliefs and emotions. It should also be noted that GoDrive only delivered an improvement in perceived risk for one out of ten measures, and whilst an improvement was made for a measure with the least safe views (i.e. driving with passengers), future revisions of this intervention should consider how best to strengthen perceptions of risk, particularly on speeding and travelling late at night.

Several limitations of the evaluation should be noted. The response rate was lower than expected, and there were significant dropout rates, which may affect the generalizability of the findings (i.e. with results based on safer individuals who responded at both timepoints as described in section 3.1). The reliance on self-reported data also introduces the potential for response biases. Additionally, the intervention's remote delivery depended heavily on teacher and student engagement, which will have varied across participating schools and colleges. Future research should aim to enhance participant engagement and response rates, perhaps by incorporating more interactive and incentivised elements. Longitudinal studies could also provide deeper insights into the sustained impact of the intervention. Exploring the differential effects of the intervention across various demographic groups could also help tailor future iterations to be more inclusive and effective.

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Annex A: Survey Questions

Nb. Those which are marked with an asterisk (*) were only be asked at baseline. Those that are marked with two asterisks (**) were asked at follow-up only. Lower scores indicate safer behaviours. Reverse coded survey items are marked with a +. Survey item references are provided at the end of the table.

Item	Question	Measure
AGE*	How old are you?	15, 16, 17, 18, 19, 20+
GENDER*	Are you…	Male, Female, Non-binary, Prefer not to say
ETHNICITY*	Which race or ethnicity best describes you?	White, Mixed or multiple ethnic groups, Asian or Asian British, Black, African, Caribbean, Black British, Other ethnic group, Prefer not to say.
DRIVING STAGE	What stage of your driving journey are you at?	I have passed my driving test, I am currently learning to drive, I aim to start learning in the next 12 months, I am to start learning in the next 1-5 years, I might learn to drive at some point in the future, I have no intention of learning to drive
NO. CARS*	In total, how many cars or vans are owned, or available for use, by members of your household?	0-1, 2-3, 4-5, More than 5
AREA	In what area is your school/college	Bracknell, Buckinghamshire, Milton Keynes, Oxfordshire, Reading, Slough, West Berkshire. Windsor & Maidenhead, Wokingham, Portsmouth, Hampshire, Southampton, Other/please specify
EDUCATION	Please select your school/college from the options below	[Multiple school/college options]
INT_SPEED_1	I would like to drive within the speed limit at all times [1]	Strongly agree (1) – Strongly disagree (7)
INT_SPEED_2	I expect that it is inevitable that I will driver over the speed limit sometimes [1]	True (1) – Untrue (7) +
INT_FATIG	How likely are you to drive whilst feeling very tired? [2]	Very Likely (1) – Very Unlikely (7) +
INT_MOB	How likely are you to drive whilst using a hand-held mobile phone for calls and/or messages? [2]	Very Likely (1) – Very Unlikely (7) +

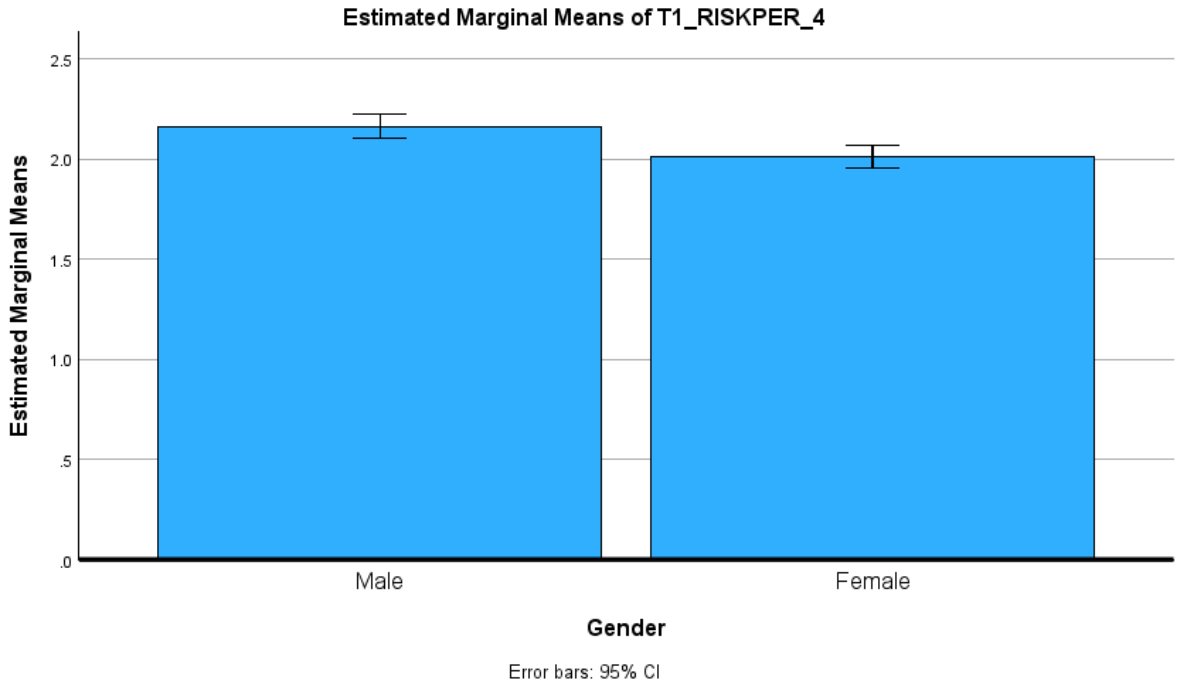
Item	Question	Measure
INT_SPKOUT_1	How likely are you to speak up if someone is driving too fast when you are travelling as a passenger in their car? [2]	Very Likely (1) – Very Unlikely (7)
INT_SPKOUT_2	How willing are you to speak up if someone is driving too fast when you are travelling as a passenger in their car? [2]	Very Willing (1) – Not at All Willing (7)
INT_HZDPER	How willing are you / would you have been to undertake more hazard prediction training after you have passed your driving theory test? [2]	Very Willing (1) – Not at All Willing (7)
INT_PRAC	How willing are you / would you have been to get at least 100 hours of driving practice over a 12 month period before taking your practical driving test? [2]	Very Willing (1) – Not at All Willing (7)
ATT_SPEED	Driving over the speed limit is… [2]	Very Harmful (1) – Very Beneficial (7)
ATT_FATIG	Driving whilst feeling very tired is… [2]	Very Harmful (1) – Very Beneficial (7)
ATT_MOB	Driving whilst using a hand-held mobile phone for calls and/or messages is… [2]	Very Harmful (1) – Very Beneficial (7)
RISKPER_1	When driving, how safe do you feel the following situations are? Driving with 2 or more passengers [3]	Always Safe, Mostly Safe, Sometimes Safe, Rarely Safe +
RISKPER_2	When driving, how safe do you feel the following situations are? Driving between midnight and 6am [3]	Always Safe, Mostly Safe, Sometimes Safe, Rarely Safe +
RISKPER_3	When driving, how safe do you feel the following situations are? Driving at 70mph in a 60mph zone [3]	Always Safe, Mostly Safe, Sometimes Safe, Rarely Safe +
RISKPER_4	When driving, how safe do you feel the following situations are? Driving at 40mph in a 30mph zone [3]	Always Safe, Mostly Safe, Sometimes Safe, Rarely Safe +
RISKPER_5	When driving, how safe do you feel the following situations are? Driving whilst talking on a mobile phone [3]	Always Safe, Mostly Safe, Sometimes Safe, Rarely Safe +
RISKPER_6	When driving, how safe do you feel the following situations are? Driving a car that is over 10 years old [3]	Always Safe, Mostly Safe, Sometimes Safe, Rarely Safe +
RISKPER_7	When driving, how safe do you feel the following situations are? Driving with a blood alcohol level just above the legal limit [3]	Always Safe, Mostly Safe, Sometimes Safe, Rarely Safe +
RISKPER_8	When driving, how safe do you feel the following situations are? Driving while messaging on a mobile phone [3]	Always Safe, Mostly Safe, Sometimes Safe, Rarely Safe +
RISKPER_9	When driving, how safe do you feel the following situations are? Driving after smoking cannabis [3]	Always Safe, Mostly Safe, Sometimes Safe, Rarely Safe +
RISKPER_10	When driving, how safe do you feel the following situations are? Going through a red light [3]	Always Safe, Mostly Safe, Sometimes Safe, Rarely Safe +

