

Is having accurate knowledge necessary for implementing safe practices?

A consumer folk theories-of-mind perspective on the impact of price

Anjala S. Krishen

Lee Business School, University of Nevada, Las Vegas, Las Vegas, Nevada, USA

Shaurya Agarwal

Civil and Urban Engineering Department, New York University, New York, New York, USA, and

Pushkin Kachroo

Department of Electrical Engineering, University of Nevada, Las Vegas, Las Vegas, Nevada, USA

Consumer folk theories-of-mind perspective

1073

Received 14 January 2015
Revised 20 November 2015
Accepted 7 March 2016

Downloaded by University of Nevada Las Vegas At 08:43 04 July 2016 (PT)

Abstract

Purpose – The purpose of this research is to increase consumer safety by providing insights about the linkage between consumer knowledge, price perception and safety intentions. Drawing from the expanded societal view of marketing, this model aims to further understanding of the connection between consumer education and safety from a folk theories-of-mind perspective.

Design/methodology/approach – This paper utilizes a phased, mixed-methods and interdisciplinary approach which blends transportation research and marketing. First, a qualitative inquiry of 151 comments regarding child safety seats was conducted. Next, using the key themes and concepts, a quantitative model was derived and a proposed structural equation model on a sample of 217 respondents was tested.

Findings – Although consumers understand the importance of child safety seats and the ample potential harms associated with their misuse, this paper contributes to existing literature by showing that a high perceived price can offset potential experience with them, attitude toward them and future use of them.

Practical implications – Integrated marketing campaigns to increase safety practices regarding child safety can be framed from a “cost of a life” rather than a “cost of a seat” perspective.

Originality/value – This research contributes by highlighting the importance of perceived price as it weighs against safety in a quantitative model, showing that consumer education can increase usage

The authors acknowledge the helpful comments and suggestions received from Arch G. Woodside, Boston College; Dhruv Grewal, Babson College; Dipayan Biswas, University of South Florida; and Michael LaTour, Cornell University. They also thank the Nevada Department of Public Safety, Office of Traffic Safety and the Lee Business School at University of Nevada, Las Vegas, for their generous support.



intentions for critical products and offering a mixed-methods, interdisciplinary approach to reduce framing biases and address a topic of significant societal concern.

Keywords Knowledge, Consumer behaviour, Behavioural sciences, Consumer research, Safety, Pricing

Paper type Research paper

Introduction

Knowledge acquired from information processing is at the heart of effective safety practices; indeed, research suggests that as individuals become more engaged in learning, they perform at a higher safety level (Burke *et al.*, 2006). Furthermore, increasing knowledge is particularly relevant and effective when individuals are exposed to highly hazardous situations (Burke *et al.*, 2006). As an example, traveling in vehicles is a hazardous situation for vulnerable children; hence, the idea of increasing knowledge to impact caregiver safety deployment can be a useful paradigm. For the past few decades, vehicle travel for children occupants aged 14 and under continues to rise, and alongside this increase comes the hazard of accidental death and injury. During 2012, there were 1,168 fatal motor vehicle accidents and more than 176,000 injuries for passenger children aged 14 years and younger in the USA (CDC, 2012). The number of fatalities for these children in 2012 represents a 3 per cent increase over the 1,139 fatalities that occurred in 2011 (National Highway Traffic Safety Administration, 2013). Motor vehicle crashes are the leading cause of accidental deaths among children in the USA, and those fatalities are often preventable because the children had not been properly restrained (CDC, 2012; National Library of Medicine, 2012).

Given the immense harm associated with failing to use a child safety seat (CSS), the goal of the present research is to draw from the expanded societal perspective of marketing (Wilkie and Moore, 2012) to further our understanding of the connection between consumer knowledge and safe practices. The elevated marketing concept perspective argues for “[...] educating, not just informing” consumers to enable them to make better and safer decisions (Webster and Lusch, 2013, p. 394). Likewise, the aim of transformative consumer research is to increase societal well-being by designing marketing policies and services such that they benefit not only individuals, but also families, groups and communities (Davis and Pechmann, 2013). Consumer safety should be the most significant goal of all marketing efforts; as such, the purpose of this research is to derive the important themes from consumers regarding safety and then propose and test a theory-based model. In particular, the purpose of this model is to lend insight into several key aspects of a consumer’s decision to purchase and implement a CSS, which include:

- the perceived price of a CSS;
- the consumer’s actual knowledge regarding CSS requirements; and
- the consumer’s perceived knowledge of CSS usage.

The key contribution of this model is the proposed framework for deployment of safety-related marketing efforts, and the finding that perceived price can drive consumers to make unsafe choices.

As particularly vulnerable consumers, children in vehicles depend on their parents or caretakers to make the right choices when purchasing or deploying CSSs. However, research shows that many caretakers do not utilize CSSs when traveling with a child

(Bilston *et al.*, 2011). In fact, parents who do not deploy safety mechanisms for themselves, i.e. safety belts, are also less likely to use them for their children (Macy and Freed, 2012). In comparison to regular seat belts, CSSs significantly reduce the risk of death in the event of an automobile accident (Elliott *et al.*, 2009). Thus, caretakers play a pivotal role in determining whether or not to purchase and use CSSs. The effectiveness of a campaign to increase CSS usage will likely increase via targeting toward caretakers; such a campaign will also improve their attitude toward safety seats, thus increasing their intention to use them (Anitsal *et al.*, 2010).

The paper is organized as follows. During our first phase, we select a set of locations based on a quasi-convenience sampling technique. Next, we conduct a qualitative study of participant comments and utilize unguided semantic analysis of those comments to uncover important themes and concepts. Upon completion of Phase 1, we discuss information processing theory, perceived price and folk theory-of-mind literature to develop hypotheses that explicate the important role of actual knowledge in driving reported use of CSSs. Following this, we begin Phase 2 and describe an empirical study designed to test the conceptual framework suggested by our hypotheses. After discussing our empirical findings, we explore their implications for both marketers and researchers. Finally, we summarize our research and draw appropriate conclusions.

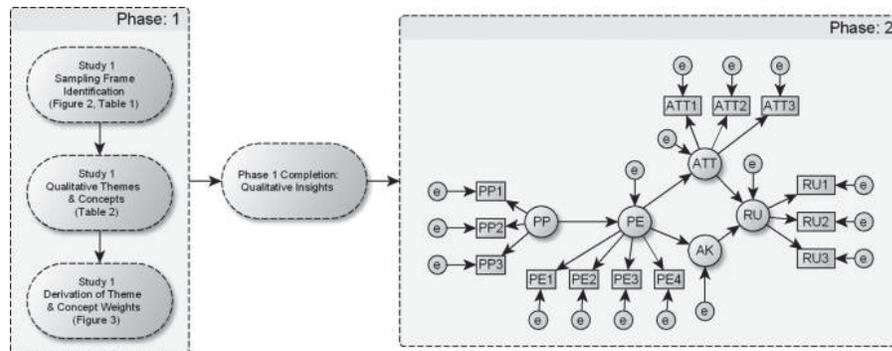
Research method

The study here uses a phased, mixed-methods approach to understanding the relevant drivers for CSS deployment, which allows for an initial exploration of the phenomena followed by a more directed quantitative model. Harrison (2013) identifies a taxonomy of mixed-methods approaches and calls for research which combines both qualitative and quantitative inquiry methods. The design type of this research is exploratory, in that it is a sequential presentation of a qualitative study followed by a quantitative one (Bryman, 2006); the rationale for which is to confirm and discover ideas regarding the connection between consumer education and safety intentions. In particular, mixed-methods approaches offer increased accuracy and deeper insights, mainly due to the use of alternative methods of collecting data within the same context (Woodside, 2010). For the initial phase, a quasi-convenience sampling method derived a set of locations within which qualitative respondent feedback was gathered. Using a procedure similar to Voorhees *et al.* (2006), an open-ended survey inquiry collected initial respondent thoughts; this use of verbal prose is consistent with the definition of exploratory, qualitative research. In our study, however, we used two different samples for the two studies and therefore gathered qualitative insights from one initial sample followed by quantitative insights from another one. This information was then analyzed with an unguided semantic tool to uncover relevant themes and concepts. Following this, Phase 2 was conducted by performing a thorough literature review to propose a theoretical framework and formulate a structural equation model. Figure 1 provides a schematic of the phased research process.

