



JOHNS HOPKINS  
**BLOOMBERG**  
SCHOOL of PUBLIC HEALTH

*Johns Hopkins Center for Injury Research & Policy*



# ***Understanding the Impact of Fire and Life Safety Messages on Children***

## ***Final Report***

**A project for the National Fire Protection Association  
conducted with funding from the  
U.S. Department of Homeland Security  
Federal Emergency Management Agency  
Fire Prevention and Safety Grant Program**

**by**

**Andrea C. Gielen, ScD, ScM  
Dina Borzekowski, EdD  
Rajiv Rimal, PhD**

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For more information, contact: Dr. Andrea Gielen, [agielen@jhsph.edu](mailto:agielen@jhsph.edu), 410-955-2397  
Johns Hopkins Center for Injury Research and Policy, Johns Hopkins Bloomberg School of Public Health, 624 N. Broadway, Baltimore, MD 21205

## EXECUTIVE SUMMARY

The National Fire Protection Association contracted with the Johns Hopkins Center for Injury Research and Policy to conduct a study to determine the best way to communicate safety messages to children 4-9 years old. This research project sought to understand whether safety messages should be communicated positively (by focusing on the positive outcomes of doing the appropriate behaviors) or negatively (by focusing on the negative outcomes of doing the inappropriate behaviors). Given that parents are often asked to discuss safety issues with children, this research also sought to understand how parental mediation – the manner in which parents communicate with children – affects children’s understanding of safety messages. Using three- to five-minute videos to show safety content, the project was designed to learn:

- Whether positively- or negatively-framed fire safety messages delivered via videos are more effective to reach children of different ages;
- Whether including parent/guardian mediation after viewing the videos has an effect on the impact of the videos on children;
- How parents/guardians respond to positively- and negatively-framed fire safety messages for their children.

A total of 320 children ages 4-5 years and 321 children ages 6-9 years and their parents were shown two age-appropriate videos -- one about burns and one about house fires, each of which was incorporated into an episode of a popular children’s television show. The sample was randomly assigned to watch either a video that modeled the correct behavior with a positive outcome (positive valence), or one that showed the incorrect behavior with a negative outcome (negative valence). The burn video focused on the message “Cool the Burn” and compared the positive behavior (using cool water) to a negative behavior (putting butter on the burn). The house fire video centered on the message “Get Low and Go” and also compared the positive behavior (getting low under the smoke) to a negative behavior (standing and walking through the smoke). The positive behavior was accompanied by a positive outcome (e.g., the character was able to resume normal activities) while the negative behavior was accompanied by a negative outcome (e.g., the character went to the hospital). The videos for the younger children were animated, while live action was used in the videos for the older children.

To examine the role of parental mediation, parents were also randomized to one of three experimental conditions: no mediation (control group), where they received no special instructions about talking to their child about the video; unguided mediation, where they were asked to talk to their child about the video but were not provided any guidelines on how to do so; and guided mediation, where they were given a sheet of talking points to use in talking with their child. After watching the video, parents were left alone with their children for a few minutes and whatever conversation transpired was audio-taped to capture the conversation. Then, the children were interviewed while parents completed a self-administered questionnaire.

The outcomes of interest from the children’s interviews included: recall and understanding of the safety message, perceived social norms about the behavior, valence of the message, self-efficacy to perform the behavior, and general interest and appeal of the video. The outcomes of interest from the parent questionnaire included their perceptions of the impact of the videos on their children and the helpfulness of the videos.

Major findings for younger children (aged 4-5) include:

- Recall was not affected by whether the children saw the positive or negative video. Children in the unguided and guided mediation groups had higher unprompted recall of the fire video than children in the no mediation control group.
- Children who saw the positive video had better understanding of depicted behaviors in the burn video than children who saw the negative video. Children who were in the guided mediation group had the best understanding of depicted behaviors for both the fire and the burn videos.
- Perceptions of social norms were not affected by whether the video was positive or negative. Children in the guided mediation group were more likely to indicate that other children would engage in the correct behavior compared to children in the control group.
- Children who saw the positive video were more likely to correctly rate the behavior as beneficial for the burn video but not for the fire video. Guided mediation tended to improve children's perceptions of how harmful the negative behaviors were.
- Children who saw the positive video were significantly more likely to have high self-efficacy for correctly handling burns and fires than children who saw the negative video. Children who had guided mediation also had the highest self-efficacy, although this was only significant for the burn video.
- General interest and appeal did not differ by whether the children saw the positive or negative videos.

Major findings for older children (aged 6-9) include:

- Recall was not affected by whether the children saw the positive or negative video. Children in the guided and unguided mediation groups had higher unprompted recall of the burn video than children in the no mediation control group.
- Children who saw the positive video had better understanding of the video content in both the burn and fire videos. Children in the guided mediation group consistently had better understanding of depicted behaviors for both videos than children in the other two mediation groups.
- More children perceived that others like them would engage in positive behaviors than in negative behaviors, but this perception was not affected by whether children themselves saw positively framed videos or negatively framed videos. This perception was also not affected by parental mediation.
- For the burn video, children who saw the positive video perceived positive behavior as more beneficial than the children who saw the negative video. Likewise, the negative behavior was perceived to be more harmful by children who saw the negative video, compared to the positive video. Children in the guided mediation group perceived positive behaviors to be more beneficial and negative behaviors to be more harmful than children in the unguided and control groups.
- Children who saw the positive video had higher self-efficacy related to burns than children who saw the negative video. Children in the guided mediation group generally had higher self-efficacy, but this was not a statistically significant finding.
- General interest and appeal did not differ significantly by whether the children saw the positive or negative video.

Major findings for parents include:

- Parents rated the positive videos significantly higher than the negative videos for both the burn and fire videos on: 1) effectiveness in teaching the safety message; 2) how well they thought their child understood the message; 3) how likely they thought it was that their child would be able to do the right thing if confronted with the same situation; and 4) how effective they thought the video would be to teach other children.
- There were no differences in parents' ratings of how much attention their child paid to the video or how well they liked it.
- Parents thought receiving videos like the ones they saw would be very helpful, and that the positive videos would be more helpful than the negative videos.
- Few parents thought their children would be upset by anything they saw in the videos, although parents with younger children were more likely to report something upsetting.

Overall conclusion and recommendations for safety programming:

- For both younger and older children watching positively framed videos was more effective than watching negatively framed videos. Parents also rated positively framed videos as more effective. Thus, safety messages should focus on depicting the positive outcomes that result from engaging in safety behaviors. Communicating safety messages by depicting the negative consequences of unsafe behaviors were not as effective as communicating the positive outcomes of safe behavior.
- When parents discuss media content with their children, children learn more. These parental mediation effects were maximized when parents were provided with discussion guidelines. When parents were simply asked to discuss the videos with their children, without being given specific guidelines on how to do so, outcomes were less favorable. Parents need assistance with how to discuss media content with their children.
- Overall, findings from this research suggest that the impact of safety messages on children will be greatest when messages are framed positively, parents are encouraged to discuss these messages with children, and parents are provided with discussion guidelines.
- Even though this study used parents (or legal guardians), study findings will likely generalize to teachers and other adults who discuss media content with children. Thus, if safety videos are to be developed for use in schools, our findings indicate that such videos should be accompanied with guides to assist teachers.

## INTRODUCTION

The National Fire Protection Association (NFPA) contracted with the Johns Hopkins Center for Injury Research and Policy at the Johns Hopkins Bloomberg School of Public Health (JHSPH) for this project to determine the best way to communicate safety messages to children 4-9 years old. Using three- to five-minute videos to show safety content, the project was designed to learn:

- Whether positively- or negatively-framed fire safety messages delivered via videos are more effective to reach children of different ages;
- Whether including parent/guardian mediation after viewing the videos has an effect on the impact of the videos on children;
- How parents/guardians respond to positively- and negatively-framed fire safety messages for their children.

The project also developed an assessment tool for others to use when creating or evaluating educational materials for use in fire prevention and safety programs.

### Background and Rationale

This study's goal was to evaluate the effectiveness of public education messages on children ages 4-9. This age group was selected because the majority of fire departments in the United States focus their public education efforts on preschool and elementary-aged children, and because fires and burns represent an important health problem for children. According to the Center for Disease Control's National Center for Injury Prevention and Control, from 2000 – 2007, 4,114 children 18 years and younger were killed in house fires. In the most recently available single year (2009) a total of 111,309 children in this age group suffered non-fatal fire and burn injuries.<sup>1</sup> Educating children at an early age how to prevent fire and teaching parents about how to protect them in case of a fire are essential in injury prevention and safety.

In the early 1970s, NFPA commissioned Strothers Associates, an educational research group, to determine the motivation and learning patterns in children and adults related to fire prevention actions. Results from this study have been the foundation for NFPA's educational philosophy since that time and embraced by fire departments and other child safety organizations throughout North America. This philosophy emphasizes the importance of positive messaging – telling people what to do and showing correct behavior. Since the original study nearly 40 years ago there have been many changes in the current information-rich educational and media environment. Today's children receive messages through a variety of media, often at the same time. Therefore, it is time to generate new knowledge about safety message framing for use with children.

### Overview of Study Methods

In this study, children (stratified by age) watched one video on getting low under smoke and getting out of the house and one video on cooling a burn. Videos for the younger children (4 to 5 years old) were in an animation format, whereas videos for the older children (6 to 9 years old) depicted real people (teenagers). The videos demonstrated either the correct behavior with a safe outcome (positive valence) or the incorrect behavior with an unsafe outcome (negative valence). We also varied the order in which the videos were watched (burn video first, smoke second or vice versa). The videos were embedded in excerpts from an age-appropriate child-friendly show so that the experience better mirrored how children experience the media environment and when they would be likely to be exposed to a safety message such as those in



the videos. The valence of the message and the order of the fire and burn videos were randomly assigned. Four videos were created for 4-5 year olds, and four videos were created for 6-9 year olds (2 topics, 2 valences for younger children and 2 topics, 2 valences for older children).

Prior to launching the study, pilot testing of the videos and the data collection protocol and instruments was undertaken with 30 parent/child pairs. As a result of the pilot testing, the videos were revised and the instruments corrected. Changes to the videos included shortening the videos, clarifying some messages, and using a different existing show in which to imbed the study videos. Changes to the instruments included adding more pictures and changing the ordering of some questions to improve the flow.

The ways that parents/guardians discuss media can influence children’s understanding of messages. Therefore, we also examined the impact of parental<sup>1</sup> mediation on children’s reception of the presented videos. There were three mediation conditions: a control group given no guidance on what to talk about with their child, an unguided mediation group told to talk about the safety messages with their child, and a guided mediation group provided with talking points. These parent/guardian mediation instructions were assigned randomly. The overall structure of the study and number of parent/child pairs that participated is shown in Table 1. Parents/guardians also completed a brief questionnaire to assess their reactions to the videos, fire safety beliefs and behaviors, family demographic and media utilization information. Parents/guardians were given \$50 to thank them for their time; both parents and children received fire and home safety educational materials at the conclusion of their participation.

NFPA was involved in all aspects of the study, including the design, script development, casting, and overall study procedures. NFPA also provided free educational materials and giveaways for study participants. In addition to NFPA, we also worked with Assistance in Marketing (AIM), a professional marketing research firm in Towson, MD, and Meath Media, a professional media production company in Boston, MA.

### Experimental Design

Cell entries signify number of parent-child pairs (N=641) randomly assigned to study condition

	Younger Children (4 - 5 years old)			Older Children (6 - 9 years old)		
	No Mediation	Unguided Mediation	Guided Mediation	No Mediation	Unguided Mediation	Guided Mediation
<b>Burn then Fire Video, Positive</b>	30	25	28	29	25	26
<b>Fire then Burn Video, Positive</b>	28	26	28	26	21	31
<b>Burn then Fire Video, Negative</b>	22	22	26	27	28	28
<b>Fire then Burn Video, Negative</b>	28	29	28	25	28	27

<sup>1</sup> While a small minority of children were accompanied by their guardians, for simplicity, we use the term “parent” in this report to refer to the adult (either parent or guardian) who participated in the experiment.

## **Significance**

The results from this work not only generate much needed practical information and insights for those who develop fire and life safety educational messages, but also the data collection tools, procedures and practical guidelines that were developed can be used for other safety and injury-prevention organizations to guide their development and selection of future public educational safety materials and messaging directed at children. In addition, by including a parent mediation component into the study, child-safety educators can better understand the relative impact of parents in reinforcing certain behaviors.

## METHODS

### Videos

The reason for selecting “Cool the Burn” and “Get Low and Go” as the two topics for the videos is because these are specific behaviors that are recommended and taught in NFPA curricula and they are important to reduce injury in the event of a fire or contact burn. “Cool the Burn” refers to proper first aid treatment, which is to use cool water immediately after contact with a hot liquid or hot object. Getting low under the smoke teaches children how to avoid dangerous smoke inhalation risks in the event of a house fire. The positive videos show what happens when the subject does the desired behavior and a positive consequence (e.g., child was able to resume normal activities). The negative videos show the subject doing something other than the desired behavior (e.g., walking upright or putting butter on a burn) and a negative consequence (e.g., bad coughing or painful burn). Each parent-child pair watched positive or negative versions of both videos. Which videos they watched and in what order they watched them was randomly assigned.

The videos were produced by a professional producer, Jonathan Meath of Meath Media, a company that has produced educational videos for PBS and Nickelodeon, including programs such as *Where in the World is Carmen San Diego*, *The Wubbulous World of Dr. Seuss* and *Zoom*. The videos were embedded in excerpts from age-appropriate, child-friendly shows (*Arthur* for the younger children and *Design Squad* for the older children) so that the experience better mirrored how children experience the media environment and when they would likely to be exposed to a safety message such as those in the videos. Showing the videos took about 20 minutes in total.

### Mediation Conditions

After each parent/child pair watched the videos, and with the parent/guardian’s prior permission, a Research Assistant (RA) turned on an audiotape recorder to record the conversation. Participants in the **no mediation control condition** were asked to just make themselves comfortable while the interviewer gathered the materials s/he needed to complete the questionnaires and interviews. Those in the **unguided mediation condition** were asked to chat with their child about what they saw while the interviewer gathered the materials s/he needed to complete the questionnaires and interviews. Those in the **guided mediation condition** were given a “talking points” sheet identifying the highlights of the videos and asked to discuss it with their child while the interviewer gathered the materials s/he needed to complete the questionnaires and interviews. The RA then left the room for about 3 minutes.

### Study Design

The overall study design for each injury topic was a 2 (message valence: positive or negative) x 3 (nature of parent/guardian-child mediation: no mediation, unguided mediation, or guided mediation) randomized experiment. Using a computer randomization program, data collection dates and times were randomly assigned to one of the experimental conditions. Participants were assigned to their study condition based on when their appointment was scheduled. Based on sample size calculations, we sought to enroll 640 children (320 younger and 320 older). Parent/child pairs watched their assigned videos together, after which the children were interviewed privately and the parents completed a self-administered questionnaire in another area of the viewing room.

## Sample

The child participants in the study were ages 4 – 9 as of May 1, 2010, with an equal number of boys and girls. The two age groupings were 4 and 5 year olds (“younger group”) and 6 – 9 year olds (“older group”). The sample of parent/guardian and child pairs was recruited from the larger Metropolitan Baltimore population, and we strived to obtain a sample that closely corresponded to the ethnic composition and the educational level of the Metropolitan Baltimore area based upon the most recent data.

- In 2006 the Metropolitan Baltimore area had a population classified as 64.5% White, non-Hispanic<sup>ii</sup>. Ethnicity was determined by self-reported identification of the parent/guardian.
- In 2000, the most recent data at the time of this study, 81.9% of the adults in Metropolitan Baltimore area had more than a high school diploma<sup>iii</sup>. Education level was self-reported by the parents/guardians.

## Recruitment

Participant recruitment was undertaken by AIM and included two strategies. First, AIM routinely advertises through public media for individuals interested in participating in marketing studies. When a person calls AIM, the staff ask “Would you be willing to have us re-contact you if a study becomes available for which you may be interested and eligible?” If they agree, they provide their names and phone numbers, and other demographic characteristics, information which is maintained in AIM’s database. For this study, AIM used its databases and called parents/guardians of children ages 4 to 9 who had expressed interest in doing future studies. The second recruitment method was the placement of a study-specific advertisement in newspapers, magazines, newsletters, and electronic networking sites. Both recruitment methods concentrated on Baltimore City and the nearby counties of Baltimore, Harford, Carroll and Howard (within 25-30 miles of the Towson office and research studio).

## Screening and Enrollment

Once AIM called a potential participant, or someone called into the office, AIM staff completed the screening and enrollment process. Prospective study participants were screened by telephone by the AIM staff. Screening questions included:

- 1) Are you the parent or legal guardian of a child between the ages 4-9 (as of May 1, 2010)?
- 2) Is English the primary language spoken by both you and the child, and do you communicate with each other in English? (Understanding and conversing in English are inclusion criteria, as the consent and study materials, including the videos, were in English.)
- 3) Child’s gender.
- 4) Parent/guardian ethnicity.
- 5) Parent/guardian highest level of education.

Parents/guardians who answered yes to the first two questions were eligible to participate. Parents could only participate once, so if they had more than one age eligible child, they were asked to participate with the child who had the next birthday.

AIM staff also obtained permission to call the person back when it was time to schedule an appointment for them. Potential participants were also told that written informed consent would be provided at the time of the appointment and that they could decide then whether or not to participate. Participants also received a reminder call the day before their session.

### **Consent and Data Collection Process**

All study sessions were held at the AIM office and studio located in Towson, Maryland, a suburb of Baltimore, MD. Appointments were set up to accommodate three parent/child pairs in the same age group per hour; all three pairs were thus in the same randomly assigned study condition. Appointments were scheduled from approximately 9:30 am to 8:00 pm up to 7 days per week during the months of June and July 2010. The study was staffed with one lead RA and three interviewer RAs at all times.

When each parent/child pair arrived at the AIM offices for their scheduled appointment, they met the lead RA designated to work with them throughout the visit. The lead RA reviewed the written consent form and answered any questions and then obtained signed consent. At the same time, the interviewer RA read the age-appropriate assent script to the child. The study could not proceed unless the parent/guardian signed the consent form and the child either nodded and/or said “yes” (the 4 and 5 year olds) or circled a thumbs-up sign labeled “Yes, I want to do this” and wrote their name (the 6 to 9 year olds) indicating assent.

After the consent process, the study pairs were seated in front of a screen onto which the video was projected, and the interviewer RAs left the room so as to remain blinded to the study condition. The three parent-child pairs were all in the same room, viewing the same screen. Each pair was separated from and not visible to the other two pairs. The lead RA, who was not collecting data from the group, remained in an adjacent room with one-way mirrors to ensure that the participants were comfortable and the video was working properly. After watching the video, the lead RA returned to initiate the parent mediation (none, unguided, guided). After the 3-minute mediation period, in which the lead RA again watched through the one-way mirror, the interviewer RAs returned and conducted the child interview while the lead RA set up the parent with his or her questionnaire. The lead RA then debriefed with all of the parents together, answering questions and giving them safety resource materials produced by the NFPA. The parents then received the \$50 compensation and were thanked for their time. The child received an NFPA safety coloring and activity book.

### **Data Collection Instruments**

After the parent/child pair watched the videos and completed the mediation instructions, parents were given a self-administered questionnaire, and an RA interviewed the child one-on-one, away from the parent. The child interviews measured appeal and comprehension of the videos and assessed the child’s perceptions about safety, social norms, intentions and perceived ability to engage in the presented behaviors. The parent questionnaire assessed perceptions about the videos and behaviors, household media environment, and household safety practices. The questionnaire and interviews took about 15 minutes to complete.

### **Children’s Interview Data and Analysis**

The central questions for the children’s interview were: 1) whether positive or negative fire safety video messages are more effective to reach children, and 2) whether including

parent/guardian mediation after viewing the videos has an effect on the impact of the videos on children. We addressed these questions by measuring five outcomes of watching the videos: recall (prompted and unprompted); understanding; perceptions of social norms; valence (understanding how good or bad the safety behaviors were); and perceptions of self efficacy. The items used to measure these outcomes are listed below (please see the Appendix for the full set of questions and answer options).

<b>Recall</b>	A series of open ended items were used, asking the child to explain what happened in the video they watched (unprompted recall). A series of open and closed ended items were used with pictures from the video to measure prompted recall.
<b>Understanding</b>	<b>Burn video:</b> Q1. Let's say your cousin was taking cookies out of the oven and banged her hand on the oven. She seems to have burned herself. What would you tell her to do? Q2. If something very hot falls on your leg and starts burning you, what would do? <b>Fire video:</b> Q1. Let's say there was a fire in your cousin's bedroom. What would you tell her to do? Q2. Of these four things, what is the best thing to do if there is a fire in your bedroom?
<b>Perceptions of Social Norms</b>	<b>Burn video:</b> Q1. Think about other kids your age. If they burned themselves, around how many would put butter on the burn? Q2. Again, think about other kids your age. If they burned themselves, around how many would put cool water on the burn? <b>Fire video:</b> Q1. Think about other kids your age. If they were in a room with smoke, around how many would stand up and try to walk out of the room? Q2. Again, think about other kids your age. If they were in a room with smoke, around how many would get low and get out of the room while staying low?
<b>Valence</b>	<b>Burn video:</b> If a child burned his arm on the stove... Q1. How bad or good would it be for him to put his arm into a bucket of ice? Q2. How bad or good would it be for him to put his arm under cool water? Q3. How bad or good would it be for him to put butter all over his arm? <b>Fire video:</b> If a room was filling with smoke... Q1. How bad or good would it be to go into the clothes closet and wait for a firefighter? Q2. How bad or good would it be to get low and get out of the room? Q3. How bad or good would it be to look around the house, try to find a telephone, and dial 911?
<b>Perception of Self Efficacy</b>	<b>Burn video:</b> Q1. If you burned yourself do you think you would be able to put cool water on the burn? Q2. If you were all by yourself, would you still be able to put cool water on it? <b>Fire video:</b> Q1. If you were in a smoke filled room, do you think you would be able to get low and go? Q2. If you were all by yourself, would you still be able to get low and go?
<b>General Interest and Appeal</b>	Children were asked 1) how much they liked watching the videos, 2) how much their best friend would like the videos, and 3) how much other friends their age would like the videos

After checking for data entry errors and appropriate distributions of the primary variables, we checked to see how our primary demographic indicators (age, gender, parent education and ethnicity) were distributed across the experimental conditions to double check that randomization procedures were successful. Also of concern was whether the positive and negative videos were perceived by the children as positive and negative (i.e., whether the study manipulation worked), so we conducted a manipulation check on the data by asking children to assess the behavior of the main character in terms of whether the behavior was good or bad.

