

**EVALUATION OF SAFETY RESULTS AS PART OF A
MOTORIST SURVEY ON
TRAFFIC SAFETY AND CONGESTION**

by

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EXECUTIVE SUMMARY

The Texas Transportation Institute (TTI) conducted a Motorist Survey on Traffic Safety and Congestion for the Texas Department of Transportation (TxDOT) during the 1993 Houston Auto Show. The purpose of the survey was to obtain public knowledge, opinions, and suggestions regarding traffic safety and congestion on Houston's roadways. The objective of the safety survey questions was to determine the attitude and behavior of Houston motorists toward roadway safety as well as their knowledge of traffic safety laws. Four hundred ninety-four (494) surveys were completed by volunteers during the nine-day period of the show. The results of the safety questions are discussed in this report.

Respondents were asked eleven questions regarding traffic safety. They were also asked to answer specific questions regarding age, education, ethnic background, driving experience, and family makeup. The survey demographics were compared to representative regional population statistics of the Houston metropolitan area.¹ This comparison indicated that survey respondents were over-represented by males, whites, and individuals from ages 25 to 54.

The eleven safety questions involved safety belt usage, headlight usage, drinking and driving, Texas laws governing these acts, as well as automobile safety features and traffic safety advertising campaigns produced by TxDOT. Sixty-five percent (65%) of respondents revealed that they always use their safety belt when driving a vehicle, while only 29% of respondents indicated that they always use a safety belt when riding in the rear seat of a vehicle. Ninety-four percent (94%) correctly knew that Texas law requires that the driver, the front seat passenger, and all children under four years of age must wear a safety belt in a vehicle. Regarding headlights, 62% of survey respondents stated that they always use them when driving in fog, rain, or other bad weather during daylight hours. However, 83% of the respondents knew that Texas law requires drivers to use headlights under such conditions. Forty-five percent (45%) of the respondents said it would be a problem to drive after drinking any alcohol with 2% saying they never drink alcohol at all. The remaining respondents indicated that drinking varying amounts of alcohol would make it a problem to drive. Sixteen percent (16%) considered driving to be a problem after having 1 drink, 18% after 2 drinks, and 19% after 3 or more drinks

in an hour. These responses indicated that these drivers do drive after drinking. Fifty-eight percent (58%) said that they would be very likely to use alternative transportation (friend, cab, designated driver) if they felt they'd had too much to drink. With respect to Texas laws on drinking and driving, only 12% of respondents chose the most correct response that three drinks within an hour roughly translates into a blood alcohol concentration of 0.10 or more for the average person, resulting in legal intoxication. The remainder of respondents selected smaller amounts of alcohol as necessary to exceed the legal limit. The most popular safety features for automobiles were the driver side airbag and anti-lock brakes. The most well-known safety campaign was "Don't Wreck Your Life", with 44% of respondents indicating awareness of the campaign.

It is apparent that some drivers are aware of certain traffic safety measures and Texas laws. Whether or not they take safety precautions whenever driving is uncertain. More research may be needed to further clarify this behavior. However, changing the attitude of the driver to one of caution and safety is a key to increasing safe behavior. Such behavior can transfer into decreased accidents and saved lives.

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The contents of this report reflect the views of the author who is responsible for the opinions, findings, and recommendations presented herein. The contents do not necessarily reflect the official views or policies of the Texas Department of Transportation. This report does not constitute a standard, specification, or regulation.

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EVALUATION OF SAFETY RESULTS AS PART OF A MOTORIST SURVEY ON TRAFFIC SAFETY AND CONGESTION

PURPOSE

The purpose of this study is to evaluate the results of the Traffic Safety portion of the Motorist Survey on Traffic Safety and Congestion conducted by Texas Transportation Institute (TTI). The survey questions gauged the knowledge, behavior, and attitude of Houston motorists towards particular traffic safety laws and issues. TTI conducted the survey for the Texas Department of Transportation (TxDOT) during the 1993 Houston Auto Show from 30 January 1993 to 7 February 1993.

BACKGROUND

Traffic safety is an important transportation issue. Millions of dollars are spent each year in research and development to improve the safety aspects of vehicle performance and the roadway environment. Impacts of such improvements are decreased accidents, injuries, and fatalities. Another important impact is a savings of millions of dollars to taxpayers, insurance companies, and the transportation industry.

However, one uncontrollable factor in the driving environment is the behavior of the driver. Thus, despite efforts to improve vehicle and roadway safety, thousands of people die on American roadways each year. Some of these individuals might have lived if they had taken safety precautions before riding in or driving a vehicle, such as deciding to wear a safety belt. Therefore, education can play a role in reducing the frequency of accidents. If drivers are educated on traffic safety measures, their innate value, and the consequences of not driving safely, they might take steps to avoid accidents and injuries in motor vehicles.

As part of its ongoing role in public education and traffic safety, TxDOT requested that TTI survey the public on its behavior and knowledge towards particular traffic safety issues. TTI conducted this safety survey as part of the Motorist Survey on

Traffic Safety and Congestion. The survey was conducted at the 1993 Houston Auto Show under the TxDOT interagency cooperative project with TTI that focuses on public surveys and information.

Eleven safety questions were included in the Motorist Survey on Traffic Safety and Congestion under the heading of Traffic Safety. The overall objective of the traffic safety survey questions was to determine motorist attitude and behavior toward safety on the roadway and to gauge knowledge of traffic safety laws. Respondents were also asked to answer specific questions regarding age, education, ethnic background, driving experience, and family makeup. The confidentiality of their responses was stressed by research staff throughout the survey.

SURVEY METHODOLOGY

A total of 494 surveys were completed by volunteers from those individuals attending the 1993 Houston Auto Show. Staff members asked the volunteers to complete the survey and stressed the fact that no right or wrong answers existed for the questions. The objective was to obtain public opinion and knowledge on a variety of survey topics.

A total of eleven questions were asked regarding traffic safety. Seven survey questions covered driver attitude and behavior regarding traffic safety. Two questions targeted safety belt usage, one question asked respondents their use of headlights under certain conditions, and two questions focused on drinking and driving. The remaining two questions asked the respondent's preference for safety features in a vehicle and asked if the respondent had heard of particular traffic safety advertising campaigns produced by TxDOT. Four questions on traffic safety laws were asked of each respondent. They covered laws regarding safety belt usage for adults and children, headlight usage, and driving while under the influence of alcohol. A copy of the Motorist Survey on Traffic Safety and Congestion is located in Appendix A. The Traffic Safety questions are on pages A-3 and A-4.

DATA ANALYSIS AND FINDINGS

The 494 returned surveys were entered into a computer data file and then statistically analyzed. The data analysis of the eleven Traffic Safety questions generated by statistical analysis are located in Appendices B and C. These results include an analysis of each question with respect to various demographic categories (i.e., female response vs. male response to each question). Graphs illustrating results are located in Appendix D.

Demographic Breakdown

Table 1 illustrates the demographic questions asked of survey respondents. The survey response choices for each question are listed along with the associated response percentages for each choice. Also given are the regional population statistics of the Houston metropolitan area for comparison purposes.¹

Table 1. Survey Respondent Demographics

Survey Question	Survey Response Choices	Response	Houston Metropolitan Population Statistics ¹
What is your gender?	A. Male B. Female	69% 31%	50% 50%
What is your age?	A. Less than 25 B. 25-39 C. 40-54 D. 55+	27% 40% 27% 6%	39% 29% 16% 16%
What is your family background?	A. White B. Black C. Hispanic D. Asian/Pacific Islander E. American/Alaskan Native F. Other	79% 6% 8% 4% 1% 2%	41% 27% 28% 4% 0% 0%

Additional background information was obtained from survey respondents regarding education, primary spoken language, driving as part of work, miles driven during an

average year, area in which most driving takes place, family composition, and ownership of vehicles and safety features thereof. The results to these questions are illustrated in Table 2.