Theoretical framework and hypotheses

There are three relevant theoretical literatures from which we gather our insights and propose our model, these are information processing and knowledge, perceived price and folk theories-of-mind. The information processing and knowledge literature ties directly to the idea of how product knowledge connects to product experience. A

Figure 1.
Research
methodology



consumer's perceived price for a product or service is an important antecedent to how that consumer frames a choice-based decision. Finally, folk theory-of-mind guides the framework by explaining how intention to perform a behavior is largely guided by acquisition of knowledge; this interplay between theories-of-mind and intentionality to perform safe behaviors explains the action piece of the proposed model.

Information processing and knowledge

Consumer choice research claims that consumers make decisions based on limitations in their motivation and ability to process information; in essence, this information processing approach to decision-making claims that due to working memory and computational capabilities, consumers are prone to heuristics or rules of thumb when making choices (Bettman, 1979). Consumer knowledge level with regards to the use of a product, for example, will have a direct impact on the accessibility of information required to make a choice in that product category, as would be the case with CSSs. In addition to impacting the use of a product, knowledge level would also impact the outcome of an attribute trade-off (e.g. price vs safety) in a product category (Bettman *et al.*, 1998). Alba and Hutchinson (1987) identify key components of consumer expertise, centering their ideas on memory for complex information. In essence, according to their work, experts:

- have higher recall of product information;
- recall relevant information better than irrelevant information; and
- have higher relevant information retention over time, versus novices, among other differences.

These distinctions are most important with regards to complex information, such as CSS laws and product information. Specifically, as product familiarity increases, so does consumer expertise (Alba and Hutchinson, 1987). Capraro *et al.* (2003) define two types of consumer knowledge in a decision-making context, subjective and objective knowledge. In the present research, their use of subjective knowledge is matched to perceived knowledge; likewise, objective knowledge matches actual knowledge. Similar to other researchers, they highlight the information processing differences between high and low knowledge purchases and how that by increasing consumer knowledge of brand alternatives, likelihood of brand switching increases. In fact, expert consumers make their decisions based on their prior category knowledge and thus are able to make

them more readily than novice ones, especially when they are presented with information that matches their category knowledge (Sujan, 1985).

Perceived price

In addition to detailed product and domain knowledge, consumers often have to make price assessments based on their expertise. In the case of CSS price perceptions, most consumers would have to make an estimate based on their domain knowledge and their product expertise, especially when not explicitly provided with price or product details (Monroe and Lee, 1999). Without access to explicit price information, consumers rely on memory-based judgments (Ofir *et al.*, 2008) and do not usually have high recall for exact product prices (Vanhuele *et al.*, 2006). Regarding retail patronage, Binkley and Bejnarowicz (2003) find that memory-based price perceptions influence attractiveness to a store. Not only do consumers have limited knowledge of actual product pricing, but they also conceptualize and perceive price as a sacrifice or a give up component, i.e. they think of a product purchase in terms of what they will have to *give up* versus what they could potentially *get* from the product (Chang and Wildt, 1994).

Ample research confirms that there is a two-way relationship between product experience and perceived product cost. For example, product experience is an inherently limited resource (i.e. there are a fixed number of hours in a day) and thus is often more valued than perceived value or price of a product (Aaker *et al.*, 2011). On the other hand, when a utilitarian product is perceived to be costly, consumers are less likely to want to purchase it and are less satisfied if they do (Jones *et al.*, 2006). Therefore, we present the following hypothesis:

H1. CSS perceived price associates negatively with product experience.

Spending time with a product is a critical factor in achieving product experience, and as it increases, personal meaning, interpersonal connection and, ultimately, happiness increase as well (Aaker *et al.*, 2011). Across multiple product domains and experiments, Mogilner and Aaker (2009) demonstrate that activating a consumer's time with a product increases personal connection, which in turn leads to more favorable attitude toward the product and purchase decision. Extant research suggests that familiarity (defined as it relates to consumer experience) and expertise are the two dimensions of consumer knowledge (Cordell, 1997). Huffman and Houston (1993) establish the connection between product experience and product knowledge and show that by providing a goal to a novice, enhanced product learning can take place. In fact, according to Alba and Hutchinson (1987), product-related experiences accumulated over time constitute familiarity. Consumer knowledge increases as consumers gain product experience, thus the following hypotheses are proposed:

H2. CSS product experience associates positively with attitude toward CSSs.

H3. CSS product experience associates positively with CSS actual knowledge.

The relationship between attitude and behavior has been the subject of ample extant research and theories, including the theory of reasoned action (Fishbein and Ajzen, 1975), the theory of planned behavior (Ajzen, 1991) and several other attitude-to-behavior consistency models. For example, de Leeuw *et al.* (2015) show that attitude is an antecedent to intention to behave in pro-environmental ways; building on these original models, goal-directed attitudes are even more predictive of subsequent

behaviors (Kruglanski *et al.*, 2015). In addition to impacting the reported use of CSSs, existing studies also suggest that knowledge increases the likelihood and intensity of attitude-behavior consistency (Fabrigar *et al.*, 2006). The experimental findings of Fabrigar and colleagues are important to the current research because they confirm that actual knowledge of CSS laws is not only important to increase use of them, but also the likelihood of behavioral consistency regarding their purchase and deployment. Given the existing research and theories supporting the relationship between attitude and eventual behavior, we therefore propose that:

H4. Attitude toward CSS associates positively with reported use of CSSs.

Folk theories-of-mind

A “folk theory-of-mind” is defined as a complex conceptual framework that connects various mental states together, and eventually links them to behaviors (Malle, 2001); it occurs prior to any conscious or unconscious processing of a cognition and essentially frames it, allowing for its interpretation. Malle (2001) refers to the ability to reason about mental states as a theory-of-mind. In essence, individuals simulate or make inferences within their own minds what they believe others are experiencing within their minds. As part of social cognition, individuals are able to distinguish between social and non-social objects through the use of set of categories and classifications which are gathered early in life (Fiske and Taylor, 1991). According to folk theories-of-mind, there are two ways in which mental states are connected to behavior: those that use behavior as a form of expression, and those that influence behavior. In terms of the connection between behavior and mental states, there are intentional versus unintentional behaviors. Intentionality is conceptualized to include an important delineation between desires, or the end state that is being aimed for, and beliefs, or the multiple approaches toward the end state (Dretske, 1988). Importantly, desires are rooted in shared cultural knowledge and strongly link to actions (Bruner, 1990). Whereas intentional behavior is the result of personal reason-based actions, unintentional behavior is rooted in mechanical reasonless causality (Heider, 1958).

