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16. Abstract

This report presents findings from the first Motor Vehicle Occupant Safety Survey. The National Highway Traffic Safety Administration (NHTSA) conducted this survey to collect critical information needed by the agency to develop and implement effective countermeasures to improve highway traffic safety. Two different versions of the questionnaire were used, one giving special attention to safety belt use and the other to child safety seats. Other issues covered include motor vehicle crash and injury experience, airbags, bicycle and motorcycle helmet use, speeding, and drinking and driving. The survey was administered to 8,000 respondents age 16 and older, 4,000 per version of the questionnaire.

The survey results show that 23 percent of the population age 16 and older, or more than 45 million youth and adults, have sustained a motor vehicle crash injury that required medical attention.

The survey results also show that safety belt use continues to rise. Nearly three-fourths of drivers report using their belts all the time, but some of these drivers admit to not having used their belt at some time in the past year. Among self-reported "most of the time" belt users, 40 percent did not buckle up while driving in the past day.

The survey also indicates that most children are placed in child safety seats when they are very young (under age two), but that use of the car seat declines precipitously as the child grows larger. Many small children who should still be using car seats are not.

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EXECUTIVE SUMMARY

The National Highway Traffic Safety Administration (NHTSA) conducted the Motor Vehicle Occupant Safety Survey in October and November 1994. Its purpose was to collect critical information needed by NHTSA to develop and implement effective countermeasures that meet the Agency's mandate to improve highway traffic safety. Two different versions of the questionnaire were used, one giving special attention to safety belt use and the other to child safety seats, with some questions included on both versions. Other issues covered include motor vehicle crash and injury experience, airbags, bicycle and motorcycle helmet use, speeding, and drinking and driving. Approximately 4,000 interviews were conducted using each version of the questionnaire, for a total of 8,113 interviews with a national sample of youth and adults age 16 and older.

Motor Vehicle Crashes and Injuries

The survey results document the magnitude of the problem of injuries caused by motor vehicle crashes. Nearly one quarter (23%) of the public age 16 and older--more than 45 million people--have, at some point in their lives, been in a vehicle crash in which they received an injury requiring medical attention. For many of these persons, the injury had a long-term effect: 61%, or an estimated 28 million people, had injuries that prevented them from performing their normal activities for at least a week, and 13%, or an estimated 6 million people, experienced long-term impairment such that they were unable to resume some activities even a year after the crash.

In the past year alone, 2% of people age 16 and older--an estimated 4 million youth and adults--were involved as a driver or passenger in a motor vehicle crash that resulted in death or injury requiring medical attention (although they, personally, may or may not have been injured in the crash). Persons 16-24 years old are substantially overrepresented among both drivers and passengers in these serious crashes.

Safety Belt Use

The survey data indicate that safety belt use continues to rise, but that even some who report using their belt "all the time" admit to lapses in use within the past year. Seventy-four percent of drivers report using their safety belt all the time (when driving their primary vehicle) and 13% say they use their belt most of the time. However, 4% of all-the-time belt users also say that they drove at some time within the past day without wearing their belt and another 4% say they did so within the past week. Of drivers who report using their belt most of the time, 40% say they drove within the past day without wearing their safety belt.

Factoring in the occasional non-use by reported all-the-time belt users yields the following revised national estimates of safety belt use: 62% of drivers wear their safety belt all the time, another 13% say they wear their belt all the time but have driven without it on at some time in the past year ("all the time minus"), 13% wear their belt most of the time, and 6% rarely or never wear their safety belt.

Two specific survey findings support the notion that safety belt use continues to rise. First, more than a fourth of drivers (27%) say they have increased their safety belt use in the past year--most often because of increased safety awareness or safety belt laws--compared with only 1% who report having reduced it. Second, reported safety belt use at the time of a serious vehicle crash has risen steadily from less than 20% of drivers and 10% of passengers in crashes that occurred over 20 years ago, to about 75% of drivers and 70% of passengers in past year crashes.

Although overall safety belt use continues to rise, passenger safety belt use (especially in the back seat) lags behind driver belt use. Two thirds of persons age 16 and older who normally sit in the front seat when riding as a passenger wear their safety belt all the time and less than half (41%) of those who normally ride in the back seat when a passenger wear their safety belt all the time.

There are many reasons why youth and adults wear safety belts, but foremost among them is to avoid serious injury. Almost all drivers (95%) and non-drivers (96%) wear safety belts to avoid injury, and two thirds say this is the most important reason why they wear their belt. A high percentage of drivers (79%) and non-drivers (84%) also wear safety belts because it is the law, and two thirds of each group wear them to avoid getting a ticket.

The most common reasons for not using safety belts are forgetting to put them on, driving/riding only a short distance, belt discomfort, and being in a rush. Forty percent of all drivers dislike or find something annoying about wearing their safety belt, most often some physical discomfort of the neck or shoulder. Female drivers and drivers who do not use their safety belt all the time are more likely to find something annoying about safety belts. Fatalistic attitudes may also be a factor in some not wearing a safety belt: nearly half of drivers who rarely or never use their belts agreed with the statement that if it is your time to die, you'll die, so it doesn't matter whether you wear your safety belt.

NHTSA's "Vince and Larry" crash dummy advertisements to promote safety belt use have successfully reached 64% of the population age 16 and older. Five out of six (84%) recall seeing or hearing ads that use crash dummies and 75% of those who recall the ads say, correctly, that the message was to wear your safety belts.

Child Safety Seat Use

Because of the important role of child safety seats in protecting young children from motor vehicle-related injury and death, the survey asked drivers about the use of car seats among children under age 6 whom they drove as a passenger. Nearly half (47%) of drivers age 16 and older have, in the past year, driven with a child under age 6 as a passenger, yet almost two-thirds of these drivers did not have a child under age 6 living in their household. This suggests that programs to increase car seat use should not limit their target audience to parents and primary caregivers.

The survey selected a subgroup of drivers who were parents of a child under age 6, whether the child lived with them or not, and other drivers who in the past year drove with a child under age 6 who lives in their household. These drivers ("parents/caregivers") were asked to focus on one child under age 6 whom they drove in the past year and to answer a series of questions about that child's car seat use.

Car seats are frequently used by young children, but many children are being placed in a safety belt rather than a car seat before they are physically mature enough for this change. About ninety percent of children under age 2 are in the car seat "all the time" when a passenger. The likelihood the child will be in the seat declines dramatically among larger children. While 92% of children weighing 20-29 pounds use the car seat all the time, just over half (61%) of those 30-39 pounds and less than a third (29%) of children weighing 40-49 pounds are in the car seat all the time. Since safety materials instruct adults to place children weighing about 20-40 pounds in forward-facing convertible seats or harness systems, many children who should be riding in seats of this type are not using them.

The presence of an airbag in a vehicle generally enhances passenger safety; however, it is dangerous to place a rear-facing car seat in the front seat of a vehicle having a passenger side airbag. This is because a passenger-side airbag could strike the back of the safety seat with a force that could seriously injure the child. Parents/caregivers having a child who rides in a car seat were asked a question to determine their knowledge of this danger. More than half (56%) recognize that this combination of vehicle equipment and car seat positioning is unsafe, but more than a fourth (29%) mistakenly believe it is safe. An additional 15% do not know whether it is safe or say they do not know how airbags work. Of those who mistakenly believe that there isn't any danger from the airbag, approximately 3% have a passenger-side airbag in their primary vehicle.

Among the part-time users of car seats, failure to use the seat is more often the result of attitudinal factors rather than difficulty with attaching or buckling the child into the seat. Most of the parents/caregivers find car seats easy to use (although this does not necessarily mean they are using the seat correctly). Two-thirds (68%) say it is very easy to attach the car seat to the vehicle's safety belt system, and 28% say it is somewhat easy. An even higher percentage (77%) say that buckling the child into the seat is very easy, and virtually all others say it is somewhat easy. The two reasons most frequently identified by parents/caregivers of children who do not always use their car seat are that they would only be in the vehicle a short time (46%) and that the child doesn't like the car seat (37%).

The survey identified two additional problems related to young children not being fastened into their car seat. About one in five (22%) of the parents/caregivers report that their child has gotten out of a car seat while riding in the vehicle, most commonly among children who use booster seats. Among part-time car seat users, 22% of children usually ride in another passenger's lap when they are not in their car seat, a particularly significant concern from an occupant safety perspective.

Children under age 6 who never use a car seat are usually buckled in a safety belt. Eight of ten (81%) use their safety belt all the time and another 16% use it most of the time.

Airbags

The increased availability of airbags is expected to reduce serious injuries and deaths resulting from motor vehicle crashes. By late 1994, almost one-fourth of drivers had at least one airbag in their primary driving vehicle. One of every six (16%)

had a driver side airbag only, while 7% had both driver and passenger side airbags.

People recognize the need to use safety belts even if they have an airbag, and drivers of airbag-equipped vehicles actually use their belts more frequently than do other drivers. Nine out of ten persons age 16 and older recognize that the presence of an airbag does not eliminate the need to use safety belts. Eighty-two percent of drivers whose primary vehicle has an airbag use their safety belt all the time, compared with 72% of drivers whose primary vehicle does not have an airbag.

Many people still are misinformed or uncertain about how airbags work. Most people (86%) know that a front-end impact at moderate speed will activate an airbag; however, almost half (45%) also say that a side impact will activate the airbag and more than half (55%) say that the airbag will deploy upon a rear impact. The general public appears to have little idea of how fast a vehicle must be going in order to activate the airbag upon impact: 12% say 0-10 mph, 12% say 11-20 mph, 12% say 21-30 mph, and 12% say 31-40 mph.

Public confidence about the protection airbags offer is moderate. Just over half (55%) believe it is unlikely they would be injured in a vehicle with an airbag if they were in a crash involving major vehicle damage. Youth (age 16-20) are more likely than adults to believe they would be injured in an airbag-equipped vehicle in such a crash (37% versus 21%).

Bicycle and Motorcycle Helmet Use

Despite the fact that head injuries are the leading cause of serious injury and death of bicycle riders involved in crashes, most adult bicyclists and many children riders do not usually wear a helmet. More than four of five (81%) bike riders age 16 and older, or about 57 million bike riders, usually do not wear a bicycle helmet when they ride. Children age 4-12 are more likely to use a helmet, but half of these young bicyclists either do not have or usually do not wear a helmet when they ride. Among children who do not usually wear a helmet, the most frequent reasons for not wearing it are dissatisfaction with the way the helmet looks (28%), the perception that it is too much trouble to put on (20%), or because the bicycle riding is restricted to the driveway or yard (19%).

Adults who sometimes ride a bicycle with a young child as a passenger were asked about the child's helmet use on these occasions. Three-fourths say that the child normally wears a bicycle helmet when riding with them; however, a fourth (25%) of these children usually do not wear helmets on such occasions.

The problem of head injuries to motorcycle riders has prompted most States to enact motorcycle helmet laws. These laws appear to be promoting helmet use. Overall, 67% of motorcycle drivers use a helmet all the time, but 16% rarely or never use a helmet. In States that require all riders to wear a helmet, very few motorcyclists (8%) rarely or never wear a helmet, compared with more than a fourth (29%) from States that restrict the requirement to specific categories of riders and a third (32%) from States with no helmet law. (These results should be viewed cautiously because of the small sample size.)

Highway Safety Laws and Their Enforcement

Support for traffic safety laws of all kinds is generally strong among the public (age 16 and older). A very large majority (84%) favor safety belt laws for drivers and front-seat adult passengers and two thirds support safety belt laws for back-seat adult passengers. Most (60%) favor enforcing safety belt laws with fines (average fine recommended: $50 for the first offense, $118 for repeat violations) but only a third support giving points on the driver's license. Four out of five (82%) support motorcycle helmet laws.

Safety laws for children have even stronger public support. Three quarters (74%) favor strict enforcement of car seat laws, with 58% favoring police ticketing of car seat law violations at every opportunity (average minimum fine recommended for a car seat violation: $126). Almost all (94%) agree that children under age six should be required by law to wear a safety belt when they outgrow a car seat. Nearly 80% support bicycle helmet laws for children.

Highway Safety Behavior and Attitudes

Most drivers normally exceed the highway speed limit, but most also think the current speed limit is about right. Two thirds of drivers (68%) typically drive faster than the speed limit on highways, averaging 59 mph as their reported speed on a 55 mph highway. However, more than two-thirds (70%) think the current highway speed limit is about right, and only a fourth (25%) think it is too low. These results suggest that there is little public support for increasing highway speed limits, but also indicate that drivers use speed limits as guides rather than absolute limits.

People tend to be much more tolerant of speeding on highways than in residential areas. Sixty percent think that driving 5 mph over the 55 mph speed limit is OK, but only 13% think it is OK to exceed the 35 mph limit by the same 5 mph margin.

According to the survey data, one of eight drivers--an estimated 23 million persons--had, in the past month, driven after drinking alcohol. Slightly less than 1% (0.8%), or an estimated 1.5 million people, drove sometime in the past month after they believed they had consumed too much alcohol to drive safely; these drivers were four times as likely to be between the ages of 21 and 24.

CHAPTER 1

BACKGROUND AND METHODOLOGY

Background

During the late 1960s and early 1970s, more than 50,000 persons were killed each year in motor vehicle crashes in the United States. Diverse approaches were taken to address the problem. Vehicle safety designs and features were improved; restraint devices were improved; safety behaviors were mandated in state legislation (including safety belt use, child safety seat use, and bicycle and motorcycle helmet use) and alcohol-related legislation was enacted; this legislation was enforced; public information and education activities were widely implemented; and roadways were improved.

As a result of these interventions and improvements, crash fatalities dropped significantly. By 1994, total fatalities had fallen to 40,676, representing a 20% decline from 1966. In addition, the resident population and the number of vehicle miles traveled increased greatly over the past 25 years. When fatality rates are computed per 100,000 population, the rate for 1994 (15.62) was more than 40 percent lower than the 1966 rate (26.02). In sum, heightened highway safety activity conducted over the past two decades corresponds with major strides in reducing traffic fatalities.

However, if the level of safety remains the same as today, crash fatalities and injuries will rise with population growth.[1] Continued reduction in injuries and fatalities requires further change in the driving environment, including increased public adherence to prevention behaviors. For example, observed safety belt usage in passenger vehicles was estimated at 62% in 1992. NHTSA calculated that increasing belt usage to 75% would save about 1700 lives per year (based on 1992 figures), while averting almost 90,000 injuries (NHTSA 1993). Reasonable progress in other areas such as increased usage of motorcycle helmets (29% effective in preventing motorcyclist fatalities, cited in Hertz 1989), increased correct usage of child safety seats, and reducing the number of speeding drivers would elicit further injury/fatality reductions.