The primary data analysis was done using Student's t-tests, analysis of variance / covariance (ANOVA / ANCOVA), and linear and logistic regression models. The models included the experimental conditions (i.e., exposure to positive or negative video messages and nature of parental/guardian mediation) as the independent variables. Dependent variables included the main outcome variables described above. We also tested for significant interactions between the two independent variables.

### **Parent Questionnaire Data and Analysis**

The parent/guardian questionnaire data were collected primarily to address the question of how parents would respond to positive versus negative fire safety video messages. We addressed this question by a series of six items, each of which was answered on a 1 to 10 scale where 1 was the most negative response and 10 was the most positive response to the question:

1. How effective do you think this video was in promoting this safety message for your child?
2. How well do you think your child understood this safety message?
3. How much attention do you think your child paid to the video?
4. How well do you think your child liked the video?
5. In the video, there was a message about what your child should or should not do if:  
(Burn video) he or she got burned. Would your child be able to do the right thing if he or she got burned?  
(Fire video) he or she woke up in a smoke filled room. Would your child be able to do the right thing if there was a fire in the house?
6. How effective do you think this video would be for teaching other children about what to do:  
(Burn video) if they got burned on a stove?  
(Fire video) in the event of a fire?

We also asked parents if there was anything in the video that they thought would upset their child, and if so, we asked them to explain their answer. Finally, we asked parents how helpful it would be to receive videos such as the ones they just watched.

For data analysis, we first checked for data entry errors and appropriate distributions of the primary variables and then obtained frequency distributions on the variables of interest. Using t-tests, we compared mean scores on each item by whether the parent watched a positive or negative video.

## RESULTS

In this section, we first discuss our randomization and manipulation checks. Next, we present results for the analyses involving younger children followed by the results for older children. Finally, results from the parent questionnaire are presented in the last section.

### Randomization

All children were randomly assigned to one of six experimental conditions, defined by the valence of the video (positive or negative) and mediation (no mediation, unguided mediation, or guided mediation). We sought to determine whether the randomization procedure was successful by assessing the demographic profile of the six groups. For both age groups, none of the demographic variables differed significantly across video valence or mediation groups, indicating that the randomization was successful.

### Manipulation Checks

Manipulation checks were based on whether the child interpreted the character's response to the events as good or bad, with a desired response as good for positively framed (put cool water on the burn, crawled low under the smoke) and bad for negatively framed videos (put butter on the burn, walked upright through the smoke). Children rated their responses to the videos on a 1 to 5 scale, with 5 being very good. We tested the mean scores to determine if the average response to a positive video was more positive than neutral and if the average response to a negative video was more negative than neutral.

For the younger children, manipulations for the burn video were deemed successful. Younger children rated the video as more positive than neutral (mean response 3.48),  $t = 3.58$   $p = 0.0002$ . Similarly, children who saw the negatively framed video rated the video as more negative than neutral (mean response 2.04),  $t = -8.17$ ,  $p < 0.0001$ .

For the fire video, younger children who saw the positively framed video did not rate the video as more positive than neutral (mean response 2.53),  $t = -3.47$ ,  $p = 0.999$ . The manipulation was successful for younger children who saw the negatively framed video because they rated the video as more negative than neutral (mean response 1.75),  $t = -12.29$ ,  $p < 0.0001$ .

For the older children, manipulations for the burn video were deemed successful. Older children rated the video as more positive than neutral (mean response 4.02),  $t = 9.38$   $p < 0.0001$ . Similarly, children who saw the negatively framed video rated the video as more negative than neutral (mean response 1.26),  $t = -34.3$ ,  $p < 0.0001$ .

For the fire video, manipulations for the older children were deemed successful. Older children who saw the positively framed video rated the video as more positive than neutral (mean response 3.59),  $t = 4.28$ ,  $p < 0.0001$ . Similarly, children who saw the negatively framed video rated the video as more negative than neutral (mean response 1.44),  $t = -20.26$ ,  $p < 0.0001$ .



## Outcomes among Younger Children

### *Description of the Sample – Younger Children*

Information about the 320 study participants is offered in Table 1. On average, children were 4.5 years old (SD = 0.5), and their parents were 34.3 years old (SD = 7.1). Roughly equal numbers of boys and girls participated. Parents were relatively evenly divided between African Americans (45.2%) and Whites (51.9%); most had a college degree or higher education (53.2%) and were married (67.7%). There was a wide distribution across the various income categories.

**Table 1. Characteristics of the younger children's sample (N= 320)**

<b>Variable</b>	<b>N</b>	<b>%</b>
<b>Sex</b>		
Girls	157	49.1
Boys	163	50.9
<b>Age</b>		
Four Years	157	49.1
Five Years	162	50.6
<b>Parent Race</b>		
White	164	51.9
Black or African American	143	45.2
Asian American	6	1.9
<b>Parent Education Level</b>		
High School or Less	54	17.1
Some college or vocational school	94	29.8
College Graduate (or higher)	168	53.2
<b>Parent Marital Status</b>		
Single (never married, separated, divorce, or widowed)	102	32.3
Married	214	67.7
<b>Household Income</b>		
19,999 or less	41	13.3
20,000 to 39,999	63	20.5
40,000 to 59,999	41	13.3
60,000 to 79,999	62	20.1
80,000 to 99,999	45	14.6
100,000 or more	56	18.2

### *Recall – Younger Children*

Regardless of which video valence a child saw, there were no significant differences in remembering either the burn or the smoke videos. Similar percentages (about 55% in both cases) of the children were able to mention the burn and the fire videos when asked what they saw during the research session (unprompted recall). When shown a stimulus picture of the character, Cubie (featured in the burn video), 26% could recall the video's message. When shown another character, Orbie (featured in the smoke video), 23% recalled the video's message. Nineteen percent and 22% of the children were unable to recall the safety messages in the burn and smoke videos, respectively.

For the burn video, there were no significant differences related to mediation group in recall of the message. In contrast, there were differences for the smoke video ( $\chi^2(2) = 13.5, p < 0.01$ .) More children in the unguided (69%) and guided (55%) groups mentioned this video (unprompted recall) than those in the no mediation group (44%).

### **Understanding – Younger Children**

For each video, researchers asked the children two questions to check their understanding of the depicted behaviors. For the burn video, Q1 was: “Let’s say your cousin was taking cookies out of the oven and banged her hand on the oven. She seems to have burned herself. What would you tell her to do?” Q2 was: “If something very hot falls on your leg and starts burning you, what would do?” For the fire video, Q1 was: “Let’s say there was a fire in your cousin’s bedroom. What would you tell her to do?” And Q2 was: “Of these four things (pictures shown to child), what is the best thing to do if there is a fire in your bedroom?”

For understanding the message presented in the burn video, children who saw the positive version were more likely than those who saw the negative video to give a correct response. For the fire video, the video valence was not significantly associated with giving a correct response. In contrast, mediation group was related to giving a correct response across video topics and questions. Consistently, around two-thirds of the children in the guided mediation group could offer a correct response; slightly more than a third (37% to 40%) of the children in either the control or unguided groups could give a correct response.

**Table 2. Younger children’s understanding by video valence and mediation groups (Percent Correct Response)**

	Video Valence Groups		$\chi^2$	Mediation Groups			$\chi^2$
	Negative Video	Positive Video		Control	Unguided	Guided	
<b>Burn Video</b>							
<b>Q1</b>	42.6	54.3	$\chi^2(1) = 4.4, p < 0.05$	38.9	40.6	65.5	$\chi^2(2) = 19.2, p < 0.001$
<b>Q2</b>	39.4	52.1	$\chi^2(1) = 5.2, p < 0.05$	37.0	37.3	62.7	$\chi^2(2) = 19.0, p < 0.001$
<b>Fire Video</b>							
<b>Q1</b>	41.2	39.4	$\chi^2(1) = 0.1, p = 0.75$	38.9	40.6	65.5	$\chi^2(2) = 19.2, p < 0.001$
<b>Q2</b>	29.7	26.7	$\chi^2(1) = 0.4, p = 0.55$	37.0	37.3	62.7	$\chi^2(2) = 19.0, p < 0.001$

Multivariate models with an interaction term were created to examine the simultaneous impact of the video valence and mediation groups. Figures 1 (burn video) and 2 (fire video) show the percent of children who gave the correct response based on these analyses. Guided mediation was associated with better understanding for both positive and negative videos for both burn and fire videos.

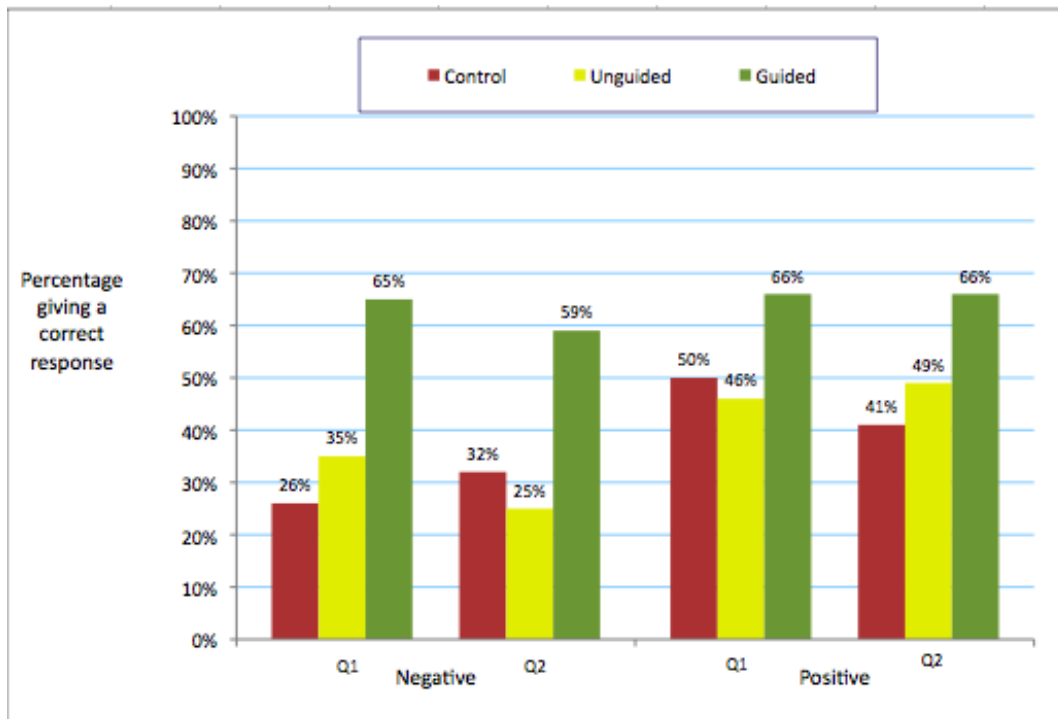


Figure 1. Percentages of younger children giving a correct response to questions about understanding burn videos by video valence (negative or positive video) and mediation condition (control/none; unguided; guided).

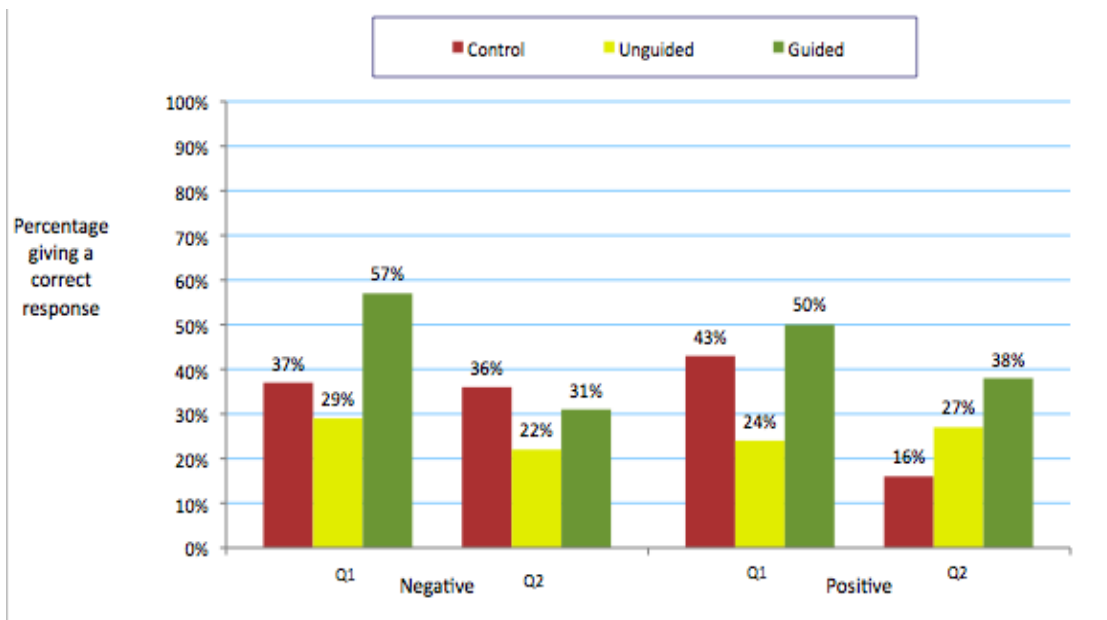


Figure 2. Percentages of younger children giving a correct response to questions about understanding fire videos by video valence (negative or positive video) and mediation condition (control/none; unguided; guided).

### Perceptions of Social Norms – Younger Children

To assess perceptions about social norms, we asked two questions about the behaviors presented in each video. The first question presented a wrong behavior (i.e., put butter on a burn) while the second question presented a correct behavior (i.e., get low and go). Children were then asked how many other kids would do the suggested behavior if faced with a situation similar to what appeared in the video. To respond, participants chose a picture to represent how many kids would do this ranging from ‘none’ to ‘a lot.’

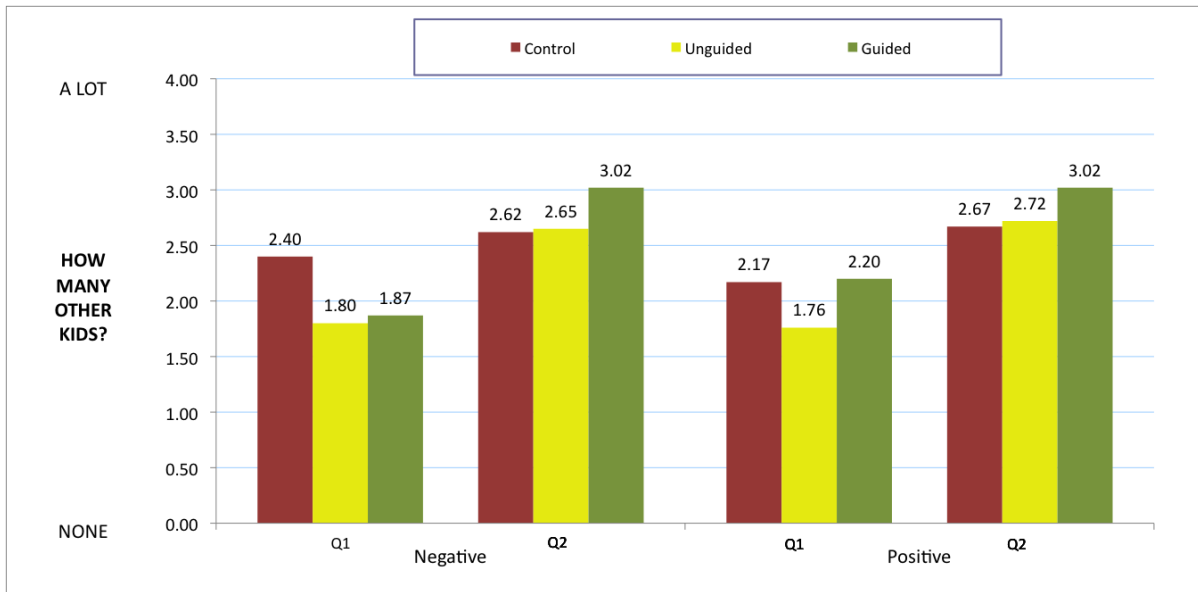
Table 3 below shows the mean scores for perceptions of social norms. In general, children thought more children would engage in the positive behaviors than the negative behavior. There were no significant differences associated with the video valence in whether children thought fewer or more children would engage in the suggested behavior. In contrast, a child’s mediation group was significantly associated (or approached significance) with perceptions of social norms. When children were asked about “how many other kids in a smoke filled room would ‘get low and go’”, those in the guided mediation group were more likely to say ‘a lot’ (Mean=3.0) compared to those in the control (Mean= 2.5) or unguided (Mean= 2.7) groups.

**Table 3. Younger children’s perceptions of social norms by video valence and mediation groups (Mean Scores\*)**

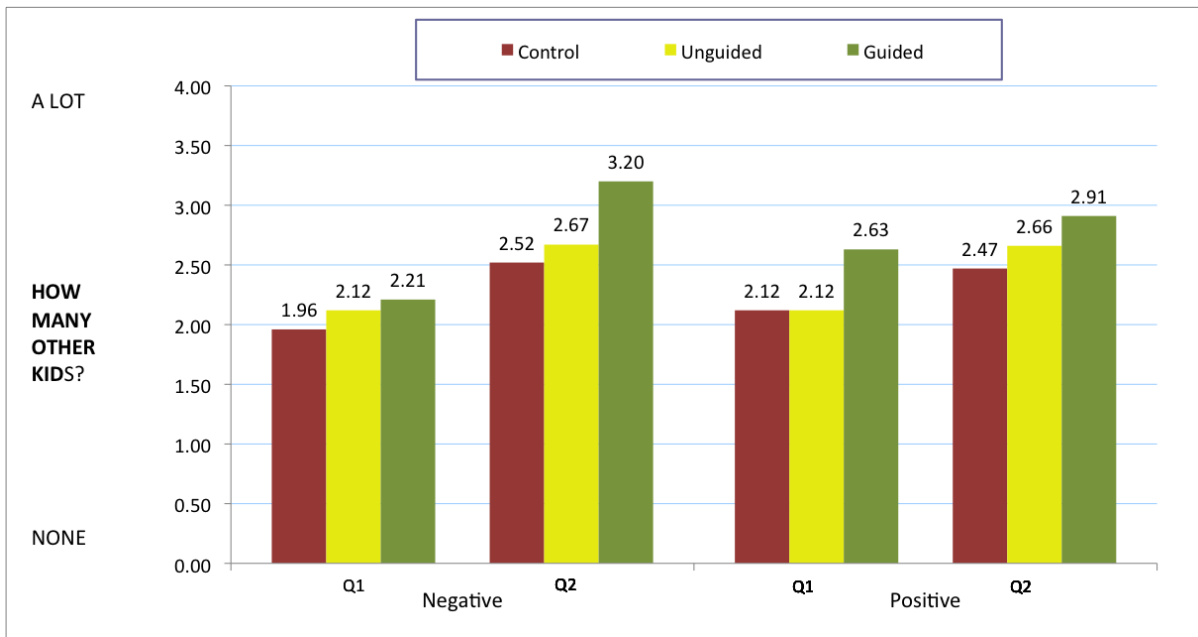
	Video Valence Groups		t-test	Mediation Groups			F-test
	Negative Video	Positive Video		Control	Unguided	Guided	
<b>Burn Video</b>							
Q1 (Wrong Behavior)	2.0	2.1	$t(314) = -0.2, p = .84$	2.3	1.8	2.0	$F(2, 315) = 2.5, p = .09$
Q2 (Correct Behavior)	2.8	2.8	$t(314) = -0.3, p = .79$	2.6	2.7	3.0	$F(2, 315) = 2.7, p = .07$
<b>Fire Video</b>							
Q1 (Wrong Behavior)	2.1	2.3	$t(317) = -1.1, p = .27$	2.0	2.1	2.4	$F(2, 318) = 1.8, p = .17$
Q2 (Correct Behavior)	2.8	2.7	$t(313) = 0.8, p = .43$	<b>2.5</b>	<b>2.7</b>	<b>3.0</b>	<b><math>F(2, 314) = 5.4, p = .01</math></b>

\* All responses scored from 0-4, with 0 being the best answer if the item was the wrong behavior, and 4 being the best answer if the item was the correct behavior.

In the multivariate models for each of the social norm outcomes, we considered video valence, mediation, and potential interactions simultaneously; Figures 3 (burn video) and 4 (fire video) show the estimated means based on this analysis. No discernable patterns were observed across mediation conditions or by video valence for either the burn or fire videos; guided mediation seemed to have a positive impact when children were asked about the correct safety behavior.