To understand an individual’s intention to perform a future safety action, then, would require a complex unraveling of the folk theories-of-mind associated with that individual’s mental states and their linkages to behaviors. Likewise, intentional behavior requires desire to perform an action, which requires knowledge. Hence we hypothesize:

H5. CSS actual knowledge associates positively with reported use of CSSs.

Therefore, the current research tests the conceptual model shown in Figure 3, Panel A.

Phase 1 (Qualitative study 1)

Sample and method

In Figure 1, Phase 1 begins with a combinatorial optimization sampling frame identification technique (Raschke *et al.*, 2013). Statistical diversity was sought by distributing sampling sites throughout the Las Vegas and Henderson areas. Sampling sites were chosen based on the probabilistic occurrence of the following basic criteria:

- parents and/or guardians having small children should be likely;
- economic ranges should be well-represented;

- children's age groups should be diverse; and
- various zip codes should be well-represented.

The chosen sites included day care centers, public parks, public libraries and baby product retailers.

The aim of Study 1 is to gather qualitative ideas regarding the important aspects of CSS usage for consumers. Descriptive data were collected with a paper-and-pencil instrument at various locations throughout the southern Nevada region. Two graduate students who served as data collectors traveled to a total of 17 locations for gathering respondents. The instrument was designed to provide qualitative input which could guide the authors toward designing a quantitative study. To participate in the study, respondents were required to meet the following criteria:

- be 18 or over;
- have one or more children under the age of 14;
- have a valid driver's license in the state of Nevada; and
- not be enrolled as a student in a university.

A total of 200 subjects from the southwestern part of the USA participated in the study; respondents were provided with a small monetary incentive. The entire sample population consisted of 42.9 per cent males and 57.1 per cent females; 68 were under 30 years old, 94 were between 31 and 40 and 38 were between 41 and 50; and participant ages ranged from 20 to 49 years old.

The first page of the instrument asked participants to respond to the following statement: "Please give us any thoughts you have regarding CSS usage and laws in Nevada". The participants were provided with a page to respond in writing or could alternatively move to the next page. We then included few filler constructs on the next page and ended with basic demographic questions. Of the 200 who filled out the instrument, 151 provided comments, yielding an acceptable qualitative response rate of 75.5 per cent.

Procedure and analysis

The qualitative feedback provided is similar to netnographic data, such as consumer product reviews, meaning that each comment differs in length and contribution and contains completely voluntary information (Kozinets, 2002). Thus, to conceptualize the qualitative data, and identify underlying concepts and ideas regarding CSSs, we utilized a lexicographic content analyzer. Leximancer (www.leximancer.com) uses a machine learning technique to discover the concepts and themes within verbal data (Smith, 2007). Several fields in social science, including marketing, advertising and accounting, use Leximancer to analyze textual data (Krishen *et al.*, 2014). The semantic analysis algorithm, based on Bayesian theory, derives concepts and themes that in general conform to those derived by qualitative researchers (Rooney, 2005). Because our quest for this study is purely exploratory, a semantic analyzer which can discover themes through an iterative process is appropriate and does not rely on human coding of text.

Results

The semantic analysis tool creates concept maps based on derived themes, and within each theme, maps stimulate focal ideas. Researchers can interpret these maps and derive any key ideas from them.

Figure 2 includes two panels to show the connections between the themes and concepts as well as the relative weights of each of the themes. As Panel A shows, *safety* is the largest theme that emerges from analysis, with several main concepts beneath it,

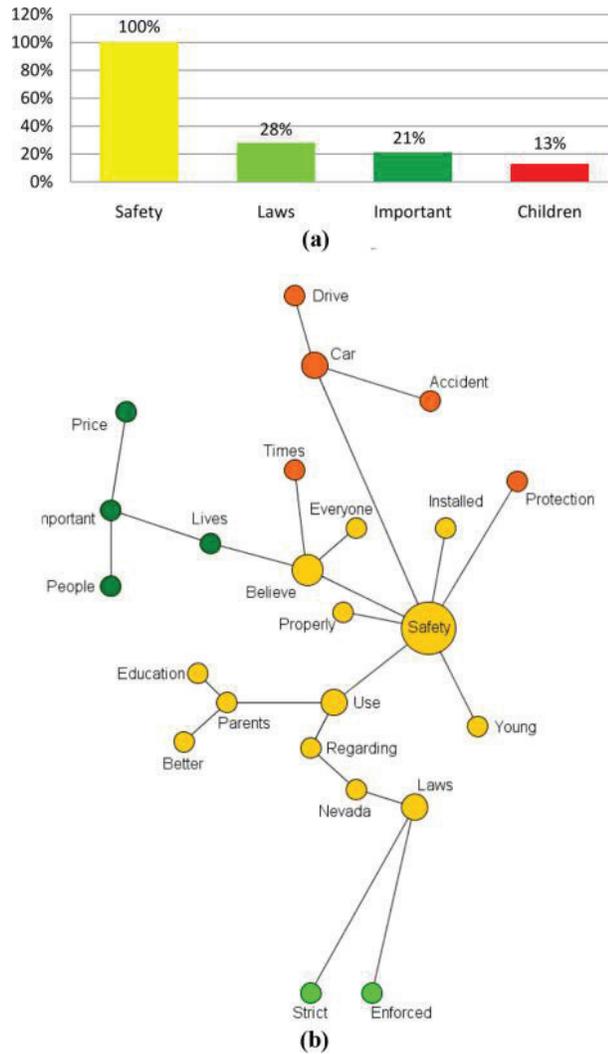


Figure 2.
Study 1 theme and
concept diagrams

Notes: (a) Theme relevance weights; (b) theme
and concept connections

including *believe, properly, installed, education* and *use*. Table I provides sample comments for several of the main comments in each theme. Next, the theme *Laws* includes the concepts *strict* and *enforced*; Important includes *important, price* and *people*. Finally, *children* includes *times, car, accident* and *drive*. Some of the concepts overlap within themes; for example, the theme *Important* contains the concept *important* and that word is also included in the *children* theme within the *accident* concept. This overlap indicates that the respondents consider the concept of CSSs to be a very important topic of interest. Importantly, the instructions on the instrument did not force them to provide written comments, so they did so of their own volition.

Discussion

To delve further into the issue of CSSs, the semantic analysis of the respondent comments indicates that respondents consider the topic to be extremely important, which is a positive outcome. Several other interesting findings flow from this unguided semantic analysis. In terms of tangible properties of CSSs, respondents seem most focused on the proper installation of them and their price. Related to the laws surrounding their use, respondents claim that they should have better education and that the laws should be strictly enforced. Participants seem to be fully aware of the harms associated with improper use of CSSs and the possible impact of lack of use, as provided in the drive, accident, people, important and car concepts. According to these

Theme	Key concept	Sample comment
Safety	Believe	Child safety seats are definitely a safety precaution and I believe the laws are
	Properly	Everyone with children should be required to attend a class or have them installed properly
	Education	Better education for parents regarding child safety seats would benefit the family and the community as a whole
	Installed	I follow the Nevada safety laws for the safety of my children. All children should be in a safety seat and it should be installed properly
	Use	They should always be used with children according to state laws and manufacturer's guidelines
Laws	Strict	US laws should be as strict as Europe laws
	Enforced	Should be further enforced
Important	Important	It's important
	Price	Child safety is very important to me, so price is not an issue based on quality of the product. The state must educate the people about their options and available products in terms of safety ratings and pricing
Children	People	Important and a lot of people don't follow it
	Times	You have small kids use them at all times
	Car	I have one 13-month-old son who is still rear-facing. Safe Kids—we installed our car seat
	Accident	Extremely Important! Car seats and booster seats are vital especially when considering the best protection in a car accident
	Drive	I believe that any child under 60 pounds should be in a child safety seats at all times no matter how short the drive may be

Table I.
Study 1 themes and concepts ($n = 151$)

findings, two key areas of exploration include knowledge of CSS laws (which would include two of the themes from Study 1 – safety and laws) and price perceptions (as apparent in the important theme from Study 1). Therefore, the next phase of this study will introduce a conceptual framework to propose a quantitative model.

