

**MICHIGAN OMNIBUS STATE TRAFFIC SAFETY
SURVEY: SUMMER 1995**

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| 16. Abstract <p>The 1995 Omnibus State Traffic Safety Survey is part of a multiyear study providing periodic information on traffic safety attitudes, perceptions, and reported behaviors of adult residents throughout the state of Michigan. The latest survey wave was conducted in June 1995 (N=810). The telephone survey instrument contained 58 questions on six broad traffic safety topics including travel speeds and roads, police patrols, driver licensing, alcohol consumption and impaired driving, designated drivers and other alternatives for impaired drivers, and driving with suspended licenses. Majority support was found for policies restricting driving privileges of drivers under age 18, policies concerned with the licensing of older drivers, and policies aimed at keeping persons with suspended driver's licenses off the road. Stratification by gender, age, survey year, and other selected variables revealed significant differences. Results are of interest to those considering alternative policies to reduce injuries, and to those monitoring injury-relevant behavior such as alcohol consumption, safety belt use, and speeding.</p> | | | | | |
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Executive Summary

The 1995 Omnibus State Traffic Safety Survey is part of a multiyear study providing periodic information on traffic safety attitudes, perceptions, and reported behaviors of adult residents throughout the state of Michigan. The latest survey was conducted in the summer of 1995 (N=810). The telephone instrument contained 58 questions on a variety of traffic safety topics.

Majority support was found for the following traffic safety policies:

- Graduated driver licensing for teenage drivers
- Curfew from 11:00 p.m. to 5:00 a.m. for drivers under age 18
- Road test for new drivers
- Graduated driver licensing for older drivers
- Road test for older drivers
- Impounding vehicle owned by person with suspended driver license
- Confiscating license plate of vehicle owned by person with suspended driver license
- Locking vehicle owned by person with suspended driver license with tire boot or steering wheel lock

Majority support was not found for the following traffic safety policy:

- Passenger limit for drivers under age 18.

Findings concerning perceptions about traffic safety included the following:

- A third responded that Michigan's freeways are in poor condition.
- Over a third responded that the major roads are in poor condition.
- Over 90 percent considered traffic safety to be highly important.
- Nearly two-thirds perceived crime as more important than traffic safety in their every day lives.
- Over three-quarters perceived traffic safety as more important than "a person's ability to travel."

- Two-thirds reported that speeding is the traffic law violated most often.
- Over two-fifths indicated that impaired driving is the most serious traffic law violation.
- Almost three-quarters thought that Emergency Medical Services or ambulance will respond to a traffic crash in 15 minutes or less.

Findings concerning attitudes and behaviors included the following:

- Two-thirds reported driving at least 60 mph on urban freeways and highways, nearly half reported driving at speeds over 65 mph.
- Over half reported driving at speeds less than 65 mph on Michigan's rural freeways, however, over 20 percent reported driving at least 70 mph.
- Almost half reported that drivers will not be ticketed on Michigan's urban freeways and highways unless they are driving at least 65 mph (i.e., unless drivers exceed the speed limit by at least 10 mph).
- Most reported that drivers will not be ticketed on Michigan's rural freeways and highways unless they are driving at least 70 mph (i.e., exceed the speed limit by at least 5 mph). Over a third indicated that they must drive at least 75 mph (i.e., exceed the speed limit by 10 mph) before they will be ticketed.
- Respondents were about evenly split in reporting that there are "enough" and that there "should be more" police road patrols.
- About half responded that they have found themselves too tired to drive on some occasion. Of these, about half reported pulling off the road.
- Over two-thirds reported they always use a safety belt and nearly a fifth reported that they use safety belts most of the time.
- Most reported that the problem of alcohol-impaired driving in their community is somewhat or very serious.
- Over half reported that it is unlikely an adult driver will be pulled over by police for driving while impaired; however, over a third reported that there is a good chance.
- Nearly half reported that there is a good chance that a driver under age 21 will be pulled over by police for driving while impaired; however, over a third reported that it is unlikely.
- Most reported little or no drinking of alcoholic beverages.
- Most reported no occasions of drinking to intoxication in the past two weeks; however, about a fifth reported drinking to intoxication on at least one occasion. Of these, over a third reported drinking to intoxication at home; a fifth reported drinking to intoxication in another's home, and another fifth reported drinking to intoxication in a tavern/bar. Almost a fifth drove after drinking to intoxication. Half of those who did not drive after drinking to intoxication used a designated driver.
- Most indicated a willingness to use a "Safe Ride" service if it was free or offered at a reasonable cost.

- Two-thirds reported having stopped an intoxicated person from driving. Half of these took the intoxicated person's car keys.
- Over three-quarters reported that there is at least a good chance of getting a ticket for not using a safety belt if pulled over for speeding.
- Two-thirds reported that police patrols are more effective than stricter laws in influencing driving behavior.
- About two-thirds indicated that there has been no increase in police road patrols in the last year.
- Most reported that the problem of people driving with suspended driver licenses is somewhat or very serious in Michigan.
- Most reported no special safety programs under way in their area.
- A quarter reported buying a new car in the last year. Of these, one in six indicated that safety was either the most or second most important factor in the new car purchase.

The following changes were found between survey years:

- Reported driving speeds on Michigan's urban freeways and highways have increased since 1988.
- The proportion reporting they always use safety belts has increased since 1988.
- The proportion reporting that freeways are in poor condition has increased from 1992.
- The proportion reporting that major roads are in poor condition has increased since 1992.
- The proportion favoring graduated driver licensing for teenage drivers has increased since 1992.
- The proportion favoring an 11:00 p.m. to 5:00 a.m. curfew for drivers under age 18 has increased since 1992 after a consistent decrease between 1987 and 1992.

Introduction

Monitoring public opinions and behavior is an important part of policy planning and evaluation. Public opinion and behavior guide such planning by providing information about opportunities and needs for change; opinions and behavior are also shaped by policies and programs. Thus, opinion and behavior data can inform decision makers about new or revised policies and programs, and provide information to assist evaluation of existing policies and programs. The Omnibus State Traffic Safety Survey provides such data.

The Omnibus State Traffic Safety Survey is a multiyear study intended to provide periodic information on traffic safety attitudes, perceptions, and reported behaviors of adult residents of the state of Michigan to facilitate policy planning and evaluation related to traffic safety. The first phase of the survey was conducted in the summer of 1987 to design, pretest, and implement a telephone survey on traffic safety issues using a small statewide probability sample (N=200). The second phase involved full implementation of the survey in the fall of 1987 with a representative sample of 760 of the state's residents over age 18. Subsequent phases were conducted in the fall of 1988, fall of 1990, and fall of 1992 (with statewide probability samples of 760, 753, and 753 adult Michigan residents, respectively).

The current phase reported here was conducted in the summer of 1995, using a statewide probability sample of 810 Michigan residents over the age of 18. As in the past, this phase involved some revision of the survey instrument from the previous phase to reflect new laws or changes in existing laws and to address emerging traffic safety issues. Some of the items remain identical to those in previous phases, enabling comparison of results across surveys.

Methods

Survey Instrument Development

The telephone survey instrument used in the summer 1995 survey, reported here, was quite similar to the instrument used in 1992. Some items used in the 1992 survey were deleted because recent or impending changes in laws diminished the usefulness of the items. Other items were dropped because it was felt they had yielded sufficient information for planning purposes and their continued inclusion in the survey would bring few additional benefits. Some of these items may be introduced to the survey in a later phase. Some new items were added to address emerging traffic safety issues (e.g., the driving while under suspension problem, designated driver and "Safe Ride" systems, specifics of teen-age driving curfews and restrictions.)

Development and testing of the original survey instrument is described in detail elsewhere (Wagenaar, Streff, and Maybee, 1987). A brief summary is provided here. An extensive process was used to thoroughly review published and fugitive transportation safety literature to identify potential survey items. The items identified in that review were categorized by subject and reviewed with respect to item content, wording, and appropriateness of response categories. From the total pool, all items that were possible candidates for inclusion in the survey instrument were extracted. A number of additional items were developed to address issues raised by officials in key informant interviews.

The new items in the current survey instrument and items changed from previous surveys were tested and revised for clarity, wording, and response categories. The entire survey instrument was then programmed into the Computer Assisted Telephone Interview (CATI) system by Information Transfer Systems, Inc., a private marketing research firm that conducted the telephone interviews. The complete survey instrument used in the 1995 survey is contained in Appendix A.

Sample Design

Sample design for the survey is discussed in a technical report prepared by Information Transfer Systems, Inc. The report is contained in Appendix B.

Results

The 1995 survey contained 58 items on a variety of traffic safety topics. Pie charts showing response distributions for the total sample are provided for every item in the survey. Confidence interval bands for the univariate distributions are contained in Appendix C. These bands should not be used to assess differences between response categories or to assess distributions other than univariate distributions (i.e., bivariate distributions).

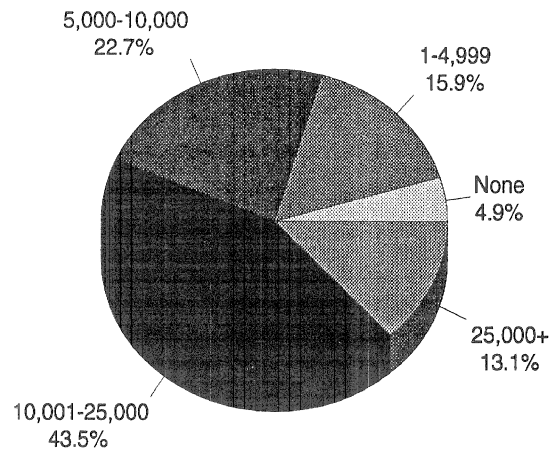
In addition to assessing univariate relationships, we examined each item in the survey by respondent gender and age. Items that appeared in previous surveys were also examined by survey year. In addition, a number of other bivariate relationships of interest were examined. Charts of notable bivariate relationships are included in the results section. All percentages in the figures are weighted to reflect the sample design, while Ns reflect the actual number of respondents for each question. All relationships reported in this report are statistically significant at $p < .05$. Table 1 shows the demographic characteristics of the sample.

| Table 1. Demographic Characteristics of Sample | | |
|--|--------------|------------------|
| | Unweighted N | Weighted Percent |
| <u>Age</u> | | |
| 18-20 | 49 | 7.1 |
| 21-30 | 148 | 20.7 |
| 31-40 | 176 | 22.9 |
| 41-50 | 156 | 16.2 |
| 51-60 | 100 | 11.7 |
| 61-70 | 84 | 12.0 |
| 70+ | 84 | 9.3 |
| <u>Gender</u> | | |
| Male | 337 | 47.0 |
| Female | 473 | 53.0 |
| <u>Income</u> | | |
| Less than \$5,000 | 36 | 4.2 |
| \$5,000-14,999 | 85 | 9.3 |
| \$15,000-24,999 | 95 | 13.5 |
| \$25,000-34,999 | 140 | 19.2 |
| \$35,000-49,999 | 136 | 18.7 |
| More than \$50,000 | 240 | 35.0 |
| <u>Education</u> | | |
| Less than 13 years | 350 | 43.1 |
| 13-16 years | 364 | 45.4 |
| More than 16 years | 93 | 11.5 |
| <u>Miles driven per year</u> | | |
| None | 49 | 4.9 |
| Less than 5,000 | 161 | 15.9 |
| 5,000-10,000 | 60 | 22.7 |
| 10,000-25,000 | 383 | 43.5 |
| More than 25,000 | 133 | 13.0 |

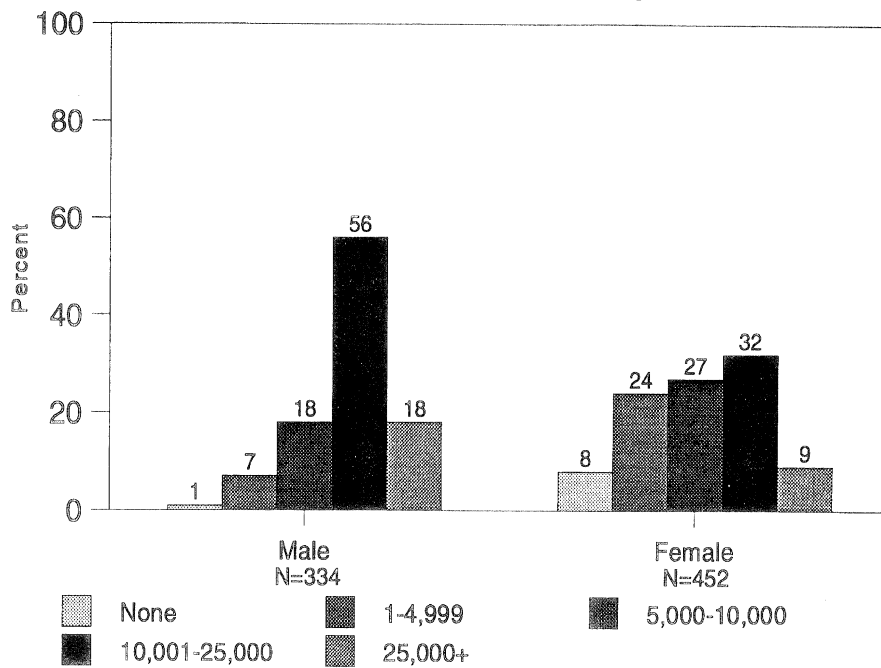
Miles Driven in Last Year

Respondents were asked: **About how many miles did you drive a motor vehicle in the last year?** A total of 786 respondents gave valid responses to this question. The remaining respondents did not respond or did not know. Close to half of respondents drove between 10,000 to 25,000 miles last year. Men were more likely than women to report higher annual mileage. Respondents age 18-20 and those over age 60 reported driving fewer miles per year than middle-aged respondents.

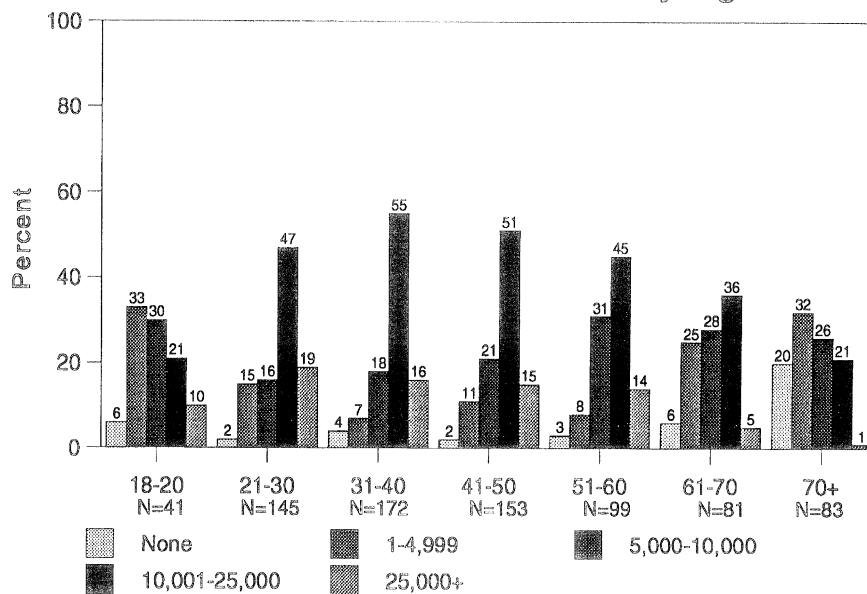
Miles Driven in the Last Year



Miles Driven in the Last Year, by Gender



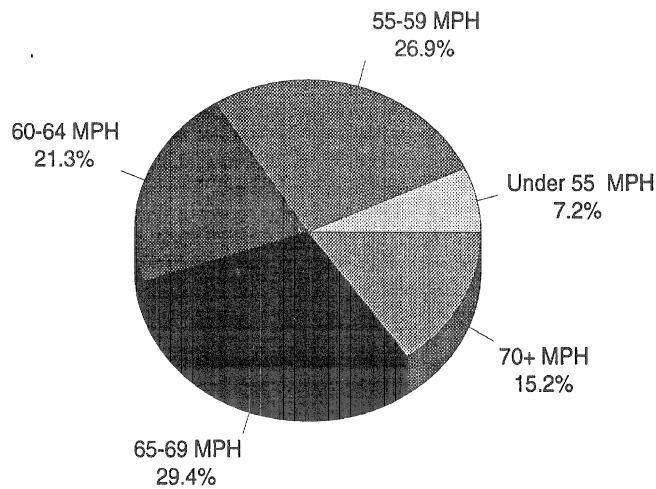
Miles Driven in the Last Year, by Age



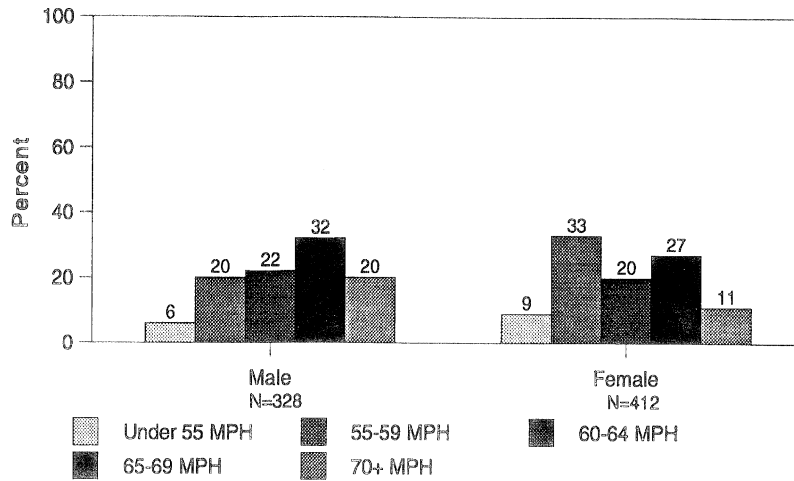
Urban Freeway Driving Speeds

Respondents were asked: **How fast do you generally drive on Michigan's urban freeways?** A total of 740 respondents gave a valid response to this item. Two-thirds of the respondents reported driving at least 60 mph on Michigan's urban freeways; nearly half reported driving at least 65 mph. Men reported driving at higher speeds than women. Reported speeds generally decreased with age and increased with reported annual miles driven. Reported driving speeds on Michigan's urban freeways have increased since 1988.

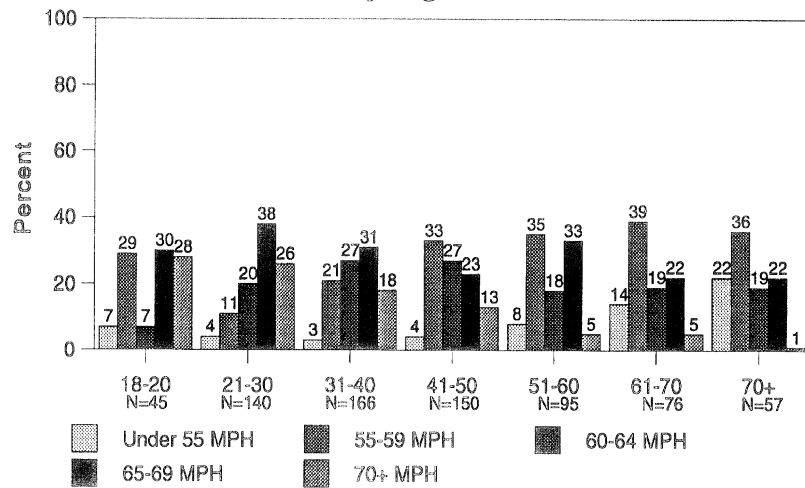
Urban Freeway Driving Speeds



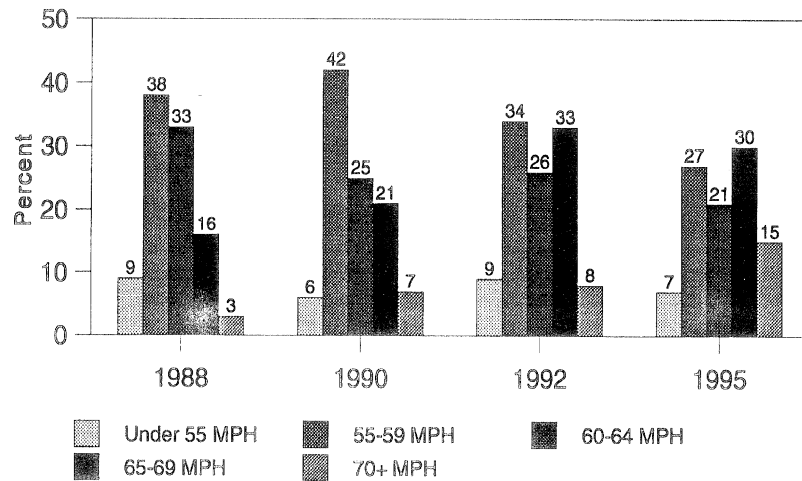
Urban Freeway Driving Speeds, by Gender



Urban Freeway Driving Speeds, by Age



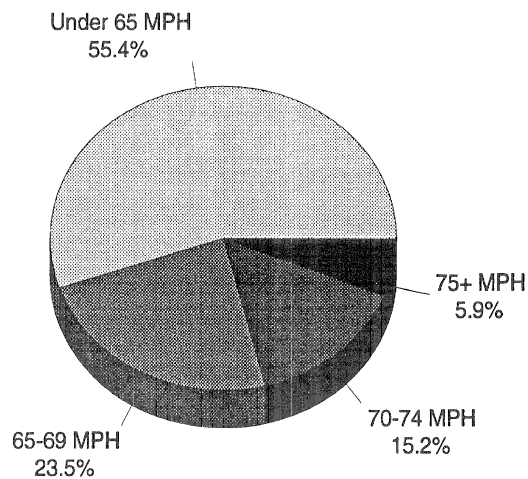
Urban Freeway Driving Speeds, by Survey Year



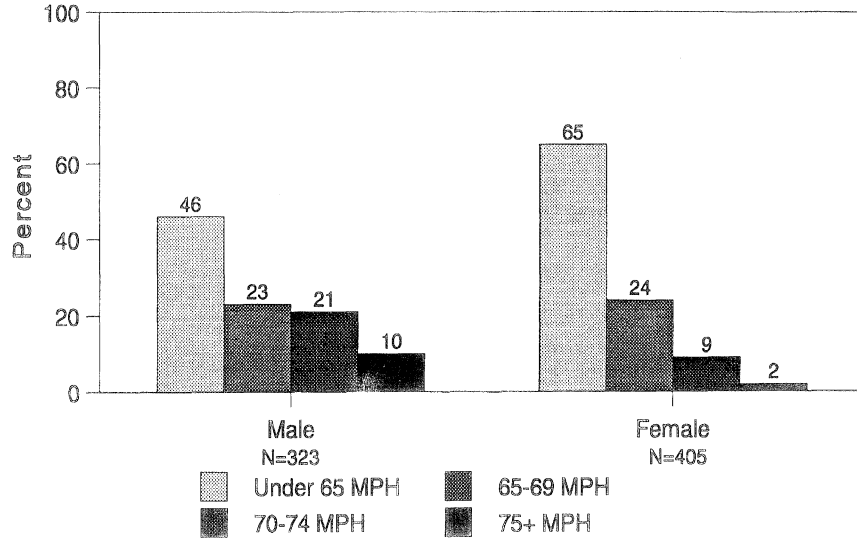
Rural Freeway Driving Speeds

Respondents were asked: **How fast do you generally drive on Michigan's rural freeways?** A total of 728 respondents gave a valid response to this item. Over half of respondents reported driving less than 65 mph on Michigan's rural freeways; however, over 20 percent reported driving speeds of 70 mph or more. Men were nearly three times as likely as women to report driving speeds of 70 mph or more. Respondents age 21-30 were more likely than either younger or older respondents to report driving speeds of 70 mph or more. In general, respondents who drove no faster than 5 mph over the speed limit on urban freeways were more likely to drive no faster than 5 mph over the speed limit on rural freeways as well. There was no discernible pattern to the data across the survey years.