**Figure 3. Younger children’s mean scores on social norm questions about burns by video valence (negative or positive video) and mediation condition (control/none; unguided; guided) (Note: Q1 in both videos asks about the wrong behavior; Q2 in both videos asks about the correct behavior).**



**Figure 4. Younger children’s mean scores on social norm questions about fires by video valence (negative or positive video) and mediation condition (control/none; unguided; guided) (Note: Q1 in both videos asks about the wrong behavior; Q2 in both videos asks about the correct behavior).**

## Valence – Younger Children

For each of the behaviors depicted in the videos, children were asked to choose a picture of a smiling or frowning face that best represented how good or bad they perceived the behavior to be. For the burn video, the questions addressed what to do if a child burned his arm on the stove. Q1 was: “How bad or good would it be for him to put his arm in a bucket of ice?” Q2 was: “How bad or good would it be for him to put his arm under cool water?” Q3 was: “How bad or good would it be for him to put butter all over his arm?” For the fire video, the questions addressed what to do if a room was filling with smoke. Q1 was: “How bad or good would it be to go into the clothes closet and wait for a firefighter?” Q2 was: “How bad or good would it be to get low and get out of the room?” Lastly, Q3 was: “How bad or good would it be to look around the house, try to find a telephone and dial 911?” The scale ranged from 0 to 4. For desired behaviors, higher scores were more correct; for undesired or unsafe behaviors, lower scores were more correct.

Table 4 below shows the mean scores for perceptions of different behaviors. For the burn video, the video valence approached significance for Q1 and Q3 (wrong behavior questions) and was significant for Q2 (correct behavior question). When asked about the correct behavior (putting arm under cold water when burned), children who had seen the positive video gave a significantly more correct response about the valence. In contrast, considering the mediation groups, those who were in the guided group gave a more accurate assessment of wrong behaviors (putting arm in bucket of ice; putting butter on the burn). The mediation group assignment was not significantly associated with perceptions of the correct behavior in the burn video. For the fire video, there were no differences between those who saw the positive versus negative videos. For the mediation groups, only Q3 was significant, as the children in the guided mediation condition gave a significantly better (lower) response about the valence of the wrong behavior.

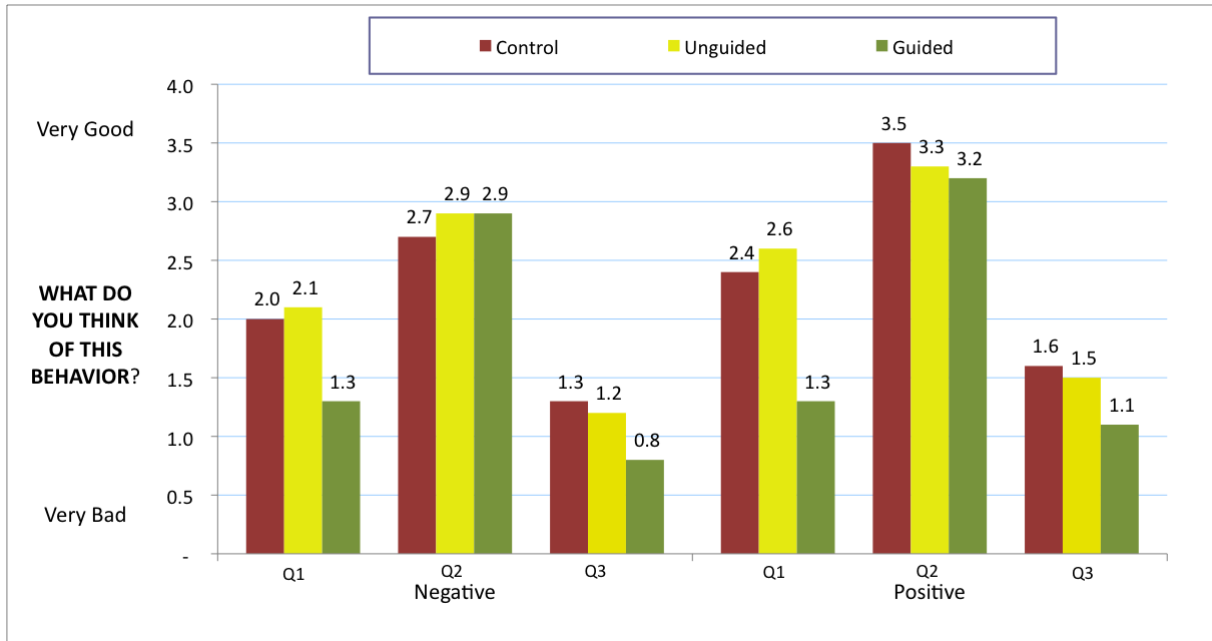
**Table 4. Younger children’s perceptions of valence by video valence and mediation groups (Mean Scores\*)**

	Video Valence Groups			Mediation Groups			F-test
	Negative Video	Positive Video	t-test	Control	Unguided	Guided	
<b>Burn Video</b>							
Q1 (wrong behavior)	1.8	2.1	$t(316) = -1.4, p = .14$	2.2	2.3	1.3	$F(2, 317) = 11.0, p < .001$
Q2 (correct behavior)	2.8	3.3	$t(315) = -3.3, p = .001$	3.1	3.1	3.1	$F(2, 316) = 0.22, p = .80$
Q3 (wrong behavior)	1.1	1.4	$t(315) = -1.8, p = .08$	1.5	1.4	0.9	$F(2, 316) = 4.0, p = .02$
<b>Fire Video</b>							
Q1 (wrong behavior)	1.2	1.5	$t(318) = -1.7, p = .09$	1.3	1.5	1.2	$F(2, 319) = 1.1, p = .33$
Q2 (correct behavior)	2.7	2.9	$t(318) = -1.2, p = .22$	2.6	3.0	2.8	$F(2, 319) = 1.8, p = .16$
Q3 (wrong behavior)	2.3	2.5	$t(315) = -1.5, p = .14$	2.8	2.5	1.9	$F(2, 316) = 8.3, p < .001$

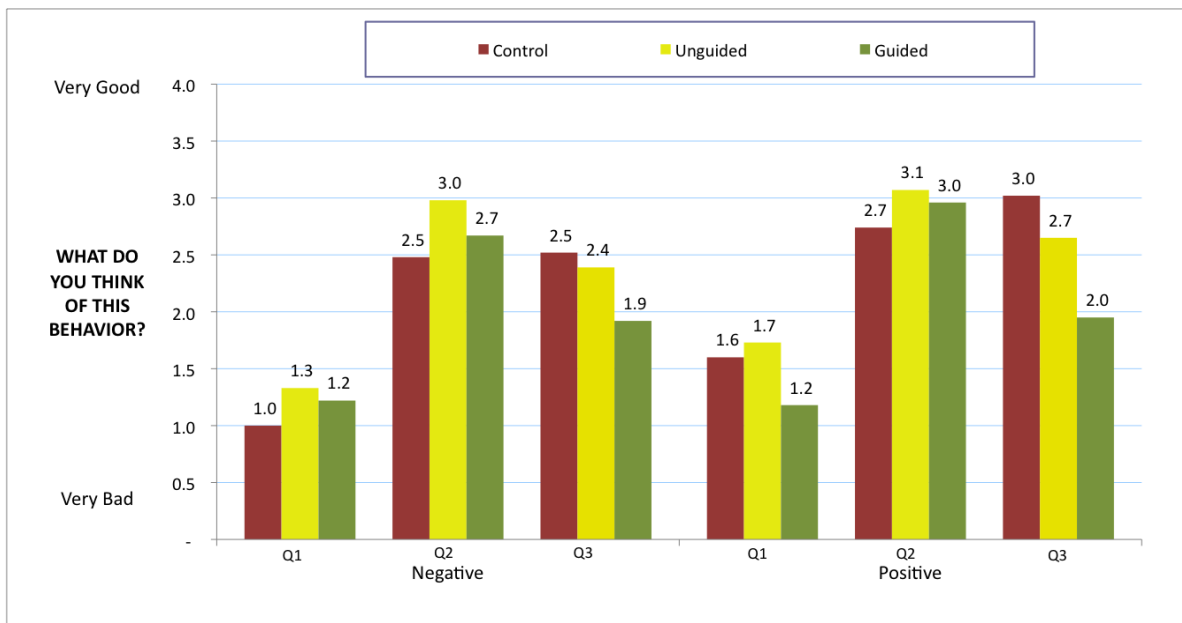
\*All responses scored from 0-4, with 0 being the best answer if the item was the wrong behavior and 4 being the best answer if the item was the correct behavior.

In multivariate models for each of the behavior perception (valence) outcomes, we considered video valence, mediation, and potential interactions simultaneously. Figures 5 (burn video) and 6 (fire video) show the estimated means based on this analysis. The positive videos tended to

be rated higher than the negative videos for all questions, and guided mediation had its strongest impact when the wrong behavior was at issue.



**Figure 5. Younger children’s mean scores on valence questions about burns by video valence (negative or positive video) and mediation condition (control/none; unguided; guided).**  
 (Note: Q1 and Q3 in both videos ask about the wrong behavior; Q2 in both videos asks about the correct behavior)



**Figure 6. Younger children’s mean scores on valence questions about fires by video valence (negative or positive video) and mediation condition (control/none; unguided; guided).**  
 (Note: Q1 and Q3 in both videos ask about the wrong behavior; Q2 in both videos asks about the correct behavior)

### Perceptions of Self-Efficacy – Younger Children

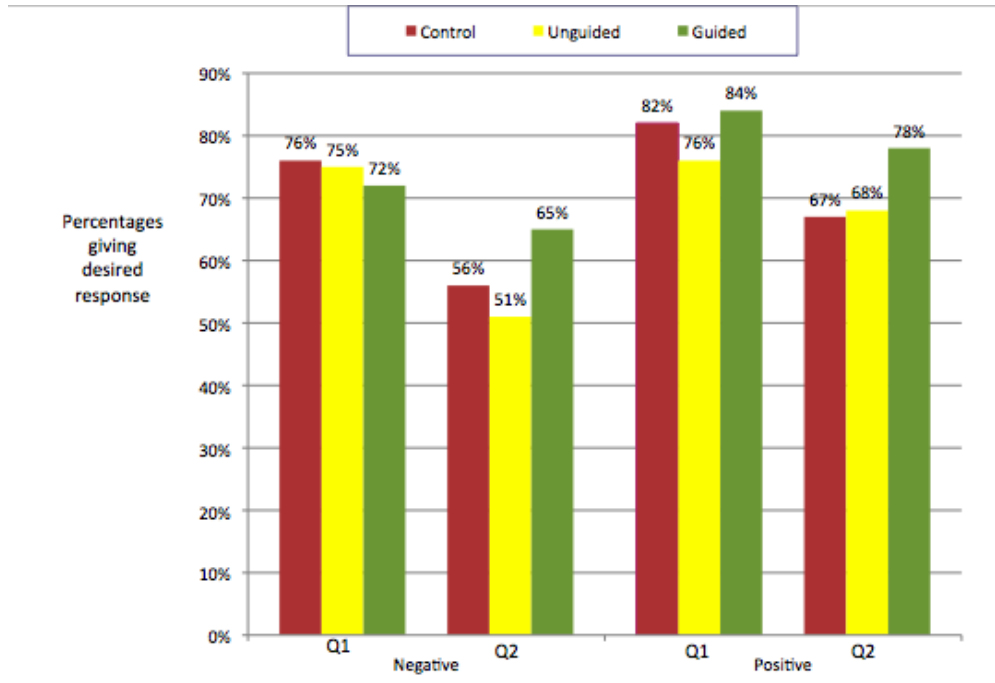
Children were asked if they burned themselves, would they be able to put cool water on the burn (Q1) and if they thought they could if they were all by themselves (Q2)? In general, 64% thought ‘yes’ to both items (high self-efficacy). Those children who saw the positive video were significantly more likely to say yes than the children who saw the negative video (See Table 8). Asked about whether they thought they could ‘go low and go’ from a burning room (Q1) and if they thought they could do this if they were all by themselves (Q2), those who had seen the positive video also had higher self-efficacy than those who had seen the negative video. In considering self-efficacy by mediation groups, those in the guided mediation group were the most confident in their ability to put cool water on a burn, but the differences by group only approached significance. For the ‘get low and go’ message, children in the guided mediation group (79%) were significantly more confident than those in the unguided (74%) and control (64%) groups.

**Table 5. Younger children’s perceptions of self efficacy by video valence and mediation groups**  
**Percent High Self Efficacy Response**

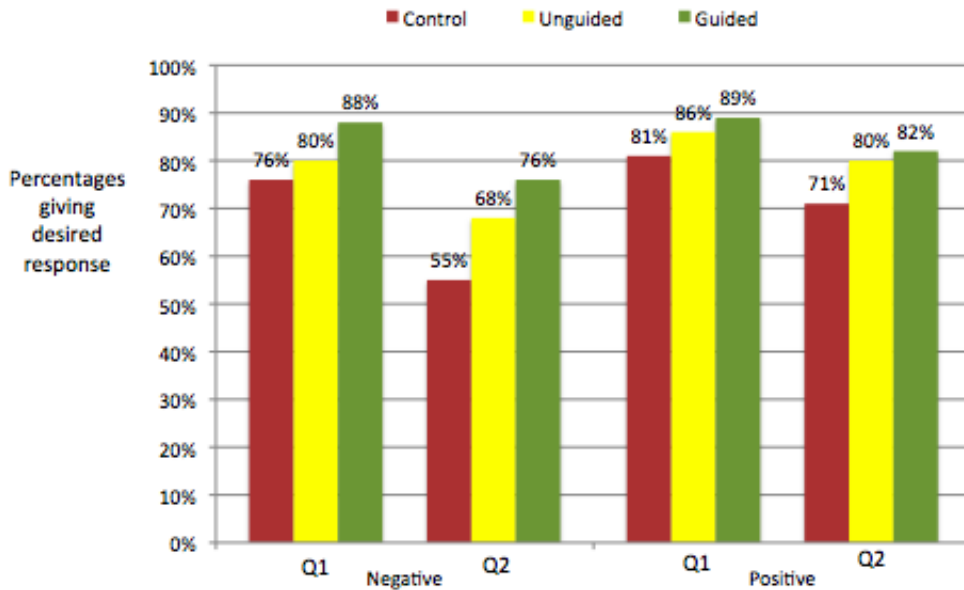
	Video Valence Groups			Mediation Groups			F-test
	Negative	Positive	t-test	Control	Unguided	Guided	
<b>Burn Video</b>							
<b>Self-Efficacy</b>	.67	.71	<i>t</i> (315)= - 2.5, <i>p</i> = .01	.62	.59	.72	<i>F</i> (2, 316)= 1.9, <i>p</i> = .14
<b>Fire Video</b>							
<b>Self-Efficacy</b>	.67	.78	<i>t</i> (309)= - 2.2, <i>p</i> = .03	.64	.74	.79	<i>F</i> (2, 310)= 3.3, <i>p</i> = .04

In the multivariate models for each of the self-efficacy outcomes, we considered video valence, mediation, and potential interactions simultaneously. Figures 7 (burn video) and 8 (fire video) show the estimated percentages of correct responses based on these analyses. The positive videos generally resulted in higher self efficacy relative to the negative videos. Mediation conditions did not show a consistent trend for the burn video, but those in the no mediation control group consistently had the lowest self efficacy for the fire video.





**Figure 7. Percentages of younger children reporting high self-efficacy for safe burn behavior by video valence (negative or positive video) and mediation condition (control/none; unguided; guided) Note: Q1 asked if child could do the correct behavior and Q2 asked if child could do the correct behavior if they were all by themselves**



**Figure 8. Percentages of younger children reporting high self-efficacy for safe fire behavior by video valence (negative or positive video) and mediation condition (control/none; unguided; guided) Note: Q1 asked if child could do the correct behavior and Q2 asked if child could do the correct behavior if they were all by themselves**

### General Interest and Appeal – Younger Children

We asked children how much they liked watching the stories featuring Cubie and Orbie ('self').<sup>2</sup> We also asked them to think about how much their best friends ('best friend') and other friends their age ('others') would like these videos. On a scale from 0 (NOT interesting and boring) to 4 (VERY interesting), the mean score for self was 4.3 ( $SD = 1.2$ ). The mean was 4.1 ( $SD = 1.4$ ) for best friend and 4.0 ( $SD = 1.4$ ) for others. Table 6 shows the means and significance tests of appeal by video valence and mediation groups. Those who saw the positive videos gave slightly higher appeal scores than those who saw the negative video, but these differences were not statistically significant. Those in the guided mediation groups gave the highest appeal scores, followed by those in the control group and then the unguided mediation groups. These differences, however, were only statistically significant for the question about best friends.

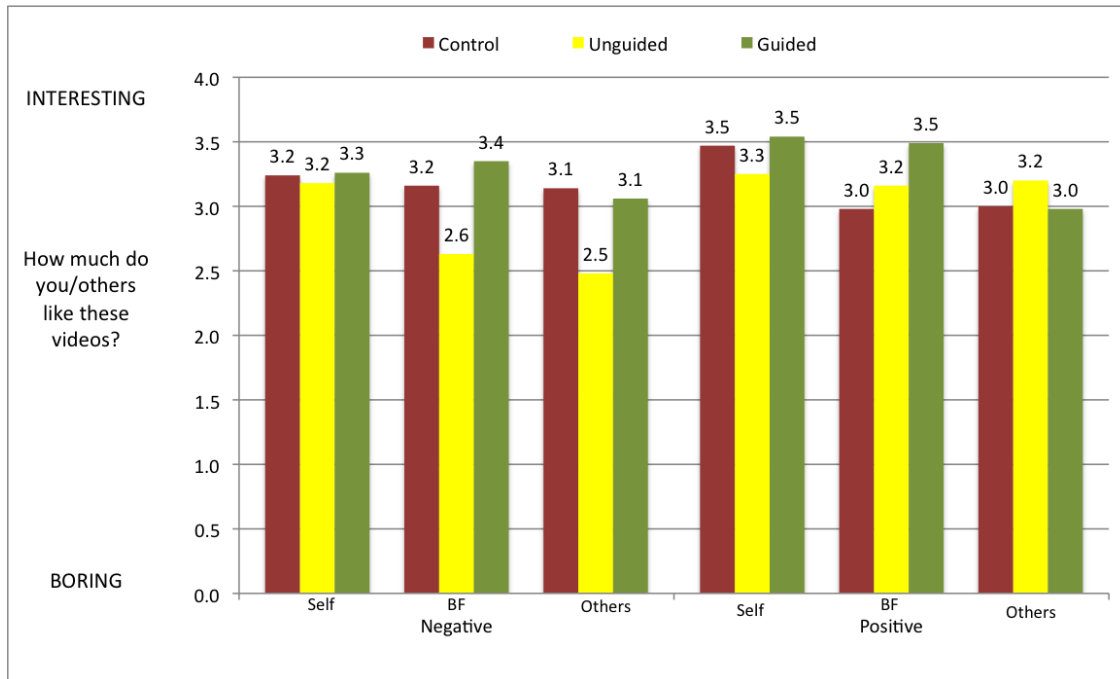
**Table 6. Younger children's mean scores\* on how appealing the videos were for themselves, their best friends, and other friends their age by video valence and mediation groups**

	Video Valence Groups		t-test	Mediation Groups			F-test
	Negative Video	Positive Video		Control	Unguided	Guided	
<b>Self</b>	3.4	3.2	$t(319) = -1.4,$ $p = .15$	3.4	3.2	3.4	$F(2, 318) = .64,$ $p = .53$
<b>Best Friends</b>	3.1	3.2	$t(308) = -.98,$ $p = .33$	<b>3.1</b>	<b>2.9</b>	<b>3.4</b>	<b><math>F(2, 309) = 3.9,</math></b> <b><math>p = .02</math></b>
<b>Others</b>	2.9	3.1	$t(310) = -1.0,$ $p = .31$	3.1	2.8	3.0	$F(2, 311) = .71,$ $p = .49$

\*All responses scored from 0-4, with 4 being the highest appeal

In multivariate models for each of the general interest and appeal outcomes, we considered video valence, mediation, and potential interactions simultaneously. Figure 9 shows the estimated means based on this analysis. No consistent patterns emerged for positive versus negative videos or across mediation groups in terms of likeability of the videos.

<sup>2</sup>We did not ask children if they liked the Burn video more or less than the Fire video; rather, we asked about the general appeal of these safety messages.



**Figure 9. Younger children’s mean scores for general interest and appeal question about the videos for the respondent (self), best friend (BF), and other children the same age (others) for both fire and burn videos combined**

## Outcomes among Older Children

### *Description of the Sample – Older Children*

Information about the 321 study participants is shown in Table 7. The sample comprised more girls (53%) than boys (47%), with equal proportions of nine year-olds (23%), six-year olds (26%), seven year-olds (26%), or eight year-olds (24%). Approximately 54% of the sample identified as White, and another 44% identified as Black or African American. Almost one-half (48.6%) of the parents had a college degree or higher education. Roughly two-thirds (65.5%) of parents were married or living together with their partners. Approximately 10% of the sample earned less than \$20,000 per year and 23% of the sample earned \$100,000 or more.

**Table 7. Characteristics of the older children's sample (N= 321 pairs)**

Variable	N	%
<b>Sex</b>		
Girls	168	53.0
Boys	149	47.0
<b>Age</b>		
Six Years	82	26.0
Seven Years	83	26.4
Eight Years	77	24.4
Nine Years	73	23.2
<b>Parent Race</b>		
White	171	53.6
Black or African American	140	43.9
Asian American	1	0.30
Other	7	2.20
<b>Parent Education Level</b>		
High School or Less	52	16.3
Some college or vocational school	112	35.1
College Graduate (or higher)	155	48.6
<b>Parent Marital Status</b>		
Single (never married, separated, divorced, or widowed)	110	34.5
Married or living with partner	209	65.5
<b>Household Income</b>		
19,999 or less	31	9.8
20,000 to 39,999	55	17.4
40,000 to 59,999	52	16.4
60,000 to 79,999	63	19.9
80,000 to 99,999	43	13.6
100,000 or more	73	23.0

### *Recall – Older Children*

Regardless of whether the child saw the positive or negative valence video, there were no significant differences in remembering either the burn or the smoke videos. When asked what they saw during the research session (unprompted recall), similar percentages of the children were able to mention the burn (66.5% for positive video and 69.3% for negative video) and the fire videos (70.3% for positive video and 65.0% for negative). When shown a stimulus picture of Dylan and Reese (the two characters featured in the burn video), about 24% of the children in each video group could recall the video's message. When shown Sam and Pat (the characters featured in the smoke video), about 24% recalled the video's message. About 8% of the children were unable to recall either video.

