How safe is my car: Is safety a priority in private vehicle purchasing?

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Abstract

In recent years significant effort has been focused on improving the safety culture amongst fleet buyers; however around half of all new vehicles sold in Australia are for private use. In attempts to highlight the importance of vehicle safety amongst private consumers of both new and used cars, a number of consumer information programs have been developed. These include the Australian New Car Assessment Program (ANCAP), the Used Car Safety Ratings (UCSR) Program and the howsafeisyourcar.com.au web site. Surveys have identified an increase during the past decade in the level of consumer interest in vehicle safety. Despite this, the priority private consumers place on vehicle safety within their purchasing decision remains unclear. A comprehensive review revealed a paucity of public information regarding consumer understanding of specific safety features or ratings, and the importance placed on safety features relative to other features such as convenience and comfort. The aim of this research was to explore the key mechanisms driving private consumer choice in vehicle selection, particularly regarding safety within Australia. A total of 2,013 participants from Victoria, New South Wales and Queensland who were in the market for a vehicle, completed pre and post vehicle purchase surveys (n=1,009 and n=1,004 respectively) designed to establish purchasing behaviours and priorities across the vehicle purchasing process. The factors: age, gender, concern about crash involvement, and sourcing ANCAP ratings were found to be significant factors in the identification of a 'safe vehicle purchaser' profile. Females, participants aged 50 years or older, those with greater levels of concern about being involved in a crash, and those who sourced ANCAP information were identified as being more likely to place high priority on secondary safety features in their vehicle purchase. The results of this project provide valuable insights which can be employed to encourage private vehicle buyers to purchase the safest possible vehicles.

Key words: safe vehicles, vehicle choice, vehicle purchase, safety features, ANCAP, Used Car Safety Rating, UCSR

1. Introduction

In recent years significant effort has been focused on improving the safety culture amongst fleet buyers; however registration data analysis reveals that around half of all new vehicles sold in Australia are for private use. In attempts to highlight the importance of vehicle safety amongst private consumers of both new and used cars, a number of consumer information programs have been developed. These include the Australian New Car Assessment Program (ANCAP), the Used Car Safety Ratings (UCSR) Program and the howsafeisyourcar.com.au web site. While consumer interest in vehicle safety has increased over the past decade (Koppel, Charlton, Fildes & Fitzharris, 2008), the priority consumers place on vehicle safety within their purchasing decisions remains unclear.

Monash University Accident Research Centre researchers conducted an extensive international literature review into the role of safety in consumer vehicle purchasing as part of the Safety Rating Advisory Committee (SARAC), funded by the EU Commission (Koppel et al., 2008; Koppel, Charlton, Fildes, Fitzharris, Clark, Kullgren, Olona Solano, Mäkitupa &

Ernvall, 2005). They found a paucity of research exploring consumer vehicle purchasing decisions and that conclusive comparison between studies was limited by associated methodological weaknesses. Based on the available literature Koppel et al., (2005) concluded that while vehicle safety was becoming more important to consumers it was still not considered a key factor in the purchase decisions, with priority commonly focussed on factors such as price, reliability and appearance. It was noted that within some consumer groups more aesthetic type factors, such as vehicle appearance or comfort, were even prioritised over safety. A survey conducted on attendees at a North American auto show found that participants ranked safety 5th in their purchasing decision with vehicle style and appearance ranked higher in 4th position (Progressive Insurance, 2001). Approximately one fifth of the participants placed more importance on having a CD player than ABS and nearly half considered side airbags to be less important than vehicle colour.

Commonly the inclusion of vehicle safety in the purchasing process occurs further down the decision making chain, playing a role in deciding between more specific options such as a particular model within a make (Koppel et al., 2008). In recognition of this primary focus on price and functionality in the vehicle purchasing decision, participants of a survey conducted by Euro-NCAP were asked to identify key factors after taking into account price and function, vehicle safety was then the highest ranked response (MORI, 2005).