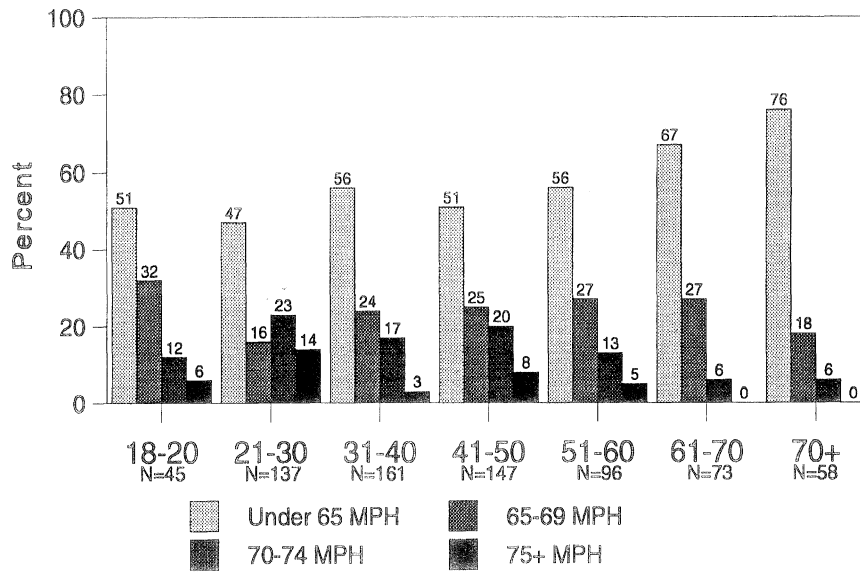
Rural Freeway Driving Speeds



Rural Freeway Driving Speeds, by Gender



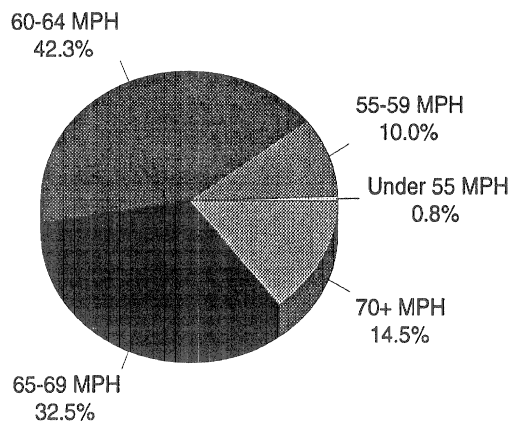
Rural Freeway Driving Speeds, by Age



Speed at Which Drivers Will Be Ticketed on Urban Freeways

Respondents were asked: **Currently the speed limit on Michigan's urban freeways is 55 miles per hour. Where the limit is 55, how fast do you think you have to be driving before police using radar at the roadside will stop you and give you a ticket?** A total of 778 respondents gave a valid response to this item. Almost half of respondents reported that drivers will not be ticketed unless they exceed the speed limit by at least 10 mph. There was no change from 1992 in respondents' perceptions of the speeds drivers must exceed on urban freeways before being ticketed.

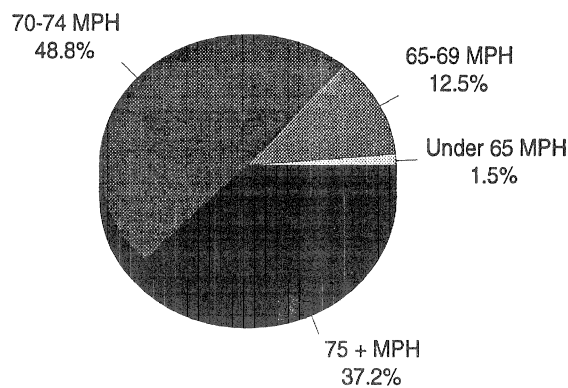
Speed at Which Drivers Will Be Ticketed on Urban Freeways



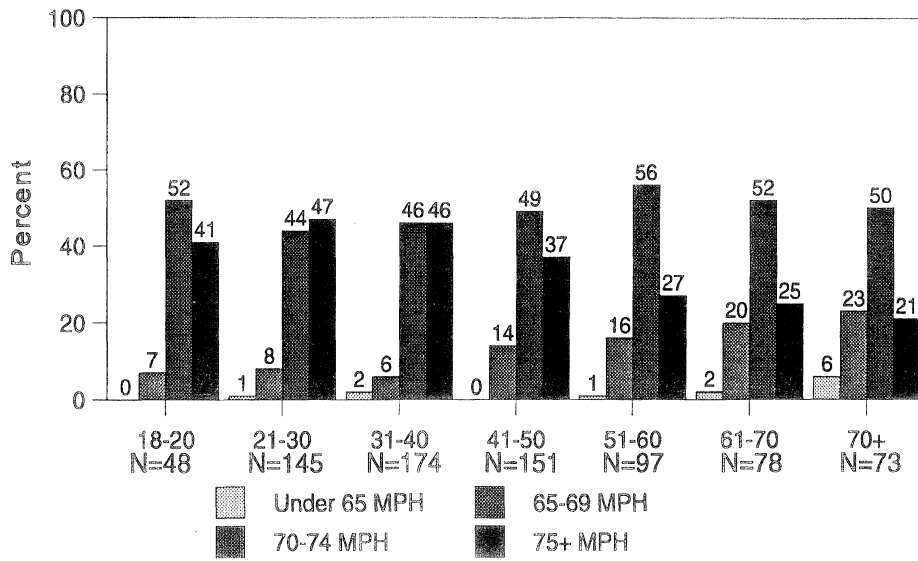
Speed at Which Drivers Will Be Ticketed on Rural Freeways

Respondents were asked: **Currently the speed limit on Michigan's rural freeways is 65 miles per hour. Where the limit is 65, how fast do you think you have to be driving before police using radar at the roadside will stop you and give you a ticket?** A total of 776 respondents gave a valid response to this item. Over three-quarters of respondents reported that drivers must exceed the speed limit by at least 5 mph before they will be ticketed. Over one-third of respondents indicated that they must drive at least 75 mph (i.e., exceed the speed limit by 10 mph) before they will be ticketed. Perceived speeds at which drivers will be ticketed increased as reported driving speeds on Michigan's rural freeways increased. Respondents under age 50 were more likely than older respondents to indicate that drivers will not be ticketed unless they exceed the speed limit by at least 10 mph. There was no change from 1992 in respondents' perceptions of the speeds drivers must exceed on rural freeways before being ticketed.

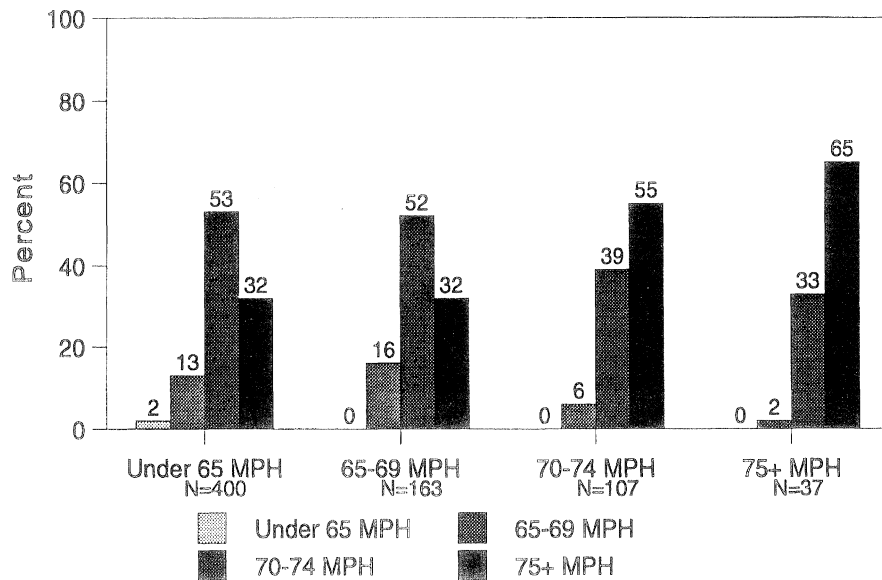
Speed at Which Drivers Will Be Ticketed on Rural Freeways



Speed at Which Drivers Will Be Ticketed on Rural Freeways, by Age



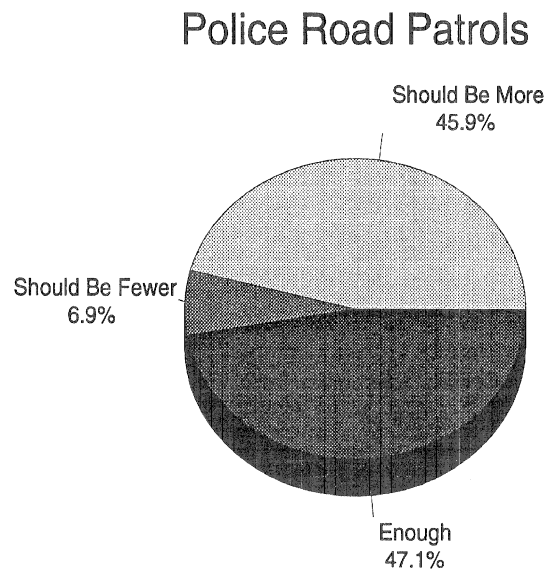
Speed at Which Drivers Will Be Ticketed on Rural Freeways, by Rural Driving Speeds



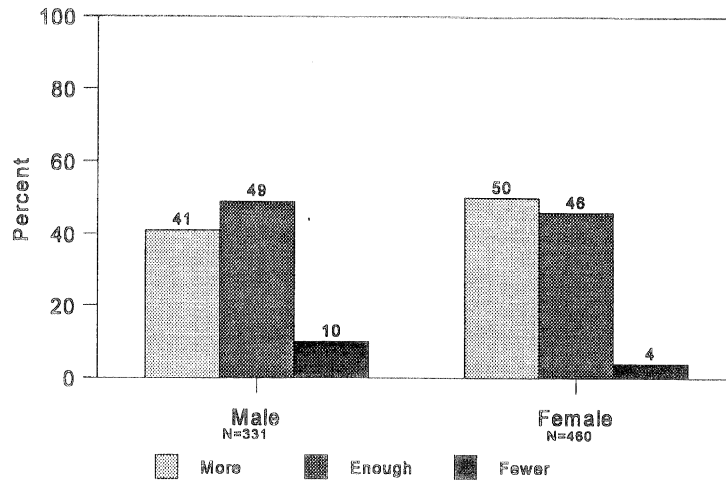
Police Road Patrols

Respondents were asked: **Do you think there are enough police patrolling the roads in Michigan looking for traffic violations, or should there be more police or fewer police patrolling the roads?** A total of 791 respondents gave a valid response to this item.

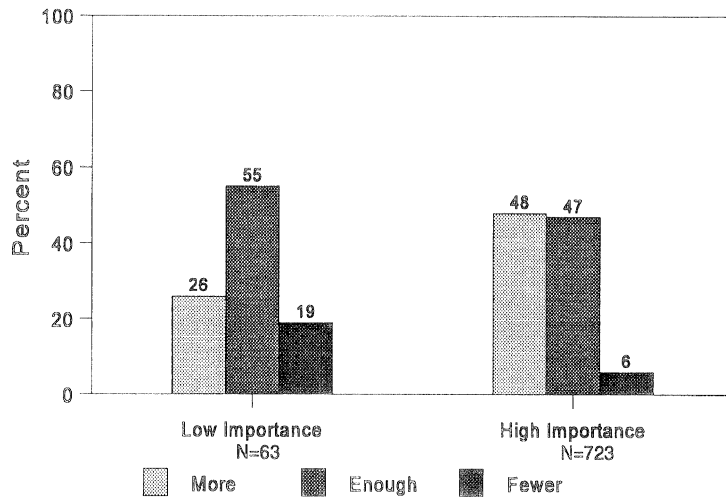
Respondents were about evenly split between reporting that there were "enough" police and that there "should be more" police patrolling the roads. Relatively few respondents indicated there should be "fewer" police patrolling the roads. Women were more likely than men to report a desire for more police patrols. Respondents' desire for more police patrols generally decreased with increasing urban freeway driving speeds. Respondents who assigned high importance to traffic safety were more likely than others to indicate that there should be more police patrols. There was no discernible pattern to the data across survey years.



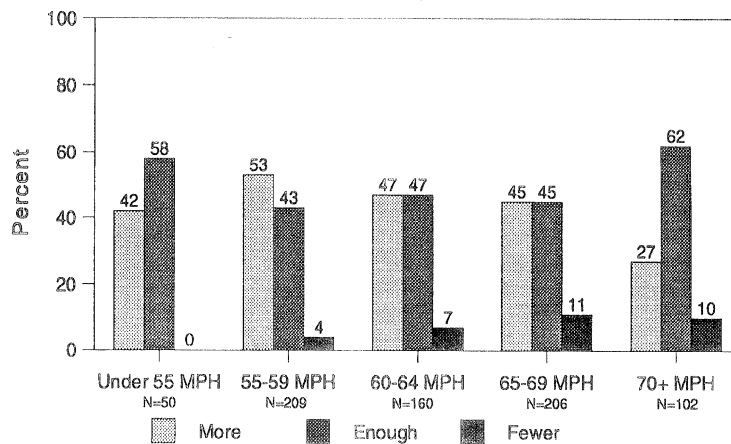
Police Road Patrols, by Gender



Police Road Patrols, by Importance of Traffic Safety



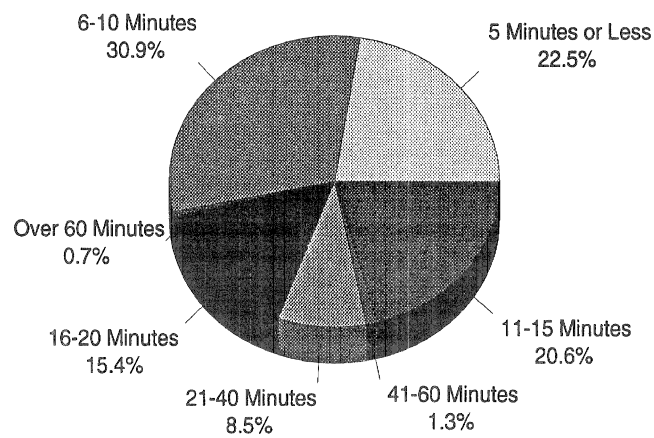
Police Road Patrols, by Urban Freeway Driving Speeds



EMS Response Time

Respondents were asked: **How long do you think it takes EMS (Emergency Medical Services or an ambulance) to respond to a traffic crash site after being called by 911?** A total of 717 respondents gave a valid response to this item. About a third of respondents indicated the EMS response time is 6 to 10 minutes; one-fifth perceived it to be 5 minutes or less, and one-fifth perceived it to be 11 to 15 minutes. Overall, almost three-quarters of respondents indicated that EMS will respond to a traffic crash site in 15 minutes or less.

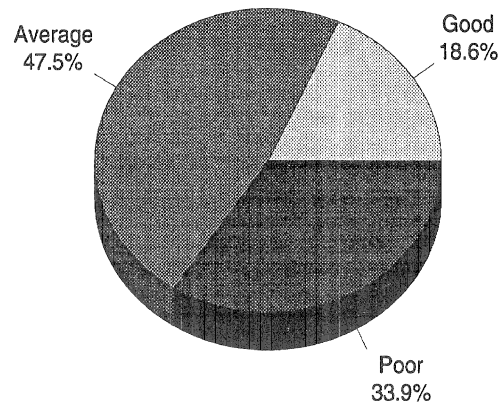
EMS Response Time



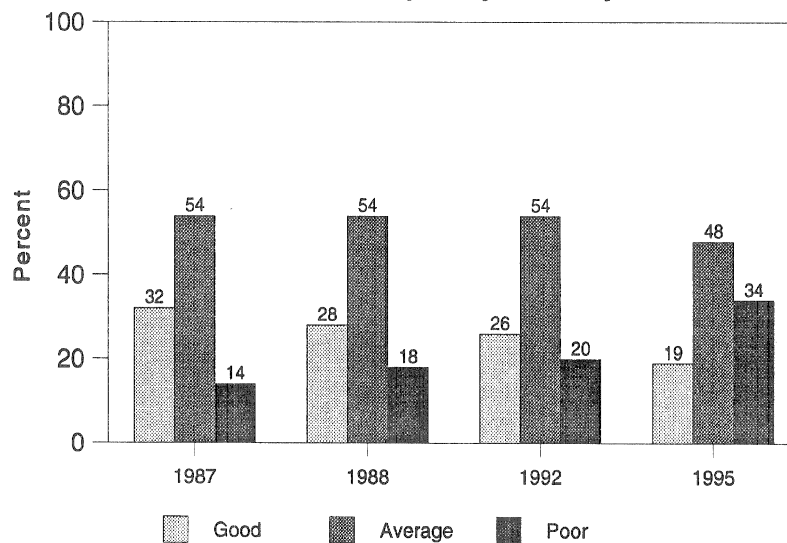
Condition of Freeways

Respondents were asked: **In general, do you think the freeways in Michigan are in good condition, average condition, or poor condition?** A total of 801 respondents gave a valid response to this item. Almost half of respondents reported that the freeways are in "average condition ". A third indicated that they are in "poor condition" and almost a fifth indicated they are in "good condition." There has been an increase since 1992 in the proportion of respondents that perceive the freeways to be in "poor condition."

Condition of Freeways



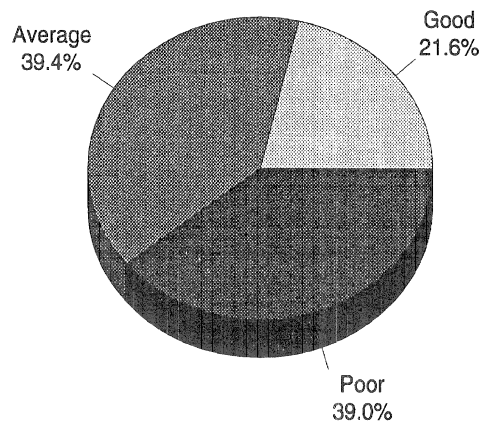
Condition of Freeways, by Survey Year



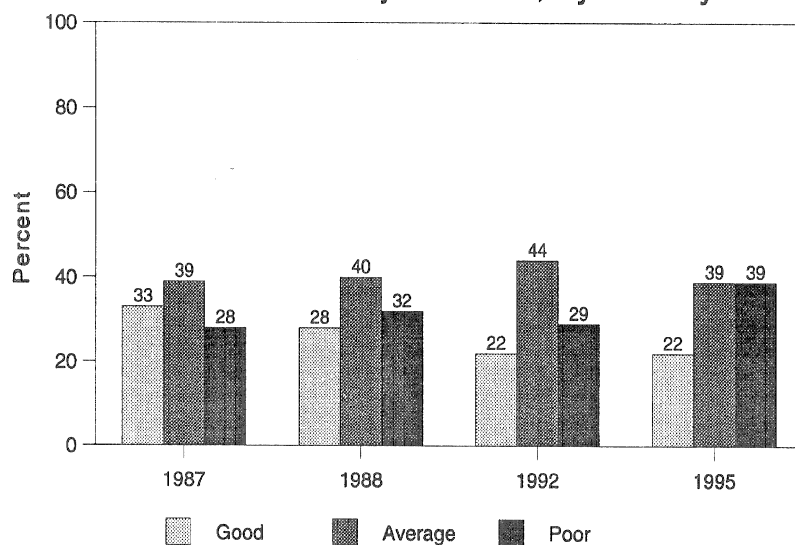
Condition of Major Roads

Respondents were asked: **How about the condition of major roads in your area?** A total of 803 respondents gave a valid response to this item. Approximately a fifth of respondents reported that major roads in their area are in "good" condition. The rest of respondents were evenly split between reporting major roads to be in "average" condition and in "poor" condition. There has been an increase since 1992 in the proportion of respondents reporting major roads to be in "poor condition."

Condition of Major Roads



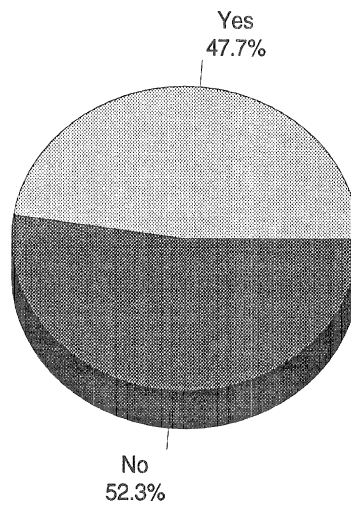
Condition of Major Roads, by Survey Year



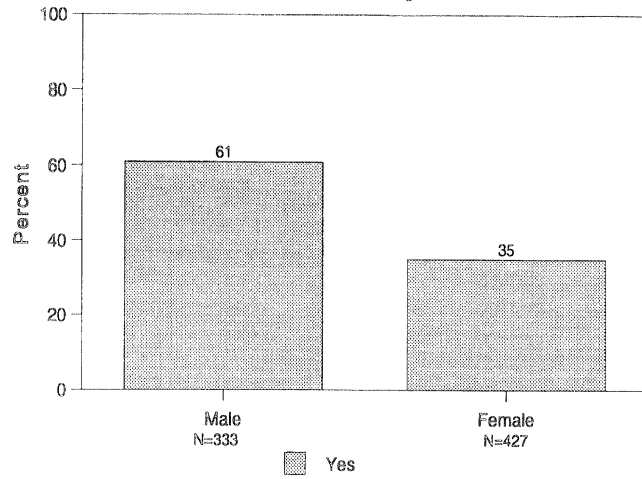
Too Tired To Drive

Respondents who drove were asked: **Have you ever been driving and found yourself too tired to drive or have you startled yourself awake?** A total of 760 respondents gave a valid response to this item. About half of respondents reported that they have found themselves too tired to drive on some occasion. Men were more likely than women to report having been too tired to drive. The portion of respondents that found themselves too tired to drive was highest for those age 21 to 60. The likelihood of having found oneself too tired to drive increased with annual miles driven.

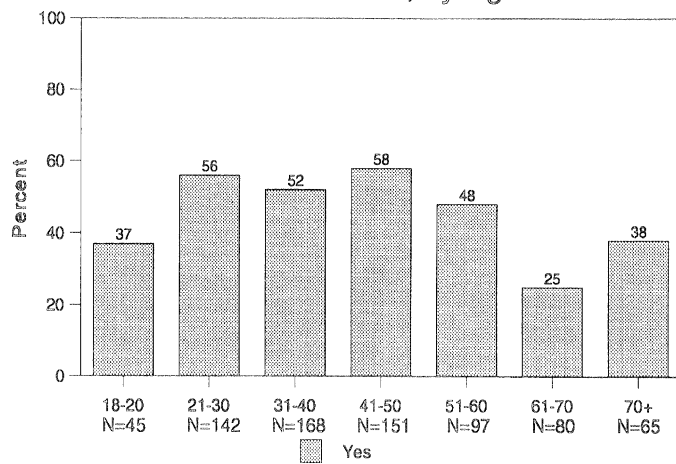
Too Tired To Drive



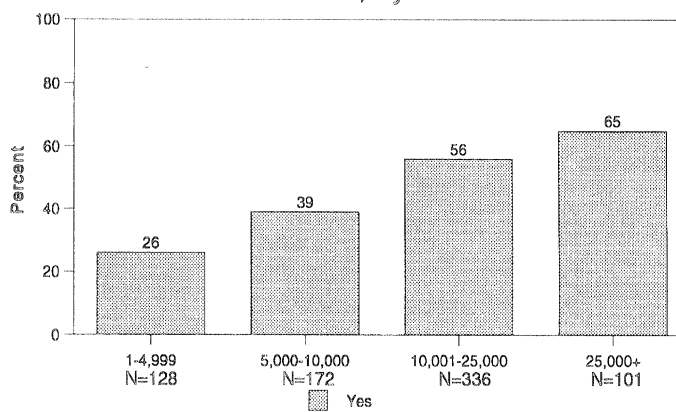
Too Tired to Drive, by Gender



Too Tired to Drive, by Age



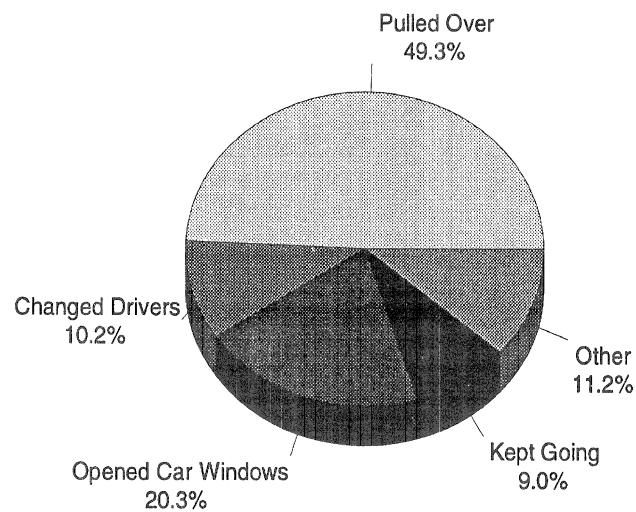
Too Tired To Drive, by Miles Driven



Actions When Too Tired To Drive

Respondents who indicated that they have found themselves too tired to drive were asked: **What did you do the last time you found yourself too tired to drive?** A total of 351 respondents gave a valid response to this item. Almost half of respondents reported pulling off the road; 20 percent reported opening the car windows; and ten percent reported changing drivers.