Phase 2 (Quantitative Study 2)

Participants, procedure and measures

Descriptive data were collected via a quota convenience sample in a manner similar to Study 1. [Chen et al. \(2013\)](#) compare quasi-convenience sampling methods such as snowball to several other techniques and find that they do not create estimation issues or biases, and even less so when the sample size is large. Previous research utilizes this method, which consists of data collectors randomly asking individuals to participate in a survey concerning child safety belts ([Mick, 1996](#)). To participate in the study, respondents were required to meet the following criteria:

- be 18 or over;
- have one or more children under the age of 14;
- have a valid driver's license in the state of Nevada; and
- not be enrolled as a student in a university.

A total of 217 participants completed the instrument. All constructs utilized Likert scales anchored by 1 = strongly disagree and 7 = strongly agree. Perceived price (PP) measures the monetary cost associated with CSSs with a three-item Likert scale consisting of:

- (1) the price of a CSS is high;
- (2) the price of a CSS is low (R); and
- (3) CSSs are expensive ([Yoo et al., 2000](#)), with an acceptable reliability of $\alpha = 0.74$.

Product experience (PE) measures experience with CSSs with a four-item Likert scale consisting of:

- (1) I have a great deal of skill in using CSSs.
- (2) I make use of CSSs frequently.
- (3) I have experience using CSSs.
- (4) I know how to operate CSSs ([Griffin et al., 1996](#)), with a reliability of $\alpha = 0.70$.

Attitude toward the CSSs (ATT) was measured with a three-item scale with bipolar end points regarding CSSs consisting of “bad/good”, “unpleasant/pleasant” and “unfavorable/favorable” ([Lord et al., 1994](#)). Reliability was appropriate at $\alpha = 0.81$. Reported use of CSSs (RU) was measured with a three-item adapted Likert scale consisting of:

- (1) How often do you use a CSS while driving with children under the age of 14 years?
- (2) How often do you use a CSS?
- (3) How regularly do you use a CSS? ([Sirgy et al., 1997](#))

Reliability was appropriate at $\alpha = 0.88$. Actual knowledge of CSSs (AK), adapted to the context of CSSs, was created and calculated with the same technique as given by Roy and Cornwell (2004). Appendix provides the scale items.

Consumer folk theories-of-mind perspective

1083

Results – Study 2

Refinement of scales and measurement model. The measurement model includes five variables, namely, PE (product experience), PP (perceived price), ATT (attitude to CSS), RU (reported use of CSS) and AK (actual knowledge). To assess model fit, all constructs in the model were initially examined in tandem; to estimate appropriate measurement model fit, the standard residual covariance matrix, modification indices and squared multiple correlations were referenced. No items were deleted from the measurement model.

Structural model and hypothesis testing. To check for the reliability and validity of the model, Table II presents loadings for each construct, composite scores and average variance extracted (AVE) per construct. All items are significant at 0.05 levels and have acceptable loadings (all are 0.4 or higher), displaying convergent validity (Fornell and Bookstein, 1982). All constructs indicate acceptable levels of reliability, with composite reliability measures ranging from 0.76 to 0.90 (Nunnally, 1978). The AVE values, which provide the variance of each indicator in relation to the measurement error and examine the convergent validity of each construct (Chin, 1998), should be greater than 0.50 (Barclay *et al.*, 1995). As the findings in Table III indicate, the cutoff AVE value is achieved for all five constructs, with AVE values ranging from 0.52 to 0.76.

Table III provides cross-factor loadings of construct items; all items loaded higher on their respective constructs than on others, suggesting the discriminant validity of the model measures. In Table IV, the mean, standard deviation and correlations are given; here, diagonal values represent the square root of the AVE. To test for discriminant validity, these diagonal values should be greater than their corresponding non-diagonal ones. The table shows that this is the case, and therefore, discriminant validity is displayed.

Construct		Measurement items	Item loading
Product experience (PE: CR = 0.86; AVE = 0.62)	PE1	I have a great deal of skill in using child safety seats	0.88
	PE2	I make use of child safety seats frequently	0.67
	PE3	I have experience using child safety seats	0.73
	PE4	I know how to operate child safety seats	0.84
Perceived price (PP: CR = 0.76; AVE = 0.52)	PP1	The price of child safety seat is high	0.86
	PP2	The price of child safety seat is low. (R)	0.44
	PP3	Child Safety Seats are expensive	0.80
Attitude to child safety seats (ATT: CR = 0.78; AVE = 0.54)	ATT1	Child safety seats are a good idea	0.62
	ATT2	Child safety seats are a favorable idea	0.78
	ATT3	Child safety seats are a pleasant idea	0.79
Reported use of a child safety seat (RU: CR = 0.90; AVE = 0.76)	RU1	How often do you use a child safety seat while driving with children under the age of 14 years?	0.67
	RU2	How often do you use a child safety seat?	0.98
	RU3	How regularly do you use a child safety seat?	0.93

Table II.
Study 2
measurement items
and loadings

Table III.
Study 2 cross-factor loadings

		PE	PP	ATT	RU	AK
PE1	I have a great deal of skill in using child safety seats	0.88	-0.17	0.47	0.24	0.31
PE2	I make use of child safety seats frequently	0.67	-0.13	0.36	0.19	0.24
PE3	I have experience using child safety seats	0.73	-0.14	0.39	0.20	0.26
PE4	I know how to operate child safety seats	0.84	-0.16	0.45	0.23	0.30
PP1	The price of child safety seat is high	-0.17	0.86	-0.09	-0.05	-0.06
PP2	The price of child safety seat is low	-0.09	0.44	-0.05	-0.02	-0.03
PP3	Child Safety Seats are expensive	-0.16	0.80	-0.08	-0.04	-0.06
ATT1	Child safety seats are a good idea	0.33	-0.06	0.62	0.22	0.12
ATT2	Child safety seats are a favorable idea	0.42	-0.08	0.78	0.28	0.15
ATT3	Child safety seats are a pleasant idea	0.43	-0.08	0.79	0.29	0.15
RU1	How often do you use a child safety seat while driving with children under the age of 14 years?	0.19	-0.04	0.24	0.67	0.25
RU2	How often do you use a child safety seat?	0.27	-0.05	0.36	0.98	0.37
RU3	How regularly do you use a child safety seat?	0.26	-0.05	0.34	0.93	0.35

Table IV.
Study 2 mean, standard deviation, correlations and square root of AVE (diagonal elements)