Consumers typically associated vehicle safety only with vehicle safety technology (e.g. ABS, air bags) rather than holistic safety performance such as measured by an overall crashworthiness rating (MORI, 2005). This complemented findings that consumers did not actively seek out information about safety ratings but rather assumed they would be included in vehicle reviews (Charles River Associates Inc., 1998) and may be attributable to the commonly reflected attitude that driving was a reasonably safe activity with a low crash risk (Ferguson & Williams, 1996).

Overall, the literature review concluded that empirical understanding into the role of safety in consumer vehicle purchasing choice is limited (Koppel et. al., 2005). The setting of priorities within the purchasing process can involve complex interactions between multiple factors. Consumers commonly reported having to make trade-offs between price, reliability and safety but the degree of importance attributed to each factor within this weighing process requires further investigation, including validation of the most appropriate methodological measures to employ for this investigation. Gaps in the current knowledge base were also identified, such as the level of consumer understanding regarding specific safety features and their function in relation to passenger and pedestrian safety, as well as insight into consumer willingness to pay for the inclusion of additional safety features in their vehicles (Koppel et. al., 2005).

Based on the findings of their literature review Koppel et al., (2005; 2008) designed and conducted the SARAC study into the role of safety in the vehicle purchasing process for consumers across two countries, Sweden which has a relatively low road toll within the EU, and Spain which comparatively has a relatively high road toll. The aim of the study was to determine: how important vehicle safety is in the new vehicle purchase process, what importance consumers place on safety options/features relative to other convenience and comfort features, and how consumers conceptualise vehicle safety. The Swedish participants (n=1,012) who completed and returned the self-report survey specifically developed for the study, were recruited through a car insurance company and the Spanish participants (n=300) were recruited and surveyed via telephone. The SARAC Private Purchaser questionnaire findings indicated that participants ranked safety-related factors (e.g. Euro-NCAP [or other] safety ratings) as more important in the new vehicle purchase process than other vehicle factors (e.g., price, reliability etc). Similarly, participants ranked safety-related features (e.g., advanced braking systems, front passenger airbags etc.) as more important than non-safety related features (e.g. route navigation systems, air-conditioning etc). The key factors associated with a person prioritising safety in choosing a vehicle were: use of Euro-NCAP, gender and education level, age, drivers' concern about crash involvement, first vehicle

purchase, annual driving distance, person for whom the vehicle was purchased, and traffic infringement history (Koppel et. al., 2005). The SARAC research also found that Swedish new vehicle purchasers were more likely to list 'safety' as their most important consideration in the new vehicle purchase process compared with Spanish new vehicle purchasers (Koppel et al., 2008).

In a more recent study Vrkljan and Anaby (2011) examined vehicle choice preferences of 2002 Canadian drivers (aged 18 yrs >) against age and gender. Using a self-report survey participants were asked to rank the variables: storage, mileage, safety, price, comfort, performance, design, and reliability in order of importance when purchasing a vehicle. Overall, safety and reliability were ranked highest with performance and design ranked as least important. Women reported placing a greater importance on safety compared to men. This focus on the importance of safety appeared to remain steady across all age groups for the women, while for men the importance of safety increased with age, albeit with a slight, temporary decline in the importance of safety for males 55-64 yrs. The authors highlight the importance of considering age and gender when marketing vehicle safety to consumers especially considering that young males, who pose the greatest crash risk, were found to place the least amount of priority on safety.

While the SARAC study provided an extensive review of the available literature surrounding consumer vehicle choice it, as well as the Vrkljan and Anaby study, also highlighted the disparity in the role of vehicle safety across different countries with varying attitudes towards road safety and injury prevention. Research on an Australian population is warranted to provide an understanding into the role of safety in consumer vehicle choice within the Australian market. The aim of this research was to gain a better understanding of the key mechanisms that drive private consumer choice in vehicle selection, within the Australian vehicle purchasing market.