Item	Question	Measure
KNOW	Is the following statement true or false: If you get caught just once using your mobile phone whilst driving within the first 2-years of passing your driving test, you will loose you licence	True - False
COG_1**	To what extent do you agree or disagree that the GoDrive intervention was...Credible [4]	Strongly agree (1) – Strongly disagree (5)
COG_2**	To what extent do you agree or disagree that the GoDrive intervention was...Useful [4]	Strongly agree (1) – Strongly disagree (5)
COG_3**	To what extent do you agree or disagree that the GoDrive intervention was...Interesting [4]	Strongly agree (1) – Strongly disagree (5)
COG_4**	To what extent do you agree or disagree that the GoDrive intervention was...Important [4]	Strongly agree (1) – Strongly disagree (5)
COG_5**	To what extent do you agree or disagree that the GoDrive intervention was...Informative [4]	Strongly agree (1) – Strongly disagree (5)
FC_VALD1**	Please indicate the extent to which you agree or disagree with the following statements about the GoDrive Intervention: I feel that I have benefited from watching the GoDrive film [5]	Strongly agree (1) – Strongly disagree (5)
FC_VALD2**	Please indicate the extent to which you agree or disagree with the following statements about the GoDrive Intervention: I feel that I have benefited from taking part in the GoDrive activities [5]	Strongly agree (1) – Strongly disagree (5)
FC_VALD3**	Please indicate the extent to which you agree or disagree with the following statements about the GoDrive Intervention: I am now more aware of my responsibilities as a passenger [5]	Strongly agree (1) – Strongly disagree (5)
FC_VALD4**	Please indicate the extent to which you agree or disagree with the following statements about the GoDrive Intervention: The GoDrive intervention has changed how I think about being a driver [5]	Strongly agree (1) – Strongly disagree (5)
FC_VALD5**	Please indicate the extent to which you agree or disagree with the following statements about the GoDrive Intervention: I plan to take the learning from the GoDrive intervention and apply it to how I behave as a driver/future driver [5]	Strongly agree (1) – Strongly disagree (5)

[1] Adapted from Poulter & McKenna (2010) [2] Intentions measured using adapted standard measures for Theory of Planned Behaviour components (Conner & Sparks, 2005; Rowe et al., 2016) [3] an adapted perception of risk scale (Glendon et al., 2014; Ivers et al., 2009) [4] Cognitive response measured by measures from Cuenen et al. (2016) [5] Face validity measured by adapting measures from Road Safety Analysis (2015)

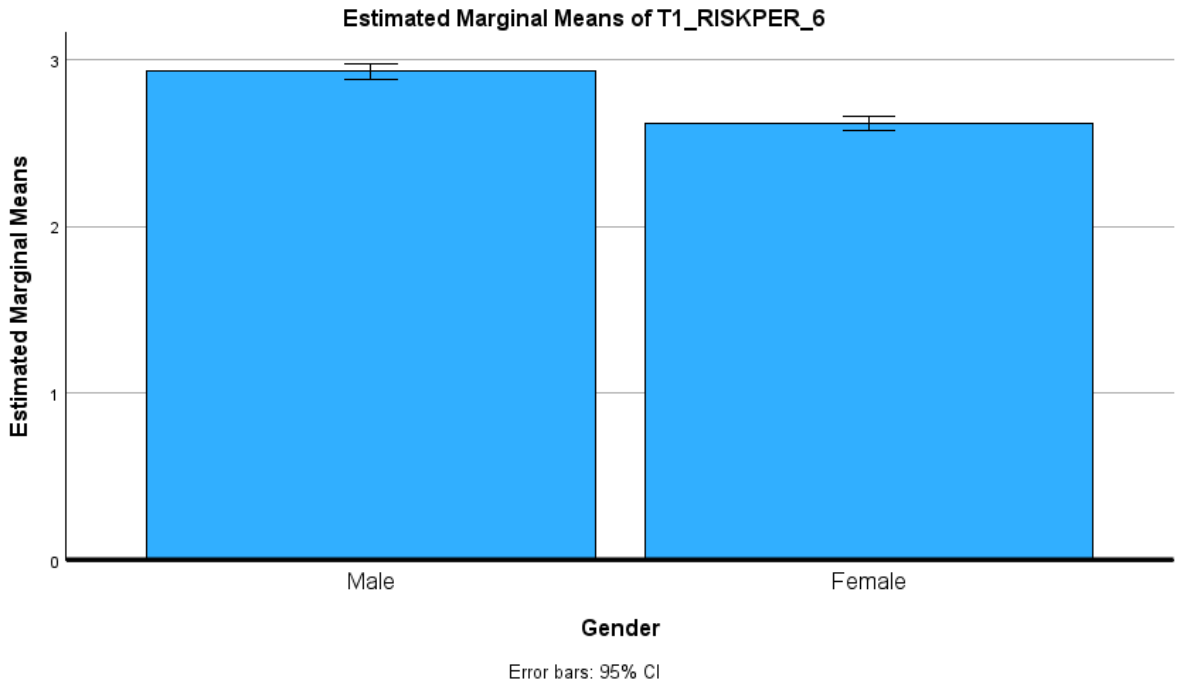
Annex B: Pre-survey age and gender response difference

Figure B1 Perceived risk associated with driving at 40mph in a 30mph zone, by gender, T1