Federal transportation policy notes the importance of bolstering prevention behaviors in enhancing public safety (USDOT 1994). Strengthening prevention behaviors is also a goal of Healthy People 2000 (USHHS 1991), a national strategy for significantly improving the health of the Nation over the coming decade. Under this plan, the Department of Health and Human Services has outlined objectives that include increasing usage of occupant protection systems, such as safety belts, inflatable safety restraints, and child safety seats, to at least 85% of motor vehicle occupants; increasing the use of helmets to at least 80% of motorcyclists and at least 50% of bicyclists; extending to all 50 states laws requiring safety belt and

[1] Data from the National Highway Traffic Safety Administration show an increase in motor vehicle crash fatalities in 1993, and again in 1994, following a low of 39,250 fatalities in 1992.

motorcycle helmet use for all ages; and increasing to at least 75% the proportion of worksites with 50 or more employees that mandate employee use of occupant protection systems, such as safety belts, during all work-related motor vehicle travel.

Remaining barriers to safety will be more resistant to programmatic influences now that the easy gains have already been accomplished. Up-to-date information is essential to plot the direction of future activity that will achieve the more difficult gains in the coming years.

In order to collect the critical information needed by the National Highway Traffic Safety Administration (NHTSA) to develop and implement effective countermeasures that meet the Agency's mandate to improve highway traffic safety, NHTSA commissioned a national telephone survey. The survey was conducted by Schulman, Ronca and Bucuvalas, Inc. (SRBI), a national market research firm.

The survey included questions related to safety belts, child safety seats, airbags, bicyclist safety, pedestrian safety, motorcyclist safety, and Emergency Medical Services. It also contained small segments on alcohol use and on speeding. Overall the survey provided a status report on public attitudes, knowledge and behavior related to specific occupant protection issues. Not all content areas are covered in this report due to necessary limitations on report length.

1994 NHTSA SURVEY
OF MOTOR VEHICLE OCCUPANT SAFETY

- **Conducted October 5 - December 11, 1994**
- **Telephone interviews with 8112 respondents**
- **Two versions of the questionnaire**
- **Major content areas:**
  - **Version 1: Safety belts (N=4094)**
  - **Version 2: Child safety seats (N=4018)**

Brief Methodology

The objectives of this project were to provide information for strategic planning in occupant protection programmatic areas, with a particular emphasis on safety belts and child safety seat use. NHTSA's information needs required safety belt and child safety seat sections too large to merge into a single survey instrument without producing an inordinate burden on respondents. Rather than reduce these sections, the survey instrument was divided into two series of modules. Each module was administered to one-half the total number of subjects to be interviewed.

NHTSA was assisted in questionnaire development by the National Center for Health Statistics (NCHS) of the U.S. Department of Health and Human Services. Staff from NHTSA and NCHS used a three-stage process to develop and refine the questionnaire. For the first stage, questionnaire designers worked with subject matter experts to complete comprehensive cycles of expert analyses on draft versions of questions. Second, face-to-face cognitive interviews were conducted in the NCHS Questionnaire Design Research Laboratory to identify conceptual problems and to

examine cognitive difficulties with questions and response alternatives. Third, simulated survey interviews by telephone, followed by face-to-face retrospective interviews, were also conducted in the laboratory prior to finalizing the questionnaire.

Module Series #1 of the final questionnaire focused on safety belts. It also included smaller sections on airbags, motorcyclist safety, general driving (including speed), and crash experience. Module Series #2 focused on child safety seats, accompanied by smaller sections on bicyclist safety, pedestrian safety, and Emergency Medical Services. Both series contained sections on drinking and driving because of the extensive impact of alcohol on the highway safety problem. Some basic safety belt questions contained in Module Series #1 were duplicated on Module Series #2.

SAFETY BELT QUESTION AREAS

- Belt type
- Frequency of use
- Change in use
- Use on the job
- Reasons for use/nonuse
- Attitudes about safety belt laws/penalties
- Knowledge of laws in their state
- Perceptions of police enforcement
- Experience receiving tickets/warnings

CHILD SAFETY SEAT QUESTION AREAS

- Type of seat
- Frequency of use
- Location and positioning
- Knowledge of safest location
- Where obtained seat
- Where obtained information on seats
- Ease of installing seat/buckling child
- Reasons for nonuse
- Restraint status of child not in safety seat
- Attitudes about enforcement/penalties

OTHER CONTENT AREAS

- Airbags
- Alcohol/medicine use and driving
- Crash and injury experience
- Emergency medical services
- Motorcycle/helmet use
- Bicycle/helmet use
- Driving on the job
- Pedestrian safety
- Demographics

Data collection involved interviews of approximately 8,000 randomly selected respondents. The two instruments were administered to separate samples of 4,000 persons age 16 and older, including oversamples of persons age 16-39.

The most important elements of the study design were:

1) The survey population was defined as the total non-institutionalized population, age 16 and older, of the United States.

2) The survey was conducted by telephone, using computer assisted telephone interviewing (CATI).

3) The survey instrument was divided into two separate questionnaires.

4) For each questionnaire, a national probability sample of telephone households was drawn using a Random Digit Dialing sampling procedure.

5) One eligible adult was selected in each sampled household, using the "most recent/next birthday" for systematic selection within household.

6) A total sample size of approximately 4,000 adults was interviewed using the safety belt questionnaire. This questionnaire also included sections on airbags, speed, and motorcyclist safety.

7) A total sample size of approximately 4,000 adults was interviewed using the child safety seat questionnaire. This questionnaire also focused on pedestrian safety, bicyclist safety, and Emergency Medical Services.

8) Both questionnaires contained a series of identical demographic, alcohol, and safety belt questions.

9) Younger age cohorts were oversampled compared to their population prevalence. For each questionnaire, 1,000 interviews were allocated to a national sample of persons age 16-39, while the remaining 3,000 interviews were allocated to a national sample of persons age 16 and older.

10) A Spanish language version was used by bilingual interviewers to minimize language barriers.

11) The survey was conducted by professional interviewers, experienced in interviews on sensitive subjects, using the computer assisted telephone interviewing system.

12) The completed data sets were weighted to correct for disproportionate sampling, selection bias and non-response bias.

The survey methodology is described in greater detail in Appendix A of the report.

In the following report, findings based on the data collected in the survey are presented for the reader. Note that the percentages reported and extrapolations made to the U.S. population are national estimates derived from the survey data. Due to sample weighting, percentages may not reflect the proportion of respondents indicated by the unweighted "N" presented on the charts. In general, sample estimates are rounded to the nearest whole number. Consequently, due to rounding, tables may appear to add to slightly more or less than 100%. This report contains the opinions and conclusions of the contractor, Schulman, Ronca and Bucuvalas, Inc. and does not necessarily reflect those of the NHTSA or the U.S. Department of Transportation.

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CHAPTER 2

CRASH AND INJURY EXPERIENCE

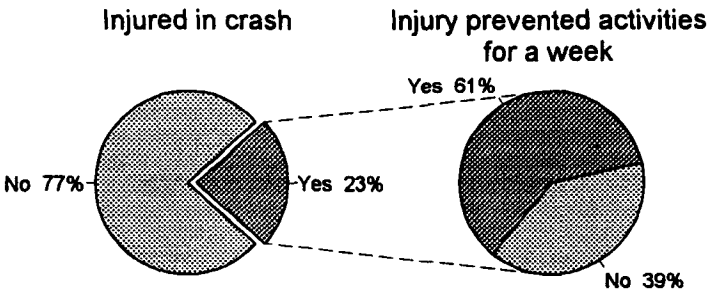
The National Highway Traffic Safety Administration (NHTSA) was established to carry out a Congressional mandate to reduce the mounting number of deaths, injuries and economic losses resulting from motor vehicle crashes on the Nation's highways. The Fatal Accident Reporting System (FARS) established by NHTSA in 1975 provides a census of fatal traffic crashes in the fifty States, the District of Columbia, and Puerto Rico. The General Estimates System (GES), begun in 1988, contains data from a nationally representative sample of police-reported crashes of all degrees of severity, including those that result in death, injury, or property damage. However, these systems do not provide information on the crash involvement histories of drivers and passengers. This survey documents the public's experience with serious crashes over the past year and over the course of a lifetime.

Injuries in Motor Vehicle Crashes

Nearly one quarter (23%) of the public, age 16 and older, have been injured in a motor vehicle crash at some point in their lives. The term "injury" was specified in the question to mean injuries that required medical attention. Based on a population estimate of 201 million persons age 16 and older, the survey indicates that more than 45 million youth and adults have suffered injuries in motor vehicle crashes that required medical attention[2]. This estimate does not include the experience of children under the age of 16 or those whose injuries were fatal.

FIGURE 2-1

Ever Injured In Motor Vehicle Crash



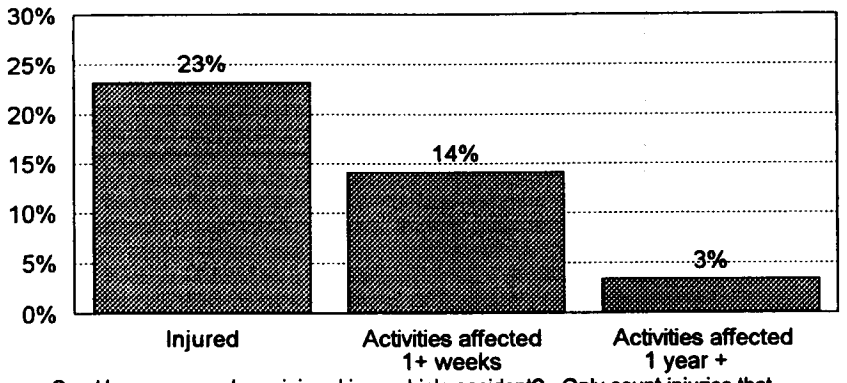
Qx: Have you ever been injured in a vehicle accident? Only count injuries that required medical attention.
Qx: Have you received injuries from a vehicle accident that prevented you from performing any of your normal activities for at least a week?
Base: Total population age 16+
Unweighted N=4018

[2]This population estimate of crash injury experience is based upon the Child Car Seat survey, in which the crash injury experience is asked of all respondents in the sample. In the Safety Belt survey, the injury question was asked of only a subset of respondents and yielded a lower prevalence (16%). Analysis suggested that the skip pattern used to restrict the sample for the crash experience question in the Belt survey affected the result. Hence, the estimate from the Car Seat survey, in which the entire sample received the question, is the best estimate of crash injury experience.

Among those who were injured in a motor vehicle crash, 61% had injuries that prevented them from performing their normal activities for at least a week. This translates into an estimated 28 million persons who have been incapacitated for a week or longer as a result of injuries sustained in a motor vehicle crash. Those who reported being unable to perform normal activities for a week or longer were asked whether there were any activities that they were unable to resume because of these injuries a year after the crash. The survey finds that 3.1% of persons 16 or older, or 13% of those injured in vehicle crashes, were unable to resume some activities even a year after the crash. This translates into about 6 million persons who suffered long term or permanent activity impairment as a result of motor vehicle crashes.

FIGURE 2-2

Motor Vehicle Crash Injuries

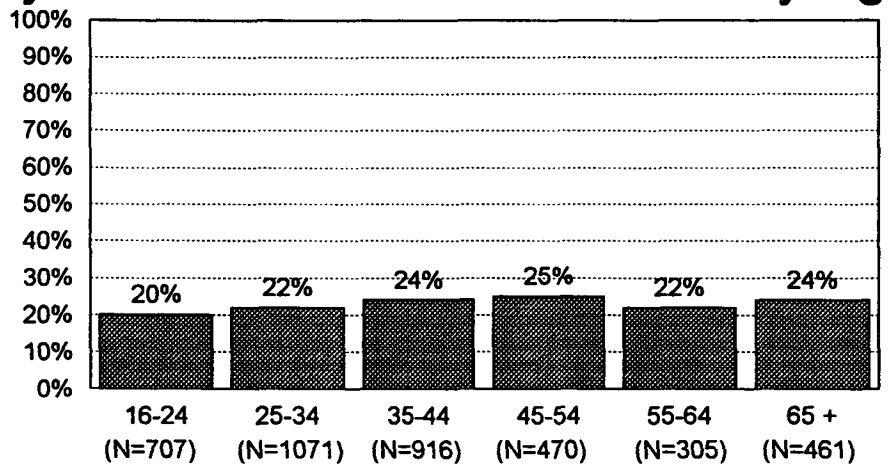


Qx: Have you ever been injured in a vehicle accident? Only count injuries that required medical attention.
Qx: Have you received injuries from a vehicle accident that prevented you from performing any of your normal activities for at least a week?
Qx: Were there any activities that you were unable to resume because of your injuries even a year after the accident?
Base: Total population age 16+
Unweighted N=4018

There is surprisingly little difference in the prevalence of bodily injury in motor vehicle crashes as a function of age or gender. One out of five persons (20%) age 16 through 24 years old had already been in a motor vehicle crash in which they suffered an injury requiring medical attention. As expected, the lifetime prevalence of motor vehicle injuries increases somewhat with age, until after age 55, when it declines. However, lifetime prevalence does not increase substantially after age 24. Hence, the data suggest that crash injury occurrence is heavily concentrated in younger age groups. The decline in lifetime prevalence after age 55 could reflect recall error of less serious injuries over an extended time frame, a true decline in injury experience, and/or an increase in fatalities (versus injuries) due to increasing frailty.

FIGURE 2-3

Injured In Motor Vehicle Crash By Age

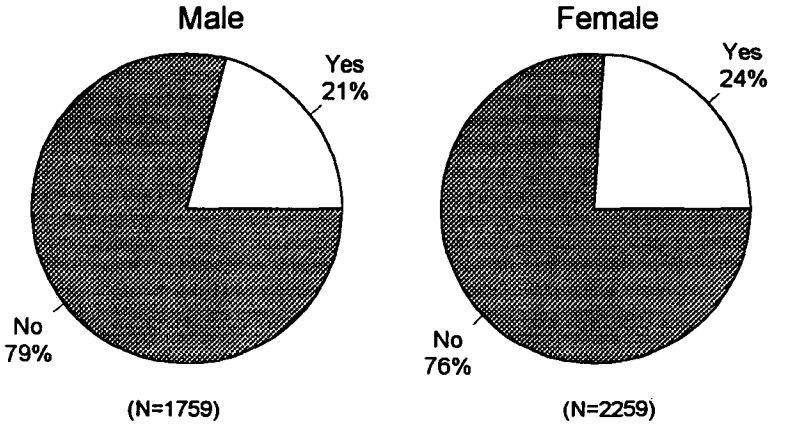


Qx: Have you ever been injured in a vehicle accident? Only count injuries that required medical attention.
Base: Total population age 16+ by age
Unweighted Ns listed above

Although considerable attention has been given to the role of male drivers in motor vehicle crashes, the survey finds that females are more likely than males to have been in a vehicle crash in which they received an injury that required medical attention (24% of females vs. 21% of males).

FIGURE 2-4

Injured In Motor Vehicle Crash By Gender



Qx: Have you ever been injured in a vehicle accident? Only count injuries that required medical attention.
Base: Total population age 16+ by gender
Unweighted Ns listed above

There is some variation in the lifetime prevalence of crash-produced bodily injury by NHTSA region. The lowest rate of bodily injury experience among the population is reported in NHTSA Region II (Mid-Atlantic). The next lowest rates are in Region VII (Midwest), Region V (Midwest), and Region VI (Southwest). The highest rate of bodily injury experience is in Region VIII (Mountain).