2. Method

2.1. Participants

The participants were recruited through an externally contracted company Pureprofile Pty. Ltd. Pureprofile is an online panel provider with access to over 320,000 members within Australia. Members have a log in account to which our survey link was forwarded. Participants accumulate small monetary incentives (ranging from 20c to $2) on completion of surveys. This monetary incentive is part of a pre-existing arrangement of their Pureprofile membership. In accordance with the research team's brief, quotas were applied to the host database to ensure a stratified sample in relation to:

- Age – a representative number of participants aged 18-24 years, 25-64 years, ≥65 years
- Gender – equal numbers of females and males
- Geographic location – rural and urban participants (1:2 ratio respectively)

The Pre and Post-purchase survey links were viewed by 11,592 potential participants (3,852 Pre purchase and 7,740 Post purchase) across Queensland, NSW and Victoria. It should be noted that apart from only 64 participants who completed both surveys, the pre and post surveys were not completed by the same group of participants.

2.2. Materials

A Pre and Post-Purchase Consumer Survey were developed for the project, based on a survey used in the SARAC project but modified to suit Australian Consumers and updated to include more recently introduced vehicle features. The same questions were used in both the Pre and Post-purchase surveys but phrased in a prospective or retrospective tone accordingly. In addition to basic demographic and crash and traffic infringement history, the

questions inquired about the features and factors that play(ed) a key role in their vehicle purchasing decision. While the main aim of the surveys was to explore the role that safety and safety features play in this decision process, to reduce reporting biases other non-safety related questions and factors were incorporated into the survey design.

2.3. Procedure

The participants were contacted and invited to participate by Pureprofile. As is standard practice for the company, Pureprofile account holders were emailed an online invitation to participate in the research project which informed them of time required to complete the survey, the payment amount for completion the survey, and that the survey was funded by Monash University. Details of the survey theme were not provided until the account holder had accepted the invitation to participate, following which there was still the option of disregarding the survey. The invitation to participate was forwarded to members in Queensland, NSW and Victoria. The participant selection criterion was satisfied with a "yes" response to the question "Are you currently looking to buy a new or used vehicle?" (Pre-purchase survey), and "Have you recently purchased a new or used vehicle?" (Post-purchase survey).

Completed surveys were submitted back to Pureprofile who correlated the raw data.

2.4. Data Analysis

A number of descriptive analyses were undertaken to investigate the importance of vehicle safety in the vehicle purchase process. A series of t-tests and chi-squares analyses were conducted, where appropriate, to explore differences between groups of participants based on age, gender, and other relevant variables. Logistic regression analysis was also undertaken in order to identify the relative contribution of variables in explaining 'safe vehicle purchase'.

3. Results

3.1. Participants

The Pre-purchase survey was viewed by 3,852 potential participants and the Post-purchase survey by 7,740 (across Victoria, NSW & Qld). For the Pre-purchase survey 17 account holders did not open the invitation link, 3,835 accepted the invitation to participate of which 2,395 were excluded from accessing the survey because they responded "*no*" to the selection criteria question "*Are you currently looking to purchase a new or used vehicle?*", and another 431 account holders commenced but did not complete the survey. The exact reason behind non-completions was not available however; common reasons are loss of interest, and internet browser drop-out. A total of 1,009 participants (n=506 females, n=503 males) completed the Pre-purchase survey.

For the Post-purchase survey 553 account holders did not open the invitation link, 6,184 accepted the invitation to participate of which 4,957 were excluded because they responded "*no*" to the selection criteria question "*Have you recently purchased a new or used vehicle?*", another 1,226 account holders commenced but did not complete the survey. A total of 1,004 participants (n=500 females, n=502 males, 2 missing data) completed the Post purchase survey. There were 64 participants (6%) who completed both the Pre and Post purchase surveys, the remaining participants completed only one of the two surveys.

3.2. Demographic information

The participant age group and gender distribution is presented in Table 1.

Table 1: Percentage distribution of participant age group and gender for pre and post purchase surveys

Age group	PRE purchase *(n=1009)*			POST purchase *(n=1004)*		
	Male	**Female**	**Total %**	**Male**	**Female**	**Total %**
18-24	5.5	13.5	18.9	4.0	6.9	10.9
25-29	3.7	6.2	9.9	6.1	7.5	13.6
30-34	5.4	5.6	10.9	6.9	6.1	13.0
35-39	4.3	4.2	8.4	6.2	4.7	10.9
40-44	4.6	4.6	9.1	4.2	5.4	9.6
45-49	4.9	2.5	7.3	5.5	4.5	10.0
50-5 5	4.0	3.8	7.7	4.5	5.1	9.6
56-65	11.4	5.6	16.9	7.3	5.1	12.4
65+	6.3	4.4	10.7	5.5	4.7	10.2
Total %	**49.9**	**50.1**	**100**	**50.1**	**49.9**	**100**