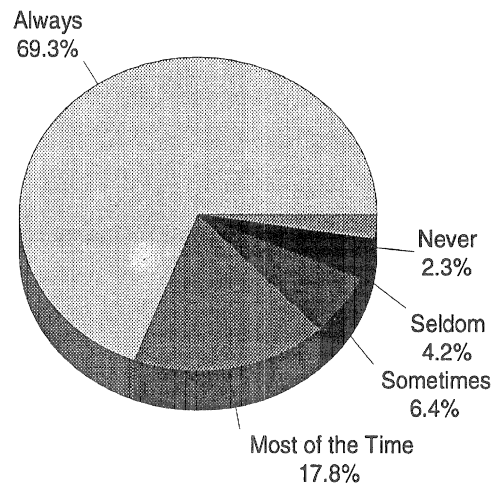
Actions When Too Tired To Drive



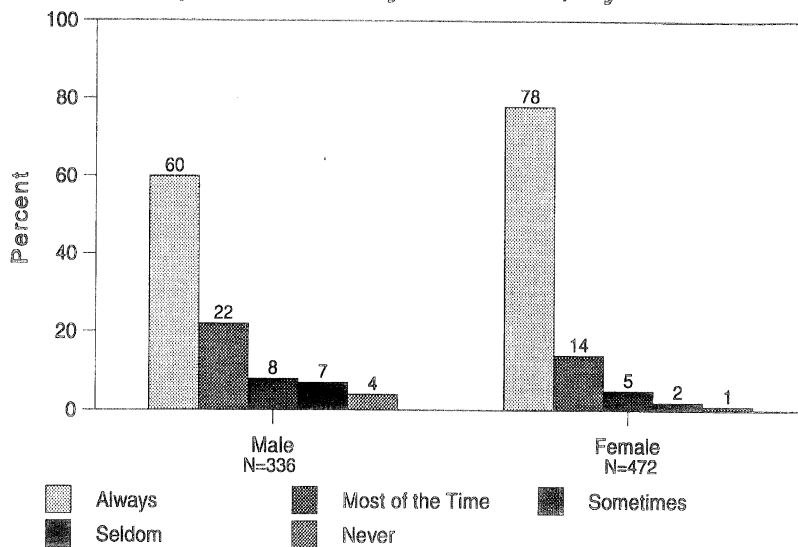
Self-Reported Safety Belt Use

Respondents were asked: **How often do you use a safety belt?** A total of 808 respondents gave a valid response to this item. Over two-thirds of respondents reported that they always use safety belts, and nearly one-fifth reported using safety belts most of the time. Only two percent reported that they never use a safety belt. This self-reported safety belt usage is consistent with a 1994 direct observation survey of safety belt use in Michigan that found that 66 percent of all front outboard occupants traveling in passenger cars were using their shoulder belt (Eby, Streff, and Christoff, 1994). Women were more likely than men to report always using a safety belt. There has been an increase in the proportion of respondents reporting they always use safety belts since 1988.

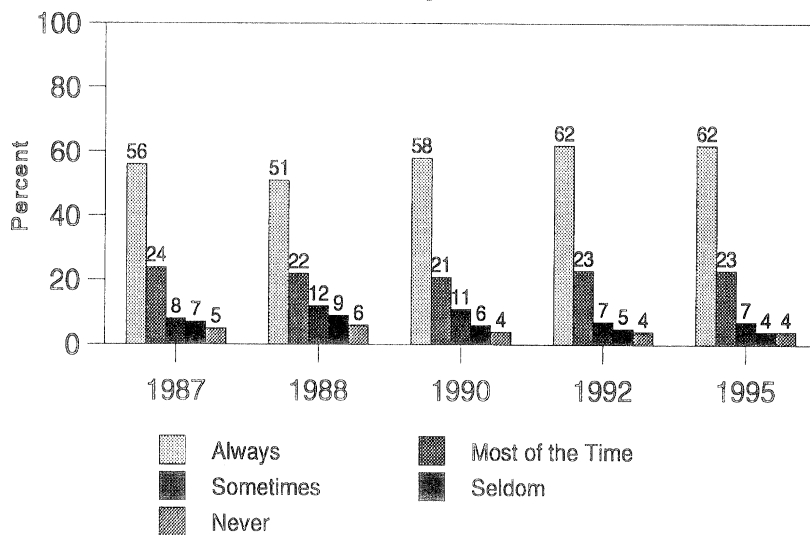
Self-Reported Safety Belt Use



Self-Reported Safety Belt Use, by Gender



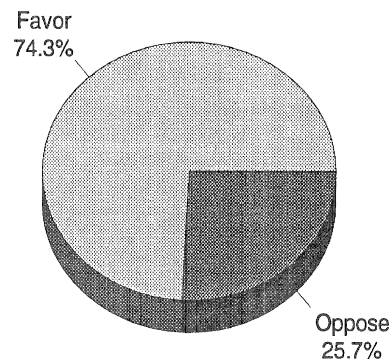
Self-Reported Safety Belt Use, by Survey Year



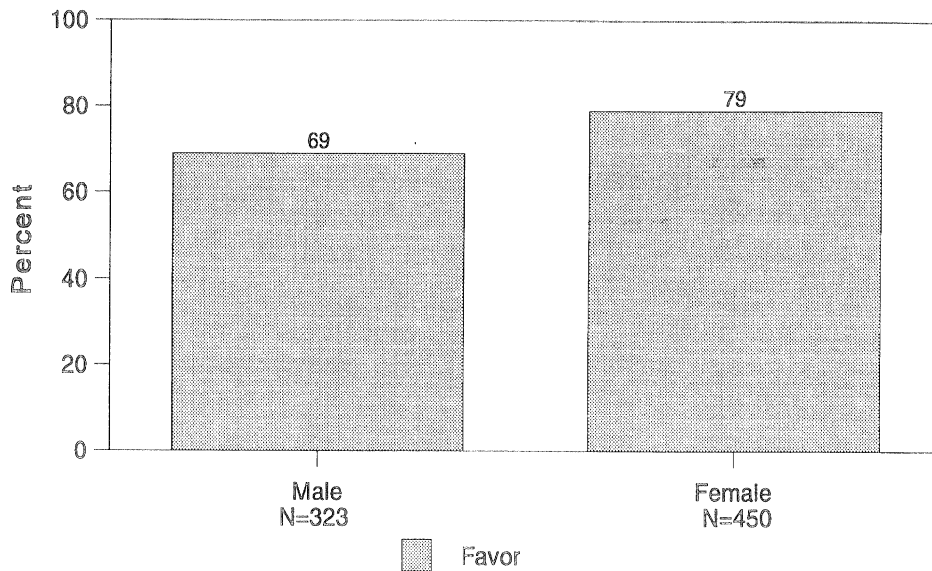
Graduated Driver Licensing for Teenage Drivers

Respondents were asked: **Some have suggested that teenage drivers should progress to full driving privileges gradually. In this system, beginning drivers would be allowed to move from one level of driving privilege to another based on both experience and demonstrated skill. Do you favor or oppose such a graduated licensing system for teenage drivers?** A total of 773 respondents gave a valid response to this item. Almost three-quarters of respondents favored a graduated licensing system for teenage drivers. Women were more likely than men to favor such a licensing system. The proportion of respondents favoring graduated driver licensing for teenage drivers has increased since 1992.

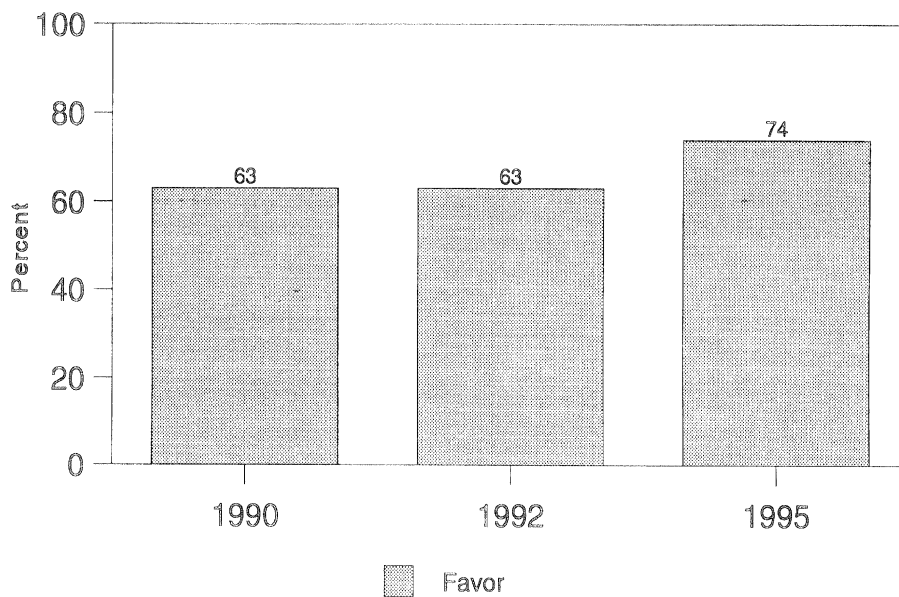
Graduated Driver Licensing for Teenage Drivers



Graduated Driver Licensing for Teenage Drivers, by Gender



Graduated Driver Licensing for Teenage Drivers, by Survey Year

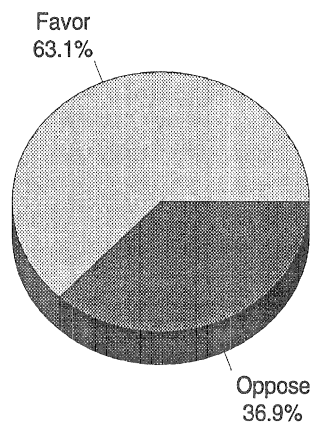


In 1990 and 1992, the question asked for opinions about graduated driver licensing for *young beginning drivers*. In 1995, the question asked for opinions about graduated driver licensing for *teenage drivers*.

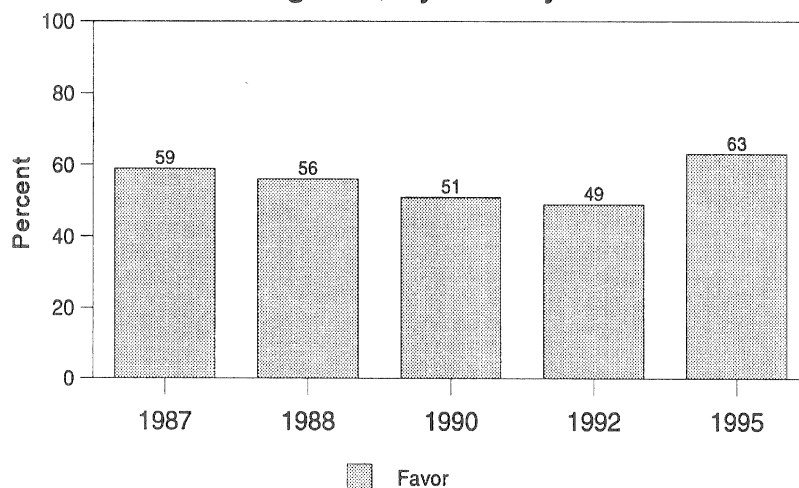
11 pm to 5 am Curfew for Drivers Under Age 18

Respondents were asked: **Would you favor or oppose a law that would prevent persons under the age of 18 from driving between 11 o'clock at night and 5 o'clock in the morning unless they could show a need to drive to or from school or work?** A total of 796 respondents gave a valid response to this item. Almost two-thirds of respondents favored a curfew between 11 pm and 5 am for drivers under 18 years of age. The proportion of respondents favoring this curfew has increased since 1992 after a consistent decrease between 1987 and 1992.

11 pm to 5 am Curfew for Drivers Under Age 18



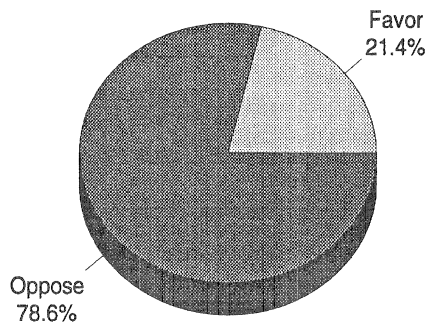
11 pm to 5 am Curfew for Drivers Under Age 18, by Survey Year



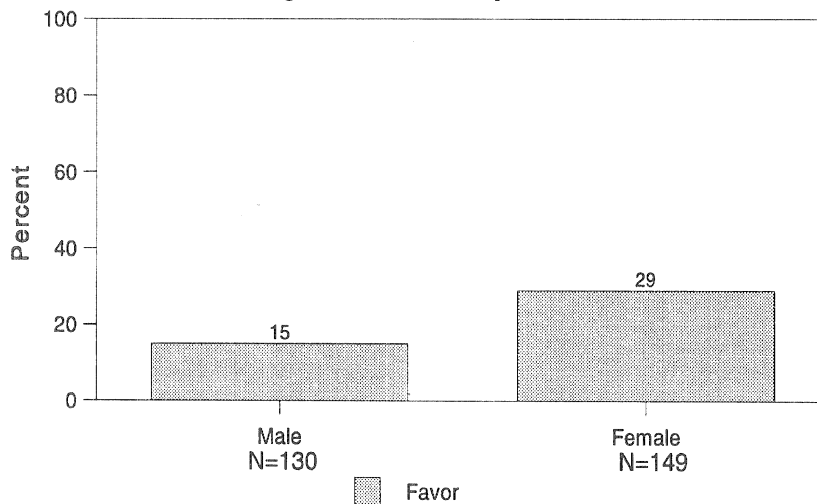
Midnight to 5 am Curfew for Drivers Under Age 18

Respondents who opposed the curfew between 11 o'clock at night and 5 o'clock in the morning were asked: **Would you favor or oppose a curfew that started at midnight and continued until 5 o'clock in the morning?** A total of 279 respondents gave a valid response to this item. Over three-quarters of these respondents were opposed to a curfew between midnight and 5 am for drivers under age 18. Women were more likely than men to favor such a curfew.

Midnight to 5 am Curfew for Drivers Under Age 18



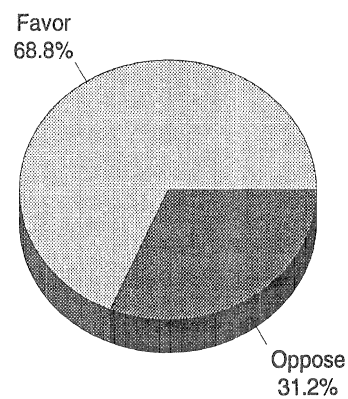
Midnight to 5 am Curfew for Teenage Drivers, by Gender



Curfew for Drivers Under Age 18 With Poor Driving Records

Respondents who opposed the curfew between 11 o'clock at night and 5 o'clock in the morning were asked: **Would you favor or oppose such a curfew for young drivers who have a poor driving record?** A total of 279 respondents gave a valid response to this item. Over two-thirds of these respondents favored a curfew for drivers under age 18 with poor driving records.

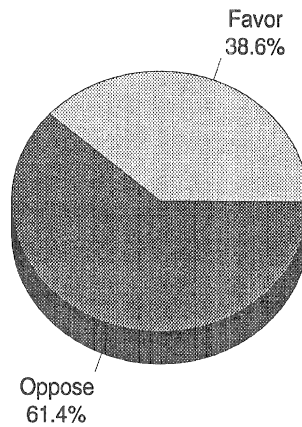
Curfew for Drivers Under Age 18 with Poor Driving Records



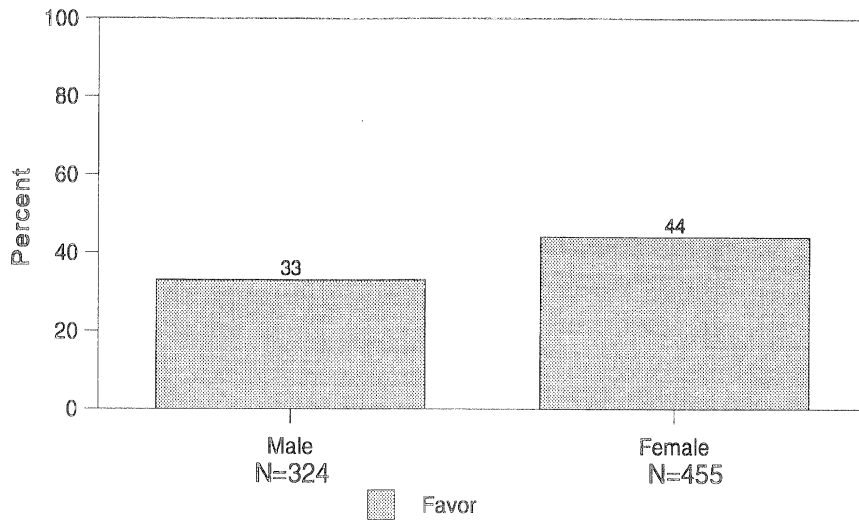
Passenger Limit for Drivers Under Age 18

Respondents were asked: **Would you favor or oppose a law that would restrict a driver under the age of 18 to driving with no more than one or two passengers?** A total of 779 respondents gave a valid response to this item. Almost two-thirds of respondents opposed a passenger limit for drivers under age 18. Women were more likely than men to favor this passenger limit. Respondents age 18-20 were least likely to favor this passenger limit. Overall, as age of respondents increased they were more likely to favor the passenger limit for drivers under age 18.

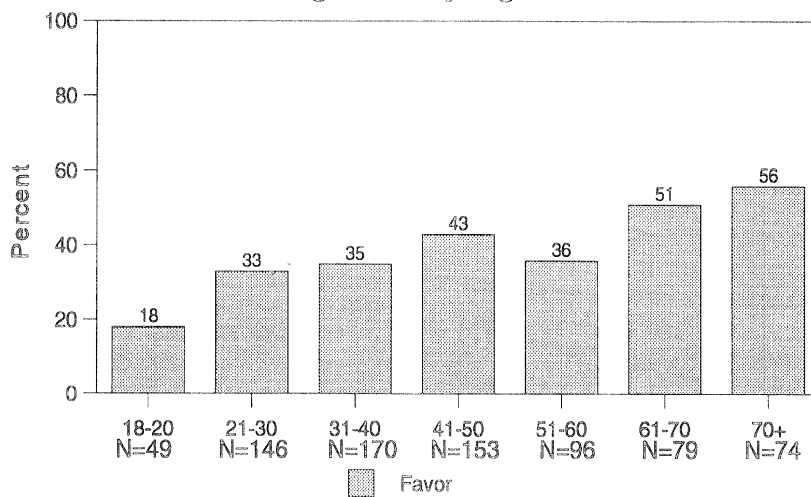
Passenger Limit for Drivers
Under Age 18



Passenger Limit for Drivers Under Age 18, by Gender



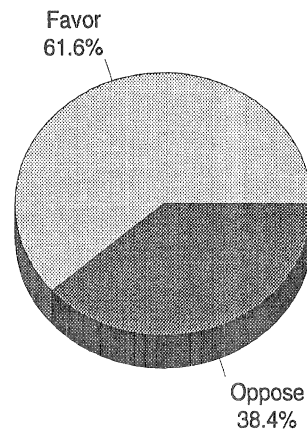
Passenger Limit for Drivers Under Age 18, by Age



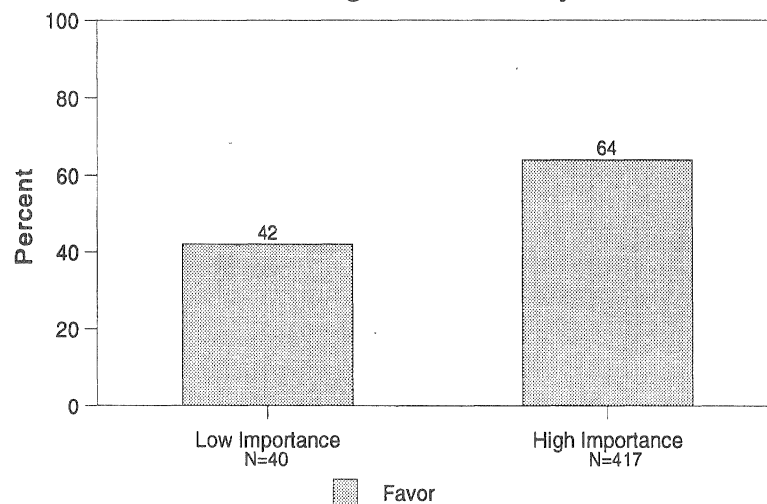
Passenger Limit for Drivers Under Age 18 With Poor Driving Records

Respondents who opposed a law restricting the number of passengers for drivers under age 18 were asked: **Would you favor or oppose such a passenger limit for young drivers who have a poor driving history?** A total of 459 respondents gave a valid response to this item. Nearly two-thirds of these respondents favored a passenger limit for drivers under age 18 with poor driving histories. Respondents who assigned high importance to traffic safety were more likely than others to favor a passenger limit for these drivers.

Passenger Limit for Drivers Under Age 18 with Poor Driving Records



Passenger Limit for Drivers Under Age 18 with Poor Driving Records, by I.T.S.*

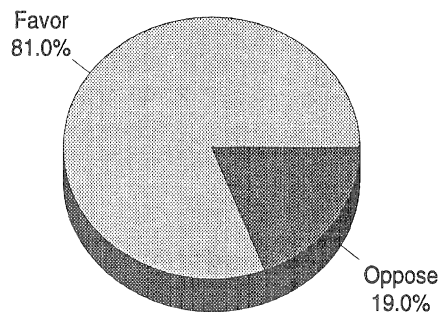


*Importance of Traffic Safety

Graduated Driver Licensing for Older Drivers

Respondents were asked: **Some have suggested that older drivers should gradually reduce the amounts and kinds of driving they do based on their driving ability. In a "graduated licensing system" older drivers would be required to take more frequent driver examinations to identify driving-related problems and driving would be restricted if problems were identified. Do you favor or oppose such a graduated licensing system for older drivers?** A total of 792 respondents gave a valid response to this item. Over three-quarters of respondents favored a graduated licensing system for older drivers. There was no relationship between opinions and age or survey year.

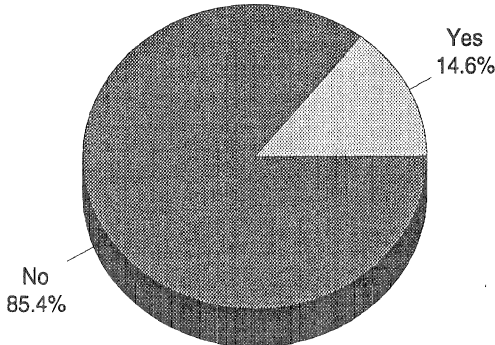
Graduated Driver Licensing for Older Drivers



Driving Ability Affected by Age

Respondents were asked: **Does anyone in your family have trouble driving safely because their driving ability has been affected by their advancing years?** A total of 807 respondents gave a valid response to this item. Almost 15 percent of respondents reported that someone in their family has trouble driving safely because of advanced age. The proportions of responses did not change from 1992.