TABLE 2-1
Injured in Motor Vehicle Crash
By NHTSA Region

Qx: Have you ever been injured in a vehicle accident? Only count injuries that required medical attention.

NHTSA REGION	STATES	PERCENT OF POPULATION AGE 16+ INJURED IN VEHICLE CRASH (LIFETIME)
I	CT, ME, MA, NH, RI, VT	27%
II	NY, NJ	19%
III	DE, DC, MD, PA, VA, WV	26%
IV	AL, FL, GA, KY, MS, NC, SC, TN	23%
V	IL, IN, MI, MN, OH, WI	21%
VI	AR, LA, NM, OK, TX	21%
VII	IA, KS, MO, NE	20%
VIII	CO, MT, ND, SD, UT, WY	30%
IX	AZ, CA, HI, NV	22%
X	AK, ID, OR, WA	23%

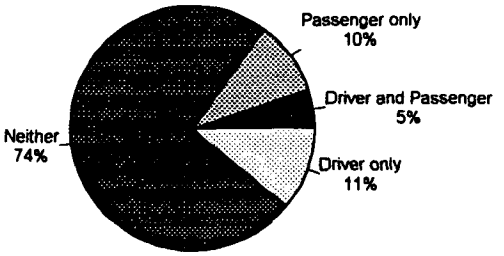
Driver and Passenger Involvement

Regardless of whether or not they were personally injured, this national sample of the population age 16 and older was asked whether or not they have ever been a driver in a vehicle crash resulting in either a death or an injury requiring medical attention. This would include anyone injured, whether in their vehicle or not. They were also asked whether they had ever been a passenger in a motor vehicle crash resulting in death or injury requiring medical attention.

The survey finds that slightly more than a quarter of the public (26%) have been either a driver or a passenger in a serious motor vehicle crash involving death or bodily injury. One in six persons age 16 or older (16%) have been a driver in a serious motor vehicle crash, including 11% who have been involved in an injury crash as a driver only and 5% who have been in an injury crash both as a driver and as a passenger. One in ten (10%) have been in such a crash only as a passenger.

FIGURE 2-5

Involvement In Motor Vehicle Crashes Causing Death Or Injury



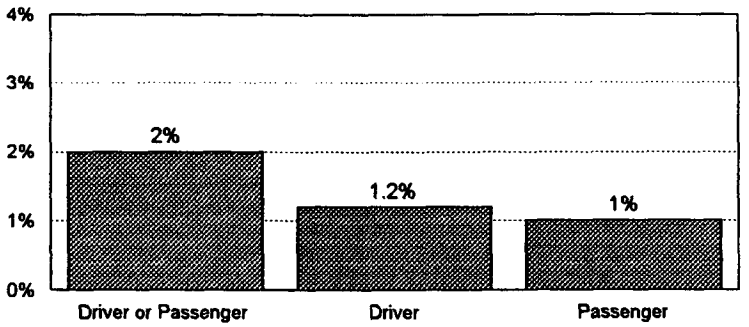
Qx: Have you ever been a driver in a vehicle accident resulting in either a death or an injury requiring medical attention? This would include anyone injured, whether in your vehicle or not.
Qx: Have you ever been a passenger in a vehicle accident resulting in either a death or an injury requiring medical attention? This would include anyone injured, whether in your vehicle or not.
Base: Total population age 16+
Unweighted N=4094

Those who had been in a crash involving death or injury were asked how long ago the crash (or most recent crash if more than one) had occurred. The data indicate that 1.2% of youth and adults had been a driver in a crash involving injury within the past year. This translates into nearly 2.5 million persons age 16 and older.

Approximately the same percentage (1.0%) had been a passenger in an injury crash within the past year. This translates into about 2 million persons age 16 and older. In combination, 2.0% of the driving-age public were drivers or passengers in a motor vehicle crash in the past year that resulted in death or injury requiring medical attention. This translates into an estimated 4 million youth and adults who have been personally involved in an injury crash within the past year.

FIGURE 2-6

Involved In A Crash That Caused Injury In Past Year



Qx: Have you ever been a driver/passenger in a vehicle accident resulting in either a death or an injury requiring medical attention?
Qx: How long ago did that (most recent) accident occur?
Base: Total population age 16+
Unweighted N=4094

The survey finds some demographic differences in injury crash experience; however, demographic breakdowns of past year crash involvement should be viewed cautiously because of the small sample sizes. Gender is not a major factor in exposure to injury crashes. Males are slightly overrepresented in injury crashes in the past year, both as drivers and as passengers, compared to their population proportion. However, the survey finds more dramatic differences by age in the likelihood of past year experience of an injury crash. Persons age 16-24, who comprise only 16% of the study population, represent 38% of the drivers in past year crashes involving death or serious injury, and 61% of passengers in those crashes.

TABLE 2-2
Characteristics of Drivers and Passengers
In Vehicle Crashes Involving Injury (Past Year)

Qx: Have you ever been a driver in a vehicle accident resulting in either a death or an injury requiring medical attention?
Qx: Have you ever been a passenger in a vehicle accident resulting in either a death or an injury requiring medical attention?
Qx: How long ago did that (most recent) accident occur?

		GENERAL POPULATION DISTRIBUTION (8112)	DRIVERS IN CRASHES (116)	PASSENGERS IN CRASHES (37)
AGE				
	16-24	16%	38%	61%
	25-34	20%	19%	19%
	35-44	21%	15%	5%
	45-54	15%	13%	-
	55-64	9%	8%	4%
	65 +	16%	7%	12%
	Refused	2%	-	-
		100%	100%	100%
GENDER				
	Male	48%	53%	54%
	Female	52%	47%	46%
		100%	100%	100%
RACE				
	White	80%	79%	73%
	Black	9%	7%	20%
	Other	9%	12%	4%
	Refused	2%	1%	3%
		100%	100%	100%

Safety Belt Use in Injury Crashes

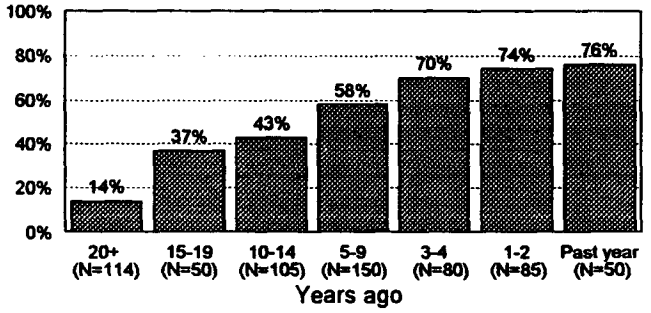
Persons who had been in vehicle crashes involving death or serious injury as drivers were asked whether they had been wearing their safety belt at the time of the

crash (or most recent crash, if more than one). Half (51%) were wearing their belt at the time of the crash and just under half (45%) were not (4% were not sure).

The survey documents a dramatic increase in the use of safety belts in motor vehicle crashes over the past twenty years. In injury crashes that occurred twenty or more years ago, less than 20% of drivers were wearing a safety belt at the time of the crash. The rate of driver use of safety belts in injury crashes has steadily increased until, as of the past year, more than three quarters of drivers in injury crashes report that they were wearing their safety belt at the time.

FIGURE 2-7

Driver Safety Belt Use In Injury Crashes Over Time

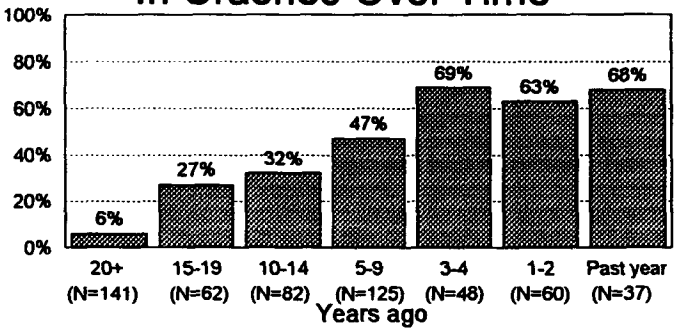


Qx: Have you ever been a driver in a vehicle accident resulting in either a death or an injury requiring medical attention?
Qx: How long ago did that (most recent) accident occur?
Qx: Were you wearing your seat belt at the time of the accident?
Base: Driver in a crash resulting in death or injury
Unweighted Ns listed above

The same pattern of increased safety belt use over time is also found among passengers in crashes involving death or serious injury. In crashes that occurred twenty or more years ago, less than ten percent of passengers were wearing their safety belt at the time. In the past year, 68% of passengers in injury crashes report that they were wearing their safety belts at the time.

FIGURE 2-8

Passenger Safety Belt Use In Crashes Over Time



Qx: Have you ever been a passenger in a vehicle accident resulting in either a death or an injury requiring medical attention?
Qx: How long ago did that (most recent) accident occur?
Qx: Were you wearing your seat belt at the time of the accident?
Base: Passenger in crash resulting in death or injury
Unweighted Ns listed above

CHAPTER 3

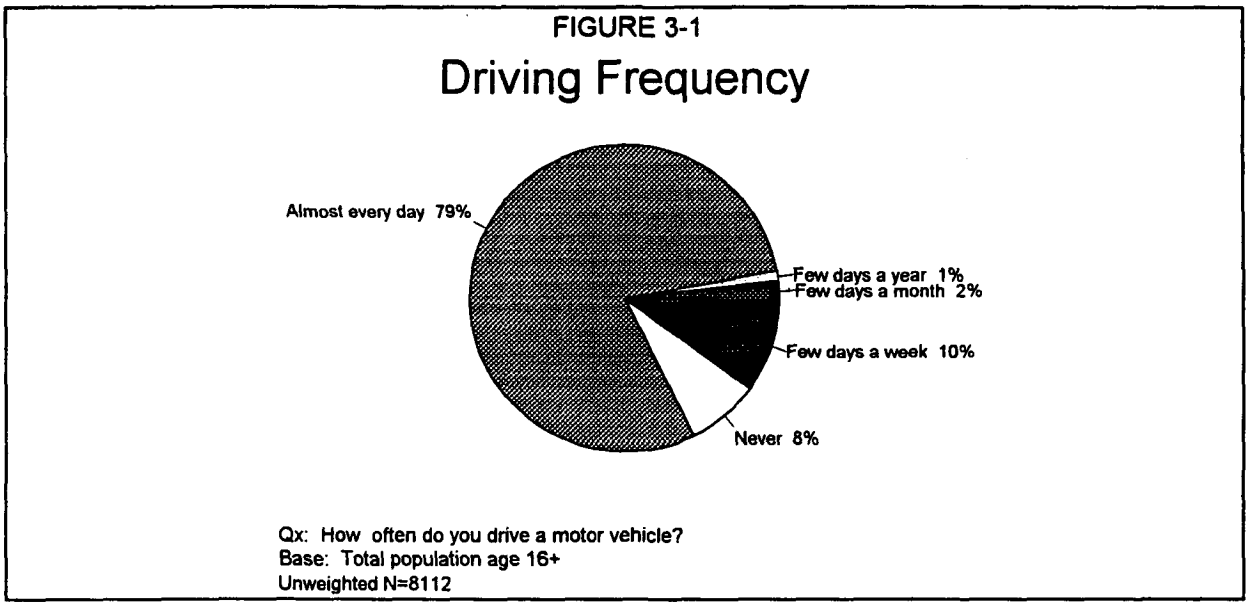
SAFETY BELT USE

The sample for the Motor Vehicle Occupant Safety Survey is drawn from the total population age 16 and older. The survey examined several driving and safety belt use characteristics of this population, including the frequency of driving, type of primary vehicle driven, safety belt configuration in the primary vehicle, and frequency of safety belt use.

Drivers and Vehicles

More than nine out of ten persons age 16 and older have driven in the past year. Nearly four out of five (79%) drive almost every day and another 10% drive a few days a week.

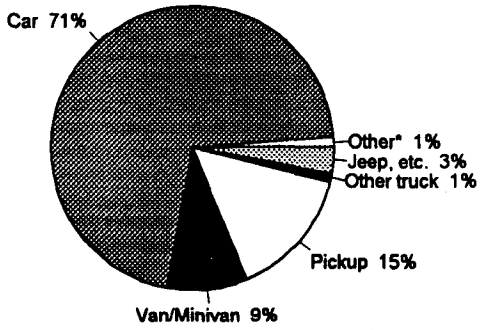
FIGURE 3-1



Many households have more than one motor vehicle, so drivers may use more than one. Since the type of safety equipment may vary from one vehicle to another, drivers were asked about the vehicle that they drive most often. Over seven out of ten drivers (71%) drive a car most often. Another 3% most often drive a jeep or another kind of utility vehicle. Nearly one out of ten (9%) drive a van or minivan as their primary vehicle and about one in seven drivers (15%) drive a pickup truck most often.

FIGURE 3-2

Primary Vehicle Driven



Qx: Now I'd like you to think about all the driving you do. Is the vehicle you drive most often a car, van, motorcycle, pickup truck, or other type of truck?
Base: Drive a motor vehicle
Unweighted N=7443
* Includes motorcycle.

Driver Safety Belts

Nearly nine out of ten drivers' primary vehicle (88%) has safety belts in the front seat that go across both the lap and shoulder. Eight percent have shoulder belts only and 4% have lap belts only. Only fourteen persons out of more than 7400 drivers interviewed report that their primary vehicle has no safety belts at all.

The type of safety belt varies by the type of vehicle driven. The combined shoulder and lap belt are found in nine out of ten cars (89%) and vans (90%) identified as the primary vehicle. However, combined shoulder and lap belts are found in only 83% of pickup trucks and 63% of other kinds of trucks. Indeed, seven out of the fourteen vehicles in the sample without any safety belts were trucks.

TABLE 3-1
Safety Belt Configuration By Type Of Primary Vehicle

Qx: For the next series of questions, please answer only for the vehicle you said you usually drive. Do the seat belts in the front seat of the vehicle go across your shoulder only, across your lap only, or across both your shoulder and your lap?

	Total	Car/jeep	Van/ minivan	Pickup truck	Other truck
	(N=7418)	(N=5590)	(N=620)	(N=1099)	(N=62)
Across shoulder only	8%	9%	5%	7%	2%
Across lap only	4%	2%	5%	9%	33%
Across both	88%	89%	90%	83%	63%
Vehicle has no belts	--	--	--	1%	2%

Drivers with both shoulder and lap belts were asked whether these belts were a one-piece unit or two separate belts. According to the data, most shoulder and lap belt systems in primary vehicles are one piece.

TABLE 3-2
Type Of Driver Safety Belt In Primary Vehicle

Qx: For the next series of questions, please answer only for the vehicle you said you usually drive. Do the seat belts in the front seat of the vehicle go across your shoulder only, across your lap only, or across both your shoulder and your lap?
Qx: Are the shoulder and lap belt one piece or are they two separate pieces?
Qx: Are both the shoulder and lap belt automatic?
Qx: Is the shoulder belt automatic or do you have to fasten it?

