Increasing Seat Belt Use Among 8- to 15-Year-Olds

Volume I
Findings

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16. Abstract

The broad aim of this research project was to determine the nature and causes of non-use of seat belts among 8- to 15-year-olds, and to recommend interventions and strategic approaches to increase usage among this age group. This report summarizes findings from three phases of research: a literature review; 28 in-home family immersion interviews conducted in Illinois, Georgia, and Arizona; and detailed findings from qualitative testing of intervention concepts through 96 triads among "tweens" and teens 8 to 15 years old, six focus groups with parents in Pennsylvania, Iowa, Wisconsin, and California, and two focus groups with adult/teen influencers in Iowa and California. Interventions tested included those based on new products, community and school influence, communications, and key influencers (parents, older teens). Findings from the first and second phases of research suggested there are three segments or targets within the 8-to-15 age range with different attitudes and behaviors toward safety restraints. More specifically, 8- to 10-year-olds (younger tweens), 11- and 12-year-olds (older tweens), and 13- to 15-year-olds (young teens) seem to be motivated by different influencers and peer groups. There also appears to be a gap in messages on seat belt safety directed to parents of 8- to 15-year-olds. That is, after hearing about the importance of child safety restraints for infants, parents report almost no information on the continued importance of safety restraints and/or how to transition children to appropriate restraint systems from infant to toddler to pre-teen. Finally, in terms of messages and interventions, 8- to 15-year-olds say hearing about the consequences of not wearing seat belts from other children their age, or from slightly older youth, would make the consequences of not wearing a belt seem more real and alarming.

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Executive Summary

The following report presents findings from qualitative research with 8- to 15-year-olds, parents, and adult and teen influencers. The purpose of this research was to determine the nature and causes of non-use of seat belts among 8- to 15-year-olds, and to recommend interventions and strategic approaches to increase usage among this age group. In order to achieve these objectives, three phases of research were conducted: a literature review, in-home family immersions, and triad interviews with "tweens" and teens (8 to 15 years old) concurrent with focus groups attended by parents/influencers of tweens and teens. Sites for information collection were selected to provide racial, ethnic, and socioeconomic diversity; as well as broad geographic representation.

This project began with a literature review to determine what previous studies, if any, had been conducted with this target audience. The literature review revealed a dearth of information on the factors influencing safety restraint use, particularly for children 8 to 15. The few studies that focused on safety restraint use tended to present the results of interventions aimed at changing non-use behaviors, without necessarily measuring or addressing specific attitudes or motivations associated with safety restraint use or non-use. The message strategies guiding these interventions were also rarely described in any detail.

In order to begin to fill these gaps in information, the second phase of research consisted of going into 28 homes of tweens and teens and their parents to interview them on their attitudes, perceptions, and behaviors with regard to safety restraints. These in-home family immersion interviews were conducted in Illinois, Georgia, and Arizona, and lasted up to two hours. From these interviews, several key conclusions emerged.

First, there appeared to be three segments or targets within the 8 to 15 age range with different attitudes and behaviors toward safety restraints. More specifically, 8- to 10-year-olds (younger tweens), 11- and 12-year-olds (older tweens), and 13- to 15-year-olds (young teens) seemed to be motivated by different influencers and peer groups. In general, younger tweens demonstrated a simpler understanding of why they wore seat belts and were typically driven by parental influence and a desire to comply with the rules. On the other hand, older tweens began to show a more sophisticated understanding of why they wore safety restraints and they were more likely to begin making independent decisions to wear their seat belts. Finally, young teens were the most likely to observe and report other peers who did not wear their seat belts and they were the least likely to be willing to ask their friends to buckle up.

Second, regardless of age, the results from the immersions underscored that tweens and teens in the 8- to 15-year-old age group were still largely influenced by their parents. Published studies confirm this, with one finding that parental influence on health beliefs and behaviors continues even into the college years (Lau, 1990). Despite occurrences of youthful rebellion or boundary-testing, children in the target age range still tended to live by the rules and examples set by the parents in their household. While children may express a desire to not wear their seat belts, this research suggested there is little resistance when parents tell them to buckle up.

Third, the majority of tweens and teens who were regular seat belt users said that wearing a seat belt was a habit. It appeared that for young tweens, the act of wearing a seat belt was a habitual,

almost unconscious response to parental reminders. Reports from older tweens suggested that wearing a seat belt was a combination of habit and decision. Young teens reported the most conscious reasoning for when they did/did not wear seat belts. Young teens who said they had developed a habit said that they did not have to think about putting on their seat belts. The reported fluctuation between habit and conscious decision making suggested that there is a continuum of stages that children experience with regard to seat belt usage. Interventions that take these nuances into account could be more effective, given varying motivations among children.

Finally, there appeared to be a gap in messages on seat belt safety directed to parents. The only message that parents consistently reported about the importance of safety restraints for children was that they were required to have a child seat in order to take their child home from the hospital. After this event, awareness of additional messages appeared to diminish.

After completing the in-home immersions, a series of intervention concepts was developed based on findings from the first two phases of research. More specifically, intervention concepts were created based on different target audiences (younger tweens, older tweens, young teens, and parents) and varying delivery mechanisms including product interventions, community-based interventions, school, communications, and influencer-driven interventions. In the final phase of the qualitative research, participants were exposed to intervention concepts in 96 triad interviews with tweens and teens and eight focus groups with parents and influencers conducted in Pennsylvania, Iowa, Wisconsin, and California. They were asked to share their reactions to the concepts on a variety of dimensions, ranging from how appealing the concepts seemed to how effective they considered the concepts would be in prompting belt use. The concepts were presented in paragraph form and several key conclusions emerged.

First, target audiences ultimately identified two intervention concepts they believed would have the most promise for increasing seat belt use among 8- to 15-year-olds in the future. These concepts involved use of a school assembly conducted by youth and a product-based intervention that would lock the radio unless everyone riding in the vehicle was restrained. These concepts were deemed appealing and effective by participants across all target groups and youth sub-groups, split by age, sex, and race/ethnicity. The children said that hearing about the consequences of not wearing seat belts from other children their age, or from slightly older youth, would make the consequences of not wearing a belt seem more real and alarming. Parents supported use of assemblies as well, often saying they felt such messages would be deemed more relevant by their children if they came from their peers or were drawn from real-life experiences.

Appeal of the interlock device, though mixed at times, was overwhelmingly trumped by the fact that this intervention was consistently cited as the most effective intervention overall. Youth said that the inability to listen to the radio would be a strong driver for influencing seat belt use, and would also give them permission to demand that peers or other passengers wear their belts as well. While most parents liked this option too, a few adults (non-users) said they would prefer the ability to over-ride the feature when they, themselves, were not wearing seat belts.

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I. Background and Objectives

Motor vehicle crashes are the leading cause of injury and death among children and teenagers in the United States. Proper use of vehicle restraints has been shown to be an effective means to prevent many of these injuries among children, yet usage is far from universal. Previous public awareness and educational campaigns have achieved success in increasing the number of young children who are restrained in appropriate car seats and booster seats. However, research has shown a decline in restraint usage during the pre-teen and early teenage years (age 8 to 15).

In 2003, NHTSA issued a solicitation seeking vendor support for formative exploratory research to determine how to increase seat belt use among 8- to 15-year-olds. Aeffect, Inc., a strategic marketing and research firm, responded to this solicitation and was awarded the contract in fall 2003. Aeffect began work on a three-phased research project in fall 2003. The first phase involved a review of existing literature and creation of a theoretical model to guide research design and planning. The literature review was completed in 2004. The second phase involved conducting 28 in-home immersion interviews with families with at least one child 8 to 15 years old living in their households. These interviews were conducted in fall/winter 2005 with families in Chicago, Atlanta, and Phoenix. During a two-hour visit, Aeffect researchers probed youth motivations for wearing or not wearing seat belts, as well as parents' impressions of how their children could be influenced to wear seat belts. The third and final phase of qualitative research, conducted in summer 2006, used results from the previous research phases to design intervention concepts and test the viability of these concepts with youth, parents, and adult and teen influencers.

The overarching objective of this initiative was to identify the best approaches for increasing seat belt usage among 8- to 15-year-olds. More specific objectives were to:

- Identify the most effective and least effective intervention concepts for motivating seat belt usage among 8- to 15-year-olds;
- Identify children's favorite concepts as well as their least favorite concepts;
- Uncover both positive and negative reactions to the concepts;
- Discover ways to improve the concepts based on respondents' input;
- Determine whether there are differences in reactions by age, sex, or race/ethnicity;
- Determine parents' and influencers' reactions to youth concepts;
- Determine parents' reactions to parent-targeted concepts; and

- Propose ways to effectively reach and encourage children to increase seat belt usage based on overall reactions to intervention concepts.