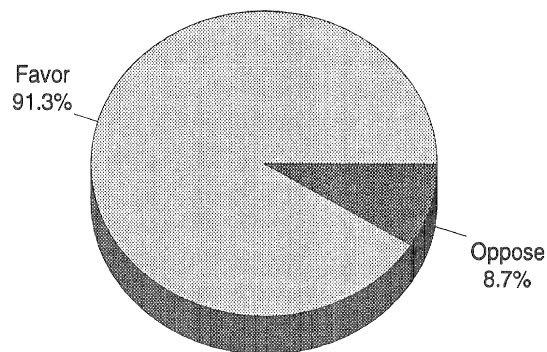
Driving Ability Affected by Age



Road Test for New Drivers

Respondents were asked: **Would you favor or oppose the Department of State using a road test to determine if new drivers are fit to get their driving license.** A total of 799 respondents gave a valid response to this item. Over 90 percent of respondents favor a road test in the licensing of new drivers.

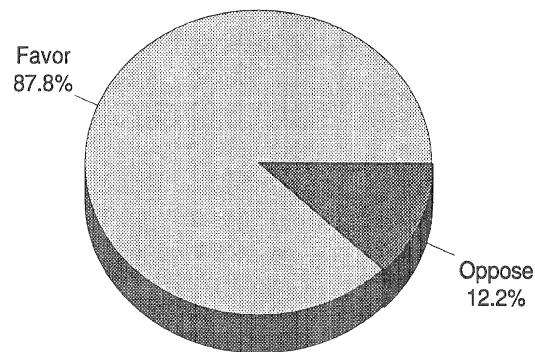
Road Test for New Drivers



Road Test for Older Drivers

Respondents were asked: **Would you favor or oppose the Department of State using a road test to determine if older drivers are fit to have their driving licenses renewed?** A total of 792 respondents gave a valid response to this item. Almost 90 percent of respondents favor road tests for older drivers renewing their licenses.

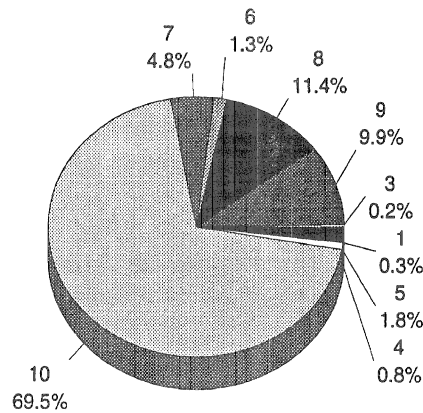
Road Test for Older Drivers



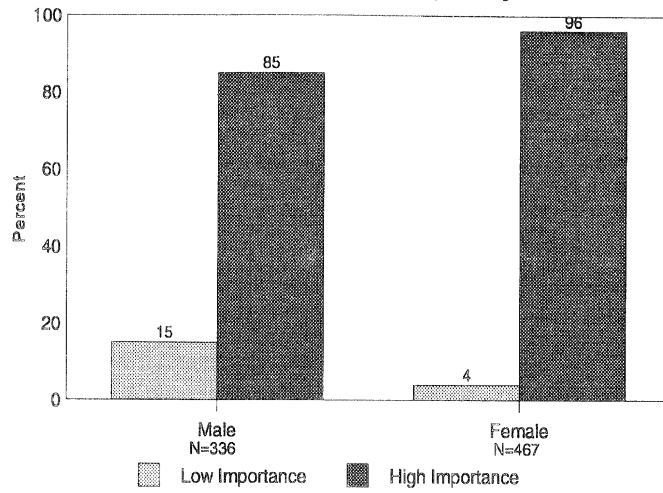
Importance of Traffic Safety

Respondents were asked: **On a scale of 1 to 10, where 1 means NOT AT ALL IMPORTANT, and 10 means MOST IMPORTANT, how important is traffic safety to you?** A total of 803 respondents gave a valid response to this item. Over two-thirds of respondents assigned a scale value of 10 to the importance of traffic safety. Overall, over 90 percent assigned a value of at least 8 on the importance scale. Women were more likely than men to assign higher levels of importance to traffic safety. Generally, respondents over age 30 were somewhat more likely than younger drivers to assign higher levels of importance to traffic safety.

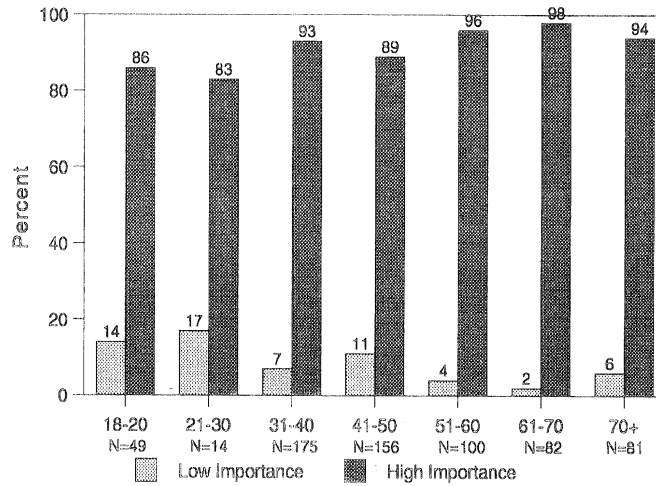
Importance of Traffic Safety



Importance of Traffic Safety*, by Gender



Importance of Traffic Safety*, by Age

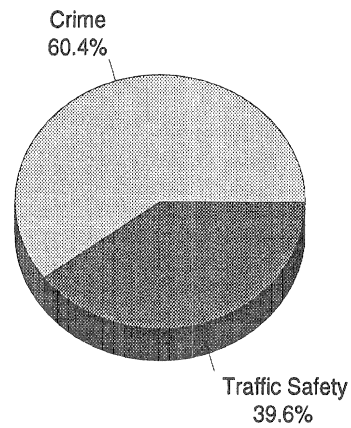


*Scale values of the importance of traffic safety from eight to ten signify "high importance" and values of seven and below signify "low importance."

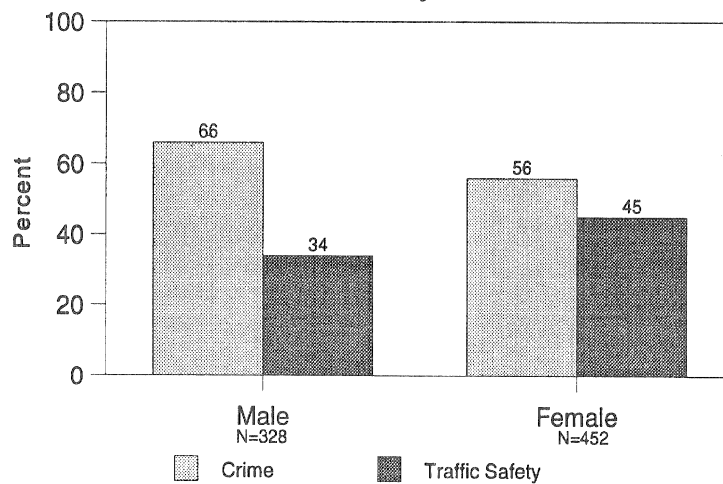
Importance of Traffic Safety Versus Crime

Respondents were asked: **Which issue is more important to your every day life -- crime or traffic safety?** A total of 780 respondents gave a valid response to this item. Sixty percent of respondents reported that the issue of crime rather than traffic safety is more important to their every day life. Women were more likely than men to consider traffic safety more important than crime.

Importance of Traffic Safety Versus Crime



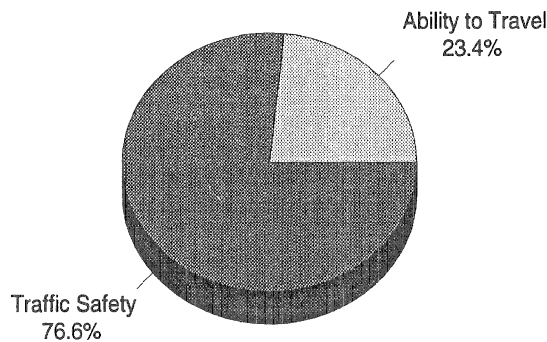
Importance of Traffic Safety Versus Crime, by Gender



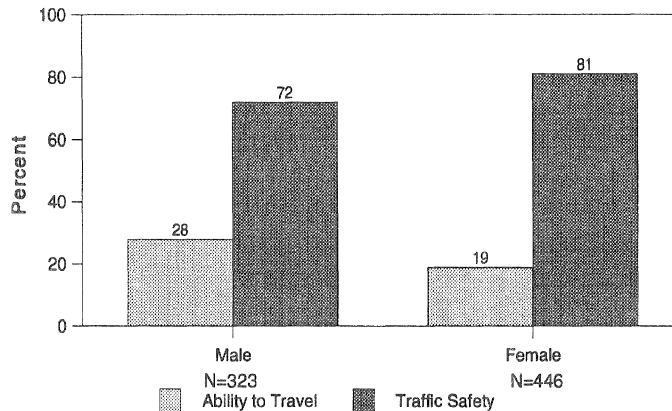
Importance of Ability to Travel Versus Traffic Safety

Respondents were asked: **Which issue is more important to you in your every day life -- a person's ability to travel or traffic safety?** A total of 769 respondents gave a valid response to this item. Over three-quarters of respondents reported that traffic safety was more important than "a person's ability to travel." Women were more likely than men to consider traffic safety more important than a "person's ability to travel."

Importance of Travel Versus Traffic Safety



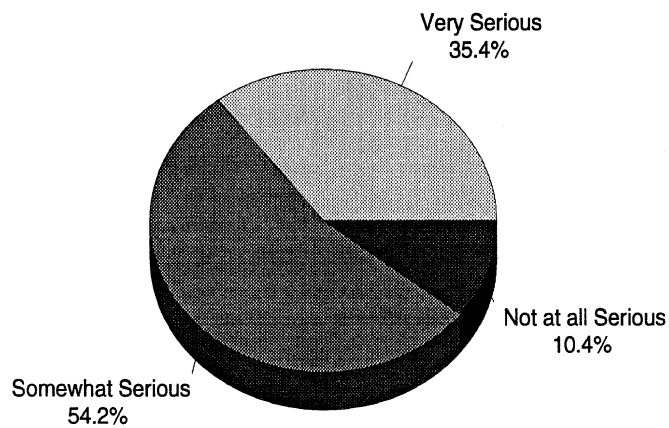
Importance of Travel Versus Traffic Safety, by Gender



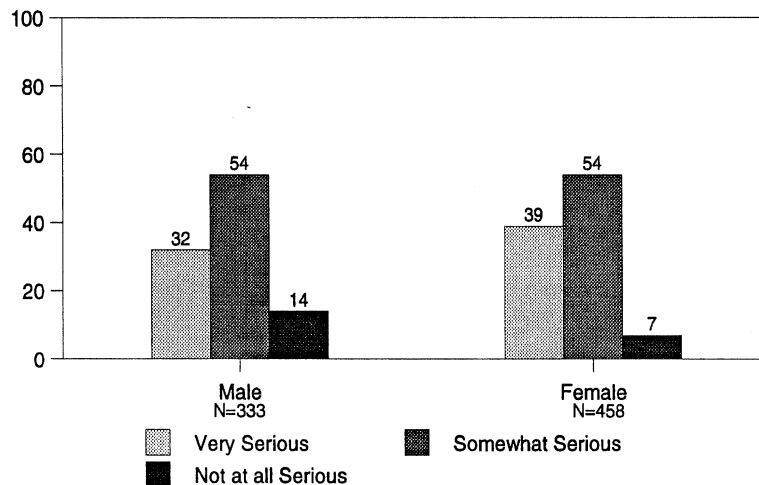
Seriousness of Drunk Driving Problem

Respondents were asked: **How serious do you think the drunk driving problem is in your community?** A total of 791 respondents gave a valid response to this item. Over a third of respondents reported that drunk driving is a very serious problem in their community; over half of respondents reported that it is somewhat serious. The remaining respondents reported that drunk driving is not at all a serious problem in their community. While equal portions of men and women reported that drunk driving was a somewhat serious problem in their community, women were twice as likely as men to consider drunk driving to be a very serious problem. Perceptions about the seriousness of the drunk driving problem were not related to age or survey year.

Seriousness of Drunk Driving Problem



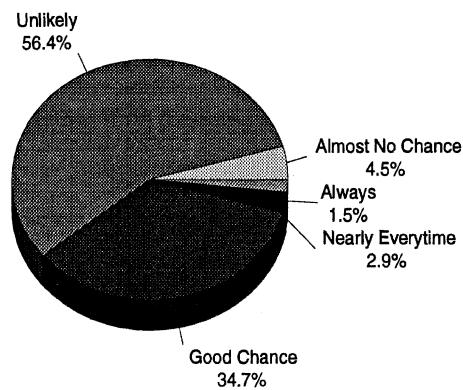
Seriousness of Drunk Driving Problem, by Gender



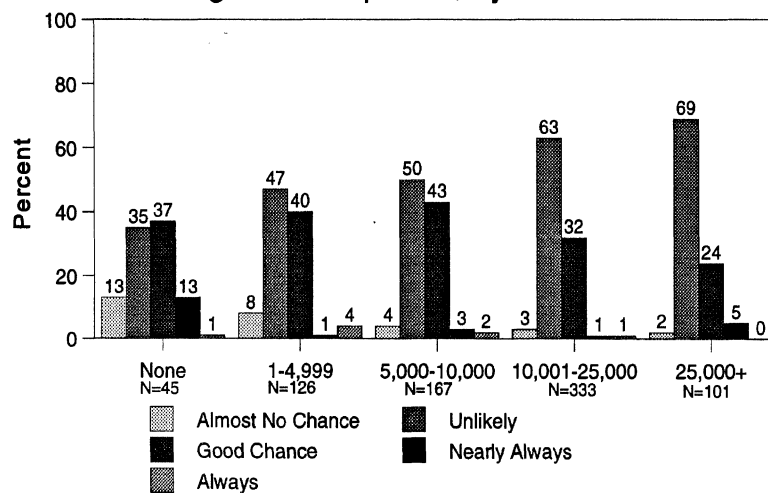
Chance of Adult Driver Being Pulled Over for Driving While Impaired

Respondents were asked: **If an adult has been drinking and their blood alcohol level is over the limit for driving when intoxicated (.10 percent), how likely is that person to be pulled over by the police?** A total of 795 respondents gave a valid response to this item. Over half of respondents reported that it is unlikely that an intoxicated adult driver will be pulled over by the police; over a third of the respondents reported that there is a good chance of the driver being pulled over. The remaining respondents were about evenly split between reporting that the adult intoxicated driver will never be pulled over and reporting that the driver will be pulled over at least most of the time. The perceived likelihood of an intoxicated adult driver being pulled over decreased with annual miles driven. The perceived likelihood of being pulled over did not change from 1992 levels.

Chance of Adult Driver Being Pulled Over
For Driving While Impaired



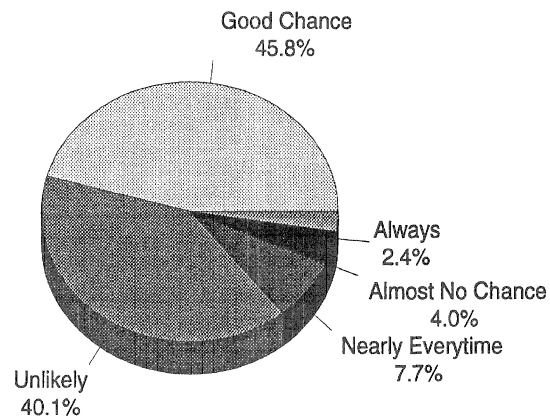
Chance of Adult Driver Being Pulled Over
for Driving While Impaired, by Miles Driven



Chance of Driver Under Age 21 Being Pulled Over for Driving While Impaired

Respondents were asked: **If a person under age 21 has been drinking, how likely is that person to be pulled over by the police?** A total of 799 respondents gave a valid response to this item. Nearly half of respondents reported that there is a good chance that a driver under age 21, who had been drinking, will be pulled over; ten percent of respondents reported that such a driver will be pulled over nearly all or all of the time. Over a third of respondents indicated that it is unlikely that such a driver will be pulled over.

Chance of Driver Under Age 21 Being Pulled Over for Driving While Impaired

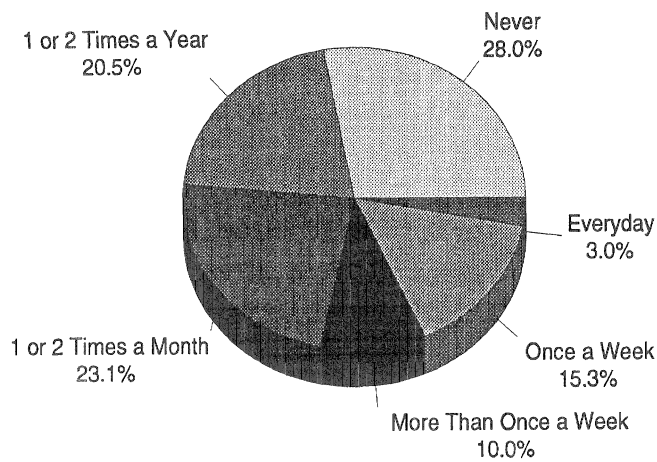


Frequency of Drinking

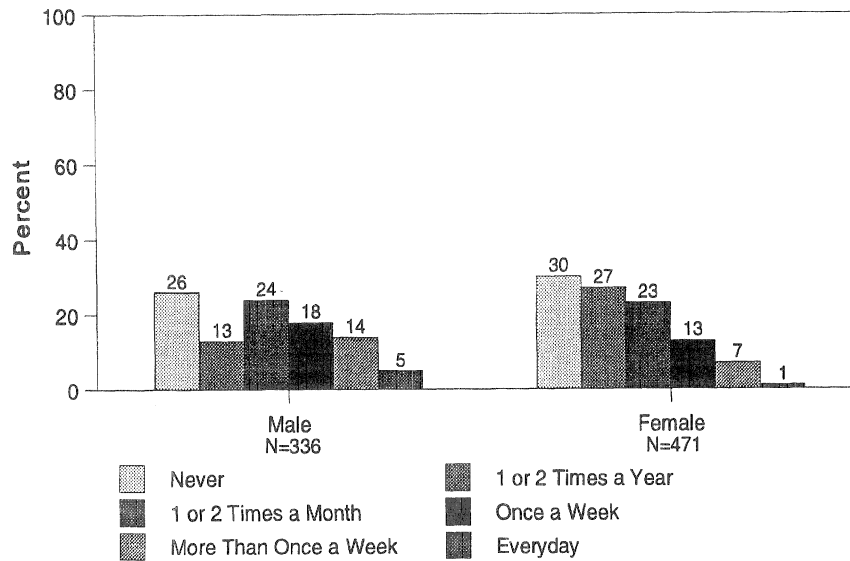
Respondents were asked: **How often would you say you drink alcoholic beverages?**

A total of 807 respondents gave a valid response to this item. Most respondents reported drinking little or no alcohol. Almost three-quarters reported they drink alcoholic beverages no more than once or twice a month. Men reported drinking more frequently than women. There were no discernible differences in frequency of drinking across survey years.

Frequency Of Drinking



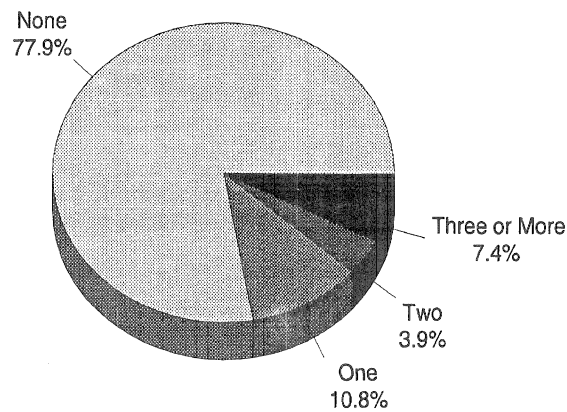
Frequency of Drinking, by Gender



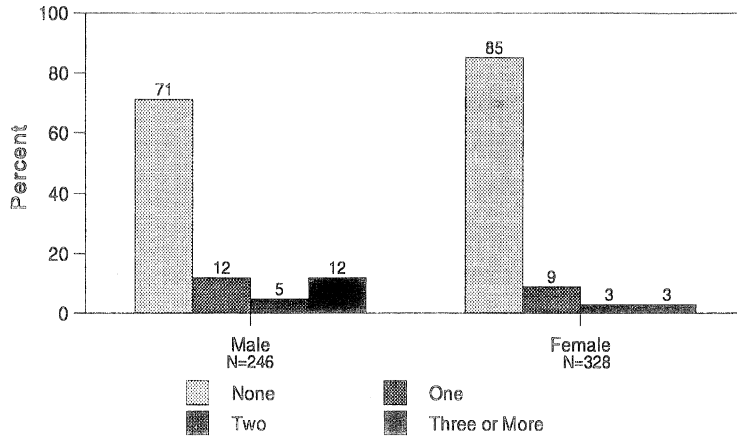
Frequency of Drinking To Intoxication

Respondents were asked: **Thinking about any drinking you may have done in the last two weeks, how many times did you have 5 or more drinks on a single occasion?** A total of 574 respondents gave a valid response to this item. We used reported consumption of five or more drinks on a single occasion as a measure of intoxication. Based on this measure, about a fifth of respondents reported drinking to intoxication in the past two weeks. Men were twice as likely as women to report drinking to intoxication. Respondents under age 21, who are not legally permitted to drink, were more likely than any other group, except those age 21-30, to report drinking to intoxication. A third of respondents age 18-20 reported drinking to intoxication on at least one occasion in the past two weeks. There were no discernible differences in frequency of drinking to intoxication across survey years.

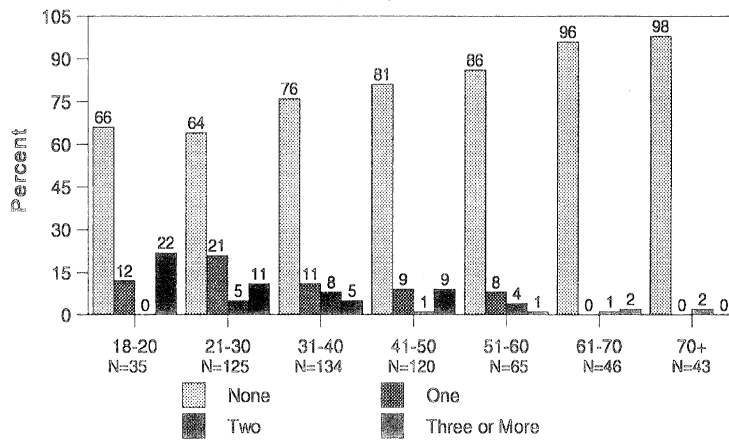
Frequency of Drinking to Intoxication



Frequency of Drinking to Intoxication, by Gender



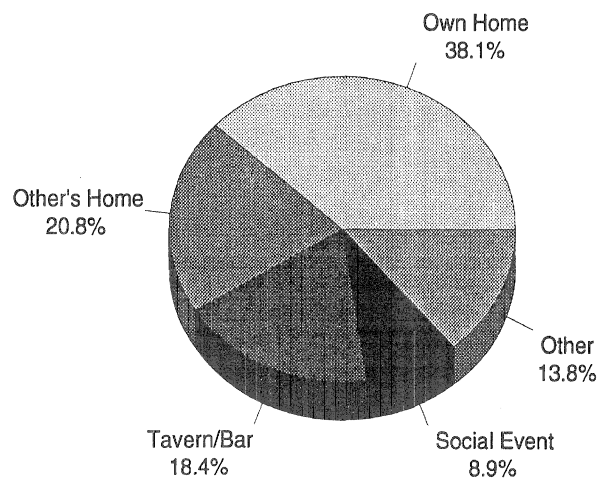
Frequency of Drinking to Intoxication, by Age



Location of Drinking to Intoxication

Respondents who reported drinking to intoxication on at least one occasion were asked: **The last time you had 5 or more drinks on a single occasion, where were you drinking?** A total of 119 respondents gave a valid response to this item. Just over a third of respondents reported drinking to intoxication at home. A fifth of respondents reported drinking to intoxication in another's home and close to a fifth reported drinking to intoxication in a tavern/bar. There was no discernible change in the location of drinking to intoxication from 1992.