BELT SYSTEM TYPE	DESCRIPTION	PERCENTAGE
One-Piece Systems	Only one buckle	[85%]
Lap belt only	One belt that goes across the driver's lap, whether manual or automatic	4%
Lap/shoulder-manual	Combination system that must be pulled and buckled by the driver	70%
Lap/shoulder-automatic	Combination system that is permanently buckled and automatically fastens around the driver	3%
Shoulder only-manual	One belt that goes across the driver's shoulder that must be pulled and buckled by the driver	7%
Shoulder only-automatic	One belt that goes across the driver's shoulder that is permanently buckled	1%
Two-Piece Systems	Two separate buckles for lap and shoulder belts	[14%]
Lap manual/ shoulder manual	Driver must pull and fasten each belt separately	6%
Lap manual/ shoulder automatic	Shoulder is permanently buckled but driver must pull and fasten lap belt	8%
Lap automatic/ shoulder automatic	Each belt automatically fastens around the driver	1%

The respondents were also asked whether their safety belts were automatic. Among those with shoulder belts only or one-piece shoulder and lap belts, almost all (95%) of the belts are manual rather than automatic. Among those with separate lap and shoulder belts, a majority (61%) of the shoulder belts are automatic. The relatively small proportion of drivers protected by automatic systems (13%) is further

reduced by those who disconnect or disable their automatic belts. Self-report data from the survey indicate that 6% of those with automatic belts disable, disconnect or place the belts behind them. Hence, only 12% of drivers drive motor vehicles with functioning automatic safety belts in their primary vehicle.

In sum, more than two-thirds (70%) of drivers have a one-piece lap and shoulder belt that is fastened manually, rather than automatically. Seven other belt configurations are described by drivers, including some not known to be offered. This suggests that some drivers may not fully understand their belt systems.

Driver's Use of Safety Belts

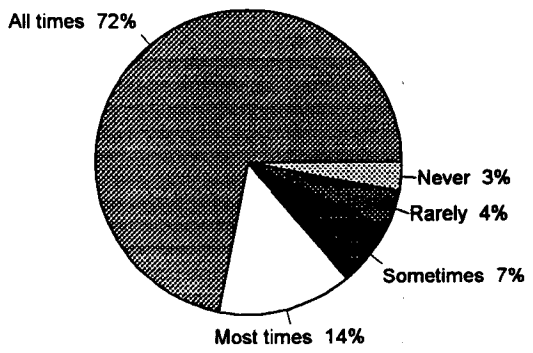
Drivers age 16 and older were asked about their use of safety belts when driving their primary vehicle. Survey results on the frequency of belt use are presented according to belt types: shoulder belts, lap belts, and lap belts in systems where there is a separate shoulder belt.

Shoulder belt use (including use of one-piece lap/shoulder belt combination systems) is high for drivers with automatic belts in their primary vehicle and somewhat lower for those with manual shoulder belts. About 13% of drivers have automatic shoulder belts in their primary vehicle, 6% of whom sometimes disconnect or disable the automatic belt. Thus, more than nine of ten (94%) drivers with automatic shoulder belts always wear them when they drive.

The drivers whose shoulder belts are manual or who sometimes disconnect or disable their automatic shoulder belts were asked how often they wear their shoulder belt. About three-fourths (72%) of these drivers use the shoulder belt all the time. One in seven (14%) use the shoulder belt most of the time. Seven percent sometimes use it and an equal percentage (7%) rarely or never use their shoulder belt.

FIGURE 3-3

Drivers' Use Of Manual Or Sometimes Disconnected Automatic Shoulder Belts

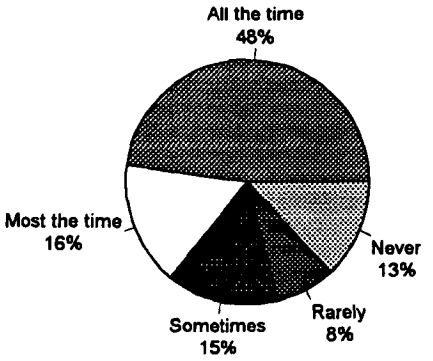


Qx: When driving this vehicle, how often do you wear your shoulder belt?
Base: Drivers whose shoulder belts are manual or sometimes disconnected
Unweighted N=6115

Drivers who have only a lap belt in their primary vehicle (about 4% of drivers) use their safety belt much less frequently than do drivers of vehicles with shoulder belts. Slightly less than half (48%) of these drivers use their belt all the time, and one in six (16%) use it most of the time. More than one in five drivers whose primary vehicle has only lap belts use their belt rarely (8%) or never (13%).

FIGURE 3-4

Drivers' Use Of Safety Belts: Vehicles With Lap Belts Only

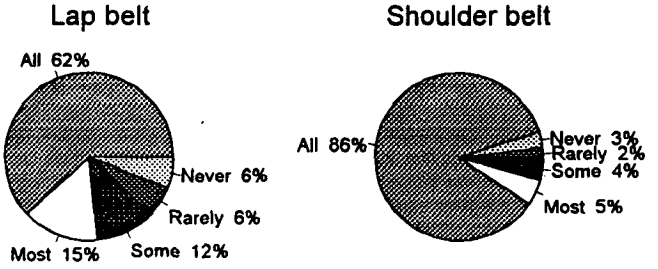


Qx: When driving this vehicle, how often do you wear your lap belt?
Base: Drivers whose primary vehicle has lap belts only
Unweighted N=258

Drivers with separate lap and shoulder belts in their primary vehicle, as a group, tend to use their lap belts less frequently than they use their shoulder belts. Sixty-two percent use a lap belt all the time, compared with all-the-time shoulder belt use by 86% of these drivers. (The shoulder belt use figure includes both manual and automatic shoulder belts.)

FIGURE 3-5

Drivers' Use of Safety Belts: Vehicles With Separate Lap and Shoulder Belts

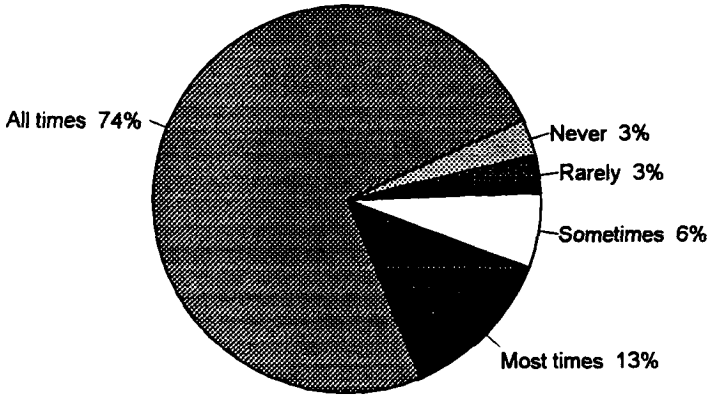


Qx: How often do you wear your lap/shoulder belt?
Base: Drivers of vehicles with separate lap and shoulder belts
Unweighted N=1073

Overall, the survey indicates that three-quarters (74%) of drivers have either a connected automatic safety belt system or use their manual safety belt all the time when driving[3] Another 13% wear their belt most of the time. About one in eight drivers wear their belt some of the time (6%), rarely (3%), or never (3%).

FIGURE 3-6

Frequency Of Safety Belt Use



Qx: How often do you wear your lap/shoulder belt?
Base: Drivers whose primary vehicle has safety belts
Unweighted N=7389

In previous surveys, the drivers' report of the frequency of safety belt use has been taken at face value. The Motor Vehicle Occupant Safety Survey, however, introduced an additional check on this measure of reported belt use. Regardless of the reported frequency of belt use, drivers were asked the last time that they had driven without wearing a safety belt.

Seven out of ten daily drivers who say that they wear their safety belts "all of the time" when driving have gone more than a year since they last drove without wearing safety belts. An additional ten percent are not sure when they last drove without wearing a safety belt. However, nearly one in five persons who claim that they wear their safety belts all the time last drove without their safety belts on in the past day (4%), past week (4%), past month (4%), or past year (5%).

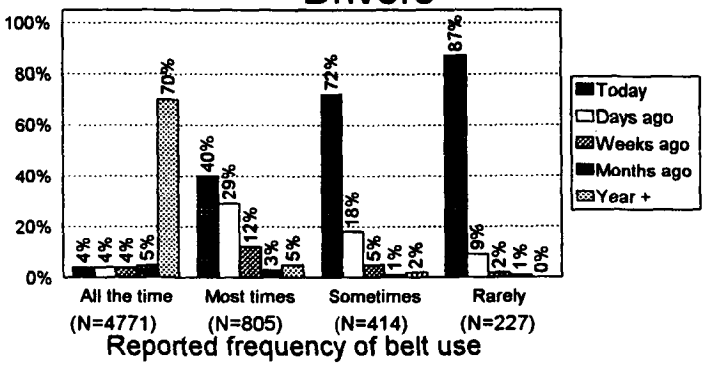
Although about 17% of "all the time" safety belt wearers have driven without wearing safety belts at some time during the past year, the survey data still suggests that there is a substantial difference in safety belt use between the "all the time" wearers and other groups. Only 4% of those who wear their safety belts "all of the time" say that they drove without a safety belt in the past day, compared with 40% of those who wear their safety belts "most of the time," 72% of those who "sometimes" wear their safety belt, and 87% of those who "rarely" wear their safety belt. In summary, the self-reported frequency of safety belt use appears to overstate

[3]Combined safety belt use figures for vehicles with both lap and shoulder belts are based on the portion of the belt system (lap or shoulder) used most frequently.

actual frequency. Results of cognitive testing during questionnaire development suggest that apparent discrepancies between the reported frequency of belt use ("all the time") and reported recency of non-use ("past day," etc.) can be attributed more to how respondents perceive their belt use than to their desire to provide a socially acceptable response. For example, they may say they always wear the belt because they always mean to wear the belt. Thus, they are giving an accurate account of their use, as they see it.

FIGURE 3-7

Last Time Didn't Wear Safety Belt By Reported Frequency of Belt Use: Daily Drivers

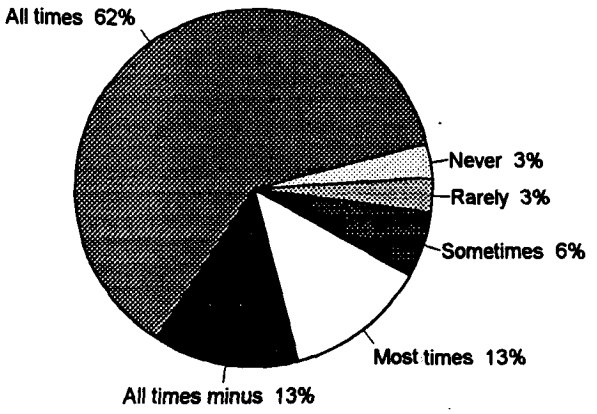


Qx: When was the last time you did not wear your seat belt when driving?
Base: Daily drivers
Unweighted Ns listed above

For this report, the discrepancy in responses to the two usage measures has been used to revise the total estimates of self-reported safety belt use. The drivers who claim to wear their safety belt all of the time when driving have been subdivided into two groups: those who cannot remember any time within the past year when they drove without wearing their safety belts ("all the time"), and those who have driven sometime within the past year without wearing their safety belts ("all the time minus"). Based on this revised estimate, about three out of five (62%) drivers wear their safety belts all of the time, and have not driven without a safety belt on in the past year. Another 13% claim to always wear their safety belts, but admit they have driven without wearing safety belts in the past year ("all the time minus").

FIGURE 3-8

Revised Total Frequency Of Belt Use



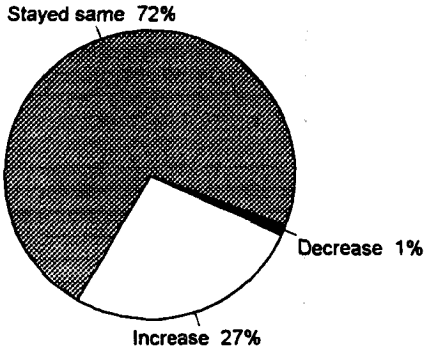
Qx: How often do you wear your shoulder/lap belt?
Base: Drivers whose primary vehicle has safety belts
Unweighted N=7389

Changes in Belt Use

Most drivers' (72%) safety belt use has not changed in the recent past. However, just over a fourth of drivers (27%) reported increasing their safety belt use in the past year. By contrast, only 1% of drivers have reduced their use of safety belts in the past year.

FIGURE 3-9

Change In The Use Of Safety Belts



Qx: In the past year, has your use of seat belts when driving (car driven most often) increased, decreased, or stayed the same?
Base: Drivers whose primary vehicle has safety belts
Unweighted N=7401

The small proportion of drivers whose safety belt use has declined in the past year is about the same across the ten NHTSA regions (1% in all but two regions); however, there are regional differences both in the overall levels of safety belt usage and in the percentage of drivers who have increased their use of safety belts in the past year. The NHTSA region with the smallest increase in belt use in the past year

(19%), Region X, is one of only two regions where more than 80% of the region's drivers report using their safety belt all the time. Therefore, it would seem reasonable to expect less improvement in belt use because of the already high levels of usage. Region IX, the other region in which 80% or more of drivers use their safety belts all the time, saw a past-year increase in belt use by nearly a fourth (23%) of its drivers. Two regions in which about three quarters of drivers use their safety belts all the time saw the highest percentage of their drivers increase their belt use in the past year: Region IV (29%) and Region VI (31%). Region VIII, the region with the lowest all-the-time belt use rate, also saw increased belt use in the past year by 29% of its drivers.

TABLE 3-3
Patterns Of Reported Safety Belt Use
By NHTSA Region

Qx: How often do you wear your lap/shoulder belt?
Qx: In the past year, has your use of safety belts when driving your [primary vehicle] increased, decreased, or stayed the same?

NHTSA REGION	STATES	CHANGE IN SAFETY BELT USE, PAST YEAR		PERCENT OF DRIVERS USING SAFETY BELT "ALL THE TIME"
		Increased	Decreased	
I	CT, ME, MA, NH RI, VT	23%	1%	68
II	NY, NJ	25%	1%	72
III	DE, DC, MD, PA, VA, WV	25%	1%	76
IV	AL, FL, GA, KY, MS, NC, SC, TN	29%	1%	75
V	IL, IN, MI, MN, OH, WI	27%	1%	71
VI	AR, LA, NM, OK, TX	31%	1%	74
VII	IA, KS, MO, NE	27%	2%	66
VIII	CO, MT, ND, SD, UT, WY	29%	3%	63
IX	AZ, CA, HI, NV	23%	1%	84
X	AK, ID, OR, WA	19%	1%	84
	TOTAL	27%	1%	74

The survey also found some variation by demographic characteristics of those who increased safety belt use in the past year. Younger drivers were more likely to increase their belt use than older drivers: more than a third of those age 16-20 (36%) and those age 21-24 (34%) increased their belt use in the past year, compared with one-fourth or less of those age 45-54 (23%), 55-64 (25%), or 65 and older (18%). A higher percentage of Hispanics (34%) than non-Hispanics (26%) and a higher percentage of blacks (33%) than whites (26%) increased belt use in the past year.