Table 2. Survey Respondent Background Information

Survey Question	Survey Response Choice	Response
What is the highest level of school you have completed?	A. Less than high school B. High school graduate C. Some college D. College degree(s)	7% 21% 37% 35%
Is English the primary language spoken in hour home?	A. Yes B. No	96% 4%
Is driving a vehicle a major part of your job?	A. Yes B. No	35% 65%
About how many miles do you drive during an average year? (Average is approximately 12,000 miles per year)	A. Less than 10,000 miles B. 10,001 to 15,000 miles C. 15,001 to 20,000 miles D. 20,001 to 30,000 miles E. Over 30,000 miles	14% 29% 26% 16% 15%
Where do you spend most of your driving time?	A. Inside city limits B. Outside city limits C. About half inside and half outside city limits	45% 20% 35%
Have you ever taken a driver education course?	A. Yes B. No	84% 16%
Do you have small children in your family?	A. Yes B. No	36% 64%
Do you yourself own any of the following vehicles? (Choose all that apply)	A. Car B. Truck or Van C. Motorcycle D. I do not own any of above	80% 46% 9% 5%
In the vehicle you normally drive, what safety features does it have? (Choose all that apply)	A. Driver side airbag B. Passenger side airbag C. Automatic safety belts D. Anti-lock brakes E. Built-in child restraints F. None of the above	15% 3% 29% 11% 6% 36%

As illustrated by Table 1, survey respondents were over-represented by males, whites, and individuals from ages 25 to 54. The young (<25) and the elderly (55+) were under-represented as well as females, blacks, and Hispanics.

Table 2 indicates that 72% of survey respondents said they attended college. Fifty-six percent (56%) indicated that they drive over 15,000 miles per year, and 45% said they drive mostly within city limits. Eighty percent (80%) responded that they own a vehicle, and 84% said they have taken a driver education course. Only 36% of respondents noted that they have small children in their family. Detailed response rates based on some of these demographic categories are located in Appendix C.

Safety Belt Usage

Attitude and Behavior

Sixty-five percent (65%) of respondents revealed that they always use their safety belt when driving a vehicle, as shown in Figure 1. This number coincides with the Texas average safety belt usage of 66%, but is higher than the 58% usage for Houston, as reported in a study by Texas Transportation Institute.² Twenty-one percent (21%) of respondents stated that they almost always use safety belts, 13% said they seldom use them, and only 1% said that they never use them when driving a vehicle.

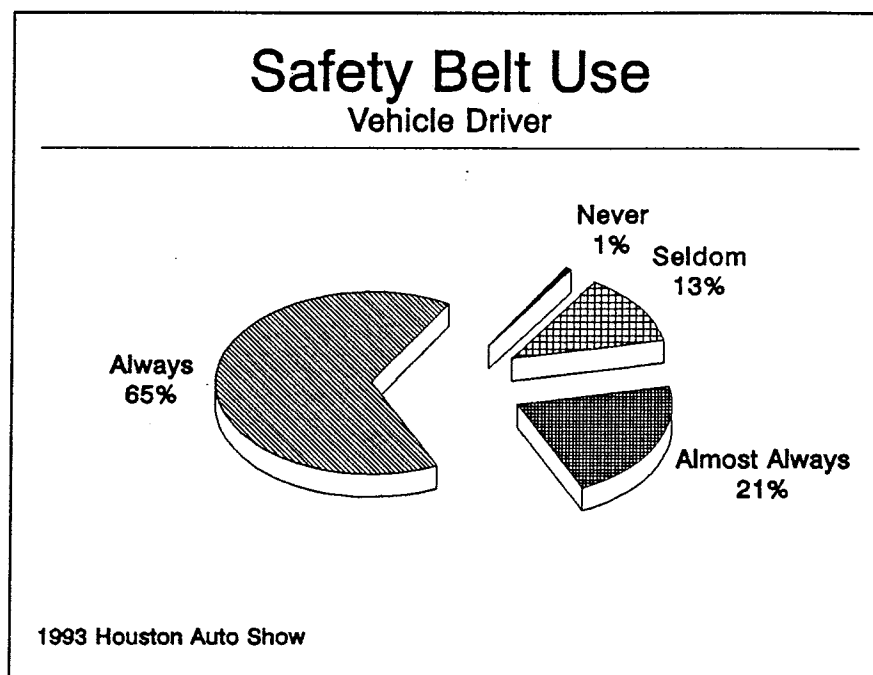


Figure 1. Safety Belt Usage - Vehicle Driver

Demographic analysis indicated that slightly more female (68%) than male respondents (64%) said that they always wear safety belts when driving a vehicle. Safety belt usage among respondents increased with age from a low of 61% for those less than 25 to a high of 69% for those 55 and older. An interesting trend was displayed when safety belt usage was compared to education. Sixty-five percent (65%) of those with less than a high school education said they always use safety belts. This figure dropped to 56% for those with a high school education and rose to a high of 73% for those respondents with a college degree. Furthermore, slightly more respondents who had taken driver education said they always wear safety belts. The same held true for drivers with small children.

When asked how often they use a safety belt when riding in the rear seat of a motor vehicle, only 29% of respondents said that they always do so, as displayed in Figure 2. Twenty percent (20%) said they almost always use rear seat safety belts, 27% seldom use them, and 24% said that they never use them.

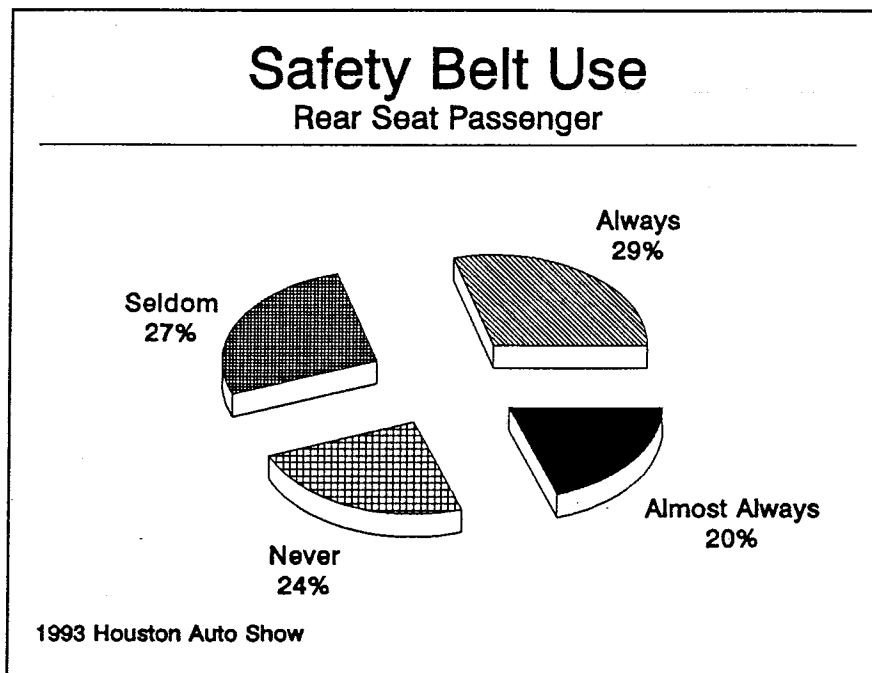


Figure 2. Safety Belt Usage - Rear Seat Passenger

Slightly more men (30%) than women (27%) stated that they always wear a safety belt when they are a rear seat passenger. Trends similar to those illustrated for safety belt usage among all drivers were illustrated for safety belt usage among rear seat passengers. For instance, usage increased with age and was higher among respondents with driver education and small children. The trend for rear seat passenger usage with respect to education was similar to that for driver safety belt usage: a rate of 29% for those with less than a high school education, a drop to 20% for those with a high school education, and an increase to a high of 37% for those with a college degree.

