

An Evaluation of Attitudinal Driving Workshops

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Abstract

This paper reports on preliminary findings of an evaluation of the effectiveness of Attitudinal Driving Workshops in changing attendees' driving attitudes. A survey was distributed at two workshops held at Redlands RSL club in the Wynnum Police District. Seventy-nine (60%) workshop attendees completed surveys. Telephone interviews were used to assess subsequent driving behaviour six weeks after workshop attendance. Results suggest that the workshops are reaching the target demographic of 16 to 25 year old drivers and more importantly producing attitude changes. The personal, emotional stories are more effective in persuading people to change their driving attitudes than the less personal informational messages presented at the workshops. However, participants also valued the practical strategies for safer driving, such as the discussions on perception times, and stopping and following distances, as these provided guidance to meaningful behavioural change. Regression modelling revealed that perceived message relevance was the most critical message characteristic predicting attitude change. A third-person effect was evident for the less personal messages. Although, participants interviewed six weeks post workshop indicated that the workshops had improved their attitudes and safety awareness when driving, this sample was insufficient in size to draw any firm conclusions about subsequent behaviour change.

Keywords

Road safety education, workshop, attitude, fear appeal, persuasion, emotion

Project background

Attitudinal Driving Workshops were initiated in Maroochydore in December 2006 as a joint response by the QPS and local community organisations to an increase in fatal road crashes in the North Coast Region (NCR) during 2006. Since November 2007 Wynnum District has emulated Maroochydore's workshops. Like Maroochydore they also hold workshops once per month using the local Redlands RSL club in Cleveland as the venue. Similar programs are now also running in the Ipswich and Townsville police districts. The primary aim of the workshops is to reduce road trauma by raising motorists' awareness of the risks associated with careless and irresponsible driving practices and providing some education about safe driving behaviour. The local newsprint media are supportive of the workshops and free workshop promotion is provided in the Redlands Times and Bayside Bulletin newspapers.

Workshops primarily target 16 to 25 year old drivers as road crash statistics confirm that drivers under the age of 25 are at greater risk of being involved in road crashes than more mature and experienced drivers. However, while this group remains the primary audience, presentations are delivered to anyone over 16 years of age.

The local magistrate and court staff are supportive of the workshops and recommend motorists attend a workshop if they are facing driver's licence disqualification or are applying to have current disqualification restrictions removed from their driver's licence. Thus, the

audiences are somewhat diverse from the perspective of motivation for workshop attendance. The majority of workshop attendees read about workshops in the local newspaper or on a billboard, or were informed about them by relatives, friends or the RSL club. Thus, this demographic were interested in the workshops and self motivated to attend them. However, a significant proportion of the audience attend because the local court or their solicitor requested them to attend as a result of a forthcoming court hearing in relation to a driving offence/s. This later demographic may respond differently to the program than those who attend with a more positive initial attitude. Similarly, a substantial number of the primary target demographic of under 21 years of age attendees attend because their parents requested them to attend and likewise, may respond differently to the workshops.

Workshops typically run for about three hours which includes a 20 minute tea break midway. Workshops have a mix of speakers from different backgrounds to present road trauma risks from a variety of perspectives. Presenters and the order in which they speak can vary depending on speaker availability. Typically, the format is as follows.

1. The Redlands RSL Operational Programs Manager and Police Officer in Charge (OIC) of the Wynnnum Traffic Branch provide a brief overview of the program's purpose and origin, and explain the program is a partnership between the local QPS and Redlands RSL sub-branch. The OIC facilitates the program by providing an overview of road trauma for both the district and state; he introduces the themes of choice and attitude; and introduces each presenter in turn during the presentation.
2. The first presenter is an acute trauma surgeon from the local Redland's hospital (the particular surgeon varies from night to night, depending on availability). He explains road trauma from a medical perspective. He shows graphic images of crash victim's injuries to illustrate his point that the consequences of careless driving can be serious injuries.
3. A female lay speaker (mid 30's) reiterates her personal experience of almost being killed in a car crash. She describes her numerous serious injuries and explains the impact that the crash has had on her life.
4. A police traffic officer explains vehicle stopping and following distances and driver perception times. This informational section focuses on practical driving skills and the officer encourages audience participation by asking questions, such as "how long to you think the average perception time is?" He provides practical examples, some with humour, and shows some video footage to illustrate the concepts, such as stopping distance consists of three components: perception of danger, reaction time, and braking distance.
5. A tea break
6. The RSL president makes the point that road trauma is a serious issue, by making a comparison of the number of Australian soldiers killed in the Vietnam War over 10 years of fighting compared to the number killed in Australia in road crashes per year. He also speaks from his perspective of working as a correctives services officer explaining a consequence of serious or recidivist traffic violations can be a prison term. He explains doing a prison term is not pleasant.
7. The ambulance officer describes a specific fatal crash that had a lasting impact on him.

8. A second female lay speaker (19 year old) tells about her personal experience of a crash as a result of her driving while fatigued. She fell asleep while driving and the resulting crash left her with permanent injuries. She describes her serious injuries and the on-going personal consequences of these.

9. The last presenter is the keynote speaker, a female police officer in her early 30s who was a victim of road trauma while off duty. She reiterates her personal experience of being involved in a head-on high speed crash which occurred when an oncoming motorist had an epileptic fit, lost control of his vehicle and crashed into her car. She was hospitalised with serious injuries, but has made a good recovery. However, her baby was killed in the crash and her other son was crippled (paraplegic). She shows a number of photos of the children who were injured and/or killed. This presenter speaks at nearly all workshops in every district in which workshops are held, she has a very polished and emotionally arousing presentation. She is always the last presenter, as the organisers believe she has the most impact and want to take advantage of the recency effect (that people remember best the last message of a series of messages).

10. The OIC reiterates the key themes of choice and attitudes.

11. The Redlands RSL Operational Programs Manager thanks people for attending, announces the date for the next workshop and concludes the evening.