II. Methodology

Phase I Literature Review

The literature review was constructed around the structural framework/model guiding this project, which was derived from the theory of reasoned action and theory of planned behavior (see diagram on next page). A systematic review of published literature was conducted to identify interventions that encourage seat belt use among children in the 8 to 15 age range. In addition, information was gathered on each component of the theoretical model, and areas were isolated where little research exists and future primary research will be needed. In particular, this literature review specifically sought information on the following major topic areas:

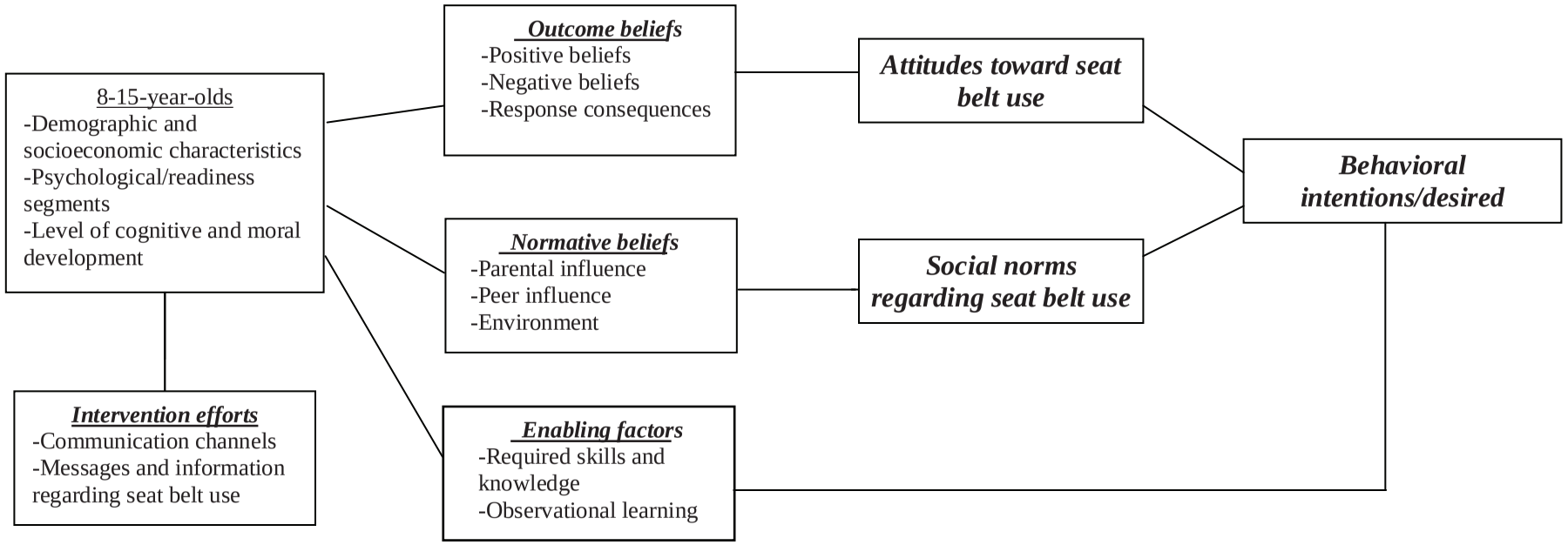
- Demographic, socioeconomic and psychological characteristics of 8– to 15-year-olds;
- Level of cognitive and moral development;
- Successful communications channels and messages;
- Examples of successful health and safety interventions targeting 8– to 15-year-olds;
- Outcome beliefs (positive and negative beliefs about seat belt use/non-use);
- Role of parents, peers and environment in creating normative beliefs and behaviors;
- Factors that enable seat belt usage—skills, knowledge, observational learning;
- Attitudes toward seat belt usage; and
- Social norms regarding seat belt usage.

Bibliographic searches were conducted in a complete range of abstract and full text databases, including Medline, ISI Web of Science, Dissertation Abstracts, Health and Safety Science Abstracts, PsychInfo, and Social Sciences Abstracts. Searches were focused on studies that targeted health or safety behavior change among 8– to 15-year-olds, and those that discussed cognitive development issues that may affect children's adoption of safety behaviors. Relevant studies were also found by reviewing bibliographies of articles and books on these topics. Included literature encompassed studies from around the world. Material was retrieved using the library resources of the University of Illinois at Urbana-Champaign and the University of Georgia.

Phase II Immersion Interviews

For the second phase of research a total of 28 families were interviewed in their homes in Chicago, Atlanta, Phoenix, and surrounding suburbs. Interviews were conducted by Aeffect moderators on November 15 to 19, 2005 (Illinois), December 6 to 8, 2005 (Georgia), and January 12 to 15, 2006 (Arizona). Up to 10 families were recruited per State, and a total of 30 children were interviewed. Family interviews consisted of an interview with one or both parents, as well as worksheet activities and a separate interview with one or more children whose ages fell between 8 and 15. The total length of the sessions was approximately 90 minutes. Families were selected by subcontracted recruiting agencies that used telephone and random-digit dialing in targeted geographic

Structural Framework to Guide Project Tasks



areas to establish contact. The agencies employed recruitment criteria designed to obtain a broadly representative sample with respect to race/ethnicity, number of children in household, sex, age, socioeconomic status, and frequency of seat belt use. All interviewed families were given a monetary incentive of $150. All interviews were audio-taped with the families' permission and transcribed for analysis.

Phase III Triads and Focus Groups

For the final phase of research, a total of 293 youth 8 to 15 years old (2nd through 9th grade) participated in 96 triad interviews conducted by Aeffect researchers across four cities. Interviews with 2 to 4 children at a time were held in Philadelphia, Des Moines, Racine, and San Diego on June 26 to 30 and July 6 and 7, 2006. Youth participants in each triad interview were matched by sex, race/ethnicity and age/grade. Though recruited by age (only those 8 to 15 years old) participants were also grouped by grade as previous research has shown that children mature by grade rather than age. That is, children in the same grade tend to think and behave similarly despite age differences. Regular and non-regular belt wearers were interviewed separately. Each triad interview lasted approximately 1 ¼ hours.

Six parent focus groups of 7 to 9 respondents each were also conducted during this same time period. Two groups were held in Philadelphia, two groups in Racine, and one group each in San Diego and Des Moines. Both regular and non-regular belt-wearing parents participated. Each parent focus group lasted approximately two hours.

Additionally, two influencer focus groups were conducted. These influencers were recruited based on their interaction with, and influence over, youth 8 to 15. One focus group was comprised of adult influencers and was held in Des Moines (n=7). Some adult influencers were teachers, youth leaders, and caregivers. Other participants were uncles and aunts who interacted with nieces and nephews in the 8-to-15 age range. The other focus group was conducted in San Diego and was comprised of teen influencers (n=5) who were related to, friends with, tutored, or babysat children 8 to 15 on a regular basis. Each influencer focus group took approximately 2 hours.

Intervention concepts were both shown in text paragraph form and read to the triad and focus group participants without the use of pictures or other visuals. Exposure to the concepts in text format without pictures ensured participants would react to the concept stimuli, not to other things (pictures, images, colors, etc.) that could influence their reactions. Among the youth triads, certain concepts were specifically targeted to younger or older children and thus were only shown to certain age groups. Youth concepts were shown to parents, adult influencers, and teen influencers. The parent and influencer groups were also exposed to concepts that were specifically parent-targeted.

The following 13 concepts were tested among 8- to 15-year-olds:

Concept A *(Assembly conducted by peers in schools)*
You are at school, and your class attends an assembly in the auditorium. The speaker is a kid your age. They talk about the importance of wearing a seat belt to prevent injuries. They were injured in a car accident because they were not wearing their seat belt, and want other kids to learn from their experience.

Concept B *(Branded or self-designed belts)*
You get into the car, and you notice there are different symbols or pictures on the seat belts in your car. In fact, everyone in the car has a belt expressing their own personality or interests. Your belt might have the logo of your favorite sports team or perhaps show your school's mascot. You can add pictures, drawings, or symbols to your seat belt to make it your own.

Concept C *(Cable program exploring belt use)*
You watch the cable television program "Myth Busters" on TLC, and this week, the guys try to explore whether or not you're really just as safe in the car without a seat belt as when you're wearing one. They also explore whether or not you really need a seat belt when you're just going on a short trip or when driving in town.

Concept E *(Theme park exhibit)*
You're on vacation with your family and visit a theme park. This theme park has a special building with things to do that demonstrate how you can be safe in a car. You might be able to get your picture taken with crash test dummies or play computer games that show what happens when cars hit each other traveling at different speeds.