Legal Knowledge

The respondents were asked to identify the specifics of Texas law regarding safety belt usage. Ninety-four percent (94%) correctly knew who must wear a safety belt in a vehicle: the driver, the front seat passenger, and all children under four years of age.³ When asked to identify the Texas law covering children and safety restraints in vehicles, 90% of respondents chose the correct law. The law requires that all children under four years of age must be in a safety belt or a car seat (children under two years must be in a car seat), regardless of their location in the vehicle.⁴

All groups in each demographic category (Gender, Age, Education, Driver Education, Drivers with Small Children) had correct response rates over 90% regarding the Texas law on general safety belt usage. When questioned on the Texas law covering children and safety restraints, more women (95%) than men (86%) knew the correct response. Furthermore, respondents with driver education had a better correct response rate than those without it. However, it is interesting to note that more respondents with no small children knew the correct law than those with them, with response rates of 92% and 84%, respectively.

Headlight Usage

Attitude and Behavior

Sixty-two percent (62%) of survey respondents stated that they always use their vehicle headlights when driving in fog, rain, or other bad weather during daylight hours. Thirty-one percent (31%) said that they almost always use vehicle headlights under such conditions, and only 6% said they seldom or never use them in inclement weather during the daytime. Figure 3 illustrates these results.

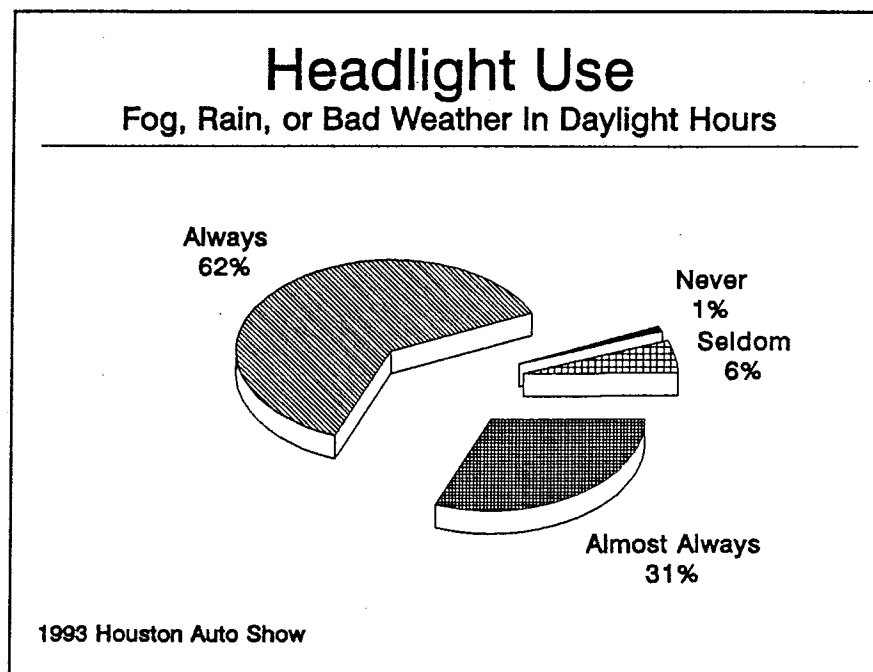


Figure 3. Headlight Usage

More women (67%) than men (60%) said that they drive with their headlights on in various types of inclement weather. The same held true for respondents with driver education (63%) versus those without it (60%). All age groups indicated headlight usage in inclement weather between 61% and 63%. In addition, such headlight usage was highest for those respondents with some college education (68%), followed by

respondents with a high school education (64%), those with less than a high school education (59%), and those with a college degree (57%).

Legal Knowledge

Texas law requires that drivers use headlights under various conditions:

" . . . from a half hour after sunset to a half hour before sunrise and at any other time when, due to insufficient light or unfavorable atmospheric conditions, persons and vehicles on the highway are not clearly discernible at a distance of one thousand (1000) feet ahead . . ." ⁵

This description includes heavy fog, rain, snow, or any other weather condition that creates such a vision problem. When asked about the specifics of the Texas law, 83% of respondents correctly chose the answer that included all of these conditions.

Female respondents (87%) were slightly more aware of the Texas law governing headlight usage than male respondents (82%). However, it is interesting to note that knowledge of the law decreased with age from a high of 89% for those respondents less than 25 years of age to a low of 69% for respondents 55 years and older. Based on education, those with less than a high school education had the highest correct response rate at 91%. Moreover, those respondents with driver education (84%) were more aware of the law than those without it (77%). Correct response rates for respondents based on their having children were about equal with 84% for those with small children and 83% for those having no small children.

Alcohol and Driving

Attitude and Behavior

A key contribution to highway deaths each year is alcohol intoxication. Figure 4 illustrates the general attitude of respondents toward drinking and driving. When asked when they would consider it a problem to drive a vehicle after drinking, 45% of

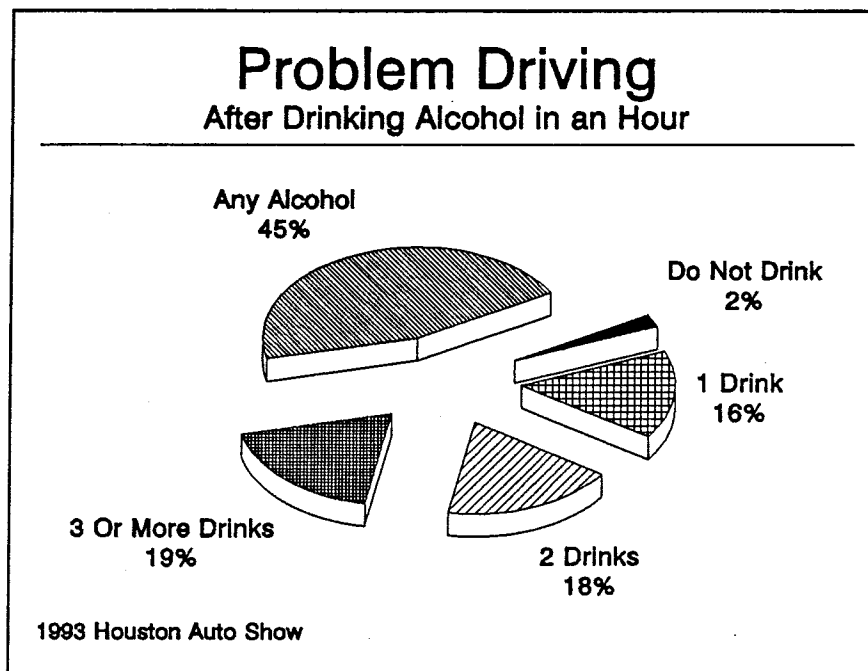


Figure 4. Problem to Drive After Drinking Alcohol in an Hour

respondents said it would be a problem after drinking any alcohol, and 2% said they do not drink alcohol. The remainder of respondents indicated that drinking varying amounts of alcohol would make it a problem to drive. Sixteen percent (16%) stated that driving would be a problem after having 1 drink, 18% after 2 drinks, and 19% after 3 or more drinks in an hour.

Respondents were then asked how likely they would be to use alternative transportation (friend, cab, designated driver) if they felt they'd had too much to drink. Fifty-eight percent (58%) responded that they would be very likely to do so. Other response rates were: likely (22%), unlikely (9%), very unlikely (9%), and do not drink alcohol (2%).

Demographic analysis indicated that more female respondents than male respondents felt it would be a problem to drive after drinking any alcohol, with 50% and 46% response, respectively. The age category with the highest response rate for any alcohol was the older driver with 66%. The age group with the lowest response rate was found to be those between 40 and 54, with 41% saying any alcohol would create a problem. Furthermore, the highest response rate was 50% for those with less than a

high school diploma. The response rates decreased as the education level increased with the lowest rate being for respondents with a college degree (40%).

Using an alternate transportation source was more popular with women (69%) than men (53%). The practice was also acceptable for those less than 25 (60%) and those 55 and older (78%). Alternate transportation usage was lowest for those with a high school education (50%).