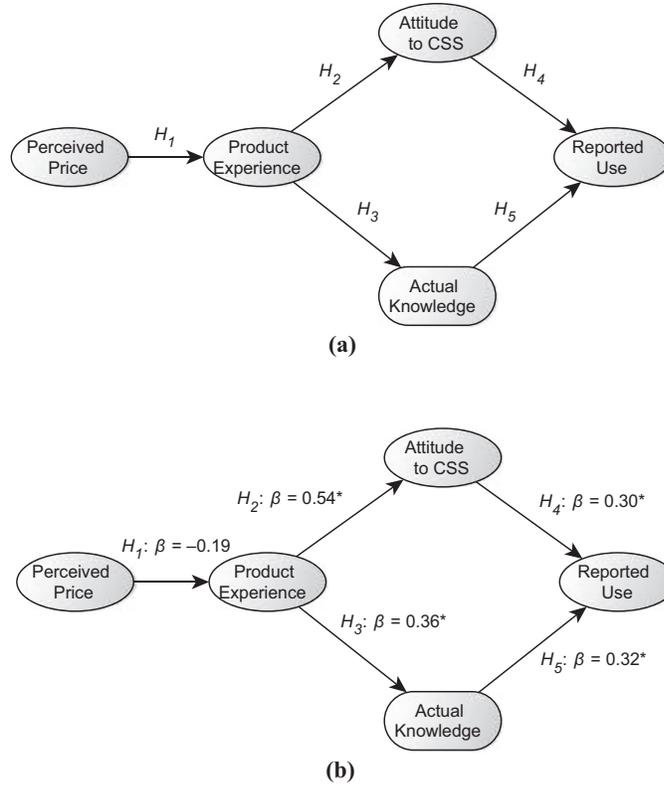
Variables	Mean	SD	PE	PP	ATT	RU
PE	5.94	1.17	0.79			
PP	4.41	1.44	-0.17*	0.72		
ATT	6.38	0.91	0.46**	-0.06	0.73	
RU	5.50	1.92	0.40**	-0.06	0.35**	0.87
AK	5.87	2.08	0.35**	-0.08	0.20**	0.42**

Notes: *Significant at the $p < 0.05$ level; **significant at the $p < 0.01$ level

The full structural model (see Figure 3, Panel B) was tested with AMOS 20.0 and shows acceptable fit with $\chi^2 = 136.970$, root mean square error of approximation (RMSEA) = 0.064, normed fit index (NFI) = 0.910, comparative index fit (CFI) = 0.955 and Tucker-Lewis index (TLI) = 0.935 (Bagozzi and Yi, 2012). Because AK is a calculated construct, there are no items for the structural model; however, all other constructs in the model have at least three associated measurement items, as per Hulland's (1999) suggestion. Figure 3, Panel B shows the path model results for the complete model; Table V provides the findings for H1-H5. As indicated by the significant critical ratios, all hypotheses are fully supported with paths significant at the $p = 0.02$ or below level. To determine the extent to which variances in the constructs can be explained by the model, R^2 values for the dependent constructs are all significant and given as follows: product experience is 0.04, attitude to CSS is 0.29, actual knowledge is 0.13 and reported use of a CSS is 0.23 (Hulland, 1999).

Discussion

All hypotheses are confirmed in the final path model. H1 shows a significant negative association between perceived price for a CSS and product experience with a CSS, with a path coefficient value of $\beta = -0.19$. As given by H2, product experience with a CSS is



Notes: (a) Theme relevance weights; (b) theme and concept connections; *significant at $p < 0.05$ (two tailed)

Figure 3. Study 2 models

Dependent variable	Independent variables	β	t -value	Hypothesis
PE ($R^2 = 0.04$)	PP	-0.19	-2.40 ($p = 0.02$)	$H1$
ATT ($R^2 = 0.29$)	PE	0.54	5.88*	$H2$
AK ($R^2 = 0.13$)	PE	0.36	5.07*	$H3$
RU ($R^2 = 0.23$)	ATT	0.30	3.78*	$H4$
	AK	0.32	4.74*	$H5$

Notes: β is a standardized coefficient; *significant at $p < 0.005$ (two-tailed)

Table V. Study 2 AMOS path model results

strongly positively predictive of attitude toward a CSS ($\beta = 0.54$); $H3$ shows that PE is also predictive of actual knowledge of CSS laws ($\beta = 0.36$). Finally, as indicated by $H4$ and $H5$, respectively, reported use of a CSS is predicted by attitude toward a CSS ($\beta = 0.30$) and actual knowledge ($\beta = 0.32$).

In combination, Studies 1 and 2 find that actual knowledge of CSSs is particularly important, given the societal implications of improper use. Study 1 shows that

consumers believe that price is an important attribute regarding CSSs; they also perceive the potential harms associated with their misuse. To explain the gap in use of CSSs, we introduce perceived price in Study 2, showing its negative consequences in terms of knowledge, attitude and reported use of them.

Conclusions*Contributions to theory*

Our research contributes to existing literature on information processing and knowledge as well as pricing theory in several important ways. First, we show that even though most consumers understand the importance of CSSs and the ample potential harms associated with their misuse, a high perceived price can offset potential experience with them and attitude toward them, and eventually lower future reported use of them. This key finding is supported by the folk theory-of-mind wherein intentionality to perform safe practices must result from knowledge, specifically cultural in nature. Lack of knowledge regarding safety seat usage can therefore result in unintentionally endangering the safety of a child. This first contribution is significant because whereas price is often considered a highly rated attribute of a product, most existing models do not weigh it in the context of consumer safety. In addition to the idea of safety as paramount to consumers regarding travel (car seats, in the present research), it expands far beyond the chosen research domain. In the social marketing realm alone, this framework can be applied to contexts such as research regarding healthy eating for obesity mitigation (Bui and Krishen, 2015) and smoking cessation product decisions (Hamilton and Hassan, 2010). In essence, the proposed model, derived from mixed-methods and interdisciplinary research, can therefore be tested across many other marketing contexts to increase usage intention for critical products.

A second contribution of this study lies in its application to consumer decision-making regarding the connection between consumer education and reported usage of safety devices. Decision-making trade-offs when, for example, price and safety are being weighed often force consumers to make suboptimal decisions. For instance, given a situation in which a consumer is faced with valuing safety versus money with limited knowledge, he/she may choose a lower-priced product to save money rather than to purchase a safer CSS (Bettman *et al.*, 1998). Price, quality and value perceptions are at the root of all consumer purchase decisions. In terms of value and quality, research shows that when consumers make purchase decisions, perceived monetary price impacts perceived quality and perceived sacrifice directly and impacts perceived value indirectly, which ultimately increases purchase intention for a product (Zeithaml, 1988). Therefore, if the perceived price is high, the perceived sacrifice will also be high, causing a consumer to avoid experiencing the product at all. This is consistent with our model, as perceived price has a direct impact on product experience for CSSs.

Third, to understand actual consumer beliefs regarding CSSs, we present qualitative data and allow semantic analysis of the data to conceptualize a quantitative model. In this way, we augment the relatively low number of mixed-methods studies in the marketing realm (Hanson and Grimmer, 2007; Harrison, 2013) while addressing a topic of significant societal concern. Moreover, Woodside (2006) argues that framing biases occur when one method of inquiry utilizes one set of basic questions. Additionally, our model benefits from an interdisciplinary perspective which blends transportation

research and policy with marketing theory, a theoretical gap which has been recognized by business scholars (Wind, 2009).

Practical and theoretical implications

Increasing objective knowledge about a subject area, for example genetic literacy, can only be accomplished by carefully designed educational interventions (Pearson and Liu-Thompkins, 2012). Gaining actual knowledge for non-product categories such as CSSs takes more effort for consumers, as such information is not as readily available as in the case of product categories; that is, consumers are regularly provided with product information as they make purchase decisions (Carlson *et al.*, 2009).