Concept L *(Little extra belt for stuffed animal)*
You get into the car, and this time, there's a seat belt with a little extra belt. The little extra belt can be used to strap in your favorite stuffed animal. This seat belt keeps both you and your favorite stuffed animal safe when riding in the car.

Concept M *(Mood seat belt that changes colors)*
You get into the car, and this time, there's a mood seat belt in your car. It's a seat belt that changes colors. One day you might be blue, another day red. The belt might be one color until you put it on, and then it might change to a different color once you have it fastened. It might even glow in the dark.

Concept N *(Peer-to-peer event at mall signaled by instant messaging)*
You hear from your friends about a local event going on at the shopping mall or at a local hangout. Your friends received text messages on their phones about this event, and there has been a lot of talk about it. You know that it is an event about safety and that there will be demonstrations and interactive activities.

Concept P *(Promotion "So I Can …")*
You see a commercial on TV that shows different kids/teens saying that they wear a seat belt so they can grow up to be whatever they want to be. They say they buckle up to be a firefighter, an actress, a scientist, or a rock star. The ad invites you to go online and enter a contest, saying "I buckle up so I can _____" (You fill in the blank). Prizes will be given for best entries.

Concept R *(Radio interlock device)*
You get into the car and when the car starts up you don't hear the radio like usual. In this car, the radio doesn't go on until everyone riding in the car buckles their seat belt.

Concept S *(Sports coach intervention)*
Your coach tells everyone on your team to be safe because your team can't win unless everyone is healthy and in good physical condition. He tells you that it's very important for you to wear your seat belt when riding in the car to prevent injuries. He reminds you to put on your seat belt on your way home after the game because he expects to see you at the next practice.

Concept V *(Video game intervention)*
You are playing a video game that involves driving or racing in an automobile. Before you begin playing, the game gives you an option to wear your seat belt in the automobile. If you wear your seat belt, you get extra points. If you don't wear your seat belt, bad things will happen.

Concept X *(Pre-recorded call from celebrity)*
You receive a pre-recorded voice message on either your cell phone or home phone from your favorite celebrity-maybe an actor, athlete, or musician. For example, it might say, "Hi, this is _____ and I want to let you know that I wear my seat belt every time I'm in the car, and I think you should too. If you want to know why, visit my Web site at www.blank.com

Concept Z *(Downloadable ring-tones for in-car reminders)*
You get into the car, and your car reminds you to wear your seat belt by playing a song clip or pre-recorded voice until the driver and passengers buckle up. The song or reminder sounds can be downloaded to your car in advance just like cell phone ring tones.

Several youth concepts (Concepts B and M) sought to re-position seat belts, changing children's existing perceptions of belts from uncool to cool. Other concepts attempted to engage people who might influence youth to wear seat belts such as peers (Concepts A and N), coaches (Concept S), or celebrities (Concept X). Several concepts sought to educate youth so that they could make their own informed decisions about seat belt use (Concepts C, E, and N). Other concepts were designed as vehicle-related interventions which either reminded youth to put on a seat belt (Concept Z) or made it unpleasant not to do so (Concept R).

Two additional concepts --Concepts O (Blink of an Eye Campaign) and I (Insurance Discounts)—were designed for testing exclusively with parents and influencers:

Concept O *(Blink of an Eye Campaign)*
You see a commercial, billboard, or other advertisement. It says: "In a blink of an eye, you can fasten your seat belt. In a blink of an eye, you can lose your child."

Concept I *(Insurance Discounts)*
Your car records and saves information on whether drivers and passengers (like your children) wear a seat belt for every trip. This information can be downloaded and sent to your insurance company to qualify you for a discount on your annual car insurance payment. When everyone buckles up in your car, you save money.

The following exposure schedule was employed so that younger and older respondents were shown concepts that were most relevant to them. Parents were shown a core set of concepts developed for them, along with additional youth-targeted concepts as time permitted.

- Tweens (Concepts A, B, E, L, M, P, R, S, V, X, Z)
- Teens (Concepts A, B, C, E, M, N, P, R, S, V, X, Z)
- Parents (Concepts I, R, O, Z plus rotate other youth concepts)

Respondents were initially exposed to the concepts one by one, and order of exposure to the concepts was rotated across interviews to avoid order bias. In parent and influencer groups, adult-targeted concepts were shown first, and youth concepts were then rotated in for discussion.

After initial exposure to each concept, boys and girls expressed positive ("thumbs up"), neutral ("sideways"), or negative ("thumbs down") reactions to each concept. These reactions were then counted and tallied, allowing the project team to compare the appeal of the concepts overall and within specific youth groups. Adults and influencers, however, did not complete the thumbs up/thumbs down activity, but rather expressed reactions to the concepts more informally, hence quantitative data are not reported for these groups.

After indicating their individual reactions, the participants then discussed what they liked or disliked about each concept, as well as their perceptions of its potential influence on their behaviors, peer acceptance, practicality, and its potential long-term efficacy.

Limitations

A variety of limitations should be mentioned related to this research. The immersion interviews involved a very small sample size with some self-selection bias in that participation was voluntary. While the triads were conducted with a far larger number of respondents, the information was not collected from a representative sample but rather from people who agreed to come to a focus group facility in select research locations. However, the research team believes these individuals represented a good cross-section of people based upon recruitment criteria (age, sex, race/ethnicity, and socio-economic status). In addition, many questions were asked in an open-ended manner and answers to such questions may be influenced by interviewers, other respondents who are participating, and/or the amount of time a respondent is allowed to answer or explain his or her response. While the moderators took steps to minimize negative effects of group dynamics, it is important to recognize that data were gathered in a group rather than individual setting. Finally, though quantitative ratings were used in this research to help compare reactions across concepts and groups, it is important to keep in mind that the nature of this research was primarily qualitative and designed to elicit reactions and comments from youth. As such, the quantitative information should be interpreted with caution given relatively small total and group sample sizes.

III. Summary of Findings

LITERATURE REVIEW

This project began with a literature review to determine what previous studies, if any, had been conducted with this target audience. The results of that review are presented as an Appendix in the Volume II Report. The review found that children's health and safety behaviors can be influenced through focused strategies that target them with appropriate messaging and incorporate community support/resources such as parents, schools, law enforcement entities, physicians, and local media. Successful child-targeted interventions discussed in the review demonstrated some or all of the following elements:

- Targeted both children and parents;
- Empowered and trusted children to look at the facts, draw conclusions, and make safety decisions for themselves;
- Involved the community, especially with an approach customized to the characteristics of the local area;
- Addressed peer influence/normative forces;
- Did not rely on a one-time only delivery;
- Employed more than one channel (directed toward children, parents, teachers, community, physicians, media, etc.).

Lessons learned from other health interventions, such as bicycle helmet safety, indicated that addressing children's education/knowledge alone was not sufficient to elicit change. In isolation of any other reinforcing factors, enhancing children's knowledge did not necessarily lead to change in behaviors. In addition, interventions whose goal was to change behaviors without also changing more deep-seated attitudes were not likely to be successful in the long term. For example, reward-based programs often achieved behavior change goals, but tended to experience significant declines after the programs ended.

The literature review revealed a dearth of information on the factors influencing child safety restraint use, particularly for children 8 to 15. The few studies that focused on safety restraint use tended to present the results of interventions aimed at changing non-use behaviors, without necessarily measuring or addressing specific attitudes or motivations associated with safety restraint use or non-use. The message strategies guiding these interventions were also rarely described in any detail.

IMMERSION INTERVIEWS

In order to begin to fill these gaps in information on tweens and teens, the second phase of research consisted of going into 28 homes of tweens and teens and their parents to interview them on their attitudes, perceptions, and behaviors with regard to safety restraints. These in-home family immersion interviews were conducted in Illinois, Georgia, and Arizona and lasted up to two hours.

Within the 28 households, 30 children were interviewed composed of 19 males and 11 females. The age breakdown was as follows: 8- and 9-year-olds (n=11), 11- and 12-year-olds (n=7), and 13- to 15-year-olds (n=12). Reported race/ethnicity was 11 White, 10 African-American, and 9 Hispanic children. In addition to varying age, sex, and race/ethnicity, the sample contained a mix of household income (<$30k to more than $100k) and number of children in household (1 to 5 or more).

Results from the immersion interviews are presented in the Volume II Appendices. Among the major findings:

- In general, younger tweens (8 to 10) demonstrated a simpler understanding of why they wore seat belts and were typically driven by parental influence and a desire to comply with the rules. On the other hand, older tweens (11 and 12) began to show a more sophisticated understanding of why they wore safety restraints and they were more likely to begin making independent decisions to wear their seat belts. Young teens (13 to 15) were the most likely to report that their peers/friends did not wear seat belts and they were the least likely to be willing to ask their friends to buckle up.