Legal Knowledge

In order to determine their knowledge of Texas laws regarding driving under the influence of alcohol (DUI), respondents were asked when it would be likely to be illegal to drive after drinking (based on the number of drinks consumed within an hour). Forty-three percent (43%) said that having any alcohol in an hour would constitute intoxication, as shown in Figure 5. Twenty-one percent (21%) responded that having one drink in an hour was the limit, while 24% said two drinks within an hour was too much. Only 12% chose the most correct response of three drinks within an hour. The Texas DUI law states that legal intoxication is having a blood alcohol concentration of 0.10 or more.⁶ This concentration translates into about three drinks consumed in an hour for the average individual.

Each demographic category (Gender, Age, Education, Driver Education, Drivers with Small Children) had a majority of respondents select an incorrect yet safer response regarding the Texas DUI law. Less than 20% of each category ranging from a low of 9% for females and 55+ to a high of 18% for those with less than a high school education knew that 3 drinks or more in one hour is roughly equivalent to a blood alcohol content of 0.1% - legal intoxication. The remainder of respondents selected less amounts of alcohol as exceeding the limit.

Safety and Advertising

Respondents were asked to identify all safety features listed that they would specifically request when purchasing their next vehicle. An impressive 79% of respondents said they would request a driver side airbag, and 75% said they would prefer

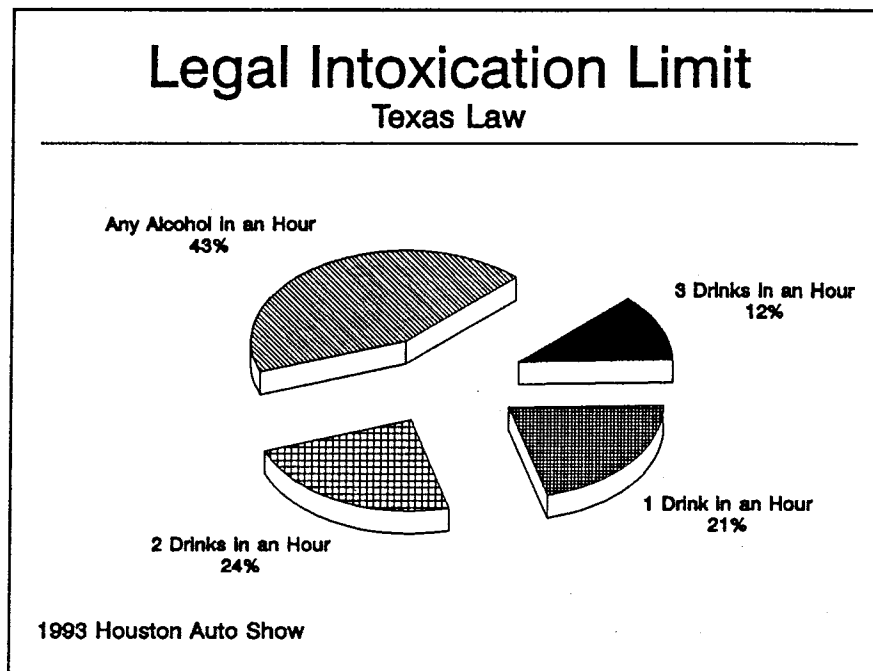


Figure 5. Legal Intoxication Limit - Texas Law

anti-lock brakes. Sixty-four percent (64%) of respondents indicated they would ask for a passenger side airbag, while 45% said they would want automatic seat belts (passive restraint system). Thirty-one percent (31%) said they would like built-in child restraints.

A majority of male and female respondents both preferred a driver side airbag as a safety feature. Anti-lock brakes were the next most popular safety feature. It is interesting to note that preference rates for all listed features were higher for women than men. Built-in child restraints were more popular among respondents with small children (42%) than those without them (25%).

TxDOT has developed a variety of public relations campaigns to increase awareness about particular roadway safety issues. The three most prominent campaigns include "Don't Wreck Your Life", "Project Spring Break", and "Project Graduation". Forty-four percent (44%) of respondents said they had heard of "Don't Wreck Your Life", a campaign focused on safe and defensive driving on Texas roadways. Thirty-one percent (31%) of respondents had heard of "Project Graduation", and 18% had heard of "Project Spring Break", both of which are targeted at the younger population (predominantly high school and college students) to emphasize alcohol-free activities and

safe roadways during those times of the year. Thirty-six percent (36%) indicated that they were unaware of any of these campaigns.

Overall knowledge of the safety campaigns was higher among female than male respondents. Moreover, the respondent age group of less than 25 were more aware of the programs than their older counterparts, with awareness consistently decreasing with age.

SUMMARY AND RECOMMENDATIONS

Some trends were illustrated from the results of the survey. For instance, gender tended to play a role in safe behavior. With the exception of safety belt usage as a rear seat passenger, more female respondents demonstrated safe behavior than male respondents. They were also more inclined to know the laws in question. Also, age influenced both driver and rear seat passenger safety belt usage. Furthermore, respondents with driver education tended to use safety belts and headlights more frequently, and were more likely to know the laws governing their use.

The question on drinking and driving hit at the heart of a safety problem. Over 50% of the respondents indicated that it would be a problem to drive after drinking varying amounts of alcohol. Thus, a substantial portion of this respondent group, and probably the general population, drives after drinking alcohol.

Awareness of the safety campaigns decreased with age. This trend is understandable since most of the campaigns are geared toward the younger population who tend to be less safe on the roadway. This response may be an indication that the campaigns are being heard and possibly heeded by the target group.

Since certain demographic groups were over- or under-represented in the survey, the reliability and accuracy of the survey results may be slightly biased. Furthermore, the nature of the questions could have encouraged respondents to select the preferred and/or safe-minded answer as opposed to indicating their true behavior. However, by giving respondents a range of answers instead of "yes" or "no" responses, the opportunity to be honest was presented in a non-intimidating manner.

It is apparent that some drivers are aware of the safety aspects of safety belts, headlights, and the laws that govern them. They are also aware of the dangers of mixing alcohol and motor vehicles. However, whether or not these drivers truly take safety precautions whenever driving is uncertain. More research may be needed to further clarify this behavior and the reasons for it. If the rate of safety measure usage (i.e., safety belt use by driver) is lower than desired, changing the attitude of the driver to one of caution and safety can increase safety behavior. Education can play an important role in changing this attitude, which translates into behavior that can decrease accidents and save lives.

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APPENDICES

Appendix A: Motorist Survey

MOTORIST SURVEY ON TRAFFIC SAFETY AND CONGESTION

INTRODUCTION

Thank you for volunteering your time to take this survey. The survey, sponsored by the Texas Department of Transportation, is being conducted by the Texas Transportation Institute to obtain your opinions, suggestions, and knowledge regarding traffic safety and congestion on Houston's roadways.

The survey is not a test, so please answer without hesitation and give us your most honest answer. Any answer is a good answer and your input will help our study of Houston roadways, traffic safety, and handling freeway congestion.

At the end of the survey, you will be asked some specific questions regarding your age, education, family background, and driving experience. The answers to these questions will remain strictly confidential. If you have any questions, please ask the interviewer. We appreciate your cooperation in these efforts.