The societal issues of CSS usage become even more severe when marketers consider functionally illiterate and low literate consumers, who are more likely to rely on visual images, and socially contextual single-attribute decision rules (Viswanathan *et al.*, 2005). In effect, Viswanathan and colleagues find that a low literate consumer could be more likely to use stored category knowledge to drive basic decision heuristics such as “buy the smallest”, “buy the cheapest” or “buy the lowest sodium”. Given the proposed model and the importance of low perceived price in increasing product experience and actual knowledge, such single-attribute decision rules have dangerous consequences for low literates in the context of CSS usage. Wegner and Girasek (2003) measure the required reading level for CSS instructions to determine whether lower-priced safety seat instructions are geared to lower education levels of parents; disturbingly, their findings indicate that the instructions are written at a much higher reading level than that of most American consumers. This disparity in communication materials and their targeted consumer literacy levels exists not only for product instructions, but also for required laws for product use, as well as for product pricing and purchasing information. Specifically for low financially literate consumers, Gaurav *et al.* (2011) suggest that certain offers such as money-back guarantees can serve as a signal for quality and trigger higher likelihood of purchasing an intangible product, such as insurance.

Therefore, our findings have several important implications for low literate consumers, including:

- due to the fact that a single-attribute decision rule is more likely to be used, the perceived price could have even a higher negative impact on likelihood of using and learning about CSSs;
- instructions for CSSs and their accompanying laws must be carefully written and visual imagery should be utilized wherever possible to increase actual knowledge using multiple sensory mechanisms; and
- advertisements can be targeted more carefully so that offers signal higher quality perceptions and thus lower perceived sacrifice.

Limitations and future research

As with all research, ours has several limitations, many of which provide potential directions for future research. First, the domain we chose, CSSs, although important, limited our sampling frame to parents within a very specific geographic region of the USA. Although we presented a mixed-methods approach, we did not conduct carefully controlled experiments, which limits the size and scope of our claims. We also limited our study to a small number of constructs, and only one of them, perceived price, is

directly related to a tangible CSS attribute. Additional research is necessary to examine other tangible attributes of CSSs, such as brand name, perhaps using conjoint analysis to determine the relative weights and importance of them. Likewise, our research does not investigate heuristics or signals, such as the price–quality heuristic (Zeithaml, 1988) and the low price signal (Dutta *et al.*, 2007), and the significant role they can play in price perception and decision-making.

With respect to road safety for parents regarding children, Greenberg-Seth *et al.* (2004) find that community-based interventions can be fruitful. Increasing a parent's knowledge of booster seats also increases intention to use them (Anitsal *et al.*, 2010). Future research should take the proposed model and consider delineating price in terms of actual cost versus perceived value of life. One stream of research could explore the economic impact of safety decisions and the mental accounting that takes place for consumer value calculations. With high-stake purchases, such as choice of a hospital, post purchase perceived risk can also have a significant impact on future intention to purchase the same brand of the same product (Grewal *et al.*, 2007). In light of this, future research can explore personal risk as well as post-purchase perceived risk in terms of CSS purchases and deployment.

Another approach worth researching would be to study potential social marketing campaigns which display the positive effects of utilizing CSSs from a “money well spent” perspective (Szmigin *et al.*, 2011). Regarding advertising, future research could also explore the potential impact of fear-based campaigns to offset pricing concerns for CSSs, as such campaigns have been implemented to improve driver safety (Rossiter and Thornton, 2004). More specifically, how should CSS providers frame their marketing communications to offset the high perceived price of a safety seat? In effect, CSS marketing messages should make consumers realize that the cost of losing a child's life is much higher than the price of a seat itself. Previous research shows that when safety features are positioned as reducing the probability of death, consumers exhibit higher valuation of them and willingness to pay for them (Boulding and Purohit, 1996). Regulatory focus theory may play a role in framing the *losing money* versus *gaining life* promotions, and should therefore be further researched in relation to this domain. Finally, case-based qualitative inquiry of parental decision strategies regarding CSSs would also be beneficial, as such a method could highlight additional constructs or theory to build better programs (Rittichainuwat and Chakraborty, 2012).

References

- Aaker, J.L., Rudd, M. and Mogilner, C. (2011), “If money does not make you happy, consider time”, *Journal of Consumer Psychology*, Vol. 21 No. 2, pp. 126-130.
- Ajzen, I. (1991), “Theories of cognitive self-regulation: the theory of planned behavior”, *Organizational Behavior and Human Decision Processes*, Vol. 50 No. 2, pp. 179-211.
- Alba, J.W. and Hutchinson, J.W. (1987), “Dimensions of consumer expertise”, *Journal of Consumer Research*, Vol. 13 No. 4, pp. 411-454.
- Anitsal, M.M., Anitsal, I. and Liska, K. (2010), “Child booster seat safety: an attitudinal model of the use of booster seats”, *Academy of Marketing Studies Journal*, Vol. 14 No. 2, pp. 13-25.
- Bagozzi, R.P. and Yi, Y. (2012), “Specification, evaluation, and interpretation of structural equation models”, *Journal of the Academy of Marketing Science*, Vol. 40 No. 1, pp. 8-34.

- Barclay, D., Thompson, R. and Higgins, C. (1995), "The partial least squares (PLS) approach to causal modeling: personal computer adoption and use as an illustration", *Technology Studies*, Vol. 2 No. 2, pp. 285-309.
- Bettman, J.R. (1979), *An Information Processing Theory of Consumer Choice*, Addison-Wesley, Reading, MA.
- Bettman, J.R., Luce, M.F. and Payne, J.W. (1998), "Constructive consumer choice processes", *Journal of Consumer Research*, Vol. 25 No. 3, pp. 187-217.
- Bilston, L.E., Du, W. and Brown, J. (2011), "Factors predicting incorrect use of restraints by children travelling in cars: a cluster randomised observational study", *Injury Prevention*, Vol. 17 No. 2, pp. 91-96.
- Binkley, J.K. and Bejnarowicz, J. (2003), "Consumer price awareness in food shopping: the case of quantity surcharges", *Journal of Retailing*, Vol. 79 No. 1, pp. 27-35.
- Boulding, W. and Purohit, D. (1996), "The price of safety", *Journal of Consumer Research*, Vol. 23 No. 1, pp. 12-25.
- Bruner, J.S. (1990), *Acts of Meaning*, Harvard University Press, Cambridge, MA.
- Bryman, A. (2006), "Integrating quantitative and qualitative research: how is it done?", *Qualitative Research*, Vol. 6 No. 1, pp. 97-113.
- Bui, M. and Krishen, A.S. (2015), "So close yet so far away: the moderating effect of regulatory focus orientation on health behavioral intentions", *Psychology & Marketing*, Vol. 32 No. 5, pp. 522-531.
- Burke, M.J., Sarpy, S.A., Smith-Crowe, K., Chan-Serafin, S., Salvador, R.O. and Islam, G. (2006), "Relative effectiveness of worker safety and health training methods", *American Journal of Public Health*, Vol. 96 No. 2, pp. 315-324.
- Capraro, A.J., Broniarczyk, S. and Srivastava, R.K. (2003), "Factors influencing the likelihood of customer defection: the role of consumer knowledge", *Journal of the Academy of Marketing Science*, Vol. 31 No. 2, pp. 164-175.
- Carlson, J.P., Vincent, L.H., Hardesty, D.M. and Bearden, W.O. (2009), "Objective and subjective knowledge relationships: a quantitative analysis of consumer research findings", *Journal of Consumer Research*, Vol. 35 No. 5, pp. 864-876.
- Chang, T.Z. and Wildt, A.R. (1994), "Price, product information, and purchase intention: an empirical study", *Journal of the Academy of Marketing Science*, Vol. 22 No. 1, pp. 16-27.
- Chen, X., Chen, Y. and Xiao, P. (2013), "The impact of sampling and network topology on the estimation of social intercorrelations", *Journal of Marketing Research*, Vol. 50 No. 1, pp. 95-110.
- Chin, W.W. (1998), "The partial least squares approach to structural equation modeling", in Marcoulides, G.A. (Ed.), *Modern Methods for Business Research*, LEA, Mahwah, pp. 295-336.
- Cordell, V.V. (1997), "Consumer knowledge measures as predictors in product evaluation", *Psychology & Marketing*, Vol. 14 No. 3, pp. 241-260.
- Davis, B. and Pechmann, C. (2013), "Introduction to the Special Issue on transformative consumer research: developing theory to mobilize efforts that improve consumer and societal well-being", *Journal of Business Research*, Vol. 66 No. 8, pp. 1168-1170.
- de Leeuw, A., Valois, P., Ajzen, I. and Schmidt, P. (2015), "Using the theory of planned behavior to identify key beliefs underlying pro-environmental behavior in high-school students: implications for educational interventions", *Journal of Environmental Psychology*, Vol. 42 No. 1, pp. 128-138.