- Regardless of age, tweens and teens in the 8- to 15-year-old age group were still largely influenced by their parents. Yet there appeared to be a gap in messages on seat belt safety directed to parents. The only message that parents consistently reported about the importance of safety restraints for children was that they were required to have a child seat in order to take the infant home from the hospital. After this event, awareness of additional messages appeared to diminish.

- Parents said they acquired general safety information from a variety of sources including traditional media sources such as TV, radio, and Internet. The most influential sources tended to be interpersonal – doctors' offices/hospitals, friends, family, other parents, and their children's school.

- The majority of children who were regular seat belt users said that wearing a seat belt was a habit. It appeared that for young tweens, the act of wearing a seat belt was a habitual, almost unconscious response to parental reminders. Reports from older tweens suggested that wearing a seat belt was a combination of habit and decision. Young teens reported the most conscious reasoning for when they did/did not wear seat belts. Young teens who said they had developed a habit said that they did not have to think about putting on their seat belts. Children who said

they had established seat belt wearing habits were in environments where that standard was consistently enforced, typically by parents.

- There were several barriers identified by parents and children that undermined the development of habitual seat belt use. For both parents and children the main set of barriers was the absence of conditions conducive to developing the habit – sporadic/no reminders, lack of modeling by their parents, and exceptions to the rule. Many 8- to 15-year-olds communicated misconceptions about there being times when it was not necessary to wear a seat belt. For example, when children were asked when it was okay not to wear a seat belt, some said it was all right when they rode short distances.

- Other barriers to the development of habitual seat belt use reported by families included lack of properly functioning seatbelts in the rear seat, and the feeling that seat belts were restricting or uncomfortable. A few families in this study said seat belts no longer retracted, buckled, or fit correctly in their vehicles. While parents expressed concern over broken seat belts, they did not say they intended to repair damaged safety restraints. Most children described discomfort and restricted movement as a key barrier to consistent seat belt use. While a few families said they made seat belts more comfortable with clips or padding, many said they put shoulder straps behind them or under their arms.

- Children often said they would be more likely to wear their seat belts on a regular basis if a light or sound inside the vehicle reminded them to buckle up in the back seat (similar to a feature now offered for front seat passengers). If this feature was extended to rear seating, parents said they would be able to tell if children were buckled up in seats where it is difficult for them to see the children (particularly in SUVs and minivans).

- There were informational gaps regarding seat belt safety in children's lives. Reported messages and interventions on seat belt safety tended to decline in late elementary school and did not resume until Driver's Education.

- Younger and older tweens primarily received information from home and school, as well as child-entertainment channels on television and from video games. Younger teens were more influenced by their peers, figures in the media (musicians, athletes, actors), and engaged in relational technology that connected them to others like instant messenger, e-mail, MySpace.com, cell phones, as well as iPods.

TRIAD INTERVIEWS

Table 1 shows the distribution of the triad sample. It reflects the sample selection criteria which sought to obtain comparable numbers of children across selected characteristics. Please note, though recruited by age (only those 8 to 15 years old) participants were also grouped by grade, because previous research has shown that children mature by grade rather than age. That is, children in the same grade tend to think and behave similarly despite age differences.

Table 1: Profile of Triad Participants

	N	%
Total Sample	**293**	**100**
Sex		
Male	143	49
Female	150	51
Grade		
2nd-3rd	72	25
4th-5th	79	27
6th-7th	70	24
8th-9th	72	25
Race/Ethnicity		
White	110	38
African-American	94	32
Hispanic	89	30
Household Income		
Under $30K	52	18
$30K-$50K	87	30
$50K-$70K	62	22
$70K-$100K	55	19
Over $100K	30	11
Refused/No Answer	7	--

Children who participated in the triads as well as their parents were asked to report their seat belt wearing behaviors. Parents were more likely than their children to report full-time seat belt use; 89 percent of parents said they wore belts regularly, compared to 52 percent of youth who reported the same (see Table 2). Though there was a significant correlation between reported parent and youth seat belt use, it was a weak correlation (.207) at best.

Table 2: Parent versus Child Seat Belt Use

Youth Seat Belt Use	**N**	**%**
Wear Regularly (8-10/past 10 times)	216	52
Wear Non-Regularly (1-7/past 10 times)	70	48
Parent Seat Belt Use		
Wear Regularly (8-10/past 10 times)	253	89
Wear Non-Regularly (1-7/past 10 times)	32	11
No Answer	8	--

The children's reported seat belt use appeared to be related to household income. As shown in Table 3, the average reported child seat belt use rose as household income increased (up to $70,000 level). There was a significant correlation between child and parent belt use at the highest income brackets; that is, a correlation of .816 for households with incomes over $100K, and a correlation of .404 for households with incomes between $70K and $100K. There was no correlation between parent and child seat belt use in lower income households.

Table 3: Seat Belt Use by Household Income

	Parent Seat Belt Average 10/10		**Child Seat Belt Average 10/10**	
Income	**Mean**	**n**	**Mean**	**n**
Under $30K	8.83	53	7.55	53
$30K-$50K	8.72	87	8.34	86
$50K-$70K	9.35	62	8.73	62
$70K-$100K	9.62	53	8.55	55
Over $100K	9.43	30	8.50	30

Screening Question: Thinking of the last 10 times that you were in a car, truck, or van, how many of those times did you wear your seat belt?
*Data should be interpreted with caution due to small base sizes

Average reported child seat belt use was highest among White children, lower among Hispanic children, and lowest among African-American children (see Table 4). There were significant correlations between self-reported parent and child seat belt use in White and Hispanic households (.509 and .234, respectively), but not a significant correlation between the parent and child behaviors in African-American households (.119). However, this may have stemmed from a greater proportion of higher income families among the White and Hispanic samples. When correlation analysis was re-run solely with families having household income under $70K, there was no difference by race/ethnicity, i.e., there was no correlation between parent and child use by racial/ ethnic group.

Table 4: Seat Belt Use by Household Ethnicity

	Parent Seat Belt Average 10/10		**Child Seat Belt Average 10/10**	
Race/Ethnicity	**Mean**	**n**	**Mean**	**n**
White	9.22	112	8.71	112
African-American	8.63	91	7.97	92
Hispanic	9.62	82	8.23	82

Screening Question: Thinking of the last 10 times that you were in a car, truck, or van, how many of those times did you wear your seat belt?
*Data should be interpreted with caution due to small base sizes

The intervention concepts presented to the children during the triad sessions are listed on pages 5 and 6. While several concepts appeared to have broad-based youth appeal—such as Concept A (Assembly) and Concept R (Radio Interlock)—more frequently, concept appeal was mixed and segmented.

In many interviews, youth said they had a difficult time choosing "best" or favorite concepts, given that several ideas actually appealed to them. In fact, some children suggested that the best way to influence them would be to deliver a continuous stream of interventions to repeatedly remind them that it was important to wear a seat belt. Both regular and non-regular belt wearers said repetition of such messages would influence their behaviors longer-term.

In general, most children who wore seat belts said they learned to use them early in their lives, specifically around the time they began to buckle their own seat belts at about 3 to 5 years old. Most regular users said they had worn seat belts as long as they could remember, since they were toddlers, and had already developed the habit of doing so. For this target group, the primary intervention was parental direction and consistent demand for the behavior.

Interestingly, youth were generally able to separate concepts they liked from concepts they thought would work in getting them and/or their friends to wear seat belts. Concepts with high appeal were not always deemed to be effective. For example, though most

children liked the idea of featuring seat belt use in video games, many agreed that what happens in video games has little effect on their behaviors in real life.

On a comparative basis, Concepts R (Radio Interlock) and A (Assembly) were rated most effective by youth, that is, most apt to get them to wear their seat belts or to wear belts more consistently. Though Mood Belts did not have broad-based appeal across all youth groups, many youth thought they would work, if not for them personally, for other children.

Concepts A (Assembly), R (Radio Interlock), N (Mall Event), and M (Mood Belts) were rated most favorably by youth who didn't wear seat belts regularly. Oftentimes, non-regular belt wearers gravitated toward concepts that showed consequences of not wearing a seat belt, provided strong reminders to do so, or helped make seat belts seem cool.

Boys and girls had strikingly different reactions to the concepts. Boys often favored experiential or participatory concepts, such as video games, sports/coaches, etc. Girls, on the other hand, tended to prefer concepts that promoted self-expression and social interaction, such as mood belts, mall events, or assemblies.

Across the total sample, two concepts emerged as interventions able to elicit strong positive reactions from 8- to 15-year-olds**.** About three-quarters of all youth expressed positive reactions to Concept A (Assembly – 75% positive) and Concept R (Radio Interlock – 74% positive). Across age groups, the main reason youth reacted favorably toward Concept A was because the speaker in the assembly would be someone their age or slightly older. Respondents explained that they were more likely to pay attention at an assembly where the speaker was young because they could relate to the person. Therefore, children said that to hear about a child's or teenager's experience in a car crash would probably have a greater impact on their perceptions and behaviors regarding seat belt use than an adult's experience.