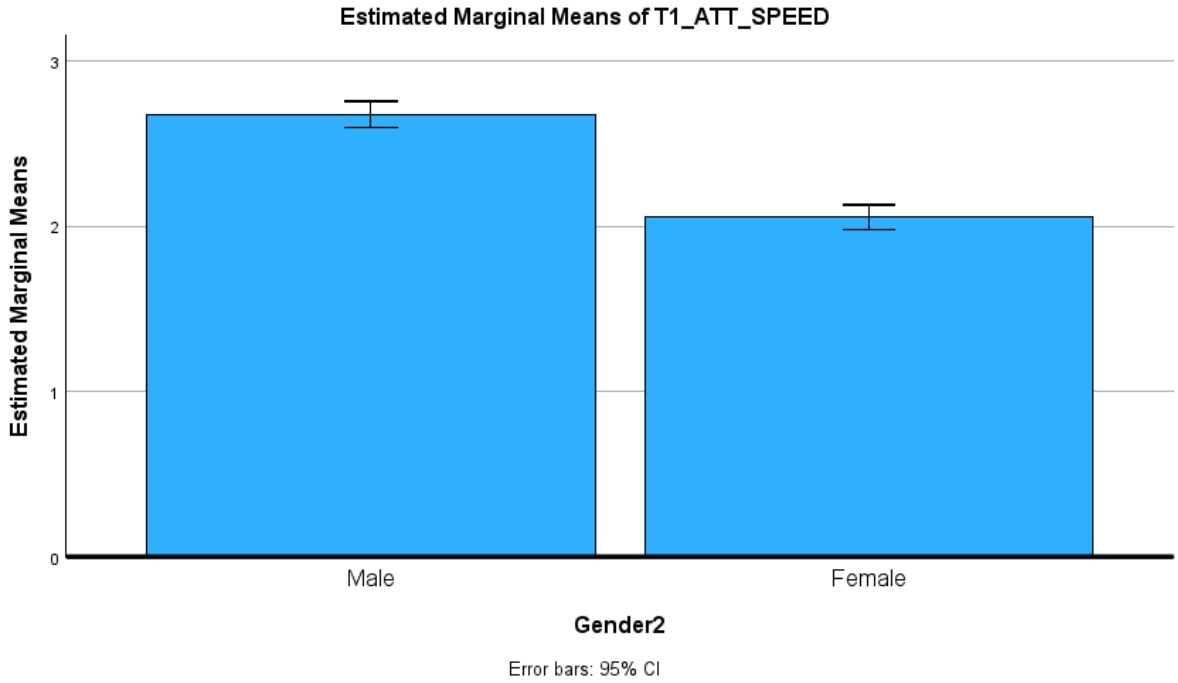
F (1, 2202) = 33538.580, p =.003, partial η2 = 1.000.

Figure B2 Perceived risk associated with driving a car that is over 10 years old, by gender, T1



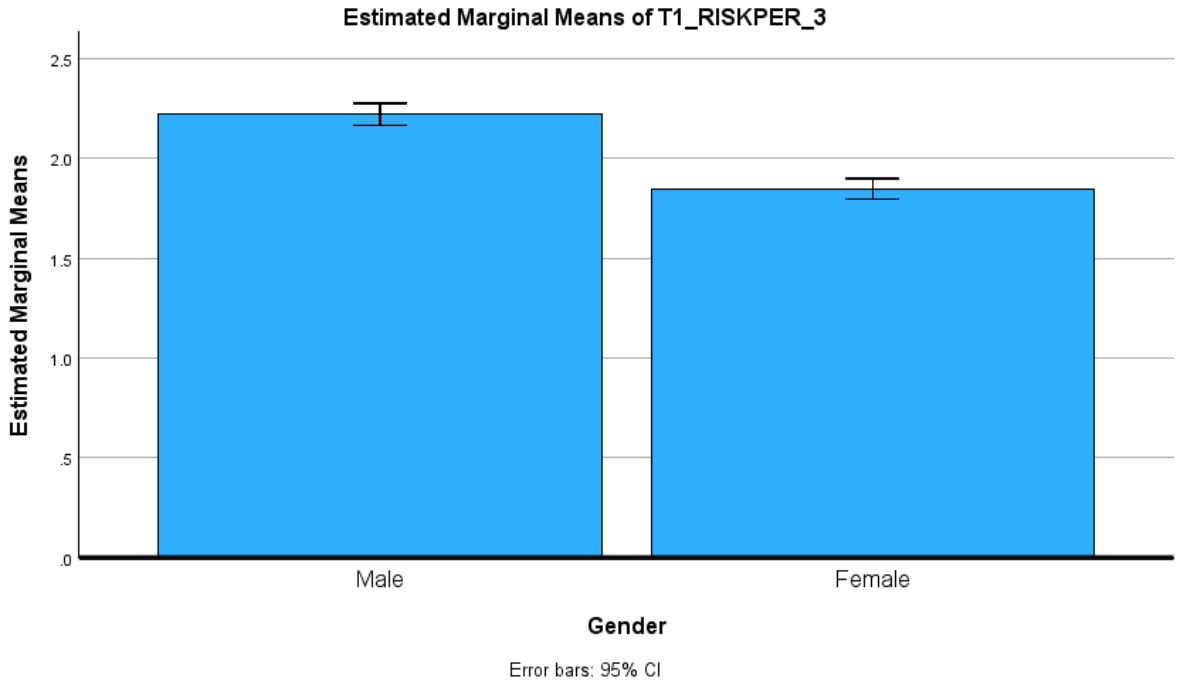
F (1, 2202) = 30638.658, p =.004, partial η2 = 1.000.

Figure B3 Attitude to speed, by gender, T1



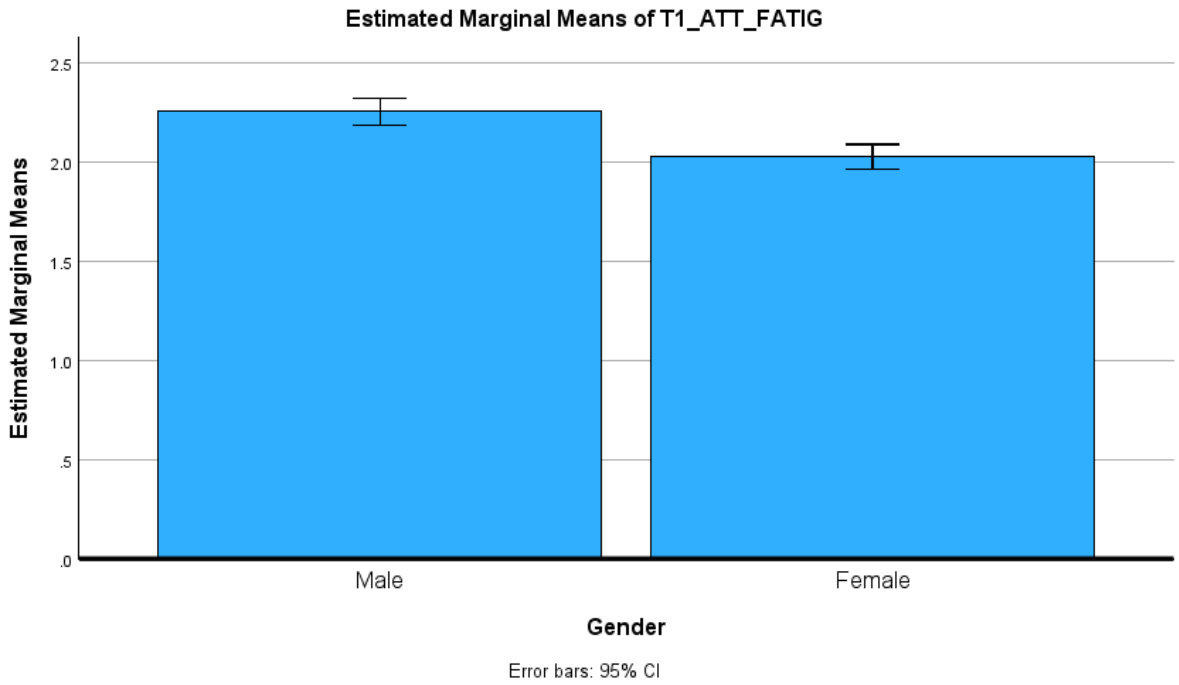
Speed attitude: *F*(1, 2202) = 11177.60, p =.006, partial η2 = 1.000.