- Dretske, F. (1988), *Explaining Behavior: Reasons in a World of Causes*, MIT Press, Cambridge, MA.
- Dutta, S., Biswas, A. and Grewal, D. (2007), "Low price signal default: an empirical investigation of its consequences", *Journal of the Academy of Marketing Science*, Vol. 35 No. 1, pp. 76-88.
- Elliott, M.R., Kallan, M.J. and Durbin, D.R. (2009), "Child restraint systems for young children during motor vehicle collisions", *American Journal of Public Health*, Vol. 99 No. 9, pp. 1540-1541.
- Fabrigar, L.R., Petty, R.E., Smith, S.M. and Crites, S.L., Jr. (2006), "Understanding knowledge effects on attitude-behavior consistency: the role of relevance, complexity, and amount of knowledge", *Journal of Personality and Social Psychology*, Vol. 90 No. 4, pp. 556-577.
- Fishbein, M. and Ajzen, I. (1975), *Belief, Attitude, Intention and Behavior*, Addison-Wesley, Reading, MA.
- Fiske, S.T. and Taylor, S.E. (1991), *Social Cognition*, McGraw-Hill, New York, NY.
- Fornell, C. and Bookstein, F.L. (1982), "Two structural equation models: LISREL and PLS applied to consumer exit-voice theory", *Journal of Marketing Research*, Vol. 19 No. 4, pp. 440-452.
- Gaurav, S., Cole, S. and Tobacman, J. (2011), "Marketing complex financial products in emerging markets: evidence from rainfall insurance in India", *Journal of Marketing Research*, Vol. 48 No. 1, pp. 150-162.
- Greenberg-Seth, J., Hemenway, D., Gallagher, S.S., Ross, J.B. and Lissy, K.S. (2004), "Evaluation of a community-based intervention to promote rear seating for children", *American Journal of Public Health*, Vol. 94 No. 6, pp. 1009-1013.
- Grewal, D., Iyer, G.R., Gotlieb, J. and Levy, M. (2007), "Developing a deeper understanding of post-purchase perceived risk and behavioral intentions in a service setting", *Journal of the Academy of Marketing Science*, Vol. 35 No. 2, pp. 250-258.
- Griffin, M., Babin, B.J. and Attaway, J. (1996), "Anticipation of injurious consumption outcomes and its impact on consumer attributions of blame", *Journal of the Academy of Marketing Science*, Vol. 24 No. Fall, pp. 314-327.
- Hamilton, K. and Hassan, L. (2010), "Self-concept, emotions and consumer coping Smoking across Europe", *European Journal of Marketing*, Vol. 44 Nos 7/8, pp. 1101-1120.
- Hanson, D. and Grimmer, M. (2007), "The mix of qualitative and quantitative research in major marketing journals, 1993-2002", *European Journal of Marketing*, Vol. 41 Nos 1/2, pp. 58-70.
- Harrison, R.L. (2013), "Using mixed methods designs in the Journal of Business Research, 1990-2010", *Journal of Business Research*, Vol. 66 No. 11, pp. 2153-2162.
- Heider, F. (1958), *The Psychology of Interpersonal Relations*, Wiley, New York, NY.
- Huffman, C. and Houston, M.J. (1993), "Goal-oriented Experiences and the development of knowledge", *Journal of Consumer Research*, Vol. 20 No. 2, pp. 190-207.
- Hulland, J. (1999), "Use of partial least squares (PLS) in strategic management research: a review of four recent studies", *Strategic Management Journal*, Vol. 20 No. 2, pp. 195-204.
- Jones, M.A., Reynolds, K.E. and Arnold, M.J. (2006), "Hedonic and utilitarian shopping value: investigating differential effects on retail outcomes", *Journal of Business Research*, Vol. 59 No. 9, pp. 974-981.
- Kozinets, R.V. (2002), "The field behind the screen: using netnography for marketing research in online communities", *JMR, Journal of Marketing Research*, Vol. 39 No. 1, pp. 61-72.
- Krishen, A.S., Raschke, R., Kachroo, P., LaTour, M. and Verma, P. (2014), "Promote me or protect us? The framing of policy for collective good", *European Journal of Marketing*, Vol. 48 Nos 3/4, pp. 742-760.