More than half of the participants were married (55% pre, 62% post), without children (59% pre, 56% post), or with one to two children (32% pre, 36% post). Yearly income was comparable in both survey samples with approximately 12% earning below $30,000 per year and more than a third earning over $90,000 per year. The majority of participants were born in Australia (75% pre, 81% post) and resided in metropolitan Melbourne, Sydney and Brisbane (68% pre, 70% post) compared to rural areas (32% pre, 30% post). On average participants estimated that their vehicle would be driven around 10,000 to 20,000 km per year (47% pre, 49% post). The majority of participants had not been involved in a crash (85%) or incurred a traffic infringement (78%) within the last three years. Of the 155 reported crashes the majority had not resulted in any injuries to the driver or passengers.

3.3. Vehicle *factor* priority

In the surveys, participants were presented with a list of 20 vehicle factors such as price, appearance, fuel efficiency, added extras, four of which were safety-related (ANCAP rating, Used Car Safety Rating, vehicle aggressivity, pedestrian aggressivity). They were asked to rate these factors (prospectively for the pre and retrospectively for the post-purchase surveys) according to the priority they would place on these factors in their vehicle purchase decision (i.e. high, medium, low, never heard of). Following this, for those vehicle factors they rated as a 'high priority', participants were then asked to rank the importance of these factors (with 1 = most important).

Pre-purchase

In the pre-purchase survey *reliability* was the factor given the highest priority in the vehicle purchase process (86%), followed by *price* (79%). The safety related factors *ANCAP* and *UCSR rating* were each rated as being a high priority in their decision making process for almost one third of participants. *Vehicle aggressivity* and *pedestrian aggressivity* were given a 'high' rating by 11% and 8.5% of participants, respectively. In terms of any factors which were unfamiliar to participants, one third (34 %) had not heard of *vehicle aggressivity*, while 30% had not heard of *pedestrian aggressivity*. *ANCAP* (16%) was the next factor least known to participants followed by *UCSR* (7%).

Participants were then asked to rank all the factors that they had listed as a high priority. The three factors most participants rated as '*high*' in priority were *price*, *fuel efficiency* and *reliability*. Overall, *price* was ranked as the highest priority followed by *fuel efficiency* and *reliability*. ANCAP rating, which had been listed as '*high*' priority by 30 percent of participants, was ranked fourth highest overall in priority, ahead of *comfort* and *performance*. The other

three safety-related factors (*safety rating, pedestrian aggressivity & vehicle aggressivity*) were generally ranked lowest in priority.

Post purchase
In the post-purchase survey reliability was the factor given the highest priority (82%), followed by price (77%). ANCAP and UCSR were rated 'high' priority by 24% and 21% of participants, respectively. A small percentage of participants rated vehicle aggressivity (8%) and pedestrian aggressivity (6%) as a high priority in their decision. In terms of factors unfamiliar to participants, almost 40% had not heard of vehicle aggressivity while 37% had not heard of pedestrian aggressivity. ANCAP (19%) was the next factor least known to participants followed by UCSR (11%).

Participants were then asked to rank all the factors that they had listed as a high priority. Overall, *price* was ranked as the highest priority followed by *fuel efficiency* and *reliability*. *ANCAP*, which had been listed as '*high*' priority by a quarter of the participants, was ranked fourth highest overall in priority. The other three safety-related factors (UCSR*, pedestrian aggressivity & vehicle aggressivity*) were ranked lowest in priority.

3.4. Vehicle *feature* priority

In the surveys, participants were presented with a list of 31 vehicle features such as transmission type, air conditioning, GPS, cruise control,19 of which were safety-related (e.g., ESC, ABS, curtain airbags etc). They were then asked to rate (prospectively for the pre and retrospectively for the post-purchase survey) the priority they would place on these features in their vehicle purchase decision (i.e., high, medium, low, never heard of). Following this, for those vehicle features they rated as a 'high priority', participants were then asked to rank the importance of these factors (with 1 = most important).