Figure B4 Perceived risk associated with driving at 70mph in a 60mph zone, by gender, T1



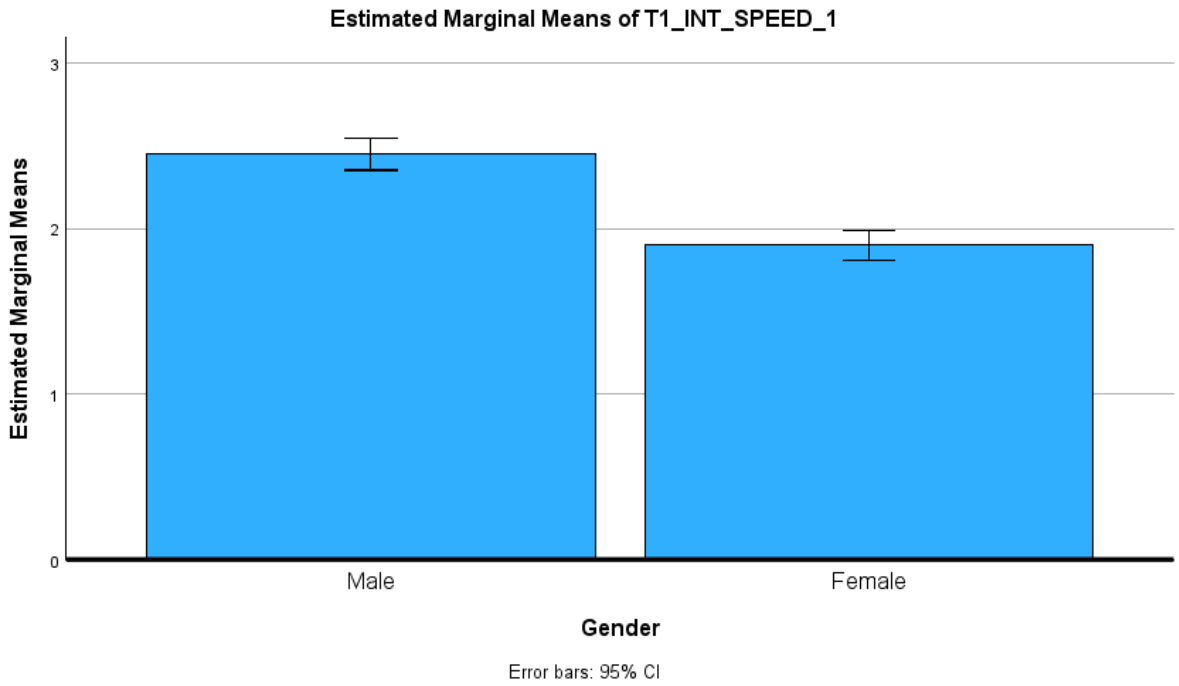
F(1, 2202) = 3040.362, p =.012, partial η2 = 1.000.

Figure B5 Attitude to driving whilst fatigued, by gender, T1



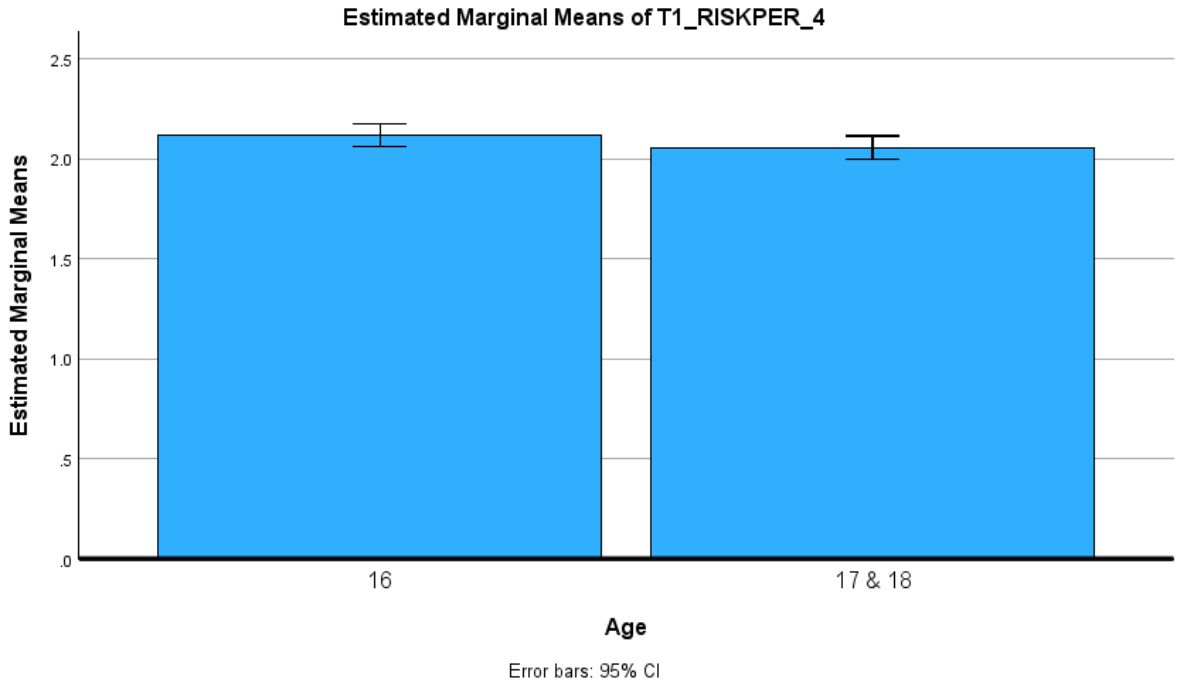
F(1, 2202) = 2006.248, p =.014, partial η2 = 1.000.