TRAFFIC SAFETY QUESTIONS

1. When you drive, how often do you wear your safety belt?
☐ Never
☐ Seldom
☐ Almost Always
☐ Always
2. When you ride in a vehicle in the rear seat, how often do you wear your safety belt?
☐ Never
☐ Seldom
☐ Almost Always
☐ Always
3. When driving in fog, rain, or bad weather during daylight hours, how often do you use your headlights?
☐ Never
☐ Seldom
☐ Almost Always
☐ Always
4. When would you consider it a problem for you to drive a vehicle after drinking?
☐ After having 3 or more beers or mixed drinks within an hour
☐ After having 2 beers or mixed drinks within an hour
☐ After having 1 beer or mixed drink within an hour
☐ Drinking any alcohol within an hour would be a problem
5. If you feel you've had too much to drink, how likely are you to call a friend, a cab, or use a designated driver?
☐ Very Likely
☐ Likely
☐ Unlikely
☐ Very Unlikely
6. When purchasing your next vehicle, which safety features would you specifically request? (Check all that apply.)
☐ Driver Side Airbag
☐ Passenger Side Airbag
☐ Automatic Safety Belts
☐ Anti-Lock Brakes
☐ Built-in Child Restraints

TRAFFIC SAFETY QUESTIONS

7. Which, if any, of the following advertising campaigns have you heard about? (Check all that apply.)
- ☐ Don't Wreck Your Life
 - ☐ Project Spring Break
 - ☐ Project Graduation
 - ☐ Haven't Heard of Any of These Campaigns
8. Who in a vehicle MUST wear a safety belt according to Texas Law?
- ☐ The driver
 - ☐ The front seat passenger
 - ☐ All children under 4 years of age
 - ☐ All of the above
9. According to Texas Law, who MUST be secured in a car seat or wear a safety belt?
- ☐ Children under 4 years of age
 - ☐ Children riding in the front seat
 - ☐ Both of the above
10. According to Texas Law, when should a driver use vehicle headlights?
- ☐ A. Dusk to Dawn
 - ☐ B. Normal Daylight Hours
 - ☐ C. Rainy, Foggy, Snowy, or Other Bad Weather
 - ☐ D. Any Time Its Hard to See 1000 Feet Ahead of You
 - ☐ E. Answers A, C, & D
11. When is it likely to be illegal to drive after drinking?
- ☐ After 1 beer or mixed drink within an hour
 - ☐ After 2 beers or mixed drinks within an hour
 - ☐ After 3 beers or mixed drinks within an hour
 - ☐ Driving after drinking any alcohol

CONGESTION QUESTIONS

12. In your opinion, is congestion a problem on Houston's roadways?

- ☐ Yes
- ☐ No

13. If yes, do you feel that receiving current traffic condition updates (such as from radio reports or changeable message signs) would help improve congestion?

- ☐ Yes
- ☐ No

14. What is your average one-way commute time each day?

- ☐ A. Less than 10 minutes
- ☐ B. 10 - 20 minutes
- ☐ C. 20 - 30 minutes
- ☐ D. 30 - 45 minutes
- ☐ E. Over 45 minutes
- ☐ F. I don't commute to work.

15. Do you carpool to work?

- ☐ Yes
- ☐ No

16. If no, what is the least amount of time savings that it would take to convince you to carpool to work each day instead of driving alone?

- ☐ A. Save 45 Minutes
- ☐ B. Save 30 Minutes
- ☐ C. Save 20 Minutes
- ☐ D. Save 10 Minutes
- ☐ E. None. I would not carpool.

CONFIDENTIAL BACKGROUND INFORMATION

17. What is your gender?

- ☐ Male
- ☐ Female

18. What is your age?

- ☐ Less than 25
- ☐ 25-39
- ☐ 40-54
- ☐ 55+

19. What is the highest level of school you have completed?

- ☐ Less than high school
- ☐ High school graduate or equivalent
- ☐ Some college
- ☐ College degree(s)

20. What is your family background?

- ☐ White
- ☐ Black
- ☐ Hispanic
- ☐ Asian or Pacific Islander
- ☐ American Indian or Alaskan Native
- ☐ Other (specify) _____

21. Is English the primary language spoken in your home?

- ☐ Yes
- ☐ No

22. Is driving a vehicle a major part of your job (i.e., outside salesperson, taxi driver, delivery person, etc.)

- ☐ Yes
- ☐ No

23. About how many miles do you drive during an average year? (Average is approximately 12,000 miles per year.)

- ☐ Less than 10,000 miles
- ☐ 10,001 to 15,000 miles
- ☐ 15,001 to 20,000 miles
- ☐ 20,001 to 30,000 miles
- ☐ Over 30,000 miles

CONFIDENTIAL BACKGROUND INFORMATION

24. Have you ever taken a driver education course? (In high school or from a commercial school in order to get a license, not defensive driving.)

☐ Yes
☐ No

25. Where do you spend most of your driving time?

☐ Inside city limits
☐ Outside city limits
☐ About half inside and half outside city limits

26. Do you have small children in your family?

☐ Yes
☐ No

27. Do you yourself own any of the following vehicles? (Check all that apply.)

☐ Car
☐ Truck or Van
☐ Motorcycle
☐ I do not own any of the above.

28. In the vehicle you normally drive, what safety features does it have? (Check all that apply.)

☐ Driver Side Airbag
☐ Passenger Side Airbag
☐ Automatic Safety Belts
☐ Anti-Lock Brakes
☐ Built-in Child Restraints

THANK YOU FOR YOUR TIME AND COOPERATION. HAVE A GOOD DAY!

Appendix B: Survey Response Data

SAS

Q1	Frequency	Percent	Cumulative Frequency	Cumulative Percent
Never	3	0.6	3	0.6
Seldom	63	12.8	66	13.4
Almost Always	105	21.3	171	34.6
Always	323	65.4	494	100.0

Q2	Frequency	Percent	Cumulative Frequency	Cumulative Percent
Never	119	24.1	119	24.1
Seldom	132	26.8	251	50.9
Almost Always	98	19.9	349	70.8
Always	144	29.2	493	100.0

Frequency Missing = 1

Q3	Frequency	Percent	Cumulative Frequency	Cumulative Percent
Never	5	1.0	5	1.0
Seldom	27	5.5	32	6.5
Almost Always	153	31.0	185	37.4
Always	308	62.3	493	99.8
5	1	0.2	494	100.0

input
error

Q4	Frequency	Percent	Cumulative Frequency	Cumulative Percent
After having 3	92	18.6	92	18.6
After having 2	90	18.2	182	36.8
After having 1	77	15.6	259	52.4
Drinking any	224	45.3	483	97.8
Dont drink	11	2.2	494	100.0

SAS

Q5	Frequency	Percent	Cumulative Frequency	Cumulative Percent
Very likely	286	58.0	286	58.0
Likely	108	21.9	394	79.9
Unlikely	44	8.9	438	88.8
Very unlikely	42	8.5	480	97.4
5	12	2.4	492	99.8
6	1	0.2	493	100.0

Frequency Missing = 1

Q8	Frequency	Percent	Cumulative Frequency	Cumulative Percent
The driver	14	2.8	14	2.8
The front	12	2.4	26	5.3
All children	4	0.8	30	6.1
All of above	463	93.9	493	100.0

Frequency Missing = 1

Q9	Frequency	Percent	Cumulative Frequency	Cumulative Percent
Children under	43	8.7	43	8.7
Children riding	8	1.6	51	10.3
Both of above	440	89.2	491	99.6
4	1	0.2	492	99.8
5	1	0.2	493	100.0

Frequency Missing = 1

Q10	Frequency	Percent	Cumulative Frequency	Cumulative Percent
Dusk to dawn	37	7.5	37	7.5
Normal daylight	2	0.4	39	7.9
Rainy, foggy	13	2.6	52	10.6
Any time its	31	6.3	83	16.9
Answers ACD	409	83.1	492	100.0

Frequency Missing = 2

SAS

Q6	Frequency	Percent	Cumulative	Cumulative
			Frequency	Percent
Driver side	390	26.7	390	26.7
Passenger side	315	21.6	705	48.3
Automatic safety	223	15.3	928	63.5
Anti-lock	369	25.3	1297	88.8
Built-in Child	154	10.5	1451	99.3
None	10	0.7	1461	100.0

SAS

Q7	Frequency	Percent	Cumulative	Cumulative
			Frequency	Percent
Dont wreck	218	34.1	218	34.1
Project spring	87	13.6	305	47.7
Project grad	154	24.1	459	71.8
Havent heard	180	28.2	639	100.0