In the surveys participants were required to rank (prospectively for the pre and retrospectively for the post surveys) a total of 31 features such as transmission type, air conditioning, GPS, cruise control, 19 of which were safety-related (eg. ESC, ABS, curtain airbags), according to the priority they would place on these features in their vehicle purchase decision (i.e., high, medium, low, never heard of).

Pre-purchase
In the pre-purchase survey a*ir conditioning* was the vehicle feature most likely to be rated as a high priority (70%), followed by *driver airbags* (64%), and ABS (60%). In terms of safety features least known to participants, *high intensity discharge lights* were nominated most frequently (21%), followed by *automatic collision notification systems* (19%), and *active head restraints* (17%).

Participants were then asked to rank all the features that they had listed as a high priority. *ABS* was ranked as the most important feature followed by *driver airbags* and *air conditioning.*

Post purchase
In the post-purchase survey *air conditioning* was the feature most likely to be rated as a high priority (67%), followed by *driver airbags* (53%) and *automatic transmission* (48%). *ABS* was rated fourth highest priority in the Post purchase survey. In terms of safety features least known to participants, *lane change warning devices* were nominated first (29%) followed by *automatic collision notification systems* (26%) and *alcohol interlocks* (26%). These least known safety features were the newly evolving ones and/or those typically only available in the luxury car market. Out of the safety features arbitrarily deemed as more commonly known the features least known to participants, even after they had purchased a vehicle, were *alcohol interlocks* (26%) and *ESC* (12%).

Participants were then asked to rank the importance of all the vehicle features that they had listed as a high priority. *ABS* was ranked highest priority, followed by *air conditioning*, and then *driver airbags*.

3.5. Factors associated with 'safe' vehicle purchasers

A logistic regression model was constructed to examine the factors associated with purchasers of safe vehicles in the Post survey. For the purposes of this study, safe vehicle purchasers were defined as those survey participants who had rated at least one of the secondary safety features as 'high' in the question 'What features were a priority in your vehicle choice?'. These secondary safety features are: ABS, driver airbags, front passenger airbags, active head restraints, autonomous braking, curtain airbags, alcohol interlock, automatic collision notification system, side airbags, ESC, specific child restraints, parking assistance, frontal distance warning device, seatbelt pre-tensioners, & seatbelt reminder.

In developing the model, a series of univariate analyses were performed to identify those factors with a *p*-value less than or equal to 0.25 for inclusion in the multivariate model. The factors *age group* and *gender* were 'forced' into the model.

The model was developed with a total of 1002 observations using STATA/SE 11.2. The model correctly classified 61.7% of participants with an Area Under the Curve approaching acceptable discrimination at 64.1%. Although this assessment of the predicted probabilities implies a somewhat inadequate model, the significant Hosmer-Lemeshow test of goodness-of-fit suggested the model fit to the data well (χ_8^2 =0.8202, p > 0.05). Although the factors *marital status*, *extent to which purchaser feels they can protect family*, and *number of children* were all statistically significant in the univariate analyses, they were not significant in the final model nor were they influential on the factors in the final model. All possible interactions were tested, however, none were statistically significant. The final multivariable model predicting the profile of people most likely to purchase a safe car is comprised of the factors presented in Table 2, together with their odds ratios, associated confidence intervals and probability values.

Table 2: Factors associated with purchasers of safe vehicles

Predictor (factor)		**Referent**	**Odds Ratio**	**95% C.I.**	**P>|z|**
Age group	35-49 yrs	18-34 yrs	1.76	1.28-2.41	<0.0001
	50 yrs & over	18-34 yrs	2.21	1.61-3.03	<0.0001
Gender	Female	Male	1.15	0.89-1.50	0.288
Concern about being in a crash	Concerned / very concerned	Not concerned	1.65	1.24-2.20	0.001
Source of information	ANCAP	Not ANCAP	3.43	2.11-5.56	<0.0001

In summary, the analysis showed:

Differences between age groups: Compared to purchasers aged 18 to 34 years, those aged 35 to 49 years were 1.76 times more likely to rate a secondary safety feature as a high priority in their choice of vehicle, while those aged 50 years and over were 2.21 times more likely to do so.