Figure B6 Speeding intentions, by gender, T1



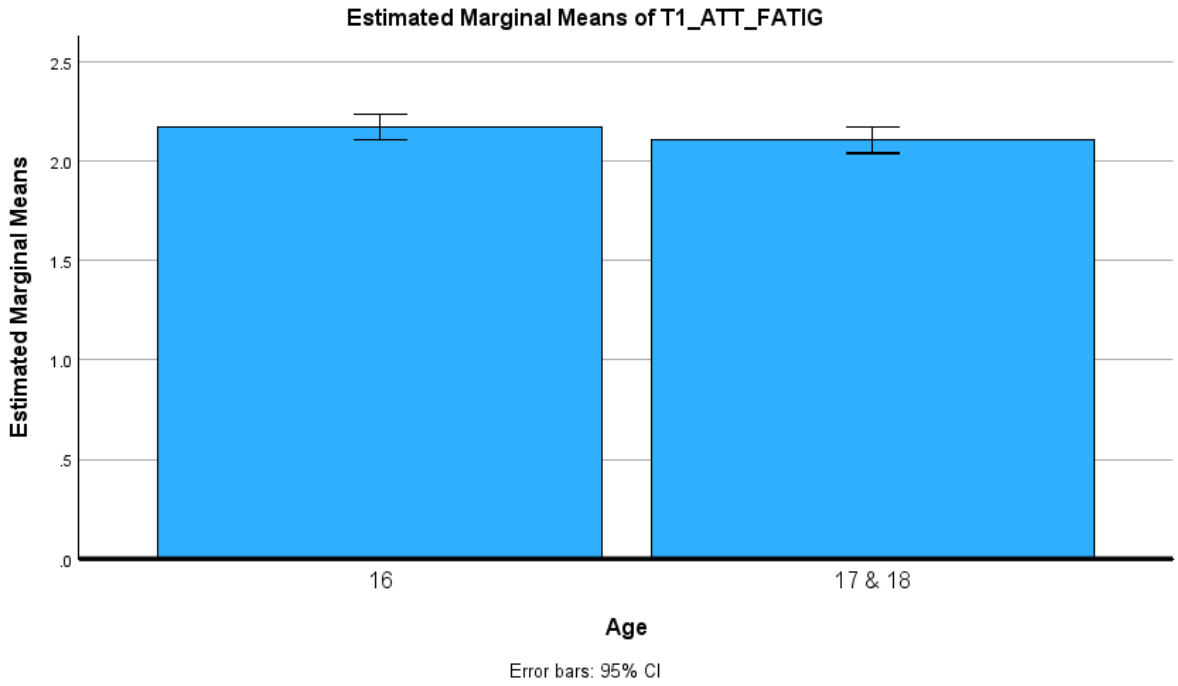
F(1, 2202) = 634.518, p =.025, partial η2 = .998.

Figure B7 Perceived risk associated with driving at 40mph in a 30mph zone, by age, T1



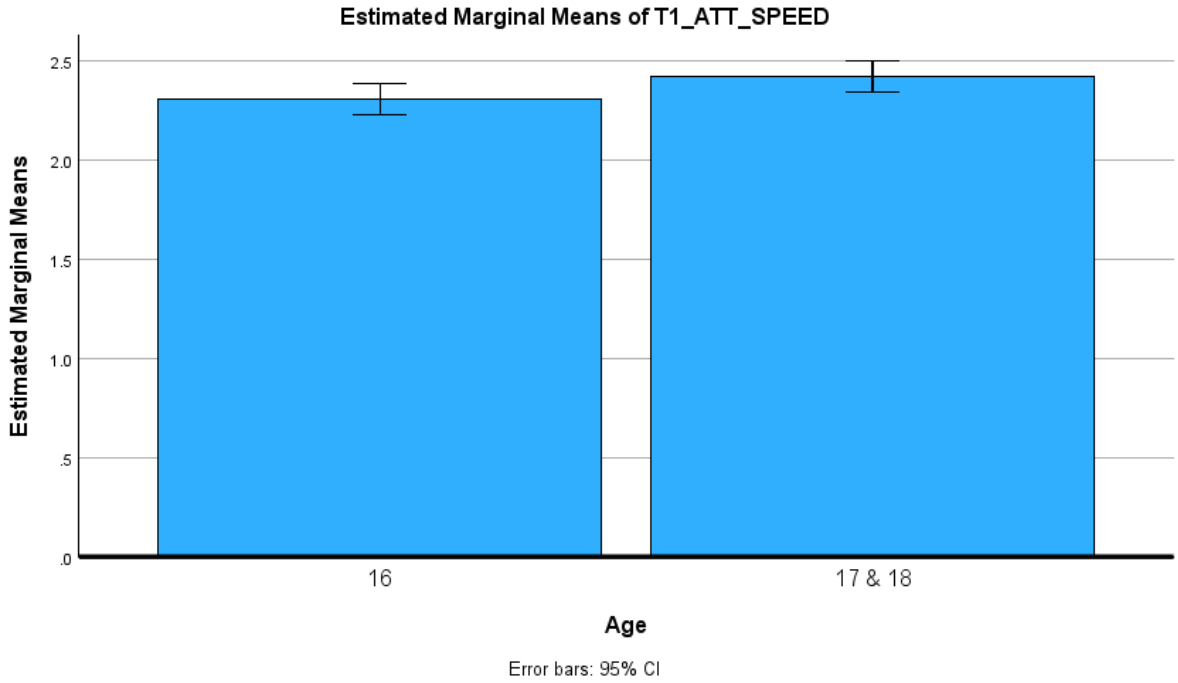
F(1, 2202) = 5516.663, p =.009, partial η2 = 1.000.

Figure B8 Attitudes towards driving whilst fatigued, by age, T1



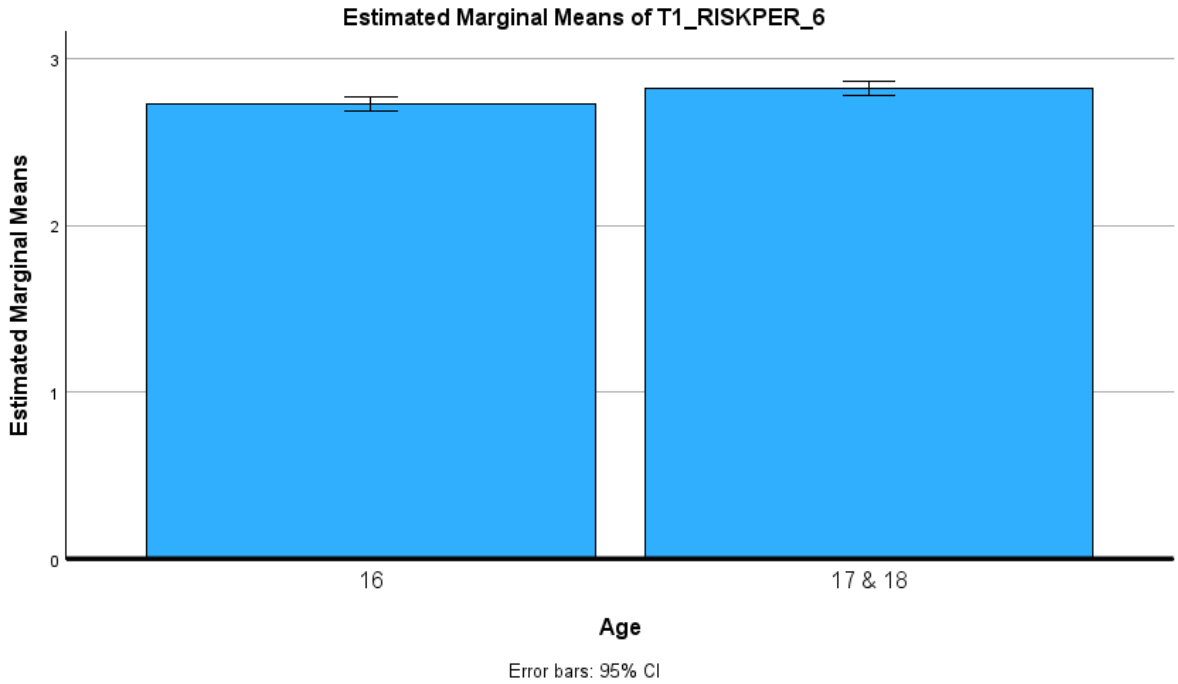
F(1, 2202) = 175.222, p =.048, partial η2 = .994.