People with less education were most likely to increase their belt use in the past year: nearly a third (31%) of those with a high school education or less increased their use of safety belts in the past year, compared with 27% of those with some college and only 19% of people with a college degree.

TABLE 3-4
Reported Changes In Drivers' Use Of Safety Belts In The Past Year By Demographic Characteristics

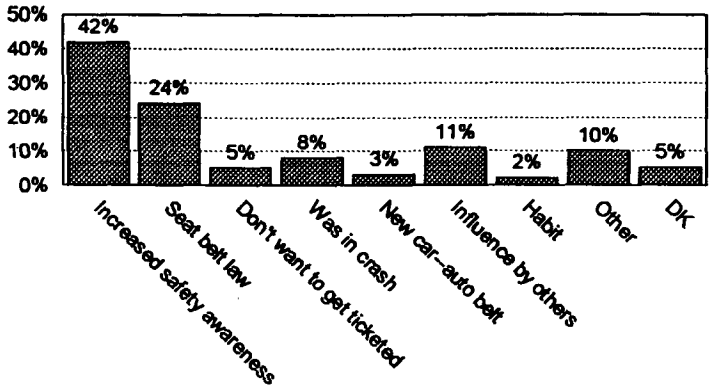
Qx. In the past year, has your use of seat belts when driving your [primary vehicle] increased, decreased, or stayed the same?

		BASE	INCREASED	DECREASED	STAYED SAME
AGE					
	16-20	(570)	36%	3%	59%
	21-24	(631)	34%	1%	64%
	25-34	(2010)	29%	1%	70%
	35-44	(1777)	27%	1%	72%
	45-54	(910)	23%	2%	75%
	55-64	(581)	25%	*	73%
	65 +	(787)	18%	*	80%
GENDER					
	Male	(3388)	26%	1%	72%
	Female	(4013)	27%	1%	71%
RACE					
	White	(6015)	26%	1%	73%
	Black	(632)	33%	1%	64%
	Other	(619)	31%	*	67%
ETHNICITY					
	Hispanic	(493)	34%	*	64%
	Non-Hispanic	(6837)	26%	1%	72%
EDUCATION					
	<H.S.	(917)	31%	2%	65%
	H.S. grad.	(2378)	31%	1%	68%
	Some college	(1895)	27%	1%	72%
	College grad.	(2144)	19%	1%	80%

Among those whose safety belt use has increased, the most common reason given for the change was increased awareness of safety (42%). Nearly a quarter (24%), however, cite safety belt laws as their reason for increased safety belt use. Eleven percent say their safety belt use has changed because of pressure from others and 8% say that their belt use has changed because they were in a crash.

FIGURE 3-10

Causes Of Increased Belt Use



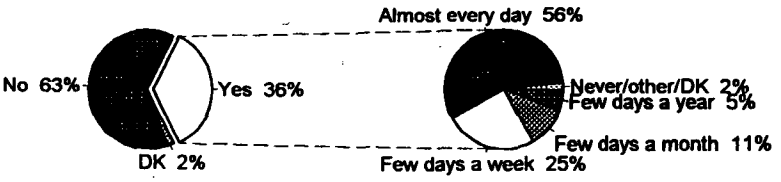
Qx: In the past year, has your use of seat belts when driving (car driven most often) increased, decreased, or stayed the same?
Qx: What caused the change?
Base: Increased or decreased in wearing safety belt
Unweighted N=2033

Company Safety Belt Policy

Among those who drive a motor vehicle at all, 36% at least sometimes drive a vehicle as part of a job or business, not including driving to and from work. Business-related driving is found among less than a quarter (23%) of female drivers. However, nearly half (48%) of male drivers at least sometimes drive a vehicle as part of a job or business.

FIGURE 3-11

Frequency Drive Vehicle As Part Of Job Or Business



Qx: Do you at least sometimes drive a vehicle as part of a job or business? Do not include driving to and from work.
Qx: How often do you drive a vehicle as part of a job or business?
Base: Drive a motor vehicle
Unweighted N=3758

Over half (56%) of those who drive a vehicle as part of a job do so almost every day. Another quarter (25%) drive a few days a week as part of their job or

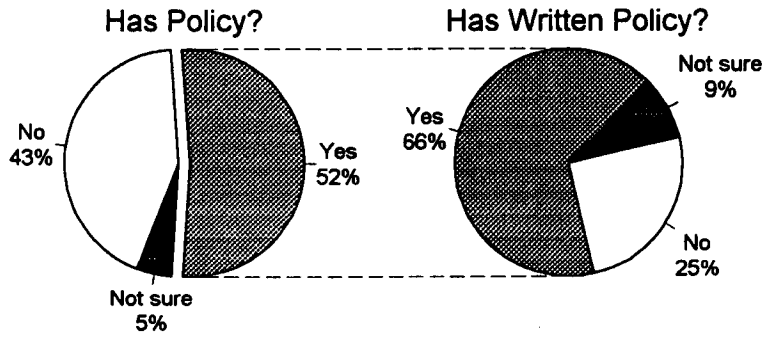
business. Hence, four out of five of those who drive as part of their job or business do so on a fairly regular basis. Stated differently, 29% of all drivers are driving on the job at least a few days a week.

Only half (52%) of those who drive as part of their job report that their company has a policy requiring safety belt use when driving on the job. By contrast, 43% of those who drive on the job report that their company does not have a policy requiring safety belt use when driving on the job. Another 5% are not sure whether there is any company policy requiring safety belt use.

Among those who are aware of a company policy requiring use of safety belts, about two thirds (66%) report that it is a written policy. A quarter say that the policy is not a written policy. Nine percent are not sure whether there is a written policy or not. In total, only about a third (34%) of those who drive as part of a job or business report that their company has a written policy requiring the use of safety belts when driving on the job.

FIGURE 3-12

Presence Of Company Safety Belt Policy: Drivers Who Drive On The Job



Qx: Does your company or business have a policy requiring seat belt use when driving on the job?
Qx: Is that a written policy?
Base: Drivers who drive on the job
Unweighted N=1366

Two thirds (67%) of those who drive as part of their jobs say that they are just as likely to wear their safety belts when driving on the job compared to driving for personal use. However, a quarter (26%) say that they are more likely to wear safety belts when they drive on the job, compared to driving for personal use. Only 5% are less likely to wear safety belts on the job.

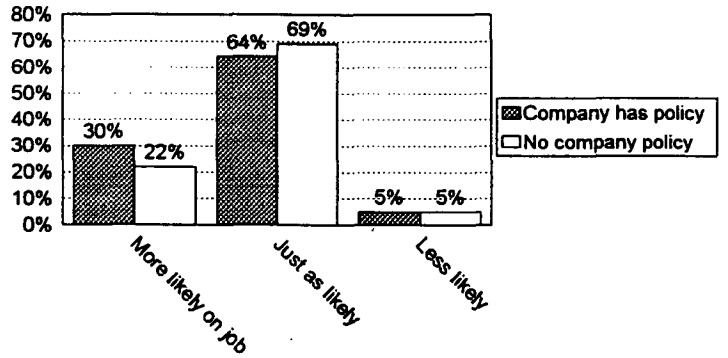
Of those more likely to wear their safety belt when driving for work, a third (35%) say it is because of the company policy. In addition, 24% report they wear the safety belt more often on the job because of increased awareness of safety. Eleven percent say it is just habit. Concern about the law (4%) or tickets (1%) are rarely expressed as reasons for increased use of safety belts on the job compared to elsewhere.

People who are less likely to use their safety belt when driving on the job than in their personal driving most often say that it is because they are in and out of the vehicle all the time (25%). A somewhat surprising 8% say that their reason for less use on the job is company policy, and 15% don't know why they use their belt less on the job.

The survey data supports the positive impact of company policy on safety belt use on the job. Among on-the-job drivers who are aware of a company policy requiring safety belts, 30% say that they are more likely to wear a safety belt on the job. Only 22% of those in companies without a known policy requiring safety belts say that they are more likely to wear belts while driving on the job.

FIGURE 3-13

Job vs. Personal Safety Belt Use By Presence Of Company Policy



Qx: Are you more likely, less likely or just as likely to wear your seat belt when driving on the job as compared to when driving for personal use?
Base: Drive a vehicle as part of job
Company Policy Unweighted N=687, No Company Policy Unweighted N=599

Passenger Use of Belts

Ninety-five percent of the public age 16 and older ride as passengers in cars, vans or trucks, at least occasionally. One in ten (11%) ride as a passenger almost every day. Thirty-eight percent ride as passengers a few days a week. Hence, about half of the public ride as passengers in motor vehicles at least a few times per week.

Ninety percent of those who never drive a motor vehicle ride as passengers in cars, vans or trucks. Indeed, among those who never drive, 36% ride as passengers almost every day, and another 34% ride as passengers a few days a week. Less than one percent of the noninstitutionalized population age 16 and older never drive or ride in motor vehicles.

TABLE 3-5
Frequency Drive Motor Vehicle
By Frequency Ride As Passenger

Qx: How often do you drive a motor vehicle?
Qx: How often do you ride as a passenger in any kind of car, van, or truck?

	Frequency Drive Motor Vehicle				
	Almost every day	Few days a week	Few days a month	Few days a year	Never
	(N=3283)	(N=373)	(N=67)	(N=29)	(N=336)
Frequency Ride as Passenger					
Almost every day	8%	12%	20%	30%	36%
Few days a week	39%	38%	30%	29%	34%
Few days a month	33%	28%	36%	23%	16%
Few days a year	14%	16%	12%	18%	4%
Never	5%	5%	3%	--	10%
Total	100%	100%	100%	100%	100%

The vast majority (89%) of persons age 16 and older usually sit in the front seat when riding as passengers in motor vehicles. Only 8% normally ride in the back seat. Riders aged 16-20 (10%) and those aged 65 and older (13%) are more likely than the norm to ride in the back seat.

People who normally sit in the front seat when riding as a passenger were asked about their use of safety belts on these occasions. Two thirds of these riders (69%) wear their safety belt all of the time and another 16% wear their belt most of the time when riding as a front-seat passenger. About one in six riders, when riding as a front-seat passenger, wear their belts only some of the time (8%), rarely (4%) or never (4%).

Passenger use of safety belts occurs less frequently in the back seat. Only 41% of people who normally ride in the back seat when a passenger wear their safety belts all of the time and 16% wear their safety belts most of the time when riding as a back-seat passenger.

TABLE 3-6
Frequency Wear Safety Belt As Passenger
By Where Ride As Passenger

Qx: When you are a passenger, do you usually ride in the front seat or the back seat?
Qx: When riding as a passenger in the ____ seat, how often do you wear your seat belt?

Frequency of Passenger Safety Belt Use	Where Ride As Passenger		
	Front Seat	Back Seat	Don't Know
	(N=3491)	(N=267)	(N=105)
All times	69%	41%	64%
Most times	16%	16%	15%
Sometimes	8%	12%	12%
Rarely	4%	11%	5%
Never	4%	19%	3%
Don't know	--	1%	1%
Total	100%	100%	100%

Persons are fairly consistent in their reported frequency of safety belt use as drivers and passengers. More than eight of ten (84%) drivers who use their safety belt all the time when driving use a belt all the time when riding as a passenger. About three quarters (75%) of those who rarely or never use a belt as a driver also rarely or never wear a belt when they are a passenger.

TABLE 3-7
Frequency Of Safety Belt Use As Driver By
Frequency Of Safety Belt Use As Passenger

Frequency of Passenger Safety Belt Use	Belt Use As Driver			
	All the time (N=2689)	Most of the time (N=409)	Some of the time (N=220)	Rarely/ Never (N=224)
All times	84%	26%	12%	6%
Most times	11%	49%	17%	5%
Sometimes	3%	18%	47%	14%
Rarely/Never	2%	7%	25%	75%
Total	100%	100%	100%	100%

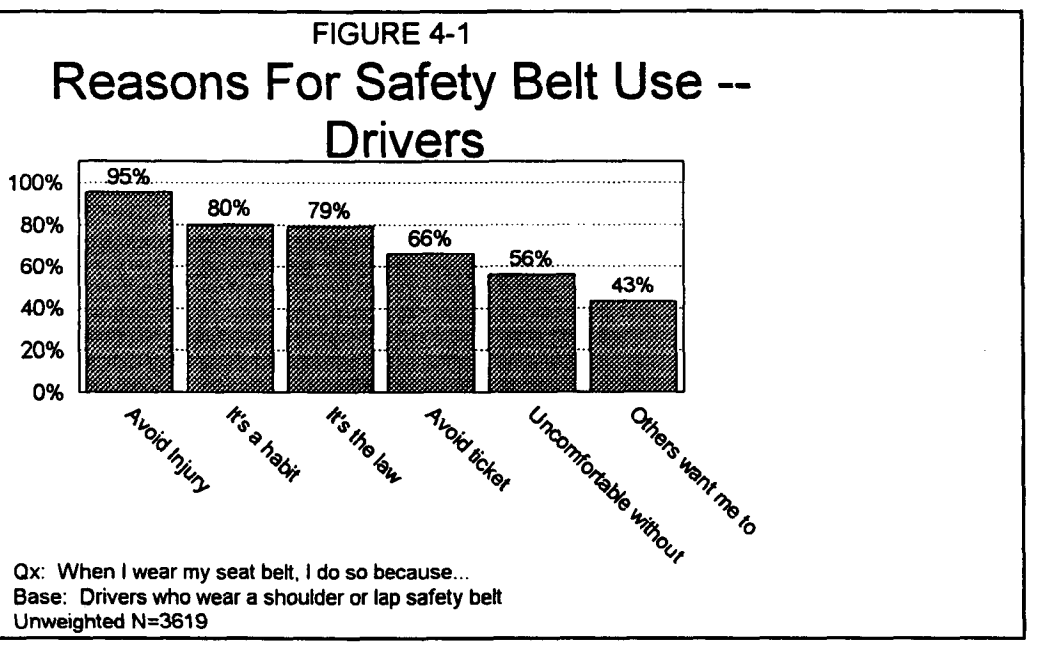
CHAPTER 4

REASONS FOR SAFETY BELT USE AND NON-USE

Drivers who wear shoulder or lap belts were asked their reasons for wearing safety belts when they drive. Six potential reasons for safety belt use were read, one at a time, to respondents. They were asked whether or not each reason was a factor in their use of safety belts. The respondents were then given an opportunity to volunteer other reasons for their safety belt use.

