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FINAL TECHNICAL REPORT PFTR-1100-82-3
Contract Number: DTNH22-80-R-07505
March 1982

DEVELOPMENT AND TEST OF A MOTIVATIONAL APPROACH AND MATERIALS FOR INCREASING USE OF RESTRAINTS

Norman D. Schwalm
Paul Slovic

Prepared for:

U.S. DEPARTMENT OF TRANSPORTATION
National Highway Traffic Safety Administration
400 7th Street Southwest
Washington, D.C. 20509

PERCEPTRONICS
6271 VARIEL AVENUE • WOODLAND HILLS • CALIFORNIA 91367 • PHONE (213) 884-7470

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Group 6: Seat Belt Message - No Risk Perception Content

These survivors know that seat belts work.
"Well, remarkably enough I didn't suffer any injuries, because of the fact that I had my seat belt on."

"It held me back, it kept me from going through the windshield."

"The car was completely destroyed, and I crawled out of the car with no injuries more than a sore rib."

"You only have one life and you ought to protect it every way you can, and seat belts are such a little thing that you can do to protect that life; I think everyone ought to use them."

"Seat belts are for everybody."

YOUNG MAN: Well, man, I'll think about it.

ANNOUNCER: It's the one thing you can do to avoid serious injury ... so you'll be able to walk away.
But you do have to buckle up every time.

SILENCE

ANNOUNCER: Saving a lifetime means buckling up for a lifetime ... starting now.

GROUP 6: SEAT BELT MESSAGE - NO RISK PERCEPTION

Hello, thank you for participating in our risk perception experiment. The responses you are about to make will be very important, and will help to insure the safety of many people. It is, therefore, important that you answer as truthfully and honestly as possible. The questionnaire that you are about to receive requires you to answer a number of items related to your driving attitudes and behavior. Please read each question carefully, and if you have any questions, please ask the experimenter, even if you have the slightest doubt about the meaning of a question or how to answer the question. The questionnaire shouldn't take longer than 10 minutes to complete, however, you may take as much time as you need. We will use the first question as an example on how to mark the answers. (Give pretest and explain example) Are there any questions? Please begin to answer the questions. Ignore all information contained in the margins marked "EXPERIMENTER USE ONLY."

(Collect pretest upon completion by subjects)

In this part of the experiment we would like you to view a film that concerns driving behavior. Please pay close attention to the film and the message contained therein. You will find the film fairly self-explanatory. We will listen to it 3 times. The message lasts 30 seconds. Are there any questions? Let's begin.

(Run the film 3 times)

Well, I hope you enjoyed that. Now we would like you to answer a few more questions regarding the film you just saw. The questionnaire is similar to the one you just filled out, so no further instructions are necessary. Are there any questions?

(Give immediate post test)

This completes the end of the 1st session. Upon completion of the second part of the experiment, which will be in 1 months time, you will be paid the total of $8.00 for participating. Please pick up a reminder sheet that notes when the second part of the experiment will take place.

Thank you very much for your participation.

Group 7: Alcohol Message

"Janie died on an endless road in America, because a lonely man was driving drunk out of his mind. Problem drinkers who drive are responsible for more than 40 deaths every day. Get the problem drinker off the road. Help do something about the problem drinker for his sake and yours."

SILENCE

ANNOUNCER: Saving a lifetime means buckling up for a lifetime ... starting now.

ANNOUNCER: It's a very easy decision to make ... and you'll even like yourself for doing it. All you have to do is promise yourself that for the rest of your life, whenever you're riding in a car, you'll buckle up. Go ahead, say it to yourself.

ALL DRIVERS: (Whisper; a litany)
"Whenever I ride in a car, I will buckle up."

ANNOUNCER: Hey, that's terrific.

Groups 3 and 4: Risk Perception Message - No Commitment

ANNOUNCER: (A wry, knowing voice of reason.)

Oho ... You Americans ... you do a lot of driving ... getting in you car 2, 3, 4 times ... call it 2½ trips ... a day ... 365 days a year ... say 50 years of driving ...

Do you realize that in your lifetime each of you makes more than 45,000 trips by car?

And even though each trip is relatively safe, over a whole lifetime of driving, one out of three of you will be injured seriously in an automobile accident.

Those are the odds ... one out of three.

YOUNG MAN: Forget it!

ANNOUNCER: Uh-huh. You're all pretty good drivers. Each time you get in a car, you figure you're in control. And most of the time you're right. But remember, you've got no control over those other drivers out there ... Or over lousy driving conditions.

And when the odds say <u>your</u> time is up, it may not even be your fault, but you'll still get <u>hurt</u> ... or worse.

THREE DRIVERS: (Murmurs of dismay and dissent)

ANNOUNCER: Those are the facts. It's going to happen and I'd like one of you to volunteer.

(Three drivers together here)

YOUNG MAN: Get off our case, man!

OLDER MAN: Doesn't seem fair to me ...

YOUNG WOMAN: Look, there must be something we can do to avoid this.

ANNOUNCER: Actually, there is something you can do, because none of you is wearing a seat belt. You can make one <u>big</u> decision to buckle up on every car trip, so you're ready when and if the odds finger <u>you</u>.

TOGETHER:

YOUNG WOMAN: Is this all you want from us?

OLDER MAN: This still won't keep us out of an accident.

Groups 1 and 2: Risk Perception Message - Commitment

ANNOUNCER: (wry, knowing voice of reason.)

Oho ... You Americans ... you do a lot of driving ... getting in your car 2, 3, 4 times ... call it 2½ trips ... a day ... 365 days a year ... say 50 years of driving ...

Do you realize that in your lifetime <u>each</u> of you makes more than <u>45,000</u> trips by car?

And even though each trip is relatively safe, over a whole <u>lifetime</u> of driving, one out of three of you will be injured seriously in an automobile accident.

Those are the odds ... <u>one</u> out of <u>three</u>.

YOUNG MAN: *Forget it!*

ANNOUNCER: Uh-huh. You're all pretty good drivers. Each time you get in a car, you figure you're in control. And most of the time you're right. But remember, you've got no <u>control</u> over those <u>other drivers</u> out there ... Or over lousy driving conditions.

And when the odds say <u>your</u> time is up, it may not even be your fault, but you'll still get <u>hurt</u> ... or worse.

THREE DRIVERS: (Murmurs of dismay and dissent)

ANNOUNCER: Those are the facts. It's going to happen and I'd like one of you to volunteer.

(Three drivers together here)

YOUNG MAN: Get off our case, man!

OLDER MAN: Doesn't seem fair to me ...

YOUNG WOMAN: Look, there must be something we can do to avoid this.

ANNOUNCER: Actually, there is something you can do, because none of you is wearing a seat belt. You can make one <u>big</u> decision to buckle up on every car trip, so you're ready when and if the odds finger <u>you</u>.

TOGETHER:

YOUNG WOMAN: Is this all you want from us?

OLDER MAN: This still won't keep us out of an accident.

YOUNG MAN: Well, man, I'll think about it.

ANNOUNCER: It's the <u>one</u> thing you can do to avoid serious injury ... so you'll be able to walk away.
But you do have to buckle up every time.

APPENDIX D
MESSAGE TEXTS

APPENDIX D
MESSAGE TEXTS

GROUP 8: NO MESSAGE

Hello, thank you for participating in our risk perception experiment. The responses you are about to make will be very important, and will help to insure the safety of many people. It is, therefore, important that you answer as truthfully and honestly as possible. The questionnaire that you are about to receive requires you to answer a number of items related to your driving attitudes and behavior. Please read each question carefully, and if you have any questions, please ask the experimenter, even if you have the slightest doubt about the meaning of a question or how to answer the question. The questionnaire shouln't take longer than 10 minutes to complete, however, you may take as much time as you need. We will use the first question as an example on how to mark the answers. (Give pretest and explain example) Are there any questions? Please begin to answer the questions. Ignore all information contained in the margins marked "EXPERIMENTER USE ONLY."

(Collect pretest upon completion by subjects)

Thank you for filling out the questionnaire. This completes the end of the first session. Upon completion of the second part of the experiment, which will be in 1 months time, you will be paid a total of $8.00 for participating. Please pick up a reminder sheet that notes when the second part of the experiment will take place.

Thank you very much for your participation.

GROUP 7: ALCOHOL

Hello, thank you for participating in our risk perception experiment. The responses you are about to make will be very important, and will help to insure the safety of many people. It is, therefore, important that you answer as truthfully and honestly as possible. The questionnaire that you are about to receive requires you to answer a number of items related to your driving attitudes and behavior. Please read each question carefully, and if you have any questions, please ask the experimenter, even if you have the slightest doubt about the meaning of a question or how to answer the question. The questionnaire shouldn't take longer than 10 minutes to complete; however, you may take as much time as you need. We will use the first question as an example on how to mark the answers. (Give pretest and explain example) Are there any questions? Please begin to answer the questions. Ignore all information contained in the margins marked "EXPERIMENTER USE ONLY."

(Collect pretest upon completion by subjects)

In this part of the experiment we would like you to view a film that concerns driving behavior. Please pay close attention to the film and the message contained therein. You will find the film fairly self-explanatory. We will see it 3 times. The message lasts 60 seconds. Are there any questions? Let's begin.

(Run the film 3 times)

Well, I hope you enjoyed that. Now we would like you to answer a few questions regarding the film you just saw. The questionnaire is similar to the one you just filled out, so no further instructions are necessary. Are there any questions?

(Give immediate post test)

This completes the end of the 1st session. Upon completion of the second part of the experiment, which will be in one month's time, you will be paid the total of $8.00 for participating. Please pick up a reminder sheet that notes when the second part of the experiment will take place.

Thank you very much for your participation.

APPENDIX E

RAW DATA

APPENDIX E - #1

IMMEDIATE ATTITUDE CHANGE DATA FOR THE QUESTIONNAIRE ITEM:

HOW CONCERNED ARE YOU ABOUT BEING INJURED OR KILLED IN AN AUTOMOBILE ACCIDENT?

Percent of Group	Commitment TV	Commitment Radio	No Commitment TV	No Commitment Radio	Alcohol	Seat Belt-No Risk Perception	No Message	Saturation
+ Change	31.4	27.8	13.9	33.4	48.7	40	30.6	17.1
0 Change	65.7	66.7	77.8	61.1	48.6	54.3	69.4	74.3
- Change	2.9	5.6	8.3	5.6	2.9	5.7	0	8.6

$x^2 = 17.09$; p = N.S.

Net Gain	+28.5	+22.2	+5.6	+27.8	+45.8	+34.3	+30.6	+8.5
n =	35	36	36	36	35	35	36	35

APPENDIX E - #2

DELAYED ATTITUDE CHANGE DATA FOR THE QUESTIONNAIRE ITEM:

HOW CONCERNED ARE YOU ABOUT BEING INJURED OR KILLED IN AN AUTOMOBILE ACCIDENT?

Percent of Group	Commitment TV	Commitment Radio	No Commitment TV	No Commitment Radio	Satura-tion	Seat Belt-No Risk Perception	Alcohol	No Message
+ Change	17.1	22.2	19.5	27.8	48.6	28.6	13.9	5.7
0 Change	65.7	66.7	55.6	42.2	37.1	51.4	52.8	68.6
- Change	17.2	11.1	25	25	14.3	20	33.5	25.8

$\chi^2 = 28.74$; $p < .01$

Net Gain	0	+11.1	-5.5	+2.8	+34.3	+8.6	-19.6	-20.1
n =	35	36	36	36	35	35	36	35

APPENDIX E - #3

IMMEDIATE ATTITUDE CHANGE FOR THE QUESTIONNAIRE ITEM:

GETTING KILLED OR INJURED IN A CAR ACCIDENT IS JUST A MATTER OF FATE, SO SEAT BELTS DON'T MAKE THAT BIG A DIFFERENCE.

Percent of Group	Commitment TV	Commitment Radio	No Commitment TV	No Commitment Radio	Alcohol	Seat Belt-No Risk Perception	No Message	Saturation
+ Change	14	17	14	20	34	17	17	31
0 Change	60	72	70	69	63	72	66	57
- Change	26	11	16	11	3	11	17	12

$x^2 = 16.68$; p = N.S.

Net Gain	-12	+6	-2	+9	+31	+6	0	+19
n =	35	36	37	36	35	35	35	36

APPENDIX E - #4

DELAYED ATTITUDE CHANGE FOR THE QUESTIONNAIRE ITEM:

GETTING KILLED OR INJURED IN A CAR ACCIDENT IS JUST A MATTER OF FATE, SO SEAT BELTS DON'T MAKE THAT BIG A DIFFERENCE.

Percent of Group	Commitment TV	Commitment Radio	No Commitment TV	No Commitment Radio	Saturation	Seat Belt-No Risk Perception	Alcohol	No Message
+ Change	9	17	13	17	40	17	14	20
0 Change	71	61	57	64	49	57	61	60
- Change	20	22	30	19	11	26	25	20

$\chi^2 = 17.04$; p = N.S.

Net Gain	-11	-5	-17	-2	+29	-19	-11	0
n =	35	36	37	36	35	35	35	36

APPENDIX E - #5

IMMEDIATE ATTITUDE CHANGE FOR THE QUESTIONNAIRE ITEM:

THE CHANCES OF GETTING INTO AN ACCIDENT ARE SO SMALL THAT SEAT BELTS AREN'T REALLY WORTH THE INCONVENIENCE.

Percent of Group	Commitment TV	Commitment Radio	No Commitment TV	No Commitment Radio	Saturation	Seat Belt-No Risk Perception	Alcohol	No Message
+ Change	20	25	24	28	31	11	17	37
0 Change	63	58	68	58	69	72	69	49
- Change	17	17	8	14	0	17	14	14

$\chi^2 = 15.94$; p = N.S.

Net Gain	+3	+8	+12	+14	+31	-6	+3	+23
n =	35	36	37	36	35	35	36	35

APPENDIX E - #6

DELAYED ATTITUDE CHANGE FOR THE QUESTIONNAIRE ITEM:

THE CHANCES OF GETTING INTO AN ACCIDENT ARE SO SMALL THAT SEAT BELTS AREN'T REALLY WORTH THE INCONVENIENCE.

Percent of Group	Commitment TV	Commitment Radio	No Commitment TV	No Commitment Radio	Saturation	Seat Belt-No Risk Perception	Alcohol	No Message
+ Change	23	25	30	25	23	17	11	17
0 Change	51	61	40	56	66	60	67	66
- Change	26	14	30	19	11	23	22	17

$\chi^2 = 12.13$; p = N.S.

Net Gain	-3	+11	0	+6	+12	-6	-11	0
n =	35	36	37	36	35	35	36	35

APPENDIX E - #7

IMMEDIATE ATTITUDE CHANGE FOR THE QUESTIONNAIRE ITEM:

SOME PEOPLE SAY THAT BECAUSE THE PROBABILITY OF DEATH OR SERIOUS INJURY WHILE DRIVING OR RIDING IN AN AUTOMOBILE IS SO HIGH, WEARING A SEAT BELT IS A GOOD THING TO DO, SINCE, EVENTUALLY, ANY EFFORT OR INCONVENIENCE INVOLVED IN WEARING A SEAT BELT IS LIKELY TO BE REPAID. INDICATE THE EXTENT TO WHICH YOU AGREE OR DISAGREE WITH THIS STATEMENT BY PLACING A CHECK ON THE APPROPRIATE LINE.

Percent of Group	Commitment TV	Commitment Radio	No Commitment TV	No Commitment Radio	Satura-tion	Seat Belt-No Risk Perception	Alcohol	No Message
+ Change	22.9	33.3	27.0	30.6	40	28.6	16.7	8.6
0 Change	54.3	58.3	54.1	58.3	51.4	51.4	72.2	65.7
- Change	22.9	8.3	18.9	11.1	8.6	20	11.1	25.7

$\chi^2 = 18.85$; p = N.S.

Net Gain	0	+25	+8.1	+19.5	+31.4	+8.6	+5.6	-17.1
n =	35	36	37	36	34	35	36	35

APPENDIX E - #8

DELAYED ATTITUDE CHANGE FOR THE QUESTIONNAIRE ITEM:

SOME PEOPLE SAY THAT BECAUSE THE PROBABILITY OF DEATH OR SERIOUS INJURY WHILE DRIVING OR RIDING IN AN AUTOMOBILE IS SO HIGH, WEARING A SEAT BELT IS A GOOD THING TO DO, SINCE, EVENTUALLY, ANY EFFORT OR INCONVENIENCE INVOLVED IN WEARING A SEAT BELT IS LIKELY TO BE REPAID. INDICATE THE EXTENT TO WHICH YOU AGREE OR DISAGREE WITH THIS STATEMENT BY PLACING A CHECK ON THE APPROPRIATE LINE.

Percent of Group	Commitment TV	Commitment Radio	No Commitment TV	No Commitment Radio	Satura-tion	Seat Belt-No Risk Perception	Alcohol	No Message
+ Change	25.7	27.8	32.4	27.8	37.1	25.7	30.6	14.3
0 Change	54.3	52.8	51.4	58.3	54.3	51.4	52.8	60
- Change	20	19.4	16.2	13.9	8.6	22.9	16.7	25.7

$\chi 2 = 8.28$; p = N.S.

Net Gain	+5.7	+8.4	+21.2	+13.9	+28.5	+2.8	+13.9	-11.4
n =	35	36	37	36	35	35	36	35

APPENDIX E - #9

IMMEDIATE ATTITUDE CHANGE FOR THE QUESTIONNAIRE ITEM:

HOW EFFECTIVE DO YOU THINK AUTOMOBILE SEAT BELTS ARE IN PREVENTING INJURY OR DEATH WHEN AN ACCIDENT OCCURS?

Percent of Group	Commitment TV	Commitment Radio	No Commitment TV	No Commitment Radio	Alcohol	Seat Belt-No Risk Perception	No Message	Saturation
+ Change	20	44.4	29.7	19.4	37.0	34.3	17.0	17.0
0 Change	60	47.2	56.8	55.6	60.0	54.3	75.0	66.0
- Change	20	8.3	13.5	25.0	3.0	11.4	8.0	17.0

$x^2 = 22.56$; $p < 0.06$

Net Gain	0	+36.1	+16.2	-5.6	+34.0	+22.9	+9.0	0
n =	35	36	37	36	35	35	36	35

APPENDIX E - #10

DELAYED ATTITUDE CHANGE FOR THE QUESTIONNAIRE ITEM:

APPENDIX E - #12

SUBJECT ASSESSMENT OF MESSAGES EFFECTS ON SEAT BELT USE

APPENDIX E - #11

CHANGE IN SELF-REPORTED FREQUENCY OF SEAT BELT USE

Percent of Group	Commitment TV	Commitment Radio	No Commitment TV	No Commitment Radio	Satura-tion	Seat Belt-No Risk Perception	Alcohol	No Message
+ Change	20	11.1	24.3	13.9	31.4	8.6	13.9	5.7
0 Change	80	86.1	73.0	83.3	65.7	88.6	86.1	85.7
- Change	0	2.8	2.7	2.8	2.9	2.9	.0	8.6

$$\chi^2 = 24.6;\ p < 0.05$$

Net	+20	+8.3	+21.6	+11.1	+28.5	+5.7	+13.9	-2.9
n =	35	36	37	36	35	35	36	35

APPENDIX E - #12

SUBJECT ASSESSMENT OF MESSAGES EFFECTS ON SEAT BELT USE

Percent of Group	Commitment TV	Commitment Radio	No Commitment TV	No Commitment Radio	Satura-tion	Seat Belt-No Risk Perception	Alcohol
No More Often Than Before	40	47.2	45.9	30.6	14.3	35.3	50
Increased For A While - Now, No More Often	5.7	8.3	10.8	13.9	20	8.8	2.8
Somewhat More Often	25.7	22.2	16.2	16.7	37.1	29.4	25
Much More Often	8.6	11.1	13.5	16.7	17.1	8.8	13.9
Already Wear One All The Time	20	11.1	13.5	22.2	11.4	17.6	8.3
n =	35	36	37	36	35	34	36

$x^2 = 25.78$; p = N.S.

50272-101

REPORT DOCUMENTATION PAGE	1. REPORT NO.	2.	3. Recipient's Accession No.

4. Title and Subtitle
Development and Test of a Motivational Approach and Materials for Increasing Use of Restraints

5. Report Date
3/11/82

6.

7. Author(s)
N.D. Schwalm, P. Slovic

8. Performing Organization Rept. No.
PFTR-1100-82-3

9. Performing Organization Name and Address
Perceptronics, Inc.
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Woodland Hills, CA 91367

10. Project/Task/Work Unit No.

11. Contract(C) or Grant(G) No.
(C) DTNH22-80-R-07505
(G)

12. Sponsoring Organization Name and Address
U.S. Department of Transportation
National Highway Traffic System Administration
400 7th Street Southwest
Washington, D.C. 20590

13. Type of Report & Period Covered
Final, March 1981 - January 1982

14.

15. Supplementary Notes

16. Abstract (Limit: 200 words) The objective of this study was to design and assess the effect of a motivational approach to modify the riding and driving public's attitudes towards the perceived risks of driving an automobile and the use of occupant restraint systems. Two hundred eighty-five subjects were randomly assigned to one of eight groups that received either a version of a prototype TV or radio message (or both) based on a manipulation of perceived risk and lifetime injury statistics, a filmed highway safety (drunk driving) announcement devoid of both expressed seat belt content and risk perception manipulations, a filmed announcement supporting the use of seat belts but devoid of expressed risk perception manipulation, or no message at all. Both attitude change and changes in observed and self-reported seat belt wearing behavior were assessed. Results indicated statistically significant changes in several attitudes and in self-reported frequency of seat belt wearing. In general, the messages based on manipulations of perceived risk appeared to improve attitudes and behavior most, although favorable results also ensued from exposure to some of the other messages. The results are discussed in light of the available literature on risk perception and seat belt wearing, and other relevant social psychological factors pertaining to persuasive communications. Guidelines for refinement of the motivational message tested and for a large scale evaluation of the refined message also are presented.

17. Document Analysis a. Descriptors
Seat Belts
Occupant Restraints
Motivational Messages
Persuasive Communications

b. Identifiers/Open-Ended Terms

c. COSATI Field/Group

18. Availability Statement
DISTRIBUTION UNLIMITED

19. Security Class (This Report)
UNCLASSIFIED

21. No. of Pages
248

20. Security Class (This Page)
UNCLASSIFIED

22. Price

(See ANSI-Z39.18) *See Instructions on Reverse*

OPTIONAL FORM 272 (4-77)
(Formerly NTIS-35)
Department of Commerce

FOREWORD

This report was prepared by Perceptronics, Incorporated, Woodland Hills, California, under DOT Contract No. DTNH22-80-R-07505. The contract was administered under the technical direction of the National Highway Traffic Safety Administration with Dr. Bruce E. Bigelow acting as the Contract Technical Manager. This report is a summary of work completed under this contract during the period from January 22, 1981 through January 1, 1982. This report was submitted by the authors on January 18, 1982.

ACKNOWLEDGEMENTS

Appreciation is expressed to the Contract Technical Manager, Dr. Bruce E. Bigelow, for his guidance as well as his technical and administrative support of this contract.

We wish to thank Drs. Neil M. Burns and Theodore Jolosky of Hoffman-York-Compton, Inc. and Dr. Gershon Weltman of Perceptronics, Inc. for their contributions to the development and preparation of the motivational messages used in the study. Appreciation is also expressed to Dr. Francois Christen for his valuable input to the design of the research.

Special thanks are given to all the subjects who participated in this research effort.

This research was supported (in part) by the National Highway Traffic Safety Administration (NHTSA), U.S. Department of Transportation, Under Contract No. DTNH22-80-R-07505. The opinions, findings, and recommendations contained herin are those of the authors, and do not necessarily represent those of the NHTSA.

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EXECUTIVE SUMMARY

1. Background

Attempts to convince motorists to use occupant restraints have produced disappointing results. Studies have shown that less than 11 percent of motorists use safety belts. However, various sources have indicated that a large number of fatalities could be prevented each year if individuals would wear seat belts.

The probability of dying or being seriously injured on a single automobile trip is extremely low. As a result (and according to principles of learning), motorists may be "punished" for using seat belts because using seat belts could require effort, may be inconvenient, and may cause discomfort. Often, this effort, inconvenience, and discomfort may be endured without any apparent reward. In fact, motorists may actually be rewarded for *not* using seat belts because the large majority of driving experiences are accident-free. Thus, it is believed that to modify motorists' attitudes toward the use of seat belts, it is important to increase their perceptions of the risks involved in driving or riding in an automobile, so that the perceived benefits of wearing seat belts outweigh the perceived costs.

One approach to modifying perceived risks of driving is to induce people to consider the risks of death or injury over a lifetime of driving, rather than on the basis of a single automobile trip. From the perspective of a lifetime of driving, the probability of dying from an automobile accident is about 1 in 100, and the probability of at least one serious injury is about 1 in 3, according to previous research. Experimental data suggest that a change from a single trip to a lifetime perspective is effective in changing motorists' attitudes toward seat belts. It is believed that such a favorable change in attitudes would facilitate a corresponding change in seat belt wearing behavior.

The objective of this study was to design and assess the effect of a motivational approach to modify the riding and driving public's attitudes toward the perceived risks of driving an automobile and the use of seat belts.

2. Approach

To induce favorable attitudes toward occupant restraint systems, a prototype radio and television spot announcement was designed to induce motorists to adopt a lifetime perspective regarding the risks involved in being in an automobile. The effectiveness of this announcement in changing attitudes toward seat belts and in changing seat belt wearing behavior was assessed empirically as follows:

> Two hundred eighty-five subjects were randomly assigned to one of eight groups that received either a version of a prototype TV or radio message (or both) based on a manipulation of perceived risk and lifetime injury statistics, a filmed highway safety (drunk driving) announcement devoid of both expressed seat belt content and risk perception manipulation, a filmed announcement supporting the use of seat belts but devoid of expressed risk perception manpulation, or no message at all. Both attitude change and change in observed and self-reported seat belt wearing behavior were assessed.

3. Results

Results indicated statistically significant changes in several attitudes and in self-reported frequency of seat belt wearing. Although observed seat belt use increased dramatically over the experimental period, this effect could not be attributed to any particular message group. It is

felt that this may have been due to effects of the experimental situation and the method used for observing actual seat belt use. Alternative strategies for observing actual seat belt use in future research are presented.