For the burn video, there were significant differences related to mediation group in recall of this message ( $\chi^2(4) = 11.03, p < 0.026$ ). More children in the unguided (76.5%) and guided (70.5%) groups mentioned the burn video (unprompted recall) than those in the no mediation group (57.0%). In contrast, there was not a significant difference in recall across the mediation conditions for the smoke video.

### Understanding – Older Children

For each video, researchers asked the children two questions to check their understanding of the depicted behaviors. For the burn video, Q1 was: “Let’s say your cousin was taking cookies out of the oven and banged her hand on the oven. She seems to have burned herself. What would you tell her to do?” Q2 was: “If something very hot falls on your leg and starts burning you, what would do?” For the fire video, Q1 was: “Let’s say there was a fire in your cousin’s bedroom. What would you tell her to do?” And Q2 was: “Of these four things (pictures shown to child), what is the best thing to do if there is a fire in your bedroom?” For understanding the lesson presented in the burn video, children who saw the positive video were more likely than those who saw the negative video to give a correct response. As shown in Table 8, 69% of children who saw the positive burn video provided a correct response, as compared to 59% (first question) and 55% (second question) who saw the negative burn video. For the fire video, watching the positive videos also resulted in greater understanding than watching the negative video (84% versus 78% for the first question, and 70.3% versus 50.3% for the second question); in this case, responses to the first question were not significantly different, although they were in the same direction.

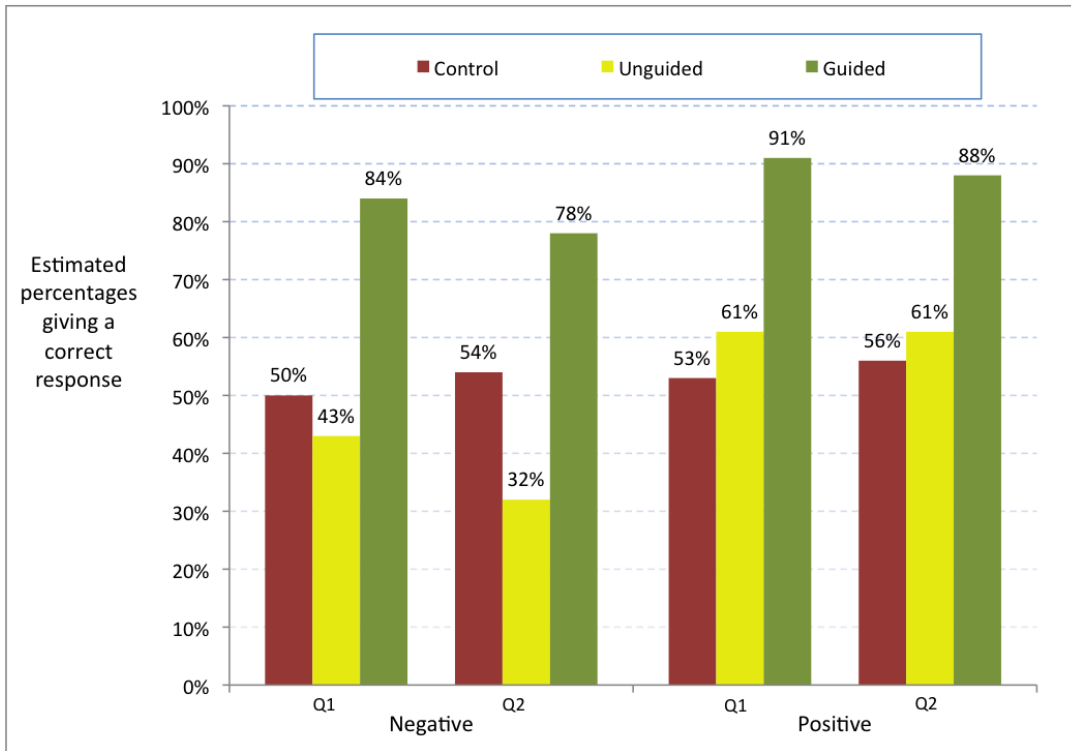
Mediation group was also related to understanding of video content. Consistently, children in the guided mediation group understood the video (88% and 83% for the burn video and 94% and 72% for the fire video) more than those in the control group or those in the unguided mediation group.

**Table 8. Older children’s understanding by video valence and mediation groups (Percent Correct Response)**

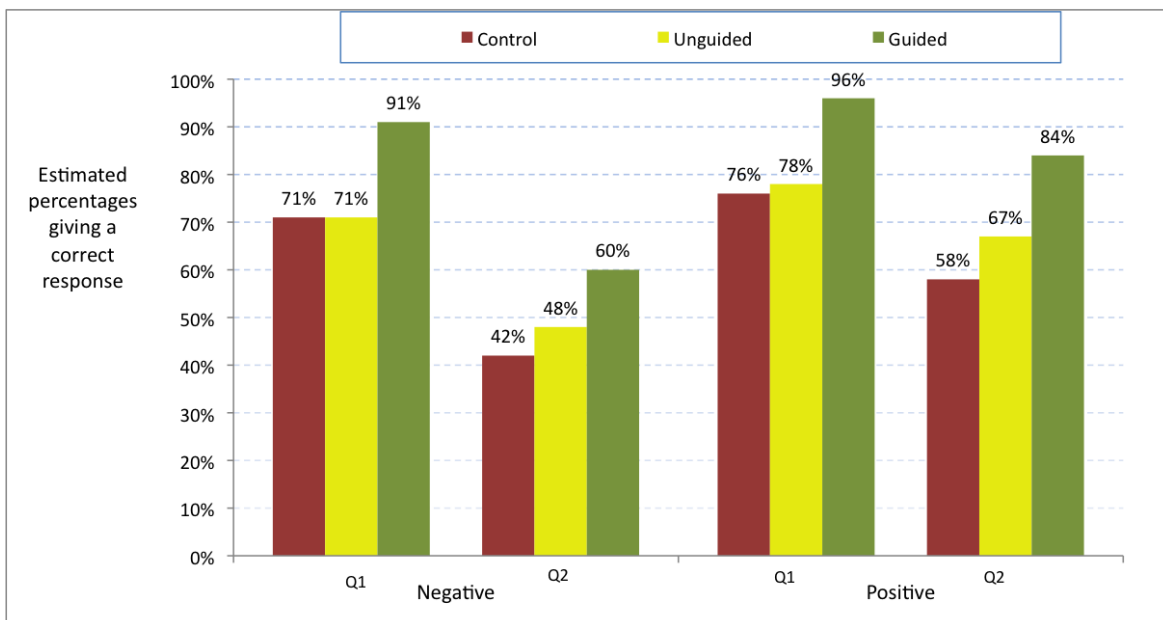
	Video Valence Groups			Mediation Groups			$\chi^2$
	Negative	Positive	$\chi^2$	None	Unguided	Guided	
<b>Burn Video</b>							
<b>Q1</b>	58.9	69.0	$\chi^2(1) = 3.5,$ $p = 0.06$	51.4	<b>51.0</b>	<b>87.5</b>	$\chi^2(2) = 41.6,$ $p < 0.001$
<b>Q2</b>	<b>54.6</b>	<b>69.0</b>	$\chi^2(1) = 7.0,$ $p = 0.05$	55.1	<b>45.1</b>	<b>83.0</b>	$\chi^2(2) = 35.4,$ $p < 0.001$
<b>Fire Video</b>							
<b>Q1</b>	78.0	84.1	$\chi^2(1) = 2.0,$ $p = .161$	<b>73.8</b>	<b>74.3</b>	<b>93.8</b>	$\chi^2(2) = 18.3$ $p < 0.001$
<b>Q2</b>	<b>50.3</b>	<b>70.3</b>	$\chi^2(1) = 13.3,$ $p < .001$	50.5	<b>56.9</b>	<b>72.3</b>	$\chi^2(2) = 11.6,$ $p = 0.003$

Percentages that answered correctly are presented. Bolded items are statistically significant using a chi<sup>2</sup> test.

Multivariate models with an interaction term were created to examine the simultaneous impact of the video valence and mediation groups. Figures 10 (burn video) and 11 (fire video) show the percent of children who gave the correct response based on these analyses, taking into account the effects of mediation group and video valence simultaneously. For both the negative and positive videos, children in the guided mediation group consistently showed greater understanding of video content, as compared to children in the unguided or the control groups.



**Figure 10. Percentage of older children giving a correct response for understanding questions about burns by video valence (negative, positive) and mediation condition (control/none, unguided, guided)**



**Figure 11. Percentage of older children giving a correct response for understanding questions about fire by video valence (negative, positive) and mediation condition (control/none, unguided, guided)**

### **Perceptions of Social Norms – Older Children**

Two questions were asked to assess children’s perceptions about social norms. The first question presented an undesirable behavior (i.e., put butter on a burn) and the second question pertained to a desirable behavior (i.e., get low and go). Children were asked how many other children would do the suggested behavior when faced with a situation similar to what appeared in the video. To respond, participants chose a picture to represent how many children would engage in the depicted behavior, with responses ranging from “none” to “a lot.”

Table 9 shows the mean scores for perceptions of social norms. In general, children thought more children would engage in the positive behaviors than the negative behavior. There were no significant differences associated with the video valence in whether children thought fewer or more children would engage in a suggested behavior. Similarly, no differences were observed in normative beliefs across the three mediation groups.

**Table 9. Older children’s perceptions of social norms by video valence and mediation groups (Mean Scores\*)**

	Video Valence Groups		t-test	Mediation Groups			F-test
	Negative Video	Positive Video		Control	Unguided	Guided	
<b>Burn Video</b>							
<b>Q1 (Wrong Behavior)</b>	1.0	0.9	t(319)=-0.7, p=.493	1.0	0.9	1.0	F(2, 18)=0.2, p=.796
<b>Q2 (Correct Behavior)</b>	3.1	3.3	t(311*)=1.8, p=.070	3.0	3.3	3.3	F(2, 18)=2.2, p=.112
<b>Fire Video</b>							
<b>Q1 (Wrong Behavior)</b>	1.2	1.0	t(319)=1.3, p=.188	1.2	1.2	1.0	F(2,18)=0.6, p=.568
<b>Q2 (Correct Behavior)</b>	3.5	3.6	t(319)=-0.7, p=.452	3.5	3.6	3.5	F(2,318)=0.8, p=.433

\* This statistic uses Satterthwaite’s degrees of freedom because the groups did not have equal variances so an unequal t-test was used. Means are presented. All responses scored from 0-4, with 0 being the best answer if the item was the wrong behavior and 4 being the best answer if the item was the correct behavior.

Multivariate models with an interaction term were created to examine the simultaneous impact of the video valence and mediation groups. Figures 12 (burn video) and 13 (fire video) show the mean scores based on these analyses, taking into account the effects of mediation group and video valence simultaneously. Perceptions of social norms differed little by experimental condition.

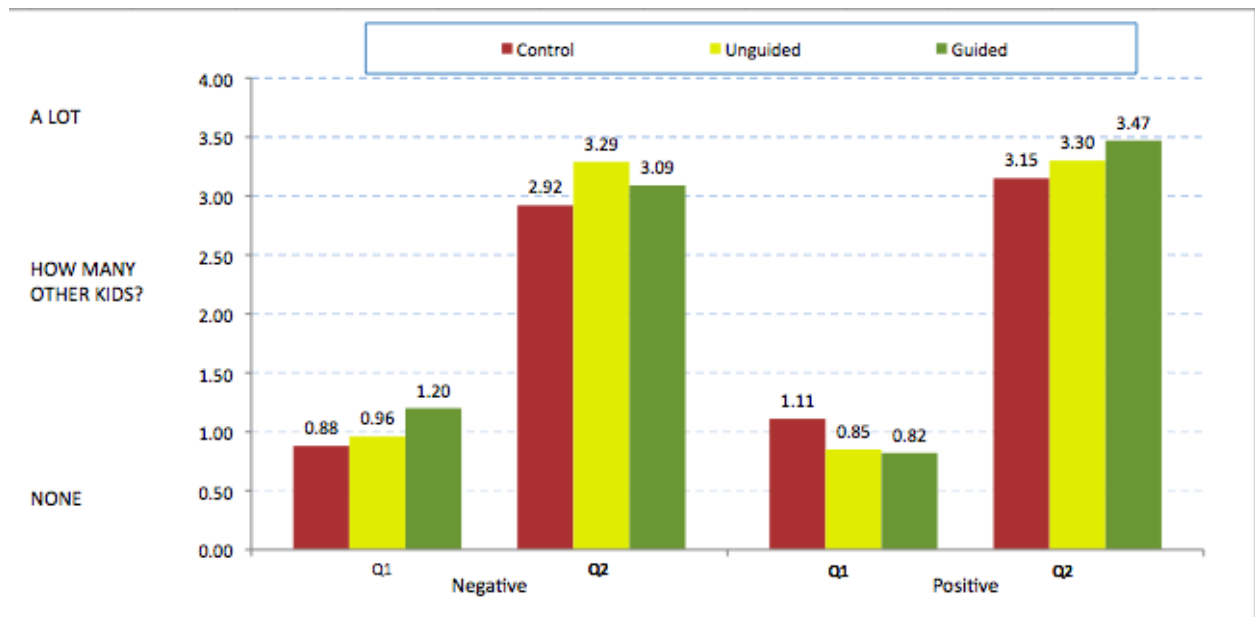


Figure 12. Older children’s mean scores on social norm questions about burns by video valence (negative or positive video) and mediation condition (control/none; unguided; guided) (Note: Q1 in both videos asks about the wrong behavior; Q2 in both videos asks about the correct behavior)

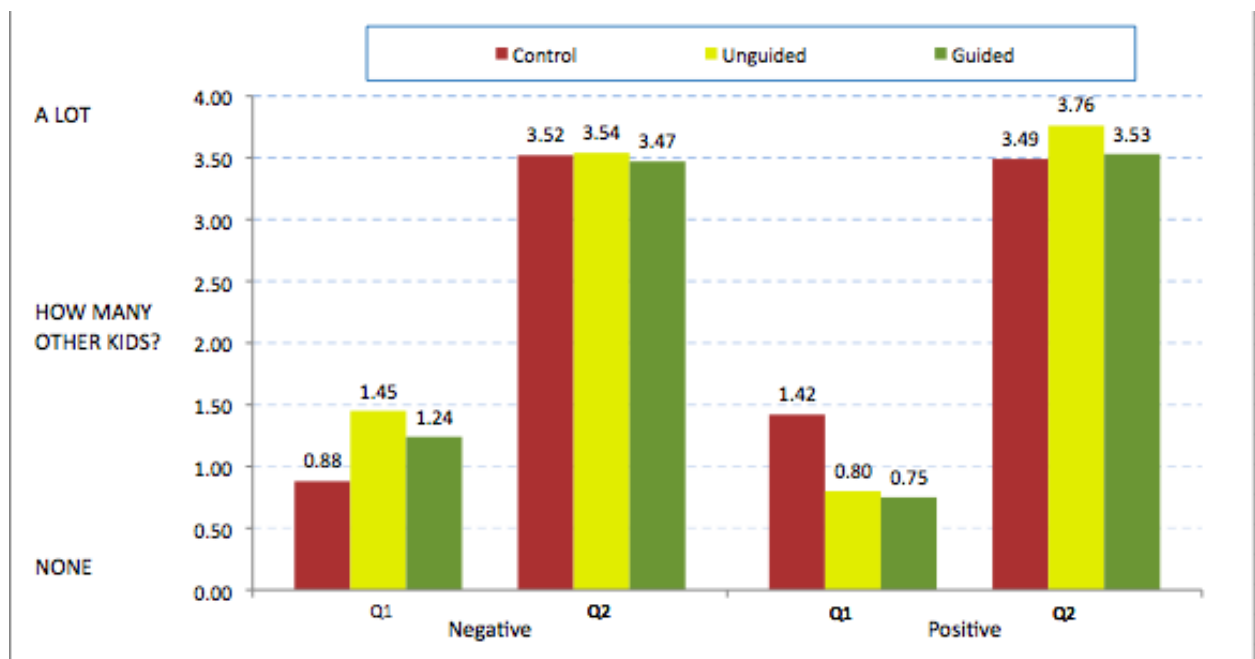


Figure 13. Older children’s mean scores on social norm questions about fires by video valence (negative or positive video) and mediation condition (control/none; unguided; guided) (Note: Q1 in both videos asks about the wrong behavior; Q2 in both videos asks about the correct behavior)



### Valence – Older Children

For the burn video, the questions were: If a child burned his arm on the stove, Q2 was “How bad or good would it be for him to put his arm under cool water” and Q3 was “How bad or good would it be for him to put butter all over his arm?” For the fire video Q1 was “If a room was filling with smoke, how bad or good would it be to go into the clothes closet and wait for a firefighter?” And Q2 was “How bad or good would it be to get low and get out of the room?” The scale ranged from 0 to 4. For desired behaviors, higher scores were more correct; for undesired or unsafe behaviors, lower scores were more correct.

Table 10 shows the mean scores for perceptions of different behaviors. For the burn video, the positive behavior was perceived to be more beneficial by those in the positive video condition than those in the negative video condition. Similarly, the negative behavior was perceived to be more harmful in the negative video condition than in the positive video condition. Children in the guided mediation group perceived the positive behavior to be more beneficial than children in the control group and the unguided mediation group. Children in the guided mediation group also assessed the negative behavior to be more harmful than children in the control group and unguided mediation group. For the fire videos, assessments of the positive and negative behaviors did not differ by video valence or mediation condition.

**Table 10. Older children’s perceptions of valence of the behaviors by video valence and mediation groups (Mean Scores)**

	Video Valence Groups			Mediation Groups			F-test
	Negative Video	Positive Video	t-test	Control	Unguided	Guided	
<b>Burn Video</b>							
Q2 (Correct Behavior)	3.3	3.6	t(305*)=2.6 p=.009	3.2	3.3	3.7	F(2,318)=7.4, p<.001
Q3 (Wrong Behavior)	0.1	0.8	t(203*)=6.1 p<.001	0.5	0.6	0.3	F(2,317)=3.8, p=.024
<b>Fire Video</b>							
Q2 (Correct Behavior)	3.6	3.8	t(296*)=1.4, p=.144	3.7	3.7	3.8	F(2,316)=0.8, p=.474
Q1 (Wrong Behavior)	0.6	0.5	t(318)=0.1, p=.932	0.6	0.7	0.4	F(2,317)=2.7, p=.072

\* This statistic uses Satterthwaite’s degrees of freedom because the groups did not have equal variances, so an unequal t test was used. Means are presented. All responses scored from 0-4, with 0 being the best answer if the item was the wrong behavior and 4 being the best answer if the item was the correct behavior.

Multivariate models with an interaction term were created to examine the simultaneous impact of the video valence and mediation groups. Figures 14 (burn video) and 15 (fire video) show the mean scores based on these analyses, taking into account the effects of mediation group and video valence simultaneously. For the burn video, under both the negative and positive valence conditions, children in the guided mediation group showed greater understanding of the correct behaviors (Q2) as compared to children in the unguided or the control groups. For the fire video, children in the guided mediation group compared to the unguided or control groups showed greater understanding of the wrong behavior (Q1).

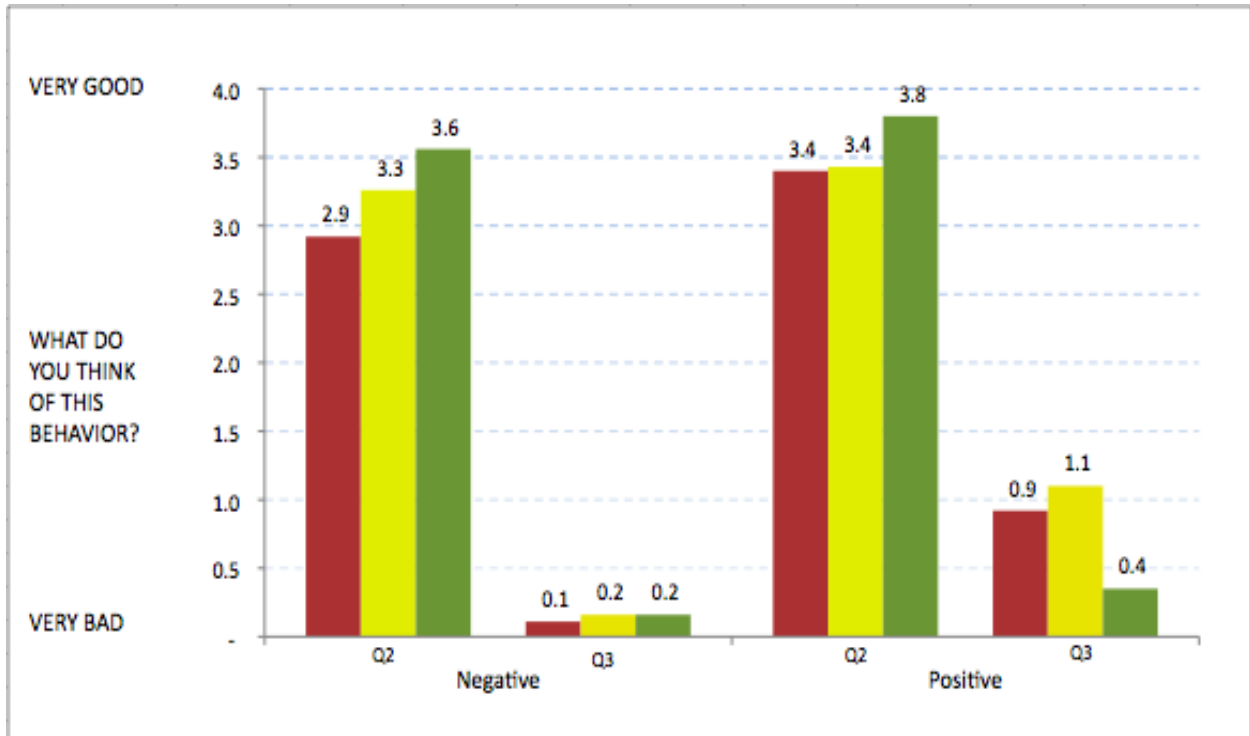


Figure 14. Older children’s mean scores on valence questions about burns by video valence (negative or positive video) and mediation condition (control/none; unguided; guided) (Note: For both videos, Q2 asks about correct behavior and Q3 asks about wrong behavior.)