Figure B9 Attitudes to speed, by age, T1



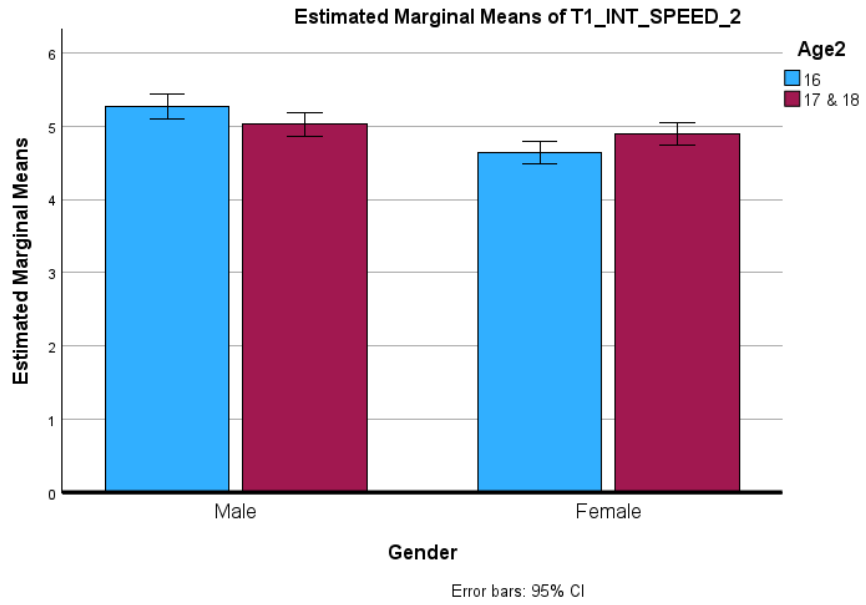
F(1, 2202) = 373.737, p =.033, partial η2 = .997.

Figure B10 Perceived risk associated with driving a car over 10 years old, by age, T1



F(1, 2202) = 2821.884, p =.012, partial η2 = 1.000.

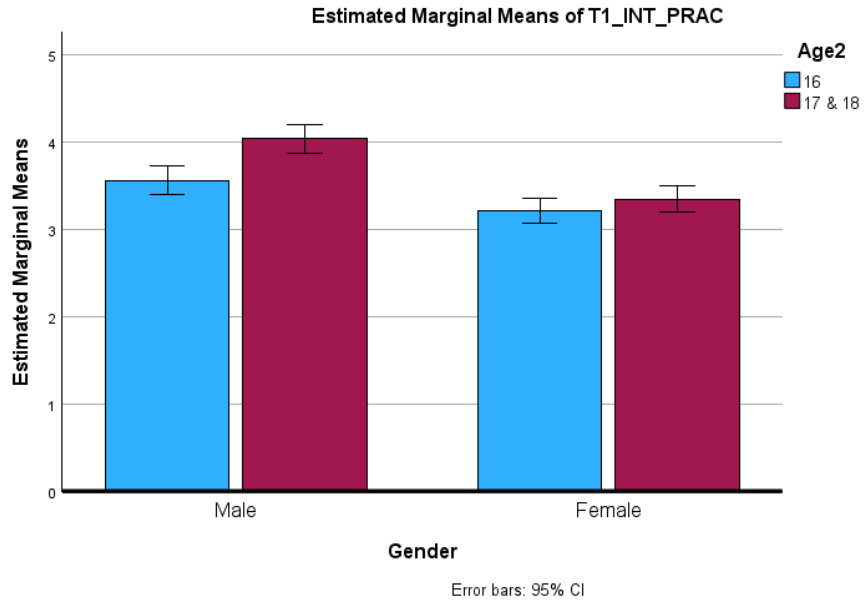
Figure B11 Intentions to drive within the speed limit at all times, T1



F(1, 2202) = 9.433, p =.002, partial η2 = .004.

Figure B11 shows worse safety scores that improve with age for males, in comparison to better safety scores for females, which get slightly worse with age.

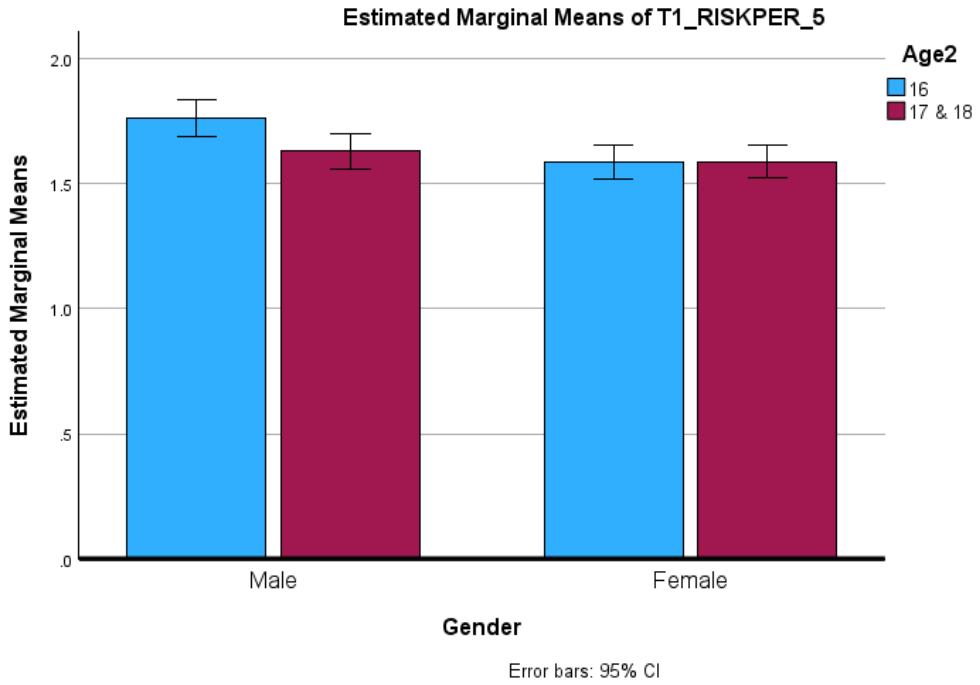
Figure B12 Intentions to get at least 100 hours practice over 12 months, T1



F(1, 2202) = 4.789, p =.029, partial η2 = .002.