4. Conclusions

In general, the messages based on manipulations of perceived risk appeared to improve attitudes and self-reported behavior most, although favorable results also ensured from exposure to some of the other messages. Although not conclusive, the results of this study present an encouraging picture for the use of messages based on risk perception themes in changing people's attitudes and behavior with regard to use of seat belts. Moreover, the results suggest that media campaigns aimed at doing this *could* increase voluntary use of seat belts if they were based on sound psychological themes. Based on the literature in risk perception and seat belt wearing, and on other relevant social psychological factors pertaining to persuasive communications, guidelines for refinement of the motivational message tested and for future evaluation of the refined message are presented.

1. INTRODUCTION

1.1 Overview

Attempts to convince motorists to use occupant restraints have produced disappointing results. Studies have shown that less than 11 percent of motorists use safety belts. However, the National Highway Traffic Safety Administration (NHTSA) has estimated that up to 12,000 or more fatalities that occurred in 1979 might have been prevented if the victims had been using seat belts.

The probability of dying or being seriously injured on a single auto trip is extremely low. As a result, motorists are "punished" for using occupant restraint systems because such systems could require effort, are perhaps inconvenient, and may cause some discomfort. On the other hand, motorists are "rewarded" for not using restraints because the overwhelming majority of driving experiences are accident-free. It follows, therefore, that to modify motorists' attitudes toward the use of occupant restraint systems, it is important to increase their perception of the risks involved in driving an automobile. One approach is to consider the risks of death or injury over a lifetime of driving. From the perspective of a lifetime of driving, the probability of dying from an automobile accident is calculated to be about 1 in 100, and the probability of at least one serious injury is about 1 in 3. Experimental data suggest that a change from a single trip to a lifetime perspective is effective in changing motorists' attitudes toward occupant restraints (Slovic, Fischhoff, and Lichtenstein, 1978). It is believed that such a favorable change in attitudes would facilitate a corresponding change in seat belt wearing behavior.

To induce favorable attitudes toward occupant restraint systems, a prototype radio and television spot announcement was designed to induce motorists to adopt a lifetime perspective regarding the risks involved in being in an automobile. The effectiveness of this announcement in changing attitudes toward restraints and in changing actual seat belt wearing behavior was assessed empirically in this study.

This report is divided into 6 chapters. In Chapter 1, a discussion of the restraint use problem, the possible solutions to that problem, and a review of the literature relevant to the risk perception and occupant restraint wearing issues are presented. Additionally, the rationale for the present study is discussed, and a brief discussion of the objectives and approach is presented. The chapter concludes with an outline of the issues to be addressed by the study.

In Chapter 2, the detailed research method used in the study is outlined, and the nature of the questionnaire, motivational messages, and behavioral observation technique is discussed in detail.

The results of the present investigation are presented in Chapter 3. The first part of the chapter deals with general descriptive information obtained in the study; the second part discusses the changes in attitudes that appear to have taken place as a result of the experimental manipulations; and the third part of the chapter presents the data on the behavioral changes (i.e., changes in self-reported actual seat belt wearing behavior) that resulted from exposure to the motivational messages.

Chapter 4 discusses the implications of these results and presents a set of guidelines for the refinement of the motivational messages tested.

Chapter 5 deals with methods by which the effectiveness of the movtivational message may be evaluated on a large scale. Particular attention is given to the options available for observing behavioral changes in seat belt wearing since this issue has been an elusive one and inadequately addressed thus far. Finally, Chapter 6 presents the results of an experiment to elicitate some of the factors that appear to have influenced the results dealing with measures of observed seat belt use.

1.2 Background

1.2.1 The Problem: Non-Use of Occupant Restraints. Since the time it was realized that traffic accidents take an inordinate number of lives and produce large numbers of serious or disabling injuries, authorities have been searching for ways in which motorists could protect themselves from injury or death resulting from automobile accidents. "Defensive driving" campaigns were instituted to encourage safer driving practices. It became obvious, however, that a large number of accidents still occurred and that deaths and injuries were still inordinately high. The focus of transportation authorities concerned with highway safety then appeared to turn to engineering solutions to the safety problem. The outcome of this new focus was the devolopment of the seat belt, and later, the lap belt and shoulder harness combination, both of which have been shown to reduce effectively injury and death in automobile accidents (Campbell, O'Neill, and Tingley, 1974; Fhaner and Hane, 1973; Green, 1976; Hodson-Walker, 1970; Preston and Shortridge, 1973). The problem inherent in this approach was that motorists were now called upon to use voluntarily seat belts or shoulder harnesses (henceforth referred to as "restraints"); the success of the restraint became dependent entirely on the willingness of individuals to take preventive action to protect themselves against injury and death.

Although restraints were mandatory equipment in automobiles produced after 1967, few motorists used them. Accordingly, safety engineers and designers attempted to ensure use of restraints by including an interlock device in the design of automobiles so that the automobile would not start if front

seat occupants had not fastened their restraints. Despite the ingenuity of this approach, it seemed more to anger and annoy motorists than to increase their use of seat belts. In fact, nearly 30 percent of drivers have claimed that the interlock device was among the least liked features of their new car (Robertson, 1974). Congressional law eliminated this mandate for interlock devices, and automobile manufacturers responded by discontinuing the interlock and substituting a reminder buzzer with an accompanying panel light according to a new congressional mandate. This continuous buzzer apparently was not accepted by the public, and congress responded by eliminating this mandate as well. Instead, a 4-8 second reminder buzzer or tone was mandated by congress and implemented by automobile manufacturers. Although manufacturers continue to produce autos with this feature, the public has not accepted this approach either. Anecedotal information suggests that many people still disconnect the reminder mechanism so that they will not be "bothered."

No approach has been successful in inducing more than a small percentage of motorists to "buckle up for safety." The Opinion Research Corporation (1979) estimated that only about 11 percent of drivers and a smaller percentage of passengers wear restraints. One may conclude that the majority of people really do not *want* to wear occupant restraints, even though individuals apparently are aware of the effectiveness of these devices (Knapper, Cropley, and Moore, 1976; Marzoni, 1971). Some reasons given for non-use include forgetfulness, laziness, inconvenience, discomfort, fear of entrapment, and low perceived risk (Knapper, et al., 1976; Fhaner and Hane, 1973; Waller, Li, Campbell, and Herman, 1977).

Other factors that may further reduce people's use of restraints are: (a) the knowledge that they are less than 100% effective (Fhaner & Hane, 1974); (b) drivers' tendencies to view vehicle risks as under their control (Fischhoff, Slovic, Lichtenstein, Read, & Combs, 1978), coupled with the fact that perceived control produces exaggerated feelings of confidence

(Langer, 1975); and (c) the fact that 75% to 90% of the drivers in various countries consider themselves to be better than average drivers (Svenson, 1977), and hence do not perceive that they will need the restraint. Thus, the question at issue becomes: How do proponents of restraint use, such as government agencies, encourage non-users to use occupant restraints?

1.2.2 Mandatory Compliance. One option in promoting the use of occupant restraints is to mandate that they be fastened and to impose a significant fine or penalty on motorists who do not comply. Although this method is being used effectively in many countries (Crinion, Foldvary, and Lane, 1975; Hurst, 1979; Robertson, 1978), some people feel that this is an unacceptable imposition on their freedom of choice. Hence, this measure may be unacceptable to the federal government at this time.

1.2.3 Voluntary Compliance and Persuasive Communications. Another option, and one that is receiving much attention currently, is to convince motorists of the values of wearing occupant restraints, and the potential dangers of not wearing them, in an attempt to increase voluntary compliance. A large number of media campaigns, literature dissemination and education programs, and the likes, have attempted to do this. The rationale for these approaches is based on several classical studies of the relationship between attitudes and behavior (Ajzen and Fishbein, 1970; Ajzen and Fishbein, 1977; Fishbein and Ajzen, 1975). The general conclusion drawn from these discussions is that to the extent that one changes one's attitude toward some object or event, one also changes the probability of certain behaviors directed at that object or event. Simply stated, positive changes in an individual's attitude towards seat belts may serve to increase the probability that that individual will wear seat belts more often. Although this hypothesis has received support from past research (Fhaner and Hane, 1973, 1974), it has been shown that belt users and non-users alike often express a very favorable attitude towards seat belts, with belt users being only somewhat more favorable (Fhaner and Hane, 1973).

Several concerns should be pointed out, however, with regard to the attitude-behavior change issue. First, behavior can and does sometimes change without a corresponding change in attitude. It is not difficult to imagine situations in which attitudes toward restraints may be very negative but people wear them due to possible penalties for non-use (e.g., employees using company cars are often required to wear belts) or incentives for use (see Elman and Killebrew, 1978). Second, attitude change often is not apparent until some time after exposure to a message designed to produce the change. Hovland, Lumsdaine, and Sheffield (1949) have found consistently that long-term effects of attitude change attempts are not only quantitatively different but also qualitatively different; long-range effects are greater than immediate effects for general attitudes but weaker for specific attitudes. Also, Hovland, Janis, and Kelley (1953) have shown that a discredited speaker has no persuasive effect immediately, but may have a significant effect a month later, unless listeners are reminded of the source.

Despite the above findings, it appears as if media campaigns designed to increase use of restraints have not been as successful as might be hoped. In an extensive study of effectiveness of TV messages on use of restraints, (Robertson, Kelley, O'Neill, Wixom, Elswirth, & Haddon, 1974) concluded that "the TV campaign did not affect the use of safety belts." The authors go on to deliver a scathing series of comments on the ineffectiveness of media campaigns in changing behavior related to use of restraints. This rather bleak picture is completed by a follow-up article by the first author (Robertson, 1978) in which the same theme is reiterated. Thus, it appears from these studies as if encouraging voluntary compliance by mass media techniques has a poor prognosis. It should be noted, however, that these studies have looked only at media in the form of TV exposure, this being a limited use of mass media. Therefore, conclusions regarding success or failure of mass media campaigns in general may not be appropriate.

Also important to note is that Robertson et al. (1974) did not attempt to ascertain the attitudes, reactions, or psychological characteristics of the individuals who received the messages, or changes in those variables that might have ensued from exposure to the campaigns. Thus, no clues as to *why* these campaigns were ineffective were forthcoming. This is unfortunate in light of the many variables that could affect the subjects' acceptance of the message content, such as the source of the message, its intelligibility, length, logical content, and emotional appeal. The literature on persuasive communications clearly indicates that changing one's attitudes and behavior is a complex issue and that many psychological and social factors must be considered when designing programs or media campaigns aimed at accomplishing this. In general, it is felt that studies purporting to test media campaigns have not drawn enough on theory and psychological insights in the preparation of the campaign content. Other mass media campaigns designed to change attitudes and behavior in the medical area (i.e., medical risks) *have* been effective (McAllister, A., Puska, P. Solomon, J.T., Tuomilehto, J., and Koskela, K., 1982). Further development of a persuasive communication campaign will require a thorough understanding not only of the social psychological literature but of literature in learning, perception, decision-making, consumer psychology and other related areas as well.

1.2.4 Perception of Risk. Recently, psychologists have begun to consider some of the variables mentioned above in an attempt to describe how people arrive at decisions regarding high consequence threats (Slovic et al. 1978). In general, people's attitudes and behavior reflect their experience. It is a well-established psychological principle of learning that rewarded actions tend to be repeated while non-rewarded behavior diminishes in frequency. Slovic et al. (1978) estimated that only one in every 3.5 million person-trips ends in a fatal accident, and about one in every 100,000 person-trips results in a disabling injury. Thus, because the overwhelming majority of driving experiences are accident-

free, each safe trip rewards (reinforces) the non-use of seat belts. On the other hand, motorists who are not in an accident and who do use seat belts are punished by the effort, inconvenience, and discomfort they may have incurred without any concrete reward. Therefore, it is not surprising that safe driving experiences often lead to the non-use of seat belts. Nevertheless, the failure to use seat belts is very surprising given the extremely high value that people place on their lives. One would expect that even a very small probability of saving one's life or avoiding serious injury should lead one to realize that the expected gain from using seat belts exceeds the cost. However, numerous studies exist that demonstrate that people have difficulties in estimating probabilities and making decisions under conditions of risk (Slovic, Fischhoff, & Lichtenstin, 1977; Slovic & Lichtenstein, 1971).

Support for this point of view comes from research investigating the conditions under which people are willing to purchase insurance. Several field studies and laboratory studies of insurance decision making (Kunreuther, Ginsberg, Miller, Sagi, Slovic, Borkin, & Katz, 1978; Schoemaker, 1977; Slovic, Lichtenstein, Corrigan, & Combs, 1977) show that people are more willing to insure against small losses with relatively high probabilities of occurrence than against large but unlikely losses. This behavior runs counter to that postulated by the traditional economic theories of insurance (e.g., Friedman & Savage, 1948). Those theories assume that people wish to protect themselves against rare, catastrophic losses that they could not bear themselves. However, the popularity of low-deductible insurance plans (Fuchs, 1976; Pashigan, Schkade, & Menefee, 1966) that offer expensive coverage for small but likely losses is consistent with the results from the laboratory experiments.

The general conclusions that may be drawn from this analysis are (a) that the protective behavior is influenced more by the probability of a hazard than by the magnitude of its consequences, and (b) that people are not inclined to protect themselves voluntarily against very low probability threats, regardless of their magnitude. These conclusions have important implications for agencies, such as the National Highway Traffic Safety Administration (NHTSA), who advocate greater use of occupant restraints. As long as the public sees minimal risk of death or injury from driving an automobile, it is unlikely (a) that potential interest groups will feel that there are economic benefits to occupant restraint usage, and (b) that there will be strong administrative or legislative advocacy in favor of automatic or manual occupant restraints. In sum, the modification of people's attitudes regarding the dangers of driving an automobile is an essential antecedent to promoting greater highway safety.

1.3 The Present Study

1.3.1 Rationale. It follows from the psychological considerations described above that appeals based on either the efficacy of seat belts (in the event of an accident) or on lurid descriptions of accidents will be ineffective. For these appeals to be effective, they must somehow raise the perceived probability of accidents. Indeed, as indicated previously, such appeals have been tried already and failed. In his review of fifteen years of research on fear arousal and the failure of threat appeals, Higbee (1969) reached a similar conclusion; as long as accidents are viewed as virtually impossible, efficacy and damage mean little.

To modify people's perception of risk arising from driving, Slovic (1978) devised a method to get people to consider the risks faced over a lifetime of driving rather than the risks faced on any single trip. Using the 1969 Nationwide Personal Transportation Study (U.S. Department of Transportation) indicating that the average U.S. citizen makes about 800 automobile trips per year, they calculated that the probability of a

fatal accident sometime within a 50 year period of driving (40,000 trips) is about 0.01, while the probability of experiencing at least one disabling injury is about 0.33.

Slovic et al. then studied the effect of presenting these probabilities, along with the admonition that "no one knows when that accident will come" in inducing people to modify their attitudes towards wearing seat belts. The intent of this intervention was to lengthen people's time perspective concerning the threat of death or injury resulting from an automobile accident. A previous laboratory experiment had shown that presenting people with such information was effective in inducing people to purchase insurance against rare threats (Slovic, et al., 1977).

The study by Slovic et al. (1978) showed that only 10% of respondents exposed to *single-trip* statistics believed that their use of seat belts would be changed, but 39% of those exposed to the *lifetime* probabilities said they expected that their use of seat belts would increase because of this information. Additionally, whereas 54% of the persons who received single-trip information favored mandatory protection, 78% of those exposed to lifetime statistics favored such a law.

Participants in both groups were later shown both single-trip and lifetime information accompanied by the respective anti- and pro-seat belt statements. When asked to compare the statements and indicate which was more convincing, 80% of the participants selected the pro-seat belt argument based on the probabilities over the course of 40,000 trips.

While these results in and of themselves are quite promising, there is no assurance that the favorable attitudes towards seat belts engendered by a lengthened time perspective will be maintained and translated into behavior, especially in light of people's repeated safe experiences with automobile trips. Furthermore, there is no assurance that the paper and pencil presentation medium used by Slovic et al. (1978) is as effective as other media such as film or videotape. The research presented here

was designed to determine how successful the multiple-trip perspective would be in a more adequate test of attitude and behavior change.

1.3.2 Objectives and General Approach. The objective of this study was to design and assess the effect of presentation of lifetime driving statistics in modifying the riding and driving public's attitudes toward (a) the perceived risk of driving an automobile, and (b) the use of occupant restraint systems. Lifetime statistics concerning the risk of death or serious injury in an automobile accident were presented using television (video tape) and radio (tape recorder) spot announcement.

Attitudes also were assessed before and immediately after exposure to the announcement, and again one month later. This last assessment is in line with the social psychological literature that suggests that attitudes generally do not change immediately.

Self-reported restraint use and actual use through behavioral observation were also assessed. A detailed discussion of the methods and materials used in this study appears in Chapter 2.

1.3.3 Specific Study Questions. Although this study was largely exploratory in nature, an attempt was made to address several specific questions that are central to assessing the effectiveness of the announcements. These questions were:

(1) Does presentation of TV (or radio) spot announcements that are based on lifetime statistics and manipulation of perceived risk change the attitudes of individuals toward occupant restraints more than other occupant restraint messages or highway safety announcements?

(2) Does presentation of TV (or radio) spot announcements that are based on lifetime statistics and manipulation of perceived risk change the behavior (restraint use) of individuals more than other occupant restraint messages or highway safety announcements?

(3) What differences in attitude and behavior change, if any, are due to the type of medium used for presentation of the announcements (i.e., radio vs. TV)?

2. METHOD

2.1 Subjects

One hundred twenty five males and 160 females, ranging in age from 18 to 23 years (mean age = 19 years) completed the study. Subjects had been driving for an average of approximately 3 years; the median age of the cars was 5 years.

Subjects volunteered for the study and were recruited, for the most part, from a local university, a community agricultural college, and a vocational school close to the research location. Some subjects also were recruited from nearby businesses. Subjects were paid for their participation and were told immediately about the requirement to appear twice (once at the time of recruitment and once a month hence) to be paid for participation. The payment was eight dollars for all experimental conditions except the "saturation" group, which received up to forty dollars due to additional responsibilities imposed on them by the experimental design. These responsibilities will be described in the section on experimental conditions.

2.2 Procedure

2.2.1 Questionnaires. Since a standard questionnaire designed to measure beliefs, opinions, and attitudes toward use of restraints did not exist, the authors were required to develop such an instrument. In a review of the literature on use of restraints and risk perception, the important attitudinal issues were identified and a questionnaire containing items designed to address those issues was produced. The questionnaire also included demographic questions and questions referring to people's behavior while driving or riding in an automobile. Also included were questions related to individuals' knowledge of the risks of dying in an automobile (relative to other risks). Several versions of the questionnaire were

designed for the various experimental groups and each subject received the questionnaire three times; before the experimental intervention, immediately after the intervention, and a month after the intervention. This design allowed the researchers to obtain baseline measures for all the questionnaire items which in turn allowed the assessment of both immediate and delayed attitude change scores. The questionnaires for all experimental groups are provided in Appendix A.

The attitude and opinion items of the questionnaire were subjected to a confirmatory factor analysis to determine the underlying dimensions of the items. Through Varimax rotation of factors according to Kaiser's (1960) criterion, three orthogonal factors were extracted, conforming to the original expectations of the researchers. Factor 1, which accounted for 71% of the variance, appeared to relate to items associated with perceived benefit of restraints; Factor 2, which accounted for approximately 15% of the variance, seemed to be associated with restraint usage; and Factor 3, which accounted for approximately 14% of the variance in responses, involved questions about the desirability of laws regarding restraints. The purpose of this analysis was simply to confirm the expectation that certain sets of questionnaire items were measuring the same underlying constructs. It is important to note that the analysis was performed on all three questionnaires (pre-intervention, immediate post-intervention, and delayed post-intervention); the results were nearly identical for all three analyses. This is a good indication that the intervention did not alter the underlying factor structure of the questionnaire, and did not change the interrelationship among factors. This is also an indication that subjects' responses were systematic and argues for the stability of the questionnaire. The questions that formed these three factors are presented in Table 1. Additionally, a Cronbach reliability analysis was performed on these attitudinal items for each questionnaire and produced an average alpha reliability coefficient of 0.89.

TABLE 1

FACTOR STRUCTURE OF ATTITUDE ITEMS

Factor No. Name	Associated Items	Scale Anchors
1 Perceived Benefit	"I don't need to wear a seat belt because I am a good driver and I can avoid accidents."	Strongly Agree (5) - Strongly Disagree (1)
	"Getting killed or injured in a car accident is just a matter of fate, so seat belts don't make that big a difference."	Strongly Agree (5) - Strongly Disagree (1)
	"The chances of getting into an accident are so small that seat belts aren't really worth the inconvenience."	Strongly Agree (5) - Strongly Disagree (1)
	Some people say that because the probability of death or serious injury while driving or riding in an automobile is so high, wearing a seat belt is a good thing to do, since, eventually, any effort or inconvenience involved in wearing a seat belt is likely to be repaid.	Strongly Agree (5) - Strongly Disagree (1)
	How effective do you think automobile seat belts are in preventing injury or death when an accident occurs?	Very Effective (5) - Not At All Effective (1)
2 Usage	"Nothing would make me use seat belts more often."	*Strongly Agree (1) - Strongly Disagree (5)
	"I would wear a seat belt more often if it were more comfortable."	*Strongly Agree (5) - Strongly Disagree (1)
	"I should wear a seat belt more often!"	*Strongly Agree (5) - Strongly Disagree (1)
3 Laws	How would you feel about a law that would impose a significant fine upon a person if he or she did not wear a seat belt when riding in or driving an automobile?	Strongly Favor (5) - Strongly Oppose (1)
	How do you feel about a law that will require automobile manufacturers to put either airbags or seat belts that work automatically in new cars?	Strongly Favor (5) - Strongly Oppose (1)
	How would you feel about a law that would allow insurance companies to pay for deaths and injuries that occurred in a crash only if the occupant(s) wore a seat belt?	Strongly Favor (5) - Strongly Oppose (1)

*(6) = Irrelevant because I wear seat belts all the time.

The immediate post-test questionnaire was supplemented with two forms. The first required subjects to provide information on the frequency with which they exercise and go to the doctor and dentist for checkups, and the extent to which they are conscious of eating the right foods. The second form requested subjects to list the things they liked most and least about the message they saw or heard, and asked them to indicate whether they thought the odds of being injured seriously in a car accident were greater, the same, or less than the message stated. These supplementary forms are presented in Appendix B.

2.2.2 Subject Induction and Questionnaire Completion. Upon arrival by automobile at the research location, subjects stopped at a stop sign where a "parking attendant" showed them to an assigned parking space. Subjects were told that the company had assigned spaces for its employees and visitors, and that "the people with whom we share the building get upset if their assigned spaces are taken, so a parking attendant will meet you and show you where to put the car." The parking attendant's real objective, aside from showing subjects where to park and how to get to the experiment area, was to note whether or not the subjects were wearing their seat belts.

When the entire group for a given session, which ranged between 3 and 7 people, had arrived and had parked their cars, the parking attendant escorted them upstairs to the experimental room. The experimenter then entered the room, thanked the subjects for participating, and gave them instructions appropriate to their experimental condition. These instructions are presented in Appendix C.

Subjects then proceeded to fill out their respective questionnaires. After the questionnaires were completed, the experimental intervention began. Subjects were exposed to the message appropriate to their experi-

mental condition (detailed in the next section); the message was given three times to all groups except the "saturation" group (who received it four times) and the no-message group, who obviously received no message.

After exposure to the message, subjects were asked to fill out the immediate post-intervention questionnaire, were given an appointment card as a reminder of the date for the next appearance, and were dismissed. On their way out, subjects drove by the parking attendant who checked his watch and supposedly recorded the time of departure from the research location. In reality, this entry was again an observation of whether or not the subjects had fastened their seat belts.

One month later the subjects again arrived at the research location and were again checked for seat belt wearing behavior prior to being escorted to the experimental room. Here they filled out the delayed post-intervention questionnaire, were paid, thanked for their participation, and dismissed. They were also asked not to discuss the nature of the experiment with anyone, and were told that they would receive an explanation and letter of debriefing regarding the purpose and results of the experiment as soon as they became available. Their actual seat belt behavior was again observed as they departed.

2.3 Experimental Design and Conditions

A between-subjects design was employed in the present study, with approximately 36 subjects serving under each of the eight experimental conditions. The experimental design is shown in Table 2. Groups 1 through 5 received some version of the prototype restraint message with expressed lifetime statistics and risk perception content. Group 6 received a message concerning use of restraints without any expressed risk perception content; Group 7 received a highway safety message concerned with drunk driving; and Group 8 received no message at all. The text of all these messages appears in Appendix D. An overview of the experimental conditions follows.

TABLE 2

EXPERIMENTAL DESIGN

CONDITIONS

1 Commitment TV	2 Commitment Radio	3 No Commitment TV	4 No Commitment Radio	5 Satura- tion	6 Seat Belt No Risk Perception	7 Alcohol	8 No Message
n = 35	n = 36	n = 37	n = 36	n = 35	n = 35	n = 36	n = 35

Group 1: Risk Perception Message - Commitment - TV

This group received the prototype message via video tape recorder. The last part of this message contained a request by the announcer for the characters in the message (and, hence, the subjects) to repeat the line "Whenever I ride in a car, I will buckle up." This was meant to elicit a lifetime commitment from the subjects to wear restraints. The message lasted approximately 2½ minutes.

Group 2: Risk Perception Message - Commitment - Radio

This group received the same prototype message as group 1 but received the message via tape recorder (i.e., without the video portion). The message lasted approximately 2½ minutes.

Group 3: Risk Perception Message - No Commitment - TV

This group received the prototype message without the request for subjects to repeat the lifetime commitment statement: "Whenever I ride in a car, I will buckle up." The message ended just before this request for commitment; otherwise, the message was identical to that used in group 1. This message lasted approximately 2 minutes.

Group 4: Risk Perception Message - No Commitment - Radio

This group received the prototype message without the request for subjects to repeat the lifetime commitment statement. However, this group received the message via tape recorder (i.e., without the video portion). Otherwise, the message was the same as that used in group 3. This message lasted approximately 2 minutes.

Group 5: Saturation

This group received all the prototype messages received by Groups 1 through 4; both commitment and no-commitment messages were presented via videotape and tape recorder. Each of the four messages was heard once during the intervention. In addition, subjects in this group were required to telephone the experimenters four times a week during the four weeks between the two experimental sessions. Each time the subjects called, they were exposed to one of the two radio versions of the prototype message (commitment or no commitment) via a telephone answering device. At the conclusion of the message, a tone was sounded and the subjects left their names so that the researchers had an ongoing record of the frequency with which each subject called in. The commitment and no-commitment messages were presented in alternating fashion; subjects were asked to call on four successive days during any one week to increase the probability that they would hear the commitment and no-commitment messages (on alternate days) twice (each) in any given week. Subjects received two dollars for each phone call, or a total of 32 dollars, in addition to the 8 dollars they earned by participating. Every subject in this group called the full 16 times during the one month interval.