Concept R received mostly positive reactions from youth, while some said that they would dislike an interlock device. Older tweens and younger teens said that an interlock that did not enable them to listen to music until they buckled up would motivate them to do so. However, some said they would not like having the device in the car because it would be irritating if they did not always buckle in or someone else in the car refused to wear their seat belt. Regardless, most youth agreed it would be effective.

Five concepts generated positive reactions from about half of the youth sample**:** Concept V (Video Game – 58% positive), Concept E (Theme Parks – 54%), Concept S (Sports/Coaches – 54%), Concept Z (Ring Tone Reminders – 52%), and Concept N (Mall Event – 51%). In discussion, youth often explained that they react positively to ideas they can relate to or think they might like to experience. Therefore, youth who liked Concept V enjoyed playing video games, while those who liked Concept E would enjoy interactive exhibits, whether at a theme park or a science museum. Children who favored Concept S were often involved in sports themselves and said a coach telling them to buckle up would have an impact on their behavior. Those who had positive reactions

toward Concept N enjoyed going to the mall and being involved in activities with friends. Children who liked Concept Z (ring tone reminders) said that they might enjoy choosing an "annoying" ring tone or favorite song for the car to help remind them to wear their seat belts.

The remaining concepts generally received more mixed reviews from youth, though reactions to the concepts were generally skewed more positive than negative. Generally speaking, the remaining concepts evoked positive reactions from about one-third to just under one-half of all children: Concept M (Mood Belts – 49% positive), Concept P (Promotion "So I Can…"- 44%), Concept B (Branded Belts – 42% positive), Concept C (Cable Program – 41% positive), Concept X (Celebrity Call – 37% positive), and Concept L (Little Belt – 35% positive).

Though these concepts received a mixed response from the total sample, some had relatively strong appeal within specific audience groups. For example, females voted more favorably towards Concepts M, P, B, X, and L than males. Concepts M (Mood Belts) and B (Branded Belts) were liked for similar reasons. Particularly among females, they said they would like to have a special seat belt that reflected their personalities. Concepts X (Celebrity Call) and L (Little Belt) were also favored by females, as well as younger children. More specifically, 2nd graders liked Concept L because it involved strapping in their favorite stuffed animal. They explained that this may help remind them to buckle in because they were buckling in their toy. Those who liked Concept X the most were generally 2nd to 4th graders, who thought it would be cool to receive a phone call from a celebrity. Concept P (Promotion "So I Can") tended to be favored only when there was a significant prize involved (i.e. Sony PlayStation, XBOX). In addition, males and females thought the odds of winning was low and thus not that enticed to participate.

Whites and males were more likely than females or Hispanics and African-Americans to have positive impressions of Concept C, which entailed featuring seat belt safety as the topic of an episode of the cable program "Myth Busters." More Whites and males had heard of the show than other groups, thus the concept received more positive votes among those familiar with the show. However, of those unfamiliar, many said they would either be willing to watch the show or watch another show that integrated seat belt safety into the program.

Overall Reactions

On a total sample basis, Concepts A (Assembly) and R (Radio Interlock) achieved the highest mean (average) ratings from youth, as indicated in Table 5. On a three-point scale where 1 means "negative reaction (thumbs down)" and 3 means "positive (thumbs up)", Concept A achieved a mean rating of 2.71, followed by Concept R at 2.63. Concepts V (Video Games), S (Sports/Coaches), E (Theme Parks), N (Mall Event), and Z (Ring Tones) had average ratings ranging between 2.36 and 2.43. The remaining concepts -- M (Mood Belts), C (Cable Program), P (Promotion "So I can"), B (Branded Belts), X (Celebrity Message) and L (Little Belt) – had average ratings close to neutral with means between 1.99 and 2.27.

Table 5: Concept Ratings by Total Sample

	Total Sample Mean Score
Concept A (Assembly)	2.71
Concept R (Radio Interlock)	2.63
Concept V (Video Games)	2.43
Concept S (Sports/Coaches)	2.41
Concept E (Theme Parks)	2.40
Concept N (Mall Event)*	2.37
Concept Z (Ring Tones)	2.36
Concept M (Mood Belts)	2.27
Concept C (Cable Program)*	2.22
Concept P (Promotion "So I Can …")	2.20
Concept B (Branded Belts)	2.17
Concept X (Celebrity Message)	2.12
Concept L (Little Belt)*	1.99

Note: Asterisks indicate concepts shown to selective age groups.

Reactions by Sex

Consistent with total sample findings, Concepts A (Assembly) and R (Radio Interlock) received the highest ratings from both boys and girls. Beyond these two concepts, however, boys and girls differed somewhat in their rankings.

The top 5 concepts for girls were Concepts A (2.79) and R (2.71)—as mentioned above—plus Concept N (Mall event – 2.52), Concept V (Video Games – 2.51), and Concept M (Mood Belts – 2.48). While girls trended more positive than boys to most concepts, the difference was statistically significant only for Concepts A (Assembly), M (Mood Belts), N (Mall Event), and X (Celebrity Call). In discussion, girls explained that they liked concepts that promoted self-expression or provided opportunities for social interaction. Not too surprisingly, they explained that they liked to go to the mall with friends, to shop for clothes, and to read/talk about celebrities.

The top five concepts for boys were Concepts A (2.62) and R (2.56)—as mentioned above—plus Concepts S (Sports/Coaches – 2.37), E (Theme Parks – 2.36), and V (Video Games – 2.35). In discussion, boys explained that they liked to do fun or relaxing things, such as watch TV, play video games, go to theme parks, or watch or play sports. Boys were least favorable towards Concepts M (Mood Belts –2.04), X (Celebrity Call –1.93) and L (Little Belt – 1.85) – often saying they were silly and/or just for girls.

Table 6: Concept Ratings by Sex

	Boys Mean Score	**Girls** Mean Score
Concept A (Assembly)	2.62	**2.79**
Concept R (Radio Interlock)	2.56	2.71
Concept V (Video Games)	2.35	2.51
Concept S (Sports/Coaches)	2.37	2.44
Concept E (Theme Parks)	2.36	2.44
Concept N (Mall Event)*	2.19	**2.52**
Concept Z (Ring Tones)	2.28	2.44
Concept M (Mood Belts)	2.04	**2.48**
Concept C (Cable Program)*	2.29	2.14
Concept P (Promotion "So I Can …")	2.15	2.26
Concept B (Branded Belts)	2.09	2.25
Concept X (Celebrity Message)	1.93	**2.30**
Concept L (Little Belt)*	1.85	2.11

Note: Asterisks indicate concepts shown to selective age groups. Bolded entries indicate means significantly higher than both numbers in the same row at a 95% confidence level.

Reactions by Age/Grade

Please note, though recruited by age (only those 8 to 15 years old) participants were also grouped by grade as previous research has shown that children mature by grade rather than age. That is, children in the same grade tend to think and behave similarly despite age differences. Regardless of age and grade, most youth expressed favorable reactions to Concepts A (Assembly) and R (Radio Interlock) with mean scores that ranged between 2.54 and 2.82. Some differences did exist for other concepts.

Table 7: Concept Ratings by Age/Grade

	2nd/3rd Grade Mean Score	**4th/5th Grade Mean Score**	**6th/7th Grade Mean Score**	**8th/9th Grade Mean Score**
Concept A (Assembly)	2.82	2.70	2.81	2.50
Concept R (Radio Interlock)	2.54	2.62	2.67	2.64
Concept V (Video Games)	2.65	2.32	2.42	2.35
Concept S (Sports/Coaches)	2.62	2.33	2.22	2.46
Concept E (Theme Parks)	2.51	2.29	2.54	2.28
Concept N (Mall Event)	--	--	2.45	2.29
Concept Z (Ring Tones)	2.21	2.63	2.36	2.29
Concept M (Mood Belts)	2.29	2.49	2.31	1.94
Concept C (Cable Program)	--	--	2.22	2.21
Concept P (Promotion "So I Can …")	2.17	2.10	2.33	2.24
Concept B (Branded Belts)	2.25	2.19	2.34	1.90
Concept X (Celebrity Message)	2.25	2.50	2.24	1.87
Concept L (Little Belt)	2.14	1.93	1.63	--

Note: Dashed lines indicate that the concept was not tested with this age group.