Almost all drivers who wear shoulder or lap belts do so to avoid injury (95%). Four out of five (80%) also wear safety belts because it is a habit. An almost equal proportion (79%) wear safety belts because it is the law. Two thirds of drivers who wear safety belts (66%) agree that they wear safety belts to avoid getting a ticket. Over half (56%) wear safety belts because they are uncomfortable without them. A relatively large minority (43%) agree that they wear safety belts because others want them to wear them. Among volunteered reasons, the only response to appear with any appreciable frequency is to provide a good example to children (3%).

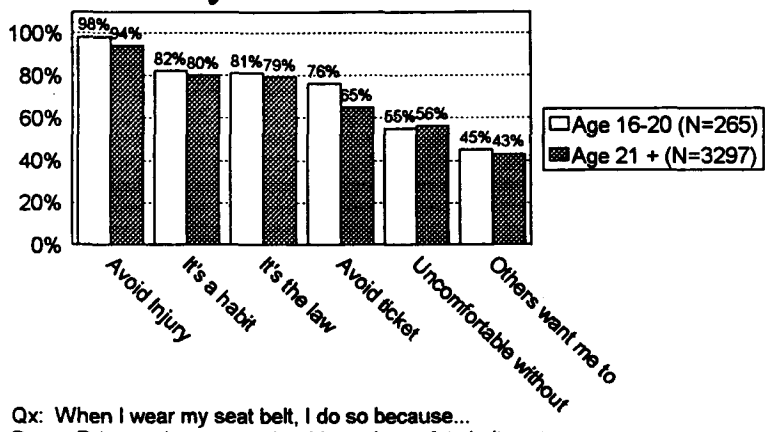
FIGURE 4-1



Since teenagers have the lowest rate of safety belt use, this study compared them to those 21 and older in their reasons for belt use. In general, teenagers are slightly more likely than older persons to agree with each of the reasons for wearing safety belts. For example, 98% of the 16-20 year olds wear safety belts to avoid injuries, compared to 94% of those aged 21 and older. The biggest difference in motivation, however, is found in fear of sanctions. More than three quarters of those 16-20 wear safety belts to avoid tickets (76%). By contrast, less than two thirds (65%) of those 21 and older wear safety belts for this reason.

FIGURE 4-2

Reasons For Safety Belt Use By Teens vs. Adults

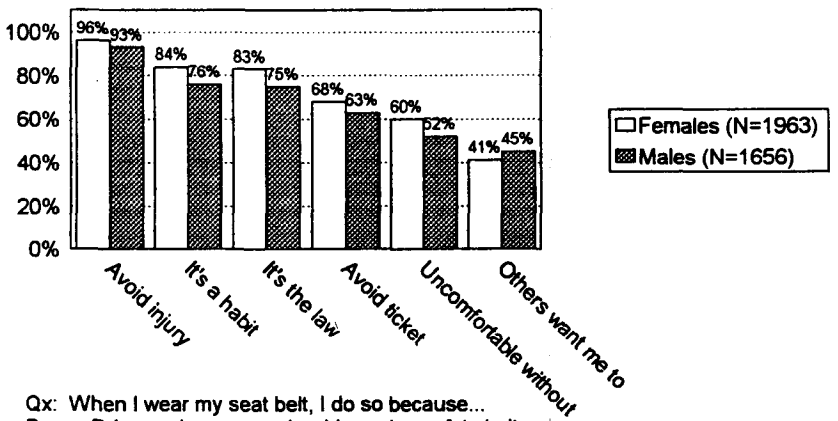


Qx: When I wear my seat belt, I do so because...
Base: Drivers who wear a shoulder or lap safety belt
Unweighted Ns listed above

Females are slightly more likely than males to wear safety belts to avoid serious injury (96%-93%), or because they don't want to get a ticket (68%-63%). They also are somewhat more likely than males to wear safety belts because it's a habit (84%-76%); because it's the law (83%-75%); or because they are uncomfortable without it (60%-52%). "Others want me to wear it," is the only reason for wearing safety belts that is reported by more males than females (45%-41%).

FIGURE 4-3

Reasons For Safety Belt Use By Gender

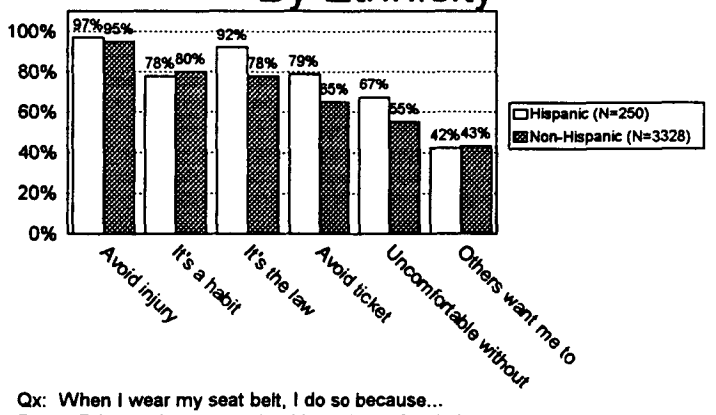


Qx: When I wear my seat belt, I do so because...
Base: Drivers who wear a shoulder or lap safety belt
Unweighted Ns listed above

The survey also found some differences in reason for safety belt use by ethnicity. Hispanics are more likely than non-Hispanics to wear safety belts because it is the law (92%-78%), to avoid getting a ticket (79%-65%), and because they are uncomfortable without a safety belt (67%-55%). The data show only minor differences in reasons for safety belt use by race.

FIGURE 4-4

Reasons For Safety Belt Use By Ethnicity



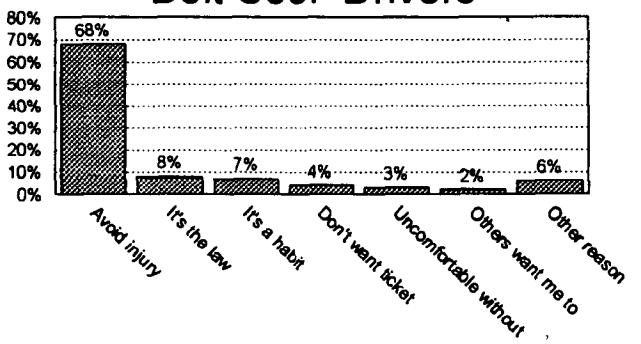
Qx: When I wear my seat belt, I do so because...
Base: Drivers who wear a shoulder or lap safety belt
Unweighted Ns listed above

Most Important Reason for Safety Belt Use

Although a majority of drivers who wear safety belts identify multiple reasons for usage, one reason clearly emerges when they are asked which is most important. More than two thirds (68%) of drivers who wear safety belts say that the avoidance of serious injury is the most important reason why they wear safety belts.

FIGURE 4-5

Most Important Reason For Safety Belt Use: Drivers



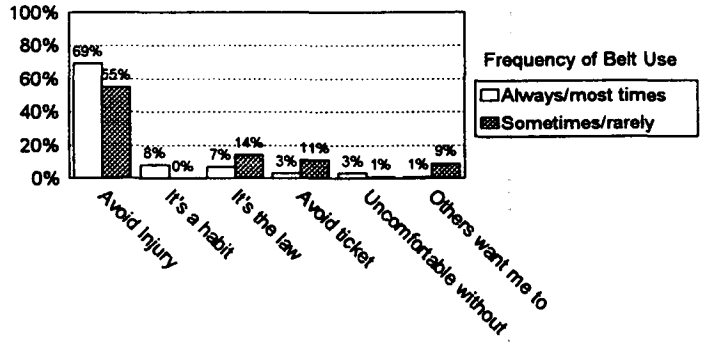
Qx: Of the following reasons you just gave me for wearing your seat belt, which is the most important?
Base: Drivers who wear safety belts
Unweighted N=3607

Fewer than one in ten drivers wearing safety belts say that the most important reason for wearing the belt is because it's the law (8%) or because it's a habit (7%). Only 4% report that avoiding getting a ticket is the most important reason.

The survey finds some differences in the primary reason given for wearing safety belts by the frequency of safety belt use. Among drivers who wear safety belts "always" or "most of the time," 69% say that avoidance of injury is their most important reason as compared to just over half (55%) of those who "sometimes" or "rarely" wear their safety belts. Those who wear their safety belts only sometimes or rarely are more likely than frequent belt users to say that the most important reason that they wear a safety belt is because it is the law (14%-7%), to avoid a ticket (11%-3%), or because others want them to do it (9%-1%).

FIGURE 4-6

Most Important Reason For Safety Belt Use By Frequency Of Belt Use



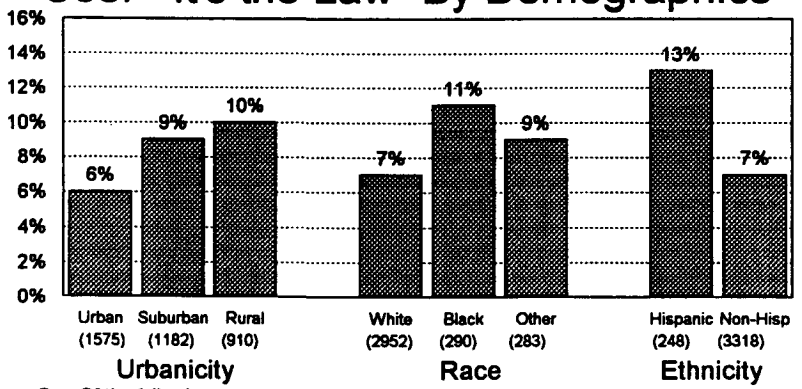
Qx: Of the following reasons you just gave me for wearing your seat belt, which is the most important?
Base: Drivers who wear safety belts
Unweighted N=3611

Females (71%) are more likely than males (65%) to report that their primary reason for wearing safety belts is to avoid serious injury. However, there is little difference by age in primary reason for safety belt use. The 16-20 year olds are about as likely to indicate injury avoidance as their main reason for wearing safety belts (69%) as the general population of drivers (68%).

There is some variation by demographic characteristics in terms of the "law" being given as the primary reason for wearing safety belts. Drivers in urban areas are less likely than those in suburban and rural areas to wear safety belts because it is the law. Whites are less likely than racial minorities to wear safety belts because it is the law. Hispanics are more likely than non-Hispanics to wear safety belts because it is the law.

FIGURE 4-7

Most Important Reason For Safety Belt Use: "It's the Law" By Demographics



Qx: Of the following reasons you just gave me for wearing your seat belt, which is the most important?
Base: Drivers who wear safety belts
Unweighted Ns is listed above

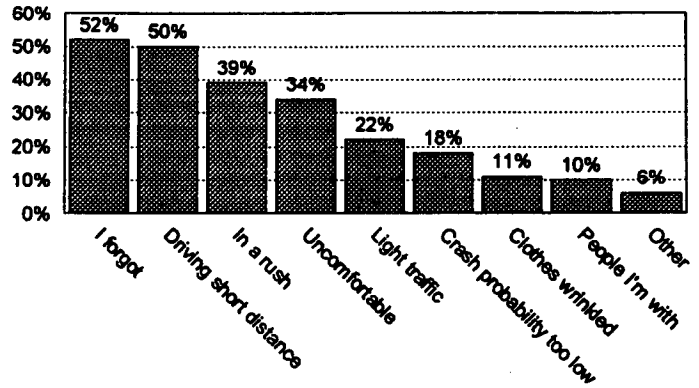
Reasons for Non-Use of Safety Belts

Drivers who did not always wear their safety belt during the past year were asked about their reasons for non-use. Interviewers read eight potential reasons to respondents. For each one, the drivers were asked to agree or disagree that they sometimes did not wear their belt because of that reason. Drivers were then given an opportunity to volunteer other reasons why they did not use their safety belts.

The most frequent reasons drivers give for not wearing their safety belts are that they forget to put it on (52%) or they are driving a short distance (50%). A third or more of this subgroup sometimes do not wear their belt because they are in a rush (39%) or the safety belt is uncomfortable (34%). About a fifth sometimes do not wear a safety belt because they are driving in light traffic (22%) or they believe the probability of being in a crash is too low (18%). One in ten sometimes do not wear a safety belt because they do not want to get their clothes wrinkled (11%) or because of the people they are with (10%). Only 6% volunteer any other reason for not wearing their belts. Finally, one fifth of part-time and nonusers (21%) do not agree that any of these are reasons they do not wear their safety belts, nor are there any other reasons that they identify for not wearing their safety belts.

FIGURE 4-8

Reasons For Not Wearing A Safety Belt: Part-time Users And Non-Users



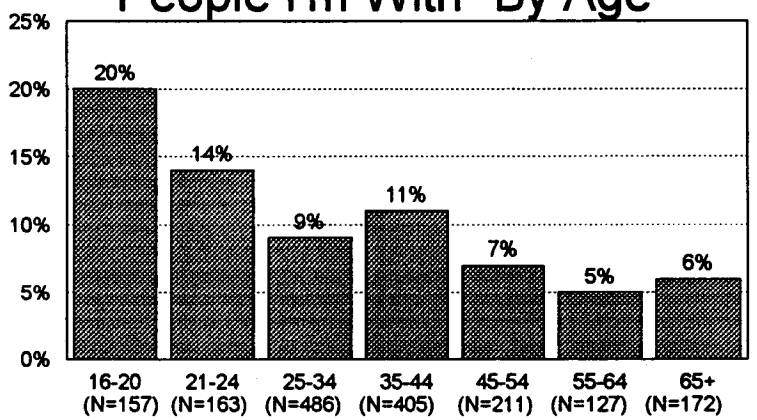
Qx: Sometimes I do not wear my seat belt because...
Base: Drivers who do not wear safety belts all the time
Unweighted N=1747

There are few gender differences in the reasons given for not wearing safety belts. Females (14%) are more likely than males (8%) to say that they sometimes don't wear safety belts because they do not want to get their clothes wrinkled.

On the other hand, there are some notable age differences in the reasons given for not wearing safety belts. One-fifth (20%) of part-time and non-users aged 16-20 say that they sometimes do not wear safety belts because of the people they are with. By contrast, 14% of those aged 21-24, 9% of those aged 25-34, 11% of those 35-44, and 6% of those aged 45 or older say that they sometimes don't wear safety belts because of the people they are with.

FIGURE 4-9

Reason For Not Wearing Safety Belt: "People I'm With" By Age

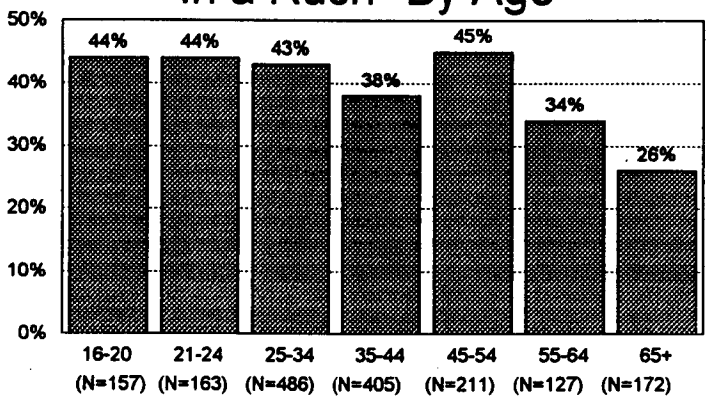


Qx: Sometimes I do not wear my seat belt because...of the people I'm with.
Base: Drivers who do not wear safety belts all the time
Unweighted Ns listed above

The survey finds that older drivers (age 55 and up) are less likely than younger drivers to say that they sometimes don't wear their safety belts because they are in a rush. Forty-two percent of part-time and non-users age 16-54 give this as a reason for not wearing their safety belt, compared with only 29% of those age 55 and older.