Figure B12 shows that whilst both male and female views become less safe as they get older, this occurs to a greater extent within males, who are less supportive than females at age 16 of getting this level of practice.

Figure B13 Perceived risk associated with talking on a mobile phone whilst driving, T1

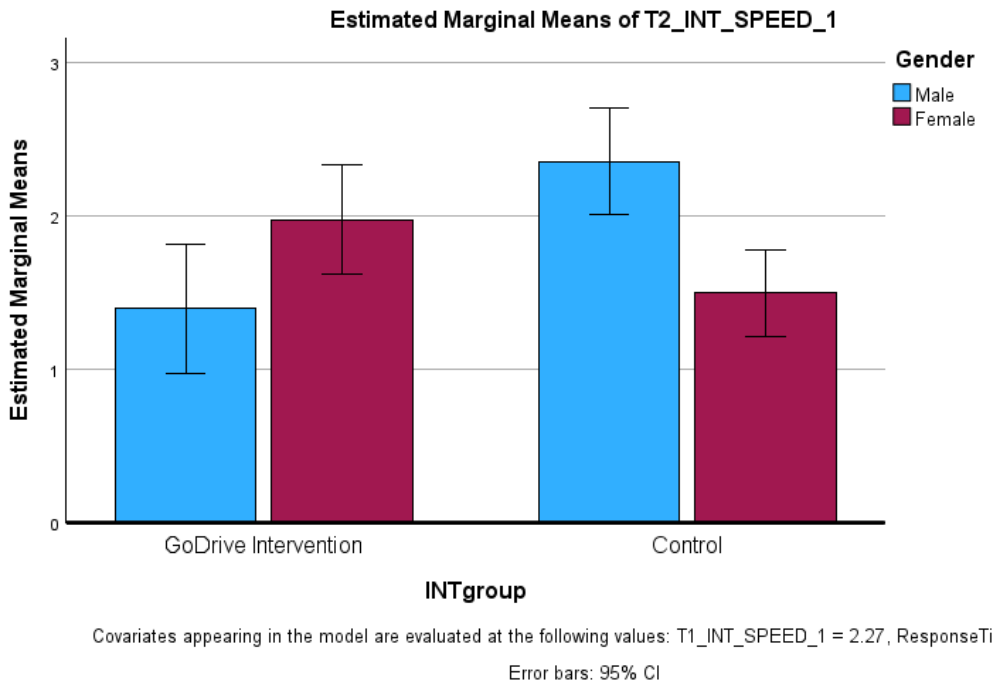


F(1, 2202) = 3.765, p =.052, partial η2 = .002.

Figure B13 shows that males did not have as high (i.e. as safe) perceived risk around mobile phone use whilst driving as females, but their perceived risk improved to around the same level as females as they age.

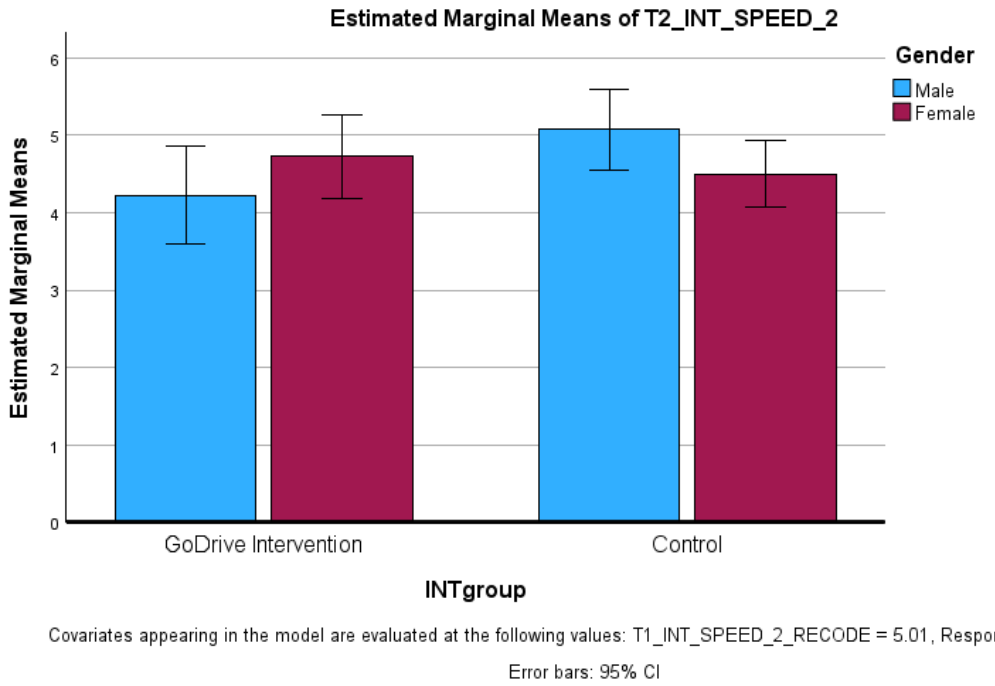
Annex C: GoDrive outcome evaluation results

Figure C1 Preference for driving within the speed limit at all times, by gender, T2



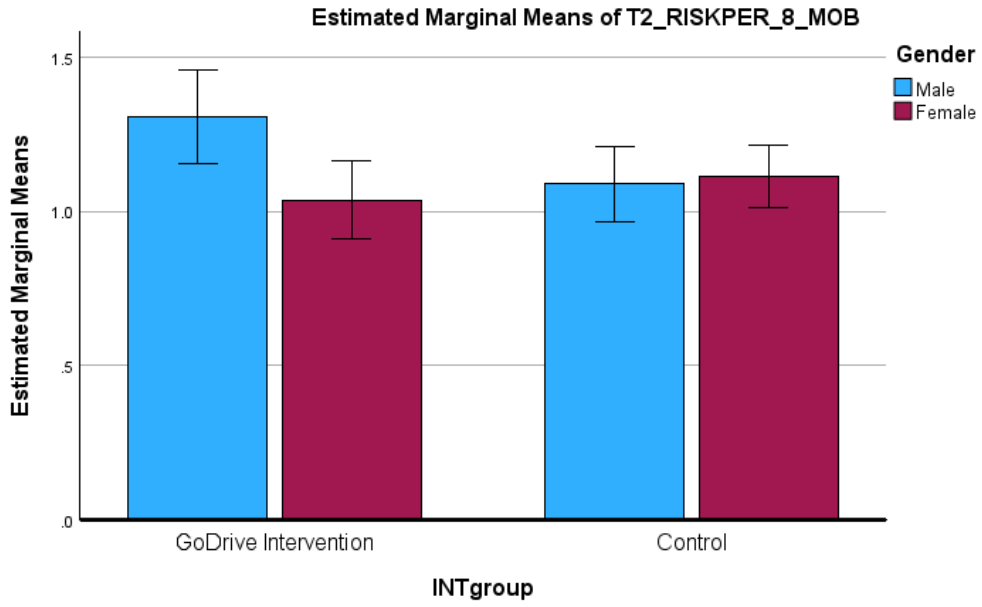
F(1, 163) = 16.195, *p* <.001, partial η2 = .09.