Group 6: Seat Belt - No Risk Perception

This group saw a 16mm film ("Seat Belt Survivors," Chrysler Corporation) that contained a message encouraging the use of seat belts to protect oneself against injury. However, no mention was made of lifetime statistics or risk perception issues, as in the prototype messages. This message lasted approximately one minute.

Group 7: Alcohol

This group saw a 16mm film ("Backyard," DOT-NHTSA) concerned with the problem of drunk driving. No mention was made in this film of occupant restraints and there was no expressed risk-perception content therein. This message lasted approximately one-half minute.

Group 8: No Message

This group received no message of any kind and merely filled out the pre-intervention questionnaire, and several minutes later, the immediate post-intervention questionnaire.

3. RESULTS

3.1 Overview

The results of the present study are presented in five sections. Section 3.2 presents general descriptive information regarding seat belt use (observed and self-reported), subjects' own estimates of the general public's use of seat belts, and subjects' perceptions of the dangers of driving. Section 3.3 presents a discussion on attitude scoring. In Section 3.4, data regarding the effects of the experiment on the attitudes measured are presented; changes in attitudes are examined as a function of the specific experimental groups (i.e., how did the risk perception messages affect attitudes relative to the other message groups?). Section 3.5 presents data regarding the effects of the experiment on the behavioral measures. Changes in behavior are examined as a function of the specific experimental groups (i.e., how did the risk perception messages affect behavior relative to other message groups?). The issue of correspondence between attitudes and behavior is discussed in Section 3.6. Finally, Section 3.7 presents information obtained through other data analyses (e.g., subjective comments and remarks elicited from or volunteered by subjects) that may have implications for the refinement of the message.

The authors felt that because this pilot study was, in large part, exploratory, the results should be reviewed not only in light of statistically significant findings, but also in light of directions and trends in the data that may have practical significance for the seat belt use issue.

3.2 General Information

To obtain information on the subjects' attitudes and behaviors regarding use of seat belts, as well as data on their estimates of public use of

seat belts and their perceptions of the dangers of driving, responses to the pre-intervention questionnaire were tabulated.

3.2.1 Self-Reported and Actual Use of Seat Belts. In answering the question, "How often do you use seat belts while driving?", where the choices were always, sometimes, or never, 38 percent (or 109 subjects) of the entire sample said they never wear seat belts, 48 percent (or 136 subjects) said they wear them sometimes, and 14 percent (or 40 subjects) said they always wear seat belts. Of the 48 percent of subjects that said they wear seat belts sometimes, more than half (51 percent) said they wear them on less than 20 percent of car trips, while only 11 percent said they wear seat belts on more than 80 percent of car trips. About 14 percent of the sample were observed to be wearing seat belts upon first arrival at the research location.

In response to the question "What percentage of the motoring public do you estimate wears a seat belt regularly?", 33 percent of the subjects said "less than 20%," 50 percent said "20% to 40%," 15 percent said "40% to 60%," and 2 percent said "60% to 80%." No subjects said that more than 80% of the motoring public wears seat belts regularly. Given that the national estimate is about 11 percent and varies by state (the estimate is somewhat higher in California), it appears as if about one third of the sample in this study had accurate perceptions of the number of people that wear belts.

3.3 Attitude Change: Scoring

Before discussing the results of the attitude analyses, an explanation of the attitude scoring procedure is in order.

The authors felt that to best generalize the results to the real world, the analyses should take the form of a tabulation of the number of people who changed their attitudes negatively, positively, or not at all. Thus, attitude values that increased between pre- and immediate post-intervention questionnaire and between pre- and delayed post-intervention questionnaires, regardless of the magnitude of the change, were considered positive changes; all attitude values that decreased in this manner were considered negative changes; and all attitude values that did not change were considered as no change. Since all attitude items were of a Likert-type scale where 1 indicated a negative or unfavorable attitude and 5 indicated a positive or favorable attitude, a simple mathematical formula was used to produce the negative, positive or no change attitude values. This formula was:

For assessment of immediate attitude change,

$$X2 - X1 = X\Delta$$

where: X2 is the value of attitude item X on the immediate post-intervention questionnaire;
X1 is the value of attitude item X on the pre-intervention questionnaire; and
$X\Delta$ is the attitude change score.

For assessment of delayed attitude change (or attitude change over time),

$$X3 - X1 - X\Delta$$

where: X3 is the value of attitude item X on the delayed post-intervention questionnaire;
X1 is the value of attitude item X on the pre-intervention questionnaire; and
$X\Delta$ is the attitude change score.

In both the above cases, where $X\Delta$ was a negative value, the attitude change was considered negative, regardless of its magnitude; where $X\Delta$ was positive, the attitude change was considered positive, regardless of its magnitude; where $X\Delta$ was zero, this was, of course, an indication of no attitude change.

It is important to note at the outset that a review of the raw attitude change scores for each attitude item revealed very few change scores of more than 1 scale value. That is to say that most of the respondents who changed their attitudes (positively or negatively) changed them by only 1 scale value (e.g., strongly agree to agree--a negative change of 1 scale value; disagree to neither agree nor disagree--a positive change of 1 scale value).

3.4 Attitude Change as a Function of the Intervention

In the following analyses, the effects of the experimental interventions on attitudes toward seat belts was assessed. The question at issue was: did the experimental interventions change peoples' attitudes regarding seat belt use, and if so, how?

Tables 3 through 12 and Figures 1 through 6 present the results of these analyses for both immediate and delayed attitude change measures. Table entries refer to the percent of people in each message group who changed their attitudes positively, negatively, or not at all.

The tables present data in five columns. In column 1 (called "Risk Perception"), the percent scores represent a combination of four of the risk perception message groups (i.e., commitment-TV, commitment-radio, no commitment-TV, no commitment-radio). This was done to obtain an attitude change measure for the risk perception groups as a whole. Also, differences along the commitment and media-type dimensions did not appear consistently enough to preclude combination of scores across groups.

For both immediate and delayed effects, a set of three tables are presented for each attitude item discussed. The upper table of each set shows the distribution of individuals in the message conditions that showed positive, negative, and no attitude change. The statistical analysis used to test these tabled results was the chi-square (χ^2) procedure (Bruning & Kintz, 1977), which is an index of whether or not the two variables being examined are related to each other. In this case, a significant chi-square value indicates that some relationship exists between the attitude change and the different message groups. The "contingency table," as it is called, is then examined to see where the largest differences lie in the proportions of people responding in a particular way. Even in the absence of statistical significance, however, the data were examined visually and indicates of trends and directions in the data were obtained.

The middle table of each set shows the "net attitude change" (positive or negative). This value was obtained by subtracting the percent of people who changed their attitudes negatively from the percent of people who changed their attitudes positively. A positive value indicates that more people changed their attitudes positively than negatively. The rationale behind this analysis is that if one assumes a correspondence between attitude change and behavior (which is one assumption under which this study was conducted) then each person who changes his or her attitude in a positive way is more likely to wear his or her seat belt in the future and vice versa. The lower table in each set shows the results of tests

for significance between proportions (Bruning and Kintz, 1977) that were performed on all possible pairs of net gain scores to determine which message groups differed significantly in their attitude change scores.

The figures presented portray graphically the net gain in percent of people that changed their attitudes for each message condition. Pre- to immediate post intervention effects are shown on the upper graph, while pre- to delayed post-intervention effects are shown on the lower graph.

3.4.1 Attitude Change for Specific Questionnaire Items. The first analysis dealt with changes in responses to the question "How concerned are you about being injured or killed in an automobile accident?"

Tables 3 and 4 show the distribution of the percent of people that changed their attitudes positively, negatively, and not at all in the experimental conditions for immediate and delayed effects respectively. Net gain (as described earlier) is also presented in these tables. In both cases, a significant relationship exists between the attitude change and message groups, as evidenced by the value of the chi-square statistic ($\chi^2 = 22.8$; $p < 0.005$ in both cases). With regard to immediate effects, the upper graph in Figure 1 shows that the risk perception messages and the saturation message (also based on risk perception) were significantly better in changing attitudes positively than no message at all. The saturation message also produced significantly better results than any of the other messages.

The seat belt-no risk perception and alcohol messages did seem to produce positive net gains immediately; however, it is important to note that these effects deteriorated over time, as is evidenced by the graph in the lower part of Figure 1. Net gain dropped by 25 percent for the seat belt-no risk perception message group (henceforth referred to as SB-NRP group);

TABLE 3

IMMEDIATE ATTITUDE CHANGE FOR THE QUESTIONNAIRE ITEM:

HOW CONCERNED ARE YOU ABOUT BEING INJURED OR KILLED IN AN AUTOMOBILE ACCIDENT?

Percent of Group	Risk Perception	Saturation	Seat Belt- No Risk Perception	Alcohol	No Message
+ Change	27	49	40	31	17
0 Change	68	49	54	69	74
- Change	6	3	6	0	9
n =	143	35	35	36	35

$\chi^2 = 22.81$; $p < 0.005$

Net Gain	+21	+46	+34	+31	+8

	Risk Perception	Saturation	Seat Belt- No Risk Perception	Alcohol
Risk Perception				
Saturation	*			
Seat Belt- No Risk Perception		*		
Alcohol		*		
No Message	*	*	*	*

* = $p<.05$

TABLE 4

DELAYED ATTITUDE CHANGE FOR THE QUESTIONNAIRE ITEM:

HOW CONCERNED ARE YOU ABOUT BEING INJURED OR KILLED IN AN AUTOMOBILE ACCIDENT? (CHECK ONE)

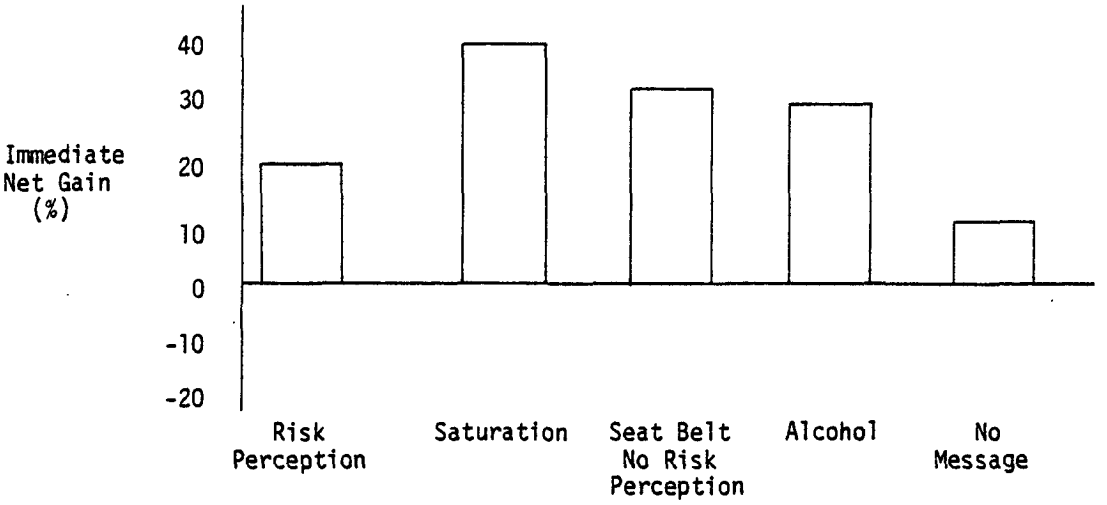
Percent of Group	Risk Perception	Saturation	Seat Belt-No Risk Perception	Alcohol	No Message
+ Change	22	49	29	14	6
0 Change	59	37	51	54	69
- Change	20	14	20	33	26
n =	143	35	35	36	35

$\chi^2 = 23.83$; $p < 0.005$

Net Gain	+2	+35	+9	-19	-20

	Risk Perception	Saturation	Seat Belt-No Risk Perception	Alcohol
Risk Perception				
Saturation	*			
Seat Belt-No Risk Perception		*		
Alcohol	*	*	*	
No Message	*	*	*	

* = $p<.05$



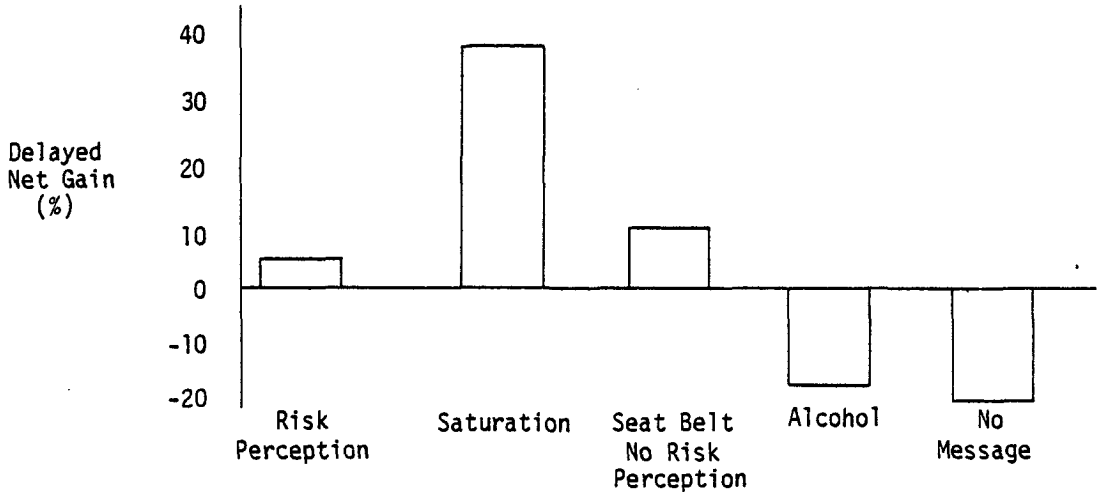


FIGURE 1.
IMMEDIATE AND DELAYED NET GAIN:
CONCERN ABOUT BEING INJURED OR KILLED

by 50 percent for the alcohol message group; and by 28 percent for the no message group. This indicates that these message groups (and the no message group) were actually associated with negative attitude change after the one month delay. Although the net gain in risk perception message groups also dropped, the extent of the drop (19 percent for risk perception, 9 percent for saturation) was less than any of the other groups and still produced some positive net gain. Clearly, the saturation message sustained the positive change over time.

These results indicate that the messages based on perception of risk succeeded in raising the level of concern of subjects about being injured or killed in an automobile accident, and were able to sustain that increased level of concern over time.

Next, responses to the questionnaire item "getting killed or injured in a car accident is just a matter of fate, so seat belts don't make that big a difference" were analyzed. This item relates to a personality trait (fatalism) and it was especially interesting to see if the message could change the extent to which individuals agreed or disagreed with that statement. Tables 5 and 6 and Figure 2 show the results of this analysis.

Interestingly, the attitude associated with this statement was changed. The saturation group produced the most attitude change over the near term, with the no message group next. However, the graph in the lower part of Figure 2 shows again that, over time, only the saturation group maintained a substantial net gain in the percent of subjects that changed their attitude positively. The authors are not sure why there appears to be a larger percent of people developing a negative attitude over time in the risk perception message group.

TABLE 5

IMMEDIATE ATTITUDE CHANGE FOR THE QUESTIONNAIRE ITEM:

GETTING KILLED OR INJURED IN A CAR ACCIDENT IS JUST A MATTER OF FATE, SO SEAT BELTS DON'T MAKE THAT BIG A DIFFERENCE.

Percent of Group	Risk Perception	Saturation	Seat Belt-No Risk Perception	Alcohol	No Message
+ Change	16	34	17	17	31
0 Change	68	63	72	66	57
- Change	16	3	11	17	12
n =	144	35	35	36	35

$\chi^2 = 12.06$; p = N.S.

Net Gain	0	+31	+6	0	+19

	Risk Perception	Saturation	Seat Belt-No Risk Perception	Alcohol
Risk Perception				
Saturation	*			
Seat Belt-No Risk Perception		*		
Alcohol		*		
No Message	*			*

* = p<.05

TABLE 6

DELAYED ATTITUDE CHANGE FOR THE QUESTIONNAIRE ITEM:

GETTING KILLED OR INJURED IN A CAR ACCIDENT IS JUST A MATTER OF FATE, SO SEAT BELTS DON'T MAKE THAT BIG A DIFFERENCE.

Percent of Group	Risk Perception	Saturation	Seat Belt- No Risk Perception	Alcohol	No Message
+ Change	14	40	17	14	20
0 Change	63	49	57	61	60
- Change	23	11	26	25	20
n =	144	35	35	36	35

$\chi^2 = 14.38$; $p < .07$

Net Gain	-11	+29	-19	-11	0

	Risk Perception	Saturation	Seat Belt- No Risk Perception	Alcohol
Risk Perception				
Saturation	*			
Seat Belt- No Risk Perception		*		
Alcohol		*		
No Message	*	*	*	*

* = P<.05

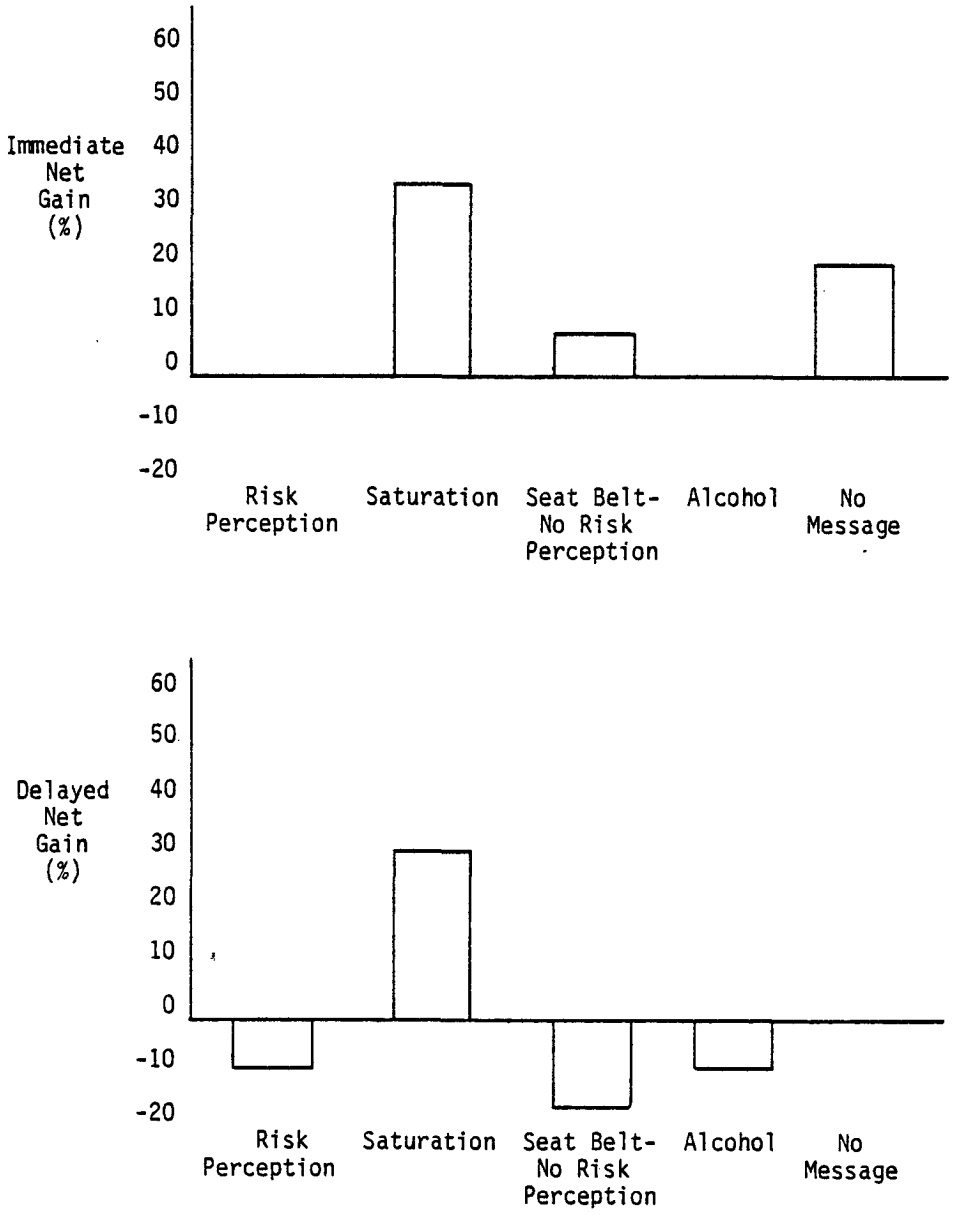


FIGURE 2.
IMMEDIATE AND DELAYED
NET GAIN: FATE

The next analysis concerned the nature of responses to the item "the chances of getting into an accident are so small that seat belts aren't really worth the inconvenience," to which subjects indicated the extent of their agreement (or disagreement). This was an item that the authors expected would be influenced by the messages based on perceived risk, since these messages try explicitly to get people to change their perceptions of the probability of being injured or killed in an automobile accident.

The results of this analysis conformed to the expectations of the investigators. A review of Tables 7 and 8 and Figure 3 show net gain in the risk perception and saturation groups in the near term; a gain was also realized in the no message group. Over the long term, however, this gain was eliminated. Additionally, the alcohol and SB-NRP groups show a greater percent of negative attitude changes over time. The risk perception groups and the saturation group still show a positive net gain after the one-month delay.

Another questionnaire item addressed the issue of perceived risk more specifically. This was:

> "Some people say that because the probability of death or serious injury while driving or riding in an automobile is so high, wearing a seat belt is a good thing to do, since, eventually, any effort or inconvenience involved in wearing a seat belt is likely to be repaid."

Again, subjects were asked to indicate the extent to which they agreed with this statement.

Note that this item assessed subjects' attitudes toward seat belts in consideration of two of the major reasons given for non-use, i.e., effort and inconvenience. Thus, this item is viewed as a critical one in assessing the effectiveness of the messages.

TABLE 7

IMMEDIATE ATTITUDE CHANGE FOR THE QUESTIONNAIRE ITEM:

THE CHANCES OF GETTING INTO AN ACCIDENT ARE SO SMALL THAT SEAT BELTS AREN'T REALLY WORTH THE INCONVENIENCE.

Percent of Group	Risk Perception	Saturation	Seat Belt- No Risk Perception	Alcohol	No Message
+ Change	24	31	11	17	37
0 Change	62	69	72	69	49
- Change	14	0	17	14	14
n =	144	35	35	36	35

$\chi^2 = 13.65$; $p < .09$

Net Gain	+10	+31	-6	+3	+23

	Risk Perception	Saturation	Seat Belt- No Risk Perception	Alcohol
Risk Perception				
Saturation	*			
Seat Belt- No Risk Perception	*	*		
Alcohol		*		
No Message	*		*	*

* = P<.05

TABLE 8

DELAYED ATTITUDE CHANGE FOR THE QUESTIONNAIRE ITEM:

THE CHANCES OF GETTING INTO AN ACCIDENT ARE SO SMALL THAT SEAT BELTS AREN'T REALLY WORTH THE INCONVENIENCE.

Percent of Group	Risk Perception	Saturation	Seat Belt- No Risk Perception	Alcohol	No Message
+ Change	26	23	27	11	17
0 Change	52	66	60	67	66
- Change	22	11	23	22	17
n =	144	35	35	36	35

$\chi^2 = 7.68$; p = N.S.

Net Gain	+4	+12	-6	-11	0

	Risk Perception	Saturation	Seat Belt- No Risk Perception	Alcohol
Risk Perception				
Saturation				
Seat Belt- No Risk Perception		*		
Alcohol	*	*		
No Message		*		*

* = P<.05

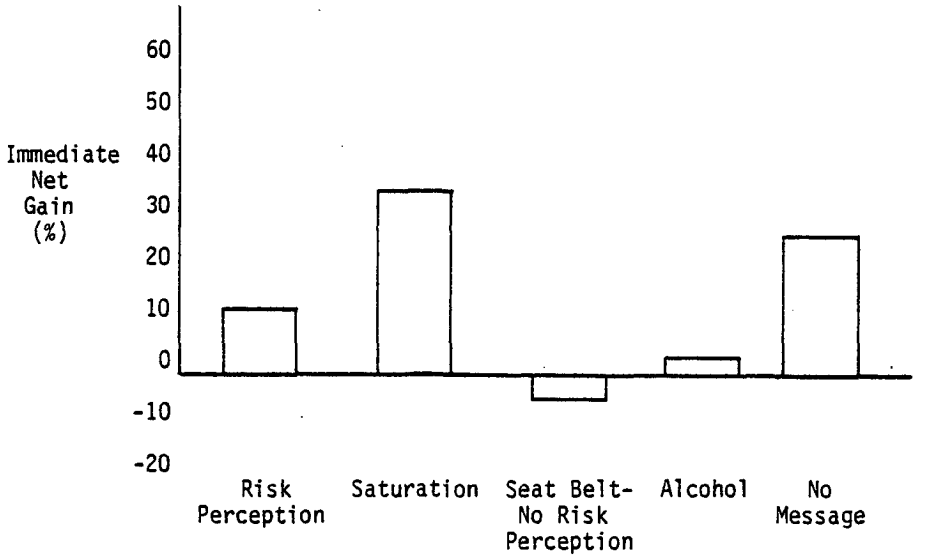


FIGURE 3.
IMMEDIATE AND DELAYED NET GAIN:
CHANCES OF BEING IN AN ACCIDENT

The results of this analysis are shown in Tables 9 and 10, and in Figure 4.

It can be seen that the risk perception and saturation groups display positive net gain in the percent of people changing attitudes. Once again, the messages given to the saturation group seem to be significantly better at generating positive attitude changes than the other message groups in the near term. Over the long term, this is also the case. This is taken to be a good indication of the effectiveness of the risk perception based messages, and offers some support for the hypothesis that a change in the perception of risks in driving may serve to overcome the resistance displayed by individuals to using seat belts due to the unrewarded effort and inconvenience associated with their use.

Finally, changes in the item designed to assess the perceived effectiveness of seat belts were assessed. This item asked subjects to indicate the degree to which they think seat belts are effective in preventing injury or death when an accident occurs. It is important to note that the risk perception messages were not designed specifically to change people's attitudes toward the effectiveness of seat belts when an accident occurs (although they do imply that seat belts help prevent injury or death); they were designed to change perceptions of the probability of an accident in which an individual will be seriously injured or killed.