Two features of these workshops that are different from traditional fear appeal public health campaigns is that the messages are true stories and presenters are not actors as on Television road safety advertisements. The emotional messages are very personal and highly credible.

Literature review

There has been considerable debate in the literature about the effectiveness of fear/threat based public health campaigns such as some road safety interventions. Some studies suggest that fear appeal messages are effective in raising audience awareness of the risks associated with dangerous driving practices, such as speeding or drink-driving, but in isolation are not clearly linked to changing driver behaviour (Cameron et al., 1993). Other studies indicate that fear appeals can be effective in changing behaviour provided they are well designed for the particular target audience (Weinreich, 2008). A growing body of research indicates that fear based messages are more effective if they explicitly include coping behaviours and/or strategies to reduce the likelihood of the fear-raising event occurring (Champness, 2000; Tay et al., 2001; Witte & Allen, 2000). As a general rule road safety interventions that are based on theory tend to be more effective than ad hoc interventions (Elliott, 1993). Thus, this literature review overviews a contemporary theoretical model of fear appeal messages that is pertinent to the “Attitudinal Driving Workshops.”

Amongst more contemporary models, Kim Witte’s (1992) Extended Parallel Process Model (EPPM) is arguably the best extant model at both identifying why fear based messages succeed or fail to change audience behaviour. This model addresses some of the shortcomings of the older models by expanding on and incorporating the best concepts of two of the better substantiated earlier models, namely Leventhal’s (1970) Parallel Process Model (PPM) and Rogers’ (1975;1983) Protection Motivation Theory (PMT). These earlier models suggested valid explanations of why audiences accepted messages by acting upon danger control processes to avert the occurrence of the feared event, but they failed to explain the

factors that lead to message rejection. Witte's model suggests that cognitive danger control responses lead to message acceptance and adoption of the recommended strategy to avoid the feared event occurring, and that emotional fear control responses, such as denial, lead to message rejection. According to this model, the intensity of the emotion impacts on the strength of the response and the perceived efficacy of the recommended strategy and perceived self-efficacy of being able to accomplish the strategy produces the type of response.

The EPPM suggests that when a fear based high efficacy message is delivered to audiences with high self-efficacy, the most likely audience reaction will be a cognitive danger avoidance response leading to adoption of the recommended strategy or a similarly effective strategy to deal with the danger. Alternatively, if the fear based message has low efficacy or the audience has low self-efficacy, the outcome is likely to be a fear avoidance response, such as denial of the threat and message rejection. The flowchart in Figure 1 (Appendix A) illustrates each process involved in the model.

The practical implication of the EPPM is that public health messages that use stimuli to elicit fear will be more likely to succeed if the audience perceives that there is an effective way to prevent the dangerous event (such as road trauma) from occurring, and the audience feels confident that they can perform the suggested or implied strategy. Thus, a road safety intervention that uses fear based messages to gain the audience's attention and highlight the consequences of road trauma and risk of being involved in it, combined with practical educational strategies that explain how to reduce this risk, should theoretically be somewhat effective in changing some driving behaviours.

There is empirical evidence that fear based road safety messages are less effective for males than females and are least effective for males under 25 years of age (Tay & Ozanne, 2002). Unfortunately this is the demographic group most represented in road trauma. Therefore, along with examining the overall effectiveness of the workshops for all age groups, this evaluation investigates the impact workshops have on attitudes of the under 25 years of age high risk group.

Davison (1983) hypothesised that communication has stronger effects on more remote others than on self and close others, such as partners, close friends and relatives; a concept he labelled 'the third-person effect.' Subsequent research has tended to confirm this hypothesis (Cohen et al. 1988; Perloff, 1999). Brosius and Engel (1996) found that the third-person effect was stronger for older and better educated people than for younger and less educated people. More recently, (Lewis, Watson & Tay, 2007) found that males tend to hold a view that fear-based road safety messages are more applicable to other people than to themselves. If this 'third-person' effect occurs it could bias people's opinions about the value of a program/intervention, such as the Attitudinal Driving Workshops, in that participants may believe a program is good and useful for other people and therefore provide positive feedback about it, even though they do not believe it has personal relevance and benefits for them.

Scope

This paper reports preliminary findings of an evaluation of the effectiveness of Attitudinal Driving Workshops at Wynnum District (Cleveland). A more comprehensive evaluation examining workshops at both Wynnum and Sunshine Coast Police Districts is currently being undertaken.

Key evaluation and research questions

This paper seeks to answer the following key evaluation and research questions. (1) What perceptions do audiences have of the workshops and what impact do they have on their driving attitudes? (2) How effective is the project in reaching the 'at risk' target demographic; and changing their attitudes and subsequent driving behaviour? (3) Do the workshops produce a third-person effect?

Method

Participants

One workshop per month is held at the Redlands RSL club in Cleveland. The survey sample was collected from two of these workshops. Participation was voluntary, and although confidential, participants were encouraged to leave their first name and a contact phone number on a separate piece of paper for a follow up phone interview. A total of 79 participants completed surveys. During the data collection period 67 people attended the first Redlands workshop and 40 (60%) of these completed surveys. Similarly, 66 attended the second Redlands workshop and 39 (60%) of these completed surveys.

The survey sample consisted of 51 males (64.6%) and 27 females (34.2%), with one per cent not identifying their gender. Forty participants (50.63%), 26 males and 13 females were under 25 years of age. Age was measured in categories, similar to those commonly used to report road crash data. The sample's age ranged from under 17 to over 60 years with a median age in the 21 to 24 years of age group and the mode in the 17 to 20 years of age group. Almost one-third (n=26, 32.9%) of the sample were referred to the workshops by local magistrates courts 26 (32.9). Of these 23 were male and three were female.

Thirteen people who completed surveys in the first round of data collection provided their first name and phone number for post workshop follow-up interviews. Of these seven males and three females were able to be contacted six weeks after workshop attendance. All 10 of those contacted completed interviews.