Gender: Compared to males, females were 1.15 times more likely to select a secondary safety feature and rate it as a high priority in their vehicle purchasing decision, however, this result was not statistically significant.

Concern about being involved in a crash: Relative to participants who indicated they were not concerned or somewhat concerned about being involved in a crash, participants who

indicated they were concerned or very concerned were 1.65 times more likely to rate a secondary safety feature of high importance.

Source of information: Participants who had sourced vehicle information from ANCAP were 3.4 times more likely to rate a secondary safety feature highly compared to those who did not consult ANCAP.

4. Discussion

The aim of this study was to gain a better understanding of the key mechanisms that drive private consumer choice in vehicle selection, within the Australian vehicle purchasing market.

4.1. Importance of safety-related factors in the vehicle purchase process

The finding of the current study showed that price and reliability are the most important factors in the vehicle purchase process, and this remains constant across the purchasing process with consumers reporting that these factors were prioritised in their actual purchase decision. This finding is consistent with the findings from the literature review conducted at commencement of the SARAC project, that price and reliability were prioritised priority over and above safety factors when purchasing vehicles. However, these findings were contrary to the research findings that Swedish and Spanish vehicle consumers assigned safety the highest priority in their vehicle choice (Koppel et al., 2005). While similar to the results of this current research, Canadian vehicle consumers identified reliability as a high priority (Vrkljan & Anaby, 2011), as was the case with the Swedish and Spanish consumers, price was not prioritised above safety. These findings indicate that, unlike the Swedish, Spanish and Canadian consumers who place high priority on vehicle safety, the importance of vehicle safety is still not a major priority for Australian drivers.

Out of the four safety-related factors presented (ANCAP, UCSR, vehicle aggressivity & pedestrian aggressivity), ANCAP was most likely to be rated as a 'high priority' amongst consumers who have heard of it. The remaining three safety-related factors were low priorities in the vehicle purchase process for consumers both prior to and during the vehicle purchase. The results also indicate that a large proportion of consumers are not aware of vehicle and pedestrian aggressivity with one third to one half of participants reporting '*haven't heard of this*' and many are still not aware of ANCAP and UCSR. These findings are consistent with previous research which suggests that vehicle safety is more commonly associated with specific safety features (ABS, airbags, ESC etc.) rather than overall safety or crashworthiness ratings (Charles River Associates Inc., 1998). However, it does not support the SARAC research findings that Swedish and Spanish consumers placed the highest priority on safety ratings (e.g. Euro-NCAP) over and above price and reliability. Interestingly in this study consumers did not appear to gain any further insight/education into safety factors during their purchasing process, as indicated by the percentage of participants who had 'not heard of' these safety factors following their vehicle purchase remaining similar to, or even greater than, those from the pre-vehicle purchase.

4.2. Importance of safety-related features in the vehicle purchase process

The findings of the current study showed that air conditioning, driver airbags, ABS and automatic transmission are most likely to be rated as 'high priorities' for consumers prior to purchasing their vehicle. This remains constant across the purchasing process as consumers reported these same four features had been prioritised in their actual purchase decision. It is encouraging to note that two or even three (as automatic transmission can be viewed as a safety type feature, especially for novice drivers) of the highest priority features are safety related.

The most frequently listed features that consumers “had not heard of” were safety features that are newly evolving and/or typically only available within the luxury car market in Australia (e.g. lane change warning devices, active head restraints, automatic collision notification systems). Amongst the more readily available safety features the least known were alcohol interlocks and ESC. As mentioned above, with the least known safety factors analysis, it appears that these consumers were not exposed to information about these features during their purchasing process.