An analysis of these data indicate, however, that positive changes did ensue from exposure to the risk perception messages. Tables 11 and 12 present these data, as does Figure 5. It is evident from the figure, that, in the near term, the group receiving the saturated message exposure showed the most net gain; this gain was significantly better than that achieved by any other group. Over time, however, these effects appeared to wear off, although the saturation group still produced significantly better results than the group receiving the alcohol message.

TABLE 9

IMMEDIATE ATTITUDE CHANGE FOR THE QUESTIONNAIRE ITEM:

SOME PEOPLE SAY THAT BECAUSE THE PROBABILITY OF DEATH OR SERIOUS INJURY WHILE DRIVING OR RIDING IN AN AUTOMOBILE IS SO HIGH, WEARING A SEAT BELT IS A GOOD THING TO DO, SINCE, EVENTUALLY, ANY EFFORT OR INCONVENIENCE INVOLVED IN WEARING A SEAT BELT IS LIKELY TO BE REPAID

Percent of Group	Risk Perception	Saturation	Seat Belt-No Risk Perception	Alcohol	No Message
+ Change	29	40	29	17	8
0 Change	56	51	51	72	66
- Change	15	9	20	11	26
n =	144	35	35	36	35

$\chi^2 = 14.82$; $p < .06$

Net Gain	+14	+31	+9	+8	-18

	Risk Perception	Saturation	Seat Belt-No Risk Perception	Alcohol
Risk Perception				
Saturation	*			
Seat Belt-No Risk Perception		*		
Alcohol		*		
No Message	*	*	*	*

* = P<.05

TABLE 10

DELAYED ATTITUDE CHANGE FOR THE QUESTIONNAIRE ITEM:

SOME PEOPLE SAY THAT BECAUSE THE PROBABILITY OF DEATH OR SERIOUS INJURY WHILE DRIVING OR RIDING IN AN AUTOMOBILE IS SO HIGH, WEARING A SEAT BELT IS A GOOD THING TO DO, SINCE, EVENTUALLY, ANY EFFORT OR INCONVENIENCE INVOLVED IN WEARING A SEAT BELT IS LIKELY TO BE REPAID

Percent of Group	Risk Perception	Saturation	Seat Belt- No Risk Perception	Alcohol	No Message
+ Change	29	37	26	30	14
0 Change	54	54	51	53	60
- Change	17	9	23	17	26
n =	144	35	35	36	35

$\chi^2 = 7.63$; p = N.S.

Net Gain	+12	+28	+3	+13	-12

	Risk Perception	Saturation	Seat Belt- No Risk Perception	Alcohol
Risk Perception				
Saturation	*			
Seat Belt- No Risk Perception		*		
Alcohol				
No Message	*	*	*	*

* = P<.05

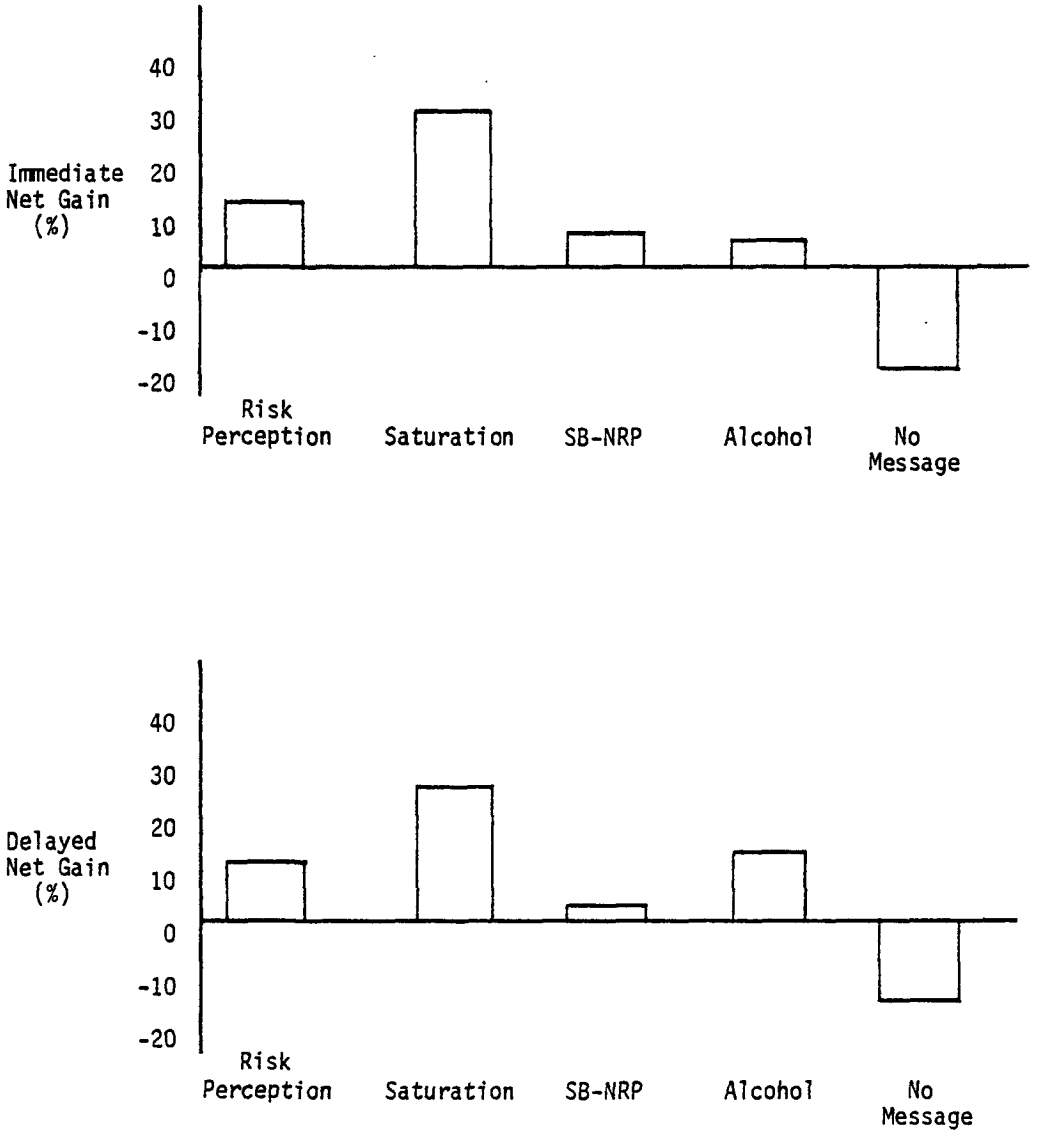


FIGURE 4.
IMMEDIATE AND DELAYED NET GAIN:
IMPORTANCE OF SEAT BELTS

TABLE 11

IMMEDIATE ATTITUDE CHANGE FOR THE QUESTIONNAIRE ITEM:

HOW EFFECTIVE DO YOU THINK AUTOMOBILE SEAT BELTS ARE IN PREVENTING INJURY OR DEATH WHEN AN ACCIDENT OCCURS?

Percent of Group	Risk Perception	Saturation	Seat Belt-No Risk Perception	Alcohol	No Message
+ Change	28	37	34	17	17
0 Change	55	60	54	75	66
- Change	17	3	12	8	17
n =	144	35	35	36	35

$\chi^2 = 12.32$; p = N.S.

Net Gain	+11	+34	+22	+9	0

	Risk Perception	Saturation	Seat Belt-No Risk Perception	Alcohol
Risk Perception				
Saturation	*			
Seat Belt-No Risk Perception				
Alcohol		*		
No Message	*	*	*	*

* = P<.05

TABLE 12

DELAYED ATTITUDE CHANGE FOR THE QUESTIONNAIRE ITEM:

HOW EFFECTIVE DO YOU THINK AUTOMOBILE SEAT BELTS ARE IN PREVENTING INJURY OR DEATH WHEN AN ACCIDENT OCCURS?

Percent of Group	Risk Perception	Saturation	Seat Belt-No Risk Perception	Alcohol	No Message
+ Change	32	20	34	11	29
0 Change	51	77	43	78	48
- Change	17	3	23	11	23
n =	144	35	35	36	35

$\chi^2 = 30.65$; $p < .001$

Net Gain	+15	+17	+11	0	+6

	Risk Perception	Saturation	Seat Belt-No Risk Perception	Alcohol
Risk Perception				
Saturation				
Seat Belt-No Risk Perception				
Alcohol	*	*		
No Message				

* = P<.05

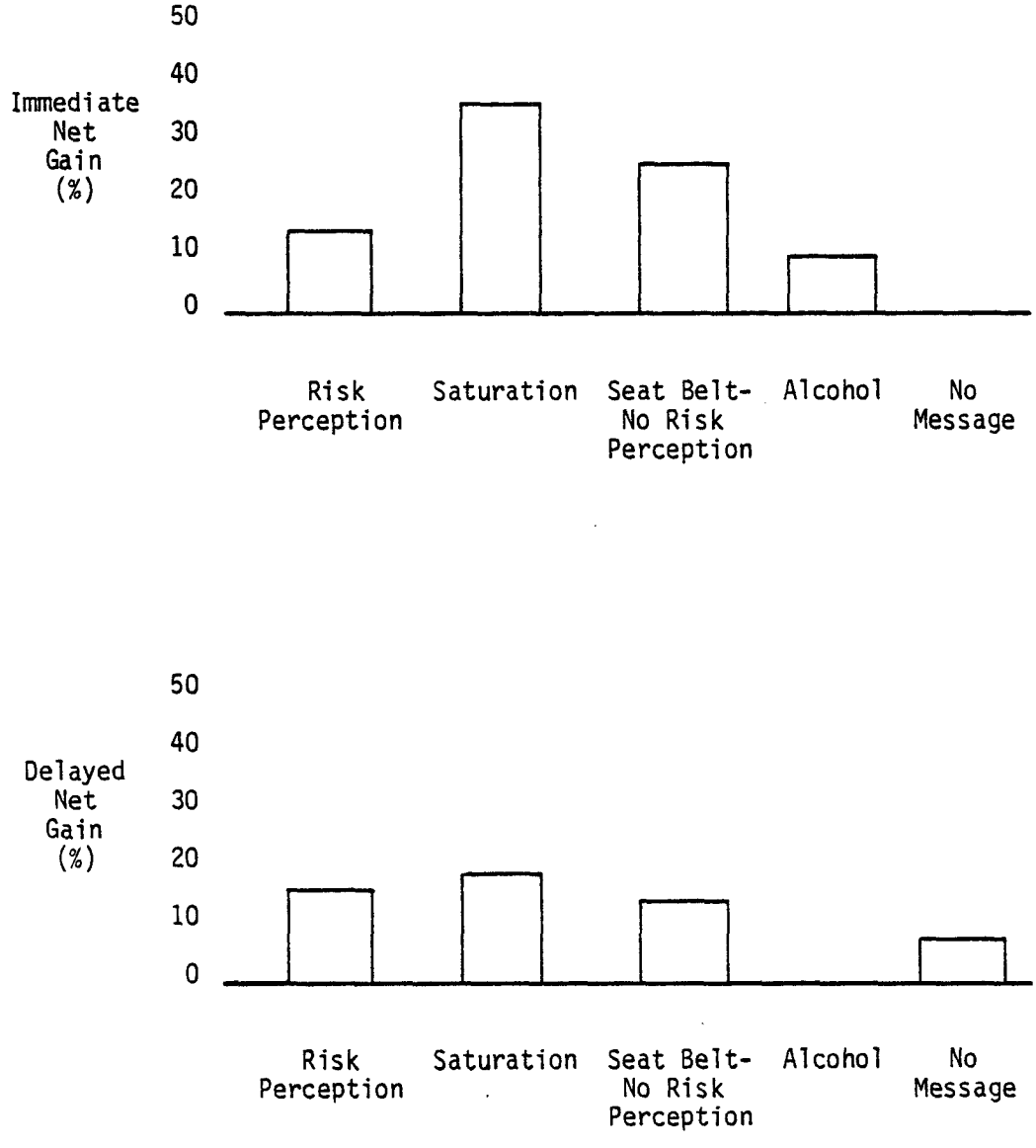


FIGURE 5.
IMMEDIATE AND DELAYED NET GAIN:
EFFECTIVENESS OF SEAT BELTS

A discussion of the apparently high percentage net gain in the SB-NRP group is in order. This result would be surprising but is explainable by the actual text of that message. A review of this text (supplied in Appendix D) shows that the message was aimed specifically at convincing people that seat belts are effective in reducing injury and death when an accident occurs. Thus, the high net gain in positive attitude change for this item appears logical for subjects receiving this message.

In sum, the attitude change data suggest that exposure to messages based on lifetime driving statistics and perceptions of risk is sometimes more effective than the other messages tested in this study, in changing attitudes toward seat belts. Moreover, repeated exposure to the risk perception messages (saturation group) appears to change a substantially greater percentage of attitudes positively and more consistently in both the near and long term. Also, the saturation group is the only group that (a) maintained a high frequency of positive net gain in attitudes over time, and (b) was never associated with any negative attitude changes. The aforementioned findings are portrayed graphically in Figure 6.

3.4.2 Attitudes Toward Laws. Three questionnaire items related to individuals' attitudes toward laws that could be instituted to encourage use of seat belts; subjects were asked to indicate the extent to which they favor or oppose:

(1) A law that would impose a significant fine upon a person if he or she did not wear a seat belt when riding or driving an automobile.

(2) A law that will require automobile manufacturers to put either airbags or seat belts that work automatically in new cars.

(3) A law that would allow insurance companies to pay for deaths and injuries that occurred in a crash only if the occupant(s) wore a seat belt.

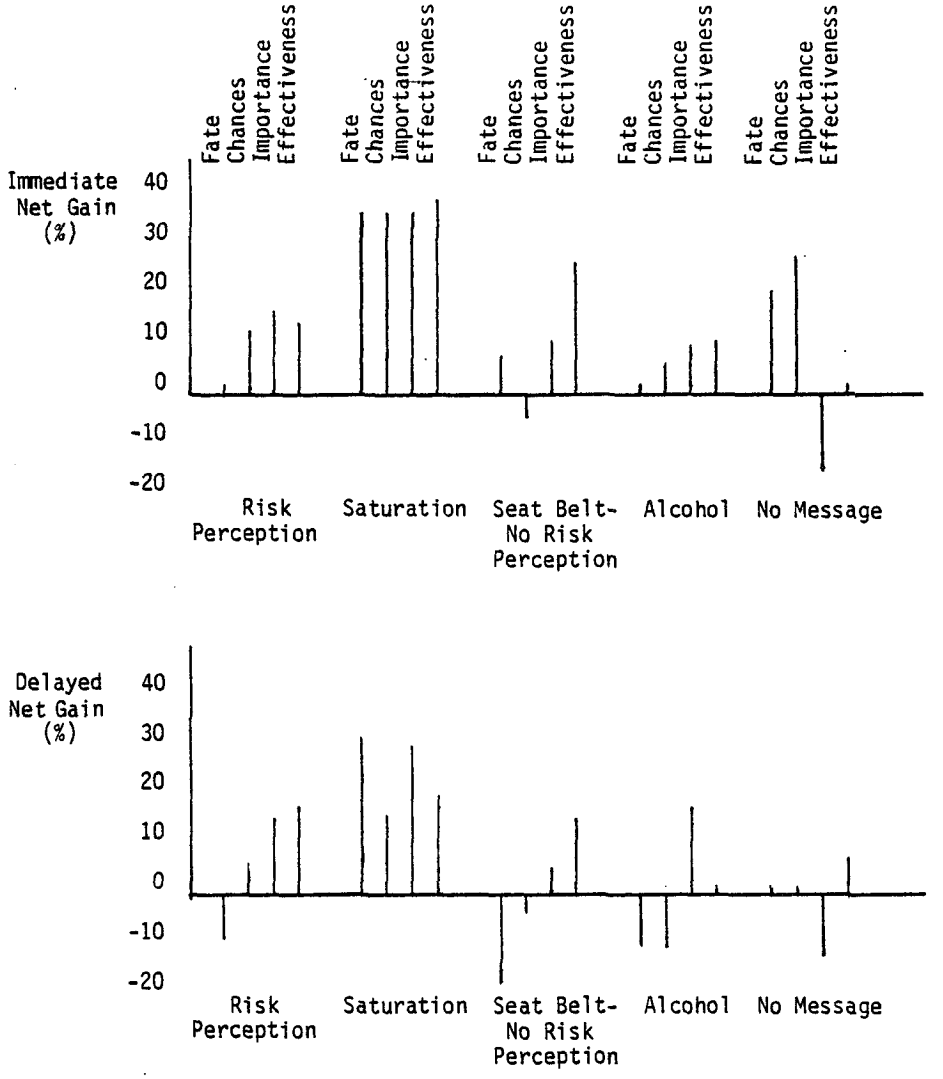


FIGURE 6.
SUMMARY OF RESULTS
ON ATTITUDE CHANGE

Analysis of the responses to these items produced the following results:

(1) No immediate change in attitude toward imposing a fine for not wearing seat belts was evident. Over time, however, responses were uniformally negative; a negative net change was observed for each message group, and none of the groups differed significantly from each other.

(2) With regard to attitudes towards a law requiring manufacturers to put automatic (passive) restraints in automobiles, some positive net gain was realized in saturation and alcohol groups, as opposed to the other message groups, which showed no appreciable change in either positive or negative direction. Although the differences in net gain between saturation and alcohol groups versus the other message groups were significant, the differences between saturation group (immediate net gain = +20%; delayed = +11.4%) and alcohol group (immediate net gain = +17%; delayed = +13.8%) were not statistically significant. It is felt that changes in the attitude towards institution of this law cannot be attributed readily to the risk perception theme.

(3) Analysis of responses to the item suggesting a law that would allow insurance coverage for damages only if occupants wore seat belts showed no apparent pattern in the near term, and negative net values or no appreciable change over the long term.

On the basis of these results, it is felt that none of the messages really succeeded in producing any consistent attitude changes. Examination of

baseline measures of these 3 items indicated that a very small proportion of the population favored these laws to begin with, and that most of the population responded with "neither oppose nor favor," "slightly oppose," or "strongly oppose," the latter category containing nearly 33 percent of the sample in each experimental group. We suggest that the individuals in this sample do not look favorably upon institution of laws regarding seat belt use. These results may have been different with an older age group that may not be as resistant to being "told what to do."

3.5 Behavior Change as a Function of the Interventions

3.5.1 Self-Report. This section describes the analyses performed on two types of behavioral measures, both self-reported. The first measure was an estimate by subjects of the frequency with which they wear seat belts; subjects responded to the question "How often do you wear seat belts while driving" on the pre- and delayed post-intervention questionnaires. Again, a difference score was obtained by subtracting the value obtained for that item on the pre-intervention questionnaire from the value obtained on the delayed post-intervention questionnaire. The resulting sums produce positive, negative, and zero values, which indicate positive, negative, or no change in self-reported frequency of seat belt use. The number of people falling into those categories of seat belt use in each message group constituted the contingency table, and the chi-square statistic was used to determine whether, in this case, self-reported behavior with regard to frequency of seat belt use was related to the experimental message groups. Tests for significance of proportions were performed to determine between which groups the significant differences in proportions lay.

The second measure was obtained from responses to the following question:

As a result of seeing the highway safety announcement a month ago, in what way did you change your use of seat belts?

___ No change. I already wear a seat belt all the time.
5

___ I wear a seat belt much more often now.
4

___ I wear a seat belt somewhat more often now.
3

___ I increased my use of seat belts for awhile, but now I wear them no more often than I did before hearing the message.
2

___ I wear a seat belt no more often than I did before hearing the message.
1

This question was given to all groups except the no message group and was intended to assess the subjects' own feelings about the effects of the message received on their seat belt wearing behavior. A frequency tabulation was then done on those data and chi-square statistics were calculated.

3.5.2 Frequency of Seat Belt Use. Table 13 and Figure 7 present the data on subjects' self-reported frequency of seat belt use. The data appear to reflect the patterns of the attitude change data. Figure 7 indicates that the greatest gain in percentage of people reporting a change in their behavoir (increasing the frequency of wearing belts) was achieved by subjects in the Saturation condition (28 percent). This is twice the percentage of people in the Alcohol message group that reported this positive behavior change, and significantly more than the change reported in the Seat Belt-No Risk Perception and No Message groups. The Risk Perception

TABLE 13

CHANGE IN SELF REPORTED FREQUENCY OF SEAT BELT USE

Percent of Group	Risk Perception	Saturation	Seat Belt- No Risk Perception	Alcohol	No Message
+ Change	17	31	9	14	6
0 Change	81	66	88	86	86
- Change	2	3	3	0	8
n =	144	35	35	36	35

$\chi^2 = 18.91; p < .05$

Net Gain	+15	+28	+6	+14	-2

	Risk Perception	Saturation	Seat Belt- No Risk Perception	Alcohol
Risk Perception				
Saturation				
Seat Belt- No Risk Perception		*		
Alcohol				
No Message	*	*		*

* = P<.05

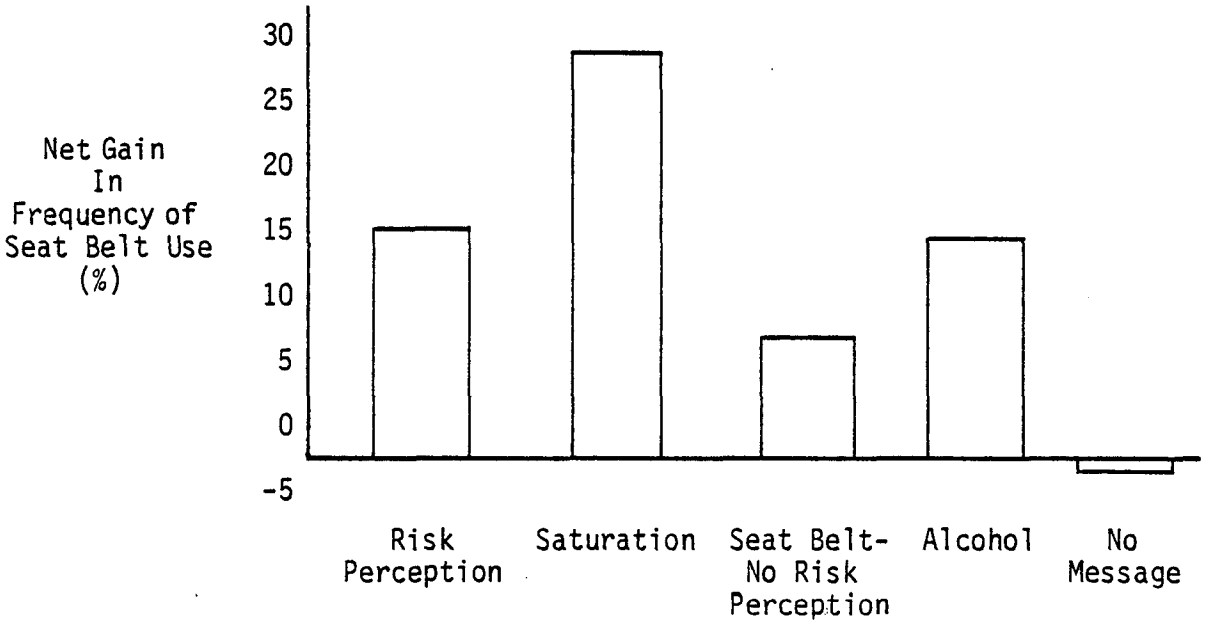


FIGURE 7.
NET GAIN IN SELF-REPORTED
FREQUENCY OF SEAT BELT USE

message groups also showed considerable positive change in self-reported seat belt wearing, but this change was not significantly different from that in the Alcohol message group. Clearly, the Risk Perception and Saturation message groups showed a significantly higher percentage of people reporting an increase in belt wearing frequency than the No Message group.

The second measure of self-reported frequency of seat belt use required subjects to estimate the effectiveness of the message they saw in changing their use of seat belts. Table 14 presents the results of this analysis. The results of interest are shown in rows 2, 3, and 4 of the table, where responses were "I increased seat belt use for awhile, but now I wear one no more often than before;" "I wear a seat belt somewhat more often now;" and "I wear a seat belt much more often now." The percentage of people responding in these three ways were combined and the total percentage was viewed as an index of improvement in seat belt use. Figure 8 graphically portrays these results. The figure shows the same pattern of responses as in many of the previous results discussed. Again, the Saturation condition produced a significantly higher percentage of positive change than any of the other groups. The Risk Perception message group did produce substantial positive change as well, but this change was not significantly different from the Non-Risk-Perception message groups. It should be noted that row 2 in Table 14 (I increased seat belt use for a while, but now I wear one no more often than before) was included in the index of improvement. Even though this category does not represent a *permanent* positive change in self-reported seat belt use, it can be considered a temporary positive change that may need reinforcement to become permanent. It fact, this is similar to the measures of immediate (as opposed to delayed) attitude change refered to throughout the study.

3.5.3 Behavioral Observation. These data were obtained from observing whether or not individuals were wearing seat belts upon arrival and

TABLE 14

BEHAVIOR CHANGE FOR THE QUESTIONNAIRE ITEM:

AS A RESULT OF SEEING THE HIGHWAY SAFETY ANNOUNCEMENT
A MONTH AGO, IN WHAT WAY DID YOU CHANGE YOUR USE OF SEAT BELTS?