SAS

Q11	Frequency	Percent	Cumulative Frequency	Cumulative Percent
After 1 beer	104	21.3	104	21.3
After 2 beer	115	23.5	219	44.8
After 3 beer	59	12.1	278	56.9
Driving after	210	42.9	488	99.8
5	1	0.2	489	100.0

Frequency Missing = 5

Q12	Frequency	Percent	Cumulative Frequency	Cumulative Percent
Yes	459	93.1	459	93.1
No	34	6.9	493	100.0

Frequency Missing = 1

Q13	Frequency	Percent	Cumulative Frequency	Cumulative Percent
Yes	407	84.1	407	84.1
No	74	15.3	481	99.4
4	3	0.6	484	100.0

Frequency Missing = 10

Q14	Frequency	Percent	Cumulative Frequency	Cumulative Percent
Less than 10	62	12.6	62	12.6
10 - 20	112	22.7	174	35.3
20 - 30	103	20.9	277	56.2
30 - 45	90	18.3	367	74.4
Over 45	71	14.4	438	88.8
I dont commute	55	11.2	493	100.0

Frequency Missing = 1

SAS

Q15	Frequency	Percent	Cumulative Frequency	Cumulative Percent
Yes	50	10.2	50	10.2
No	438	89.0	488	99.2
4	1	0.2	489	99.4
5	3	0.6	492	100.0

Frequency Missing = 2

Q16	Frequency	Percent	Cumulative Frequency	Cumulative Percent
Save 45	21	4.4	21	4.4
Save 30	36	7.6	57	12.0
Save 20	72	15.2	129	27.2
Save 10	79	16.6	208	43.8
None, I would	266	56.0	474	99.8
6	1	0.2	475	100.0

Frequency Missing = 19

Q17	Frequency	Percent	Cumulative Frequency	Cumulative Percent
Male	343	69.4	343	69.4
Female	151	30.6	494	100.0

Q18	Frequency	Percent	Cumulative Frequency	Cumulative Percent
Less than 25	133	26.9	133	26.9
25-39	196	39.7	329	66.6
40-54	133	26.9	462	93.5
55+	32	6.5	494	100.0

SAS

Q19	Frequency	Percent	Cumulative Frequency	Cumulative Percent
Less than high	34	6.9	34	6.9
High school	103	20.9	137	27.8
Some college	182	36.9	319	64.7
College	174	35.3	493	100.0

Frequency Missing = 1

Q20	Frequency	Percent	Cumulative Frequency	Cumulative Percent
White	389	79.4	389	79.4
Black	28	5.7	417	85.1
Hispanic	38	7.8	455	92.9
Asian	19	3.9	474	96.7
American Ind	7	1.4	481	98.2
Other	9	1.8	490	100.0

Frequency Missing = 4

Q20OTHER	Frequency	Percent	Cumulative Frequency	Cumulative Percent
Croatian	1	14.3	1	14.3
French	2	28.6	3	42.9
Indian, Mexican,	1	14.3	4	57.1
Jewish	1	14.3	5	71.4
Mixed	1	14.3	6	85.7
Native American	1	14.3	7	100.0

Frequency Missing = 487

Q21	Frequency	Percent	Cumulative Frequency	Cumulative Percent
Yes	474	96.0	474	96.0
No	20	4.0	494	100.0

SAS

Q22	Frequency	Percent	Cumulative Frequency	Cumulative Percent
Yes	175	35.4	175	35.4
No	319	64.6	494	100.0

Q23	Frequency	Percent	Cumulative Frequency	Cumulative Percent
10,000 mi	71	14.4	71	14.4
10-15,000 mi	142	28.9	213	43.3
15-20,000 mi	125	25.4	338	68.7
20-30,000 mi	80	16.3	418	85.0
Over 30,000 mi	74	15.0	492	100.0

Frequency Missing = 2

Q24	Frequency	Percent	Cumulative Frequency	Cumulative Percent
Yes	413	83.9	413	83.9
No	79	16.1	492	100.0

Frequency Missing = 2

Q25	Frequency	Percent	Cumulative Frequency	Cumulative Percent
Inside city	219	44.6	219	44.6
Outside city	100	20.4	319	65.0
Half and half	172	35.0	491	100.0

Frequency Missing = 3

Q26	Frequency	Percent	Cumulative Frequency	Cumulative Percent
Yes	178	36.3	178	36.3
No	313	63.7	491	100.0

Frequency Missing = 3

SAS

Q27	Frequency	Percent	Cumulative	Cumulative
			Frequency	Percent
Car	395	56.9	395	56.9
Truck or van	229	33.0	624	89.9
Motorcycle	44	6.3	668	96.3
I do not own	26	3.7	694	100.0

SAS

Q28	Frequency	Percent	Cumulative	Cumulative
			Frequency	Percent
Driver side	76	11.8	76	11.8
Passenger side	17	2.6	93	14.4
Automatic	143	22.2	236	36.6
Anti-lock	204	31.6	440	68.2
Built-in child	29	4.5	469	72.7
None of above	176	27.3	645	100.0

Appendix C: Demographic Responses

QUESTION 1

When you drive, how often do you wear your safety belt?

Demographic Category		Never	Seldom	Almost Always	Always
<i>Gender</i>	Male	1%	13%	22%	64%
	Female	0%	11%	21%	68%
<i>Age</i>	Less than 25	2%	14%	23%	61%
	25 - 39	0%	16%	18%	66%
	40 - 54	0%	9%	23%	68%
	55 +	0%	3%	28%	69%
<i>Education</i>	Less than High School	0%	6%	29%	65%
	High School	2%	20%	22%	56%
	Some College	0%	15%	21%	64%
	College Degree(s)	1%	7%	19%	73%
<i>Driver Education</i>	Yes	1%	14%	19%	66%
	No	0%	8%	31%	61%
<i>Drivers with Small Children</i>	Yes	0%	15%	19%	66%
	No	1%	12%	23%	64%

QUESTION 2

When you ride in a vehicle in the rear seat, how often do you wear your safety belt?

Demographic Category		Never	Seldom	Almost Always	Always
<i>Gender</i>	Male	25%	26%	19%	30%
	Female	22%	28%	23%	27%
<i>Age</i>	Less than 25	38%	28%	14%	20%
	25 - 39	23%	31%	21%	25%
	40 - 54	16%	20%	23%	41%
	55 +	9%	22%	25%	44%
<i>Education</i>	Less than High School	29%	21%	21%	29%
	High School	38%	24%	18%	20%
	Some College	24%	32%	16%	28%
	College Degree(s)	15%	24%	24%	37%
<i>Driver Education</i>	Yes	24%	26%	21%	29%
	No	26%	32%	14%	28%
<i>Drivers with Small Children</i>	Yes	24%	24%	20%	32%
	No	25%	28%	19%	28%

QUESTION 3

When driving in fog, rain, or bad weather during daylight hours, how often do you use your headlights?

Demographic Category		Never	Seldom	Almost Always	Always
<i>Gender</i>	Male	1%	6%	32%	61%
	Female	1%	4%	28%	67%
<i>Age</i>	Less than 25	2%	10%	27%	61%
	25 - 39	0%	3%	34%	63%
	40 - 54	2%	4%	31%	63%
	55 +	0%	6%	31%	63%
<i>Education</i>	Less than High School	0%	9%	32%	59%
	High School	2%	10%	24%	64%
	Some College	1%	3%	28%	68%
	College Degree(s)	1%	5%	37%	57%
<i>Driver Education</i>	Yes	1%	5%	31%	63%
	No	1%	6%	33%	60%
<i>Drivers with Small Children</i>	Yes	1%	4%	28%	67%
	No	1%	6%	33%	60%

QUESTION 4

When would you consider it a problem for you to drive a vehicle after drinking?