Those ages 8 and 9 (2nd/3rd grade) expressed favorable reactions to Concepts A and R (as mentioned above), as well as Concept V (Video Games – 2.65), S (Sports/Coaches - 2.62), and E (Theme Parks – 2.51). In general, they tended to favor interventions that seemed fun and/or gave them things to do. In discussion, 2nd/3rd graders also said they were aware of things that tweens and teens do, and appeared to evaluate whether those things made sense for their age group. Some said that in a school assembly (Concept A – 2.82), they would rather hear from a tween than from a child their age, hence showing some aspiration to move up in age. This desire was also shown in reactions to Concept L; about half of 2nd graders liked Concept L (Little Belt – 53%), but by 3rd grade its appeal had declined considerably (30%) with the majority saying this idea was for younger children.

Those ages 9 and 10, (4th/5th grader) expressed the most favorable reactions to Concepts A (Assembly – 2.70), Z (Ring Tones – 2.63), (R – Radio Interlock – 2.62), X (Celebrity Calls – 2.50), and M (Mood Belts – 2.49). Like 2nd/3rd graders, this age group seeks opportunities for fun and self-expression. They were also increasingly drawn to opportunities for social interaction with peers, such as talking with friends by phone or online. Most did not have cell phones yet, but were looking forward to getting one in 6th or 7th grade, hence the relatively high appeal of Concept X (getting a call from a celebrity on their own cell phones) for this age group. Most youth in this age group were cognizant of the fact that parents were trusting them more and were giving them more responsibilities in their daily lives. They viewed this as both positive and negative. While they still wanted to have fun and be silly with friends, they also had a growing desire to be more serious, cool, and unique, like their older peers.

Those ages 11 and 12, (6th/7th grader) expressed the most favorable reactions to Concepts A and R (2.81 and 2.67) and were also favorable toward Concept E (Theme Parks – 2.54), Concept N (Mall Event – 2.45) and Concept V (Video Game – 2.42). In discussion, 6th/7th graders explained that the best part of being their age was that they were now trusted by their parents to be more independent and to go places on their own. The appeal of these concepts may in some part be related to their desire to demonstrate their newfound independence in venues of interest. By this age, about half reportedly had their own cell phones, though they said that they would not want to get a call from a celebrity (Concept X – 2.24), given that it was too silly and wouldn't be a real, live person.

The oldest age group, 13 to 15 (8th/9th grade), generally reacted less favorably than their younger counterparts to most concepts. Unlike other age groups who reacted most favorably to Concept A (Assembly), teens reacted most favorably to Concept R (Radio Interlock – 2.64), followed more distantly by Concepts A (Assembly – 2.50) and S (Sports/Coaches – 2.46). Oftentimes, they explained they liked a concept, but felt it was for younger children or were simply more interested in other things now. Generally speaking, most 8th/9th graders expressed interest in dating, hot babes/guys, listening to music, or sleeping (in that approximate order). Some spent time working part-time, playing sports, or trying to find a job to earn spending money. Between homework, employment, shopping, and talking to friends via phone or PC, they said they had little time to engage in extra things like promotions (Concept P – 2.24) or decorating seat belts (Concept B – 1.90). While over half of youth in this age group said they had cell phones, they skewed negative on the idea of getting a pre-recorded message from a celebrity (Concept X – 1.87).

Reactions by Race/Ethnicity

As shown in Table 8, African-American youth often reacted more favorably to concepts than their White and Hispanic counterparts, expressing more positive reactions which resulted in higher mean concept ratings. In most instances, White and Hispanic youth reacted similarly to the concepts, with the exception of ratings on Concepts C and X.

Table 8: Concept Ratings by Race/Ethnicity

	White Mean Score	**African-American Mean Score**	**Hispanic Mean Score**
Concept A (Assembly)	2.68	2.74	2.70
Concept R (Radio Interlock)	2.64	**2.74**	2.48
Concept V (Video Games)	2.39	**2.64**	2.27
Concept S (Sports/Coaches)	2.30	**2.61**	2.33
Concept E (Theme Parks)	2.35	**2.57**	2.28
Concept N (Mall Event)*	2.24	**2.63**	2.26
Concept Z (Ring Tones)	2.13	**2.69**	2.30
Concept M (Mood Belts)	2.09	**2.43**	2.32
Concept C (Cable Program)*	**2.54**	2.06	1.87
Concept P (Promotion "So I Can …")	2.15	**2.38**	2.08
Concept B (Branded Belts)	2.22	2.26	2.16
Concept X (Celebrity Message)	**2.08**	**2.58**	1.77
Concept L (Little Belt)*	1.94	1.92	2.11

Note: Asterisks indicate concepts shown to selective age groups. Bolded entries indicate means significantly higher than both numbers in the same row at a 95% confidence level.

White youth reacted significantly (statistically speaking) more favorably to Concept C than either African-American or Hispanic youth (2.54 White versus 2.06 African-American and 1.87 Hispanic). In discussion, many African-American and Hispanic youth said their households did not receive cable television; hence they were unfamiliar with the program featured.

Reactions by Usage

Both regular and non-regular seat belt users reacted favorably and similarly to Concepts A (Assembly) and R (Radio Interlock). In many instances, however, non-regular users reacted more favorably to other concepts than regular users, as shown in Table 9.

Table 9: Concept Ratings by Seat Belt Use

	Regular Seat Belt User Mean Score	**Non-Regular User Mean Score**
Concept A (Assembly)	2.67	2.74
Concept R (Radio Interlock)	2.58	2.67
Concept V (Video Games)	2.32	**2.55**
Concept S (Sports/Coaches)	2.33	**2.50**
Concept E (Theme Parks)	2.28	**2.54**
Concept N (Mall Event)*	2.15	**2.67**
Concept Z (Ring Tones)	2.29	2.44
Concept M (Mood Belts)	2.17	**2.67**
Concept C (Cable Program)*	2.32	2.09
Concept P (Promotion "So I Can …")	2.02	**2.42**
Concept B (Branded Belts)	2.01	**2.35**
Concept X (Celebrity Message)	2.06	2.17
Concept L (Little Belt)*	1.87	2.16

Note: Asterisks indicate concepts shown to selective age groups. Bolded entries indicate means significantly higher than both numbers in the same row at a 95% confidence level.

Regular users most frequently cited parental direction, habit, safety, and fear of flying out of the vehicle or through the windshield as reasons to wear a seat belt. Regular users often described seat belt use as something they just did and didn't even need to think about anymore. They said they believed they could be injured if they were involved in a crash, and therefore, they wanted to stay safe. A few youth said they wore seat belts to protect their parents; they feared flying into the front seat and hurting their parents in a crash. Most regular users said their parents had insisted that they use seat belts from a very early age, as long as they could remember. Most said their parents also wore their seat belts, though some realized that their parents did not consistently wear their belts.

Some youth, particularly African-Americans and Hispanics, cited the law as a reason to wear a belt, saying they would not want their parents to get tickets. Most children had seen advertising campaigns promoting seat belt use, and could recall *"Click It or Ticket"* ads. Youth in Iowa also recalled a cable television campaign which featured a jingle and

the theme, *"Click-in is Kickin'."* Most youth felt that such ads were important in telling people what the rules and penalties were; however, they also had varying perceptions of whether the laws were actually enforced in their own States. Most children in all four locations believed seat belt laws were not enforced unless another traffic violation was committed. Two research sites had primary belt laws (Iowa and California), where violators can be stopped and ticketed solely for a seat belt violation. The other two sites had secondary laws (Wisconsin and Pennsylvania), where drivers can only be ticketed if they have been pulled over for another violation.

Non-regular belt users cited a variety of reasons for not wearing a seat belt. Many children said they simply forget to put a belt on, yet others said they intended to wearseat belts but didn't always see a reason to do so, given that they may be going on only a short or local trip. Some children also said there were not always enough seat belts in the vehicle to accommodate all children riding in their car or truck. They described larger families, more-frequent interaction with extended families, and situations where afterschool or sports car pooling was routine. Other reasons for not wearing a belt included eating or sleeping in the car.

Although younger children (grades 2 to 5) sometimes said seat belts were uncomfortable, tweens and teens rarely gave this excuse. A few boys said wearing sports equipment such as football pads interfered with their use of seat belts. Overall, non-regular belt wearers were less apt to perceive themselves as susceptible to injury or to fear that their own safety (or that of their parents) was jeopardized by not wearing a belt. Some expressed interest in learning more about the consequences of not wearing a belt and/or comparing crash results when passengers were wearing versus not wearing their seat belts.