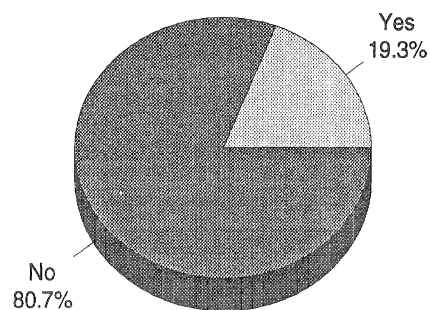
Location of Drinking to Intoxication



Self-Reported Alcohol-Impaired Driving

Respondents who reported drinking to intoxication on at least one occasion were asked: **On that occasion, did you drive?** A total of 119 respondents gave a valid response to this item. While most respondents reported they did not drive after drinking to intoxication, nearly a fifth reported driving after drinking to intoxication. Self-reported alcohol-impaired driving did not change from 1992 levels.

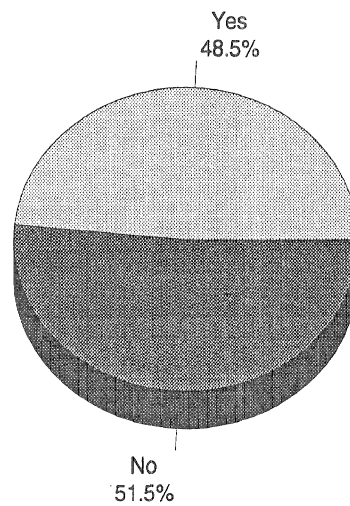
Self-Reported Alcohol-Impaired Driving



Designated Driver Use

Respondents who did not drive after drinking to intoxication were asked: **Did you use a designated driver?** A total of 95 respondents gave a valid response to this item. About half of these respondents reported using a designated driver.

Designated Driver Use



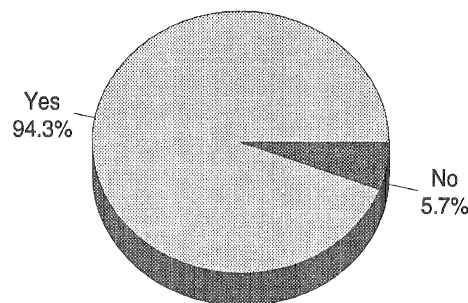
Willingness to Use Free "Safe Ride" Service

All respondents were asked to imagine the following situation:

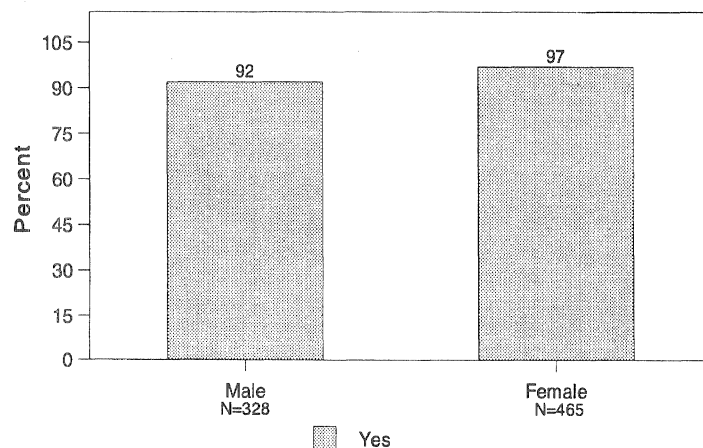
You have driven to a local restaurant to meet some friends for dinner. As you are leaving the restaurant, you notice the effects of the wine you had with dinner. In other words, you are feeling a bit drunk. As it happens, the restaurant manager also takes note of your condition and offers to call the local "Safe Ride" service offered to drivers who have been drinking. Your friends have already left and it's too far to walk home.

Respondents were then asked: **If the "Safe Ride" service was offered to you for free, would you accept the offer and use the service to get home?** A total of 793 respondents gave a valid response to this item. Nearly 95 percent of respondents indicated they would accept a free "Safe Ride" service. Women were more likely than men to accept a free "Safe Ride" service.

Willingness to Use Free "Safe Ride" Service



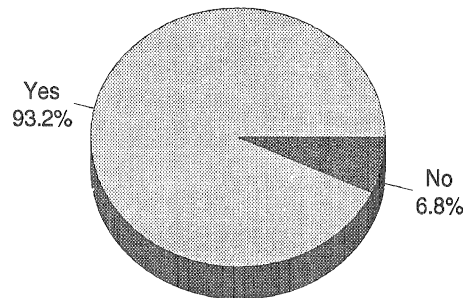
Willingness to Use Free "Safe Ride" Service, by Gender



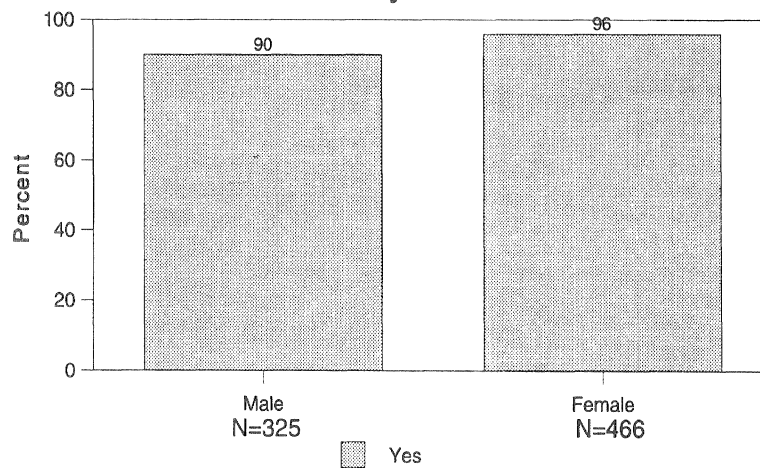
Willingness to Pay for "Safe Ride" Service

Respondents were asked: **If the "Safe Ride" service was offered at a "reasonable" cost, would you accept the offer and use the service to get home?** A total of 791 respondents gave a valid response to this item. Over 90 percent of respondents indicated they would pay a reasonable amount for the "Safe Ride" service. Women were more likely than men to use the "Safe Ride" service at a reasonable cost.

Willingness to Pay for "Safe Ride" Service



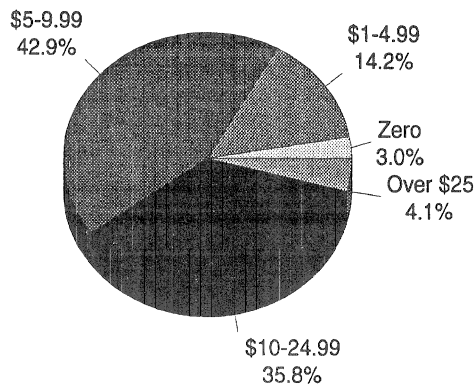
Willingness to Pay for "Safe Ride" Service, by Gender



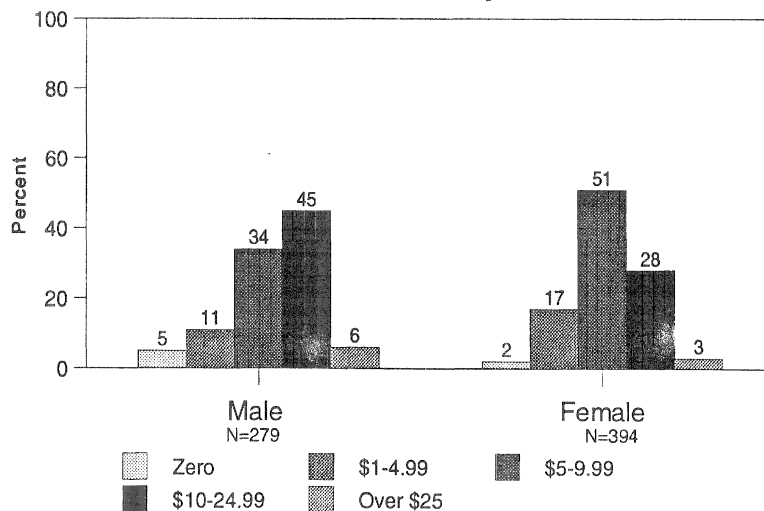
Amount Willing to Pay for "Safe Ride" Service

Respondents who would accept a free "Safe Ride" were asked: **How much would you be willing to pay each time you used the "Safe Ride" service?** A total of 673 respondents gave a valid response to this item. Over two-fifths of respondents were willing to pay between \$5.00 and \$10.00 for a "Safe Ride" and approximately a third were willing to pay between \$10.00 and \$25.00. Men were more likely than women to pay the higher prices.

Amount Willing to Pay for "Safe Ride" Service



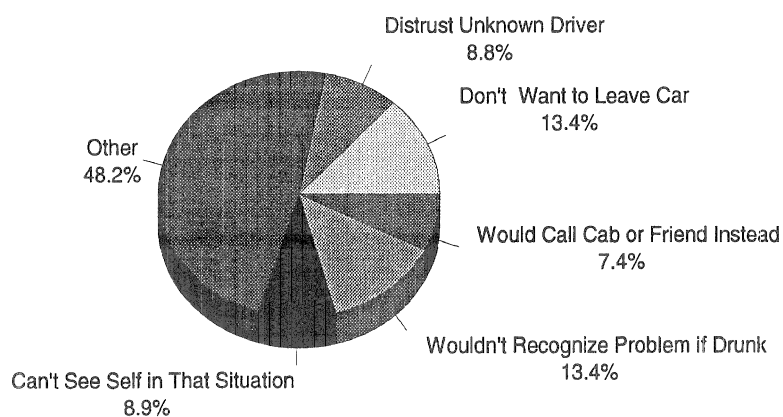
Amount Willing to Pay for "Safe Ride" Service, by Gender



Reasons for Not Using "Safe Ride" Service

Respondents who would not accept a free "Safe Ride" were asked: **Why would you choose not to use the "Safe Ride" service?** A total of 38 respondents gave a valid response to this item. Thirteen percent of these respondents stated that they would not leave their car and another thirteen percent indicated they would not perceive the problem (i.e., the need for someone else to drive) if they were intoxicated.

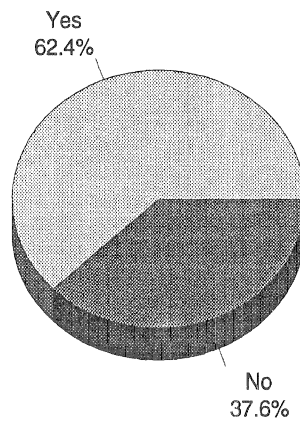
Reasons for Not Using "Safe Ride" Service



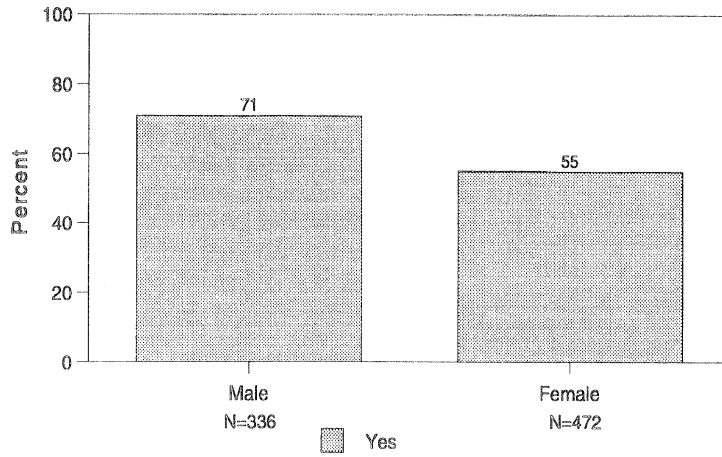
Stopping Intoxicated Persons from Driving

Respondents were asked: **Have you ever stopped someone from driving who you thought had too much to drink?** A total of 808 respondents gave a valid response to this item. Almost two-thirds of respondents reported they had stopped someone from driving after drinking. Men were more likely than women and younger respondents were more likely than older respondents to report having stopped a drinker from driving. More than three-quarters of respondents ages 18-30 reported stopping a drinker from driving. The likelihood of a respondent reporting stopping a drinker from driving increased with annual miles driven.

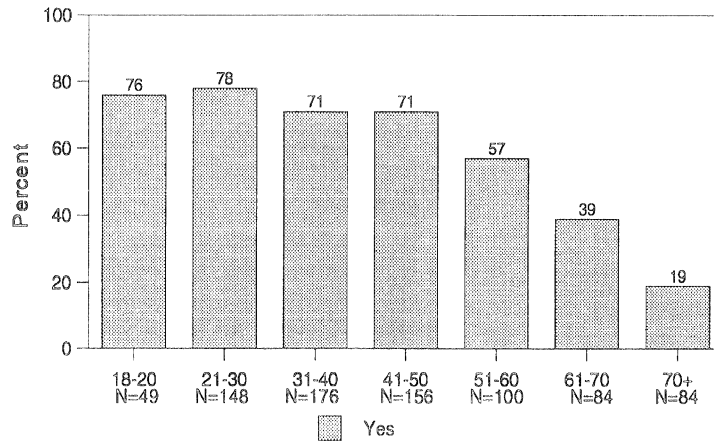
Stopping Intoxicated Persons from Driving



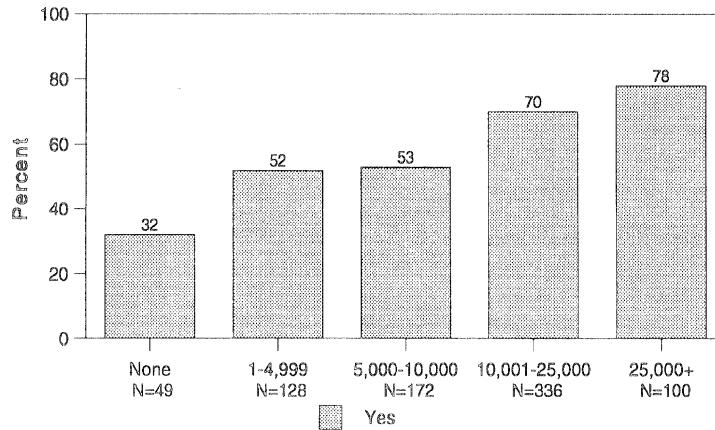
Stopping Intoxicated Persons from Driving, by Gender



Stopping Intoxicated Persons from Driving, by Age



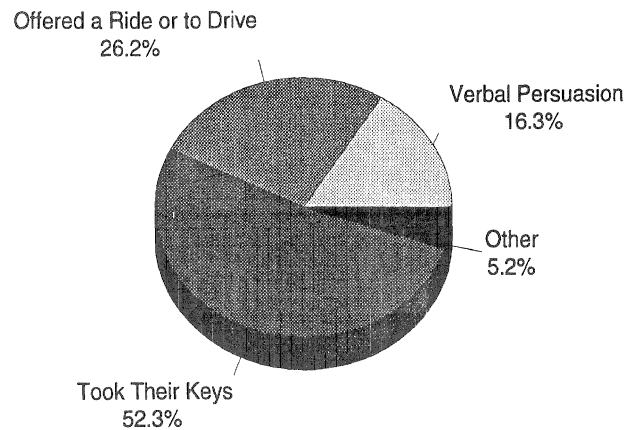
Stopping Intoxicated Persons from Driving, by Miles Driven



Ways Used to Stop Intoxicated Persons from Driving

Respondents who had stopped someone from driving were asked: **How did you stop them?** A total of 497 respondents gave a valid response to this item. Over half of these respondents reported stopping a drinker from driving by taking the keys to the car; a quarter offered the drinker a ride home, and one out of six respondents verbally persuaded the drinker not to drive.

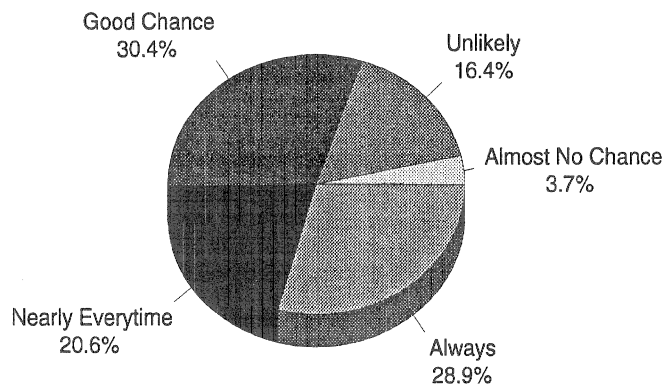
Ways Used to Stop Intoxicated Persons from Driving



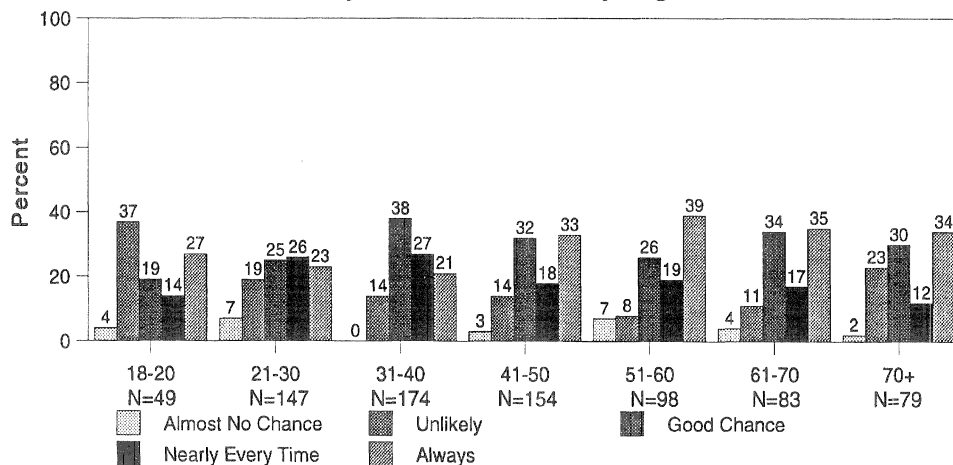
Chance of Being Ticketed for Safety Belt Nonuse

Respondents were asked: **If a person is not using a safety belt and is stopped for speeding, how likely is it that they will get a ticket for not having a safety belt on?** A total of 794 respondents gave a valid response to this item. More than three-quarters of respondents indicated that there is at least a good chance for getting a ticket for failure to use a safety belt. The perceived likelihood of always getting a ticket was generally higher among respondents over age 40 than among younger respondents.

Chance of Being Ticketed for Safety Belt Nonuse



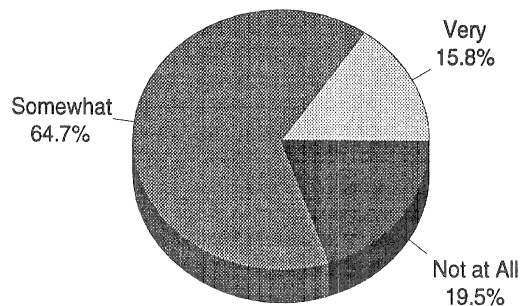
Chance of Being Ticketed for Safety Belt Nonuse, by Age



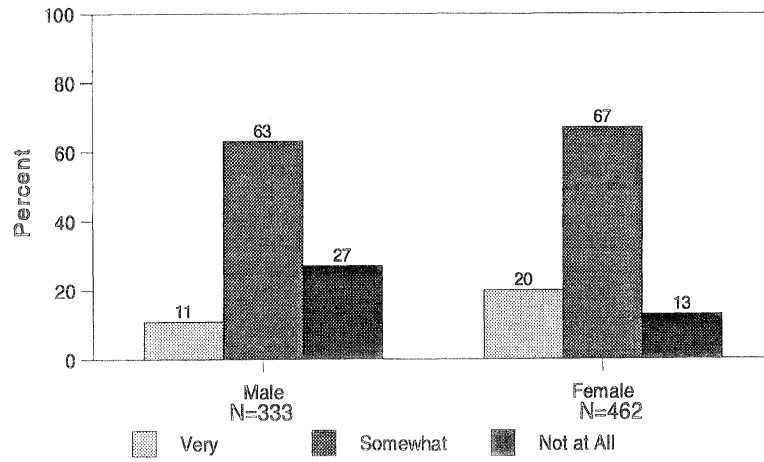
Effectiveness of Traffic Safety Education for Adults

Respondents were asked: **Based on your experience, how effective do you think traffic safety education efforts targeting adult drivers with billboards, radio messages, and television spots are in getting you to drive more safely?** A total of 795 respondents gave a valid response to this item. Almost two-thirds of respondents indicated that traffic safety education efforts targeting adult drivers are somewhat effective. The remaining respondents were about evenly split between stating that efforts are very effective and not effective at all. Women were more likely than men to consider traffic safety education for adults to be effective. Respondents who assigned high importance to traffic safety were more likely than others to state that traffic safety education efforts are at least somewhat effective.

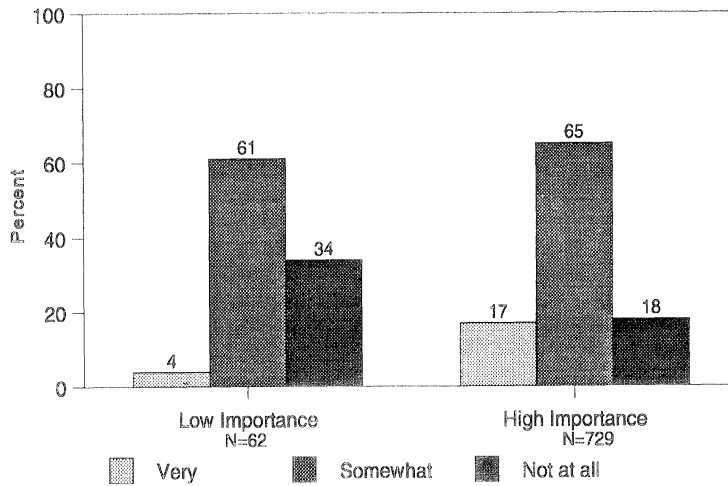
Effectiveness of Traffic Safety
Education for Adults



Effectiveness of Traffic Safety Education for Adults, by Gender



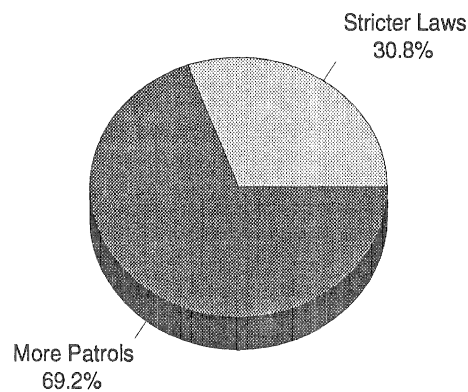
Effectiveness of Traffic Safety Education for Adults, by Importance of Traffic Safety



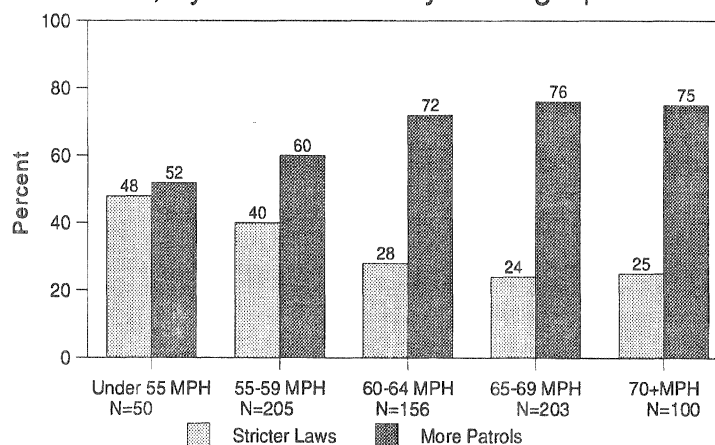
Effectiveness of Stricter Laws Versus More Police Patrols

Respondents were asked: **Based on your own experience, which is more effective in influencing your own driving behavior, stricter laws regulating driving or more police patrolling the roads?** A total of 734 respondents gave a valid response to this item. Over two-thirds of respondents reported that police patrols are more effective than stricter laws in influencing their driving behavior. The likelihood of reporting police patrols to be more effective than stricter laws increased with respondents' reported driving speeds on Michigan's urban freeways.