Quantitative Measures

A survey was developed to assess participants' perceptions about the workshops. The survey consisted of a series of five-point Likert-scale style survey items were used to explore participants' perceptions about each presenter's message for the following constructs: interest; believability; usefulness; relevance to self and relevance to others; message persuasiveness; impact on participants' attitudes towards driving; and how emotionally arousing was each presenter's message. Questions relating to the lay speakers, who tell of their personal road trauma experiences are asked in general terms as the number and identity of these speakers can vary from workshop to workshop. However, their themes are similar enough that the general questions are applicable. The survey also assessed the impact of the power-point images, using the same method as was used to assess each presenter. All variables except attitude change used the following scale: not at all (1); a little bit (2); somewhat (3); moderate (4); and very (5). The attitude change scale allowed for negative change as well as positive change and used the following scale: much more negative (-2); more negative (-1); no change (0); more positive (+1); and much more positive (+2). For analysis these scores were converted to a one to five scale to be consistent with the other measures used. The converted scale was: very negative (1), negative (2); neutral (3); positive (4); and very positive (5).

Participant's demographic information was also collected as was some qualitative general comment type information. A copy of the survey is included in Appendix B.

Qualitative Measures

A semi-structured interview was used to assess post workshop attitudes and behaviour changes (see Appendix C for a copy of the interview questions). Participants who provided a first name and phone number were contacted by phone six weeks after attending the workshops. These participants were asked a series of open questions with an aim of assessing what they remembered from the workshop, what they believed to be the most valuable parts of the workshop, their opinion about what the key message/s of the workshop was/were, and what impact it had on their attitudes and driving behaviour up till the time of the interview. Participants' verbal responses were recorded in hand-written note form by the interviewer on a separate sheet containing the interview questions for each person interviewed. Key words and phrases were recorded verbatim, but more general concepts and opinions were paraphrased in dot-point summary format.

Quantitative results and discussion

The most frequent age category that completed surveys was the 17 to 20 years of age group (28.2%). Over half (51.3%) of the sample were under 25 years of age. A further 11.4 per cent of participants were in the 25 to 30 years of age range. Of those in the key target age range of less than 25 years of age, 65 per cent of these were male. Thus, the workshops are arguably reaching the target group of high risk drivers. The second largest age demographic (19.2%) were between 41 to 50 age years of age. The vast majority of this age group (73.3%) were parents accompanying their adolescent children.

Table 1 lists the reasons indicated by the sample that had motivated them to attend the workshops. There are two noteworthy gender findings about motivation for attending the workshops. Firstly, proportionally four times as many females as males listed 'accompanied their adolescent children' as the reason for attendance; secondly, proportionally four times as many males as females were sent by the local magistrate.

Table 2 reports the mean scores and standard deviations of how participants rated each speaker's message in regard to their level of interest and how believable and useful they considered each message. All messages produced mean scores of greater than four for the message characteristics of interest, believability and usefulness. Given that the maximum possible score was five, these are very high ratings. Table 2 also shows how emotionally upsetting participants perceived each speaker's message to be. As expected the stories of personal road trauma were considerably more upsetting than the educational components of the workshop, such as vehicle stopping and following distances/times.

Table 1: Reasons People Attended the Workshops

Reason attended	N (%within gender)		
	Female	Male	Total
Learn about road safety	1 (3.7)	6 (11.8)	7 (8.9)
Parents wanted me to	5 (18.5)	8 (15.7)	14 (17.7)
Accompanied son/daughter	11 (40.7)	5 (9.8)	16 (20.3)
Sent by magistrate	3 (11.1)	23 (45.1)	26 (32.9)
Accompany friend	3 (11.1)	4 (7.8)	7 (8.9)
Interesting night out	1 (2)	1(3.7)	2 (2.5)
Other	3 (11.1)	4 (7.8)	7 (8.9)

Table 2: Mean Scores and Standard Deviations for Each Message's Characteristics

Workshop Sections	Message Characteristics – M (SD)			
	Interest	Believable	Useful	Emotional impact
Police officer's stories about crashes	4.08 (1.01)	4.54 (0.76)	4.11 (1.03)	3.34 (1.26)
Ambulance officer's crash stories	4.31 (1.09)	4.56 (0.95)	4.14 (1.08)	3.77 (1.15)
Vehicle stopping distances	4.13 (0.95)	4.35 (0.90)	4.26 (1.03)	2.95 (1.32)
Vehicle following distances	4.05 (0.91)	4.36 (0.92)	4.29 (1.01)	2.92 (1.30)
Stories of their own serious injuries	4.73 (0.68)	4.64 (0.75)	4.47 (0.92)	4.09 (1.06)
Female police officer's story about the death of her child and other child's injuries	4.72 (0.79)	4.79 (0.58)	4.54 (0.96)	4.47 (1.02)
Pictures of vehicle crashes	4.24 (1.06)	4.63 (0.63)	4.24 (0.94)	3.85 (1.14)
Pictures of crash victims' injuries	4.28 (1.21)	4.65 (0.62)	4.34 (0.91)	3.97 (1.09)

Table 3 reports the mean scores and standard deviations of how participants rated the relevance of each speaker's message, both to themselves and to others. Both the quantitative and qualitative data demonstrated a "third-person effect" as found by Lewis et al (2007) in their investigation of threatening road safety advertising messages. Although relevance scores to self are fairly high, relevance means for others are higher for all speakers and for the pictures of crashes and injuries than they are for self. A series of t-tests were used to test if the higher mean scores observed for message relevance for 'others' than for 'self' were significant. It is interesting that three of the four messages that did not produce a third-person effect were of highly personal and highly emotional content, whereas the four messages that demonstrated significant third-person effects were less personal and less emotive. A possible

explanation is that people relate better to messages that have a strong personal and emotional aspect than they do to more objective informational messages. However, the results were somewhat mixed, as the stopping distances message, which was not a highly personal or emotional message, did not produce a third person effect. So although no firm conclusions can be drawn, on balance the data indicate more personal and emotional messages appear less likely to produce ‘third-person effects’ than less emotive, informational messages.