Figure 15. Older children’s mean scores on valence questions about fires by video valence (negative or positive video) and mediation condition (control/none; unguided; guided) (Note: For both videos, Q1 asks about wrong behavior and Q2 asks about correct behavior.)

### Perceptions of Self-Efficacy – Older Children

To assess self-efficacy, we asked the children about the burn video two questions: Q1 was: “If you burned yourself do you think you would be able to put cool water on the burn?” Q2 was: “If you were all by yourself, would you still be able to put cool water on it?” For the fire video, we asked two questions: Q1 “ If you were in a smoke filled room, do you think you would be able to get low and go?” and Q2. “If you were all by yourself, would you still be able to get low and go?” The responses were recorded as either Yes or No. We also summed the responses to the two questions for each of the videos, such that higher values (maximum of 2) signified higher self-efficacy.

Self-efficacy scores were high across the board. For the burn video, children who saw the positive video had significantly greater self-efficacy, compared to those who saw the negative video, as shown in Table 11. Self-efficacy did not differ by mediation groups. In general, self-efficacy scores for the fire video were comparable to those for the burn video. Self-efficacy scores for the fire video, however, did not differ across any of the experimental conditions: those in the positive video condition were likely to have the same level of self-efficacy as those in the negative video condition and those across the three mediation groups also had similar levels of efficacy.

**Table 11. Older children’s perceptions of self-efficacy by video valence and mediation groups (Mean scores\*)**

	Video Valence Groups		t-test	Mediation Groups			F-test
	Negative Video	Positive Video		Control	Unguided	Guided	
<b>Burn Video</b>							
Q1	0.88	0.94	t(295*)=-1.9, p=.058	0.91	0.91	0.92	F(2, 318)=0.1, p=.942
Q2	0.75	0.87	t(294*)=-2.8, p=.005	0.80	0.78	0.84	F(2, 311)=0.7, p=.505
Sum Variable	1.62	1.81	t(291*)=-2.7, p=.007	1.70	1.70	1.76	F(2, 311)=0.4, p=.684
<b>Fire Video</b>							
Q1	0.91	0.94	t(313*)=-1.0, p=.337	0.91	0.90	0.96	F(2, 318)=1.3, p=.266
Q2	0.88	0.89	t(313)=-.4, p=.674	0.88	0.86	0.91	F(2, 312)=0.5, p=.588
Sum Variable	1.78	1.83	t(313)=-0.7, p=.484	1.78	1.76	1.86	F(2, 312)=0.9, p=.412

\* This statistic uses Satterthwaite’s degrees of freedom because the groups did not have equal variances, so an unequal t test was used. Means are presented. Higher scores indicate higher self-efficacy, with maximum score = 1 for individual questions and 2 for the summed variables.

Multivariate models with an interaction term were created to examine the simultaneous impact of the video valence and mediation groups. Figures 16 (burn video) and 17 (fire video) show the percent of children who had high perceptions of self-efficacy, based on these analyses, taking into account the effects of mediation group and video valence simultaneously. For the burn videos, children in the positive valence group generally indicated higher perceptions of self-efficacy than children in the negative valence group.

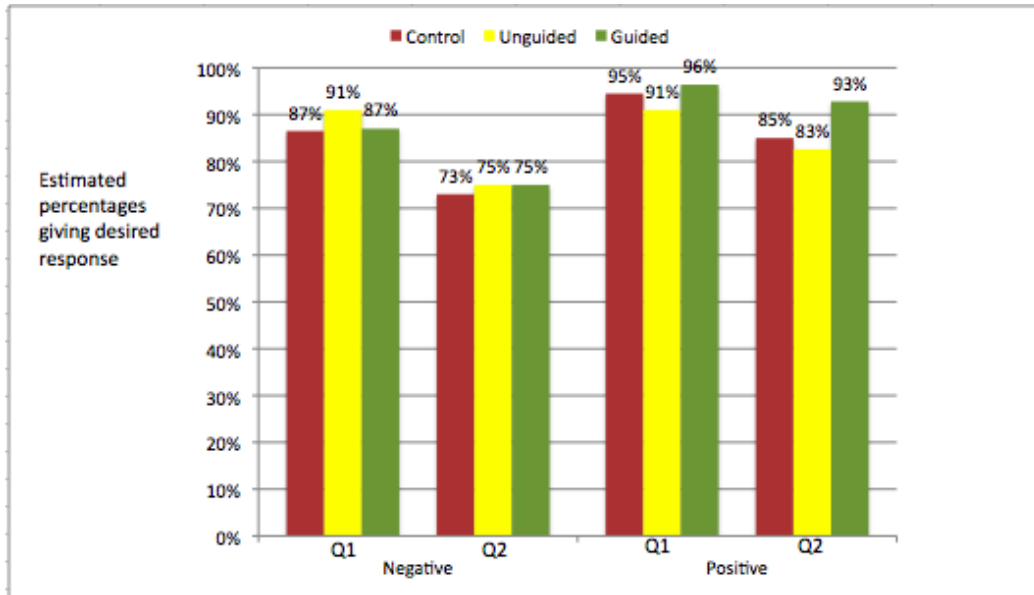


Figure 16. Percentages of older children reporting high self-efficacy for safe burn behavior by video valence (negative or positive video) and mediation condition (control/none; unguided; guided) Note: Q1 was: “If you burned yourself do you think you would be able to put cool water on the burn?” Q2 was: “If you were all by yourself, would you still be able to put cool water on it?”

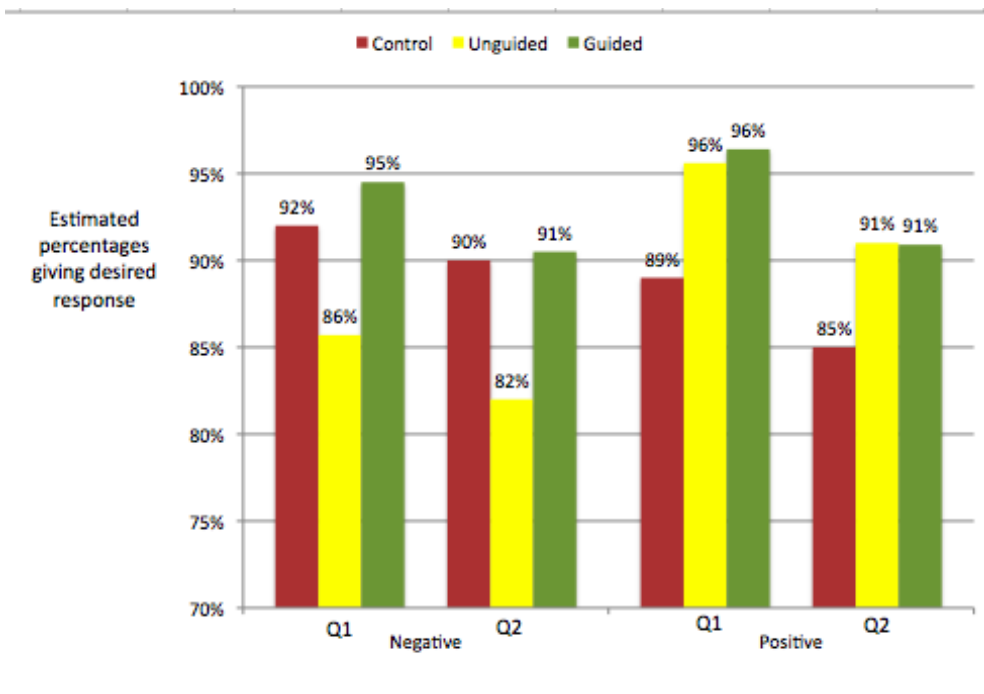


Figure 17. Percentages of older children reporting high self-efficacy for safe fire behavior by video valence (negative or positive video) and mediation condition (control/none; unguided; guided) Note: Q1 “ If you were in a smoke filled room, do you think you would be able to get low and go?” and Q2. “If you were all by yourself, would you still be able to get low and go?”

### General Interest and Appeal – Older Children

We asked children how much they liked watching the videos ('self').<sup>3</sup> We also asked them to think about how much their best friends ('best friend') and other friends their age ('others') would like these videos. Responses were on a scale from 0 (NOT interesting and boring) to 4 (VERY interesting). Table 12 shows the means and significance tests of appeal by video valence and mediation groups. On the whole, likeability was high, but it did not differ across the videos: those watching the positive videos were not different from those watching the negative videos in terms of how much they liked the videos, how much they thought their friends would like the videos, or how much they thought others would like the videos. Similarly, mediation also appeared not to differentially influence children's liking of the videos.

**Table 12. Older children's mean scores\* on how appealing the videos were for themselves, their best friends, and other friends their age by video valence and mediation groups**

	Video Valence Groups		t-test	Mediation Groups			F-test
	Negative Video	Positive Video		Control	Unguided	Guided	
<b>Self</b>	3.3	3.5	t(319)=-1.5, p=.137	3.5	3.4	3.3	F(2, 318)=0.7, p=.503
<b>Best Friends</b>	3.0	3.1	t(314)=-0.4, p=.688	3.1	3.1	2.9	F(2, 313)=1.0, p=.364
<b>Others</b>	2.9	2.9	t(317)=-0.3, p=.761	3.0	3.0	2.8	F(2, 316)=1.0, p=.380

\*All responses scored from 0-4, with 4 being the highest appeal

In multivariate models for each of the general interest and appeal outcomes, we considered video valence, mediation, and potential interactions simultaneously. Figure 18 shows the means based on this analysis. Likeability did not vary by video valence or mediation group.

<sup>3</sup>We did not ask children if they liked the Burn video more or less than the Fire video; rather, we asked about the general appeal of these safety messages.

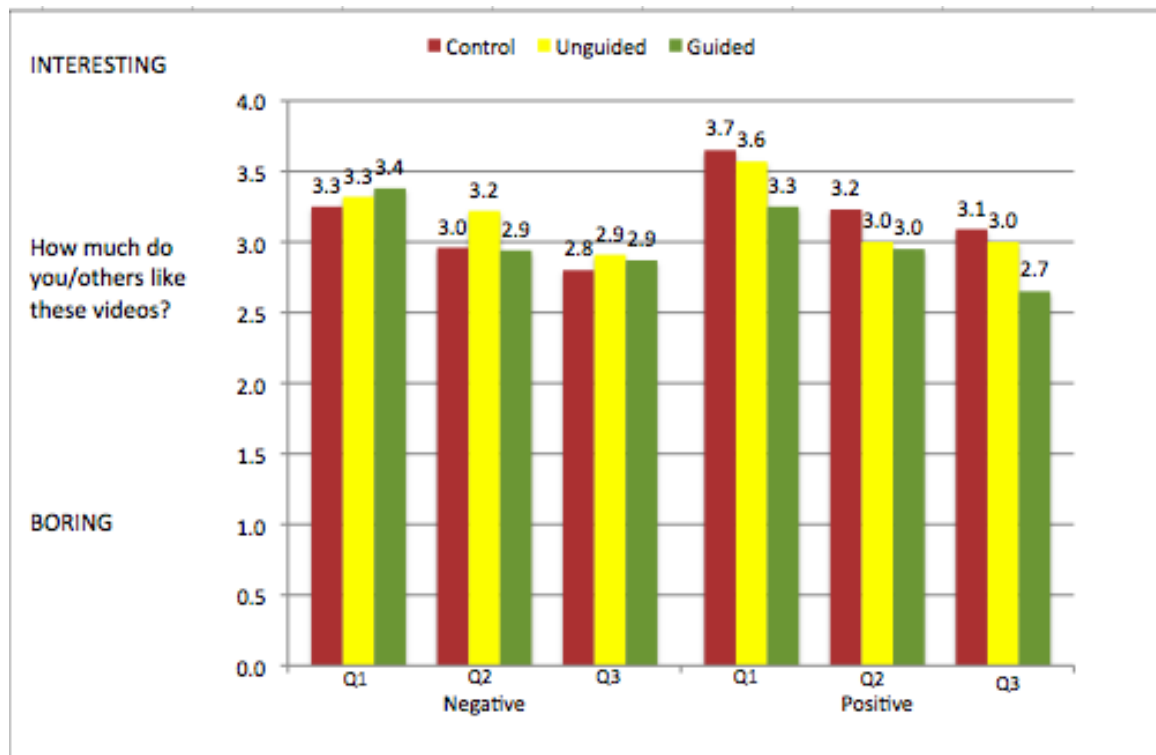


Figure 18. Older children’s mean scores for general interest and appeal question about the videos for the respondent (self, Q1), best friend (BF, Q2), and other children the same age (others, Q3) for both fire and burn videos combined

## Parent Questionnaire Responses

### Description of the Sample – Parents

The sample was recruited from Baltimore County (59%), Baltimore City (27%), and other jurisdictions (14%). In all, 95% of respondents were the child's parent, while the remainder included legal guardians (2%), step parent (1%), or another family member (2%). Respondents tended to be in their 30's, although those with younger children were younger on average (34.3 years) compared to those with older children (38.9 years) (Table 13). Most respondents had more than one child (82%). The only other significant difference between the parents with younger children and those with the older children was that older children were more likely to spend more time in school. The sample was fairly evenly divided between African Americans (44%) and Whites (53%) (only 3% of the sample reported Hispanic ethnicity). The sample was evenly divided between those with a college degree or higher (51%) and those with less education (49%). Almost two-thirds (65%) of the sample were married (or living with a partner) at the time of the survey and more than one half (55%) reported an annual household income of \$60,000 or higher.

**Table 13: Parent Characteristics, by child age group**

Variable	Parents of Younger Children (n=320)	Parents of Older Children (n=321)	p-value
Respondent Age (n= 618; mean, st dev)	34.3 (7.06)	38.9 (6.93)	<0.001
Number of Children (n= 636; n, %)			
1 child	64 (20.19)	54 (16.93)	
2 children	158 (49.84)	156 (48.90)	
3 children	63 (19.87)	70 (21.94)	
4 or more children	32 (10.09)	39 (12.23)	0.591
Childcare (n= 631; n, %)			
School Only	138 (44.23)	188 (58.93)	
School & After School/Day care or Babysitter	79 (25.32)	111 (34.80)	
Another arrangement	95 (30.45)	20 (6.27)	<0.001
Race (n= 635; n, %)			
Black or African American	143 (45.25)	140 (43.89)	
White	164 (51.90)	171 (53.61)	
Asian	6 (1.90)	1 (0.31)	
Other	3 (0.95)	7 (2.19)	0.149
Education Level (n= 635; n, %)			
Less than High School	7 (2.22)	3 (0.94)	
High School Graduate or GED	47 (14.87)	49 (15.36)	
Some college/trade/vocational	94 (29.75)	112 (35.11)	
College Graduate	106 (33.54)	106 (33.23)	
Graduate School	62 (19.62)	49 (15.36)	0.317
Marital Status (n= 635; n, %)			
Single, never married	82 (25.95)	71 (22.26)	
Separated, divorced or widowed	20 (6.33)	39 (12.23)	
Married or living w/ partner	209 (66.14)	202 (63.32)	
Married or w/partner not living together	5 (1.58)	7 (2.19)	0.062
Household Income (n= 625; n, %)			
9,999 or less	21 (6.82)	15 (4.73)	
10,000 to 19,999	20 (6.49)	16 (5.05)	
20,000 to 39,999	63 (20.45)	55 (17.35)	
40,000 to 59,999	41 (13.31)	52 (16.40)	
60,000 to 79,999	62 (20.13)	63 (19.86)	
80,000 to 99,999	45 (14.61)	43 (13.56)	
100,000 or more	56 (18.18)	73 (23.03)	0.487

### Parent Responses to the Videos

When asked for their reactions to the videos, parents fairly consistently rated the positive versions of the videos more highly (Table 14). Using a 10 point scale, mean scores were significantly higher for the positive versus the negative videos for both the burn and fire videos on: 1) how effective parents thought the video was in teaching the safety message; 2) how well they thought their child understood the message; 3) how likely they thought it was that their child would be able to do the right thing if confronted with the same situation; and 4) how effective they thought the video would be to teach other children. There were no differences in parents' ratings of how much attention their child paid to the video or how well they liked it.

<b>Question</b>	<b>Burn Negative Video</b>	<b>Burn Positive Video</b>	<b>t-test, p-value</b>	<b>Fire Negative Video</b>	<b>Fire Positive Video</b>	<b>t-test, p-value</b>
1. How effective do you think this video was in promoting this safety message for your child?	<b>7.48</b>	<b>7.84</b>	<b>2.01 0.04</b>	<b>7.53</b>	<b>8.40</b>	<b>5.22 0.000</b>
2. How well do you think your child understood this safety message?	<b>7.80</b>	<b>8.36</b>	<b>3.25 0.001</b>	<b>7.81</b>	<b>8.52</b>	<b>4.41 0.000</b>
3. How much attention do you think your child paid to the video?	8.92	8.85	0.54 0.59	8.78	8.94	1.38 0.17
4. How well do you think your child liked the video?	8.08	8.06	0.16 0.87	7.98	8.25	1.86 0.06
5. Would your child be able to do the right thing if he or she got burned? if he or she woke up in a smoke filled room?	<b>7.94</b>	<b>8.58</b>	<b>4.13 0.000</b>	<b>8.00</b>	<b>8.32</b>	<b>2.16 0.03</b>
6. How effective do you think this video would be for teaching other children about what to do: if they got burned on a stove? in the event of a fire?	<b>7.50</b>	<b>8.44</b>	<b>5.78 0.000</b>	<b>7.56</b>	<b>8.39</b>	<b>5.19 0.000</b>

\* Response options 1 to 10 for each item. N ranged from 314 – 323 across items.

Although very few parents (n=29, 4.5%) thought there was anything in the video that would upset their child, there was a significant difference between parents with younger and older children: 20 (6%) of parents with younger children compared to 9 (3%) of parents with older children (chi-square = 4.41, p=.04). There were no significant differences comparing the positive



versus negative videos for either the burn or fire videos for each of the age groups (Table 15). Among parents with younger children, their open ended responses to what might upset their child focused on the appearance of the burned hand (mentioned in response to both the positive and negative version of the video) and the child being in the hospital. One parent said her child got nervous when bad things happen and another reported that her child had been in a hospital so “she knows it’s bad”. Two comments suggested that scary messages were OK. In response to the negative burn video, a parent reported it was “a little scary - but still a necessary message”. In response to the positive fire video, a parent reported “I thought the smoke coming down would upset her - but that’s the point.” For older children, parents’ comments about what might upset their child focused on the child being fearful of a fire in their home and concern about having to go to a hospital.

<b>Table 15. Was there anything in the video you thought might upset your child?</b>						
	<b>Burn Negative Video</b>	<b>Burn Positive Video</b>	<b>p-value</b>	<b>Fire Negative Video</b>	<b>Fire Positive Video</b>	<b>p-value</b>
<b>Younger Children</b> Video upset child ( <i>n, %</i> )	N=153 4 (2.61)	N=163 4 (2.45)	0.928	N=153 8 (5.23)	N=163 4 (2.45)	0.197
<b>Older Children</b> Video upset child ( <i>n, %</i> )	N=163 2 (1.23)	N=158 2 (1.27)	0.975	N=161 2 (1.24)	N=158 3 (1.90)	0.637

Finally, we asked parents how helpful it would be to receive videos such as the ones they just watched. When asked how helpful it would be to receive videos like those just watched, parents who saw the positive video rated it significantly more helpful than those who saw the negative videos: mean score of 8.75 (out of 10) versus 8.30 ( $t=2.97$ ,  $p=0.003$ ).

## CONCLUSIONS

We were able to recruit a sufficiently large sample of parents with younger and older children who were diverse in terms of education and income levels, marital status and family size. With regard to race and ethnicity, our sample was made up of roughly equal numbers of White and African American families. Our sample under-represents other racial groups, and we had few Hispanic families in the sample, which should be taken into consideration when generalizing from our results to other population groups. We also do not know the extent to which our results are generalizable to messages other than those studied here – cool a burn, get low and go – or to other age groups.

We were also able to create videos that appropriately communicated positively and negatively framed safety messages for different age groups of children, which was critical to the internal validity of the experiment. The scores on our valence measures indicated that for 7 out of the 8 videos, messages were perceived as “good” or “bad” as intended. The exception was the positively framed fire video for younger children, which could be because escaping a fire in the bedroom was still considered a bad event even though the child was not obviously injured. It is likely that this video conveyed too subtle a message for younger children. However, for the most part, children who watched the positively oriented videos assessed the behaviors as being positive and children who watched the negatively oriented videos assessed the behaviors as being negative. This seemed more straightforward for the older children, but we suspect that a number of the younger children were confused by what was ‘good’ and ‘bad’ in a given video. For instance, even if a child did the positive thing (e.g., put cool water on a burn), having been burned in the first place may have been perceived negatively by children who were unable to differentiate between the injury (burn) or the event (fire) and the response to it. Another interesting finding was that the negatively oriented videos seemed more potent than the positively oriented videos for both age groups. Based on the valence ratings, the negative videos seem to pack more negativity than the positively oriented videos packed positivity.