Percent of Group	Risk Perception	Saturation	Seat-Belt No-Risk Perception	Alcohol
(1) I wear a seat belt no more often than before.	41	14.3	35.3	50
(2) Increased for Awhile -- Now, No More Often.	9.7	20	8.8	2.8
(3) I wear a seat belt somewhat more often.	20.1	37.1	29.4	25
(4) I wear a seat belt much more often.	12.5	17.1	8.8	13.9
(5) I already wear a seat belt all the time.	16.7	11.4	17.6	8.3
n =	144	35	34	36
	$x^2 = 18.9$; $p < .09$			
Sum of Percentages For Columns 2, 3 and 4.	42.3	74.2	47.0	41.7

	Risk Perception	Saturation	Seat Belt No Risk Perception
Risk Perception			
Saturation	*		
Seat Belt-No Risk Perception		*	
Alcohol		*	

* = P<.05

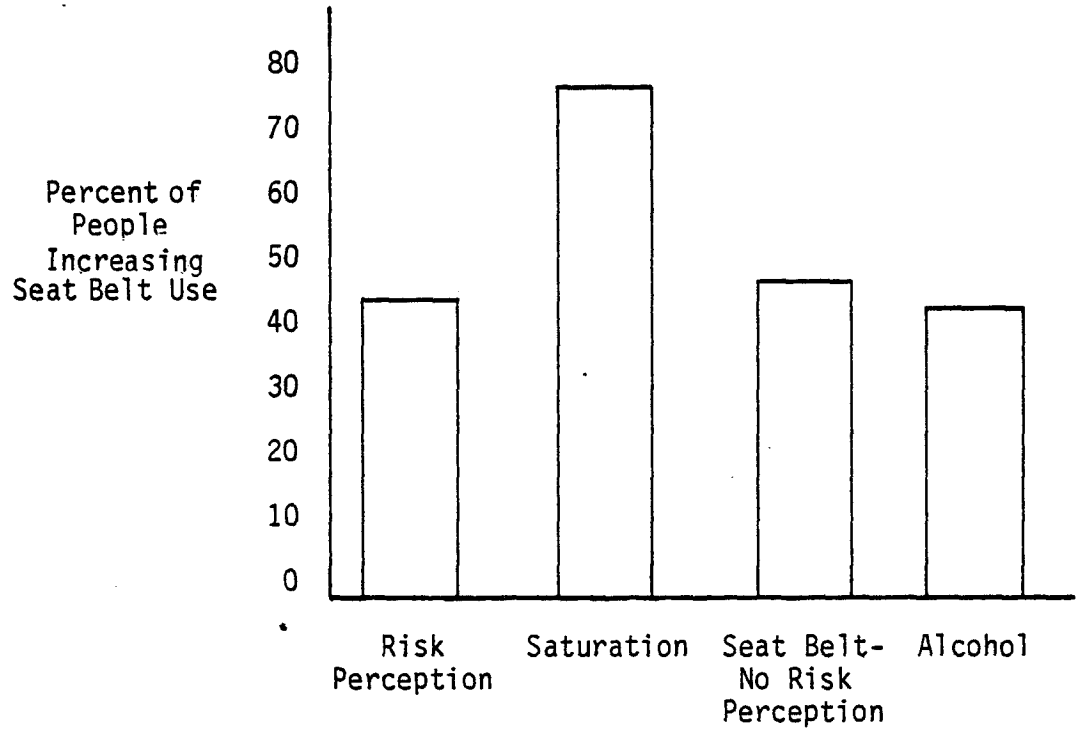


FIGURE 8.
SUBJECTS ASSESSMENT OF MESSAGE EFFECTIVENESS IN INPROVING SEAT BELT USE

departure from the research location for both experimental sessions (total: 4 observations). No negative change in seat belt wearing was observed; all those wearing seat belts upon arrival at the first session were observed to be wearing them on all of the subsequent observations. Therefore, these data were eliminated and the remaining data were analyzed for all individuals who were *not* wearing seat belts upon arrival at the first session. Any change thereafter (on any of the other 3 observations) was considered a positive change; subjects who were observed *not* to wear seat belts on all three subsequent occasions were categorized as No Change.

Figure 9 shows the percent of people observed to be wearing seat belts on each of the four observations over all the experimental conditions. A considerable increase in the percent of people wearing belts after the experimental intervention is evident. Observed seat belt use increased from 14.4 percent of the subjects on the first observation to 28.5 percent on the fourth observation; almost twice as many people were wearing seat belts at the end of the experiment as at the beginning. The important question, however, is: "How did the risk perception messages influence this positive change in observed behavior relative to the other groups?"

Table 15 and Figure 10 present data that attempt to answer this question. Figure 10 shows that the positive change in observed seat belt wearing was not attributable to any particular message group; subjects in all message groups appear to have changed their behavior to almost equal proportions. Especially interesting is the finding that a large increase in the percentage of people wearing belts occurred in the No Message group.

Two explanations for these results are possible. The first concerns the validity of the behavioral observation measure. Although caution was exercised in concealing the parking attendant's real purpose, it is

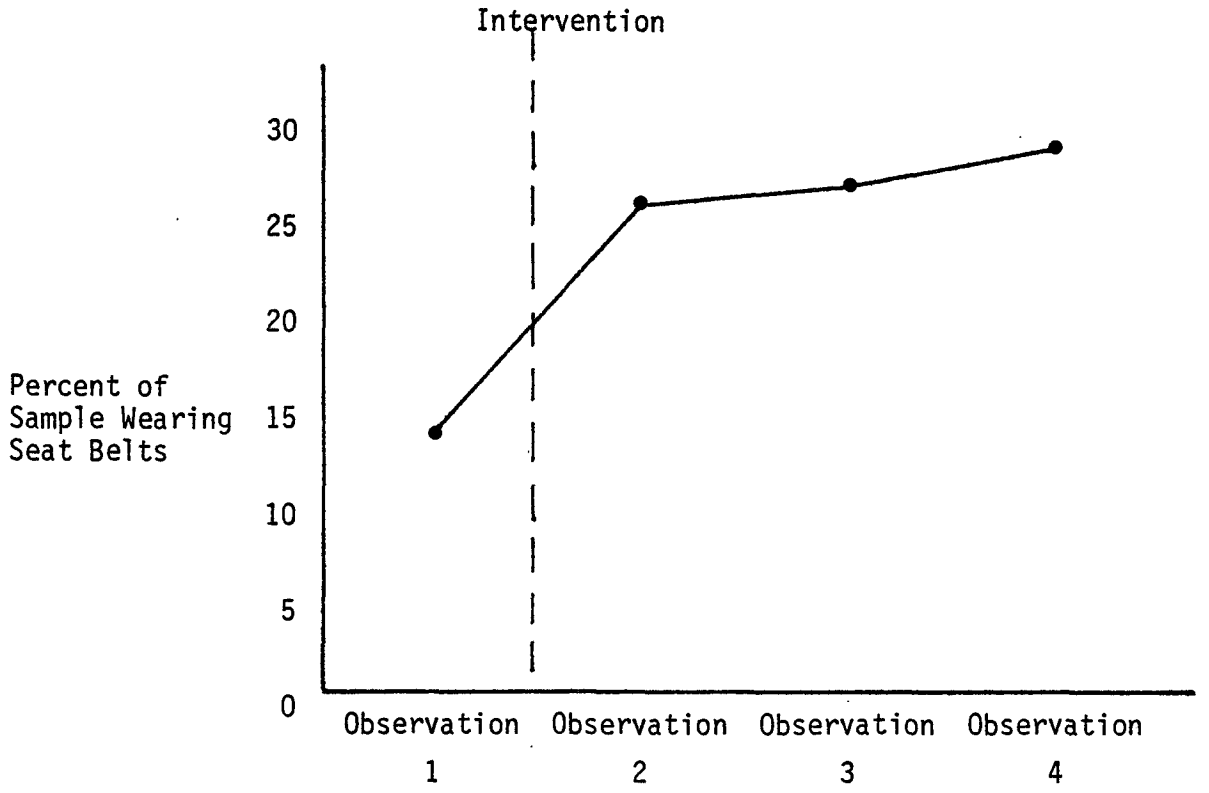


FIGURE 9.
OVERALL EFFECT OF EXPERIMENT ON OBSERVED SEAT BELT USE.

TABLE 15.

PERCENT OF SAMPLE WEARING SEAT BELTS IN EACH OF THE 4 OBSERVATIONS

Percent of Group	Commitment TV	Commitment Radio	No Commitment TV	No Commitment Radio	Satura-tion	Seat Belt-No Risk Perception	Alcohol	No Message	TOTAL
IN 1	12.9	18.2	17.6	21.2	9.1	15.6	15.2	5.9	14.4
OUT 1	30.3	33.3	21.2	33.3	18.2	19.2	24.2	21.2	25.2
IN 2	34.6	27.6	19.4	21.9	28.1	30.3	19.4	34.4	26.7
OUT 2	29.0	18.8	22.9	35.5	25.7	32.4	34.4	30.3	28.5
OUT2 - IN1 (Δ from 1st to last observation)	+16.1%	+0.6%	+5.3%	+14.3%	+16.6%	+16.8%	+16.8%	+24.4%	+14.1%

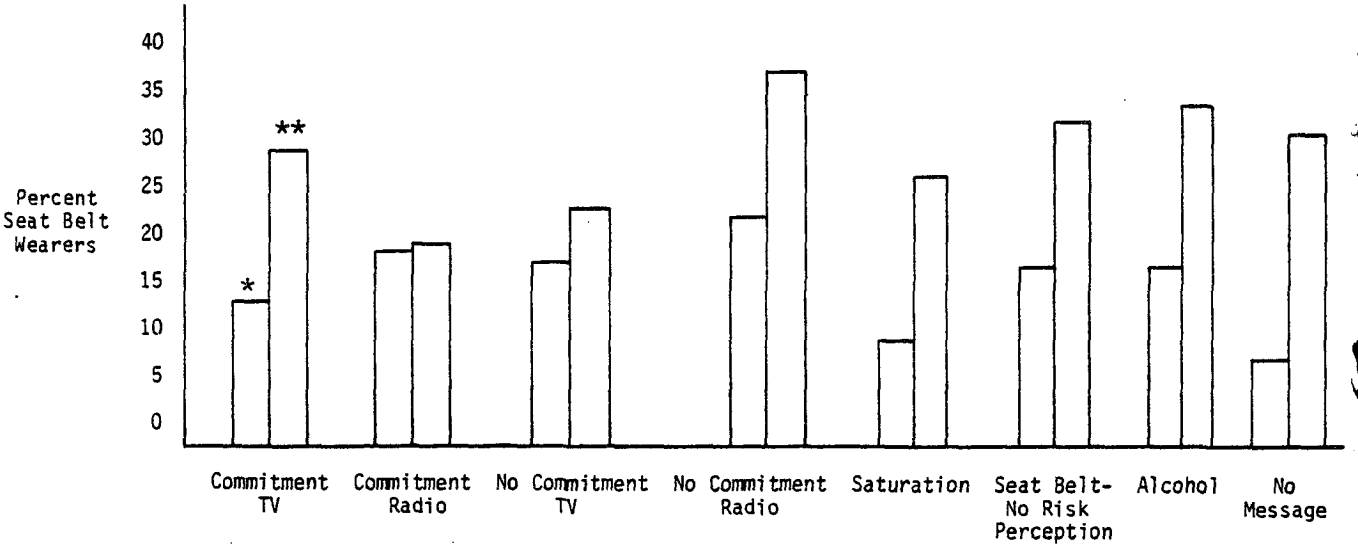


FIGURE 10.
INCREASE IN OBSERVED
SEAT BELT USE

(* = observation 1; ** = observation 4)

possible that the subjects did learn that the parking attendant was checking whether or not they were wearing a seat belt. Consequently, subjects could have done what they thought they were expected to do, i.e., fasten their seat belts. It is also possible that this perspective influenced their behavior on subsequent trips to the research location. That is, the behavioral observation may in fact have measured the influence of the parking attendant and the experiment itself on seat belt wearing.

Another explanation for the increase in observed seat belt use in the No-Message group, is that act of filling out the questionnaire may have had an effect on subjects' use of seat belts. That is, it is possible that just the experience of taking the questionnaire, which contained a number of questions whose theme was related to perceived risk, influenced subjects to change their behavior.

Intuitively, this explanation makes sense; the questionnaire could be considered a form of the risk perception message. In fact, it may have been an effective way to present the risk perception theme. Subjects (especially teenagers) may not be as receptive to messages that promote seat belt use in a "hard sell" manner, and may be more receptive to a message that requires them to think about the risks of driving without belts, devoid of any instructions or expressed encouragement to wear seat belts. In other words, they may prefer to come to their own conclusions regarding the risks of driving and seat belt use, rather than being "told what to do." Indeed, it is suggested that people who draw a conclusion for themselves are often more persuaded than if the (message) source draws it for them (McGuire, 1969).

Support for the notion that the experience of filling out the questionnaire may have positive effects on behavior comes from other research on attitude toward risk in decision making (Bateson, 1976). Bateson investigated

changes in solutions to risk-taking problems as a function of discussion with others in a group vs. private, individual study of the problems. Results showed that the private study group and discussion group produced about the same decisions made with regard to the risk problems. It is possible, therefore, that the individuals in the no-message group in the present study increased their use of seat belts as a result of being required to *think* about the risks involved in driving. The thought exercise itself could have made these subjects as aware of the risk perception theme as those in the actual risk perception message groups. This may have made the subjects in the no message group more likely to wear their seat belts.

3.6 Supplementary Analyses

3.6.1 Radio vs. TV Presentation of Messages. An analysis was done to determine whether "radio" or "TV" presentation of the risk perception messages produced different results in attitude measures. The results of this analysis are presented in Figure 11. The figure indicates that the effects of the messages on several of the attitude items in both the near and long term were significantly greater if the messages were presented via radio (tape recorder) than via TV (video tape) in this study. This is an important finding and suggests that announcements on radio may be a more cost-effective approach to changing the attitudes of people in this age group than announcements on TV, which usually cost much more to produce and air. A word of caution is in order. Although the "radio" announcement appeared to have a greater positive effect than "TV," the fact that these announcements were presented on *simulated* radio (tape recorder) and TV (video tape) should not be overlooked. It is entirely possible that real radio and TV announcements would have different effects. Thus, we do not conclude that radio announcements would be better, necessarily, in the "real world;" rather, we suggest that where cost is an issue, using radio should be considered carefully as it *may* produce as good results as TV for a fraction of the cost. Further research using presentation of messages on actual radio and TV is clearly indicated before reliable conclusions may be drawn regarding the relative merits of these media.

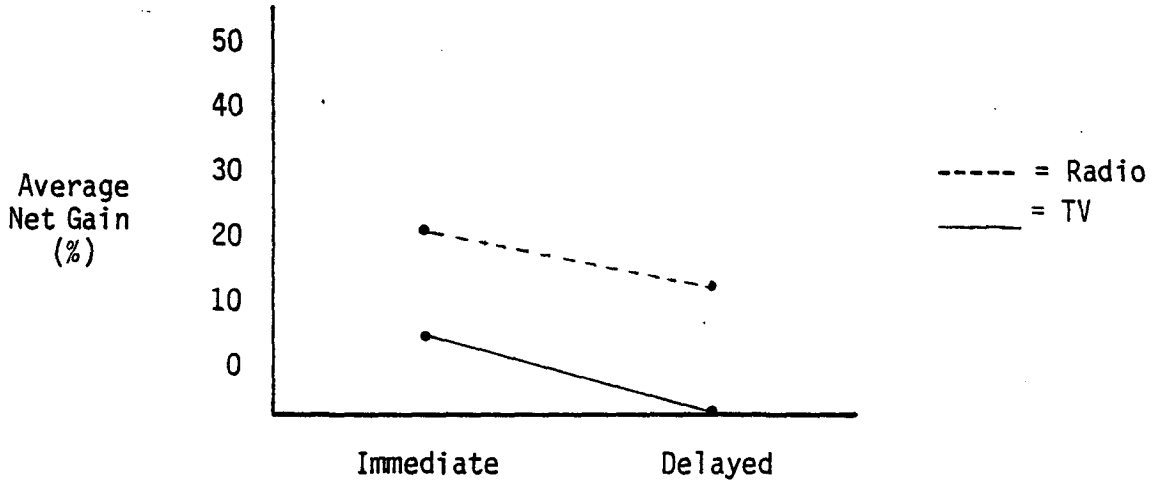


FIGURE 11.
NET GAIN IN ATTITUDE CHANGE:
TV VS. RADIO.

3.6.2 "Commitment" vs. "No Commitment" Messages. No consistent differences were found between the Commitment and No Commitment message groups in producing attitude change. However, a large number of subjects did indicate, both verbally and in writing, that they did not like the "promise part of the message." Comments about that particular part of the message indicated that people thought it was "sophomoric," "tutorial," "too instructional," and "Boy Scout-ish."

3.6.3 Subjects' Recall of Messages. Data also were collected regarding where (i.e., at what location or under what conditions) subjects thought about the messages over the one month between their two appearances at the research location. Table 16 presents the percentage of people in each message group who thought about the message in various situations. It is evident from the table that most people thought about the message when driving or riding in an automobile, and the next highest percentage of people thought about the messages when getting into an automobile. Although these findings are not very surprising, they do support the notion that it may be important to deliver such messages at the "point of contact" (i.e., in an automobile) for maximum effectiveness. Since radios are standard equipment in most cars, this suggests again that radio may be very effective in encouraging use of seat belts.

Also indicated in Table 16 is the apparent influence of the saturation condition on recall of the message. On the average, 14 percent more subjects in the saturation group (60 percent) recalled the message than in the next highest group ("unsaturated" risk perception group = 46 percent).

3.6.4 Accuracy of Recall of Message Content. Two questions were designed to test the accuracy with which subjects could recall the "lifetime of driving" statistics given in the risk perception based messages. These were:

TABLE 16.

PERCENT OF PEOPLE WHO RECALLED THE MESSAGE
IN VARIOUS SITUATIONS

Situation	Risk Perception	Saturation	Seat Belt-No Risk Perception	Alcohol
At work or at school	65	71	44	55
At home in the evening	31	77	12	39
When getting into an automobile	73	74	55	79
Watching TV	13	20	12	28
Listening to the radio	10	26	3	6
When driving or riding in an automobile	81	91	82	64
n =	143	35	34	36
$\bar{x}$ =	46	60	35	45

(1) Over 50 years of driving, how many trips do people make on the average?

___ 15,000 trips.
5

___ 15,000 trips.
4

___ 35,000 trips.
3

___ 45,000 trips.
2

___ 55,000 trips.
1

(2) How many people will be seriously injured in an automobile accident over their lifetime?

___ One in a hundred people.
1

___ One in ten people.
2

___ One in five people.
3

___ One in three people.
4

___ One in two people.
5

An analysis of the responses to question 1 indicated that an average of 45 percent of the subjects in the Risk Perception message groups answered this question correctly (correct answer: 45,000); 68 percent of the Saturation group answered correctly. This is not surprising since subjects in the Saturation group heard the message 16 times throughout the one month delay.

A much higher percentage of people, on the average, answered question 2 correctly. Eighty-seven percent of the subjects in the Risk Perception message groups said that 1 out of 3 people will be injured or killed in an automobile accident over their lifetime. Again, the fiture for the Saturation group is higher (97 percent) as expected. This is taken as support for the notion that the subjects receiving the risk perception messages remembered the central theme well.

3.6.5 Supplementary Questionnaire. As indicated previously, a supplementary form was given to each subject in the message groups. First, subjects were asked to note three things they like best and least about the message they saw or heard. Out of the 179 subjects that saw the Risk Perception message,s about 70 percent (124 subjects) noted "1 out of 3" or "lifetime of driving" statistics; roughly 97 percent (120 subjects) noted this under the "liked best" section of the form.

Next, subjects in the Risk Perception and Saturation message groups were asked if they thought the odds of being injured or killed in an automobile accident were greater, the same, or less than the message stated. This question was intended to determine what subjects *originally thought* the risks of driving were, and how that corresponded with the actual risks expressed in the risk-perception messages. Over half the subjects (53 percent) said that before seeing the message they thought the odds were less than the message stated.

Taken together, these comments indicate that the Risk Perception theme was noticed and liked by most of the subjects, and that it presented new information to the subjects, the majority of whom originally believed that the risks of driving were less than they really are.

4. DISCUSSION

4.1 Overview

Although the results of this study should not be considered conclusive, they do present an encouraging picture for the use of messages based on risk perception themes in changing peoples' attitudes and behavior with regard to use of occupant restraints. Moreover, the results suggest that media campaigns aimed at doing this *could* increase voluntary use of seat belts if they were based on sound psychological themes. This is in contrast to previous research that suggests that media campaigns are ineffective. It is suggested that failure to induce seat belt use may have been due to the fact that some earlier studies:

(a) Did not draw enough on psychological theory in the preparation of the campaign content; (indeed, it seems as if one of these studies (Robertson, 1974) used messages based on fear arousal--a type of message that reportedly has not had much success in changing attitudes or behavior, especially over the long term);

(b) Did not measure attitude change, and hence did not provide any clues as to the reasons for campaign failure;

(c) Did not provide adequate controls to insure that those subjects whose behavior was observed actually saw or heard the campaign message;

(d) Did not provide any index of the degree to which the central theme of the campaign was remembered by subjects who did hear or see the message.

We hasten to add that not *all* previous research suffers from the aforementioned inadequacies; some research has attempted to control for the variables just discussed. We believe, however, that the present study was a more adequate test of the effectiveness of messages encouraging the use of restraints than many studies done thus far.

Section 4.2 discusses the implications of the present findings for the restraint use issue. Section 4.3 presents a set of guidelines for the refinement of the message, and suggestions for future research, including development and testing of a set of messages based on risk perception themes. The purpose of this research would be to produce a message (or several messages) that would appeal to a larger portion of the population and that could be tested in a large scale evaluation. Several plans for this large scale evaluation are presented in Chapter 5.

4.2 Implications of the Findings

The important findings in this study and their implications are now presented.

> MESSAGES BASED ON RISK PERCEPTION THEMES APPEARED TO PRODUCE THE SAME OR HIGHER PROPORTIONS OF POSITIVE ATTITUDE CHANGE THAN THE OTHER MESSAGES TESTED WITH REGARD TO OCCUPANT RESTRAINTS.

A review of the questionnaire items analyzed shows that in no case did any of the other messages generate more positive attitude change than the risk perception message, even when the latter were presented in "unsaturated" conditions (single-message exposure). Thus, it is suggested that messages based on risk perception themes are a viable and promising alternative to the types of messages used in the past to encourage use of restraints. Also important to note is that this was the first attempt at the development of risk perception based messages, and that their effects were

compared to messages that have probably been through some testing and refinement process; it is reasonable to expect still more encouraging results when the risk perception messages are refined.

The results also indicate that positive change in attitude was sometimes realized in the group that received the alcohol message. The authors believe that these positive effects may ensue from the combination of the message and the questionnaire. That is, subjects filled out an attitude questionnaire obviously having to do with seat belts. They were than exposed to the alcohol or drunk driving message and then filled out another seat belt attitude questionnaire. Thus, a "cognitive link" may have been drawn by the subjects between the drunk driver and seat belt issues; people may have changed their attitudes positively because they feel that the threat of being hit by a drunk driver is enough to warrant seat belt use. Since there is no mention of seat belts in the alcohol spot, it is doubtful whether, in the real world, people seeing or hearing the alcohol spot would make a connection between drunk drivers and their use of seat belts.

Additionally, past findings have indicated that people who feel that they are in control of their vehicles may be less likely to wear seat belts. Perhaps the alcohol message indicated to subjects that, in fact, they don't have control over drunk drivers on the road. The seat belt questionnaire may then have served to indicate to subjects that wearing a seat belt is a good way to protect themselves against the consequences of an accident brought on by a drunk driver.

This hypothesis should be tested in future research. If it is supported, then perhaps the "cognitive link" referred to should be made into an "expressed link" in subsequent messages designed to encourage seat belt use. That is, perhaps two traffic safety issues could be addressed by one message that combines elements of risk perception and seat belt use

with alcohol or drunk driver issues. Themes along these lines may prove to have very powerful positive effects on seat belt related attitudes and behavior.

SATURATION OF THE RISK PERCEPTION MESSAGES PROVIDED THE LARGEST AND MOST CONSISTENT NET GAIN IN POSITIVE ATTITUDE CHANGE OF ALL MESSAGES.

This finding is very encouraging; it is consistent with the effects of the marketing approach known as the "media blitz." The argument could be made that if the other messages had been "saturated," similar results may have been obtained. The authors agree that saturating the other messages may have maintained whatever positive effects these other messages produced over the one month delay. However, this does not account for the large and often significant differences between the *immediate* effects of the saturation group as opposed to the other message groups. An explanation of this result is in order.

It will be recalled that the risk perception message groups (not including saturation) received *three exposures* to *one* version of the risk perception message (either commitment-TV, commitment-radio, no commitment-TV, or no commitment-radio). The saturation group, however, received *one exposure* to *each* of the four risk perception messages.