Demographic Category		After 3 or More Drinks In an Hour	After 2 Drinks In an Hour	After 1 Drink In an Hour	After Any Alcohol In an Hour	Don't Drink
<i>Gender</i>	Male	22%	17%	16%	43%	2%
	Female	11%	21%	15%	51%	2%
<i>Age</i>	Less than 25	19%	11%	18%	50%	2%
	25 - 39	20%	22%	14%	42%	2%
	40 - 54	20%	19%	16%	41%	4%
	55 +	0%	19%	12%	66%	3%
<i>Education</i>	Less than High School	17%	15%	15%	50%	3%
	High School	22%	11%	11%	53%	3%
	Some College	19%	18%	17%	44%	2%
	College Degree(s)	17%	24%	17%	40%	2%
<i>Driver Education</i>	Yes	19%	19%	16%	44%	2%
	No	15%	14%	17%	53%	1%
<i>Drivers with nall Children</i>	Yes	17%	18%	16%	46%	3%
	No	19%	19%	15%	45%	2%

QUESTION 5

**If you feel you've had too much to drink, how likely are you to call a friend, a cab,
or use a designated driver?**

Demographic Category		Very Likely	Likely	Unlikely	Very Unlikely	Don't Drink
<i>Gender</i>	Male	53%	24%	11%	9%	3%
	Female	69%	17%	5%	8%	1%
<i>Age</i>	Less than 25	60%	19%	9%	10%	2%
	25 - 39	55%	27%	10%	7%	1%
	40 - 54	55%	21%	10%	8%	6%
	55 +	78%	10%	0%	9%	3%
<i>Education</i>	Less than High School	73%	6%	12%	9%	0%
	High School	49%	24%	14%	10%	3%
	Some College	59%	21%	8%	9%	3%
	College Degree(s)	59%	24%	7%	8%	2%
<i>Driver Education</i>	Yes	58%	21%	9%	9%	3%
	No	58%	26%	10%	6%	0%
<i>Drivers with Small Children</i>	Yes	55%	22%	8%	11%	4%
	No	60%	22%	9%	7%	2%

QUESTION 6

When purchasing your next vehicle, which safety features would you specifically request?

(Check all that apply.)

Demographic Category		Driver Side Airbag	Passenger Side Airbag	Automatic Safety Belts	Anti-Lock Brakes	Built-In Child Restraints	None
<i>Gender</i>	Male	77%	60%	39%	73%	27%	3%
	Female	84%	72%	58%	79%	41%	1%
<i>Age</i>	Less than 25	80%	61%	47%	70%	35%	2%
	25 - 39	80%	63%	48%	78%	35%	4%
	40 - 54	74%	65%	37%	75%	23%	1%
	55 +	88%	78%	56%	72%	28%	0%
<i>Education</i>	Less than High School	79%	53%	32%	71%	41%	0%
	High School	75%	66%	46%	64%	38%	4%
	Some College	79%	68%	52%	80%	36%	1%
	College Degree(s)	82%	60%	41%	76%	20%	2%
<i>Driver Education</i>	Yes	78%	63%	46%	75%	31%	2%
	No	82%	66%	42%	73%	32%	1%
<i>Drivers with small Children</i>	Yes	78%	68%	49%	73%	42%	3%
	No	80%	61%	42%	75%	25%	2%

QUESTION 7

Which, if any, of the following advertising campaigns have you heard about?

(Check all that apply.)

Demographic Category		Don't Wreck Your Life	Project Spring Break	Project Graduation	None
<i>Gender</i>	Male	43%	15%	27%	39%
	Female	48%	23%	41%	31%
<i>Age</i>	Less than 25	56%	21%	50%	19%
	25 - 39	46%	18%	27%	37%
	40 - 54	32%	17%	18%	32%
	55 +	28%	3%	3%	66%
<i>Education</i>	Less than High School	59%	18%	44%	21%
	High School	52%	13%	26%	32%
	Some College	43%	15%	34%	40%
	College Degree(s)	37%	24%	29%	39%
<i>Driver Education</i>	Yes	44%	18%	33%	35%
	No	47%	14%	19%	47%
<i>Drivers with Small Children</i>	Yes	46%	13%	28%	39%
	No	43%	20%	33%	35%

QUESTION 8

Who in a vehicle MUST wear a safety belt according to Texas Law?

Demographic Category		Driver	Front Seat Passenger	All Children Under 4	All of the Above
<i>Gender</i>	Male	3%	3%	1%	93%
	Female	3%	1%	1%	95%
<i>Age</i>	Less than 25	2%	5%	2%	91%
	25 - 39	1%	1%	1%	97%
	40 - 54	7%	2%	0%	91%
	55 +	3%	0%	0%	97%
<i>Education</i>	Less than High School	0%	3%	0%	97%
	High School	4%	3%	2%	91%
	Some College	3%	2%	1%	94%
	College Degree(s)	3%	3%	0%	94%
<i>Driver Education</i>	Yes	3%	3%	1%	93%
	No	0%	1%	0%	99%
<i>Drivers with Small Children</i>	Yes	2%	2%	1%	95%
	No	3%	3%	1%	93%

QUESTION 9

According to Texas Law, who MUST be secured in a car seat or wear a safety belt?

Demographic Category		All Children Under 4	Children in Front Seat	Both of the Above
<i>Gender</i>	Male	11%	2%	87%
	Female	4%	0%	96%
<i>Age</i>	Less than 25	9%	2%	89%
	25 - 39	8%	1%	91%
	40 - 54	10%	2%	88%
	55 +	9%	0%	91%
<i>Education</i>	Less than High School	12%	0%	88%
	High School	11%	1%	88%
	Some College	10%	3%	87%
	College Degree(s)	6%	1%	93%
<i>Driver Education</i>	Yes	8%	2%	90%
	No	14%	2%	84%
<i>Drivers with Small Children</i>	Yes	12%	4%	84%
	No	7%	1%	92%

QUESTION 10

According to Texas Law, when should a driver use vehicle headlights?

Demographic Category		A Dusk to Dawn	B Normal Daylight Hours	C Inclement Weather	D Hard to See 1000 Feet Ahead	A, C, & D
<i>Gender</i>	Male	9%	0%	2%	7%	82%
	Female	4%	0%	4%	5%	87%
<i>Age</i>	Less than 25	5%	1%	2%	3%	89%
	25 - 39	6%	0%	3%	7%	84%
	40 - 54	10%	0%	2%	8%	80%
	55 +	19%	3%	3%	6%	69%
<i>Education</i>	Less than High School	3%	0%	3%	3%	91%
	High School	5%	0%	5%	10%	80%
	Some College	11%	1%	1%	6%	81%
	College Degree(s)	6%	1%	3%	5%	85%
<i>Driver Education</i>	Yes	8%	0%	2%	6%	84%
	No	5%	3%	6%	9%	77%
<i>Drivers with nall Children</i>	Yes	5%	0%	3%	8%	84%
	No	9%	1%	2%	5%	83%

QUESTION 11

When is it likely to be illegal to drive after drinking?