The ‘third-person effect’ results found in this study are somewhat consistent with Lewis et al (2007). Gender differences for the third-person effect were explored, and although there was a trend for males to report a greater third-person effect than females, the results were not statistically significant, probably due to the relatively small sample size. A possible explanation for the overall third-person effect pattern is that approximately 20 per cent of the sample attended to accompany their adolescent or young adult children, thus their intention from the outset was to expose their child to the presentation rather than for their own benefit. However, further analysis controlling for this factor found that the third-person trend was slightly weaker, but still remained.

Table 3: Message Relevance for Self and Others (Third-person Effect) - Means, Standard Deviations and t-tests

Workshop Messages	Message Relevance M (SD)				
	Self	Others	<i>n</i>	<i>t</i>	<i>p</i>
Police officer’s stories about crashes	3.97 (1.12)	4.20 (0.90)	64	2.87	.006
Ambulance officer’s crash stories	4.20 (1.10)	4.32 (0.92)	62	1.79	.08
Vehicle stopping distances	4.19 (1.07)	4.30 (0.98)	66	1.04	.30
Vehicle following distances	4.20 (1.04)	4.37 (0.95)	65	2.09	.04
Females stories of own serious injuries	4.49 (0.87)	4.53 (0.75)	63	0.73	.47
Female police officer’s story about the death of her child and other child’s injuries	4.58 (0.97)	4.69 (0.69)	63	1.47	.15
Pictures of vehicle crashes	4.14 (1.16)	4.36 (0.86)	62	2.12	.04
Pictures of crash victims injuries	4.19 (1.16)	4.46 (0.80)	61	2.43	.02

Table 4 reports how persuasive participants rated each speaker/message. Overall, participants rated all speakers as persuasive and effective in changing their driving attitudes. As predicted, and consistent with perceived relevance and emotional impact ratings, inspection of the mean scores in Table 4 indicates that the personal testimonies of the female presenters, the two lay female speakers who spoke of their own road trauma experiences and the female police officer whose child was killed in a crash, were rated by participants as the most persuasive and effective in changing attitudes. Age did not significantly alter self-reported attitude change with mean scores for attitude change for each speaker for those under 25 years (*n* = 40) of age being very similar to the full sample.

Mean scores indicated that the court-referred driving offenders rated all aspects of the presentation as being less emotionally arousing than those who attended for other reasons. However, t-tests showed that the differences were only statistically significant for the most emotionally arousing speakers. The mean emotional arousal of the participants arising from the female police officer's message was 4.08 for the court referred participants and 4.67 for the balance of the sample, $t(70) = 2.36, p = .021$. Likewise, mean emotional arousal arising from the female speakers who talked about their own injuries was 3.64 for the court referred participants and 4.31 for the balance of the sample, $t(74) = 2.71, p = .008$.

Table 4: Means and Standard Deviations for Message Persuasiveness and Attitude Change

Workshop Sections	Mean (SD)		
	Persuasive	Attitude Change-all	Attitude Change <25
Police officer's stories about crashes	4.01 (1.04)	4.11 (0.63)	4.06 (0.56)
Ambulance officer's crash stories	4.18 (1.05)	4.34 (0.64)	4.35 (0.66)
Vehicle stopping distances	3.88 (1.11)	4.04 (0.78)	4.06 (0.77)
Vehicle following distances	3.90 (1.12)	4.06 (0.76)	4.06 (0.80)
Stories of own serious injuries	4.29 (1.07)	4.51 (0.66)	4.56 (0.62)
Female police officer's story about the death of her child and other child's injuries	4.57 (0.89)	4.65 (0.59)	4.65 (0.61)
Pictures of vehicle crashes	4.12 (1.13)	4.24 (0.65)	4.27 (0.63)
Pictures of crash victims injuries	4.26 (1.05)	4.30 (0.65)	4.39 (0.61)

Given that mean arousal scores arising from the personal testimonies were higher than other segments of the workshop it was predicted that it was the emotional aspects of these messages that were having the most impact. To test this prediction a series of regression models were performed. Table 5 displays the regression results. Modelling revealed that only relevance was a consistently reliable predictor of attitude change across all speakers/messages that were tested. As expected, emotional arousal was a reliable predictor of attitude change of the female police officer's personal story and the ambulance officer's message, but contrary to expectations not for the second most emotional message presented by the female crash survivors. As predicted emotional arousal was not a predictor of attitude change for the less emotive messages about stopping and following distances. Along with relevance, believability was a significant predictor for stopping distances, but not following distances.

As the court-referred group were significantly less emotionally aroused than the rest of the sample, a comparison of this group with the balance of the sample was performed to determine which factors were most effective in changing attitudes in response to the female police officer's message. This message was chosen because it was presented in a consistent manner at both workshops and as it was rated as the most emotionally arousing and most persuasive of all the messages. Regression modelling revealed an interesting difference between the court-referred participants and the balance of the sample. For the participants

who attended because they wanted to attend (all non-court referred attendees) only emotional arousal was a significant predictor of attitude change for this particular message, $R^2 = .34$, $F(3,36) = 6.20$, $p = .002$, $\beta = .44$, $p = .015$. In contrast, for the court referred group only perceived message relevance was a significant predictor of attitude change, $R^2 = .69$, $F(3,17) = 12.43$, $p = .000$, $\beta = .79$, $p = .002$. This finding has important implications for message development in that it suggests messages need to be designed specifically for the target audience. Overall the results indicate that messages need to be perceived by the target audience to be personally relevant to be effective in changing attitudes, and the data suggests that the more personal the message is the more this perception is created, especially with the more at risk driving demographic.