Effectiveness of Stricter Laws Versus More Police Patrols



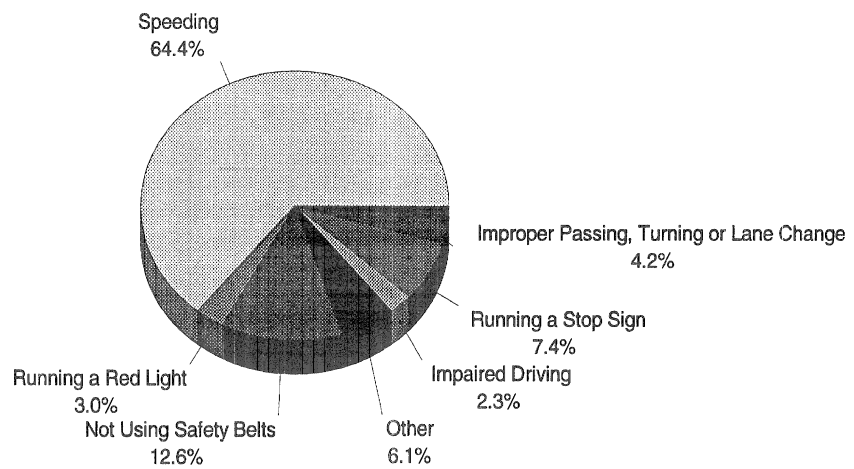
Effectiveness of Stricter Laws Versus Police Patrols, by Urban Freeway Driving Speeds



Observed Traffic Law Violations

Respondents were asked: **Based on your own observations, what traffic laws do you see violated most often?** A total of 806 respondents gave a valid response to this item. Almost two-thirds of respondents reported that speeding is the traffic law violated most often. Thirteen percent indicated that not using a safety belt is the traffic law violation observed most frequently.

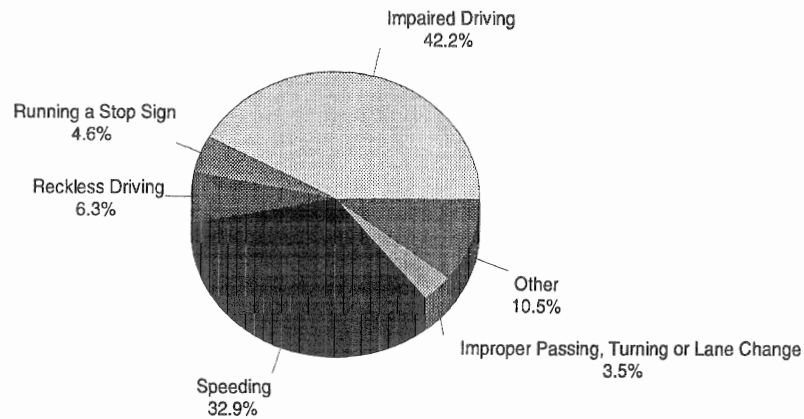
Observed Traffic Law Violations



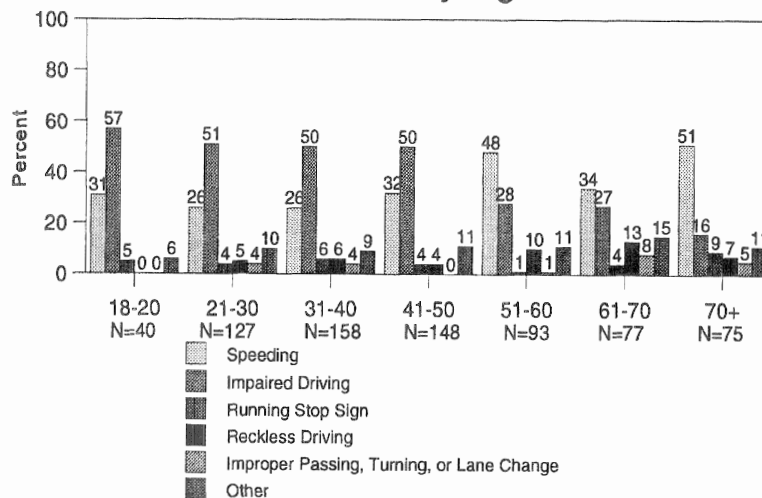
Most Serious Traffic Law Violations

Respondents were asked: **In your opinion, what traffic law violation is most serious in terms of causing crashes?** A total of 727 respondents gave a valid response to this item. Over two-fifths of respondents indicated that impaired driving is the most serious traffic law violation in causing crashes. Drivers age 18-20 were more likely than others to perceive impaired driving as the most serious violation, while drivers over age 50 were more likely to perceive speeding as the most serious.

Most Serious Traffic Law Violations



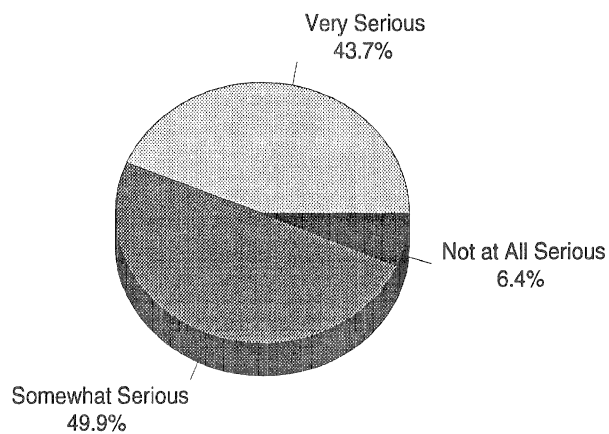
Most Serious Traffic Law Violations, by Age



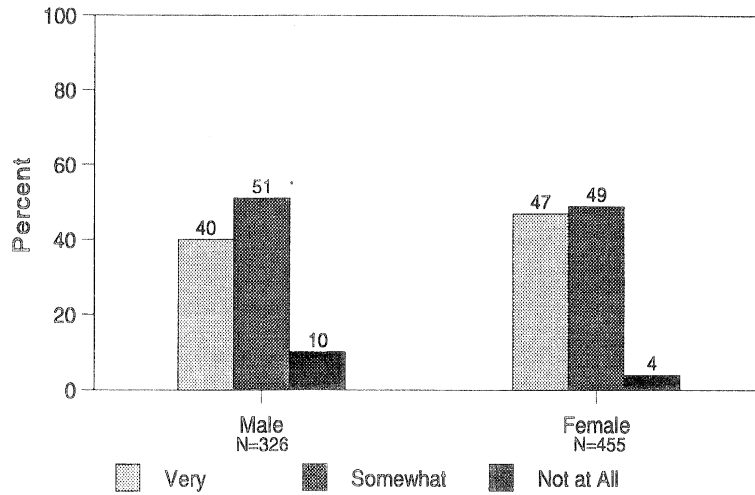
Extent of Suspended License Problem

Respondents were asked: **To what extent do you think people driving while their driving license is suspended is a problem in Michigan?** A total of 781 respondents gave a valid response to this item. Over 90 percent of respondents reported that they think people driving while their licenses are under suspension is a very or somewhat serious problem in Michigan. Men were more likely than women to perceive this as a less serious problem. Respondents who assigned high importance to traffic safety were more likely than others to consider this a very serious problem. Respondents who indicated that drunk driving is a serious problem in their community were also more likely than others to indicate that people driving with suspended licenses are a serious problem in Michigan.

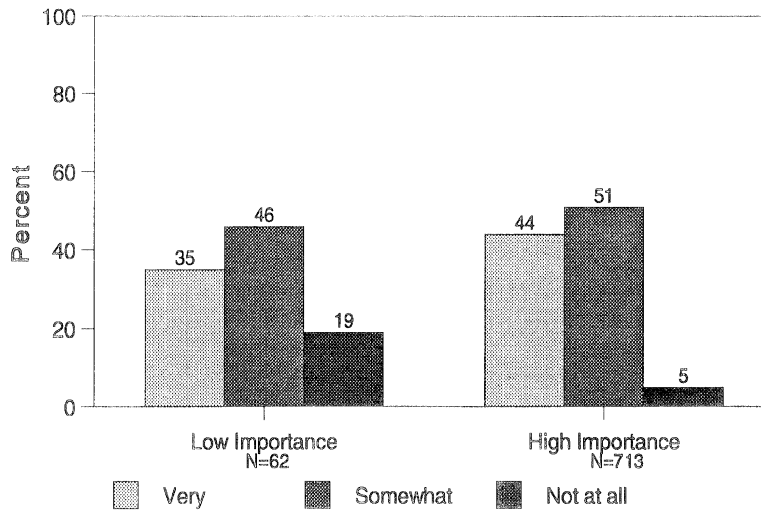
Extent of Suspended License Problem



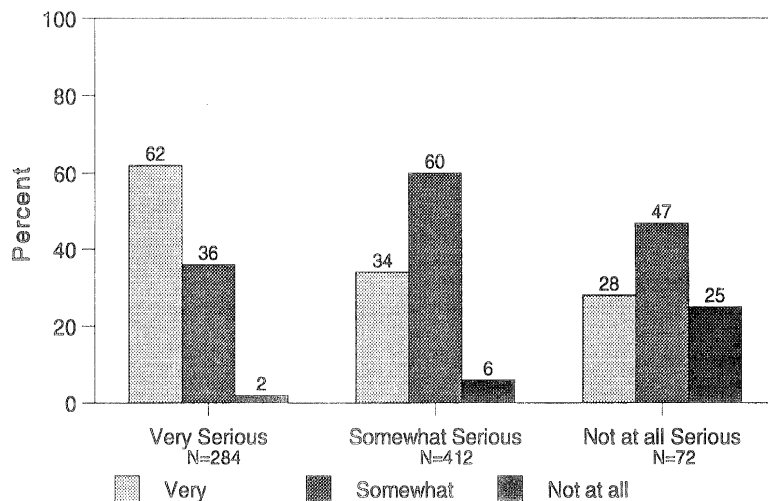
Extent of Suspended License Problem, by Gender



Extent of Suspended License Problem, by Importance of Traffic Safety



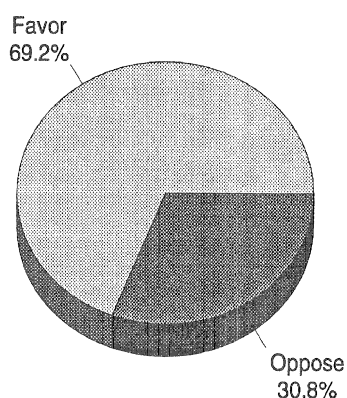
Extent of Suspended License Problem, by Seriousness of Impaired Driving



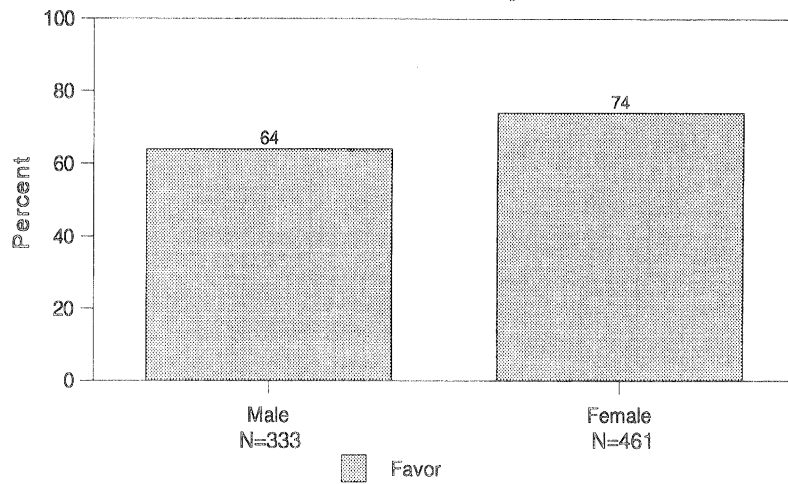
Impounding Vehicles of Persons with Suspended Licenses

Respondents were asked: **Do you favor or oppose impounding vehicles owned by persons whose licenses are under suspension as a means to prevent these persons from driving?** A total of 794 respondents gave a valid response to this item. More than two-thirds of respondents favored impounding vehicles owned by persons whose driver licenses are under suspension. Women were more likely than men to favor impounding these vehicles. Respondents who assigned high importance to traffic safety were more likely than others to favor impounding vehicles of persons with suspended driver licenses.

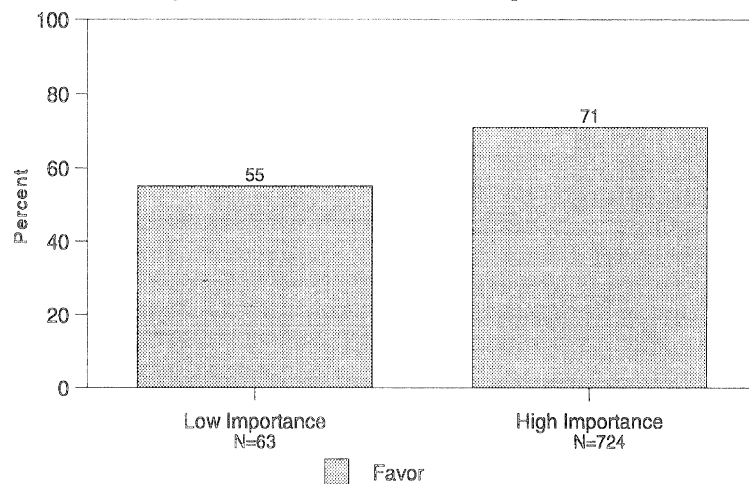
Impounding Vehicles of Persons with Suspended Licenses



Impounding Vehicles of Persons with Suspended Licenses, by Gender



Impounding Vehicles of Persons with Suspended Licenses, by I.T.S.*

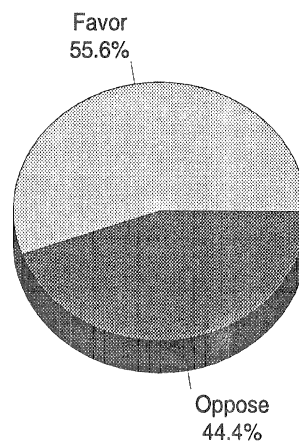


*I.T.S.=Importance of Traffic Safety

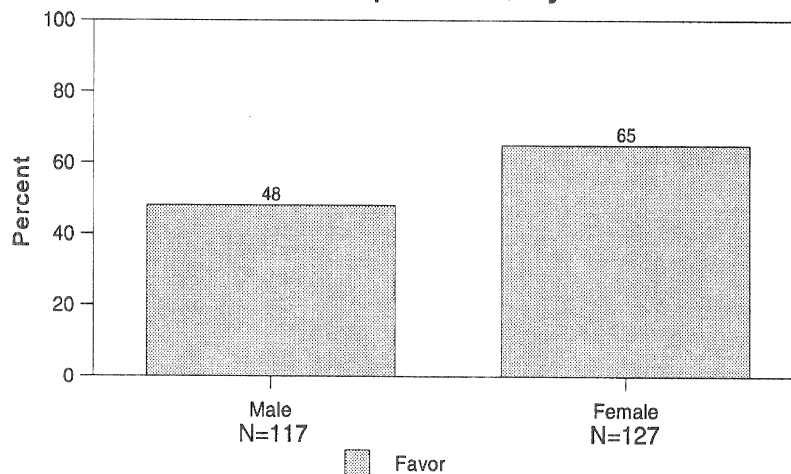
Impounding Vehicles of Persons who Repeatedly Drive with Suspended Licenses

Respondents who opposed impounding vehicles owned by persons whose licenses are under suspension were asked: **Do you favor or oppose impounding vehicles owned by persons who are repeatedly found to be driving while their licenses are under suspension as a means to prevent these persons from driving?** A total of 244 respondents gave a valid response to this item. More than half of these respondents favored impounding vehicles of persons who repeatedly drove while their driver licenses were under suspension. Women were more likely than men to favor impounding vehicles of these drivers.

Impounding Vehicles of Persons Who Drive Under Suspension



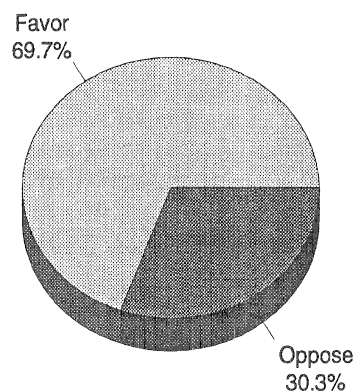
Impounding Vehicles of Persons Who Drive Under Suspension, by Gender



Confiscating Vehicle License Plate of Persons with Suspended Driver Licenses

Respondents were asked: **Do you favor or oppose confiscating the license of vehicles owned by persons whose licenses are under suspension as a means to prevent these persons from driving?** A total of 793 respondents gave a valid response to this item. Over two-thirds of respondents favored confiscating the vehicle license of vehicles owned by persons with suspended driver licenses.

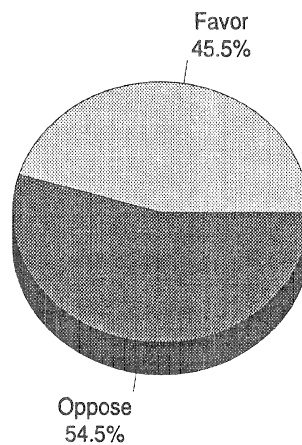
Confiscating Vehicle Plate of Persons Under Suspension



Confiscating Vehicle License Plate of Persons who Repeatedly Drive with Suspended Driver Licenses

Respondents who opposed confiscating licenses of vehicles owned by persons under suspension were asked: **Would you favor or oppose confiscating the license of vehicles owned by persons who are repeatedly found to be driving while their licenses are under suspension to prevent these persons from driving?** A total of 234 respondents gave a valid response to this item. Nearly a half of these respondents favored confiscating the vehicle license of vehicles owned by persons who repeatedly drive while their driver licenses were under suspension.

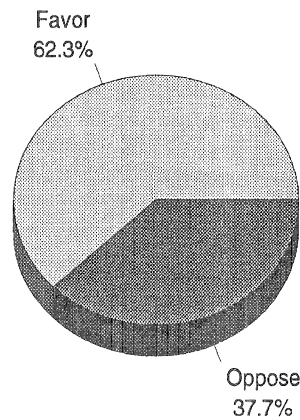
Confiscating Vehicle Plate of Persons
Who Drive Under Suspension



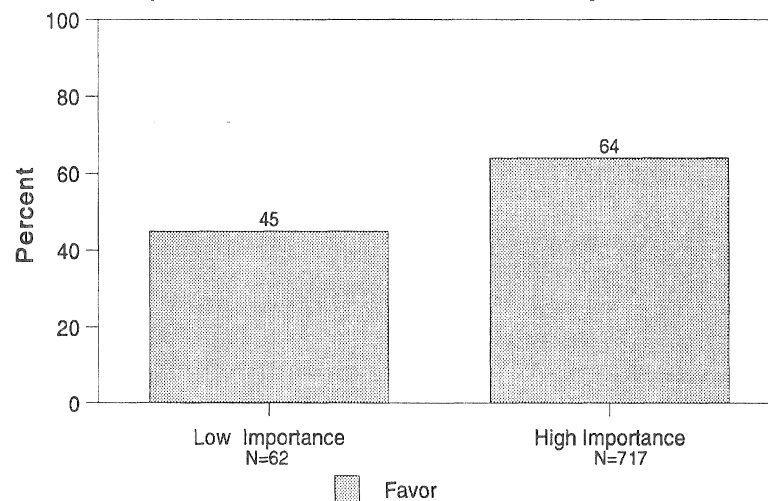
Locking Vehicles of Persons with Suspended Driver Licenses

Respondents were asked: **Do you favor or oppose locking vehicles owned by persons whose licenses are under suspension with a tire boot or steering wheel lock as a means to prevent these persons from driving?** A total of 738 respondents gave a valid response to this item. Almost two-thirds of respondents favored locking vehicles owned by persons with suspended driver licenses. Respondents who assigned high importance to traffic safety were more likely than others to favor locking these vehicles to prevent their owners from driving.

Locking Vehicles of Persons with Suspended Driver Licenses



Locking Vehicles of Persons with Suspended Driver Licenses, by ITS*

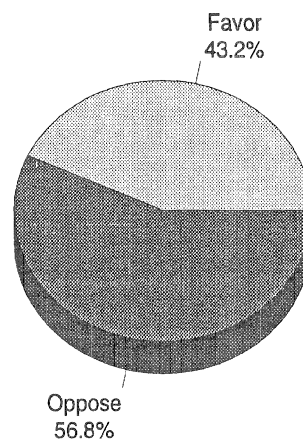


*Importance of Traffic Safety

Locking Vehicles of Persons who Repeatedly Drive with Suspended Driver Licenses

Respondents opposed to locking vehicles owned by persons under suspension were asked: **Would you favor or oppose locking vehicles owned by persons who are repeatedly found to be driving while their licenses are under suspension?** A total of 292 respondents gave a valid response to this item. Over two-fifths of respondents favored locking vehicles owned by persons who repeatedly drove while their driver licenses were under suspension.

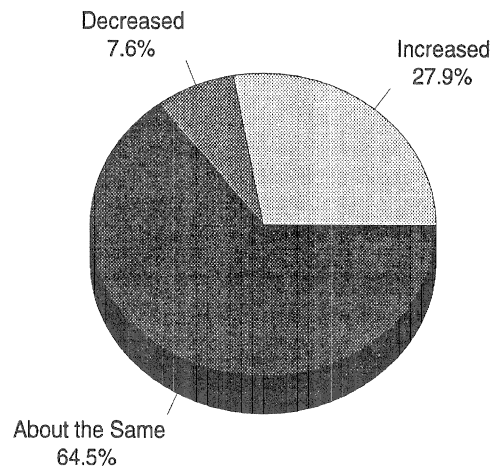
Locking Vehicles of Persons
Who Drive Under Suspension



Changes in Police Road Patrols

Respondents were asked: **Compared to last year, do you think police road patrols in Michigan have increased, decreased or remained about the same?** A total of 787 respondents gave a valid response to this item. About two-thirds of respondents indicated that police road patrols have neither increased nor decreased; over one-quarter reported that police road patrols have increased, and a small minority reported that the patrols have decreased.