4.3. Dissemination of safety-related vehicle information

Similar to the high importance of the Euro-NCAP rating in Swedish vehicle purchasing, ANCAP was found to be a very strong predictor of a safe vehicle purchaser, ranking highly as both an important safety indicator, as well as a source for accessing vehicle safety information. However, many participants had not heard of key safety performance measures (UCSR, vehicle aggressivity & pedestrian aggressivity) even following their vehicle purchase. These results indicate that information/education in this area is not being actively presented by vehicle dealers. It also suggests that consumers are either not actively researching the vehicles they are purchasing or that the safety performance information is not presented in a manner that attracts the attention of consumers. As was identified in the SARAC literature review (Koppel,et al., 2005), perhaps consumers are not actively seeking safety performance information assuming that if relevant it would automatically be included in the commonly available reviews and manufacturer brochures. Perusal of vehicle manufacturer’s websites provides a quick indication of how challenging it can be to find this type of information on their sites, if available at all.

The importance placed on safety features such as driver airbags, ABS, and automatic transmission was evident with these features represented in three of the top four purchasing priorities before and after the vehicle purchase. With the overall popularity of air conditioning it is important that the inclusion of safety features in standard car models does not replace air conditioning as a feature or the market may shift to another vehicle with air conditioning, although this replacement is considered unlikely to happen in practice it provides an example of unintended market shifts.

Knowledge about safety features appears to be filtering through as most consumers reported having heard about features such as the various types of airbag configurations, seat belt reminder systems, and ABS. Amongst the more commonly available safety features, the consumer awareness was lowest for alcohol interlocks followed by ESC. While the priority placed on ABS within the consumer market is encouraging regarding prioritising safety features, it is disappointing that ESC which has been shown to result in far greater safety benefits (Burton et al., 2004) remains relatively unknown. Again, newly evolving safety features and those that are typically found in the luxury car market (e.g. automatic collision notification systems, lane change warning & high intensity discharge lights) were commonly unheard of by consumers. This finding is important for recognising that, even during their vehicle purchase phase, consumers may not play an active role in educating themselves about the safety features available.

4.4. Safe vehicle purchaser profile

The factors age, gender, concern about crash involvement, and sourcing ANCAP ratings were found to be significant factors in the identification of a “safe vehicle purchaser” profile. Females, participants aged 50 years or older, those with greater levels of concern about being involved in a crash, and those who sourced ANCAP information were identified as being more likely to place a high priority on a vehicle’s secondary safety features in their vehicle purchase. Previous studies have identified the higher priority of vehicle safety by females or alternatively the lower prioritisation of safety by young males (Vrkljan & Anaby, 2011; Progressive Insurance Co, 2001).

4.5. Limitations

Limitations associated with this current study worth noting are the potential sample biases. The entire sample consisted of individuals who actively engage in paid market research, the survey was also only available online. While these surveys were modelled on the survey designed for and used in the SARAC research, it still poses the obvious limitation of self-report bias. It was originally intended, that to allow direct comparison of attitudes and priorities over the purchasing process, a repeat measures design would be employed. This was deemed impractical for the current study due to time constraints in having to wait for individuals to purchase their vehicle, and the associated extra costs. However, analyses indicated that the two samples obtained were generally comparable on the demographics measured and thus likely to provide a reliable indication of pre and post-consumer experiences.

4.6. Conclusions

Results from the present study have implications for promoting the purchasing of safer vehicles within the Australian private vehicle market. For example, a continued focus is warranted to educate and encourage consumers in developing a sense of responsibility to protect other road users, through the purchase of less aggressive vehicles. Further research is necessary to explore the most effective way to promote the prioritisation of safety in the vehicle purchase process. This could involve investigating previously successful strategies used in advancing safety within other health related disciplines as well as exploring overseas examples of successful vehicle safety promotion, such as strategies used in Sweden. If price and reliability are the highest priority for vehicle purchasing consumers, then it's important that safety is marketed in a manner complementary to these factors. This may include consumer information which highlights all three factors in one vehicle or alternatively marketing that acknowledges the importance of price and reliability while aiming to persuade consumers that safety is the most important factor. While the priority of safety within this Australian sample was not as favourable as that found in the Swedish market, overall this research does provide valuable insights into Australian vehicle consumers and can be used to inform strategies to encourage the purchasing of the safest possible vehicles in the private vehicle market.

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