FIGURE 4-10

Reason For Not Wearing Safety Belt: "In a Rush" By Age



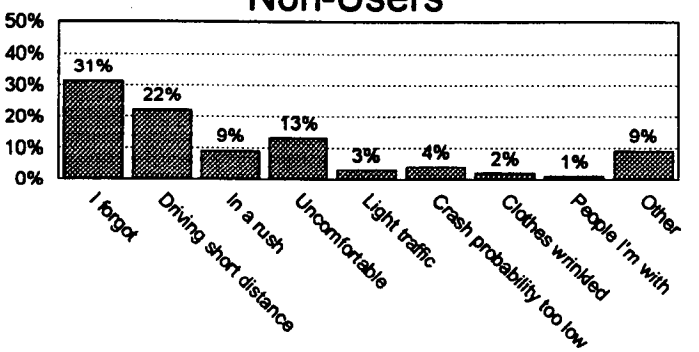
Qx: Sometimes I do not wear my seat belt because...I'm in a rush.
Base: Drivers who do not wear safety belts all the time
Unweighted Ns listed above

Most Important Reason for Non-Use of Safety Belts

When asked which is the most important reason that they sometimes do not wear a safety belt, part-time and non-users most often reply that they forget to put it on (31%). Driving a short distance is the second most common primary reason (22%) for not wearing a safety belt. The safety belt being uncomfortable (13%) ranks third, while being in a rush (9%) ranks fourth.

FIGURE 4-11

Most Important Reason For Not Wearing A Safety Belt: Part-time Users And Non-Users

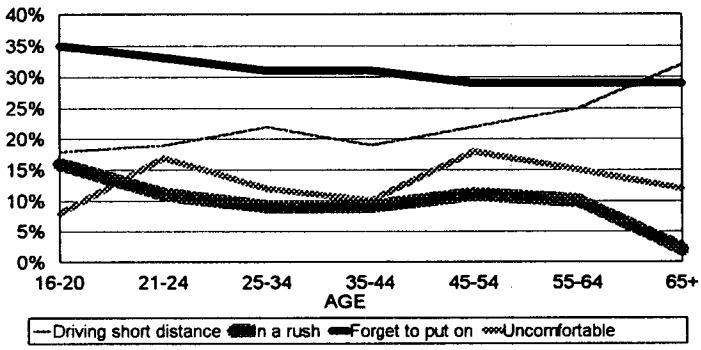


Qx: Of the following reasons you just gave me for not wearing your seat belt, which is the most important?
Base: Drivers who do not wear safety belts all the time
Unweighted N=1384

The primary reason for not wearing safety belts varies by age. The proportion whose most important reason for not wearing safety belts is because they forgot to put them on declines from 35% of those age 16-20 to 29% of those 45 and older. The proportion who do not wear safety belts primarily because they are in a rush declines from 16% of those 16-20 years old to 2% of those 65 and older. By contrast, the proportion whose most important reason for not wearing safety belts is because they are only driving a short distance increases from 18% of those 16-20 years old to 32% of those 65 and older. No consistent pattern by age appears for those whose primary reason for not wearing a safety belt is that the belt is uncomfortable.

FIGURE 4-12

Most Important Reason For Not Wearing Safety Belt By Age



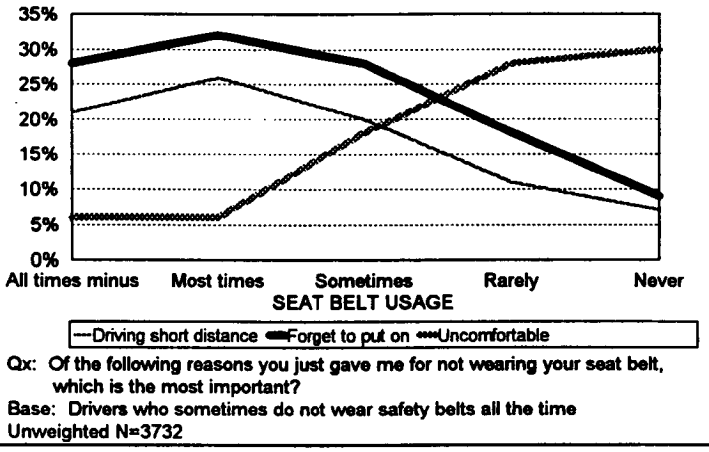
Qx: Of the following reasons you just gave me for not wearing your seat belt, which is the most important?
Base: Drivers who do not wear safety belts all the time.
Unweighted N=1384

The primary reason for not wearing safety belts also differs by the reported frequency of safety belt use.[4] Those who say that they always wear their safety belt, but have driven without their belt on in the past year, are most likely to say that forgetting to put it on was their most important reason (28%). Forgetfulness as the primary reason for not wearing safety belts generally declines with frequency of safety belt use to 9% of those who say that they never wear their safety belts. Driving a short distance is the primary reason for non-use among 26% of those who say they wear their safety belts most of the time, but declines as the most important reason for non-use to 7% of those who never wear their safety belts. By contrast, the safety belt being uncomfortable is given as the primary reason for non-use by only 6% of those who report they wear their safety belts most of the time, but increases to 30% of those who never wear their safety belts.

[4] See Chapter 3 for a description of the method used to calculate revised safety belt use frequency.

FIGURE 4-13

Most Important Reasons For Not Wearing Safety Belt By Belt Use



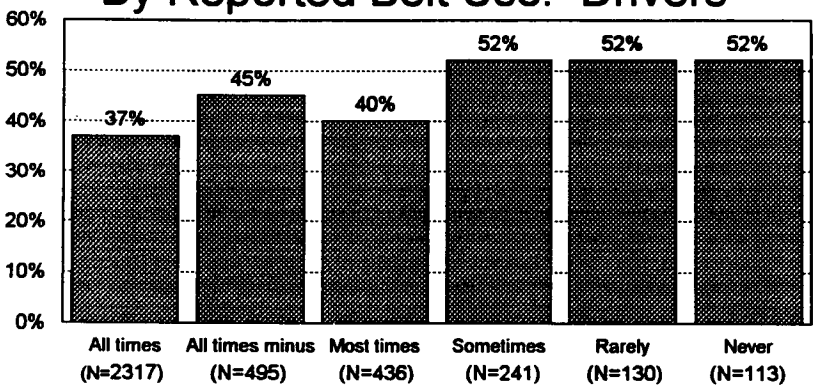
Qx: Of the following reasons you just gave me for not wearing your seat belt, which is the most important?
Base: Drivers who sometimes do not wear safety belts all the time
Unweighted N=3732

What Drivers Dislike or Find Annoying About Safety Belts

All drivers, regardless of whether or not they wear their safety belts regularly, were asked if there was anything that they particularly disliked or found annoying about wearing their safety belt. Four out of ten drivers (40%) affirmed that there are things they dislike or find annoying about wearing their safety belt. More importantly, the proportion of drivers who find their safety belt annoying increases from 37% of those who say they always wear their safety belts to 52% of those who sometimes, rarely or never wear their safety belts. Drivers who said they wear their safety belt all the time but who also said that they had driven without their belt on some time in the past year ("all times minus") are more likely than those who use their belt "most of the time" to say they find something annoying about safety belts. These results suggest that, for some drivers, their commitment to belt use needs to be, but isn't always, strong enough to overcome their annoyance or discomfort with the belt.

FIGURE 4-14

Dislike Or Find Safety Belts Annoying By Reported Belt Use: Drivers

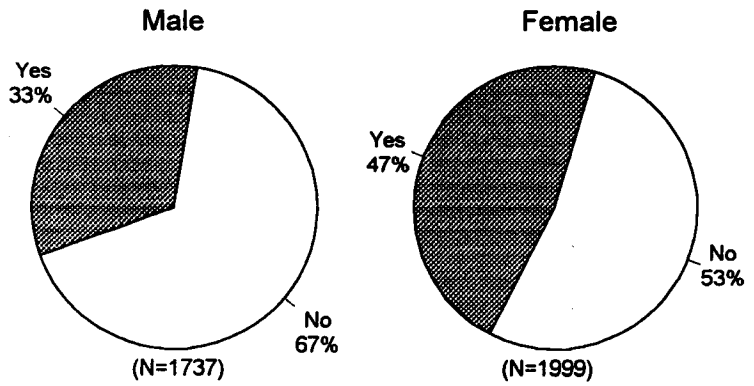


Qx: Is there anything that you particularly dislike or find annoying about wearing your seat belt?
Base: Drive a motor vehicle
Unweighted Ns listed above

There are striking differences by gender in the proportion of drivers who find safety belts annoying. Only a third (33%) of male drivers particularly dislike or find something annoying about wearing safety belts, compared to nearly half (47%) of female drivers.

FIGURE 4-15

Safety Belts Annoying By Gender



Qx: Is there anything that you particularly dislike or find annoying about wearing your seat belt?
Base: Drive a motor vehicle
Unweighted Ns listed above

The most common complaint among those who have particular dislikes or annoyances with safety belts is physical discomfort. More than half of those who dislike or find something annoying about safety belts cite body pressure or physical discomfort, including pressure on the neck (38%), shoulder pressure or tightness

(10%), and nonspecific discomfort (10% who said "uncomfortable"). There are striking gender differences here, too. Slightly more than a quarter of males (26%) who have a problem with safety belts complain about pressure across the neck, compared to nearly half of females (47%).

TABLE 4-1
What Drivers Dislike or Find Annoying About Safety Belts:
Drivers Who Dislike or Find Something Annoying About Safety Belts

Qx: Is there anything that you particularly dislike or find annoying about wearing your seat belt?
Qx: What is it that you dislike or find annoying? Anything else?

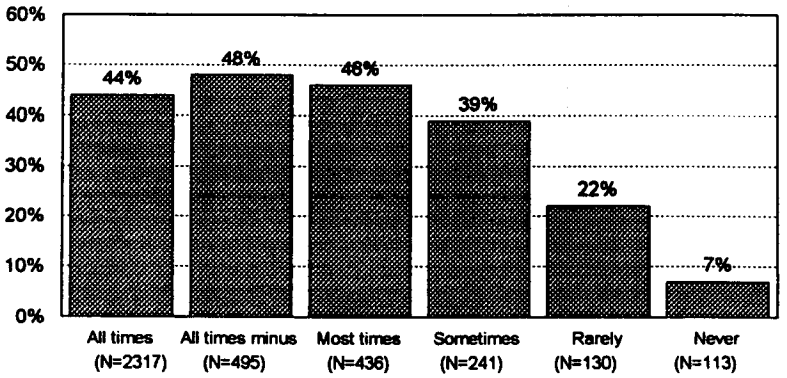
	Total (N=1507)	Males (N=575)	Females (N=932)
Body pressure (net)	53%	39%	63%
Pressure on my neck/chokes me/ cuts across my neck	38%	26%	47%
Pressure on my shoulder/ shoulder strap too tight	10%	8%	11%
Other pressure	10%	10%	10%
Discomfort (net)	16%	21%	12%
Uncomfortable	10%	12%	8%
Feel restricted/too confining	10%	13%	7%
Other			
Wrinkles my clothes	7%	4%	10%

Since forgetting to put them on is one of the most common reasons given for non-use of safety belts, drivers were asked if they would like a device that would remind them, whenever the car comes to a stop, that their safety belt was not on. More than half of drivers (52%) would dislike such a safety belt warning device. Five percent are not sure. However, a large minority (43%) like the idea of an automatic safety belt reminder device.

Those who wear their safety belts all or most of the time are most likely to approve of the idea of an automatic safety belt reminder device, with little or no difference in the approval rates between those groups. The level of approval then drops sharply as belt use decreases. These survey data indicate that the people who would most like the reminder device are the ones who need it least.

FIGURE 4-16

Would Like A Safety Belt Warning Device By Frequency Of Belt Use: Drivers

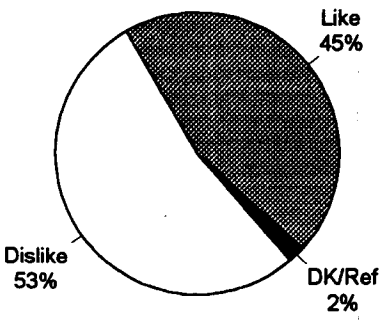


Qx: Would you like or dislike a device that would remind you that your seat belt was not on whenever the car comes to a stop?
Base: Drive a motor vehicle
Unweighted Ns listed above

Among those who say they sometimes don't wear their safety belt because they forget, less than half (45%) favor a safety belt warning device that would remind them to buckle their belt. Just over half (53%) would not like the device and 2% do not know.

FIGURE 4-17

Acceptability Of Safety Belt Warning Device: Those Who "Forget" To Wear Belt



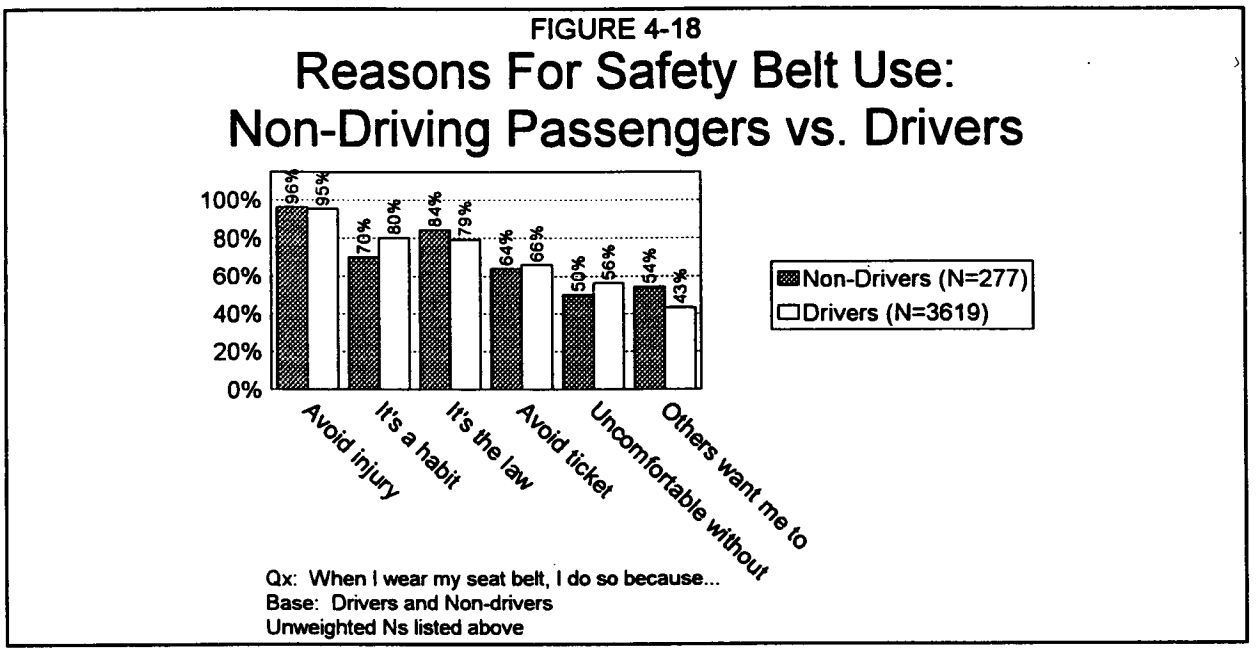
Qx: Would you like or dislike a device that would remind you that your seat belt was not on whenever the car comes to a stop?
Qx: Sometimes I do not wear my seat belt because...I forgot to put it on.
Base: Drivers who sometimes forget to wear safety belt
Unweighted N=919

Reasons for Safety Belt Use by Non-Drivers

Interviewers asked non-drivers their reasons for using safety belts while riding as passengers in motor vehicles. The survey approach was the same with non-drivers (who at least sometimes ride as passengers) as with drivers: six different reasons for safety belt use were read, one at a time, and non-drivers were asked whether or not each reason was a factor in their use of safety belts. Non-drivers were then given an opportunity to volunteer other reasons for their safety belt use.