It is doubtful that this one additional exposure to the risk perception message could produce the vast differences in attitude change demonstrated by subjects in the saturation group. It is possible, however, that the variety involved in seeing (or hearing) *each* of the different risk perception messages once (as opposed to the same message three times) may have caused the subjects in the saturation group to attend more to the

IMMEDIATE POST INTERVENTION
ALL GROUPS
QUESTIONNAIRE
(IPSTST)

Experimenter Use Only (Column #'s)		Experimenter Use Only
	NAME: _____	
(1-3)	CODE NUMBER ___ ___ ___	
(12)	1. How concerned are you about being injured or killed in an automobile accident? (Check one) ___ 1 Not concerned. ___ 2 Only a little concerned. ___ 3 Somewhat concerned. ___ 4 Quite a bit concerned. ___ 5 Greatly concerned.	CNCRN2
(21)	2. Some people say that because the probability of death or serious injury while driving or riding in an automobile is so high, wearing a seat belt is a good thing to do, since, eventually, any effort or inconvenience involved in wearing a seat belt is likely to be repaid. Indicate the extent to which you agree or disagree with this statement by placing a check on the appropriate line. ___ 1 Strongly disagree. ___ 2 Slightly disagree. ___ 3 Neither agree nor disagree. ___ 4 Slightly agree. ___ 5 Strongly agree.	SBGDIDEA2

IMMEDIATE POST INTERVENTION
ALL GROUPS
QUESTIONNAIRE
(IPSTST)

Experimenter Use Only (Column #'s)		Experime Use Only
(22)	3. How effective do you think automobile seat belts are in preventing injury or death when an accident occurs? (Check one) ___ 1 Not at all effective. ___ 2 Slightly effective. ___ 3 Moderately effective. ___ 4 Quite effective. ___ 5 Very effective.	SBEFFECTIV
(31)	4. How would you feel about a law that would impose a significant fine upon a person if he or she did not wear a seat belt when riding in or driving an automobile? (Check one) ___ 1 Strongly oppose. ___ 2 Slightly oppose ___ 3 Neither favor nor oppose ___ 4 Slightly favor. ___ 5 Strongly favor	SBFINE2

IMMEDIATE POST INTERVENTION
ALL GROUPS
QUESTIONNAIRE
(1PSTST)

Experimenter Use Only (Column #'s)		Experimente Use Only
(32)	5. How do you feel about a law that will require automobile manufacturers to put either airbags or seat belts that work automatically in new cars? (Check one) ___ 5 Strongly favor. ___ 4 Slightly favor. ___ 3 Neither favor nor oppose. ___ 2 Slightly oppose. ___ 1 Strongly oppose.	SBAIRBAGLAW
(33)	6. How would you feel about a law that would allow insurance companies to pay for deaths and injuries that occurred in a crash only if the occupant(s) wore a seat belt? (Check one) ___ 5 Strongly favor. ___ 4 Slightly favor. ___ 3 Neither favor nor oppose. ___ 2 Slightly oppose. ___ 1 Strongly oppose.	INSURANCE2

IMMEDIATE POST INTERVENTION
ALL GROUPS
QUESTIONNAIRE
(IPSTST)

Experimenter Use Only (Column #'s)		Experimenter Use Only
	7. For each of the following statements, please indicate whether you agree or disagree.	
(34)	a. "The chances of getting into an accident are so small that seat belts aren't really worth the inconvenience." (Check one) ___ 1 Strongly agree. ___ 2 Slightly agree. ___ 3 Neither agree nor disagree. ___ 4 Slightly disagree. ___ 5 Strongly disagree.	CHNCACCDNT2
(35)	b. "Getting killed or injured in a car accident is just a matter of fate, so seat belts don't make that big a difference." (Check one) ___ 1 Strongly agree. ___ 2 Slightly agree. ___ 3 Neither agree nor disagree. ___ 4 Slightly disagree. ___ 5 Strongly disagree.	FATE2

Experimenter Use Only (Column #'s)		Experimenter Use Only
(36)	c. "Nothing would make me use seat belts more often." (Check one) ___ 1 Strongly agree. ___ 2 Slightly agree. ___ 3 Neither agree nor disagree. ___ 4 Slightly disagree. ___ 5 Strongly disagree.	SBUSE2
(37)	d. "I would wear a seat belt if it were more comfortable." (Check one) ___ 5 Strongly agree. ___ 4 Slightly agree. ___ 3 Neither agree nor disagree. ___ 2 Slightly disagree. ___ 1 Strongly disagree.	COMFORT2

IMMEDIATE POST INTERVENTION
ALL GROUPS
QUESTIONNAIRE
(IPSTST)

Experimenter Use Only (Column #'s)		Experimenter Use Only
(38)	e. "I don't need to wear a seat belt because I am a good driver and I can avoid accidents." (Check one) ___ 1 Strongly agree. ___ 2 Slightly agree. ___ 3 Neither agree nor disagree. ___ 4 Slightly disagree. ___ 5 Strongly disagree.	GOODDRIVER2
(39)	f. "I should wear a seat belt more often!" (Check one) ___ 5 Strongly agree. ___ 4 Slightly agree. ___ 3 Neither agree nor disagree. ___ 2 Slightly disagree. ___ 1 Strongly disagree.	SHDWEARSB
(40)	8a. During a lifetime, do you feel that a person is more likely to die from heart disease than from an automobile accident? (Check one) ___ 3 More likely to die from heart disease. ___ 2 About the same likelihood for both. ___ 1 More likely to die from an automobile accident.	HRTDISEASE2

Experimenter Use Only (Column #'s)		Experimenter Use Only
(41-44)	b. If you selected one of the causes (heart disease or automobile accident) as more likely, how many times more likely do you feel this cause of death to be? (Enter one number per space) Number of times more likely: ___ ___ ___ ___	HRTLIKLHD2
(45)	9a. During a lifetime, do you feel that a person is more likely to die from homicide (being murdered) or from an automobile accident? (Check one) ___ More likely to die from homicide. 3 ___ About the same for both. 2 ___ More likely to die from an automobile accident. 1	HOMICDE2
(46-49)	b. If you selected one of the causes (homicide or automobile accident) as more likely, how many times more likely do you feel this cause of death to be? (Enter one number per space) Number of times more likely: ___ ___ ___ ___	HOMLIKLHD2
	DO NOT WRITE BELOW THIS LINE	

DELAYED POST INTERVENTION GROUPS 1 THRU 5:
RISK PERCEPTION MESSAGE
QUESTIONNAIRE
(DLYPSTST-E)

Experimenter Use Only (Column #'s)		Experimente Use Only
(1-3)	CODE NUMBER ___ ___ ___	
(9)	1a. How often do you now wear a seat belt while driving? (check one) ___ 1 Never. ___ 3 Sometimes. ___ 5 Always.	FREQSB3
(10)	b. If you checked that you wear your seat belt sometimes, on what percentage of trips do you wear it? (check one) ___ 1 Less than 20 percent. ___ 2 20 to 40 percent. ___ 3 40 to 60 percent. ___ 4 60 to 80 percent. ___ 5 More than 80 percent (but not 100%).	PRCNTSB3
(12)	2. How concerned are you about being injured or killed in an automobile accident? (check one) ___ 1 Not concerned. ___ 2 Only a little concerned. ___ 3 Somewhat concerned. ___ 4 Quite a bit concerned. ___ 5 Greatly concerned.	CNCRN3

DELAYED POST INTERVENTION GROUPS 1 THRU 5:
RISK PERCEPTION MESSAGE
QUESTIONNAIRE
(DLYPSTST-E)

Experimenter Use Only (Column #'s)		Experimenter Use Only
(21)	3. Some people say that because the probability of death or serious injury while driving or riding in an automobile is so high, wearing a seat belt is a good thing to do, since, eventually, any effort or inconvenience involved in wearing a seat belt is likely to be repaid. Indicate the extent to which you agree or disagree with this statement by placing a check on the appropriate line. ___ 1 Strongly disagree. ___ 2 Slightly disagree. ___ 3 Neither agree nor disagree. ___ 4 Slightly agree. ___ 5 Strongly agree.	SBGDIDEA1
(22)	4. How effective do you think automobile seat belts are in preventing injury or death when an accident occurs? (check one) ___ 1 Not at all effective. ___ 2 Slightly effective. ___ 3 Moderately effective. ___ 4 Quite effective. ___ 5 Very effective.	SBEFFECTIVE

DELAYED POST INTERVENTION GROUPS 1 THRU 5:
RISK PERCEPTION MESSAGE
QUESTIONNAIRE
(DLYPSTST-E)

Experimenter Use Only (Column #'s)			Experimente Use Only

5. For each of the following types of driving situations, please indicate how often you use your seat belt, either as a driver or as a passenger. (Check only one answer per line.)

			All of the Time	Most of the Time	Only Some-times	Rarely	Never	
(23)	(a)	Driving to Work	5	4	3	2	1	TOWORK3
(24)	(b)	Using your car for Errands	5	4	3	2	1	ERRANDS3
(25)	(c)	Driving long Distances	5	4	3	2	1	LONGDIST3
(26)	(d)	Driving on Local Streets in the City	5	4	3	2	1	LOCALSTRTS3
(27)	(e)	Driving on Highways and Freeways	5	4	3	2	1	HWYFWYS3
(28)	(f)	Driving with Children in the Car	5	4	3	2	1	WITHKIDS3
(29)	(g)	Riding in a Car as a Passenger	5	4	3	2	1	PASSENGER3
(30)	(h)	Driving Alone	5	4	3	2	1	ALONE3

DELAYED POST INTERVENTION GROUPS 1 THRU 5:
RISK PERCEPTION MESSAGE
QUESTIONNAIRE
(DLYPSTST-E)

Experimenter Use Only (Column #'s)		Experimenter Use Only
(31)	6. How would you feel about a law that would impose a significant fine upon a person if he or she did not wear a seat belt when riding in or driving an automoble? (check one) ___ Strongly oppose. 1 ___ Slightly oppose. 2 ___ Neither favor nor oppose. 3 ___ Slightly favor. 4 ___ Strongly favor. 5	SBFINE3
(32)	7. How do you feel about a law that will require automobile manufacturers to put either airbags or seat belts that work automatically in new cars? (check one) ___ Strongly favor. 5 ___ Slightly favor. 4 ___ Neither favor nor oppose. 3 ___ Slightly oppose. 2 ___ Strongly oppose. 1	SBAIRBAG[redacted]W

DELAYED POST INTERVENTION GROUPS 1 THRU 5:
RISK PERCEPTION MESSAGE
QUESTIONNAIRE
(DLYPSTST-E)

Experimenter Use Only (Column #'s)		Experimente Use Only
(33)	8. How would you feel about a law that would allow insurance companies to pay for deaths and injuries that occurred in a crash only if the occupant(s) wore a seat belt? (check one) ___ 5 Strongly favor. ___ 4 Slightly favor. ___ 3 Neither favor nor oppose. ___ 2 Slightly oppose. ___ 1 Strongly oppose.	INSURANCE3
	9. For each of the following statements, please indicate whether you agree or disagree.	
(34)	a. "The chances of getting into an accident are so small that seat belts aren't really worth the inconvenience." (check one) ___ 1 Strongly agree. ___ 2 Slightly agree. ___ 3 Neither agree nor disagree. ___ 4 Slightly disagree. ___ 5 Strongly disagree.	CHNCACCDNT3

Experimenter Use Only (Column #'s)		Experimenter Use Only
(35)	b. "Getting killed or injured in a car accident is just a matter of fate, so seat belts don't make that big a difference." (check one) ___ 1 Strongly agree. ___ 2 Slightly agree. ___ 3 Neither agree nor disagree. ___ 4 Slightly disagree. ___ 5 Strongly disagree.	FATE3
(36)	c. "Nothing would make me use seat belts more often." (check one) ___ 1 Strongly agree. ___ 2 Slightly agree. ___ 3 Neither agree nor disagree. ___ 4 Slightly disagree. ___ 5 Strongly disagree. ___ 6 Irrelevant because I wear a seat belt all the time.	SBUSE3

DELAYED POST INTERVENTION GROUPS 1 THRU 5:
RISK PERCEPTION MESSAGE
QUESTIONNAIRE
(DLYPSTST-E)

Experimenter Use Only (Column #'s)		Experimenter Use Only
(37)	d. "I would wear a seat belt more often if it were more comfortable." (check one) ___ 1 Strongly agree. ___ 2 Slightly agree. ___ 3 Neither agree nor disagree. ___ 4 Slightly disagree. ___ 5 Strongly disagree. ___ 6 Irrelevant because I wear a seat belt all the time.	COMFORT3
(38)	e. "I don't need to wear a seat belt because I am a good driver and I can avoid accidents." (check one) ___ 1 Strongly agree. ___ 2 Slightly agree. ___ 3 Neither agree nor disagree. ___ 4 Slightly disagree. ___ 5 Strongly disagree.	GOODDRIVER3
(39)	f. "I should wear a seat belt more often!" (check one) ___ 5 Strongly agree. ___ 4 Slightly agree. ___ 3 Neither agree nor disagree. ___ 2 Slightly disagree. ___ 1 Strongly disagree. ___ 6 Irrelevent because I wear a seat belt all the time.	SHDWEARSB3

DELAYED POST INTERVENTION GROUPS 1 THRU 5:
RISK PERCEPTION MESSAGE
QUESTIONNAIRE
(DLYPSTST-E)

Experimenter Use Only (Column #'s)		Experimen Use Only
(40)	10a. During a lifetime, do you feel that a person is more likely to die from heart disease than from an automobile accident? (check one) ___ More likely to die from heart disease. 3 ___ About the same likelihood for both. 2 ___ More likely to die from an automobile accident. 1	HRTDISEA
(41-44)	b. If you selected one of the causes (heart disease or automobile accident) as more likely, how many times more likely do you feel this cause of death to be? (enter one number per space) Number of times more likely: __ __ __ __	HRTLIKHD3
(45)	11a. During a lifetime, do you feel that a person is more likely to die from homicide (being murdered) or from an automobile accident? (check one) ___ More likely to die from homicide. 1 ___ About the same for both. 2 ___ More likely to die from an automobile accident. 3	HOMICDE3
(46-49)	b. If you selected one of the causes (homicide or automobile accident) as more likely, how many times more likely do you feel this cause of death to be? (enter one number per space) Number of times more likely: __ __ __ __	HOMLIKLH

DELAYED POST INTERVENTION GROUPS 1 THRU 5:
RISK PERCEPTION MESSAGE
QUESTIONNAIRE
(DLYPSTST-E)

Experimenter Use Only (Column #'s)		Experimenter Use Only
(51)	12. As a result of hearing/seeing the seat belt announcement a month ago, in what way did you change your use of seat belts? (check one) ___ 5 No change. I already wear a seat belt all the time. ___ 4 I wear a seat belt much more often now. ___ 3 I wear a seat belt somwhat more often now. ___ 2 I wear a seat belt no more often that I did before hearing the message. ___ 1 I increased my use of seat belts for a while, but now I wear them no more often than I did before hearing the message.	BEHAVECHNG
(52)	13. Did you wear a seat belt today when you came here for the interview? (check one) ___ 1 Yes. ___ 2 No.	SBTODAY

DELAYED POST INTERVENTION GROUPS 1 THRU 5:
RISK PERCEPTION MESSAGE
QUESTIONNAIRE
(DLYPSTST-E)

Experimenter Use Only (Column #'s)		Experime Use Only
	14. For the following questions, check the appropriate space (YES or NO). In the past month, did you think about the announcement	
(53)	At work or at school ___ YES ___ NO. (1) (2)	WRKSCHL
(54)	At home in the evening ___ YES ___ NO. (1) (2)	HOMEVE
(55)	When getting into an automobile ___ YES ___ NO. (1) (2)	INTOCAR
(56)	Watching television ___ YES ___ NO. (1) (2)	WATCHTV
(57)	Listening to the radio ___ YES ___ NO. (1) (2)	LISTNRAD
(58)	When driving or riding in an automobile ___ YES ___ NO. (1) (2)	DRIVERID
(59)	15. Over the last month, how often did you think about the seat belt announcement? (check one)	THINKANN
	___ Fifteen times or more. (4)	
	___ About ten to fourteen times. (3)	
	___ About five to nine times. (2)	
	___ Less than five times. (1)	

DELAYED POST INTERVENTION GROUPS 1 THRU 5:
RISK PERCEPTION MESSAGE
QUESTIONNAIRE
(DLYPSTST-E)

Experimenter Use Only (Column #'s)		Experimente Use Only
	16. Please read each question carefully and on the basis of the announcement you saw/heard a month ago, indicate by a check mark (√) which alternative is correct.	
(60)	a. Over 50 years of driving, how many trips do people make on the average? ___ 15,000 Trips. 1 ___ 25,000 trips. 2 ___ 35,000 trips. 3 ___ 45,000 trips. 4 ___ 55,000 trips. 5	CARTRIPS
(61)	b. How many people will be seriously injured in an automobile accident over their lifetime? ___ One in a hundred people. 1 ___ One in ten people. 2 ___ One in five people. 3 ___ One in three people. 4 ___ One in two people. 5	INJURIES

DELAYED POST INTERVENTION GROUP 6:
SEAT BELT--NO RISK PERCEPTION
QUESTIONNAIRE
(DLYPSTST-NRP)

Experimenter Use Only (Column #'s)		Experimenter Use Only
	NAME: _____	
(1-3)	CODE NUMBER ___ ___ ___	
(9)	1a. How often do you now wear a seat belt while driving? (check one) ___ 1 Never. ___ 3 Sometimes. ___ 5 Always.	FREQSB3
(10)	b. If you checked that you wear your seat belt sometimes, on what percentage of trips do you wear it? (check one) ___ 1 Less than 20 percent. ___ 2 20 to 40 percent. ___ 3 40 to 60 percent. ___ 4 60 to 80 percent. ___ 5 More than 80 percent (but not 100%).	PRCNTSB3
(12)	2. How concerned are you about being injured or killed in an automobile accident? (check one) ___ 1 Not concerned. ___ 2 Only a little concerned. ___ 3 Somewhat concerned. ___ 4 Quite a bit concerned. ___ 5 Greatly concerned.	CNCRN3

DELAYED POST INTERVENTION GROUP 6:
SEAT BELT--NO RISK PERCEPTION
QUESTIONNAIRE
(DLYPSTST-NRP)

Experimenter Use Only (Column #'s)		Experimer Use Only
(21)	3. Some people say that because the probability of death or serious injury while driving or riding in an automobile is so high, wearing a seat belt is a good thing to do, since, eventually, any effort or inconvenience involved in wearing a seat belt is likely to be repaid. Indicate the extent to which you agree or disagree with this statement by placing a check on the appropriate line. ___ Strongly disagree. 1 ___ Slightly disagree. 2 ___ Neither agree nor disagree. 3 ___ Slightly agree. 4 ___ Strongly agree. 5	SBGDIDE
(22)	4. How effective do you think automobile seat belts are in preventing injury or death when an accident occurs? (check one) ___ Not at all effective. 1 ___ Slightly effective. 2 ___ Moderately effective. 3 ___ Quite effective. 4 ___ Very effective. 5	SBEFFE

DELAYED POST INTERVENTION GROUP 6:
SEAT BELT--NO RISK PERCEPTION
QUESTIONNAIRE
(DLYPSTST-NRP)

Experimenter Use Only (Column #'s)			Experiment Use Only
		5. For each of the following types of driving situations, please indicate how often you use your seat belt, either as a driver or as a passenger. (Check only one answer per line.)	
(23)	(a)	Driving to Work — All of the Time (5) / Most of the Time (4) / Only Sometimes (3) / Rarely (2) / Never (1)	TOWORK3
(24)	(b)	Using your car for Errands — All of the Time (5) / Most of the Time (4) / Only Sometimes (3) / Rarely (2) / Never (1)	ERRANDS3
(25)	(c)	Driving long Distances — All of the Time (5) / Most of the Time (4) / Only Sometimes (3) / Rarely (2) / Never (1)	LONGDIST3
(26)	(d)	Driving on Local Streets in the City — All of the Time (5) / Most of the Time (4) / Only Sometimes (3) / Rarely (2) / Never (1)	LOCALSTRTS3
(27)	(e)	Driving on Highways and Freeways — All of the Time (5) / Most of the Time (4) / Only Sometimes (3) / Rarely (2) / Never (1)	HWYFWYS3
(28)	(f)	Driving with Children in the Car — All of the Time (5) / Most of the Time (4) / Only Sometimes (3) / Rarely (2) / Never (1)	WITHKIDS3
(29)	(g)	Riding in a Car as a Passenger — All of the Time (5) / Most of the Time (4) / Only Sometimes (3) / Rarely (2) / Never (1)	PASSENGER3
(30)	(h)	Driving Alone — All of the Time (5) / Most of the Time (4) / Only Sometimes (3) / Rarely (2) / Never (1)	ALONE3

DELAYED POST INTERVENTION GROUP 6:
SEAT BELT--NO RISK PERCEPTION
QUESTIONNAIRE
(DLYPSTST-NRP)

Experimenter Use Only (Column #'s)		Experimenter Use Only
(31)	6. How would you feel about a law that would impose a significant fine upon a person if he or she did not wear a seat belt when riding in or driving an automoble? (check one) ___ Strongly oppose. 1 ___ Slightly oppose. 2 ___ Neither favor nor oppose. 3 ___ Slightly favor. 4 ___ Strongly favor. 5	SBFINE3
(32)	7. How do you feel about a law that will require automobile manufacturers to put either airbags or seat belts that work automatically in new cars? (check one) ___ Strongly favor. 5 ___ Slightly favor. 4 ___ Neither favor nor oppose. 3 ___ Slightly oppose. 2 ___ Strongly oppose. 1	SBAIRBA

DELAYED POST INTERVENTION GROUP 6:
SEAT BELT--NO RISK PERCEPTION
QUESTIONNAIRE
(DLYPSTST-NRP)

Experimenter Use Only (Column #'s)		Experimente Use Only
(33)	8. How would you feel about a law that would allow insurance companies to pay for deaths and injuries that occurred in a crash only if the occupant(s) wore a seat belt? (check one) ___ 5 Strongly favor. ___ 4 Slightly favor. ___ 3 Neither favor nor oppose. ___ 2 Slightly oppose. ___ 1 Strongly oppose.	INSURANCE3
	9. For each of the following statements, please indicate whether you agree or disagree.	
(34)	a. "The chances of getting into an accident are so small that seat belts aren't really worth the inconvenience." (check one) ___ 1 Strongly agree. ___ 2 Slightly agree. ___ 3 Neither agree nor disagree. ___ 4 Slightly disagree. ___ 5 Strongly disagree.	CHNCACCDNT

Experimenter Use Only (Column #'s)		Experimenter Use Only
(35)	b. "Getting killed or injured in a car accident is just a matter of fate, so seat belts don't make that big a difference." (check one) ___ 1 Strongly agree. ___ 2 Slightly agree. ___ 3 Neither agree nor disagree. ___ 4 Slightly disagree. ___ 5 Strongly disagree.	FATE3
(36)	c. "Nothing would make me use seat belts more often." (check one) ___ 1 Strongly agree. ___ 2 Slightly agree. ___ 3 Neither agree nor disagree. ___ 4 Slightly disagree. ___ 5 Strongly disagree. ___ 6 Irrelevant because I wear a seat belt all the time.	SBUSE3

DELAYED POST INTERVENTION GROUP 6:
SEAT BELT--NO RISK PERCEPTION
QUESTIONNAIRE
(DLYPSTST- NRP)

Experimenter Use Only (Column #'s)		Experiment Use Only
(37)	d. "I would wear a seat belt more often if it were more comfortable." (check one) ___ 1 Strongly agree. ___ 2 Slightly agree. ___ 3 Neither agree nor disagree. ___ 4 Slightly disagree. ___ 5 Strongly disagree. ___ 6 Irrelevant because I wear a seat belt all the time.	COMFORT3
(38)	e. "I don't need to wear a seat belt because I am a good driver and I can avoid accidents." (check one) ___ 1 Strongly agree. ___ 2 Slightly agree. ___ 3 Neither agree nor disagree. ___ 4 Slightly disagree. ___ 5 Strongly disagree.	GOODDRIVER
(39)	f. "I should wear a seat belt more often!" (check one) ___ 5 Strongly agree. ___ 4 Slightly agree. ___ 3 Neither agree nor disagree. ___ 2 Slightly disagree. ___ 1 Strongly disagree. ___ 6 Irrelevent because I wear a seat belt all the time.	SHDWEARSB3

DELAYED POST INTERVENTION GROUP 6:
SEAT BELT--NO RISK PERCEPTION
QUESTIONNAIRE
(DLYPSTST- NRP)

Experimenter Use Only (Column #'s)		Experimenter Use Only
(40)	10a. During a lifetime, do you feel that a person is more likely to die from heart disease than from an automobile accident? (check one) ___ More likely to die from heart disease. 3 ___ About the same likelihood for both. 2 ___ More likely to die from an automobile accident. 1	HRTDISE
(41-44)	b. If you selected one of the causes (heart disease or automobile accident) as more likely, how many times more likely do you feel this cause of death to be? (enter one number per space) Number of times more likely: ____	HRTLIKHD3
(45)	11a. During a lifetime, do you feel that a person is more likely to die from homicide (being murdered) or from an automobile accident? (check one) ___ More likely to die from homicide. 1 ___ About the same for both. 2 ___ More likely to die from an automobile accident. 3	HOMICDE3
(46-49)	b. If you selected one of the causes (homicide or automobile accident) as more likely, how many times more likely do you feel this cause of death to be? (enter one number per space) Number of times more likely: ____	HOMLIKHD

DELAYED POST INTERVENTION GROUP 6:
SEAT BELT--NO RISK PERCEPTION
QUESTIONNAIRE
(DLYPSTST- NRP)

Experimenter Use Only (Column #'s)		Experiment Use Only
(51)	12. As a result of seeing the highway safety announcement a month ago, in what way did you change your use of seat belts? (check one) ___ 5 No change. I already wear a seat belt all the time. ___ 4 I wear a seat belt much more often now. ___ 3 I wear a seat belt somwhat more often now. ___ 2 I wear a seat belt no more often that I did before hearing the message. ___ 1 I increased my use of seat belts for a while, but now I wear them no more often than I did before hearing the message.	BEHAVECHNG
(52)	I3. Did you wear a seat belt today when you came here for the interview? (check one) ___ 1 Yes. ___ 2 No.	SBTODAY

Experimenter Use Only (Column #'s)

14. For the following questions, check the appropriate space (YES or NO). In the past month, did you think about the announcement

(53) At work or at school ___1 YES ___2 NO. WRKSCHL

(54) At home in the evening ___1 YES ___2 NO. HOMEVE

(55) When getting into an automobile ___1 YES ___2 NO. INTOCAR

(56) Watching television ___1 YES ___2 NO. WATCHTV

(57) Listening to the radio ___1 YES ___2 NO. LISTNR

(58) When driving or riding in an automobile ___1 YES ___2 NO. DRIVERD

(59) 15. Over the last month, how often did you think about the highway safety announcement? (check one) THINKANN

___4 Fifteen times or more.

___3 About ten to fourteen times.

___2 About five to nine times.

___1 Less than five times.

DELAYED POST INTERVENTION
GROUP 7: ALCOHOL
QUESTIONNAIRE

Experimenter Use Only (Column #'s)		Experimente Use Only
(1-3)	CODE NUMBER ___ ___ ___	
(9)	1a. How often do you now wear a seat belt while driving? (check one) ___ 1 Never. ___ 3 Sometimes. ___ 5 Always.	FREQSB3
(10)	b. If you checked that you wear your seat belt sometimes, on what percentage of trips do you wear it? (check one) ___ 1 Less than 20 percent. ___ 2 20 to 40 percent. ___ 3 40 to 60 percent. ___ 4 60 to 80 percent. ___ 5 More than 80 percent (but not 100%).	PRCNTSB3
(12)	2. How concerned are you about being injured or killed in an automobile accident? (check one) ___ 1 Not concerned. ___ 2 Only a little concerned. ___ 3 Somewhat concerned. ___ 4 Quite a bit concerned. ___ 5 Greatly concerned.	CNCRN3

Experimenter Use Only (Column #'s)

5. For each of the following types of driving situations, please indicate how often you use your seat belt, either as a driver or as a passenger. (Check only one answer per line.)