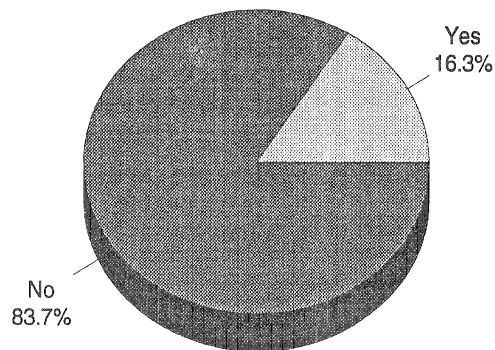
Change in Police Road Patrols



Special Traffic Safety Programs

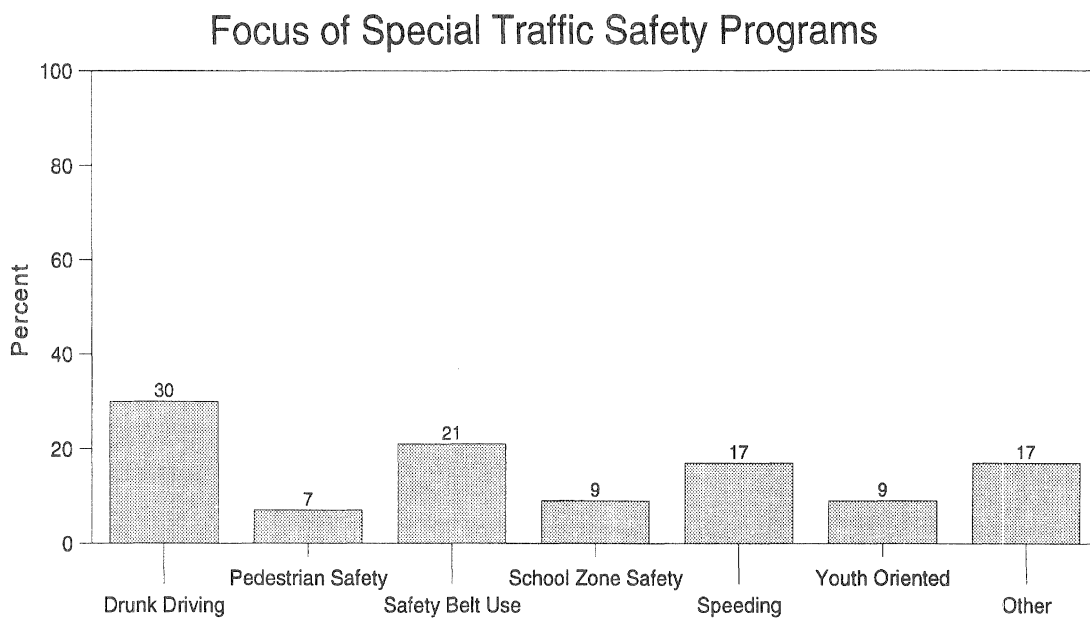
Respondents were asked: **Are there any special traffic safety programs under way in your area?** A total of 643 respondents gave a valid response to this item. One out of every six respondents reported the existence of special traffic safety programs in their area.

Special Traffic Safety Programs



Focus of Special Traffic Safety Programs

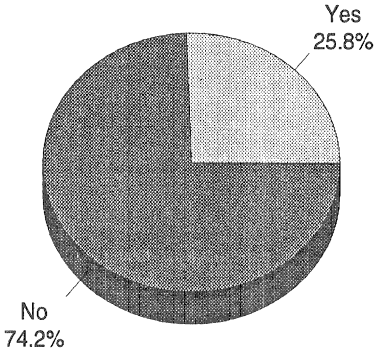
Respondents who indicated that there were special safety programs underway in their areas were asked: **What was the focus of the program?** A total of 105 respondents gave a valid response to this item. A respondent could mention more than one program. Almost a third of the special programs reported were concerned with drunk driving and a fifth of the programs were concerned with safety belt use. Also mentioned were safety programs targeting speeding, pedestrians, school zones, and youth.



New Car Purchase in Last 12 Months

Respondents were asked: **Did you buy a new car in the last 12 months?** A total of 807 respondents gave a valid response to this item. A quarter of respondents reported buying a new car in the past 12 months.

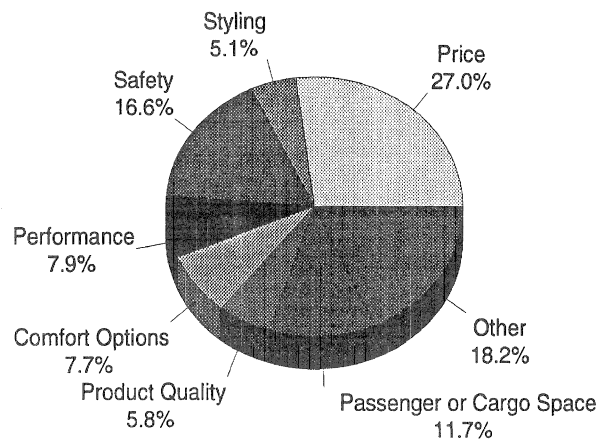
New Car Purchase
in Last 12 Months



Most Important Factor in New Car Purchase

Respondents who reported buying a new car in the last 12 months were asked: **We are interested in what you were looking for when you purchased your new car. What was the MOST IMPORTANT factor in making your final purchase decision?** A total of 189 respondents gave a valid response to this item. Over a quarter of respondents reported price as the most important factor in their purchase decision. One out of every six respondents indicated safety as the most important factor.

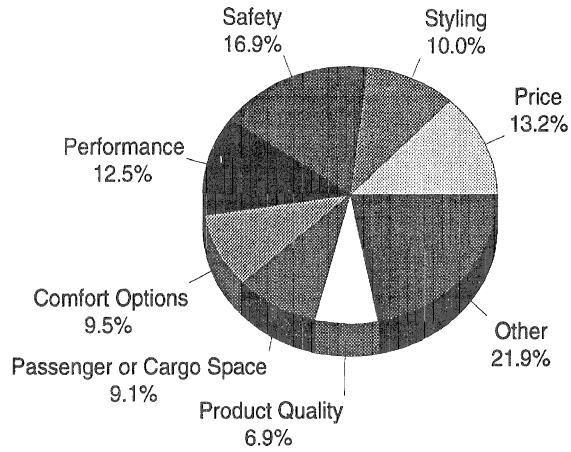
Most Important Factor in New Car Purchase



Second Most Important Factor in New Car Purchase

Respondents who reported buying a new car in the last 12 months were asked: **What was the NEXT MOST IMPORTANT factor in making your final purchase decision?** A total of 185 respondents gave a valid response to this item. One out of six respondents indicated that safety was the second most important factor in their purchase decision. About 13 percent of respondents reported that price and another 13 percent reported that performance was the second most important factor.

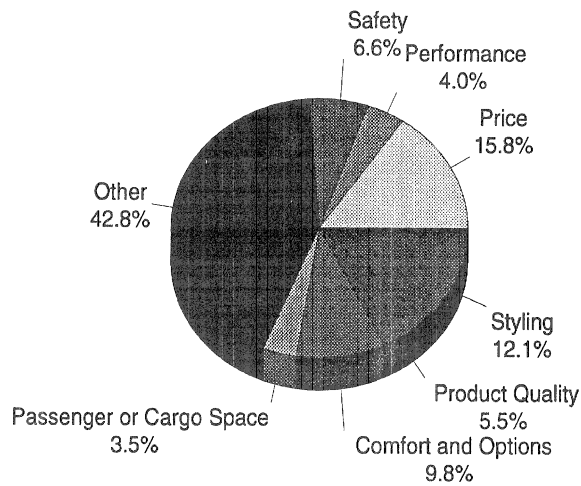
Second Most Important Factor in New Car Purchase



Third Most Important Factor in New Car Purchase

Respondents who reported buying a new car in the last 12 months were asked: **What was the THIRD MOST IMPORTANT factor in making your final purchase decision?** A total of 172 respondents gave a valid response to this item. About one of every six respondents reported that price was the third most important factor in their purchase decision and 12 percent reported that styling was the third most important factor.

Third Most Important Factor
in New Car Purchase



Discussion

In this section we summarize general findings from the 1995 survey, examine patterns in opinions and perceptions about traffic safety issues, and identify patterns in driving behavior.

There was a majority of support among residents of the state of Michigan for a number of traffic safety issues. These include:

- Graduated driver licensing for teenage drivers
- Curfew from 11 pm to 5 am for drivers under age 18
- Road test for new drivers
- Graduated driver licensing for older drivers
- Road test for older drivers
- Impounding vehicle owned by person with suspended driver license
- Confiscating license plate of vehicle owned by person with suspended driver license
- Locking vehicle owned by person with suspended driver license with tire boot or steering wheel lock

These results indicate support for policies that restrict driving privileges of potentially troublesome drivers. The support for graduated driver licensing for teenage drivers and curfews for drivers under age 18 has increased since 1992. The support for graduated driver licensing for older drivers remained at the very high levels reported in 1992.

Questions concerning road tests for new and older drivers and passenger restrictions for drivers under age 18 were new in this survey and their responses cannot be compared with responses from previous years. However, the pattern of support is consistent with an increasing tolerance for driving restrictions.

The questions concerned with policies toward persons with suspended driver licenses were also new in the current study. A majority of respondents indicated that the problem of driving with suspended licenses is either somewhat or very serious. There was strong support for all three methods of keeping drivers with suspended driver licenses off the road (i.e., impounding the vehicles, confiscating the vehicle license plate, and locking the vehicles owned

by such persons). Even among those respondents opposed to these policies, there was support for applying these actions to persons who were found to repeatedly drive with suspended licenses.

A majority of respondents perceived drunk driving as a somewhat serious problem in their community. This perception has not changed from previous surveys. The amounts of self-reported drinking, drinking to intoxication, and driving while intoxicated have not changed from previous survey years either. The current survey contained a new series of questions on getting home after drinking. When asked about using a "Safe Ride" service, a large majority of respondents indicated a willingness to use the service if it was free or offered at a reasonable price. A majority of respondents also reported having stopped an intoxicated person from driving. The most prevalent method used was taking the car keys.

The current survey asked a series of new questions on the importance of traffic safety. A large majority of respondents rated traffic safety as highly important and perceived traffic safety as more important than a "person's ability to travel." However, a majority felt that crime issues were more important to them than traffic safety in their every day lives.

Speeding is the most frequent violation of traffic law observed by respondents, but impaired driving was most frequently considered as the most serious traffic violation. A majority of respondents believed that police patrols are more effective than stricter laws in affecting driving behavior. However, respondents were about equally split in indicating that there are enough police patrols or that there should be more police patrols. Most respondents indicated that police patrols have neither increased nor decreased from last year.

Notable changes in driving behavior and perceptions from previous surveys include:

- Increase in driving speeds on Michigan's urban freeways
- Increase in self-reported safety belt use
- Increase in the perception that the freeways are in poor condition
- Increase in the perception that major roads are in poor condition

Similar to earlier surveys in this series, women generally voiced stronger support than men for traffic safety policies. Specifically, higher portions of women than men favored the following policies: more road patrols, graduated driver license for teenage drivers, and curfews for teenage drivers.

Compared with men, women assigned higher importance to traffic safety, and were more likely to consider traffic safety more important when compared with either a person's ability to travel or crime issues. Women also reported a higher use of safety belts than men and were more willing to use a "Safe Ride" system for transportation after drinking.

Women generally perceived existing and potential safety problems as more serious than men. For example, women were more likely than men to perceive the problem of drunk driving in their community and the problem of people driving with suspended licenses as very serious.

Men were more likely than women to report risk taking behavior. Men reported higher driving speeds on both urban and rural freeways. Men also reported drinking alcoholic beverages more frequently and drinking to intoxication more frequently. Men were also more willing than women to confront and prevent an intoxicated driver from driving.

This survey did not show much difference in opinions about traffic safety issues by age. An exception to this was that drivers aged 18-20 tended to oppose passenger limits for drivers under 18 and drivers over age 30 assigned higher levels of importance to traffic safety than younger drivers.

With respect to perceptions and behavior, drivers age 18-20 were most likely to consider impaired driving as the most serious traffic violation, but were also more likely than any other age group except that of age 21-30, to drink to intoxication. Drivers age 21-30 drove at higher speeds on rural freeways than did other drivers. In general, as age increased, driving speed decreased, and drivers over age 50 were more likely than younger drivers to consider speeding to be the most serious traffic violation.

There were several relationships between annual miles driven and respondent opinions and behaviors. Reported driving speed on urban freeways increased with the annual miles driven. The incidence of finding oneself too tired to drive also increased with annual miles driven. People who drove more than 25,000 in a year were more likely than others to have stopped an intoxicated person from driving. They also believed that the chance of an intoxicated adult driver being pulled over is very small.

We examined several items by reported driving speeds on Michigan's freeways. Those who drove fastest on urban freeways showed the least desire for more police patrols, yet indicated that police patrols were more effective than stricter laws in affecting driver behavior.

Results from the current survey provide important information about Michigan residents' traffic safety opinions and behaviors. This information can assist decision makers in their efforts to plan and implement new programs and policies and to evaluate existing programs and policies.

References

Eby, D.W., Streff, F.M., and Christoff, C. (1994). *Direct Observation of Safety Belt Use in Michigan: Fall 1994*. Ann Arbor, Michigan: The University of Michigan Transportation Research Institute.

Wagenaar, A.C., Streff, F.M., and Maybee, R. (1987). *Michigan Omnibus Survey: Summer 1987*. Ann Arbor, Michigan: The University of Michigan Transportation Research Institute.

Appendix A
Survey Questionnaire

DIAL.SCREEN

(INTERVIEWER: MAKE SURE YOU ARE TALKING TO SOMEONE 18+)

Hello, this is _____ calling on behalf of the University of Michigan in Ann Arbor. We are working on a study for the Transportation Research Institute. Your phone number has been chosen randomly to be included in the study, and we'd like to ask just a few questions.

Have I reached (###) ### - #### ?

- 1. CONTINUE
- 7. RETURN TO COVER SHEET (RNA, ANS MACH, REF, ETC.) --> TERMINATE

BUSINESS.CHECK

Have I reached a household or a business?

(PROBE: "Do you use this number for residential purposes?")

- 1. RESIDENCE (OR COMBINED RESIDENCE AND BUSINESS)
- 2. BUSINESS -----> BUSINESS
- 3. NONRESIDENTIAL NUMBER OR INELIGIBLE RESIDENCE ----> NONRES

(DO NOT READ)
DK (OR APPT)
REF

STATE

I would just like to confirm that this household is in the State of Michigan.

- 1. YES, HOUSEHOLD IS -----> NUM.TEL
- 2. NO, HOUSEHOLD IS NOT

BADSTATE

What state is this household in?

- 1. MICHIGAN
- 2. SOME OTHER STATE: PLEASE RECONFIRM AND GET AN --> STATE.TERM EXPLANATION AT TO WHY THIS NUMBER IS RINGING IN A DIFFERENT STATE. TALK TO SUPERVISOR IMMEDIATELY

N.OVER18

Our study requires that we interview only one adult randomly selected to represent your household.

How many members of your household, including yourself, are 18 years of age or older?

(PROBE FOR BEST ESTIMATE)

(USE F4 GENERAL HELP TO DETERMINE WHO LIVES THERE)

___ # OF PEOPLE OVER 18 (ENTER 97 IF 97 OR MORE)

DK (OR APPT)

REF

ONE.ADULT

Are you the adult?

1. YES --> GET.NAME
2. NO

GET.NAME

(IF THERE IS ONLY ONE ADULT, PLEASE ASK: May I have your first name?)

Next, could I have the first name of the adult who has had the MOST RECENT BIRTHDAY?

(IF NECESSARY: We ask for the FIRST NAME ONLY to make it easier to talk to that person over the phone. This assures that the study is confidential and anonymous. We ask for the adult with the most recent birthday as a way of randomly choosing somebody to participate in our study.)

GET.RESPONDENT

(RESPONDENT'S NAME IS -- RESPONDENT)

May I speak to that person please.

1. R. ALREADY ON PHONE
2. R. COMES TO PHONE
3. R. IS UNAVAILABLE (MAKE APPOINTMENT)
4. INFORMANT ON PHONE REFUSES TO COOPERATE FURTHER

INTRO1 IS READ FOR INFORMANTS WHO ARE RESPONDENTS

INTRO1

Great, you are the person I am supposed to interview. Our interview concerns many topics of interest, including questions about highway safety issues. I want to assure you that your answers to questions will be kept STRICTLY CONFIDENTIAL, and the survey results will be reported ANONYMOUSLY.

Please understand that your participation is voluntary, and that if I ask you any questions that you don't want to answer, just let me know and I'll go on to the next question.

INTRO2 IS READ FOR RESPONDENTS WHO COME TO PHONE

SEX

(INTERVIEWER: PLEASE ENTER THE GENDER OF THE RESPONDENT HERE)

(IF NECESSARY: I'm sorry, but I am required to ask all questions I see on the screen. What is your gender?)

1. MALE
2. FEMALE

DK
REF

AGE

And how old are you now? (What was your age at your last birthday?)

___ age of respondent
97=97 or older

Q1

About how many miles did you drive a motor vehicle in the last year?

(PROBE: Could you please give me your best estimate?)

(INTERVIEWER: IF R DOESN'T DRIVE, HIT "0" AND HIT "ENTER")

___ # of miles 999,997 = 999,997 OR MORE

000000 = 000000 OR DON'T DRIVE ----> Q4

DK
REF

Q2

How fast do you generally drive on Michigan's urban freeways?

(PROBE: How many miles per hour is that?

OR: Could you please give me your best estimate?)

_____ miles per hour
997= 997 OR MORE

DK
REF

Q3

How fast do you generally drive on Michigan's rural freeways?

(PROBE: How many miles per hour is that?

OR: Could you please give me your best estimate?)

_____ miles per hour
997= 997 OR MORE

DK
REF

Q4

Currently the speed limit on Michigan's urban freeways is 55 miles per hour. Where the limit is 55, how fast do you think you have to be driving before police using radar at the roadside will stop you and give you a ticket?

_____ miles per hour
(997=997 OR MORE)

Q5

Currently the speed limit on Michigan's rural freeways is 65 miles per hour. Where the limit is 65, how fast do you think you have to be driving before police using radar at the roadside will stop you and give you a ticket?

_____ miles per hour
(997=997 OR MORE)

Q6

Do you think there are enough police patrolling the roads in Michigan looking for traffic violations, or should there be more police or fewer police patrolling the roads?

- 1. MORE
- 2. ENOUGH
- 3. FEWER
- DK
- REF

Q7

How long do you think it takes EMS (Emergency Medical Services or an ambulance) to respond to a traffic crash site after being called by 9-1-1?

0 MI = LESS THAN ONE MINUTE

* CORRECT UNITS ARE AS FOLLOWS: *

* SECONDS--> SE HOURS --> HR *
* MINUTES--> MI DAYS --> DY *

_____ SECONDS, MINUTES, HOURS, DAYS

Q8

In general, do you think the freeways in Michigan are in good condition, average condition or poor condition?

- 1. GOOD
- 2. AVERAGE
- 3. POOR
- DK
- REF

Q9

How about the condition of major roads in your area?
(Do you think the major roads in your area are in good condition, average condition or poor condition?)

- 1. GOOD
- 2. AVERAGE
- 3. POOR
- DK
- REF

RESPONDENTS WHO DON'T DRIVE SKIP TO Q11
Q10

Have you ever been driving and found yourself too tired to drive or
have startled yourself awake?

1. YES
2. NO ----> Q11
- DK -----> Q11
- REF

Q10.A

What did you do the last time you found yourself too tired
to drive?

(DO NOT READ LIST. CHOOSE ONLY ONE ANSWER)

1. PULLED OVER
2. CHANGED DRIVERS
3. ROLLED DOWN WINDOW
4. GOT COFFEE
5. TOOK PEP PILLS OR NODOZE
6. HURRIED / WENT FASTER
7. KEPT GOING
8. OTHER (SPECIFY _____)

Q11

Can you tell me how often you use a safety belt? Would you say
always, most of the time, sometimes, seldom, or never?

1. ALWAYS
2. MOST OF THE TIME
3. SOMETIMES
4. SELDOM
5. NEVER
- DK
- REF

Q12

Some have suggested that teenage drivers should progress to full driving privileges gradually. In this system, beginning drivers would be allowed to move from one level of driving privilege to another based on both experience and demonstrated skill.

Do you FAVOR or OPPOSE such a graduated licensing system for teenage drivers?

- 1. FAVOR
- 2. OPPOSE
- DK
- REF

Q13

Would you favor or oppose a law that would prevent persons under the age of 18 from driving between 11 o'clock at night and 5 o'clock in the morning unless they could show a need to drive to or from school or work?

- 1. FAVOR ---> Q14
- 2. OPPOSE
- DK -----> Q14
- REF

Q13.A

Would you favor or oppose a curfew that started at midnight and continued until 5 o'clock in the morning?

- 1. FAVOR
- 2. OPPOSE
- DK
- REF

Q13.B

Would you favor or oppose such a curfew for young drivers who have a poor driving history?

- 1. FAVOR
- 2. OPPOSE
- DK
- REF

Q14

Would you favor or oppose a law that would restrict a driver under the age of 18 to driving with no more than one or two passengers?

- 1. FAVOR ---> Q15
- 2. OPPOSE
- DK -----> Q15
- REF

Q14.A

Would you favor or oppose such a passenger limit for young drivers who have a poor driving history?

- 1. FAVOR
- 2. OPPOSE
- DK
- REF

Q15

Some have suggested that older drivers should gradually reduce the amounts and kinds of driving they do based on their driving ability. In a "graduated licensing system" older drivers would be required to take more frequent driver examinations to identify driving-related problems and driving would be restricted if problems were identified.

Do you favor or oppose such a graduated licensing system for older drivers?

- 1. FAVOR
- 2. OPPOSE
- DK
- REF

Q16

Does anyone in your family have trouble driving safely because their driving ability has been affected by their advancing age?

- 1. YES
- 2. NO
- DK
- REF

Q17

Would you favor or oppose the Department of State using a road test to determine if new drivers are fit to get their driving license?

- 1. FAVOR
- 2. OPPOSE
- DK
- REF

Q18

Would you favor or oppose the Department of State using a road test to determine if older drivers are fit to have their driving license renewed?

- 1. FAVOR
- 2. OPPOSE
- DK
- REF

Q19

On a scale of 1 to 10, where 1 means NOT AT ALL IMPORTANT, and 10 means MOST IMPORTANT, how important is traffic safety to you?

1 -- 2 -- 3 -- 4 -- 5 -- 6 -- 7 -- 8 -- 9 -- 10
NOT AT ALL MOST
IMPORTANT IMPORTANT

-
- DK
- REF

INTRO.Q20

I am going to give you two pairs of social issues. For each of the pairs, I would like you to tell me which issue is more important to your own everyday life.

Q20

Which issue is more important to your every day life --
Crime or Traffic safety?

1. CRIME
2. TRAFFIC SAFETY
- DK
- REF

Q21

Which issue is more important to your every day life --
A person's ability to travel or Traffic safety?

(IWER: NOTE ANY COMMENTS FOR THE NEXT SCREEN)

(IF RESPONDENT DOES NOT UNDERSTAND QUESTION, REPEAT, PROBE
AND NOTE SO IN FOLLOWING COMMENT SCREEN)

1. A PERSON'S ABILITY TO TRAVEL
2. TRAFFIC SAFETY
- DK
- REF

Q21.COMM

(IWER: PLEASE NOTE ANY VOLUNTEERED RESPONSES TO THE PREVIOUS
QUESTION HERE, E.G., "Driving is not a right...It's a
privilege, Could not understand question, etc.".)

(F5 FOR NO COMMENT)

Q22

How serious do you think the drunk driving problem is in your
community -- would you say it is very serious, somewhat serious,
or not at all serious?

1. VERY SERIOUS
2. SOMEWHAT SERIOUS
3. NOT AT ALL SERIOUS
- DK
- REF

Q23

If an adult has been drinking and their blood alcohol level is over the limit for driving when intoxicated (.10 percent), how likely is that person to be pulled over by the police?

Would you say there is almost no chance they will get pulled over; it is unlikely but it happens sometimes; there is a good chance of getting pulled over; they will be pulled over nearly every time; or they will always get pulled over?

1. ALMOST NO CHANCE
 2. UNLIKELY, BUT IT HAPPENS SOMETIMES
 3. A GOOD CHANCE
 4. NEARLY EVERY TIME
 5. ALWAYS
- DK
REF

Q24

If a person under age 21 has been drinking, how likely is that person to be pulled over by the police?

Would you say there is almost no chance they will get pulled over; it is unlikely but it happens sometimes; there is a good chance of getting pulled over; they will be pulled over nearly every time; or they will always get pulled over?

1. ALMOST NO CHANCE
 2. UNLIKELY, BUT IT HAPPENS SOMETIMES
 3. A GOOD CHANCE
 4. NEARLY EVERY TIME
 5. ALWAYS
- DK
REF

INTRO.Q25

For the purpose of the following questions, when I say one drink, I mean one 12-ounce can or bottle of beer, or one 4-ounce glass of wine, or 1 drink with 1-1/2 ounces of liquor.