Across age groups, children were able to remember these safety messages, regardless of whether they watched a positive or negative video. More than half the younger and two-thirds of the older participants could describe the videos without prompting. Content of the negatively oriented videos was recalled with the same frequency as content of the positively oriented videos. However, parental mediation was a significant factor. When parents engaged with children to discuss the content of the video, children were much more likely to remember what they saw. This was particularly true if parents were given guidelines on what to discuss with their children.

Recall, of course, is different from comprehension or understanding. It appears that the positively oriented burn message video was better understood by both the younger and the older children, in comparison to the negatively oriented videos. With the fire message video, enhanced understanding associated with message orientation appeared for just the older children. These findings suggest that for certain safety messages, children have an easier time understanding what to do, as opposed to understanding what not to do. Parental mediation was consistently associated with better understanding, across messages and across age groups.

This has implications for message design, as it suggests that depicting a positive behavior results in better comprehension. This is an important finding, especially in light of the other findings reported in this paper. Understanding of safety messages appears stronger when the

positive behavior is depicted. If educators want children to understand safety messages, they may want to produce messages that depict positive behaviors that result in positive outcomes. Negative messages, while memorable, may be more difficult to understand.

In comparison to negative messages, positive messages were associated with stronger perceptions of self efficacy, particularly for younger children. Children, in general, think they are capable of doing the 'right thing.' However, those presented with a positive safety message were more confident that they could react safely to a harmful situation than those who saw negative messages. As several behavior change theories see self-efficacy as a key factor leading to behavior change, messages that increase a child's confidence that he or she can do the right thing should be encouraged.

For both younger and older children, we did not see significant differences in their liking of positively versus negatively oriented videos. Only for one of the two subject matters (burn video) among older children was the positively oriented video liked more than the negatively oriented video. As there does not seem to be great differences in preferences, using positive messages appears to be the wise course of action.

Parents were generally very favorable toward the videos, rating all of the videos very highly across the majority of our indicators of effectiveness. As predicted, the positive videos scored more highly than the negative videos for both the burn and fire topics. Parents also thought receiving the positive videos would be more helpful than receiving the negative videos, and the high ratings suggest that receiving such videos would be very helpful to parents.

These favorable ratings should be balanced against the small, but potentially important, concern that showing negative outcomes like a burned hand (even in an otherwise positive video) could upset children. In this study, parents rarely expressed that type of concern, which is very reassuring. However, the fact that parents with younger children were significantly more likely to express that concern than parents with older children, while to be expected, suggests that careful attention must be paid to pilot testing in the development of educational materials. We were advantaged in this study by working with creative and technical experts in both media and fire safety to maximize the appropriateness of the messages, and we carefully pilot tested the videos with children and parents in advance of launching the study.

In summary, our findings indicated:

- The positive and negative videos were perceived as intended – positive videos were perceived as being positive and negative videos were perceived as being negative by both younger and older children. And, parents perceived the positive videos more favorably than the negative videos.
- Positive videos garnered more desirable outcomes than negative videos. This suggests that safety videos designed for children should be framed positively – where the positively modeled behaviors (e.g., using cool water on a burn) are shown to induce positive consequences (having a lower degree burn).
- Parental mediation produced positive outcomes, and parental mediation effects were maximized when parents were provided with discussion guidelines. When parents were only asked to engage in discussion with their children, without having been provided specific guidelines on how to do so, outcomes were less favorable.

## **APPENDICES**

1. Sample Size Justification
2. Consent Forms
3. Data Collection Instruments
4. Parent Mediation Scripts
5. Debriefing Materials

## APPENDIX 1. SAMPLE SIZE JUSTIFICATION

Sample size was calculated on the basis of the following formula:

$$n = \frac{Z_c^2 pq}{d^2}$$

where  $n$  = required sample size,  $Z_c$  = critical value of the test statistic (= 1.68 for a one-tailed test, in which we assume that watching the positive safety video will be more effective than watching the negative video)  $p = 1 - q$  = proportion of effect, and  $d$  = margin of error. Setting a conservative 5% difference between these two treatment groups in key study outcome of behavioral intention, and setting a 5% error rate, we get

$$n = \frac{1.68^2 (0.5)(.5)}{(.05)^2} = 53$$

This signified that we needed 53 participants per injury topic in the experimental design. We have 6 cells (2 video types: positive or negative x 3 mediation types: none, guided, or unguided) for each age group and hence the total sample size = 53 x 6 = 318, which we rounded up to 320. This signified that we needed 320 younger children and 320 older children for a total sample size of 640. We strived to obtain equal numbers of boys and girls.

## APPENDIX 2: CONSENT FORMS

### Parental Consent Form

#### JOHNS HOPKINS BLOOMBERG SCHOOL OF PUBLIC HEALTH

**Study Title:** National Fire Protection Association Message Testing Study

**Principal Investigator:** Dr. Andrea Gielen, Director, Center for Injury Research and Policy

**IRB Number:** 2646

**PI Version Date:** January, 2010

#### **This Form**

You are being asked to join a research study conducted by the Johns Hopkins School of Public Health. This informed consent form explains the research study and you and your child's part in the study. Please read it carefully and take as much time as you need.

This form describes the purpose of the study and who is able to do the study. The procedures of the study are explained. The form also describes the risks, benefits, and payment involved in this study. Lastly, this form gives you contact information if you have any questions or concerns. You will get a copy of this form.

Please remember you and your child do not have to do this study. Even if you decide during the study that you and your child want to stop, that is okay. You and your child may stop doing the study and there will be no penalty if you want to quit the study.

#### **Purpose of the research project**

The National Fire Protection Association is working with researchers at the Johns Hopkins Bloomberg School of Public Health to study safety messages and their effect on boys and girls, ages 4 to 9 years. This group was picked because this is a very important age to reach with safety messages, as young children can be hurt by fires and other household injuries. The researchers also want to know how to make better messages to reach children's parents and legal guardians.

#### **Who can participate?**

This study will work with around 670 pairs of parents/legal guardians and children. The child has to be between the ages 4 to 9 years. If you and your child speak English (the study materials are only in English) and we can schedule a convenient appointment for you to come to our offices, then you can be part of this study. There are no other reasons why a parent/legal guardian and a child would not be able to participate.

#### **Study Procedures**

This study has you come to an appointment at the AIM-Baltimore offices, at the address 101 East Chesapeake Avenue, Suite 102, Towson, Maryland.

The visit will take around an hour and a half.

First, researchers will describe the study and ask if you and your child still want to do the study. If yes, you and your child will be brought to a room where you will see a video for around 30 minutes.

After you will be brought to a separate room and we will audio record things that are said in this room.

You, the parent will fill out a survey that asks you questions about your child, media you own and use, and things you and your family do to stay safe. Also, the survey will ask you what you thought about the video. While you are filling out the survey, a research assistant will ask your child questions. These questions will also be about what the child thought about the video.

Once you and your child finish answering the questions, the research assistant will give you information about how to make you and your household safer. You can take home these materials. These materials are produced by the National Fire Protection Association.

This will be the end of the study and you and your child are free to leave.

### **Benefits and Risks**

We hope that you will benefit from this study by learning important safety messages, from the videos and from the information given to you by the research assistant. You and your child will be given useful safety materials that you can take home.

There is very little risk associated with being in this study. Possibly, you or your child may feel bad about some of the things you see in the videos. If this is the case, please let us know. At the end of the session, we will talk about ways to keep you and your child safer and this can make you feel better. If you or your child feels bad after the research session, please let us know.

There is also the possibility that you or your child feel uncomfortable answering the questions in the survey. If you or your child feel bad, please remember you can skip questions. Also if you or your child do not want to continue doing the study, you can leave without any penalty.

Whether you agree to be in the study is completely up to you, and you can change your mind about participating at any time and for any reason.

### **Payment**

At the end of your study session you will receive a \$50 as compensation for your time and effort.

### **Confidentiality**

This study is completely confidential. That means that you and your child's names will never be linked to the information that you give. Only unique numbers will be linked to the data.

Your contact information, which was used to set up your appointment, will be kept in a separate database. After this study is completed, unless you have given separate permission to AIM-Baltimore (the company that help bring together the people for this study), the file containing the names and contact information will be destroyed.

When your study session has been completed, the only paper that has your name is a copy of this written consent form.

**Who do I call if I have questions or problems?**

If you have any questions or problems, you may call:

Primary Investigator

Dr. Andrea Gielen  
Johns Hopkins Bloomberg School of  
Public Health  
624 N. Broadway, Room 554  
Baltimore, MD 21205  
Email: agielen@jhsph.edu  
Phone: 410-955-2397  
Fax: 410-614-2797

Co-investigator

Dr. Rajiv Rimal  
Johns Hopkins Bloomberg School of  
Public Health  
624 N. Broadway, Room 739  
Baltimore, MD 21205  
Email: rimal@jhsph.edu  
Phone: 410-502-0026  
Fax: 410-955-7241

If you have any additional questions, concerns or complaints about this study, please contact immediately the Johns Hopkins Bloomberg School of Public Health's Institutional Review Board (IRB). The contact information for the IRB office is:

Address: Johns Hopkins Bloomberg School of Public Health  
615 North Wolfe Street, Suite E1100  
Baltimore, MD 21205  
Telephone: 410-955-3193  
Toll Free: 1-888-262-3242  
Fax: 410-502-0584  
Email: irboffice@jhsph.edu

**Consent**

I have read and understand this consent form. I, along with my child  
(please print child's name) \_\_\_\_\_  
agree to do this study being done by Johns Hopkins Bloomberg School of Public Health.

Please print your name: \_\_\_\_\_

Please sign your name: \_\_\_\_\_ Date: \_\_\_\_\_

JHSPH Study Team Member \_\_\_\_\_  
(one copy is given to the Participant, one copy is kept in the files)



### Younger Child Assent

Researcher: Please read aloud the following.

Hi [Child's Name].

So I want to make sure you understand what is going on here.

While we are here together with your mom/dad/guardian, we will watch a video.

You will see things about different things. Some of the things you see might be good things. Some of the things you see might be bad things. After we are done watching the video, I will ask you some questions. These will be questions like what happened in the video and what did you think about the video. You might answer by saying yes or no. Other times you might point to a picture to show your answer.

It is possible that you might feel uncomfortable watching the video or answering the questions. We don't want you to feel uncomfortable, so please let me or your mom know if you are feeling bad. We think you will have fun doing this and we think that your answers will help us make better videos in the future.

You do not have to do this. You can tell us you want to stop and you won't get in trouble. Also, we won't tell anyone what you told us – we will bring together all the boys and girls' answers and tell other people what lots of children think about the videos.

Do you have any questions about what we are going to do?

(Researcher – Please pause and allow the child enough time to ask a question)

Do you still want to do this?

If you want to do this, please say "yes" so I can hear you. If you don't want to do this, please say "no" so I can hear you.

-----  
This research study has been explained to my child in my presence in language my child can understand. He/She has been encouraged to ask questions about the study now and any time in the future.

---

Print name of parent/legal guardian

Signature of Parent/Legal Guardian

Date

---

Print name of Research Assistant

Signature of Research Assistant

Date

## Older Child Assent

Research: Please read aloud the following.

Hi [Child's Name].

So I want to make sure you understand what is going on here.

While we are here together with your mom/dad/guardian, we will watch a video.

In the video you will see all sorts of things. Some things might be good and other things might be bad. After we are done watching, I will ask you some questions about the video. Many of these questions will ask you for your opinions about things, and there won't be any right or wrong answers. Mostly, we want to know what you think.

It is possible that you might feel uncomfortable watching the video or answering the questions. We don't want you to feel bad, so please let me or your mom know if you are feeling uncomfortable. We think you will have a bunch of fun doing this and you may even learn some new things. Also, by doing this we think that we can make better videos in the future – so thank you!

You do not have to do this. You can tell us you want to stop and you won't get in trouble.

Also, this study is "confidential." That means we are not going to put your name on any of the answers. In fact, we want to know what children think of these videos in general. When we tell people about our findings we will say that this is what lots of children think about the videos.

Do you have any questions about what we are going to do?

(Research – Please pause and allow the child enough time to ask a question)

Can you write your name? If so, please write it on this line.

This thumbs up means you want to do this. This thumbs down means you don't want to do this.

Please circle either the thumbs up or the thumbs down to show what you want to do.

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**CHILD'S NAME (Write your name on the line)**

# DO YOU WANT TO DO THIS?

(CIRCLE JUST ONE TO SHOW YOUR ANSWER)



YES, I WANT TO  
DO THIS



NO, I DO NOT  
WANT TO DO  
THIS

-----

This research study has been explained to my child in my presence in language my child can understand. He/She has been encouraged to ask questions about the study now and any time in the future.

---

Print name of parent/legal guardian

Signature of Parent/Legal Guardian

Date

---


Print name of Research Assistant

Signature of Research Assistant

Date

APPENDIX 3: DATA COLLECTION INSTRUMENTS

## YOUNGER CHILD SURVEY (ages 4-5)

<b>Unprompted Recall</b>	
<p>1. PROMPT 1: "Tell me all the things you saw when you were just watching."</p> <p>PROMPT 2: "What else?"</p> <p>PROMPT 3: "Anything else?"</p>	<p>1. "Get Low and Go"</p> <p>0. Did not mention</p> <p>1. Mentions after 1 prompt</p> <p>2. Mentions after 2 prompts</p> <p>3. Mentions after 3 prompts</p> <p>2. "Cool the Burn"</p> <p>0. Did not mention</p> <p>1. Mentions after 1 prompt</p> <p>2. Mentions after 2 prompts</p> <p>3. Mentions after 3 prompts</p>
<b>Prompted Recall</b>	
<p>These characters are Cubie and Orbie.</p> <p><i>Show picture #1.</i></p>	
<p>1. Do you remember any stories showing "Cubie and Orbie"?</p>	<p>0. No</p> <p>1. Yes</p>
<p>2. What do you remember?</p>	<p>1. Mentions "Get Low and Go"</p> <p>2. Mentions "Cool the Burn"</p>
<p>3. What else do you remember with "Cubie and Orbie"?</p>	<p>1. Mentions "Get Low and Go"</p> <p>2. Mentions "Cool the Burn"</p>
<i>If second story is NOT mentioned, ask:</i>	
<p>4. Do you remember another story showing Cubie and Orbie?</p>	<p>0. No</p> <p>1. Yes</p>
<p>5. What do you remember?</p>	<p>1. Mentions "Get Low and Go"</p> <p>2. Mentions "Cool the Burn"</p>

We are now going to talk about each of these short stories to find out what you remember. Let's talk about the story with Orbie.

Show picture #2.



## Specific Recall and Understanding

1. Here is Orbie. Can you tell what happened in this story?

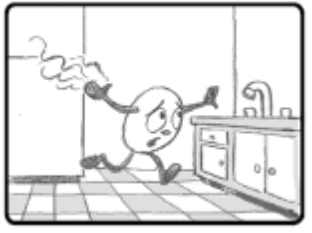
1. Mentions the precipitating event (Orbie got hurt).
  0. Does not mention precipitating event
  1. General response "got hurt."
  2. Specific response "Burned hand on stove or pan"
2. Mentions immediate reaction.
  0. Does not mention immediate reaction
  1. Orbie ran through the kitchen.
  2. Orbie ran hand under water.
  3. Orbie put butter on his hand.
3. Mentions subsequent activities
  0. Does not mention subsequent activities
  1. Orbie was sitting on the couch.
  2. Orbie was playing video games.
  3. Orbie was not playing video games.
4. Mentions a prevention message.
  0. No
  1. Yes
5. Mentions characters appearance.
  0. No
  1. Yes
6. Mentions positive versus negative.
  0. Did not mention positive or negative
  1. Positive
  2. Negative
7. Other: \_\_\_\_\_

Show picture #3.



2. Can you tell me what Orbie did here?  
(recall)

1. General response "got hurt."
2. Specific response "Burned hand on stove or pan"
3. Gave an incorrect response.
4. Said nothing

3. Was this good, bad or in-between? Please point to a face to show how bad or good it was to do that thing. <i>(understanding)</i>				
1. Very Bad	2. A Little Bad	3. In the Middle	4. A Little Good	5. Very Good
Then Orbie ran across the kitchen. <i>Show picture #4.</i>				
4. Can you tell me what Orbie did next? <i>(recall)</i>		1. General response "took care of hand" 2. Specific response "put water/butter on hand" 3. Gave incorrect response 4. Said nothing		
5. Was this good, bad or in-between? Please point to a face to show how bad or good it was to do that thing. <i>(understanding)</i>				
1. Very Bad	2. A Little Bad	3. In the Middle	4. A Little Good	5. Very Good
6. In the last scene, Orbie is sitting on the couch. Can you tell me what Orbie was doing? <i>(recall)</i>		1. Orbie WAS playing video games. 2. Orbie WAS NOT playing video games (doesn't mention friend). 3. Orbie WAS NOT playing video games (does mention friend). 4. Other _____ 5. Says "I don't know" 6. Says nothing		
<b>CHOOSE ONLY ONE ANSWER</b>				
7. Was Orbie sad, happy, or in-between? Please point to a face to show how sad or happy Orbie was.				
1. Very Sad	2. A Little Sad	3. Neither	4. A Little Happy	5. Very Happy
<b>Intentions</b>				
1. If you burned your hand on the stove, what would you do?		1. Go to the sink and put cool water on the hand 2. Find something like butter or margarine and put it on the hand 3. Do not put butter on the hand 4. Says something else _____ 5. Says "I don't know" 6. Says nothing		

## More Understanding

1. Let's say your cousin was taking cookies out of the oven and banged her hand on the oven. She seems to have burned herself. What would you tell her to do?

*(Show picture #6 to child. Point to each and describe.)*

1. Immediately cover her hand with a glove
2. Go to the sink and put cool water on her hand
3. Find something like butter or margarine and put it on her hand
4. Put her hand in a bucket of ice

2. If something very hot falls on your leg and starts burning you, what would do?

*(Show picture #7 to child. Point to each and describe.)*

1. Immediately cover your leg with a blanket
2. Find something like butter or margarine and put it on your leg
3. Find cool water and put it on your leg
4. Put your leg in a bucket of ice

## Perceptions of Social Norms

1. Think about other kids your age. If they burned themselves, around how many would put butter on the burn?

1. None	2. A few	3. Some	4. A lot	5. All
---------	----------	---------	----------	--------

2. Again, think about other kids your age. If they burned themselves, around how many would put cool water on the burn?

1. None	2. A few	3. Some	4. A lot	5. All
---------	----------	---------	----------	--------

## Perceptions Around the Behavior (Valence)

Now I am going to ask you about different things a child might do if he or she burned him or herself on the stove. I want you to tell me or point to a face to show how bad or good it is to do that thing.

1. If a child burned his arm on the stove, how bad or good would it be for him to put his arm into a bucket of ice?

1. Very Bad	2. A Little Bad	3. In the Middle	4. A Little Good	5. Very Good
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2. How bad or good would it be for him to put his arm under cool water?

1. Very Bad	2. A Little Bad	3. In the Middle	4. A Little Good	5. Very Good
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3. How bad or good would it be for him to put butter all over his arm?

1. Very Bad	2. A Little Bad	3. In the Middle	4. A Little Good	5. Very Good
-------------	-----------------	------------------	------------------	--------------

## Perceptions of Self-Efficacy

- |  |                 |
|--|-----------------|
| 1. There was a message about what to do if you burned yourself in the Orbie story. If you burned yourself do you think you would be able to put cool water on the burn? <i>(if answer is yes proceed to question #2)</i> | 0. No<br>1. Yes |
| 2. If you were all by yourself, would you still be able to put cool water on it?   | 0. No<br>1. Yes |

Now, let's talk about the story with Cubie.

Show picture #8.





## Specific Recall and Understanding

1. Here is Cubie. Can you tell what happened in this story?

1. Mentions the precipitating event (There was a fire in the bedroom).
  0. Does not mention the precipitating event
  1. General response "fire."
  2. Specific response "Smoke filled Cubie's bedroom while he was sleeping"
2. Mentions immediate reaction.
  0. Does not mention the immediate reaction
  1. Cubie woke up.
  2. Cubie crouched low and got out of the bedroom.
  3. Cubie stood up in the smoke.
3. Mentions subsequent activities
  0. Does not mention subsequent activities
  1. Cubie was okay/not okay.
  2. Cubie was riding a bicycle.
  3. Cubie was in the hospital.
4. Mentions a prevention message.
  0. No
  1. Yes
5. Mentions characters appearance.
  0. No
  1. Yes
6. Mentions positive versus negative.
  0. Does not mention positive or negative
  1. Positive
  2. Negative
7. Other \_\_\_\_\_

Cubie woke up.

Show picture #9.



2. Can you tell me what Cubie did next? (recall)

1. General response "Left the room."
2. Specific response "Crouched down and left the room"
3. Gave an incorrect response.
4. Said nothing.

3. Was this good, bad or in-between? (understanding)

1. Very Bad	2. A Little Bad	3. In the Middle	4. A Little Good	5. Very Good
-------------	-----------------	------------------	------------------	--------------

4. Can you tell me where Cubie was in the last scene of the story? <i>(recall)</i>	1. Cubie was in bed/in the hospital. 2. Cubie was riding his bike. 3. Other _____ 4. Says "I don't know" 5. Says nothing
--	--

5. Was Cubie sad, happy, or in-between? <i>(recall)</i>				
1. Very Sad	2. A Little Sad	3. Neither	4. A Little Happy	5. Very Happy

## Intentions

1. If there was smoke filling your bedroom, what would you do?	1. Mentions leaving room without getting low 2. Mentions getting low 3. Says something else _____ 4. Says "I don't know" 5. Says nothing
--	--

## More Understanding

1. Let's say there was a fire in your cousin's bedroom. What would you tell her to do?  <i>(Show picture #10 to child. Point to each and describe.)</i>	1. Crouch low and get out of the room. 2. Climb up high on a dresser 3. Find the phone and dial 911 4. Sit in the corner of a closet
2. Of these four things, what is the best thing to do if there is a fire in your bedroom?  <i>(Show picture #11 to child. Point to each and describe.)</i>	1. Slither like a snake and get out of the room. 2. Crouch near the ground and get out of the room 3. Stand up and walk quickly out of the room 4. Stand on the bed and scream out the window.