Non-regular seat belt users tended to react more favorably than regular users to many concepts. In particular, they were more attracted than regular users to concepts that re-positioned belts as cool (Concepts M, P, and B), used influencers in their lives (Concepts S and N), and allowed for simulation of crash scenarios (Concept E). In some instances, both regular and non-regular belt wearers said wearing a seat belt was not cool. Non-regular belt wearers said they might, on occasion, take their belts off given that they didn't want to be seen wearing them. Some locations where children said they might take off their seat belts included areas close to school, youth hang-outs such as the roller rink, movie theater, or sports fields. In fact, some youth involved in sports said they were unlikely to wear belts on the way home from a sporting event, given that they had just ridden to the event on buses without belts, and/or might be wearing pads or uniforms that made seat belts difficult to use.

Comparative Reactions

When asked to choose the concepts they liked most and liked least, more youth chose Concepts R (Radio Interlock), M (Mood Belt), A (Assembly), E (Theme Park) and C (Cable Program) as their favorite concepts. Concepts Z (Ring tone reminders) and V (Video games) were mentioned equally often as favorite and least favorite concepts. The remaining concepts (N, B, S, X, P, and L) were mentioned more frequently as least favored concepts.

Table 10: Concept Ratings by Like Most/Like Least

	Liked Most (%)	**Liked Least (%)**	**Net Diff (%)**
Concept R (Radio Interlock)*	29	4	+25
Concept M (Mood Belts)	27	15	+12
Concept A (Assembly)	12	9	+3
Concept E (Theme Parks)	12	9	+3
Concept C (Cable Program)*	13	10	+3
Concept Z (Ring Tones)	14	14	--
Concept V (Video Games)	8	8	--
Concept N (Mall Event)*	3	6	-3
Concept B (Branded Belts)	12	19	-7
Concept S (Sports/Coaches)	7	15	-8
Concept X (Celebrity Message)	9	20	-13
Concept P (Promotion "So I Can …")	6	19	-13
Concept L (Little Belt)*	8	23	-15

Base: Respondents exposed to each concept.

When asked which concept would be most effective at getting children to wear their seat belts, youth mentioned Concept R (Radio Interlock) most frequently (38%). Concepts M (Mood Belts) and A (Assembly) followed in frequency (21% and 16%, respectively).

Table 11: Concept Ratings for "Most Effective Concept"

	Most Effective (%)
Concept R (Radio Interlock)*	38
Concept M (Mood Belts)	21
Concept A (Assembly)	16
Concept B (Branded Belts)	8
Concept E (Theme Parks)	8
Concept S (Sports/Coaches)	5
Concept X (Celebrity Message)*	7
Concept P (Promotion "So I Can …")	4
Concept N (Mall Event)*	4
Concept L (Little Belt)*	6
Concept C (Cable Program)*	5
Concept V (Video Game)	2
Concept Z (Ring Tones)	--

Base: Respondents exposed to each concept.

PARENT FOCUS GROUPS

Of the four main concepts tested among parents (O, I, R, and Z), three concepts (O, I, and R) earned relatively strong positive reactions. Concept O was a communications intervention called "In the blink of an eye you can fasten your seat belt. In a blink of an eye you can lose your child." Most parents reacted favorably to this idea, indicating the message was powerful and realistic. Some said if they saw this on a billboard, it would remind them of the need to protect their children and to consistently demand that their children wear their seat belts. Concept I (insurance discount) was favored because parents said saving money was a strong motivator for seat belt use. However, if a tracking device monitored the families' seat belt use, some respondents said that they would feel like "Big Brother" was watching and would be concerned about their privacy. Parents said they liked Concept R because an interlock device was relevant to their children. Although respondents said it might not work for them personally, they said that it would help their children, especially teenagers, wear their seat belt more frequently. They also said it would be even better if the interlock device was controlled by the parent.

Of the youth-targeted concepts, parents reacted most favorably to concepts A, S, C, E, and L. Parents said they liked Concepts A (Assembly) and S (Sports/Coaches) most because they leveraged outside influences on their children. More specifically, the assembly involves a child of their child's age talking to them about safety. Parents said this was good peer-to-peer influence for their children. Parents also said their children sometimes listened to other adults or coaches more than their parents. Therefore, hearing about seat belt safety from a coach could be beneficial. Concepts C (Cable Program) and E (Theme Parks) received positive reactions from parents as well. Parents suggested that these concepts related to fun things children could do to learn about seat belt safety. For example, respondents said that watching an episode of "Myth Busters" featuring seat belts would be fun for the whole family to watch, while visiting an exhibit would be a hands-on and fun educational experience. However, parents did say that in order for children to see the exhibit, it would be better placed in a museum where it would have less competition with roller coaster rides, etc. Parents also said Concept L (Little Belt) was a good idea. However, most respondents said that a children younger than 8 would be more likely to strap in their favorite stuffed animals.

There were several concepts that parents were open to, but were skeptical as to whether the interventions would be effective. These concepts included N, P, V, and X. Parents said that although their children often looked up to celebrities, Concepts N (Mall Event) and X (Celebrity Call) would probably be ineffective. For example, they said if a celebrity were to go to a mall event about safety, the message would get lost with their children, who were more in awe of the star. Additionally, parents said a call from a celebrity would be fun, but again, their child would most likely forget the seat belt message. In general, parents also questioned the effectiveness of Concept P (Contest) and V (Video Games). While they wouldn't have a problem with their children entering a contest or playing a video game, many parents said that it would not have an effect on their children's long-term behaviors.

Two product intervention concepts generated more negative reactions from parents, Concepts B and M. Parents indicated the products described in these concepts would either bring about undesirable behaviors in the car or would not promote seat belt use. More specifically, parents said that Concept B (Branded Belts) might provoke their children to fight over “their seat” that they decorated. Additionally, they feared their children may ruin the car trying to decorate the seat belt with markers or other tools. Some parents also said the novelty of having a mood belt (Concept M) would wear off for their children, and that it would lose its effectiveness.

INFLUENCER FOCUS GROUPS

Of the adult-targeted concepts, Concepts I and O were favored among adult and teen influencers over R and Z. Similar to parents' reactions to these concepts, adult and teen influencers said that Concept I (Insurance Discount) was good because it gave a monetary discount on your car insurance for buckling up. However, some adult influencers raised a concern over the cost of the device or the cost of cars that would be manufactured with this device. In general, if the device was free, influencers said they would consider using it. Concept O (Blink of an Eye message) struck adult and teen influencers as it did the parents. Teen influencers said that although it would not affect them, it would definitely draw attention to seat belt safety among their parents. Adult influencers envisioned the message on a billboard with a strong visual to support the statement.

Concepts B, M, and N received the most negative reactions among influencers. Concept C received negative responses from teen influencers. Similar to the parent groups, adult and teen influencers said that Concept B (Branded Belts) risked children potentially ruining the inside of the families' cars. Teen influencers said that although it might help children 8- to 15 wear their seat belt more, their parents would not be supportive of the idea. Adult influencers also said that children might fight over the seat that they "branded" as theirs. Concept N (Mall Event) received negative reactions from adult influencers who said that the kind of people who would attend probably already wore their seat belt. However, if they were to have a celebrity at the event, it would need to be someone who could truly testify to having been in a car crash. For example, a NASCAR driver was suggested to be a suitable representative. Concept C (Cable Program) received negative reactions among teen influencers who said 8- to 15-year-olds would not watch "Myth Busters." Additionally, they said that even if a seat belt was featured in a show that children often watched, the message would be too subtle for them.

The remaining concepts received positive to neutral reactions (A, C, E, L, P, S, X, V). Concept C (Cable Program) received more positive mentions among adult influencers than teen influencers. One respondent mentioned that "Myth Busters" would introduce common-sense facts to children about belt safety to which they would pay attention. Adult and teen influencers were favorable toward Concepts A (Assembly) and S (Sports/Coaches). Respondents said that they liked the peer-to-peer aspect of another child speaking about safety in an assembly and were also positive about a coach as a role model. Teen influencers recommended that in addition to coaches, older siblings and friends could encourage seat belt use among 8- to 15-year-olds. Adult influencers reacted neutrally to negatively about Concepts E (Theme Park Exhibit) and V (Video Games). They explained that children don't always take games seriously, so if a child went into a hands-on exhibit at a theme park, the child may play the video games that demonstrated car crashes but not take it seriously. Additionally, teen and adult influencers believed that a child playing a video game that awarded extra points for wearing a seat belt would not transfer the lesson to real-life behaviors. Concept L received neutral responses from influencers. Adult and teen influencers said that a "little belt" for a stuffed animal was a nice idea for a little child. However, one adult influencer worried that it might set the

example that it was okay to have things sitting in your lap in the car (even a real baby). Concept X (Celebrity Call) and P (Contest) received positive to neutral votes among influencers. Teen and adult influencers thought that youth would enjoy receiving a call from a celebrity. However, adults questioned the logistics and tactics to reach youth through either cell phones or house phones. Although influencers claimed that Concept P was an interesting idea, both adults and teens said that the child was likely to forget the message of the contest “I buckle up so I can___” shortly after entering.