Table 5: Regression Model Results: Predictors of Attitude Change for each Message

Message and Regression Model R^2 and F statistics	Factor	Statistic	
		β	t
Female police officer's story about the death of her child and other child's injuries $R^2 = .43$, $F(3,57) = 14.19$, $p < .001$.	Emotion	.34	2.68**
	Relevance	.32	2.41*
	Believable	.12	1.04
Female lay presenters' stories of their own injuries $R^2 = .40$, $F(3,62) = 13.75$, $p < .001$.	Emotion	.22	1.61
	Relevance	.30	2.40*
	Believable	.24	2.05*
Police officer stories of crashes $R^2 = .43$, $F(3,62) = 15.72$, $p < .001$.	Emotion	.37	2.90**
	Relevance	.31	2.31*
	Believable	.08	0.69
Ambulance officer crash story $R^2 = .39$, $F(3,55) = 11.50$, $p < .001$.	Emotion	.27	1.71*
	Relevance	.38	2.76**
	Believable	.05	0.36
Stopping distances $R^2 = .42$, $F(3,61) = 14.77$, $p < .001$.	Emotion	.06	0.53
	Relevance	.37	2.98**
	Believable	.33	2.61*
Following distances $R^2 = .39$, $F(3,61) = 12.78$, $p < .001$.	Emotion	.06	0.54
	Relevance	.42	2.94**
	Believable	.22	1.63

Note * $p < .05$, ** $p < .01$.

Qualitative results and discussion

Seven males and three females completed interviews conducted six weeks post-workshop attendance. Five of the males (aged 18, 20, 27, 48 and 54) were disqualified or suspended from driving and were recommended to attend by the court. Amongst those who were not

referred by the court, the two females read about the workshops in the newspaper, one of the males heard about them at the RSL club and the other male heard about the workshops from an undisclosed source (age 36). Two females (aged 48 and 50 years) and one male (age 49 years) brought their teenage motorist children to the workshops. The nineteen year old female accompanied her mother and brother. Thus, six (60%) of those interviewed belonged to the workshops target audience of high risk drivers (under 25 years of age or currently disqualified/suspended from driving).

As the workshops were designed to be emotive, participants were asked to label the emotions that were elicited during the workshop. Most used terms such as sad, confronting, or “in your face.” None of those interviewed voluntarily suggested fear or threat. When asked directly if they found the images or stories frightening, none said they felt frightened. The most common emotions they recalled experiencing were sadness and sympathy. Other common descriptive terms participants expressed were shock, shame or guilt. One of the older males felt angered by the emotive sections and pictures of crashes, but still thought these were good for younger people. This view encapsulates the concept of the ‘third-person effect,’ in that while this participant did not believe the workshops had any impact on his attitudes, he believed it would have a strong impact on other people’s attitudes, particularly those belonging to a younger generation than him.

All of those interviewed rated the workshops as very good overall and believed that all the speakers had an important role that added value to the workshops. When asked to rate the speakers according to the amount of impact they had on their attitudes and resultant driving behaviours, nine of the 10 interviewees rated the female police officer’s message and the stories recounted by the female speakers who spoke about their own injuries as by far the most memorable, persuasive and effective in influencing their attitudes and driving behaviours. When asked why, the common response was that it was the personal nature, reality and sadness of their stories that had the impact. The confrontational and sad emotive sections of the workshop were much better remembered and were reported as having more impact on attitudes and subsequent behaviour after six weeks than the more technical and statistical information sections. In fact, none of the participants remembered any of the crash statistics information, and all of the participants under 25 years of age suggested that the medical section presented by the surgeon was too complex and contained too much statistical information.

Most of those interviewed thought the information on stopping and following distances was valuable. The older participants indicated that this information was not new, but it was good reinforcement. When questioned about their subsequent driving behaviour most suggested that they were now more conscious of their following distances and the driving environment. However, when questioned specifically about the perception times and following distances only two of those interviewed remembered all the suggested guidelines, with a few others recalling some of the information. For example, four people (40%) remembered the two-second following distance rule. The 18 and 20 year old males and a 36 year old professional truck driver trainer remembered most of the perception and stopping distance calculation rules, but the others were confused about these. All agreed the concept was important and valuable, but nearly all of those interviewed regarded the information as too complex. Some suggested that it would be good to use some form of simulation exercise to demonstrate the effects of distractions on perception and reaction times, rather than trying to explain the technical details. On the positive side most participants agreed that the video footage showing car stopping distances was a good reminder not to follow too close to the preceding vehicle.

Similar to the technical information about braking distances, interview participants could not remember any of the crash statistics information, and none said that the numbers had any persuasive effect on them. One male participant spontaneously suggested that the chairs at the front of the room with crosses representing each person who had been killed in the district that year had far more impact on him than the dry statistical numbers.

Self reported post-workshop driving behaviour was explored. When asked “what do you do differently when driving since the workshops?” responses tended to be non-specific, with most making suggestions to the effect that they were more aware of the risks involved in driving; made a greater conscious effort to be more attentive to the road environment; monitored their speed more carefully; and were more attentive to their following distance.

Consistent with Brosius and Engel’s (1996) research, post-workshop interviews found that the third-person effect was stronger amongst the over 30 age group. All six participants interviewed who were over 30 said the workshops were more important for younger people, and although most agreed that the workshops had an important and useful message for them, it was far more important for younger, less experienced drivers. For example, the three males over 40 interviewed said that they didn’t really need to see the pictures of crashes and injuries, but these would be good for the younger drivers, especially learner drivers. The most pronounced example of the third-person effect was by one of the older court referred males who was applying for a hardship licence. Even though he stated that the emotive sections angered him and he didn’t need to see pictures of crashes or injuries, he was adamant that these were very good for younger people, who he believed should attend these workshops before being able to gain a driver’s licence. These results, although supportive of the third person effect being stronger for older people, need to be considered in the context that some of the older participants originally attended the workshops to accompany their adolescent children. Thus, they are likely to have already held the view that the workshops were more important for younger people prior to attending the workshops.

Conclusions

A major strength of the attitudinal driving workshops is that they use a combination of message strategies to persuade the audience to change their driving attitudes and behaviours. While the primary persuasive method is the use of emotional appeals, this is supplemented with some practical strategies to reduce road trauma risk. Workshops place a strong emphasis on choice, which is a recurrent theme used to link the various segments of the workshops with the objective of raising audience awareness of the importance of taking responsibility for their own safety and exercising diligence when driving.