## Perceptions of Social Norms

1. Think about other kids your age. If they were in a room with smoke, around how many would stand up and try to walk out of the room?				
1. None	2. A few	3. Some	4. A lot	5. All

2. Again, think about other kids your age. If they were in a room with smoke, around how many would get low and get out of the room while staying low?				
1. None	2. A few	3. Some	4. A lot	5. All

## Perceptions of the Behaviors (Valence)

Now I am going to ask you about different things a child might do if he or she was in a room that was filling up with smoke. I want you to tell me or point to a face to show how bad or good it is to do that thing.

1. If a room was filling with smoke, how bad or good would it be to go into the clothes closet and wait for a firefighter?

1. Very Bad	2. A Little Bad	3. In the Middle	4. A Little Good	5. Very Good
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2. How bad or good would it be to get low and get out of the room?

1. Very Bad	2. A Little Bad	3. In the Middle	4. A Little Good	5. Very Good
-------------	-----------------	------------------	------------------	--------------

3. How bad or good would it be to look around the house, try to find a telephone, and dial 911?

1. Very Bad	2. A Little Bad	3. In the Middle	4. A Little Good	5. Very Good
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**Perceptions of Self-Efficacy**

1. There was a message about what to do if you were in a smoke filled room in the Cubie story. If you were in a smoke filled room, do you think you would be able to get low and go? <i>(If answer is yes proceed to question #2.)</i>	0. No 1. Yes
2. If you were all by yourself, would you still be able to get low and go?	0. No 1. Yes

**General Interest/Appeal**

1. In general, how much did YOU like watching the stories about Cubie and Orbie? *(show faces panel)*

1. They were boring and not interesting at all	2. They were a little boring. You didn't think they were interesting	3. In the middle	4. They were a little interesting	5. They were VERY interesting
--	--	------------------	-----------------------------------	-------------------------------

2. Tell me the name of your best friend. How much do you think [best friend's name] would like watching the stories about Cubie and Orbie? *(show faces panel)*

1. [Best friend's name] would think they were boring and not interesting at all	2. [Best friend's name] would think they were a little boring.	3. [Best friend's name] would think they were in the middle	4. [Best friend's name] would think they were a little interesting	5. [Best friend's name] would think they were VERY interesting
---	--	---	--	--

3. How much do you think other friends your age would like watching the stories about Cubie and Orbie?  
(show faces panel)

1. Other friends my age would think they were boring and not interesting at all	2. Other friends my age would think they were a little boring.	3. Other friends my age would think they were in the middle	4. Other friends my age would think they were a little interesting	5. Other friends my age would think they were VERY interesting
---	--	---	--	--

## Media Questions

Now we are done asking about the videos. I just have a few more questions.



1. Did you watch any TV yesterday?	0. No 1. Yes
2. If yes, what did you watch? (Have child name specific shows, not channels)	_____ _____ _____
3. Do you share a bedroom or do you have your own bedroom?	1. Share 2. Have own
4. Do you have a TV set in your bedroom?	0. No 1. Yes

I want you to think about how much television you watch on a regular day.

5. Do you watch television in the morning, like around breakfast time? (If answer is yes proceed to question #6. If answer is no proceed to question #7.)	0. No 1. Yes
6. Do you watch television only some mornings or every morning?	1. Only some mornings 2. Every morning
7. Do you watch television in the day time, around lunch time or in the afternoon? (If answer is yes proceed to question #8. If answer is no proceed to question #9.)	0. No 1. Yes
8. Do you watch television only some afternoons or every afternoon?	1. Only some afternoon 2. Every afternoon
9. Do you watch television in the evening, after dinner? (If answer is yes proceed to question #10. If answer is no proceed to question #11.)	0. No 1. Yes

10. Do you watch television only some evenings or every evening?	1. Only some evenings 2. Every evening
Now I want you to think about different types of television shows.	
11. Do you watch kids shows that are on Disney or Nickelodeon? <i>(if answer is yes proceed to question #12. If answer is no proceed to question #13.)</i>	0. No 1. Yes
12. Do you watch these shows sometimes or all the time?	1. Sometimes 2. All the time
13. Do you watch kids shows that are educational and on PBS? <i>(if answer is yes proceed to question #14. If answer is no proceed to question #15.)</i>	0. No 1. Yes
14. Do you watch these shows sometimes or all the time?	1. Sometimes 2. All the time
15. Do you watch shows that are for adults or kids older than you? <i>(If answer is yes proceed to question #16. If answer is no proceed to question #17.)</i>	0. No 1. Yes
16. Do you watch these shows sometimes or all the time?	1. Sometimes 2. All the time
Now I want to see if you can name some different TV characters. We will go one by one. If you know the character's name, tell me it. <i>(Show media characters)Picture #12</i>	
17a. Fetch (PBS character)	0. Incorrect 1. Correct
17b. Randy Jackson (from <i>American Idol</i> )	0. Incorrect 1. Correct
17c. Gary (Character from <i>Sponge Bob Square Pants</i> on Nick)	0. Incorrect 1. Correct
17d. Hannah Montana/Miley Cyrus (Disney character)	0. Incorrect 1. Correct
17e. Special Agent Seeley Booth/David Boreanaz (Character from <i>Bones</i> )	0. Incorrect 1. Correct
17f. Word Girl (PBS character)	0. Incorrect 1. Correct
17g. Martha (PBS character)	0. Incorrect 1. Correct
17h. Jake Long (Disney Character)	0. Incorrect 1. Correct
17i. Penny/Kaley Cuoco(Character from <i>Big Bang Theory</i> )	0. Incorrect 1. Correct

# OLDER CHILD SURVEY (ages 6-9)

<b>Unprompted Recall</b>	
<p>1. PROMPT 1: "Tell me all the things you saw when you were just watching."</p> <p>PROMPT 2: "What else?"</p> <p>PROMPT 3: "Anything else?"</p>	<p>1. "Get Low and Go"</p> <ul style="list-style-type: none"> <li>0. Did not mention</li> <li>1. Mentions after 1 prompt</li> <li>2. Mentions after 2 prompts</li> <li>3. Mentions after 3 prompts</li> </ul> <p>2. "Cool the Burn"</p> <ul style="list-style-type: none"> <li>0. Did not mention</li> <li>1. Mentions after 1 prompt</li> <li>2. Mentions after 2 prompts</li> <li>3. Mentions after 3 prompts</li> </ul>
<b>Prompted Recall</b>	
<p>These characters are Dylan and Reese.</p> <p><i>Show picture #1.</i></p>	
<p>1. Do you remember any videos showing Dylan and Reese?</p>	<p>0. No</p> <p>1. Yes</p>
<p>2. What do you remember?</p>	<p>1. Mentions "Get Low and Go"</p> <p>2. Mentions "Cool the Burn"</p>
<p>These characters are Sam and Pat.</p> <p><i>Show picture #2</i></p>	
<p>3. Do you remember any video showing Sam and Pat?</p>	<p>8. No</p> <p>2. Yes</p>
<p>4. What do you remember?</p>	<p>3. Mentions "Get Low and Go"</p> <p>4. Mentions "Cool the Burn"</p>

We are now going to talk about each of these short videos. Let's talk about the video with Dylan and Reese.

Show picture #3.



## Specific Recall and Understanding

1. Dylan and Reese talked about their friend Ronnie. Can you tell what they said happened to Ronnie?

1. Mentions the precipitating event (Ronnie got hurt).
  0. Does not mention the precipitating event
  1. General response "got hurt"
  2. Specific response "Burned hand on stove or pan"
2. Mentions immediate reaction.
  0. Does not mention immediate reaction
  1. Ronnie ran through the kitchen.
  2. Ronnie ran hand under water.
  3. Ronnie put butter on his hand.
3. Mentions subsequent activities
  0. Does not mention subsequent activities
  1. Ronnie's hand was very red and blistering.
  2. Ronnie's hand was red but ok.
  3. Ronnie went to the emergency room.
  4. Ronnie could/could not play basketball.
4. Mentions a prevention message.
  0. No
  1. Yes
5. Mentions characters appearance.
  0. No
  1. Yes
6. Mentions positive versus negative.
  0. Does not mention positive or negative
  1. Positive
  2. Negative
7. Other \_\_\_\_\_

Show picture #4.



2. Can you tell me what Ronnie did here? (recall)	<ol style="list-style-type: none"> <li>1. General response "got hurt."</li> <li>2. Specific response "Burned hand on stove or pan"</li> <li>3. Gave an incorrect response.</li> <li>4. Said nothing.</li> </ol>
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3. Was this good, bad, or in-between? Please point to a face to show how bad or good it was to do that thing. (understanding)

1. Very Bad	2. A Little Bad	3. In the Middle	4. A Little Good	5. Very Good
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Then Ronnie ran across the kitchen. Show picture #5.



4. Can you tell me what Ronnie did next? (recall)	<ol style="list-style-type: none"> <li>1. General response "took care of hand"</li> <li>2. Specific response "put water/butter on hand"</li> <li>3. Gave incorrect response</li> <li>4. Said nothing</li> </ol>
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5. Was this good, bad or in-between? Please point to a face to show how bad or good it was to do that thing. (understanding)

1. Very Bad	2. A Little Bad	3. In the Middle	4. A Little Good	5. Very Good
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6. In the last scene, Dylan talks about Ronnie and the big basketball game. Do you remember what is going to happen? (recall)	<ol style="list-style-type: none"> <li>1. Ronnie will definitely get to play in the game.</li> <li>2. Ronnie won't be able to play in the game.</li> <li>3. Other _____</li> <li>4. Says "I don't know"</li> <li>5. Says nothing</li> </ol>
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7. Think about Ronnie. How do you think Ronnie feels? Please point to a face to show how sad or happy Ronnie feels.

1. Very Sad	2. A Little Sad	3. Neither	4. A Little Happy	5. Very Happy
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## Intentions

1. If you burned your hand on the stove, what would you do?	<ol style="list-style-type: none"> <li>1. Go to the sink and put cool water on the hand</li> <li>2. Find something like butter or margarine and put it on the hand</li> <li>3. Do not put butter on the hand</li> <li>4. Says something else _____</li> <li>5. Says "I don't know"</li> <li>6. Says nothing</li> </ol>
---	--



## More Understanding

1. Let's say your cousin was taking cookies out of the oven and banged her hand on the oven. She seems to have burned herself. What would you tell her to do?

*(Show picture #6 to child. Point to each and describe.)*

1. Immediately cover her hand with a glove
2. Go to the sink and put cool water on her hand
3. Find something like butter or margarine and put it on her hand
4. Put her hand in a bucket of ice

2. If something very hot falls on your leg and starts burning you, what would do?

*(Show picture #7 to child. Point to each and describe.)*

1. Immediately cover your leg with a blanket
2. Find something like butter and put it on your leg
3. Find cool water and put it on your leg
4. Put your leg in a bucket of ice

## Perceptions of Social Norms

1. Think about other kids your age. If they burned themselves, around how many would put butter on the burn?

1. None	2. A few	3. Some	4. A lot	5. All
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2. Again, think about other kids your age. If they burned themselves, around how many would put cool water on the burn?

1. None	2. A few	3. Some	4. A lot	5. All
---------	----------	---------	----------	--------

## Perceptions Around the Behavior (Valence)

Now I am going to ask you about different things a child might do if he or she burned him or herself on the stove. I want you to tell me or point to a face to show how bad or good it is to do that thing.

1. If a child burned his arm on the stove, how bad or good would it be for him to put his arm into a bucket of ice?

1. Very Bad	2. A Little Bad	3. In the Middle	4. A Little Good	5. Very Good
-------------	-----------------	------------------	------------------	--------------

2. How bad or good would it be for him to put his arm under cool water?

1. Very Bad	2. A Little Bad	3. In the Middle	4. A Little Good	5. Very Good
-------------	-----------------	------------------	------------------	--------------

3. How bad or good would it be for him to put butter all over his arm?

1. Very Bad	2. A Little Bad	3. In the Middle	4. A Little Good	5. Very Good
-------------	-----------------	------------------	------------------	--------------

## Perceptions of Self-Efficacy

- |   |                         |
|---|-------------------------|
| <p>1. There was a message about what to do if you burned yourself in the "After School" story. If you burned yourself do you think you would be able to put cool water on the burn? <i>(If answer is yes proceed to question #2.)</i></p> | <p>0. No<br/>1. Yes</p> |
| <p>2. If you were all by yourself, would you still be able to put cool water on it?</p>   | <p>0. No<br/>1. Yes</p> |


Now, let's talk about the story with Pat and Sam.

Show picture #8.



## Specific Recall and Understanding

- |  |   |
|--|---|
| <p>1. Pat and Sam talk about their friend Terry. Can you tell me what they said happened to Terry?</p> | <ol style="list-style-type: none"> <li>1. Mentions the precipitating event (There was a fire in the bedroom).             <ol style="list-style-type: none"> <li>0. Does not mention precipitating event</li> <li>1. General response "fire."</li> <li>2. Specific response "Smoke filled Terry's bedroom while she was sleeping"</li> </ol> </li> <li>2. Mentions immediate reaction.             <ol style="list-style-type: none"> <li>0. Does not mention immediate reaction</li> <li>1. Terry woke up.</li> <li>2. Terry crouched low and got out of the bedroom.</li> <li>3. Terry stood up in the smoke.</li> </ol> </li> <li>3. Mentions subsequent activities             <ol style="list-style-type: none"> <li>0. Does not mention subsequent activities</li> <li>1. Terry was okay/not okay.</li> <li>2. Terry needed help breathing/was in hospital.</li> <li>3. Terry met her family in their meeting place.</li> </ol> </li> <li>4. Mentions a prevention message.             <ol style="list-style-type: none"> <li>0. No</li> <li>1. Yes</li> </ol> </li> <li>5. Mentions characters appearance.             <ol style="list-style-type: none"> <li>0. No</li> <li>1. Yes</li> </ol> </li> <li>6. Mentions positive versus negative.             <ol style="list-style-type: none"> <li>0. Does not mention positive or negative</li> <li>1. Positive</li> <li>2. Negative</li> </ol> </li> <li>7. Other _____</li> </ol> |
|--|---|

<p>Terry woke up.</p> <p>Show picture #9.</p>	
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- |  |  |
|--|--|
| <p>1. Here is Terry. Can you tell me what Terry did next? (recall)</p> | <ol style="list-style-type: none"> <li>1. General response "Left the room."</li> <li>2. Specific response "Crouched down and left the room"</li> <li>3. Gave an incorrect response.</li> <li>4. Said nothing.</li> </ol> |
|--|--|

2. Was this good, bad or in-between? (*understanding*)

1. Very Bad	2. A Little Bad	3. In the Middle	4. A Little Good	5. Very Good
-------------	-----------------	------------------	------------------	--------------

- |   |  |
|---|--|
| <p>3. Can you tell me what happened to Terry in the last part of the story? (<i>recall</i>)</p> | <ol style="list-style-type: none"> <li>1. Mentions hospital, ambulance, or being carried</li> <li>2. Terry made it out safe and met her parents.</li> <li>3. Other _____</li> <li>4. Says "I don't know"</li> <li>5. Says nothing</li> </ol> |
|---|--|

4. How do you think Terry felt? (*understanding*)

1. Very Sad	2. A Little Sad	3. Neither	4. A Little Happy	5. Very Happy
-------------	-----------------	------------	-------------------	---------------

## Intentions

- |   |  |
|---|--|
| <p>1. If there was smoke filling your bedroom, what would you do?</p> | <ol style="list-style-type: none"> <li>1. Mentions leaving room without getting low</li> <li>2. Mentions getting low</li> <li>3. Says something else _____</li> <li>4. Says "I don't know"</li> <li>5. Says nothing</li> </ol> |
|---|--|

## More Understanding

- |   |   |
|---|---|
| <p>1. Let's say there was a fire in your cousin's bedroom. What would you tell her to do?</p> <p>(Show picture #10 to child. Point to each and describe.)</p> | <ol style="list-style-type: none"> <li>1. Crouch low and get out of the room.</li> <li>2. Climb up high on a dresser</li> <li>3. Find the phone and dial 911</li> <li>4. Sit in the corner of a closet</li> </ol> |
|---|---|

<p>2. Of these four things, what is the best thing to do if there is a fire in your bedroom? (Show picture #11 to child. Point to each and describe.)</p>	<p>1. Slither like a snake and get out of the room. 2. Crouch near the ground and get out of the room 3. Stand up and walk quickly out of the room 4. Stand on the bed and scream out the window.</p>
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## Perceptions of Social Norms

1. Think about other kids your age. If they were in a room with smoke, around how many would stand up and try to walk out of the room?

1. None	2. A few	3. Some	4. A lot	5. All
---------	----------	---------	----------	--------

2. Again, think about other kids your age. If they were in a room with smoke, around how many would get low and get out of the room while staying low?

1. None	2. A few	3. Some	4. A lot	5. All
---------	----------	---------	----------	--------

## Perceptions of the Behaviors (Valence)

Now I am going to ask you about different things a child might do if he or she was in a room that was filling up with smoke. I want you to point to a number to show how bad or good it is to do that thing.

4. If a room was filling with smoke, how bad or good would it be to go into the clothes closet and wait for a firefighter?

1. Very Bad	2. A Little Bad	3. In the Middle	4. A Little Good	5. Very Good
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5. How bad or good would it be to get low and get out of the room?

1. Very Bad	2. A Little Bad	3. In the Middle	4. A Little Good	5. Very Good
-------------	-----------------	------------------	------------------	--------------

6. How bad or good would it be to look around the house, try to find a telephone, and dial 911?

1. Very Bad	2. A Little Bad	3. In the Middle	4. A Little Good	5. Very Good
-------------	-----------------	------------------	------------------	--------------

## Perceptions of Self-Efficacy

<p>1. There was a message about what to do if you were in a smoke filled room. If you were in a smoke filled room, do you think you would be able to get low and go? (If answer is yes, proceed to question #2.)</p>	<p>0. No 1. Yes</p>
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<p>2. If you were all by yourself, would you still be able to get low and go?</p>	<p>0. No 1. Yes</p>
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## General Interest/Appeal

1. In general, how much did YOU like watching the stories about Ronnie and Terry? (*show faces panel*)

1. They were boring and not interesting at all	2. They were a little boring. You didn't think they were interesting	3. In the middle	4. They were a little interesting	5. They were VERY interesting
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2. Tell me the name of your best friend. How much do you think [best friend's name] would like watching the stories about Ronnie and Terry? (*show faces panel*)

1. [Best friend's name] would think they were boring and not interesting at all	2. [Best friend's name] would think they were a little boring.	3. [Best friend's name] would think they were in the middle	4. [Best friend's name] would think they were a little interesting	5. [Best friend's name] would think they were VERY interesting
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3. How much do you think other friends your age would like watching the stories about Ronnie and Terry? (*show faces panel*)

1. Other friends my age would think they were boring and not interesting at all	2. Other friends my age would think they were a little boring.	3. Other friends my age would think they were in the middle	4. Other friends my age would think they were a little interesting	5. Other friends my age would think they were VERY interesting
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## Media Questions

Now we are done asking about the videos. I just have a few more questions.

1. Did you watch any TV yesterday?

- 0. No
- 1. Yes

2. If yes, what did you watch? (*Have child name specific shows, not channels*)

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3. Do you share a bedroom or do you have your own bedroom?

- 1. Share
- 2. Have own

4. Do you have a TV set in your bedroom?	0. No 1. Yes
I want you to think about how much television you watch on a regular day.	
5. Do you watch television in the morning, like around breakfast time? (If answer is yes proceed to question #6. If answer is no proceed to question #7.)	0. No 1. Yes
6. Do you watch television only some mornings or every morning?	1. Only some mornings 2. Every morning
7. Do you watch television in the day time, around lunch time or in the afternoon? (If answer is yes proceed to question #8. If answer is no proceed to question #9.)	0. No 1. Yes
8. Do you watch television only some afternoons or every afternoon?	1. Only some afternoons 2. Every afternoon
9. Do you watch television in the evening, after dinner? (If answer is yes proceed to question #10. If answer is no proceed to question #11.)	0. No 1. Yes
10. Do you watch television only some evenings or every evening?	1. Only some evenings 2. Every evening
Now I want you to think about different types of television shows.	
11. Do you watch kids shows that are on Disney or Nickelodeon? (If answer is yes proceed to question #12. If answer is no proceed to question #13.)	0. No 1. Yes
12. Do you watch these shows sometimes or all the time?	1. Sometimes 2. All the time
13. Do you watch kids shows that are educational and on PBS? (If answer is yes proceed to question #14. If answer is no proceed to question #15.)	0. No 1. Yes
14. Do you watch these shows sometimes or all the time?	1. Sometimes 2. All the time
15. Do you watch shows that are for adults or kids older than you? (If answer is yes proceed to question #16. If answer is no proceed to question #17.)	0. No 1. Yes
16. Do you watch these shows sometimes or all the time?	1. Sometimes 2. All the time

Now I want to see if you can name some different TV characters. We will go one by one. If you know the character's name, tell me it.

*(Show media characters)Picture #12*

17a. Fetch (PBS character)	0. Incorrect 1. Correct
17b. Randy Jackson (from <i>American Idol</i> )	0. Incorrect 1. Correct
17c. Gary (Character from <i>Sponge Bob Square Pants</i> on Nick)	0. Incorrect 1. Correct
17d. Hannah Montana/Miley Cyrus (Disney character)	0. Incorrect 1. Correct
17e. Special Agent Seeley Booth/David Boreanaz (Character from <i>Bones</i> )	0. Incorrect 1. Correct
17f. Word Girl (PBS character)	0. Incorrect 1. Correct
17g. Martha (PBS character)	0. Incorrect 1. Correct
17h. Jake Long (Disney Character)	0. Incorrect 1. Correct
17i. Penny/Kaley Cuoco(Character from <i>Big Bang Theory</i> )	0. Incorrect 1. Correct

# PARENT QUESTIONNAIRE

Thank you for filling out the survey. As mentioned in the consent form, you are free to skip any question that you do not feel comfortable answering.