IV. Recommendations

Target some portion of safety restraint interventions for 8- to 15-year-olds to parents, as they still retain considerable influence over their children. This research suggested that children in the 8- to 15-year-old age group are largely influenced by their parents. Published studies confirm this, with one finding that parental influence on health beliefs and behaviors continues even into the college years (Lau, 1990). Despite occurrences of youthful rebellion or boundary-testing, children in the target age range still tend to live by the rules and examples set by the parents in their households. While children may express a desire to not wear their seat belt, this research suggested there is little resistance when parents tell them to buckle up.

Ongoing communications with parents is important to reinforce their role in demanding that their children consistently use seat belts. Parents reacted most favorably to youth concepts that involved the use of programs, products, or people outside of the immediate family as influences or motivators for their children's restraint usage. However, youth contended that one of the best ways to encourage seat belt use was for their parents to remind them or encourage them to wear their seat belt in the car. Many parents said they would encourage consistent seat belt use if they were frequently reminded through a message like Concept O (Blink of an Eye). They explained that seeing this daily on a billboard would remind them to check to see if family members were buckled in.

Parents said they acquired general safety information from a variety of sources including traditional media such as TV, radio, and Internet. The most influential sources tended to be interpersonal – doctors' offices/hospitals, friends, family, other parents, and their children's school. Given that these resources are trusted by parents, the safety community should explore opportunities to use these sources to convey key messages about seat belts.

Address barriers that undermine the development of habitual seat belt use by children. Children who were regular users said wearing a seat belt was a habit**.** It appeared that for young tweens, the act of wearing a seat belt was a habitual, almost unconscious response to parental reminders. Reports from older tweens suggested that wearing a seat belt was a combination of habit and decision. Young teens reported the most conscious reasoning for when they did/did not wear seat belts. Young teens who said they had developed the habit said they did not have to think about putting on their seat belts. The reported fluctuation between habit and conscious decision-making suggested there is a continuum of stages that children experience with regard to safety restraint usage. Interventions that take these nuances into account could be more effective, given that motivations varied among children in this study.

Children in the immersion interviews who said they had established seat-belt-wearing habits were in environments where that standard was consistently enforced, typically by parents. Additional messages about seat belt safety that came from school or community organizations could reinforce such behaviors, as was seen in interviews with younger children where messages were more prevalent. However, most children reported that

messages from school were infrequent or non-existent. Prolonged safety behaviors are part of one's lifestyle, and habits are both hard to break and require time and consistent reinforcement to develop. The results of this research reinforced past studies on successful health and safety interventions that recommend intervention programs involving multiple sources such as community, school, media, and parents (Zaza et al., 2001, Ehrlich et al., 2004).

There were several barriers identified by parents and children that undermined the development of habitual seat belt use. The main set of barriers was the absence of conditions conducive to developing the habit – sporadic reminders or no reminders, lack of modeling by others, and exceptions to the rule. Children often said they would be more likely to wear their seat belts on a regular basis if a light or sound inside their vehicle reminded them to buckle up in the back seat (similar to a feature now offered for front-seat passengers). If this feature was extended to rear seating, parents said they would be able to tell if children were buckled up in seats where it was difficult for the parents to see the children (particularly in SUVs and minivans). A rear-seat device would also remind parents to tell their children to buckle up.

Many 8- to 15-year-olds cited instances when they believed it was not necessary to wear seat belts, and such rationalization of non-use may prevent them from developing consistent habits. For example, when children were asked when it was okay not to wear a seat belt, some said it was all right when they rode short distances or when they were on school buses. Intervention efforts should counter perceptions that lead to conditional seat belt use.

Other reported barriers to the development of habitual seat belt use included lack of seat belts or properly functioning ones, and the feeling that seat belts were restricting or uncomfortable. A few families in this study said seat belts no longer retracted, buckled, or fit correctly in their vehicles. While parents expressed concern over broken seat belts, they did not say they intended to repair damaged safety restraints. This could be an opportunity for companies to provide services in which seat belts are fixed. Most children in the immersion interviews described discomfort and restricted movement as a key barrier to consistent seat belt use. While a few families said they made seat belts more comfortable with clips or padding, many said they put shoulder straps behind them or under their arm, thus reducing their effectiveness. There may be an opportunity to explore how parents and children might be educated on how to safely alleviate discomfort without compromising the effectiveness of seat belts.

Direct interventions to this age group through both traditional and newer media channels. Younger and older tweens primarily received information from home and school, as well as child-entertainment channels on television and video games. Younger teens were more influenced by their peers, figures in the media (musicians, athletes, actors), and engaged in relational technology that connected them to others, such as Instant Messenger, e-mail, MySpace.com, cell phones, and iPods.

Be cognizant of barriers to using technology to reach tweens and teens. Although media often portrays tweens and teens as avid users of technology, it is important to keep in mind that their use of technology is often patrolled by parents and limited by available spending money. As such, concepts that attempted to leverage technology—such as pre-recorded messages from celebrities to youth cell phones or instant messaging for grass-roots events—would likely reach only a small group of the youth targeted, given that not all children had access to such technologies. In fact, such interventions may only reach children at the high end of the 8- to 15-year-old spectrum and youth living in higher socioeconomic status households. Technology access appeared to be more limited among African-American and Hispanic youth, and those living in more rural areas.

Introduce a continuous stream of seat belt campaigns and interventions to keep restraint usage top-of-mind for youth. In many triad interviews, youth said they had a difficult time choosing "best" or favorite concepts, given that several ideas actually appealed to them. In fact, some children suggested that the best way to influence them would be to deliver a continuous stream of interventions to repeatedly remind them that it was important to wear a seat belt. Both full-time and part-time belt wearers said repetition of such messages would influence their behaviors longer-term.

Uniquely target interventions to youth by age/grade, sex, race/ethnicity, and usage status. While some concepts tested well among all children, others tested well among more specific groups. Participating 2nd and 3rd graders displayed an interest in interventions that seemed fun or that allowed them to express themselves. Meanwhile, 4th and 5th graders also liked concepts that allowed them to demonstrate self-expression, but this age group also expressed interest in talking with friends or being more social. The 6th and 7th graders, most of whom attended junior high or middle school, were in a more independent phase. About half owned their own cell phones and were allowed to go places without their parents. They were more attracted to the mall event than the 8th and 9th graders. In turn, 8th and 9th graders were less apt to like most of the concepts. They were the most independent of the age groups; some were currently learning how to drive. They said there was little time to engage in extra activities like contests or mall events on safety.

In the triad discussions, girls explained they liked concepts that promoted self-expression or provided opportunities for social interaction. Boys explained they liked to do fun or relaxing things, such as watch TV, play video games, go to theme parks, or watch or play sports. Many males said concepts like the mood belt were just for girls, and were "silly."

African-American youth as a whole rated almost all concepts more positively than did White or Hispanic youth, saying that they would like to have or experience these things. The major exception was the cable program intervention, toward which White youth reacted significantly more favorably than either African-American or Hispanic youth. In discussion, many African-American and Hispanic youth said their households did not receive cable television; hence they were unfamiliar with the programs featured.

Youth defined as non-regular seat belt users tended to react more favorably than regular users to many concepts. They gravitated toward concepts that showed consequences of not wearing a seat belt, provided strong reminders to do so, or helped make seat belts seem cool.

Explore additional interventions that capitalize on the effectiveness of negative consequences to seat belt non-use. The radio interlock device received the greatest number of votes for most effective concept overall (38%). The frightening prospect of seeing a permanently disabled peer in a school assembly also performed well among children of all ages. While many children did not actually like the idea of a radio lock or attending another assembly, they still believed these interventions would be effective with themselves and their peers. Although ever-changing in-car music delivery technology may make it inadvisable to invest specifically in radio lock devices, it is clear that children felt that the presence of firm, real, and relevant negative consequences in general would be an effective method of convincing them to wear their seat belts consistently.

Create interventions to alert adult and teen influencers about the roles they can play. Though influencers recognized their influence over youth, not all acted upon that influence when it came to encouraging youth seat belt use. Some believed that it was up to parents to teach children to wear belts, and that there was little they could do. Given this, it may be beneficial to alert influencers of ways they can model and promote seat belt usage. Further research may also be needed to better understand how to justify and affirm influencers' role.

Explore the possibility of insurance discounts for seat belt use. While the insurance discount concept received mixed reactions among parents, most respondents said if they were to receive a discount on their car insurance for seat belt use, they would be more likely to consistently make sure everyone, including their children, was buckled in. Though some expected a relatively high discount as an incentive or voiced concern about privacy issues, further research is needed to prove or disprove the feasibility of this concept.

V. References

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