			All of the Time	Most of the Time	Only Sometimes	Rarely	Never	Experiment Use Only
(23)	(a)	Driving to Work	5	4	3	2	1	TOWORK3
(24)	(b)	Using your car for Errands	5	4	3	2	1	ERRANDS3
(25)	(c)	Driving long Distances	5	4	3	2	1	LONGDIST3
(26)	(d)	Driving on Local Streets in the City	5	4	3	2	1	LOCALSTRTS
(27)	(e)	Driving on Highways and Freeways	5	4	3	2	1	HWYFWYS3
(28)	(f)	Driving with Children in the Car	5	4	3	2	1	WITHKID[illegible]3
(29)	(g)	Riding in a Car as a Passenger	5	4	3	2	1	PASSENG
(30)	(h)	Driving Alone	5	4	3	2	1	ALONE3

DELAYED POST INTERVENTION
GROUP 7: ALCOHOL
QUESTIONNAIRE
(DLYPSTST-A)

Experimenter Use Only (Column #'s)		Experimente Use Only
(21)	3. Some people say that because the probability of death or serious injury while driving or riding in an automobile is so high, wearing a seat belt is a good thing to do, since, eventually, any effort or inconvenience involved in wearing a seat belt is likely to be repaid. Indicate the extent to which you agree or disagree with this statement by placing a check on the appropriate line. ___ Strongly disagree. 1 ___ Slightly disagree. 2 ___ Neither agree nor disagree. 3 ___ Slightly agree. 4 ___ Strongly agree. 5	SBGDIDEA 1 2
(22)	4. How effective do you think automobile seat belts are in preventing injury or death when an accident occurs? (check one) ___ Not at all effective. 1 ___ Slightly effective. 2 ___ Moderately effective. 3 ___ Quite effective. 4 ___ Very effective. 5	SBEFFECTIVE

Experimenter Use Only (Column #'s)		Experimenter Use Only
(31)	6. How would you feel about a law that would impose a significant fine upon a person if he or she did not wear a seat belt when riding in or driving an automoble? (check one) ___ 1 Strongly oppose. ___ 2 Slightly oppose. ___ 3 Neither favor nor oppose. ___ 4 Slightly favor. ___ 5 Strongly favor.	SBFINE3
(32)	7. How do you feel about a law that will require automobile manufacturers to put either airbags or seat belts that work automatically in new cars? (check one) ___ 5 Strongly favor. ___ 4 Slightly favor. ___ 3 Neither favor nor oppose. ___ 2 Slightly oppose. ___ 1 Strongly oppose.	SBAIRBAG[illegible]A

DELAYED POST INTERVENTION
GROUP 7: ALCOHOL

QUESTIONNAIRE
(DLYPSTST-A)

Experimenter Use Only (Column #'s)		Experiment Use Only
(33)	8. How would you feel about a law that would allow insurance companies to pay for deaths and injuries that occurred in a crash only if the occupant(s) wore a seat belt? (check one) ___ 5 Strongly favor. ___ 4 Slightly favor. ___ 3 Neither favor nor oppose. ___ 2 Slightly oppose. ___ 1 Strongly oppose.	INSURANCE3
	9. For each of the following statements, please indicate whether you agree or disagree.	
(34)	a. "The chances of getting into an accident are so small that seat belts aren't really worth the inconvenience." (check one) ___ 1 Strongly agree. ___ 2 Slightly agree. ___ 3 Neither agree nor disagree. ___ 4 Slightly disagree. ___ 5 Strongly disagree.	CHNCACCDNT3

Experimenter Use Only (Column #'s)		Experime e Use Only
(35)	b. "Getting killed or injured in a car accident is just a matter of fate, so seat belts don't make that big a difference." (check one) ___ 1 Strongly agree. ___ 2 Slightly agree. ___ 3 Neither agree nor disagree. ___ 4 Slightly disagree. ___ 5 Strongly disagree.	FATE3
(36)	c. "Nothing would make me use seat belts more often." (check one) ___ 1 Strongly agree. ___ 2 Slightly agree. ___ 3 Neither agree nor disagree. ___ 4 Slightly disagree. ___ 5 Strongly disagree. ___ 6 Irrelevant because I wear a seat belt all the time.	SBUSE3

Experimenter Use Only (Column #'s)		Experimenter Use Only
(37)	d. "I would wear a seat belt more often if it were more comfortable." (check one) ___ 1 Strongly agree. ___ 2 Slightly agree. ___ 3 Neither agree nor disagree. ___ 4 Slightly disagree. ___ 5 Strongly disagree. ___ 6 Irrelevant because I wear a seat belt all the time.	COMFORT3
(38)	e. "I don't need to wear a seat belt because I am a good driver and I can avoid accidents." (check one) ___ 1 Strongly agree. ___ 2 Slightly agree. ___ 3 Neither agree nor disagree. ___ 4 Slightly disagree. ___ 5 Strongly disagree.	GOODDRIVER3
(39)	f. "I should wear a seat belt more often!" (check one) ___ 5 Strongly agree. ___ 4 Slightly agree. ___ 3 Neither agree nor disagree. ___ 2 Slightly disagree. ___ 1 Strongly disagree. ___ 6 Irrelevent because I wear a seat belt all the time.	SHDWEARSB3

DELAYED POST INTERVENTION
GROUP 7: ALCOHOL
QUESTIONNAIRE
(DLYPSTST-A)

Experimenter Use Only (Column #'s)		Experimenter Use Only
(40)	10a. During a lifetime, do you feel that a person is more likely to die from heart disease than from an automobile accident? (check one) ___ More likely to die from heart disease. 3 ___ About the same likelihood for both. 2 ___ More likely to die from an automobile accident. 1	HRTDISEASE
(41-44)	b. If you selected one of the causes (heart disease or automobile accident) as more likely, how many times more likely do you feel this cause of death to be? (enter one number per space) Number of times more likely: ____	HRTLIKHD3
(45)	11a. During a lifetime, do you feel that a person is more likely to die from homicide (being murdered) or from an automobile accident? (check one) ___ More likely to die from homicide. 1 ___ About the same for both. 2 ___ More likely to die from an automobile accident. 3	HOMICDE3
(46-49)	b. If you selected one of the causes (homicide or automobile accident) as more likely, how many times more likely do you feel this cause of death to be? (enter one number per space) Number of times more likely: ____	HOMLIKL[illegible]3

DELAYED POST INTERVENTION
GROUP 7: ALCOHOL
QUESTIONNAIRE
(DLYPSTST-A)

Experimenter Use Only (Column #'s)		Experimenter Use Only
(51)	12. As a result of seeing the highway safety announcement a month ago, in what way did you change your use of seat belts? (check one) ___ 5 No change. I already wear a seat belt all the time. ___ 4 I wear a seat belt much more often now. ___ 3 I wear a seat belt somewhat more often now. ___ 2 I wear a seat belt no more often that I did before hearing the message. ___ 1 I increased my use of seat belts for a while, but now I wear them no more often than I did before hearing the message.	BEHAVECHNG
(52)	13. Did you wear a seat belt today when you came here for the interview? (check one) ___ 1 Yes ___ 2 No	SBTODAY
	14. For the following questions, check the appropriate space (YES or NO). In the past month, did you think about the announcement	
(53)	At work or at school ___ 1 YES ___ 2 NO.	WRKSCHL
(54)	At home in the evening ___ 1 YES ___ 2 NO.	HOMEVE
(55)	When getting into an automobile ___ 1 YES ___ 2 NO.	INTOCAR
(56)	Watching television ___ 1 YES ___ 2 NO.	WATCHTV
(57)	Listening to the radio ___ 1 YES ___ 2 NO.	LISTNRADIO
(58)	When driving or riding in an automobile ___ 1 YES ___ 2 NO.	DRIVERIDE

QUESTIONNAIRE
(DLYPSTST-A)

Experimenter Use Only

(Column #'s)

(59)

15. Over the last month, how often did you think about the highway safety announcement? (check one)

___ Fiveteen times or more.
4

___ About ten to fourteen times.
3

___ About five to nine times.
2

___ Less than five times.
1

Experim[redacted] Use Only

THINKANN[redacted]

DELAYED POST INTERVENTION GROUP 8:
NO MESSAGE
QUESTIONNAIRE
(DLYPSTST-C)

Experimenter Use Only (Column #'s)		Experimente Use Only
	NAME: _____	
(1-3)	CODE NUMBER ___ ___ ___	
(9)	1a. How often do you now wear a seat belt while driving? (check one) ___ 1 Sometimes. ___ 2 Never.	FREQSB3
(10)	b. If you checked that you wear your seat belt sometimes, on what percentage of trips do you wear it? (check one) ___ 1 Less than 20 percent. ___ 2 20 to 40 percent. ___ 3 40 to 60 percent. ___ 4 60 to 80 percent. ___ 5 More than 80 percent.	PRCNTSB3
(12)	2. How concerned are you about being injured or killed in an automobile accident? (check one) ___ 1 Not concerned. ___ 2 Only a little concerned. ___ 3 Somewhat concerned. ___ 4 Quite a bit concerned. ___ 5 Greatly concerned.	CNCRN3

DELAYED POST INTERVENTION GROUP 8:
NO MESSAGE
QUESTIONNAIRE
(DLYPSTST-C)

Experimenter Use Only (Column #'s)		Experimenter Use Only
(21)	3. Some people say that because the probability of death or serious injury while driving or riding in an automobile is so high, wearing a seat belt is a good thing to do, since, eventually, any effort or inconvenience involved in wearing a seat belt is likely to be repaid. Indicate the extent to which you agree or disagree with this statement by placing a check on the appropriate line. ___ 1 Strongly disagree. ___ 2 Slightly disagree. ___ 3 Neither agree nor disagree. ___ 4 Slightly agree. ___ 5 Strongly agree.	SBGDIDEA1
(22)	4. How effective do you think automobile seat belts are in preventing injury or death when an accident occurs? (check one) ___ 1 Not at all effective. ___ 2 Slightly effective. ___ 3 Moderately effective. ___ 4 Quite effective. ___ 5 Very effective.	SBEFFECTIVE

DELAYED POST INTERVENTION GROUP 8:
NO MESSAGE
QUESTIONNAIRE
(DLYPSTST-C)

Experimenter Use Only (Column #'s)								Experimenter Use Only
		5. For each of the following types of driving situations, please indicate how often you use your seat belt, either as a driver or as a passenger. (Check only one answer per line.)						
			All of the Time	Most of the Time	Only Sometimes	Rarely	Never	
(23)	(a)	Driving to Work	5	4	3	2	1	TOWORK3
(24)	(b)	Using your Car for Errands	5	4	3	2	1	ERRANDS3
(25)	(c)	Driving long Distances	5	4	3	2	1	LONGDIST3
(26)	(d)	Driving on Local Streets In the City	5	4	3	2	1	LOCALSTRTS3
(27)	(e)	Driving on Highways and Freeways	5	4	3	2	1	HWYFWYS3
(28)	(f)	Driving with Children in the Car	5	4	3	2	1	WITHKIDS3
(29)	(g)	Riding in a Car as a Passenger	5	4	3	2	1	PASSENGER3
(30)	(h)	Driving Alone	5	4	3	2	1	ALONE3

DELAYED POST INTERVENTION GROUP 8:
NO MESSAGE
QUESTIONNAIRE
(DLYPSTST-C)

Experimenter Use Only (Column #'s)		Experimenter Use Only
(31)	6. How would you feel about a law that would impose a significant fine upon a person if he or she did not wear a seat belt when riding in or driving an automobile? (check one) ___ Strongly oppose. 1 ___ Slightly oppose. 2 ___ Neither favor nor oppose. 3 ___ Slightly favor. 4 ___ Strongly favor. 5	SBFINE3
(32)	7. How do you feel about a law that will require automobile manufacturers to put either airbags or seat belts that work automatically in new cars? (check one) ___ Strongly favor. 5 ___ Slightly favor. 4 ___ Neither favor nor oppose. 3 ___ Slightly oppose. 2 ___ Strongly oppose. 1	SBAIRBAGLAW3

Experimenter Use Only (Column #'s)		Experimenter Use Only
(33)	8. How would you feel about a law that would allow insurance companies to pay for deaths and injuries that occurred in a crash only if the occupant(s) wore a seat belt? (check one) ___ 5 Strongly favor. ___ 4 Slightly favor. ___ 3 Neither favor nor oppose. ___ 2 Slightly oppose. ___ 1 Strongly oppose.	INSURANCE3
	9. For each of the following statements, please indicate whether you agree or disagree.	
(34)	a. "The chances of getting into an accident are so small that seat belts aren't really worth the inconvenience." (check one) ___ 1 Strongly agree. ___ 2 Slightly agree. ___ 3 Neither agree nor disagree. ___ 4 Slightly disagree. ___ 5 Strongly disagree.	CHNCACCDNT3

Experimenter Use Only (Column #'s)		Experimenter Use Only
(35)	b. "Getting killed or injured in a car accident is just a matter of fate, so seat belts don't make that big a difference." (check one) ___ 1 Strongly agree. ___ 2 Slightly agree. ___ 3 Neither agree nor disagree. ___ 4 Slightly disagree. ___ 5 Strongly disagree.	FATE3
(36)	c. "Nothing would make me use seat belts more often." (check one) ___ 1 Strongly agree. ___ 2 Slightly agree. ___ 3 Neither agree nor disagree. ___ 4 Slightly disagree. ___ 5 Strongly disagree.	SBUSE3

DELAYED POST INTERVENTION GROUP 8:
NO MESSAGE
QUESTIONNAIRE
(DLYPSTST-C)

Experimenter Use Only (Column #'s)		Experimenter Use Only
(37)	d. "I would wear a seat belt if it were more comfortable." (check one) ___ 5 Strongly agree. ___ 4 Slightly agree. ___ 3 Neither agree nor disagree. ___ 2 Slightly disagree. ___ 1 Strongly disagree.	COMFORT3
(38)	e. "I don't need to wear a seat belt because I am a good driver and I can avoid accidents." (check one) ___ 1 Strongly agree. ___ 2 Slightly agree. ___ 3 Neither agree nor disagree. ___ 4 Slightly disagree. ___ 5 Strongly disagree.	GOODDRIVER3

DELAYED POST INTERVENTION GROUP 8:
NO MESSAGE

QUESTIONNAIRE
(DLYPSTST-C)

Experimenter Use Only (Column #'s)		Experimer Use Only
(39)	f. "I should wear a seat belt more often!" (check one) ___ 5 Strongly agree. ___ 4 Slightly agree. ___ 3 Neither agree nor disagree. ___ 2 Slightly disagree. ___ 1 Strongly disagree.	SHDWEARSB
(40)	10a. During a lifetime, do you feel that a person is more likely to die from heart disease than from an automobile accident? (check one) ___ 3 More likely to die from heart disease. ___ 2 About the same likelihood for both. ___ 1 More likely to die from an automobile accident.	HRTDISEASE
(41-44)	b. If you selected one of the causes (heart disease or automobile accident) as more likely, how many times more likely do you feel this cause of death to be? (enter one number per space) Number of times more likely: __ __ __ __	HRTLIKHD3

DELAYED POST INTERVENTION GROUP 8:
NO MESSAGE

QUESTIONNAIRE
(DLYPSTST-C)

Experimenter Use Only (Column #'s)		Experimenter Use Only
(45)	11a. During a lifetime, do you feel that a person is more likely to die from homicide (being murdered) or from an automobile accident? (check one) ___ More likely to die from homicide. 3 ___ About the same for both. 2 ___ More likely to die from an automobile accident. 1	HOMICDE3
(46-49)	b. If you selected one of the causes (homicide or automobile accident) as more likely, how many times more likely do you feel this cause of death to be? (enter one number per space) Number of times more likely: ____	HOMLIKLHD3
(52)	12. Did you wear a seat belt today when you came here for the interview? ___ Yes. 1 ___ No. 2	SBTODAY

APPENDIX B
SUPPLEMENTARY FORMS

SUPPLEMENTARY FORM
ALL GROUPS

Please circle the appropriate answer:

1. Do you exercise

Regularly	Pretty Often	Sometimes	Not Very Often	Hardly At All
5	4	3	2	1

2. Do you visit your doctor for a checkup

Once A Year Or More	Once In Two Yrs	Ocassionally	Less Than Once In 3 Yrs	Only If I'm Ill
5	4	3	2	1

3. How conscious are you of eating the right foods?

Very Conscious	Somewhat Conscious	Not Concerned One Way or the Other	Not Very Conscious	Not At All Conscious
5	4	3	2	1

4. Do you visit your dentist for a checkup

Every Six Months	Once A Year	Occasionally	Less Than Once In 2 Yrs	Only If I Need to
5	4	3	2	1

SUPPLEMENTARY FORM
GROUPS 1 THRU 5:
RISK PERCEPTION MESSAGE

Please indicate in the space provided below the three things you liked most and liked least in the message you just saw/heard.

Liked Most:

1. _____

2. _____

3. _____

Liked Least:

1. _____

2. _____

3. _____

I thought the odds of being injured seriously in a car accident were:

___ 1 Greater than one out of three (More than the film stated)

___ 2 One out of three (same as the film stated)

___ 3 Less than one out of three (less than the film stated)

SUPPLEMENTARY FORM
GROUPS 6 & 7
SEAT BELT - NO RISK PERCEPTION AND ALCOHOL

Please indicate in the space provided below the three things you liked most and liked least in the message you just saw/heard.

Liked Most:

1. _____
2. _____
3. _____

Liked Least:

1. _____
2. _____
3. _____

APPENDIX C
INSTRUCTIONS TO SUBJECTS

GROUP 1: COMMITMENT RADIO - 1st SESSION

Hello, thank you for participating in our risk perception experiment. The responses you are about to make will be very important, and will help to insure the safety of many people. It is, therefore, important that you answer as truthfully and honestly as possible. The questionnaire that you are about to receive requires you to answer a number of items related to your driving attitudes and behavior. Please read each question carefully, and if you have any questions, please ask the experimenter, even if you have the slightest doubt about the meaning of a question or how to answer the question. The questionnaire shouldn't take longer than 10 minutes to complete, however, you may take as much time as you need. We will use the first question as an example on how to mark the answers. (Give pretest & explain example) Are there any questions? Please begin to answer the questions. Ignore all information contained in the margins marked "EXPERIMENTER USE ONLY." (Collect pretest upon completion by subjects)

In this part of the experiment we would like you to listen to a radio message that concerns driving behavior. Please pay close attention to the tape and the message contained therein. You will find the tape fairly self-explanatory. We will listen to it 3 times. The message lasts 2.5 minutes. Let's begin.

Listen to commitment tape - 3 times.

Well, I hope you enjoyed that. Now we would like you to answer a few more questions regarding the tape you just heard. The questionnaire is similar to the one you just filled out, so no further instructions are necessary. Are there any questions?

Give immediate post test.

This completes the end of the 1st session. Upon completion of the second part of the experiment, which will be in 1 months time, you will be paid the total of $8.00 for participating. Please pick up a reminder sheet that notes when the second part of the experiment will take place.

Thank you very much for your participation.

GROUP 2: NO COMMITMENT RADIO - 1st SESSION

Hello, thank you for participating in our risk perception experiment. The responses you are about to make will be very important, and will help to insure the safety of many people. It is, therefore, important that you answer as truthfully and honestly as possible. The questionnaire that you are about to receive requires you to answer a number of items related to your driving attitudes and behavior. Please read each question carefully, and if you have any questions, please ask the experimenter, even if you have the slightest doubt about the meaning of a question or how to answer the question. The questionnaire shouldn't take longer than 10 minutes to complete, however, you may take as much time as you need. We will use the first question as an example on how to mark the answers. (Give pretest, explain example) Are there any questions? Please begin to answer the questions. Ignore all information contained in the margins marked "EXPERIMENTER USE ONLY."

(Collect pretest upon completion by subjects)

In this part of the experiment we would like you to listen to a radio message that concerns driving behavior. Please pay close attention to the tape and the message contained therein. You will find the tape is fairly self-explanatory. We will listen to it 3 times. The message lasts 2 minutes. Are there any questions? Let's begin.

Give tape 3 times.

Well, I hope you enjoyed that. Now we would like you to answer a few more questions regarding the tape you just heard. The questionnaire is similar to the one you just filled out, so no further instructions are necessary. Are there any questions?

Give immediate post test.

This complete the end of the 1st session. Upon completion of the second part of the experiment, which will be in 1 months time, you will be paid the total of $8.00 for participating. Please pick up a reminder sheet that notes when the second part of the experiment will take place.

Thank you very much for your participation.

GROUP 3: COMMITMENT TV - 1st SESSION

Hello, thank you for participating in our risk perception experiment. The responses you are about to make will be very important, and will help to insure the safety of many people. It is, therefore, important that you answer as truthfully and honestly as possible. The questionnaire that you are about to receive requires you to answer a number of items related to your driving attitudes and behavior. Please read each question carefully, and if you have any questions, please ask the experimenter, even if you have the slightest doubt about the meaning of a question or how to answer the question. The questionnaire shouldn't take longer than 10 minutes to complete, however, you may take as much time as you need. We will use the first question as an example on how to mark the answers. (Give pretest, explain example) Are there any questions? Please begin to answer the questions. Ignore all information contained in the margins marked "EXPERIMENTER USE ONLY."

(Collect pretest upon completion by subjects)

In this part of the experiment we would like you to view a video tape that concerns driving behavior. Please pay close attention to the tape and the message contained therein. You will find the tape is fairly self-explanatory. We will listen to it 3 times. The message lasts 2 ½ minutes. Let's begin.

Give videotape 3 times.

Well, I hope you enjoyed that. Now we would like you to answer a few more questions regarding the tape you just saw. The questionnaire is similar to the one you just filled out, so no further instructions are necessary. Are there any questions?

(Give immediate post test)

This completes the end of the 1st session. Upon completion of the second part of the experiment, which will be in 1 months time, you will be paid the total of $8.00 for participating. Please pick up a reminder sheet that notes when the second part of the experiment will take place.

Thank you very much for your participation.

GROUP 4: NO COMMITMENT TV - 1st SESSION

Hello, thank you for participating in our risk perception experiment. The responses you are about to make will be very important, and will help to insure the safety of many people. It is, therefore, important that you answer as truthfully and honestly as possible. The questionnaire that you are about to receive requires you to answer a number of items related to your driving attitudes and behavior. Please read each question carefully, and if you have any questions, please ask the experimenter, even if you have the slightest doubt about the meaning of a question or how to answer the question. The questionnaire shouldn't take longer than 10 minutes to complete, however, you may take as much time as you need. We will use the first question as an example on how to mark the answers. (Give pretest, explain example) Are there any questions? Please begin to answer the questions. Ignore all information contained in the margins marked "EXPERIMENTER USE ONLY."

Collect pretest upon completion by subjects.

In this part of the experiment we would like you to view a video tape that concerns driving behavior. Please pay close attention to the tape and the message contained therein. You will find the tape is fairly self-explanatory. We will listen to it 3 times. The message lasts 2 minutes. Are there any questions? Let's begin.

Give video tape 3 times.

Well, I hope you enjoyed that. Now we would like you to answer a few more questions regarding the tape you just saw. The questionnaire is similar to the one you just filled out, so no further instructions are necessary. Are there any questions?

(Give immediate post test)

This completes the end of the 1st session. Upon completion of the second part of the experiment, which will be in 1 months time, you will be paid the total of $8.00 for participating. Please pick up a reminder sheet that notes when the second part of the experiment will take place.

Thank you very much for your participation.

GROUP 5: SATURATION - 1st SESSION

Hello, thank you for participating in our risk perception experiment. The responses you are about to make will be very important, and will help to insure the safety of many people. It is, therefore, important that you answer as truthfully and honestly as possible. The questionnaire that you are about to receive requires you to answer a number of items related to your driving attitudes and behavior. Please read each question carefully, and if you have any questions, please ask the experimenter, even if you have the slightest doubt about the meaning of a question or how to answer the question. The questionnaire shouldn't take longer than 10 minutes to complete, however, you may take as much time as you need. We will use the first question as an example on how to mark the answers. (Give pretest and explain example) Are there any questions? Please begin to answer the questions. Ignore all the information contained in the margins marked "EXPERIMENTER USE ONLY."

(Collect pretest upon completion by subjects)

In this part of the experiment we would like you to view a video tape and listen to a radio message that concerns driving behavior. Please pay close attention to the tape and message contained therein. You will find the tape is fairly self-explanatory. We will listen to each once. The message lasts 2 to 2.5 minutes. Let's begin.

Present commit TV, commit Radio, no commit TV, and no commit radio.

Well, I hope you enjoyed that. Now we would like you to answer a few more questions regarding the tapes you just saw and heard. The questionnaire is similiar to the one you just filled out, so no further instructions are necessary. Are there any questions?

(Give immediate post test)

This completes the end of the 1st session.

For the next part of the experiment we would like you to call us 4 times a week for the next 4 weeks. You will be paid $2 for each phone call you make. When you call you will hear a brief message. At the completion of the message you will hear a beep. Please leave your name after the beep. This will enable us to have a record of your call. It will be most helpful if you call four consecutive days in a row. For instance Monday thru Thursday or Tuesday thru Friday. However as long as you call 4 times a week (and please call only 4 times) you will be paid for the experiment. The number to call is _____. We have it written on these cards so you can keep track of your calls. You can call any time day or night, weekdays or weekends.

1 month from now you will come back for the third part of the experiment. At this time you will be paid $32.00 for your 16 phone calls at $2 each and $8 for the two sessions. This totals $40. Are there any questions? Please pick up a reminder when you leave and thank you very much for being a participant.

messages as they were receiving them, and that this may have been responsible for the better results obtained in this group over the near term; it is conceivable that the groups receiving three exposures to a single message became bored with the message and that this may have decreased their attentiveness. Anecdotal information tends to support this explanation. Often, an advertisement on commercial television is ignored by individuals who feel that they've "heard that commercial a hundred times." However, the addition of novel elements to a commercial with the same general theme serves to "alert" individuals or to capture attention more readily. Theoretical support for this notion comes from Kahneman (1973), in which the effects of novel stimuli on attention are discussed fully.

In sum, it is felt that the positive results of the saturation group over the long-term were expected; over the near term, however, the feeling is that the risk perception theme and the variety of the message itself and the media through which it was exposed may have been responsible for the positive results obtained. This is consistent with marketing practices, which frequently are to present variations of the same themes over different media; this approach is said to be more successful than presenting only one version of a theme in affecting consumer behavior.

IN SEVERAL OF THE ATTITUDE MEASURES, MESSAGES BASED ON RISK PERCEPTION THEMES APPEARED TO MAINTAIN POSITIVE ATTITUDE CHANGES OVER TIME, WHILE THE POSITIVE EFFECTS OF THE OTHER MESSAGES OFTEN DETERIORATED.

The implications of this result are simply that long-term attitude change may be more likely if media campaigns use messages based on perceived risk instead of other types of messages, particularly those based on fear or emotional arousal techniques (see Higbee, 1969; Robertson, 1974).

SIGNIFICANTLY MORE SUBJECTS IN THE VARIOUS MESSAGE GROUPS CHANGED ATTITUDES POSITIVELY THAN THOSE IN THE NO MESSAGE GROUPS.