Overall, both the survey and interview data suggest motorists of any age may benefit from workshop attendance. More importantly, the workshops appear to be reaching the primary target of demographically ‘at risk’ drivers (16 to 25 years of age) and are having an impact on their driving attitudes, at least immediately following workshop attendance. As the survey was completed immediately following the workshop the duration of this attitude change could not be determined. For the same reason, the survey could not measure actual driving behaviour change. However, feedback from the sample of those who were interviewed six weeks post-workshop attendance indicated that the majority of those interviewed were at least more aware of the risks associated with driving, and most stated that they were more attentive

to their environment when driving, one stated that she was making a more conscious effort to drive within speed limits and another said he had increased his following distance.

This preliminary evaluation suggests the workshops are effective in raising audience awareness of the risks associated with careless driving practices and in improving the audience's attitudes towards safe driving practices. However, according to Witte's EPPM there may be potential to strengthen the effectiveness of the workshops. Although workshops address the two critical variables that Witte's (1992) EPPM argues are essential for effective fear based appeals for behaviour change; self-efficacy and message efficacy, these constructs could be better integrated in some of the presentations. The more emotional presentations do not explicitly incorporate message efficacy within the messages. While the emotional messages are supplemented with the high efficacy educational messages, such as perception time, and safe vehicle following and stopping distances, the EPPM suggests that greater behaviour change may occur if the high fear messages explicitly portrayed an element of message efficacy. In fact, a 20 year old court-referred male indicated this concept in non technical terms during his post-workshop interview.

In sum, the data suggest that the personal and emotional stories of presenters were the aspects of the workshops that had the most impact on changing participants' driving attitudes immediately following the workshop. Post-workshop interviews indicated that participants felt the practical sections to be very useful, even if excessively complex. The data neither clearly supports nor negates Witte's theory that messages that include high efficacy practical strategies for avoiding the danger portrayed in the message are more effective in changing attitudes than low efficacy messages. While the survey data indicated that the high efficacy, low fear messages, such as vehicle stopping and following distances were somewhat effective in changing audiences attitudes, the survey results suggest that the higher fear messages, despite lacking explicit message efficacy, had a greater impact on immediate attitude change. While on the surface this result suggests that message efficacy is not important, this needs to be tempered by the finding that the high fear messages were also perceived to be more personally relevant to the audience than the low fear, high efficacy messages. These higher fear messages were also of a more intimate nature than the lower fear, more objective informational messages and it may be this construct, rather than fear, that is most influential in changing attitudes. It may be that the intimacy and authenticity of the personal messages raises audience empathy or at least sympathy, which in turn may act as an intermediate variable in the process of attitude change.

Limitations

This paper is a preliminary evaluation of the workshops and thus has some limitations. Firstly, the relatively small sample may reduce the reliability of the results. Secondly, as the sample was drawn from two workshops at one location the findings may not generalise to similar workshops in other geographical locations. Finally, and more importantly, as the surveys were completed immediately following the workshops, participant's responses may be biased towards reporting a more favourable view of their attitude change than if surveys were completed at a later date. However, the limited sample of six weeks post-workshop follow up interviews indicated that participants continued to have a positive view of the workshops and had maintained their changed attitude. Despite maintaining positive attitudes, when asked to specifically identify any changes in their driving behaviours most participants only provided non-specific responses, such as I pay more attention, or I am more aware of other motorists while driving. Only one participant specifically stated that she had stopped exceeding the speed limit since attending the workshop and another one stated that he had increased his

following distance. Unfortunately, the sample of six weeks post-workshop interviewees was not large enough to reliably estimate the effects of the workshops in sustained changes in driving behaviour for the population of workshop attendees.

The ongoing more comprehensive evaluation of the workshops will contain larger samples of both survey and post-workshop interview data which will help to address the sample size and geographical generalisability issues of this preliminary study. Similarly, it is hoped that the larger phone interview sample in the final evaluation will somewhat address the issue of bias due to completing surveys immediately after attending the workshop.

Future Research

This preliminary study suggests that closer examination of perceived message relevance and authenticity, and the capacity of messages to elicit empathy and/or sympathy would be fruitful avenues of future research investigating persuasive communication principles. For a more objective measure of longer-term behaviour change, it would be valuable for a future evaluation to examine longer-term recidivism rates of court-referred workshop attendees whose licences had been suspended due to driving offences.

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References

Brosius, H-B., & Engel, D. (1996). The causes of third-person effects: Unrealistic optimism, impersonal impact, or generalized negative attitudes toward media influence? *International Journal of Public Opinion Research*, 8, 142-162.

Cameron, H.M., Hawthorn, N., Oxley, L., Newstead, S. & Lee, T. (1993). Evaluation of Transport Accident Commission road safety television advertising. *Monash University Accident Research Centre. Report*, 52.

Champness, P. (2001). *Unpublished Psychology Honours Thesis: QUT*.