- Kruglanski, A.W., Jasko, K., Chernikova, M., Milyavsky, M., Babush, M., Baldner, C. and Pierro, A. (2015), "The rocky road from attitudes to behaviors: charting the goal systemic course of actions", *Psychological Review*, Vol. 122 No. 4, pp. 598-620.
- Lord, K.R., Lee, M.S. and Sauer, P.L. (1994), "Program context antecedents of attitude toward radio commercials", *Journal of the Academy of Marketing Science*, Vol. 22 No. 1, pp. 3-15.
- Macy, M.L. and Freed, G.L. (2012), "Child passenger safety practices in the US: disparities in light of updated recommendations", *American Journal of Preventive Medicine*, Vol. 43 No. 3, pp. 272-281.
- Malle, B.F. (2001), "Folk explanations of intentional action", in Malle, B.F., Moses, L.J. and Baldwin, D.A. (Eds), *Intentions and Intentionality: Foundations of Social Cognition*, MIT Press, Cambridge, MA.
- Mick, D.G. (1996), "Are studies of dark side variables confounded by socially desirable responding? The case of materialism", *Journal of Consumer Research*, Vol. 23 No. 2, pp. 106-119.
- Mogilner, C. and Aaker, J. (2009), "'The time vs money effect': shifting product attitudes and decisions through personal connection", *Journal of Consumer Research*, Vol. 36 No. 2, pp. 277-291.
- Monroe, K.B. and Lee, A.Y. (1999), "Remembering versus knowing: issues in buyers' processing of price information", *Journal of the Academy of Marketing Science*, Vol. 27 No. 2, pp. 207-225.
- CDC (2012), National Center for Injury Prevention and Control, Centers for Disease Control and Prevention, CDC, Web-based Injury Statistics Query and Reporting System, available at: www.cdc.gov/features/passengersafety/ (accessed 1 March 2014).
- National Highway Traffic Safety Administration (2014), "Traffic safety facts research note", available at: www.nrd.nhtsa.dot.gov/Pubs/812101.pdf (accessed 21 April 2016).
- National Library of Medicine (2012), "Death among children and adolescents", available at: www.nlm.nih.gov/medlineplus/ency/article/001915.htm (accessed 1 March 2014).
- Nunnally, J.C. (1978), *Psychometric Theory*, McGraw-Hill, New York, NY.
- Ofir, C., Raghuram, P., Brosh, G., Monroe, K.B. and Heiman, A. (2008), "Memory-based store price judgments: the role of knowledge and shopping experience", *Journal of Retailing*, Vol. 84 No. 4, pp. 414-423.
- Pearson, Y.E. and Liu-Thompkins, Y. (2012), "Consuming direct-to-consumer genetic tests: the role of genetic literacy and knowledge calibration", *Journal of Public Policy & Marketing*, Vol. 31 No. 1, pp. 42-57.
- Raschke, R.L., Krishen, A.S., Kachroo, P. and Maheshwari, P. (2013), "A combinatorial optimization based sample identification method for group comparisons", *Journal of Business Research*, Vol. 66 No. 9, pp. 1267-1271.
- Rittichainuwat, B.N. and Chakraborty, G. (2012), "Perceptions of importance and what safety is enough", *Journal of Business Research*, Vol. 65 No. 1, pp. 42-50.
- Rooney, D. (2005), "Knowledge, economy, technology and society: the politics of discourse", *Telematics and Informatics*, Vol. 22 No. 4, pp. 405-422.
- Rossiter, J.R. and Thornton, J. (2004), "Fear-pattern analysis supports the fear-drive model for antispeeding road-safety TV ads", *Psychology & Marketing*, Vol. 21 No. 11, pp. 945-960.
- Roy, D.P. and Cornwell, T.B. (2004), "The effects of consumer knowledge on responses to event sponsorships", *Psychology & Marketing*, Vol. 21 No. 3, pp. 185-207.

- Sirgy, M.J., Grewal, D., Mangleburg, T.F., Park, J.O., Chon, K.S., Claiborne, C.B., Johar, J.S. and Berkman, H. (1997), "Assessing the predictive validity of two methods of measuring self-image congruence", *Journal of the Academy of Marketing Science*, Vol. 25, pp. 229-241.
- Smith, A. (2007), *Leximancer Manual (Version 2.2) [Electronic Version]*, available at: www.leximancer.com/documents/Leximancer2_Manual.pdf
- Sujan, M. (1985), "Consumer knowledge: effects on evaluation strategies mediating consumer judgments", *Journal of Consumer Research*, Vol. 12 No. 1, pp. 31-46.
- Szmigin, I., Bengry-Howell, A., Griffin, C., Hackley, C. and Mistral, W. (2011), "Social marketing, individual responsibility and the 'culture of intoxication'", *European Journal of Marketing*, Vol. 45 No. 5, pp. 759-779.
- Vanhuele, M., Laurent, G. and Dreze, X. (2006), "Consumers' immediate memory for prices", *Journal of Consumer Research*, Vol. 33 No. 2, pp. 163-172.
- Viswanathan, M., Rosa, J.A. and Harris, J.E. (2005), "Decision making and coping of functionally illiterate consumers and some implications for marketing management", *Journal of Marketing*, Vol. 69 No. 1, pp. 15-31.
- Voorhees, C.M., Brady, M.K. and Horowitz, D.M. (2006), "A voice from the silent masses: an exploratory and comparative analysis of noncomplainers", *Journal of the Academy of Marketing Science*, Vol. 34 No. 4, pp. 514-527.
- Webster, F.E., Jr. and Lusch, R.F. (2013), "Elevating marketing: marketing is dead! Long live marketing!", *Journal of the Academy of Marketing Science*, Vol. 41 No. 4, pp. 389-399.
- Wegner, M.V. and Girasek, D.C. (2003), "How readable are child safety seat installation instructions?", *Pediatrics*, Vol. 111 No. 3, pp. 588-591.
- Wilkie, W.L. and Moore, E.S. (2012), "Expanding our understanding of marketing in society", *Journal of the Academy of Marketing Science*, Vol. 40 No. 1, pp. 53-73.
- Wind, J.Y. (2009), "Rethinking marketing: Peter Drucker's challenge", *Journal of the Academy of Marketing Science*, Vol. 37 No. 1, pp. 28-34.
- Woodside, A. (2006), "Overcoming the illusion of will and self-fabrication: going beyond naive subjective personal introspection to an unconscious/conscious theory of behavior explanation", *Psychology & Marketing*, Vol. 23 No. 3, pp. 257-272.
- Woodside, A.G. (2010), "Bridging the chasm between survey and case study research: research methods for achieving generalization, accuracy, and complexity", *Industrial Marketing Management*, Vol. 39 No. 1, pp. 64-75.
- Yoo, B., Donthu, N. and Lee, S. (2000), "An examination of selected marketing mix elements and brand equity", *Journal of the Academy of Marketing Science*, Vol. 28 No. 2, pp. 195-211.
- Zeithaml, V.A. (1988), "Consumer perceptions of price, quality and value: a means-end model and synthesis of evidence", *Journal of Marketing*, Vol. 52 No. 3, pp. 2-22.

Further reading

- Beatty, S.E. and Smith, S.M. (1987), "External search effort: an investigation across several product categories", *Journal of Consumer Research*, Vol. 14 No. 1, pp. 83-95.
- Sarker, S., Sarker, S. and Jana, D. (2010), "The impact of the nature of globally distributed work arrangement on work-life conflict and valence: the Indian GSD professionals' perspective", *European Journal of Information Systems*, Vol. 19 No. 2, pp. 209-222.

Appendix

 Consumer folk
 theories-
 of-mind
 perspective

Measurement items	Correct answer agree/disagree/don't know	
Rear-facing infant seats should be used from birth to at least two years of age and at least 30 pounds	Disagree	1093
Forward-facing toddler seats should be used in the back seat from age one and 20 pounds to about age 4 and 40 pounds	Agree	
Booster seats should be used in the back seat from about age 6 to at least age 10—unless the child is 5'3" or taller	Disagree	
Safety belts should not be used in the back seat at age 8 or older or taller than 4'9"	Disagree	
Nevada state law requires that children under age 6 and 60 pounds ride in a federally approved car seat or booster seat that is appropriate for the child's age and weight	Agree	
A car seat or booster does not need to be installed and used according to manufacturer's instructions	Disagree	
If children are less than 4'9" tall, they do not need to ride in a booster seat	Disagree	
Safety belts are made to protect an adult who is at least 4'9" tall	Agree	
Kids who have outgrown their toddler seat, are still not tall enough for the belt to lay on the strong parts of their body, such as hip bones, rather than vulnerable parts like their stomach	Agree	
If children are less than 4'9" tall, they should be in a booster seat	Agree	

Table AI.
 Study 2 actual
 knowledge construct

Corresponding author

 Anjala Selena Krishen can be contacted at: anjala.krishen@unlv.edu

 For instructions on how to order reprints of this article, please visit our website:

www.emeraldgroupublishing.com/licensing/reprints.htm

 Or contact us for further details: permissions@emeraldinsight.com