Although this result is not surprising, it is in conflict with the opinion that campaigns using these types of messages are ineffective. Clearly, attitude change does ensue from exposure to seat belt and even other highway safety messages.

> RISK PERCEPTION MESSAGES (BOTH SINGLE-EXPOSURE AND SATURATION APPROACHES) PRODUCED CONSIDERABLE POSITIVE CHANGES IN SELF-REPORTED FREQUENCY OF SEAT BELT USE.

Although self-reports have been considered invalid measures of actual seat belt use in past research, the major criticism of this measure has been that it is inflated; subjects report wearing seat belts more often than they actually wear them. In the present study, however, self-reported frequency of use was analyzed as a change score; responses to the question "How often do you wear a seat belt while driving?" were analyzed by subtracting the value of this response on the pre-intervention questionnaire from the value of this response on the delayed post-intervention questionnaire. If the subjects' self-reports were inflated, there is no reason to believe that they were more inflated at either time of measurement. Thus, the change score may be a more valid measure than a one-time estimate. Additionally, the 3 point response scale associated with this question (never, sometimes, always) does not provide as much room for inflated estimates as, for example, a scale that allows a choice of 1 (never) to 10 (always).

Also, the self report measure was found to correlate positively and significantly with the attitude measures used in this study. For these reasons, the authors believe that the self-report measures used in this study may be a valid indication of subjects use of seat belts.

OBSERVED FREQUENCY OF SEAT BELT USE WAS FOUND TO INCREASE DRAMATICALLY OVER THE STUDY PERIOD, BUT THIS EFFECT WAS NOT ATTRIBUTABLE TO ANY PARTICULAR MESSAGE GROUP.

The finding that this effect was not attributable to any particular message group is the most perplexing finding of the study. As indicated previously, this result could be due to subjects' learning of the parking attendant's real purpose, and fastening their seat belts when arriving and leaving the research location. This would have produced the increase in observed belt use evident (to approximately the same proportions) in all the experimental groups (including the no message group).

An alternative explanation for this result is that the questionnaire itself, being heavily loaded with risk-perception theme, really made the subjects think about that theme and change their behavior accordingly. As indicated, this explanation has some support from research in decision aiding (Bateson, 1976).

FOR THE AGE GROUP TESTED, "RADIO" MESSAGES APPEARED TO BE MORE EFFECTIVE IN PRODUCING ATTITUDE CHANGE THAN "TV" MESSAGES.

Our analyses of the differences in positive net attitude change between groups who received the risk perception messages via tape recorder (radio) and video tape (TV) indicated significantly higher percentage of positive attitude change for those who received the "radio" message, for both the immediate and delayed attitude measures. As mentioned previously, this result must be interpreted with caution; it suggests only that radio is a viable and perhaps a more cost-effective means of presenting seat belt messages, and should not be ignored.

Interestingly, the change in self-reported frequency of seat belt use appeared to be somewhat more favorable for the "TV" group than for the "radio" group. This is a perplexing finding and awaits further research before any concrete statements can be made regarding which of these media should be selected for a large scale evaluation of message effectiveness.

In sum, it is believed that favorable changes in attitudes toward seat belts do ensue from exposure to messages designed to manipulate perceptions of the risks of driving. Moreover, these favorable changes seem to endure longer than such changes brought about by the other messages tested.

A note of caution is in order, however, Although we are encouraged by the relative effectiveness of risk perception based messages, our interpretation of the findings is tempered by the apparent improvement shown by the other messages with regard to some of the attitude items. Additionally, it will be noted in Tables 3 through 13 that in virtually *all* of the experimental groups, most subjects did not change their attitudes one way or the other. Although not unexpected, (especially for short duration message exposures as were used in this study), these results provide the proper perspective within which the findings should be viewed. That is, *of those individuals who did change their attitudes,* percent positive net change was frequently greater in the risk perception message groups (especially the saturation group) than in the "conventional" message groups. Note, however, that the magnitude of positive attitude change in all experimental conditions is modest (rarely more than 15-25%). Thus, when we say that the results are encouraging, we mean specifically that they are encouraging within the range of attitude change that might be expected from such types of interventions. If, however, these positive attitude changes *do* translate into positive behavioral changes, the "modest" changes discussed could conceivably double the present rate of seat belt use.

4.3 Suggestions for Further Research and Guidelines for Message Refinement

Before attempting to evaluate the effectiveness of the messages tested on a large scale, the authors believe it will be necessary to refine the present risk perception messages based on the findings of this study.

New versions of the message should then be developed and evaluated in much the same way as done in the present study, so that their effectiveness may be compared to that of the existing messages. Several changes in evaluation methodology are necessary based on what was learned during the present investigation. These changes are:

> ALL MESSAGES SHOULD BE PRESENTED USING THE SATURATION APPROACH.

Since 1) the question of whether the non-risk perception messages would have had greater positive effects if they had been presented using the saturation approach remains unanswered, and 2) the saturation condition produced the most favorable results in both attitude and self-reported behavior measures, it is felt that an evaluation of message effectiveness using only the saturation approach is the most parsimonious for future research.

> INCLUDE A NO MESSAGE GROUP THAT RECEIVES AN IRRELEVANT QUESTIONNAIRE.

Although it seems as if the risk perception questionnaire itself may have had an effect on observed seat belt use, this issue remains unresolved since the design of the present study did not include an "irrelevant questionnaire" group. Any further evaluation of the messages should include such a group so that questionnaire effects may be adequately assessed.

USE A LESS OBTRUSIVE MEASURE OF OBSERVED FREQUENCY OF SEAT BELT USE.

Although a sincere and careful attempt was made at concealing the real purpose of the "parking attendant" (observer), we must allow for the possibility that this purpose was discovered by the subjects. An alternative and much less obtrusive behavioral measure should be incorporated into future research. One approach, which we believe is more likely to produce valid measures, is to forego the "parking attendant" idea, so that subjects do not see anyone at all upon arriving and departing from the research location. Instead, one or two observers would be placed in a 4-wheel drive truck parked close to the entrance to the research location. It is unlikely that subjects will notice someone in a parked vehicle observing them as they approach or leave the research location. It is also unlikely that even if seen, subjects will assume that someone in a 4-wheel drive truck would be associated with the research effort. A 4-wheel truck is suggested for this latter reason and also because that type of truck is higher off the ground, and would make observation of seat belt use easier and perhaps more reliable.

ALLOW DRIVERS OF ONLY POST-1967 AUTOMOBILES TO PARTICIPATE IN THE STUDY.

Although the overwhelming majority of automobiles in this study were post-1970 models, some variance in the observed seat belt measure undoubtedly came from inadequate observation of passengers who wore seat belts but did not wear the shoulder harnesses. Additionally, some older cars may have had seat belts that were no longer functional. Thus, we suggest that only post-1967 automobiles, which are equipped with shoulder harnesses *and* seat belts, be used in future research. Alternatively, 1975 automobiles, which contain the 3-point harness as standard equipment, could be used.

In addition to these methodological refinements, the following refinements of the messages themselves are suggested:

MAKE THE MESSAGE SHORTER.

The risk perception messages to which subjects were exposed were 2 and 2½ minutes long (the commitment statement accounted for the additional ½ minute). Practically speaking, this is too long for a TV or Radio spot that potentially would be aired. Additionally, the "seat belt no risk perception message" was only 1 minute long and the "alcohol" message was only 30 seconds long; if length of the persuasive communication is related to its effects (Lindsey, Hall and Thompson, 1975), it is possible that positive effect of the risk perception messages may have been diluted by their length, relative to the other messages. (Many subjects commented that the message was too long.) Thus, refinement of the message should produce a message of perhaps 30 to 45 seconds in length.

PRESENT MORE POSITIVE INFORMATION IN THE MESSAGE; USE A TWO-SIDED APPROACH.

When reviewing the comments elicited and volunteered by subjects, it became apparent that subjects were interested in knowing not only what the chances of being injured or killed were, but what benefit, expressed in statistical form, might be realized if they were to wear a seat belt. As previously indicated, literature on fear arousal in persuasive communications suggests that these types of approaches are often ineffective; however, when presented with the desirable outcomes of the alternative behaviors, these approaches appear to be more effective. Thus, if the "1 in 3" statistic used in these messages were combined with a statistic that stated the chances of escaping injury or death if the individual *did* use a seat belt, it is conceivable that the messages would be more effective.

The present message does suggest that "if you buckle up, you'll be able to walk away..."; however, this occurs much later in the message relative to statement of the "1 in 3" statistic and is not as specific as stating the odds of *escaping* injury or death.

ELIMINATE THE COMMITMENT STATEMENT.

Many subjects indicated that they didn't like the "promise part of the message." Apparently, this statement of commitment gave people the feeling of being children; it was viewed as tutorial, instructional, and "Boy-Scoutish." The authors feel that little would be lost and that, in fact, something might be gained by eliminating that statement. Clearly, the commitment statement was inappropriate for the age group studied; it could only have given them the impression that they were being lectured to. This would tend to reduce the credibility of the message source, which is known to reduce the effectiveness of the persuasive communication.

REVISE THE MESSAGE TOWARD A "SOFTER-SELL" APPROACH.

The social psychology literature states that a communicator's effectiveness can be increased if he appears to argue a position contrary to his own self-interest, and/or if he appears uninterested in influencing the receiver's opinion (McGuire, 1969). Clearly, the messages tested attempt to influence the receiver's opinions (especially true of the message with the commitment statement). Therefore, the next generation of messages should attempt to include the same information but present it in a less blatant manner.

This is consistent with our hypothesis that the no message group changed their behavior due to the effect of the questionnaire which, if considered a form of the risk perception message, was clearly an approach that did not appear to attempt to influence the respondents' opinions.

Now that the suggestions for message refinement have been put forth, attention is drawn to several options for large scale evaluation of the refined messages.

5. BEHAVIORAL OBSERVATION OF SEAT BELT USE

5.1 Overview

The greatest difficulty in evaluating the effectiveness of messages designed to promote voluntary use of seat belts is observing the frequency with which the people exposed to the messages actually wear their seat belts. In the present study, these observations were made on four occasions, as described previously. The issue to be addressed is how behavioral observations may be made on *more* than four occasions (or on more occasions than just upon arrival and departure from the research area). More frequent observations are crucial for two reasons: (1) to increase measurement reliability, and (2) to try to control the possibility that measurement reflects subjects' wearing their seat belts *because* they are driving to and from the research location (where they clearly are being encouraged to wear their belts). That is, it is not clear (if behavioral observations are made only upon arrival and departure from the research location) if subjects are actually wearing belts more often in general, or if they are wearing belts because they feel the experimenters expect them to.

The following discussion is divided into two parts. Section 5.2 presents an alternative to the observation methods used in the present study that we believe will eliminate whatever effects the "parking attendant" may have had on subjects' actual use of seat belts. In Section 5.3, suggestions are made for extending the behavioral observation measure beyond arrival and departure from the research location.

5.2 Behavioral Observation at the Research Location

One of the suggestions in the discussion section was that a less obtrusive measure of actual seat belt use is desirable. In the present study, it was possible that the "parking attendant's" purpose (to observe seat belt

use) was detected by the subjects. Thus, it is also possible that actual seat belt use increased because subjects did what they feel they were expected to do, i.e., buckle up.

To eliminate this effect in future studies, it is recommended that the observer be located in an enclosed van (with windows in the rear) parked at the curb next to the entrance or driveway of the research location. Upon entry into this driveway, subjects could be observed from inside the van (through the rear windows and at close range) to see if they are wearing their belts. (Only post-1975 cars, which have shoulder or "3-point" harnesses as standard equipment, could be used to make observation easier.) Dark or reflective plastic could be placed over the rear windows of the van to prevent the subjects from seeing into the van and detecting the observers. In this manner, subjects would not be aware that they are being observed.

5.3 Additional Behavioral Observations

Basic descriptions of the automobiles in which subjects arrive at the research locations will be taken. This could be done without alerting subjects to the fact that they will be observed by simply telling subjects that "the main office needs a record of who is parked *legally* in our parking lot so that their vehicles will not be towed, as is done for unauthorized vehicles." A sign could be posted at the entrance to the parking lot that says "Spaces Reserved for Building Occupants and Visitors Only -- Unauthorized Vehicles Will be Towed at Owner's Expense" or something of that nature. The fact that these warnings appear in many parking facilities in the area would lend credibility to the reasons for obtaining vehicle descriptions from subjects upon recruitment.

Assuming that a similar experimental design as was used in the present study will be used again, a delay period for measurement of attitudes will be provided. During this delay period, additional observations could be make of subject's actual seat belt wearing behavior. Several options for these observations exist.

Option 1: Street Corner Observation

With vehicle license numbers available, the addresses of subjects could be identified through cooperation of the Division of Motor Vehicles. Since subjects are likely to be recruited from a relatively small geographical area, addresses of individual subjects could be culled and subjects could be grouped by smaller geographical "sub-areas." Within practical limitations, teams of observers could be assigned to monitor these sub-areas at times when subjects would be most likely to drive to and from their residences (e.g., early morning -- on the way to school, work, etc. and evening hours -- upon return from school, work, etc.). Use of seat belts could be observed as often as necessary (number of observations required to be determined) over a certain time period. Again, observers should be parked in different vehicles at the various sub-areas to prevent detection by subjects. Observation sites would vary randomly within a sub-area, also to prevent observer detection.

Observations should be done on weekends as well as weekdays, under the assumption that different types of trips take place on weekends than on weekdays (e.g., on a weekday one is likely to drive to work; weekends one may be driving to visit friends, to go shopping, etc.). Since people's seat belt wearing behavior may vary depending on where they are going, reliability of measurement may be increased by sampling weekends as well as weekdays.

Although this approach is deemed feasible, the creation, training, and employment of observation teams may prove to be expensive; a detailed cost analysis of this approach is clearly indicated.

Option 2: Parking Lot Observation

If subjects were recruited from local universities, community colleges, and vocational schools (as they were in the present study), the subjects could be unobstrusively observed upon arrival and departure from those institution's parking lots. Observers in enclosed vans parked in spaces adjacent to the lot entrances, or alternatively, on the street near the lot entrances could record data on actual seat belt use for specific subjects. The observer could record every license plate entering and leaving the lot and whether or not the driver of that vehicle is wearing a belt. This recording of license plate numbers could begin a few weeks *before* the experiment, so that making a connection between that activity and the experiment will be less likely. These records would be compared against the list of actual subjects' license plate numbers to determine whether the subjects were wearing their belts more often after the experiment than before. Clearly, a number of observations (to be determined) should be made *before* the experiment begins, *during* the experiment, and for some time *after* the experiment ends.

Option 3: Additional Observation at Research Location

Observations at the local universities may be difficult due to the number of students that use the campus, the number of parking lots available for their use, and problems that may arise due to ride-sharing, using different vehicles and arriving at unpredictable times or locations. For these reasons, additional observations of the subjects at or near the reasearch location may be a low-cost method of obtaining behavioral measures, either alone or in combination with the previous options.

Subjects would be recruited for a series of studies over an extended period with the seat belt study embedded among unrelated studies. The first study would be a "blind" study (not related to driving) with two or three interviews required. The subject's seat belt wearing behavior would be observed via the enclosed van and parking scenario that was described in Section 5.2 Alternatively, the van might be parked on the street, a block away from the parking lot, and observations made at that point. Approximately seven pre-treatment behavior measures could be obtained in this fashion. The seat belt study would follow several blind situations (it's position to be determined). The individuals would have habituated the parking routine and would probably not be suspicious of the parking situation. These post treatment measures could be obtained at this time. The final study would again be a "blind" study. Four or more additional post treatment measurements could be obtained over an extended period after the seat belt experiment has ended. Although the measurements would be taken at or near the research site, the measurement process, the variety of studies the subjects will be participating in, and the length of time required for completion of the series should lessen any effect of coming to the research location.

6. EXPERIMENTAL FACTORS INFLUENCING OBSERVED USE OF SEAT BELTS

To determine whether the change in observed seat belt use was a function of the questionnaire or the "parking attendant" influence, an additional experiment was performed in which subjects came to the research location to fill out an "irrelevant" questionnaire. Thirty subjects drove to the research location and filled out a questionnaire on attitudes about and preferences for certain video games. Subjects' use of seat belts was observed exactly as done in the main study, i.e., through use of "parking attendant."

Only 3.3% (one of thirty) of these subjects were observed to be wearing seat belts upon arrival at the research location. (This was about the same as the previous "non-message" group.) As expected, no change in seat belt use was observed. Of the 29 subjects entering without belts, none left wearing belts; the one subject who wore his seat belt upon arrival also wore it upon departure.

These results suggest that the questionnaire used in the main risk perception study may have been a significant contributor to the increase in seat belt use observed. We also believe that this increase in observed use cannot be attributed solely to the influence of the "parking attendant" or observer. However, we do allow for the possibility that the *combination* of being in a seat belt study (made apparent by the questionnaire) and having a parking attendant present as an observer, could have contributed to the overall increase in seat belt use. That is, the entire experimental situation may have affected observed seat belt use.

These results suggest that, in future research, care should be exercised to control these effects. Thus, the following are clearly indicated, as suggested in Chapter 4:

(1) An irrelevant questionnaire group should be included in the experimental design; and
(2) The observer should be concealed and thus undetected by the subject.

In future questionnaires, items designed to elicit attitudes toward seat belts might best be embedded in a larger questionnaire of "irrelevant" items, so that the theme of the questionnaire is not as apparent to the subject as it seems to have been in this study.

In addition, it would be interesting to include a group that gets questionnaire in lieu of a message. This group could be compared to the message groups that received the irrelevant questionnaire, to determine the effects of the questionnaire as a "quasi-message." It is conceivable, in view of the literature on persuasive communication mentioned in Chapter 4, that this mode of presentation would be quite successful in changing attitudes and behavior with regard to seat belts. Perhaps a "national questionnaire," based on risk perception themes and aired on TV, may prove to be a viable option to messages designed specifically to convince motorists to use seat belts, particularly for age groups who are resistant to persuasive communication.

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APPENDIX A
QUESTIONNAIRES

PRE-INTERVENTION
ALL GROUPS
QUESTIONNAIRE
(PRTST)

Experimenter Use Only (Column #'s)		Experimenter Use Only
	NAME: _____	
(1-3)	CODE NUMBER ___ ___ ___	SNUM
(4-5)	AGE _____ (enter age in space provided)	AGE
(6)	SEX ___ MALE (1) ___ FEMALE (2) (check one)	SEX
(7-8)	1. How many years have your been driving? ____ ____	YRSDRV
	2. What is the make (e.g., Oldsmobile, Buick), model (e.g., Cutlass, Regal) and year of your automobile? (If you do not own an automobile, please give information about the automobile you usually drive). MAKE _____ MODEL _____ YEAR _____.	
(9)	3a. How often do you wear a seat belt while driving? (check one) ___ SOMETIMES (1) ___ NEVER (2)	FREQSB1
(10)	3b. If you checked that you wear your seat belt sometimes, on what percentage of trips do you wear it? (check one) ___ (1) Less than 20 percent. ___ (2) 20 to 40 percent. ___ (3) 40 to 60 percent. ___ (4) 60 to 80 percent. ___ (5) More than 80 percent.	PRCNTSB1

PRE-INTERVENTION
ALL GROUPS
QUESTIONNAIRE
(PRTST)

Experimenter Use Only (Column #'s)		Experimenter Use Only
(11)	4. What percentage of the motoring public do you estimate wears a seat belt regularly? (check one) ___ 1 Less than 20 percent. ___ 2 20 to 40 percent. ___ 3 40 to 60 percent. ___ 4 60 to 80 percent. ___ 5 More than 80 percent.	PCTPUBSB
(12)	5. How concerned are you about being injured or killed in an automobile accident? (check one) ___ 1 Not concerned ___ 2 Only a little concerned ___ 3 Somewhat concerned. ___ 4 Quite a bit concerned. ___ 5 Greatly concerned.	CNCRN1
(13-16)	6. During a whole lifetime of driving, how many people out of 1000 do you estimate will be seriously injured in an automobile accident? Enter the number from 0 to 1000 that is your best estimate in the spaces provided. — — — —	PEOPLINJ

PRE-INTERVENTION
ALL GROUPS
QUESTIONNAIRE
(PRTST)

Experimenter Use Only (Column #'s)		Experimenter Use Only
(17-20)	7. During a whole lifetime of driving, how many people out of 1000 do you estimate will be killed in an automobile accident? Enter the number from 0 to 1000 that is your best estimate in the spaces provided. — — — —	PEOPLKILD
(21)	8. Some people say that because the probability of death or serious injury while driving or riding in an automobile is so high, wearing a seat belt is a good thing to do, since, eventually, any effort or inconvenience involved in wearing a seat belt is likely to be repaid. Indicate the extent to which you agree or disagree with this statement by placing a check on the appropriate line. ___ Strongly disagree. 1 ___ Slightly disagree. 2 ___ Neither agree nor disagree. 3 ___ Slightly agree. 4 ___ Strongly agree. 5	SBGDIDEA1
(22)	9. How effective do you think automobile seat belts are in preventing injury or death when an accident occurs? (check one) ___ Not at all effective. 1 ___ Slightly effective. 2 ___ Moderately effective. 3 ___ Quite effective. 4 ___ Very effective. 5	SBEFFECTIVE1

PRE-INTERVENTION
ALL GROUPS
QUESTIONNAIRE
(PRTST)

Experimenter Use Only (Column #'s)			Experimenter Use Only

10. For each of the following types of driving situations, please indicate how often you use your seat belt, either as a driver or as a passenger (check only one answer per line).

			All of the time	Most of the Time	Only Sometimes	Rarely	Never	
(23)	(a)	Driving to Work	5	4	3	2	1	TOWORK1
(24)	(b)	Using your car for errands	5	4	3	2	1	ERRANDS1
(25)	(c)	Driving long Distances	5	4	3	2	1	LONGDIST1
(26)	(d)	Driving on Local Streets in the City	5	4	3	2	1	LOCALSTRTS1
(27)	(e)	Driving on Highways and Freeways	5	4	3	2	1	HWYFWYS1
(28)	(f)	Driving with Children in the Car	5	4	3	2	1	WITHKIDS1
(29)	(g)	Riding in a Car as a Passenger	5	4	3	2	1	PASSENGER1
(30)	(h)	Driving Alone	5	4	3	2	1	ALONE1

PRE-INTERVENTION
ALL GROUPS
QUESTIONNAIRE
(PRTST)

Experimenter Use Only (Column #'s)		Experimenter Use Only
(31)	11. How would you feel about a law that would impose a significant fine upon a person if he or she did not wear a seat belt when riding in or driving an automobile? (check one) ___ Strongly oppose. 1 ___ Slightly oppose. 2 ___ Neither favor nor oppose. 3 ___ Slightly favor. 4 ___ Strongly favor. 5	SBFINE1
(32)	12. How do you feel about a law that will require automobile manufacturers to put either airbags or seat belts that work automatically in new cars? (check one) ___ Strongly favor. 5 ___ Slightly favor. 4 ___ Neither favor nor oppose. 3 ___ Slightly oppose. 2 ___ Strongly oppose. 1	SBAIRBAGLAW1

Experimenter Use Only (Column #'s)		Experimenter Use Only
(33)	13. How would you feel about a law that would allow insurance companies to pay for deaths and injuries that occurred in a crash only if the occupant(s) wore a seat belt? (check one) ___ 5 Strongly favor. ___ 4 Slightly favor. ___ 3 Neither favor nor oppose. ___ 2 Slightly oppose. ___ 1 Strongly oppose.	INSURANC
	14. For each of the following statements, please indicate whether you agree or disagree.	
(34)	a. "The chances of getting into an accident are so small that seat belts aren't really worth the inconvenience." (check one) ___ 1 Strongly agree. ___ 2 Slightly agree. ___ 3 Neither agree nor disagree. ___ 4 Slightly disagree. ___ 5 Strongly disagree.	CHNCACCD

Experimenter Use Only (Column #'s)		Experimenter Use Only
(35)	b. "Getting killed or injured in a car accident is just a matter of fate, so seat belts don't make that big a difference." (check one) ___ 1 Strongly agree. ___ 2 Slightly agree. ___ 3 Neither agree nor disagree. ___ 4 Slightly disagree. ___ 5 Strongly disagree.	FATE1
(36)	c. "Nothing would make me use seat belts more often." (check one) ___ 1 Strongly agree. ___ 2 Slightly agree. ___ 3 Neither agree nor disagree. ___ 4 Slightly disagree. ___ 5 Strongly disagree.	SBUSE1

PRE-INTERVENTION
ALL GROUPS

QUESTIONNAIRE
(PRTST)

Experimenter Use Only (Column #'s)		Experimen Use Only
(37)	d. "I would wear a seat belt if it were more comfortable." (check one) ___ 5 Strongly agree. ___ 4 Slightly agree. ___ 3 Neither agree nor disagree. ___ 2 Slightly disagree. ___ 1 Strongly disagree.	COMFORT1
(38)	e. "I don't need to wear a seat belt because I am a good driver and I can avoid accidents." (check one) ___ 1 Strongly agree. ___ 2 Slightly agree. ___ 3 Neither agree nor disagree. ___ 4 Slightly disagree. ___ 5 Strongly disagree.	GOODDRIVER1
(39)	f. "I should wear a seat belt more often!" (check one) ___ 5 Strongly agree. ___ 4 Slightly agree. ___ 3 Neither agree nor disagree. ___ 2 Slightly disagree. ___ 1 Strongly disagree.	SHDWEARSB1

Experimenter Use Only (Column #'s)		Experimenter Use Only
(40)	15a. During a lifetime, do you feel that a person is more likely to die from heart disease than from an automobile accident? (check one) ___ 3 More likely to die from heart disease. ___ 2 About the same likelihood for both. ___ 1 More likely to die from an automobile accident.	HRTDISEASE1
(41-44)	b. If you selected one of the causes (heart disease or automobile accident) as more likely, how many times more likely do you feel this cause of death to be? (enter one number per space) Number of times more likely: ____	HRTLIKLHD1
(45)	16a. During a lifetime, do you feel that a person is more likely to die from homicide (being murdered) or from an automobile accident? (check one) ___ 3 More likely to die from homicide. ___ 2 About the same for both. ___ 1 More likely to die from an automobile accident.	HOMICDE1
(46-49)	b. If you selected one of the causes (homicide or automobile accident) as more likely, how many times more likely do you feel this cause of death to be? (enter one number per space) Number of times more likely: ____	HOMLIKLHD1
	Do Not Write Below this Line	