- Cohen, J., Mutz, D., Price, V., & Gunther, A. (1988). Perceived impact of defamation. An experiment on third-person effect. *Public Opinion Quarterly*, 52, 161-173.
- Davison, W.P. (1983). The third-person effect in Communication. *Public Opinion Quarterly*, 47, 1-15.
- Elliott, B. (1993). Road Safety Media Campaigns: A meta-analysis. Canberra, Australia. *Elliott and Shanahan Research, Federal Office of Road Safety*.
- Leventhal, H. (1970). Findings and theory in the study of fear communications. In L. Berkowitz (Ed.), *Advances in Experimental Social Psychology*, 5, (119-186). New York: Academic Press.
- Lewis, I.M., Watson, B. & Tay, R. (2007) Examining the evidence of the effectiveness of physical threats in road safety advertising: The role of third person effect, gender and age. *Transport Research Part F*, 10, 48-60.
- McGuire, W.J. (1968). Personality and susceptibility to social influence. In E. Borgatta & W. Lambert (Eds.), *Handbook of Personality Theory and Research* (pp. 1130-1187). Chicago: Rand McNally.
- Perloff, R. M. (1999). The third-person effect research: A critical review and synthesis. *Media Psychology*, 1, 353-378.
- Rogers, R.W. (1975). A protection motivation theory of fear appeals and attitude change. *Journal of Psychology*, 91, 93-114.
- Rogers, R.W. (1983). Cognitive and physiological processes in fear appeals and attitude change: A revised theory of protection motivation. In J. Cacioppo & R. Petty (Eds.), *Social Psychophysiology* (pp. 153-176). New York: Guilford.
- Tay, R. S. and Ozanne, L. (2002). Who are we scaring with high fear road safety advertising campaigns? *Asia Pacific Journal of Transport*, 4: 1-12.
- Tay, R. S. and Watson, B. C. and Radbourne, O. and De Young, B. (2001). The influence of fear arousal and perceived efficacy on the acceptance and rejection of road safety advertising messages. In *Proceedings 2001: Road Safety Research, Policing and Education Conference*, Melbourne.
- Witte, K. (1992). Putting the fear back into fear appeals: The Extended Parallel Process Model. *Communication Monographs*, 52, 329-349.
- Witte, K. & Allen, M. (2000). Meta-Analysis of Fear Appeals: Implications for Effective Public Health Campaigns. *Department of Communication, University of Wisconsin-Milwaukee*
- Weinreich, N. K. (2008). Spare Change: my two cents on making a difference with social marketing. *Making Fear-Based Campaigns Work*. www.social-marketing.com/blog.

APPENDIX A

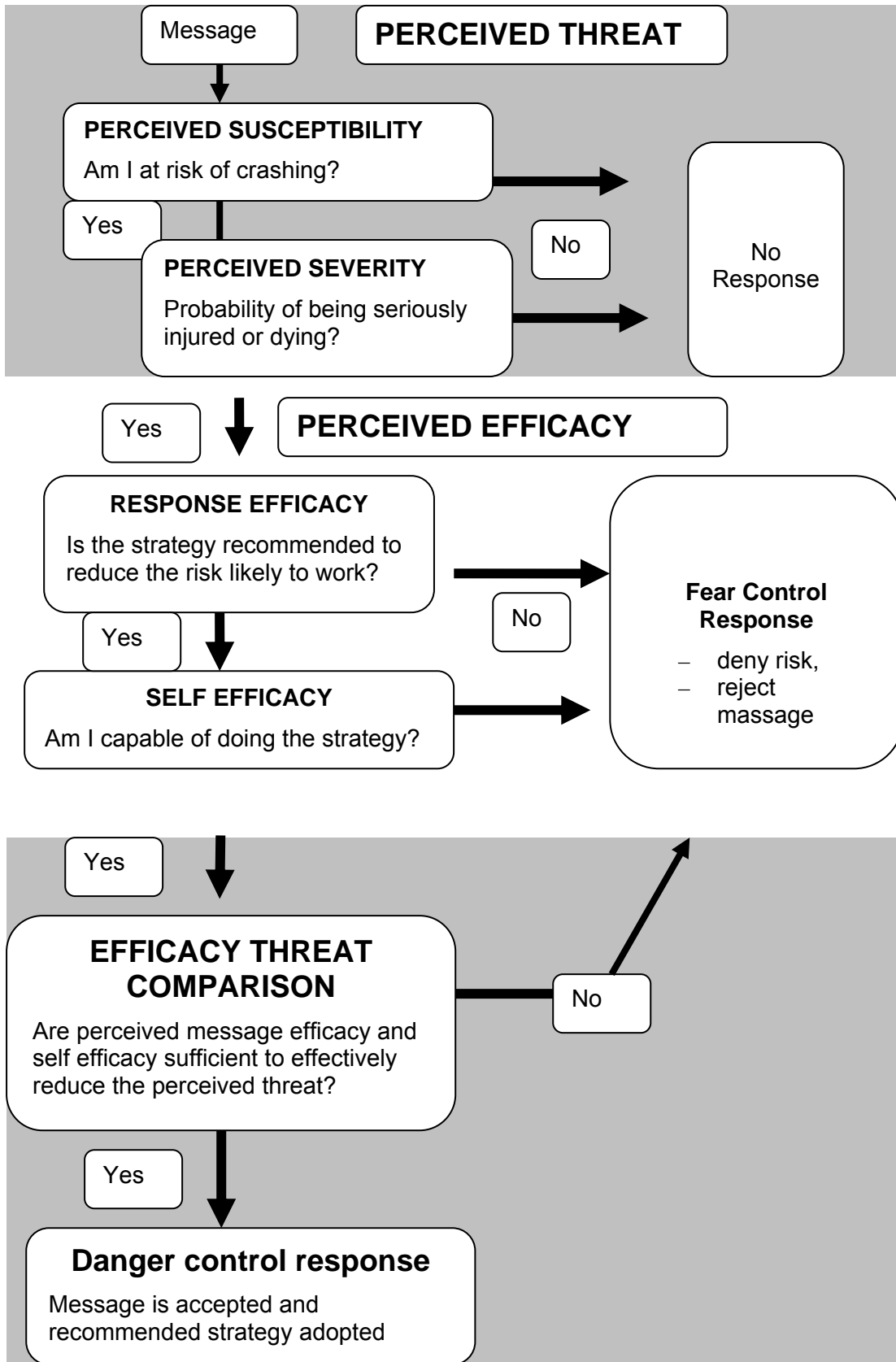


Figure 1: Flowchart of Witte's 1992 Extended Parallel Process Model of how Fear Appeals Work

APPENDIX B: Survey Instrument (extracts form full survey)

Evaluation of Attitudinal Driving Workshops

This questionnaire is to help us learn how we can improve these workshops. We'd like to know which parts you liked and which parts you think should be changed. This survey is **optional** and **confidential**. You do not need to complete it if you do not wish to and you **do not need** to write **your name** on it. However, if you are willing to be contacted by the workshop evaluator by phone to provide extra feedback about the workshop at a later date please write your **first name** and contact phone number on the list near the door on your way out.