Demographic Category		After 1 Drink In an Hour	After 2 Drinks In an Hour	After 3 Drinks In an Hour	Driving After Drinking Any Alcohol
<i>Gender</i>	Male	21%	25%	13%	41%
	Female	23%	20%	9%	49%
<i>Age</i>	Less than 25	24%	14%	13%	48%
	25 - 39	18%	27%	12%	43%
	40 - 54	22%	27%	12%	39%
	55 +	28%	25%	9%	38%
<i>Education</i>	Less than High School	21%	6%	17%	56%
	High School	18%	16%	13%	53%
	Some College	23%	25%	10%	42%
	College Degree(s)	21%	31%	13%	35%
<i>Driver Education</i>	Yes	20%	25%	12%	43%
	No	27%	15%	12%	46%
<i>Drivers with Small Children</i>	Yes	18%	28%	10%	44%
	No	23%	21%	14%	42%

Appendix D: Survey Response Data Graphics

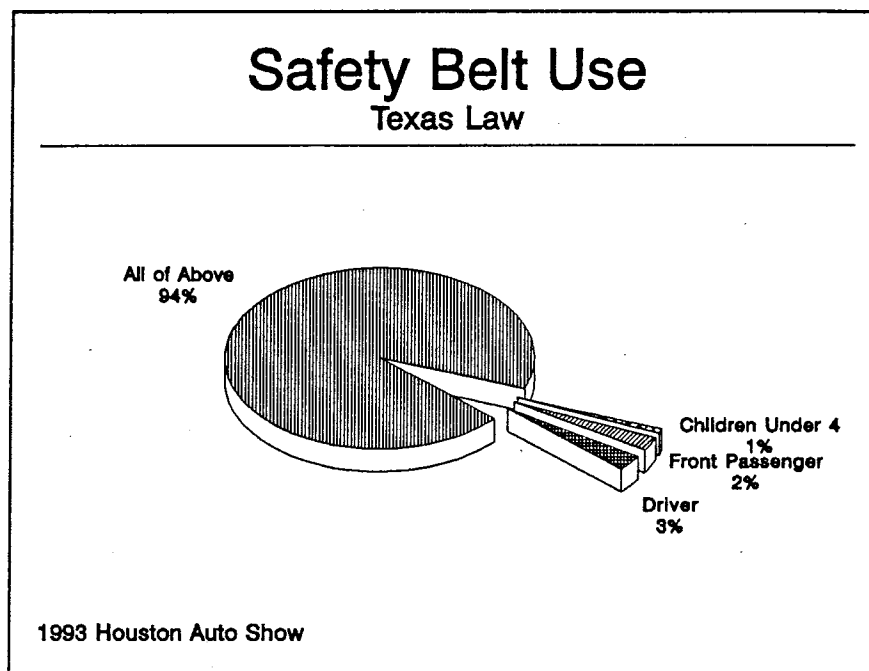


Figure D - 1. Safety Belt Usage - Texas Law

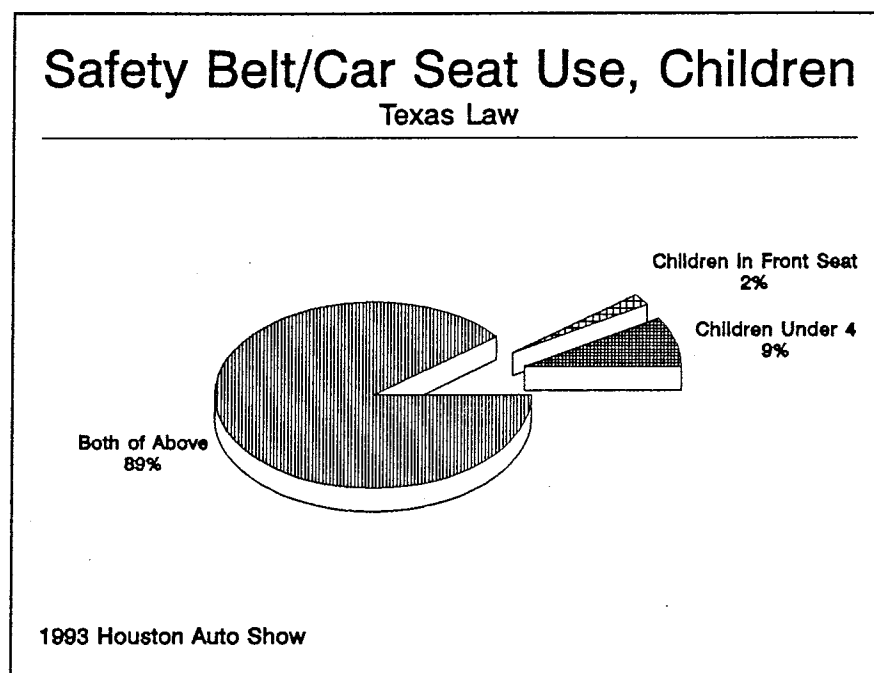


Figure D - 2. Safety Belt/Car Seat Usage, Children - Texas Law

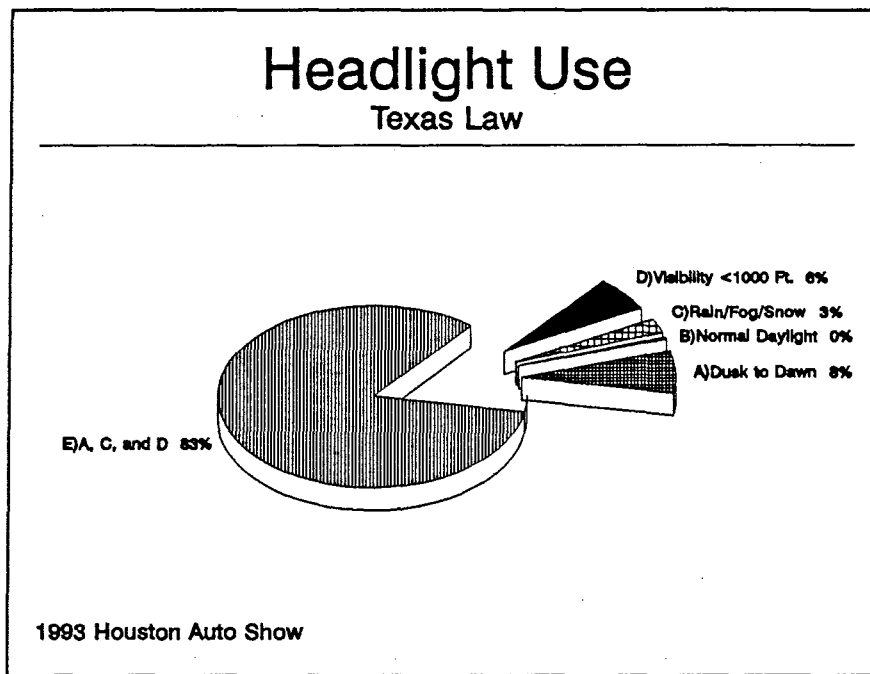


Figure D - 3. Headlight Usage - Texas Law

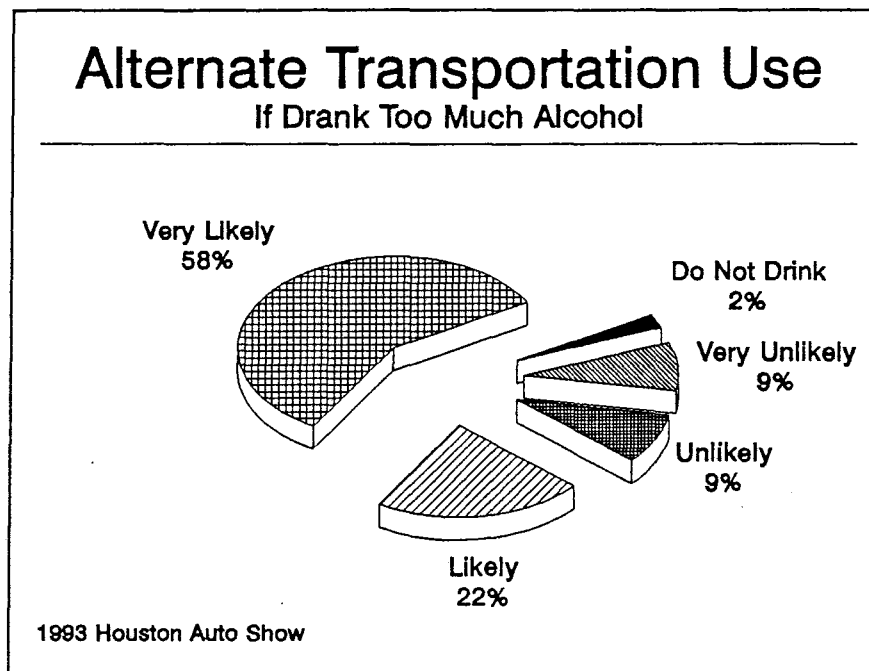


Figure D - 4. Alternate Transportation Use