Q25

How often would you say you drink alcoholic beverages? Would you say that you never drink, that you drink once or twice a year, once or twice a month, once a week, more than once a week, or every day?

1. NEVER DRINK -----> Q29PRE
 2. DRINK 1-2 TIMES A YEAR
 3. DRINK 1-2 TIME A MONTH
 4. ONCE A WEEK
 5. MORE THAN ONCE A WEEK
 6. EVERY DAY
- DK
REF

Q26

Thinking about any drinking you may have done in the last two weeks, how many times did you have 5 or more drinks on a single occasion?

- ____ TIMES IN THE LAST TWO WEEKS
- DK
REF

Q27

The last time you had 5 or more drinks on a single occasion, where were you drinking?

(DO NOT READ LIST.)

- | | |
|-----------------------|---------------------------------|
| 01. OWN HOME | 07. AT WORK |
| 02. OTHER'S HOME | 08. PARKED CAR |
| 03. TAVERN/BAR | 09. CAR, WHILE DRIVING |
| 04. RESTAURANT W/MEAL | 10. OUTDOORS (HUNTING, FISHING) |
| 05. PRIVATE CLUB | 11. SPORTS EVENT |
| 06. SOCIAL EVENT | 12. OTHER _____ (SPECIFY) |

DK
REF

Q28

On that occasion, did you drive after drinking?

1. YES --> Q29PRE
2. NO
- DK -----> Q29PRE
- REF

Q28.A

Did you use a designated driver?

1. YES
2. NO
- DK
- REF

INTRO.Q29

(Even though you said you don't drive and/or drink...)

...Imagine the following situation. You have driven to a local restaurant to meet some friends for dinner. As you are leaving the restaurant, you notice the effects of the wine you had with dinner. In other words, you are feeling a bit drunk.

As it happens, the restaurant manager also takes note of your condition and offers to call the local "safe ride" service offered to drivers who have been drinking. Your friends have already left and it's too far to walk home.

Q29

If the "Safe ride" service was offered to you for free, would you accept the offer and use the service to get home?

1. YES
2. NO ---> Q29.B
- DK -----> Q30
- REF

Q29.A

How much would you be willing to pay each time you used the "Safe ride" service?

(IWER: ENTER THE DECIMAL POINT, E.G. 00.00)

-- * --

GO TO Q30

Q29.B

Why would you choose not to use the "Safe ride" service?

(DO NOT READ LIST)

1. DON'T WANT TO LEAVE CAR
2. OTHER (SPECIFY _____)

Q30

If the "Safe ride" service was offered to you at a "reasonable" cost, would you accept the offer and use the service to get home?

1. YES
2. NO
- DK
- REF

Q31

Have you ever stopped someone from driving who you thought had too much to drink?

1. YES
2. NO ----> Q32
- DK -----> Q32
- REF

Q31.A

How did you stop them?

(DO NOT READ LIST)

1. TOOK THEIR KEYS
2. OFFERED THEM A RIDE / OFFERED TO DRIVE
3. THREATENED TO CALL THE POLICE
4. OTHER (SPECIFY _____)

Q32

If a person is not using a safety belt and is stopped for speeding, how likely is it that they will get a ticket for not having a safety belt on?

Would you say there is almost no chance of getting a ticket; it is unlikely but it happens sometimes; there is a good chance of getting a ticket; they will get a ticket nearly every time; or they will always get a ticket for not having a safety belt on?

1. ALMOST NO CHANCE
 2. UNLIKELY, BUT IT HAPPENS SOMETIMES
 3. A GOOD CHANCE
 4. NEARLY EVERY TIME
 5. ALWAYS
- DK
REF

Q33

Based on your own experience, how effective do you think traffic safety education efforts targetting adult drivers with billboards, radio messages, and television spots are in getting you to drive more safely?

Would you say these educational programs are very effective, somewhat effective, or not at all effective in getting you to drive more safely?

1. VERY EFFECTIVE
 2. SOMEWHAT EFFECTIVE
 3. NOT AT ALL EFFECTIVE
- DK
REF

Q34

Based on your own experience, which is more effective in influencing your own driving behavior, stricter laws regulating driving or more police patrolling the roads?

1. STRICTER LAWS
 2. MORE POLICE PATROLS
- DK
REF

Q35.

Based on your own observations, what traffic law do you see violated most often?

(DO NOT READ LIST. CHOOSE ONE ONLY: PROBE APPROPRIATELY)

1. SPEEDING
2. RUNNING A STOP SIGN
3. RUNNING A RED LIGHT
4. NOT WEARING A SEAT BELT
5. OTHER (SPECIFY _____)

Q36

In your opinion, what traffic law violation is most serious in terms of causing crashes?

(DO NOT READ LIST. CHOOSE ONE ONLY: PROBE APPROPRIATELY)

1. SPEEDING
2. DRUNK DRIVING
3. RUNNING A STOP SIGN
4. RUNNING A RED LIGHT
5. FAILURE TO YIELD (THE RIGHT OF WAY)
6. TAILGATING (FOLLOWING TOO CLOSELY)
7. RECKLESS DRIVING
8. OTHER (SPECIFY _____)

Q37

To what extent do you think people driving while their driving license is suspended is a problem in Michigan?

Would you say it is very serious, somewhat serious, or not at all serious?

1. VERY SERIOUS
2. SOMEWHAT SERIOUS
3. NOT AT ALL SERIOUS
- DK
- REF

Q38

Do you favor or oppose impounding vehicles owned by persons whose licenses are under suspension as a means to prevent these persons from driving?

- 1. FAVOR ---> Q39
- 2. OPPOSE
- DK -----> Q39
- REF

Q38.A

Would you favor or oppose impounding vehicles owned by persons who are repeatedly found to be driving while their licenses are under suspension as a means to prevent these persons from driving?

- 1. FAVOR
- 2. OPPOSE
- DK
- REF

Q39

Do you favor or oppose confiscating the license plate of vehicles owned by persons whose licenses are under suspension as a means to prevent these persons from driving?

- 1. FAVOR ---> Q40
- 2. OPPOSE
- DK -----> Q40
- REF

Q39.A

Would you favor or oppose confiscating the license plate of vehicles owned by persons who are repeatedly found to be driving while their licenses are under suspension as a means to prevent these persons from driving?

- 1. FAVOR
- 2. OPPOSE
- DK
- REF

Q40

Do you favor or oppose locking vehicles owned by persons whose licenses are under suspension with a tire boot or steering wheel lock as a means to prevent these persons from driving?

1. FAVOR ----> Q41
2. OPPOSE
- DK -----> Q41
- REF

Q40.A

Would you favor or oppose locking vehicles owned by persons who are repeatedly found to be driving while their licenses are under suspension?

1. FAVOR
2. OPPOSE
- DK
- REF

Q41

Compared to last year, do you think police road patrols in Michigan have increased, decreased or remained about the same?

1. INCREASED
2. DECREASED
3. ABOUT THE SAME
- DK
- REF

Q42

Are there any special traffic safety programs under way in your area?

1. YES
2. NO ----> Q43
- DK -----> Q43
- REF

Q42.A

What was the focus of the program?

(DO NOT READ LIST -- CHECK ALL THAT APPLY)

- 1. DRUNK DRIVING
- 2. SPEEDING
- 3. SAFETY BELT USE
- 4. SCHOOL ZONE SAFETY
- 5. PEDESTRIAN SAFETY
- DK
- REF

Q43

Did you buy a new car in the last 12 months?

- 1. YES
- 2. NO ---> EDUC
- DK -----> EDUC
- REF

Q43.A

We are interested in what you were looking for when you purchased your new car. What was the MOST IMPORTANT factor in making your final purchase decision?

(DO NOT READ LIST)

- | | |
|------------------------|---------------------------|
| 01. PRICE | 07. COMFORT OPTIONS |
| 02. STYLING | 08. PASSENGER SPACE |
| 03. FUEL ECONOMY | 09. CARGO SPACE |
| 04. SAFETY | 10. PRODUCT QUALITY |
| 05. MAKER'S REPUTATION | 11. STATUS APPEAL |
| 06. PERFORMANCE | 12. FOUR WHEEL DRIVE |
| | 13. OTHER _____ (SPECIFY) |

DK
REF

Q43.B

What was the NEXT MOST IMPORTANT factor
in making your final purchase decision?

(DO NOT READ LIST)

- | | |
|------------------------|---------------------------|
| 01. PRICE | 07. COMFORT OPTIONS |
| 02. STYLING | 08. PASSENGER SPACE |
| 03. FUEL ECONOMY | 09. CARGO SPACE |
| 04. SAFETY | 10. PRODUCT QUALITY |
| 05. MAKER'S REPUTATION | 11. STATUS APPEAL |
| 06. PERFORMANCE | 12. FOUR WHEEL DRIVE |
| | 13. OTHER _____ (SPECIFY) |

DK
REF

Q43.C

What was the THIRD MOST IMPORTANT factor
in making your final purchase decision?

(DO NOT READ LIST)

- | | |
|------------------------|---------------------------|
| 01. PRICE | 07. COMFORT OPTIONS |
| 02. STYLING | 08. PASSENGER SPACE |
| 03. FUEL ECONOMY | 09. CARGO SPACE |
| 04. SAFETY | 10. PRODUCT QUALITY |
| 05. MAKER'S REPUTATION | 11. STATUS APPEAL |
| 06. PERFORMANCE | 12. FOUR WHEEL DRIVE |
| | 13. OTHER _____ (SPECIFY) |

DK
REF

EDUC

Now I would like to ask a few general questions about you.

What is the highest grade of school or year of college you
completed?

___ years of school
17=graduate work

HIGHS

Did you get a high school diploma or pass a high school equivalency test?

1. YES
2. NO

DK
REF

COLL

Do you have a college degree?

1. YES
2. NO

DK
REF

ELECT

In the last presidential election, you remember that George Bush ran on the Republican ticket, Bill Clinton on the Democratic ticket, and Ross Perot as an independent. Do you remember whether or not you voted in that election?

(DO NOT READ)

1. YES DID VOTE
2. NO DID NOT VOTE
3. NOT OF VOTING AGE IN 1992
4. DO NOT REMEMBER
5. INAPPROPRIATE (RESIDENT ALIEN, ETC)

REF

INCOME

To get a picture of people's financial situation, we need to know the general range of incomes of all people we interview. Now, thinking about your or your family's total income from all sources (including your job), did you (or your family) receive \$25,000 or more in 1994?

1. YES
2. NO ---> INC3

DK -----> END.STATEMENT
REF

INC1

Was it \$35,000 or more?

1. YES
2. NO ---> END.STATEMENT

DK -----> END.STATEMENT
REF

INC2

Was it \$50,000 or more?

1. YES
2. NO

DK
REF

INC3

Was it \$5,000 or more?

1. YES
2. NO ---> END.STATEMENT

DK -----> END.STATEMENT
REF

INC4

Was it \$15,000 or more?

1. YES
2. NO

DK
REF

END.STATEMENT

That is all the questions I have. Thank you very much for your time and help with our research.

(INTERVIEWER: IF R WANTS TO RECEIVE THE RESULTS, PLEASE ENTER "7"
AND ENTER THE NAME AND ADDRESS ON THE NEXT SCREEN)

1. END INTERVIEW -----> FINISH
7. R WANTS TO RECEIVE RESULTS

RECEIVE

(PLEASE ENTER THE NAME ON THE FIRST LINE, HIT RETURN,
ENTER ADDRESS ON SECOND, HIT RETURN, AND CITY AND ZIP
ON THIRD)

Appendix B

Description of Sample Design¹

¹The author of this appendix is Thomas P. Duffy, Jr. of Information Transfer Systems, Incorporated.

Technical Report on the Sampling Methodology Utilized in the 1995
Michigan Omnibus Traffic Safety Survey

Prepared by:
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August 18, 1995

Introduction

The 1995 Michigan Omnibus Traffic Safety Survey was a statewide study of driving habits, and opinions regarding traffic safety and laws. The survey was conducted in June and July, 1995, by Information Transfer Systems, Inc., of Ann Arbor. The survey used an equal probability of selection (epsem) random digit dialing (RDD) design. The sample frame was all residential telephone numbers ringing into households in Michigan. Within each sample household, the adult respondent was randomly chosen from all resident adults 18 years of age or older. The frame was provided by Survey Sampling, Incorporated (SSI), as described below.

The Sample Design

The previous wave of the Omnibus Traffic Safety Survey, conducted by the University of Michigan Institute for Social Research in 1992, selected a sample from the Listed Hundred Series frame using the GENESYS sampling system. The GENESYS system selects epsem RDD samples from a frame consisting of all possible working block combinations ("hundred series," i.e. the first two digits of the last four in a phone number) known to contain at least two listed household numbers.

The sampling design implemented by ITS in the Omnibus Traffic Safety Survey utilized SSI's equal probability of selection method (EPSEM). The SSI EPSEM method uses all possible area code, exchange, and working block combinations known to contain at least one working household number. As a result, all telephone households in the geographic sampling frame, both with listed and unlisted numbers, are given equal probability of selection, within the limits of available data. This epsem approach produces element or simple random samples (SRS) rather than clustered samples. This yields an effective sample size that is identical to the actual sample size, not less, as in clustered designs. The SSI database of working banks is updated frequently, reducing the possibility that this list-assisted approach may overlook recently-introduced working banks.

Once all potential working block combinations are identified, randomly selected two-digit numbers are appended to the area code, exchange, and working block combination to form complete telephone numbers. Samples selected with the EPSEM method are not checked against SSI's universe of business telephone numbers to remove unknown business numbers, and EPSEM samples are not subject to SSI's Protection System to prevent previously selected numbers from further selection for a period of about one year. Thus, important and potentially severe sampling biases are avoided by the EPSEM method which are routinely imposed by most RDD sample vendors.

Based on studies using these samples, SSI has found that the general pattern of these EPSEM list-assisted RDD samples closely resembles one derived from a well known and respected national random digit dialing telephone survey conducted at the Survey Research Center of the University of Michigan (Robert M. Groves, "An Empirical Comparison of Two Telephone Sample Designs," *Journal of Marketing Research*, November, 1978 pp. 622-31). This study estimated national block density of both listed and unlisted residential phones and showed a mode of about 0.75. The ratio of all telephones to listed phone households is 1.23. Applying this adjustment to 0.6 (the approximate mode of listed residential density) produces an estimated chance of hitting a phone household of 0.74. The close correspondence between the SSI curves, based on listed residences, and the Groves curve, based on all telephone households, lends empirical support to an important assumption underlying the SSI's EPSEM sample approach, that the assignment of numbers to households is made independently of their publication status in the directory.

Once the sample was purchased from SSI, sample control procedures began by generating a series of random replicates (or subsamples) from the total sample of numbers for the geographic area, in this case the State of Michigan, with each replicate containing 10 phone numbers. Replicates can be of any size ITS defines, but experience with similar studies suggests that a replicate size of 10 is sensible since it allows us to control quite closely the final sample size while still maintaining the probability nature of the design.

At the beginning of the study, a moderate number of replicates was released to the system and additional replicates were introduced as the initial replicates were resolved (by completed interviews, firm refusals, or other final dispositions). Interviewing continued until all numbers in all replicates released to the system had been disposed of, and did not stop when a target number of completed interviews was reached. This explains the high number of interviews achieved, since the cooperation rate and working number rate were higher than expected. This also guaranteed that the final sample was a genuine probability sample of the population rather than a quota sample.

When a residential number was successfully contacted, the number of household members 18 years of age or older was determined. The informant on the phone was then asked to give the first name of the adult who had had the most recent birthday at the time of the initial contact. The "most recent birthday" procedure does not involve a listing of all household members, as some other procedures do; however, if the date of initial contact is random, or the "assignment" of birthdays in a household is random, and the interviewer provides correct information, this method results in a probability sample.¹

The advantage of this method is that it avoids the difficulties, and sense of intrusion of privacy, that sometimes result from using a household roster method. One disadvantage is that it often produces a disproportionate number of women in the sample. On the other hand, this method has been shown to produce higher response rates. The tradeoff, then, is usually between coverage error versus nonresponse error. However, the use of a household listing in the previous wave of the Omnibus State Traffic Safety Survey also produced a disproportionately high number of women in the sample. The higher cooperation rate achieved in the present rate would seem to justify having used the "birthday" selection method.

Final Sample Dispositions

A total of 2256 numbers were released into ITS's CATI system for calling. This figure was based upon some initial assumptions about expected response rates and working number rates. The study called for 750 completed interviews. Initial estimates of a 70% cooperation rate among successful contacts, and a working number/eligible household rate of 47.5%, yielded an estimate of 2256 numbers necessary to complete the study.

The final sample dispositions of all numbers are as follows in Table 1:

¹ Groves, Robert M. and Lars E. Lyberg, "An Overview of Nonresponse Issues in Telephone Surveys," in Groves, et. al., ed., Telephone Survey Methodology, New York: Wiley, 1988, pp.207-208.

Table 1: Final Sample Dispositions

| <u>Final Disposition</u> | <u>Expected Number</u> | <u>Actual Number</u> |
|----------------------------|------------------------|----------------------|
| Completed Interview | 750 | 810 |
| Refusal | 322 | 222 |
| Cooperation rate | 70% | 78.5% |
| Non-Sample | | 1054 |
| Non-Working Number | | 701 |
| Business | | 286 |
| Nonresidential Number | | 11 |
| Ineligible Residence | | 12 |
| Non-English Speaker | (not able to complete) | 17 |
| Incapacitated R. | (not able to complete) | 27 |
| Non-Interviews | | 170 |
| R. Not Available | | 13 |
| Closed-out Ans. Mach. | | 34 |
| Closed-out RNA | | 123 |
| Non-Sample+Non-Int. | 1184 | 1224 |
| Working No. Rate | 47.5% | 47.7% |

The cooperation rate, which attempts to measure interviewer success at completing interviews with eligible, able respondents: $(\text{interviews}/(\text{interviews}+\text{refusals})) = (810/810+222) = 78.5\%$. The expectation had been a cooperation rate of 70%. Other response rate calculations can be derived using the result code data in the table above.

For the purposes of this study, given budget constraints and the scope of the work, non-English speaking respondents ($n=17$) and respondents incapacitated due to illness, injury or age ($n=27$), were not counted as sample numbers.

The "working number rate," or rate at which the sample provided numbers ringing into households: $(\text{interviews}+\text{refusals}+\text{non-English speaker}+\text{incapacitated R}/\text{total sample}) = (810+222+17+27/2256) = 47.7\%$. The expectation had been a rate of 47.5%.

Sampling Weights

A weight variable was constructed to adjust for unequal probabilities of selection, and to post-stratify the sample so that it would more closely match the actual population in terms of age and gender.

In an RDD sample with equal probabilities of selection, all phone numbers in the population have an equal chance of being selected into the sample. However, since the survey randomly selected one adult to be interviewed at each household, two factors create disproportionate probabilities of selection: the number of residential phone numbers ringing into the household, and the total number of adults living in the household at the time of contact.

WEIGHT1 is a variable combining both the household and person level sampling weights; it was constructed by taking the number of adults in the household over the number of residential phone lines in the household, all divided by the mean of this weight: $(\text{no. adults}/\text{no. phones})/\text{mean of hh and person wghts}$.

WEIGHT2 is an intermediate level weight used in the construction of the final weight variable, and it should not be used in analysis. WEIGHT2 multiplied each person's household and person level weight (WEIGHT1) by a post-stratification factor. This value was then divided by the mean of all post-stratification weights to produce the final, centered weight variable, FWEIGHT. It is the weight variable that should be used when conducting weighted analysis of the data.

Post-stratification is desirable since it helps reduce non-response and non-coverage biases, and improves the precision of survey estimates. The post-stratification variables were gender and age. The sample was adjusted to reflect the population of Michigan based on 1990 US Census data. The post-stratification factors are listed below in Table 2.

Table 2: Post-Stratification Factors

| MALES | | FEMALES | |
|-----------|------------|-----------|------------|
| Age Group | Adjustment | Age Group | Adjustment |
| 18-24 | 1.11566 | 18-24 | 0.75873 |
| 25-29 | 1.27286 | 25-29 | 1.31914 |
| 30-39 | 1.17818 | 30-39 | 1.16 |
| 40-49 | 0.90592 | 40-49 | 0.65394 |
| 50-59 | 1.044 | 50-59 | 0.91309 |
| 60 + | 1.15892 | 60 + | 1.20558 |

Table 3 shows the proportions of men and women in each age group when the sample has been weighted only by WEIGHT1, the household and person level sampling weight.

Table 3: Sex by Age Group Distributions without Post-Stratification Factor

| | Age Group | | | | | |
|----------------|-----------|-------|-------|-------|-------|------|
| | 18-24 | 25-29 | 30-39 | 40-49 | 50-59 | 60 + |
| Males | | | | | | |
| Census | 7.3 | 5.5 | 11.2 | 8.5 | 5.8 | 9.3 |
| Sample | 6.7 | 4.4 | 9.7 | 9.5 | 5.7 | 8.2 |
| Females | | | | | | |
| Census | 7.4 | 5.7 | 11.6 | 8.8 | 6.2 | 12.8 |
| Sample | 9.9 | 4.4 | 10.2 | 13.7 | 6.9 | 10.8 |

Table 4 shows the proportion of men and women in each age group when the sample has been weighted by FWEIGHT, which adds a post-stratification factor to WEIGHT1.

Table 4: Sex by Age Group Distributions with Post-Stratification Factor

| | Age Group | | | | | |
|----------------|-----------|-------|-------|-------|-------|------|
| | 18-24 | 25-29 | 30-39 | 40-49 | 50-59 | 60 + |
| Males | | | | | | |
| Census | 7.3 | 5.5 | 11.2 | 8.5 | 5.8 | 9.3 |
| Sample | 7.3 | 5.6 | 11.2 | 8.4 | 5.8 | 9.3 |
| Females | | | | | | |
| Census | 7.4 | 5.7 | 11.6 | 8.8 | 6.2 | 12.8 |
| Sample | 7.3 | 5.6 | 11.6 | 8.8 | 6.3 | 12.7 |

These distributions are taken across the entire sample, including those cases for which age was refused or not answered for some reason, therefore the distributions are slightly off the census proportions in a few subgroups.

Appendix C
Confidence Interval Bands for Univariate Percentages

| Confidence Interval Bands for Univariate Percentages | | | | | |
|--|---------|-------|-------|-------|------|
| Unweighted N | Percent | | | | |
| | 10/90 | 20/80 | 30/70 | 40/60 | 50 |
| 0 | 10.0 | 20.0 | 30.0 | 40.0 | 50.0 |
| 50 | 4.2 | 5.7 | 6.5 | 6.9 | 7.1 |
| 100 | 3.0 | 4.0 | 4.6 | 4.9 | 5.0 |
| 150 | 2.4 | 3.3 | 3.7 | 4.0 | 4.1 |
| 200 | 2.1 | 2.8 | 3.2 | 3.5 | 3.5 |
| 250 | 1.9 | 2.5 | 2.9 | 3.1 | 3.2 |
| 300 | 1.7 | 2.3 | 2.6 | 2.8 | 2.9 |
| 350 | 1.6 | 2.1 | 2.4 | 2.6 | 2.7 |
| 400 | 1.5 | 2.0 | 2.3 | 2.4 | 2.5 |
| 450 | 1.4 | 1.9 | 2.2 | 2.3 | 2.4 |
| 500 | 1.3 | 1.8 | 2.0 | 2.2 | 2.2 |
| 550 | 1.3 | 1.7 | 2.0 | 2.1 | 2.1 |
| 600 | 1.2 | 1.6 | 1.9 | 2.0 | 2.0 |
| 650 | 1.2 | 1.6 | 1.8 | 1.9 | 2.0 |
| 700 | 1.1 | 1.5 | 1.7 | 1.9 | 1.9 |
| 750 | 1.1 | 1.5 | 1.7 | 1.8 | 1.8 |
| 800 | 1.1 | 1.4 | 1.6 | 1.7 | 1.8 |
| 810 | 1.1 | 1.4 | 1.6 | 1.7 | 1.8 |