Gender: Male Female

1. Age:

- Under 17 17 – 20 21 – 24 25 – 30
- 31-40 41-50 51 – 60 Over 60

2. What type of licence do you hold?
Please circle the appropriate type from the following list.

- a. Open
- b. Provisional
- c. Learners permit
- d. Disqualified or licence suspended
- e. Never had a licence

3. How did you hear about the workshop?
Please circle the main one.

- a. Newspaper
- b. TV
- c. Friend
- d. Parents
- e. Police
- f. Court/Magistrate
- g. Other

4. Why did you attend the workshop?
Please circle **one answer (1)** that is most applicable.

- a. I wanted to learn more about road safety
- b. My parents wanted me to attend
- c. I accompanied by son/daughter
- d. I was sent by the magistrate/court
- e. I thought it might be a good/interesting night out
- f. A friend or my partner wanted me to accompany them
- g. Other.....

A series of questions with tables in a similar format were used to assess opinions of participants. All questions are listed below. Each question was followed by a table with a list of presenters in the left column and a scale in the right column. The only difference in the tables was the headings for each construct examined. Thus, only one sample table is included to save space. However, the complete attitude assessment table is also included as it used a different scale. Relevance had two rows for each presenter, one for self and one for others.

5. You may have found some sections of the workshop more interesting than other sections. The table below lists workshop sections. For each item in the table, please circle the number that best indicates your **interest** for each workshop section. **One (1)** indicates it was **not at all** interesting and **five (5)** indicates it was **very interesting**.

6. You may have found some sections of the workshop more informative or useful from the perspective of helping you to become a safer driver. In the table below, please circle the number for each of the following items

to indicate the **usefulness** of each of the following sections of the workshop. *One (1)* indicates it was *not useful* and **five (5)** indicates it was **very useful/helpful**.

7. Some parts of the workshop, such as the pictures of road crashes and injured people and some of the stories about fatal crashes, may have been frightening or emotionally upsetting. Please rate by circling the appropriate number how unpleasant/upsetting and/or frightening you found each section of the workshop listed in the table below.

8. Please indicate by circling the appropriate number on the scale below how **believable** you found each section of the workshop? *One (1)* indicates it was *not believable* and **five (5)** indicates it was **very believable**.

9. You may have found some parts of the workshop more **relevant to you** than other parts. Likewise you may feel some parts are more **relevant to other motorists** than yourself. Please indicate (circle the applicable number) in the table below for each message section how relevant it was to you and to others.

10. Please rate how **persuasive** you found each section of the workshop from the perspective of **influencing/changing your driving behaviour**.

Workshop Sections	Emotionally Upsetting				
	Not at all	A little bit	Somewhat	Moderate	Very
Police officer's stories about crashes	1	2	3	4	5
Ambulance officer's crash stories	1	2	3	4	5
Vehicle stopping distances	1	2	3	4	5
Vehicle following distances	1	2	3	4	5
Surgeon's stories	1	2	3	4	5
Peoples stories about their own serious injuries	1	2	3	4	5
Female police officer's story about the death of her child and other child's injuries	1	2	3	4	5
Pictures of vehicle crashes	1	2	3	4	5
Pictures of crash victims injuries	1	2	3	4	5

11. Please rate how much each speaker/topic/section at this workshop has **changed** any of **your attitudes** towards safer driving practices. In the table below, please circle the appropriate numbers for each workshop section. For example, + **1** indicates you are now **more positive about road safety** and negative one (-1) would indicate that that part of the workshop turned you off road safety messages. *Zero (0)* indicates the workshop section had *no influence* on your attitudes about driving.

Workshop Sections	Attitude Change				
	Negative Change		No Change	Positive Change	
	Much more	More	Neutral	More	Much more
Police officer's stories about crashes	-2	-1	0	+1	+2
Remaining items are as in the above table	-2	-1	0	+1	+2

APPENDIX C

Questions for Six Week Post-Workshop Interviews

Introduce self and ask if they remember workshop ask if suitable time to talk etc.

Record code for person. gender F M

1. How many workshops have you attended?
2. How did you hear about the workshop?
 - a. Newspaper
 - b. TELEVISION
 - c. Friend
 - d. Parents
 - e. Police
 - f. Court/Magistrate
 - g. Other- list
3. Why attend?
 - a. I wanted to learn more about road safety
 - b. My parents wanted me to attend
 - c. I accompanied by son/daughter
 - d. I was sent by the magistrate/court
 - e. I thought it might be a good/interesting night out
 - f. A friend or my partner wanted me to accompany them
 - g. Other.....
4. Thinking back what was the most valuable thing you learnt from the workshop? Explain
5. What else did you learn from the workshop?
6. Anything else?
7. Think about your driving since the workshop, do you do anything different? What or explain? Following prompts if relevant.
 - a. Drive slower?
 - b. Increase following distance?
 - c. Avoid using mobile while driving?
 - d. Pay more attention?
 - e. Avoid driving when tired?
 - f. More careful about drink driving?
 - g. Anything else?
8. Which speaker or what segment of the workshop had the most impact on your attitudes about driving? If you can't remember the speakers name just think about the type of message, eg. Cop talking about stopping and following, surgeon, ambo, woman talking about her car crash, female cop speaking about her crash. RSL president- talk about Vietnam and prison.
9. Why did this speaker have more impact? Prompts if no clear answer –
 - a. Related to the speaker?
 - b. Frightening?
 - c. Funny?
 - d. Realistic?
 - e. What was different about them or their story that made the extra impact?
 - f. Anything else?
10. Think about the power-point show, which things gained and held your attention the best?
 - a. Still pictures of crashes?
 - b. Video footage of crashes?
 - c. Video footage of stopping distance?
 - d. Pictures of peoples injuries?
 - e. Statistics about how many people are killed or injured on the roads.
 - f. Something else?