<i>First, we are going to ask you some questions about your home.</i>	
1. How many floors does your home have?	1. 1 floor 2. 2 floors 3. 3 floors 4. More than 3 floors
2. How many smoke alarms do you have in your home?	0. None → Skip question 3, please go to question 4 1. 1 smoke alarm 2. 2 smoke alarms 3. 3 smoke alarms 4. More than 3 smoke alarms 5. I have smoke alarms but I don't know how many
3. When was the last time the batteries in your smoke alarm(s) were changed?	1. Less than or about 6 months ago 2. More than 6 months ago 3. Never 4. Don't remember 5. My smoke alarms are hard wired into my electrical system 6. My smoke alarms have 10 year lithium batteries
4. Have you ever tested the temperature of your hot water with a thermometer?	0. No → Skip question 5, please go to question 6 1. Yes
5. If yes, what is the temperature?	1. 120 degrees or less 2. Between 120 degree and 140 degrees 3. More than 140 degrees 4. I do not know
6. Have you every adjusted the temperature of your water heater to make the water hotter or colder? If yes, did you make the water hotter or colder?	0. No, never adjusted 1. Yes, made water hotter 2. Yes, made water cooler
7. Has the child who is here with you today ever been burned or had a fire related injury?	0. No → Skip question 8, please go to next section 1. Yes → Please describe what happened: _____ _____



8. If yes, did your child require medical care?	0. No 1. Yes
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***Now, please answer some questions about the video that you just saw. These questions are about the video in which the character's hand is burned on a hot pan on the stove.***

1. How much do you think talking to your child about the video helped him/her understand the safety message? *(Please circle a number from 1 to 10, where 1 means did not help at all and 10 means helped a lot):*

Did not help at all    -1-----2-----3-----4-----5-----6-----7-----8-----9-----10-    Helped a lot

Check here if you did not talk with your child about the video \_\_\_\_\_

2. In your opinion, what was the most important safety message in the video? (Choose only one answer)	1. Don't use butter on a burn 2. Use cool water on a burn 3. Always bandage a burn 4. Something else _____ 5. Don't know → Skip question 3, please go to question 4
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3. How effective do you think this video was in promoting this safety message for your child? *(Please circle a number from 1 to 10, where 1 means not at all effective and 10 means extremely effective):*

Not at all effective    -1-----2-----3-----4-----5-----6-----7-----8-----9-----10-    Extremely effective

4. How well do you think your child understood this safety message? *(Please circle a number from 1 to 10, where 1 means did not understand at all and 10 means understood it very well):*

Did not understand it at all    -1-----2-----3-----4-----5-----6-----7-----8-----9-----10-    Understood it very well

5. How much attention do you think your child paid to the video? (Remember, we are only talking about the short video in which the character's hand is burned on a hot pan on the stove.) *(Please circle a number from 1 to 10, where 1 means did not pay any attention and 10 means paid almost complete attention):*

Did not pay any attention    -1-----2-----3-----4-----5-----6-----7-----8-----9-----10-    Paid almost complete attention

<p>6. How well do you think your child liked the video? <i>(Please circle a number from 1 to 10, where 1 means did not like at all and 10 means liked it a lot):</i></p> <p>Did not like it at all    -1-----2-----3-----4-----5-----6-----7-----8-----9-----10-    Liked it a lot</p>	
<p>7. Was there anything in this video that you thought would upset your child?</p>	<p>0. No</p> <p>1. Yes → Please explain: _____</p> <p>_____</p>
<p>8. In the video, there was a message about what your child should or should not do if he or she got burned. Would your child be able to do the right thing if he or she got burned? <i>(Please circle a number from 1 to 10, where 1 means definitely could not and 10 means definitely could do the right thing)</i></p> <p>Definitely could not    -1-----2-----3-----4-----5-----6-----7-----8-----9-----10-    Definitely could</p>	
<p>9. How effective do you think this video would be for teaching <u>other</u> children about what to do if they got burned on a stove? <i>(Please circle a number from 1 to 10, where 1 means did not at all effective and 10 means extremely effective):</i></p> <p>Not at all effective    -1-----2-----3-----4-----5-----6-----7-----8-----9-----10-    Extremely effective</p>	

<p><b><i>Now, please answer some questions about the other short video that you just saw. These questions are about the video in which the character woke up in a smoke filled room .</i></b></p>	
<p>1. How much do you think talking to your child about the video helped him/her understand the safety message? <i>(Please circle a number from 1 to 10, where 1 means did not help at all and 10 means helped a lot):</i></p> <p>Did not help at all    -1-----2-----3-----4-----5-----6-----7-----8-----9-----10-    Helped a lot</p> <p>Check here if you did not talk with your child about the video _____</p>	
<p>2. In your opinion, what was the most important safety message in the video? (Choose only one answer)</p>	<p>1. Don't stand up and run out of the room</p> <p>2. Get down low to get out of the room</p> <p>3. Touch the door to see if it's hot</p> <p>4. Something else _____</p> <p>5. Don't know → Skip question 3, please go to question 4</p>
<p>3. How effective do you think this video was in promoting this safety message for your child? <i>(Please circle a number from 1 to 10, where 1 means not at all effective and 10 means extremely effective):</i></p> <p>Not at all effective    -1-----2-----3-----4-----5-----6-----7-----8-----9-----10-    Extremely effective</p>	

<p>4. How well do you think your child understood this safety message? <i>(Please circle a number from 1 to 10, where 1 means did not understand it at all and 10 means understood it very well):</i></p> <p>Did not understand    -1-----2-----3-----4-----5-----6-----7-----8-----9-----10-    Understood it very well it at all</p>	
<p>5. How much attention do you think your child paid to the video? (Remember we are talking about the video in which the character woke up in a smoke filled room.)(Please circle a number from 1 to 10, where 1 means did not pay any attention and 10 means paid almost complete attention):</p> <p><i>Did not pay any attention</i>                    -1-----2-----3-----4-----5-----6-----7-----8-----9-----10-                    Paid almost complete attention</p>	
<p>6. How well do you think your child liked the video? <i>(Please circle a number from 1 to 10, where 1 means did not like it at all and 10 means liked it a lot):</i></p> <p>Did not like it at all    -1-----2-----3-----4-----5-----6-----7-----8-----9-----10-    Liked it a lot</p>	
<p>7. Was there anything in this video that you thought would upset your child?</p>	<p>0. No</p> <p>1. Yes → Please explain _____</p> <p>_____</p>
<p>8. In the video, there was a message about what your child should or should not do if he or she woke up in a smoke filled room. Would your child be able to do the right thing if there was a fire in the house? <i>(Please circle a number from 1 to 10, where 1 means definitely could not and 10 means definitely could do the right thing):</i></p> <p>Definitely could not    -1-----2-----3-----4-----5-----6-----7-----8-----9-----10-    Definitely could</p>	
<p>9. How effective do you think this video would be for teaching <u>other</u> children about what to do in the event of a fire? <i>(Please circle a number from 1 to 10, where 1 means not at all effective and 10 means extremely effective):</i></p> <p>Not at all effective    -1-----2-----3-----4-----5-----6-----7-----8-----9-----10-    Extremely effective</p>	

<b><i>We are now going to ask you some questions about your use of media.</i></b>	
<p>1. Does your child (who is here today) have a TV set in his or her bedroom (or the room where he or she sleeps)?</p>	<p>0. No</p> <p>1. Yes</p>

<p>2. On a typical <u>weekday</u> (during the school year), how much time does your child spend watching television?</p>	<p>0. Does not watch TV  1. About half an hour  2. Close to an hour  3. 1 to 2 hours  4. More than 2 hours but less than 3 hours  5. More than 3 hours</p>
<p>3. On a typical <u>weekend day</u>, how much time does your child spend watching television?</p>	<p>0. Does not watch TV  1. About half an hour  2. Close to an hour  3. 1 to 2 hours  4. More than 2 hours but less than 3 hours  5. More than 3 hours</p>
<p>4. On a typical <u>weekday</u> (during the school year), how much time does your child spend on the internet?</p>	<p>0. Does not play on the internet  1. About half an hour  2. Close to an hour  3. 1 to 2 hours  4. More than 2 hours but less than 3 hours  5. More than 3 hours</p>
<p>5. On a typical <u>weekend day</u>, how much time does your child spend on the internet?</p>	<p>0. Does not play on the internet  1. About half an hour  2. Close to an hour  3. 1 to 2 hours  4. More than 2 hours but less than 3 hours  5. More than 3 hours</p>
<p>6. On a typical <u>weekday</u> (during the school year), how much time does your child spend playing video games?</p>	<p>0. Does not play video games  1. About half an hour  2. Close to an hour  3. 1 to 2 hours  4. More than 2 hours but less than 3 hours  5. More than 3 hours</p>
<p>7. On a typical <u>weekend day</u>, how much time does your child spend playing video games?</p>	<p>0. Does not play video games  1. About half an hour  2. Close to an hour  3. 1 to 2 hours  4. More than 2 hours but less than 3 hours  5. More than 3 hours</p>

<p>8. During a typical week (during the school year), how much time does your child spend in front of a screen? Please include TV, video games, and computer time. Please make your best guess in terms of hours and minutes per week:</p>	<p>_____ hours _____ minutes per week</p>
<p>9. A. If you were looking for child safety information, which <u>three</u> of these sources of information would you go to? (Check only <u>three</u>. If more than three apply, please choose the best three.)</p> <p> <input type="checkbox"/> TV                                      <input type="checkbox"/> Newspapers                                      <input type="checkbox"/> Pediatrician  <input type="checkbox"/> Internet searches or websites                                      <input type="checkbox"/> Magazines                                      <input type="checkbox"/> Friends  <input type="checkbox"/> On-line parenting networks                                      <input type="checkbox"/> Books                                      <input type="checkbox"/> Family members </p> <p><input type="checkbox"/> Other → Please describe _____</p>	
<p>10. Of those you just checked, which <u>one</u> is the most important? _____</p>	
<p>11. How helpful would it be to receive safety videos like the ones you saw today? (Please circle a number from 1 to 10, where 1 means not at all helpful 10 means extremely helpful):</p> <p>Not at all helpful      -1-----2-----3-----4-----5-----6-----7-----8-----9-----10-      Extremely helpful</p>	
<p><b>Now we are going to ask you your opinions about fires and burns and talking to your children about these topics.</b></p>	
<p>1. How likely is it that your home could catch fire? (Please circle a number from 1 to 10, where 1 means not at all likely and 10 means extremely likely):</p> <p>Not at all likely      -1-----2-----3-----4-----5-----6-----7-----8-----9-----10-      Extremely likely</p>	
<p>2. How strongly do you feel that you should talk to your child about what to do in case of a fire? (Please circle a number from 1 to 10, where 1 means I don't think I should and 10 means I definitely should):</p> <p>I don't think I should    -1-----2-----3-----4-----5-----6-----7-----8-----9-----10-    I definitely should</p>	
<p>3. How confident are you that you can teach your child what to do in case of a fire? (Please circle a number from 1 to 10, where 1 means not at all confident and 10 means extremely confident):</p> <p>Not at all confident    -1-----2-----3-----4-----5-----6-----7-----8-----9-----10-    Extremely confident</p>	

4. If you taught your child about what to do in case of a fire, how effective do you think that would be in reducing the injury? *(Please circle a number from 1 to 10, where 1 means not at all effective and 10 means extremely effective):*

Not at all effective    -1-----2-----3-----4-----5-----6-----7-----8-----9-----10-    Extremely effective

5. In your opinion, how many parents in the United States have talked to their kids about what to do in case of a fire? *(Please circle a number from 1 to 10, where 1 means extremely few, almost none of the homes and 10 means almost all the homes):*

Extremely few,            -1-----2-----3-----4-----5-----6-----7-----8-----9-----10-    Almost all the homes  
almost none of the  
homes

6. In the next month, how likely is it that you will talk to your child about what to do if there was a fire in your home? *(Please circle a number from 1 to 10, where 1 means not at all likely and 10 means extremely likely):*

Not at all likely            -1-----2-----3-----4-----5-----6-----7-----8-----9-----10-    Extremely likely

7. These next questions are about getting burned on the stove. How likely is it that your child (who is here today) could burn himself/herself on the stove, just like what happened in the story? *(Please circle a number from 1 to 10, where 1 means not at all likely and 10 means extremely likely):*

Not at all likely            -1-----2-----3-----4-----5-----6-----7-----8-----9-----10-    Extremely likely

8. If your child (who is here today) were to get burned on the stove, how serious do you think the injury would be? *(Please circle a number from 1 to 10, where 1 means not at all serious and 10 means extremely serious):*

Not at all serious        -1-----2-----3-----4-----5-----6-----7-----8-----9-----10-    Extremely serious

9. How strongly do you feel that you should talk to your child about what to do if he or she got burned on the stove? *(Please circle a number from 1 to 10, where 1 means I don't think I should and 10 means I definitely should):*

I don't think I should    -1-----2-----3-----4-----5-----6-----7-----8-----9-----10-    I definitely should

10. How confident are you that you can teach your child what to do if he or she got burned on the stove? *(Please circle a number from 1 to 10, where 1 means not at all confident and 10 means extremely confident):*

Not at all confident        -1-----2-----3-----4-----5-----6-----7-----8-----9-----10-    Extremely confident

11. If you taught your child about what to do if he or she got burned on the stove how effective do you think that would be in reducing the injury? (Please circle a number from 1 to 10, where 1 means not at all effective and 10 means extremely effective):

Not at all effective    -1-----2-----3-----4-----5-----6-----7-----8-----9-----10-    Extremely effective

12. In your opinion, how many parents in the United States have talked to their kids about what to do if they got burned on the stove? (Please circle a number from 1 to 10, where 1 means extremely few, almost none of the homes and 10 means almost all the homes):

Extremely few,        -1-----2-----3-----4-----5-----6-----7-----8-----9-----10-    Almost all the homes  
almost none of the  
homes

13. In the next month, how likely is it that you will talk to your child about what to do if he or she got burned on the stove? (Please circle a number from 1 to 10, where 1 means not at all likely and 10 means extremely likely):

Not at all likely        -1-----2-----3-----4-----5-----6-----7-----8-----9-----10-    Extremely likely

14. These next questions are about smoke alarms. How confident are you that you will be able to change the batteries in all your smoke alarms every six months? (Leave blank if you do not have any smoke alarms.) (Please circle a number from 1 to 10, where 1 means not at all confident and 10 means extremely confident):

Not at all confident    -1-----2-----3-----4-----5-----6-----7-----8-----9-----10-    Extremely confident

15. If there was a fire in your home, how effective would smoke alarms be in saving you and your family? (Please circle a number from 1 to 10, where 1 means not at all effective and 10 means extremely effective):

Not at all effective    -1-----2-----3-----4-----5-----6-----7-----8-----9-----10-    Extremely effective

16. In your opinion, how many homes in the United States have a smoke alarm on every floor? (Please take your best guess.) (Please circle a number from 1 to 10, where 1 means extremely few, almost none of the homes and 10 means almost all the homes):

Extremely few,        -1-----2-----3-----4-----5-----6-----7-----8-----9-----10-    Almost all the homes  
almost none of the  
homes

17. In the next six months, how likely is it that you will change the batteries in every smoke alarm in your home? (Leave blank if you do not have any smoke alarms.) (Please circle a number from 1 to 10, where 1 means not at all likely and 10 means extremely likely):

Not at all likely      -1-----2-----3-----4-----5-----6-----7-----8-----9-----10-      Extremely likely

18. How strongly do you feel that you should change the batteries of every smoke alarm in your home every six months? (Please circle a number from 1 to 10, where 1 means I don't think I should and 10 means I definitely should):

I don't think I should    -1-----2-----3-----4-----5-----6-----7-----8-----9-----10-    I definitely should

***In this last section, we are going to ask you some questions to help us describe the families who participated in our study.***

2. In what year were you born?	_____
3. What is the highest level of education that you have completed?	<ol style="list-style-type: none"> <li>1. Less than high school</li> <li>2. High school graduate or GED</li> <li>3. Some college/trade school/vocational school</li> <li>4. College graduate</li> <li>5. Graduate school</li> </ol>
4. What is your total yearly household income before taxes?	<ol style="list-style-type: none"> <li>1. \$9,999 or less</li> <li>2. \$10,000 to \$19,999</li> <li>3. \$20,000 to \$39,999</li> <li>4. \$40,000 to \$59,999</li> <li>5. \$60,000 to \$79,999</li> <li>6. \$80,000 to \$99,999</li> <li>7. \$100,000 or more</li> </ol>



<p>5. A. How many children do you have? And B. What are their ages?</p>	<p>1. 1 Child How old is your child? _____</p> <p>2. 2 Children How old is the younger child? _____ How old is the older child? _____</p> <p>3. 3 Children How old is the youngest child? _____ How old is the oldest child? _____</p> <p>4. 4 or more children How old is the youngest child? _____ How old is the oldest child? _____</p>
<p>6. What is your marital status?</p>	<p>5. Single -- never married 6. Single -- separated, divorced, or widowed 7. Married or living with a partner 8. Married or with a partner, but not living together</p>
<p>7. What is your ethnicity?</p>	<p>1. Black or African American 2. White 3. Asian 4. Other _____</p>
<p>8. Are you Hispanic?</p>	<p>0. No 1. Yes</p>
<p>9. How are you related to the child that you are here with today?</p>	<p>1. Parent 2. Step-parent 3. Other family member (aunt, uncle, grandparent, etc.) 4. Legal guardian</p>
<p>10. Where do you currently live?</p>	<p>1. Baltimore city 2. Baltimore county 3. Other : _____</p>
<p>11. Which of the following best describes the childcare arrangement that your child receives on weekdays?</p>	<p>1. Attends school only 2. Attends school and then attends after school care 3. Attends school and then has day care or babysitter 4. Attends day care only 5. Has Babysitter or relative only 6. Some other arrangement : _____</p>

**Thank you very much for completing this survey and for participating in this study. Please return the form to the person who gave it to you.**

## APPENDIX 4: Parent Mediation Scripts

# Cool the Burn



*Properly treating a burn and attending to it right away can help reduce skin damage and prevent infections.*

**Make sure your child knows these three important points:**

Use **cool water** on burns right away

*Do this for at least 5 minutes, or until the pain goes away*

***Never** use ice water on a burn. It can lead to further skin damage.*

**Never** use ice, creams, jellies, or oil-based products (like butter) on a burn.

*Use of these products to treat burns can cause skin damage and/or infections to occur*

**Do not** bandage a burn wound immediately after injury.

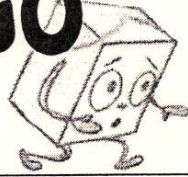
*Doing so will allow the burn to continue to "cook."*



National Fire  
Protection Association  
The authority on fire, electrical and building safety.

*In the event of a fire emergency,*

# Get Low and Go



**Make sure your child knows these three important points:**

**Don't wait!** Get out of the building as quickly as possible.

Keep your head **below** the level of the smoke

*The toxic gases contained in smoke are extremely dangerous.*

*Inhaling these gases can lead to serious respiratory problems, and even death.*

**Crouch** below and away from the smoke when exiting.



## **APPENDIX 5: Debriefing Materials**

Oral Debriefing by Research Assistant:

First of all, thank you for participating in our research study today. I would like to have a brief closing talk with all of you so that you have the chance to understand a little more about fire safety and have the chance to ask any questions or voice any concerns.

All of you are now receiving a packet- please take home and read together- from the National Fire Protection Association that contains materials for you and your child to learn more about fire safety in the home. Along with this is a debriefing sheet with contacts and references should you be needing any more information or have further questions and concerns after leaving the study today.

Every day Americans experience the tragedy of fire. Young children are especially vulnerable to the risk of death and injury due to fire. It is for this reason that the National Fire Protection Association sets out to publically educate children and families on the risks of fire and proper fire safety practices in the home.

Let's briefly review the safe way to deal with a burn and what to do when there is a fire in your home. If you should ever burn yourself on something such as an oven or a hot stove, you should immediately cool the burn by placing the burn under cold water.

If you see or smell smoke because there is a fire in your home, you should get low and go by crawling low on the floor below the smoke, to get out of the house and stay out in case of fire.

Does anyone have any questions or concerns that I can address at this time?

If you should have any questions in the future feel free to contact the references on the debriefing sheet in your packet and please take the time to read all the information. You have also been given the informed consent form. It has the contact information for this study. You can call that number should you have any questions.

It is important that you talk to your child about fire safety and make a plan for your family in case of a fire in the home.

Thank you for participating in our study and have a wonderful day!

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Centers for Disease Control National Center for Injury Prevention and Control. Retrieved October 18, 2010 from <http://webappacdc.gov/cgi-bin/broker.exe>, United States Center for Disease Control, Office of Statistics and Programming, National Center for Injury Prevention and Control, "National Fire/Burn Nonfatal Injuries Rates Per 100,000, 2008, United States, All Races, Both Sexes, Ages 4 to 9"

<sup>ii</sup> Gaquin, Deidre A. and Katherine A. DeBrandt, editors, 2008 County and City Extra Annual Metro, City and County Data Book, 16<sup>th</sup> Edition, Bernan Press, Lanham, MD, 2008, "Table C-Metropolitan Areas – Land Area And Population", p.796

<sup>iii</sup> Gaquin, Deidre A. and Katherine A. DeBrandt, editors, 2008 County and City Extra Annual Metro, City and County Data Book, 16<sup>th</sup> Edition, Bernan Press, Lanham, MD, 2008, Table C-Metropolitan Areas – "Crime, Education, Money Income and Poverty, 2000, p. 799