Figure C2 Expectation of the inevitability of driving over the speed limit sometimes, by gender, T2



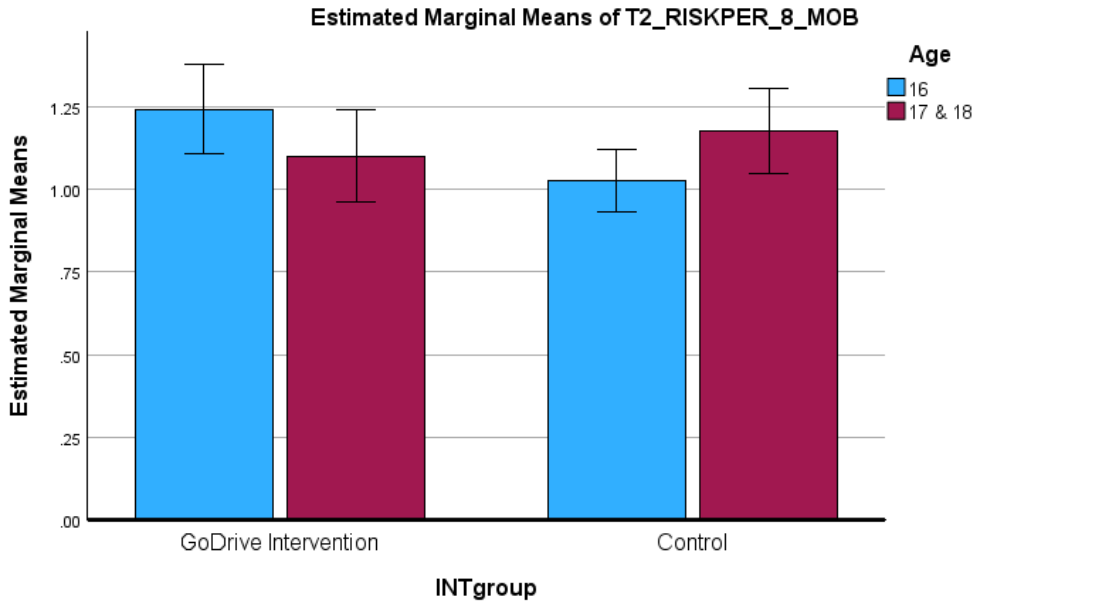
F(1, 163) = 3.913, p = .05, partial η2 = .02.

Figure C3 Expectation of the inevitability of driving over the speed limit sometimes, by gender, T2



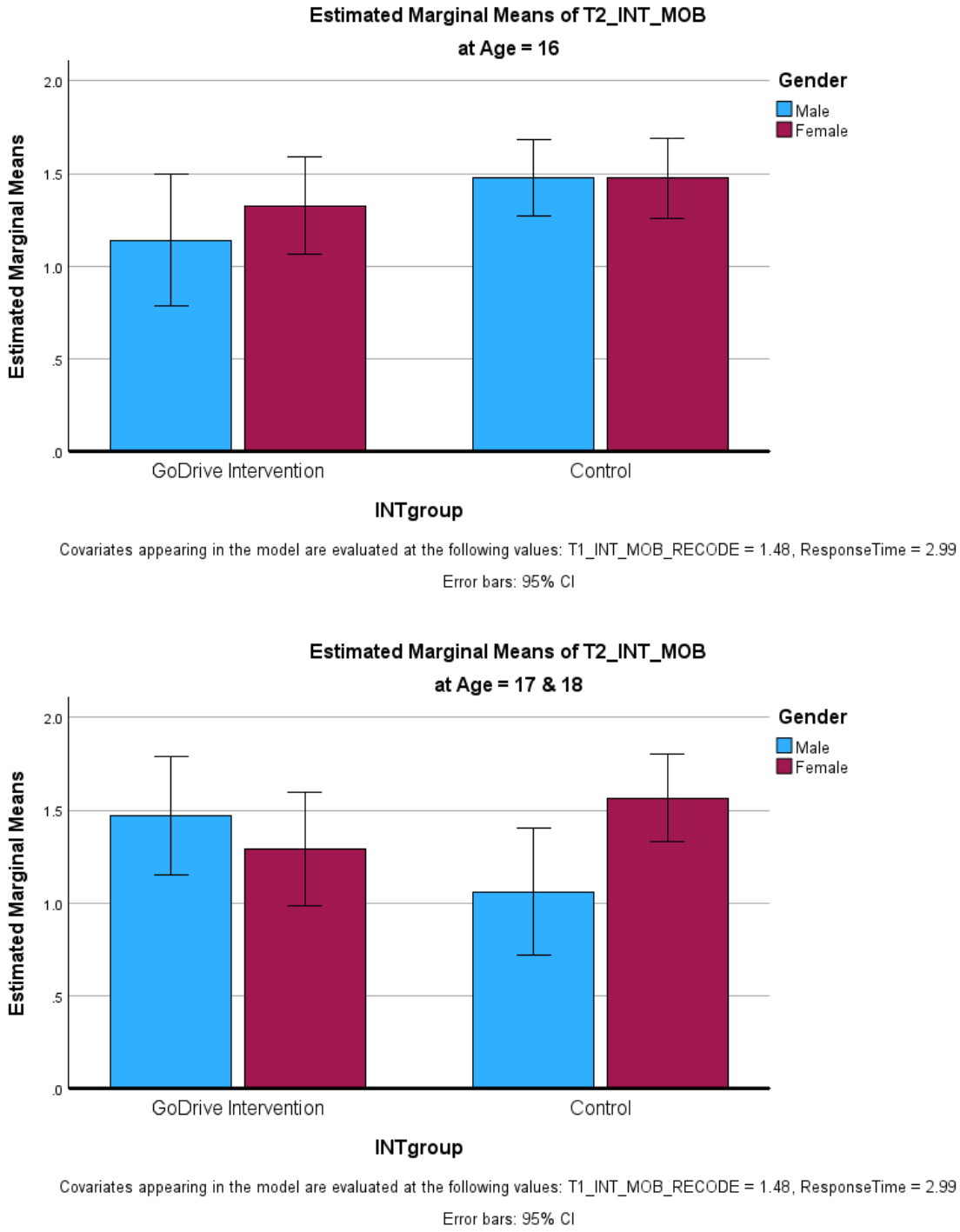
F(1, 163) = 5.223, p = .024, partial η2 = .03

Figure C4 Expectation of the inevitability of driving over the speed limit sometimes, by gender, T2



F(1, 163) = 5.408, p = .021, partial η2 = .03

Figure C5 Intentions to drive whilst using a mobile phone by age and gender, T2



$F(1, 163) = 4.656$, $p = .032$, partial $\eta 2 = .03$