Non-drivers' reasons for safety belt use are, in general, very similar to those given by drivers, with a few differences. Non-drivers are more likely than drivers (54% vs. 43%) to be influenced by others to wear their safety belt. They are less likely than drivers to wear a safety belt because they are uncomfortable without it (50% vs. 56%) or because it is a habit (70% vs. 80%).

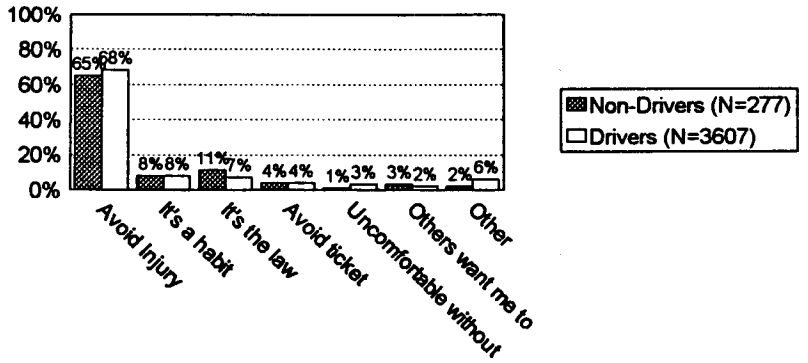
FIGURE 4-18



By far the most important reason for safety belt use among non-drivers (as with drivers) is to avoid serious injury. Almost two-thirds (65%) say this is the most important reason. Only one in nine (11%) say that the law is the most important reason for their belt use and 8% say it's a habit. Five percent or fewer cite any other single reason as their most important motivator for wearing a safety belt.

FIGURE 4-19

Most Important Reason For Safety Belt Use: Non-Driving Passengers vs. Drivers



Qx: Of the following reasons you just gave me for wearing your seat belt, which is the most important?
Base: Drivers and Non-drivers who wear a shoulder or lap safety belt
Unweighted Ns listed above

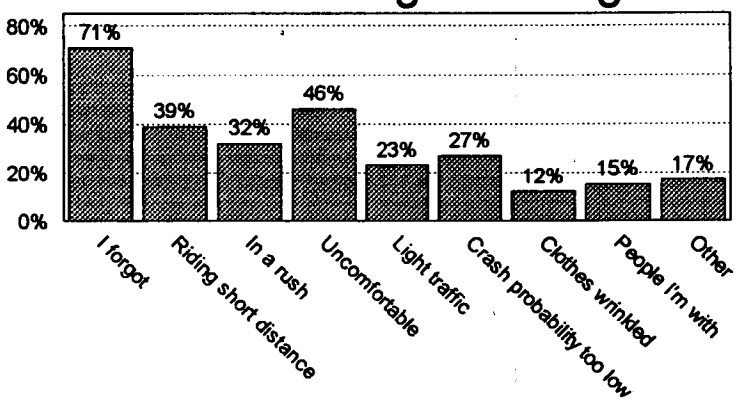
Non-Drivers' Reasons for Not Using Safety Belts

Non-drivers who at least sometimes did not wear a safety belt while riding were asked their reasons for non-use. As with drivers, interviewers read eight potential reasons to respondents. For each one, non-drivers were asked to agree or disagree that they sometimes did not wear their belt for that reason. They were then given an opportunity to volunteer other reasons why they did not use their belts.

The most commonly cited reason is that they forget to wear it (71%). A third or more sometimes do not wear their belt because they are uncomfortable wearing it (46%), only riding a short distance (39%), or in a rush (32%). About a fourth sometimes do not wear their belt because they believe the probability of a crash is too low (27%) or because of light traffic (23%).

FIGURE 4-20

Reasons For Not Wearing A Safety Belt: Non-Driving Passengers

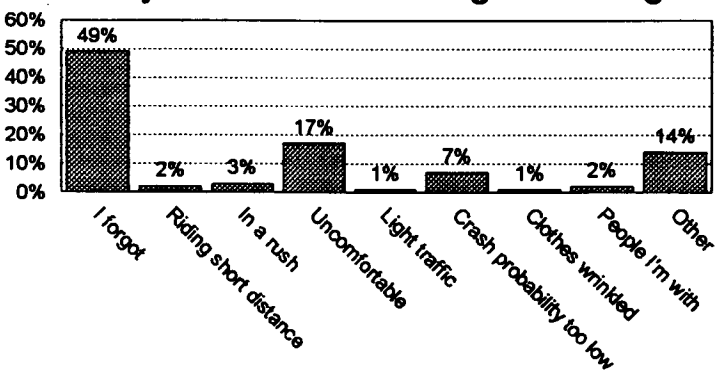


Qx: Sometimes I do not wear my seat belt because...
Base: Non-drivers who don't always wear safety belts
Unweighted N=112

Interviewers then asked non-drivers which of these reasons for non-use was the most important. "I forgot" again emerged as the top response (49%).

FIGURE 4-21

Most Important Reason For Not Wearing A Safety Belt: Non-Driving Passengers

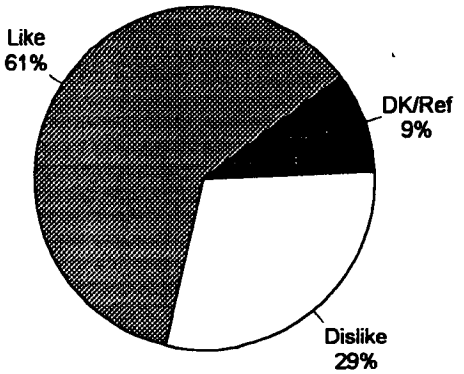


Qx: Of the following reasons you just gave me for not wearing your seat belt, which is the most important?
Base: Non-drivers who don't always wear safety belts
Unweighted N=107

As with drivers, interviewers asked non-drivers if they would like a warning device that reminds them, whenever the vehicle comes to a stop, that their belt is not on. A majority (61%) of non-drivers who rode as a passenger in the past year favor such warning devices, compared with only 43% of drivers. Less than a third (29%) would dislike such a device and 9% do not know.

FIGURE 4-22

Acceptability Of Safety Belt Warning Device: Non-Driving Passengers



Qx: Would you like or dislike a device that would remind you that your seat belt was not on whenever the car comes to a stop?
Base: Non-drivers
Unweighted N=299

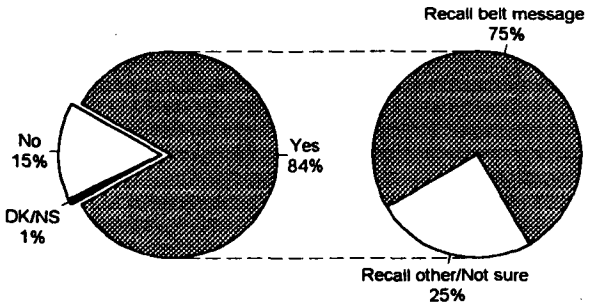
Vince and Larry, The Crash Dummies

The critical need to communicate to the public the importance of safety belt use prompted the U.S. Department of Transportation (DOT) to expend substantial resources and energy to develop public service announcements (PSAs) and conduct other safety marketing activities to convey the message to "buckle up". Advertisements about safety belt use in which Vince and Larry, the crash dummies, are the central characters have been a very important part of DOT's effort. This survey provides data on the effectiveness of the crash dummy ads in reaching the public.

The survey finds widespread public exposure to the crash dummy ads. Six out of seven (84%) persons recall seeing or hearing advertisements that use crash dummies. Moreover, three quarters of those who recall the advertisements identify the message as buckling your safety belts. Hence, the public education campaign has successfully delivered NHTSA's message to 64% of the public age 16 and older.

FIGURE 4-23

Awareness Of Crash Dummy Ads: General Public



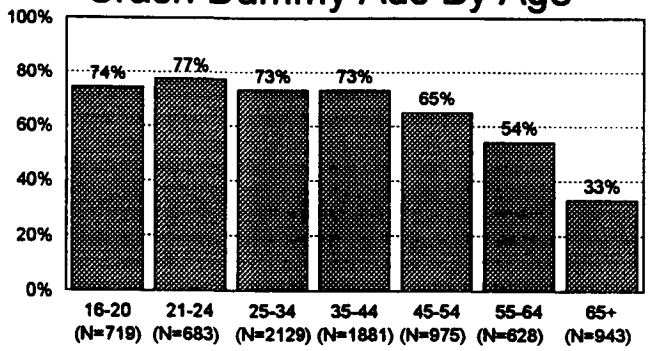
Qx: Have you seen or heard any advertisements that use crash dummies?
Qx: Could you tell me what advice or message the crash dummies advertised?
Base: Total population age 16+
Unweighted N=8112

It is particularly noteworthy that the Vince and Larry advertisements seem to have reached one of the key target audiences -- youth. Eighty-five percent of 16-20 year olds and 89% of 21-24 year olds recall seeing or hearing the advertisements using crash dummies, a slightly higher percentage than the total population (84%) and about the same as that of 25-54 year olds. Of the 16-24 year old respondents who recall such advertisements, 87% identify the safety belt message, the highest recognition percentages for any age group.

The survey results show that, overall, about two-thirds (64%) of the public have seen or heard the crash dummy ads and recall a safety belt message, with declining levels of awareness by age. Three-quarters of those age 16-44 have seen the ads and identify the safety belt message, dropping to two-thirds (65%) of 45-54 year-olds, and to just over half (54%) of those age 55-64. Only a third of adults age 65 and older recall having seen the ads and hearing the belt message.

FIGURE 4-24

Recognize And Recall Belt Message Of Crash Dummy Ads By Age



Qx: Have you seen or heard any advertisements that use crash dummies?
Qx: Could you tell me what advice or message the crash dummies advertised?
Base: Seen or heard advertisement of crash test dummies
Unweighted Ns listed above

Fatalism and Non-Use of Safety Belts

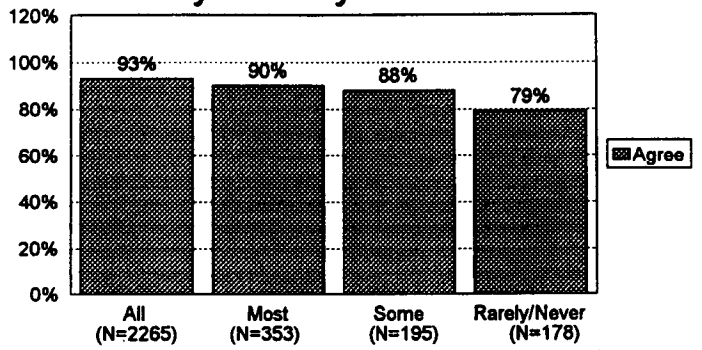
The survey provides a preliminary examination of the possible role of fatalism in safety belt non-use. As noted earlier in this chapter, the primary reason for most drivers to wear safety belts is to avoid serious injury. This reason is cited more often by those who wear safety belts more frequently. Hence, there is a question as to whether those who do not wear safety belts on a regular basis do not recognize the danger, or simply do not believe they can avoid danger.

Approximately 90% of those who wear their safety belts all (93%), most (90%) or some (88%) of the time[5] agree with the statement that people have a choice to do what they can to avoid death and serious injury, so wearing a safety belt does matter. By contrast, only 79% of those who rarely or never wear safety belts agree with this notion. Hence, there does appear to be an increased degree of fatalism that distinguishes those who rarely or never wear safety belts from those who at least sometimes wear them.

[5] See Chapter 3 for a description of the method used to calculate safety belt use frequency (unrevised).

FIGURE 4-25

Believe Wearing Safety Belt Matters By Safety Belt Use

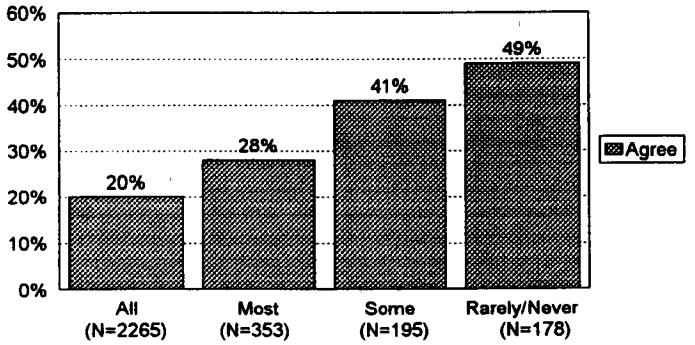


Qx: Do you agree or disagree that people have a choice to do what they can to avoid death and serious injury, so wearing a seat belt does matter?
Base: Total population age 16+
Unweighted Ns listed above

In a second question, respondents were asked if they agreed or disagreed with the statement that "if it is your time to die, you'll die, so it doesn't matter whether you wear your safety belt." Again, the survey finds greater evidence of fatalism among less frequent belt users. Only 20% of those who wear safety belts all of the time agree that if it is your time to die, you'll die whether you wear safety belts or not. Agreement with the statement increases to 28% among those who wear safety belts most of the time, 41% of those who wear it sometimes, and nearly half (49%) of those who rarely or never wear their safety belts.

FIGURE 4-26

Believe Wearing A Safety Belt Doesn't Matter By Safety Belt Use



Qx: Do you agree or disagree that if it is your time to die you'll die, so it doesn't matter whether you wear your seat belt or not?
Base: Total population age 16+
Unweighted Ns listed above

The survey finds relatively minor differences in fatalistic attitudes by gender. Females are slightly more likely than males (93% to 89%) to believe that "people have a choice to avoid death and serious injury, so wearing a seat belt does matter."

Similarly, males are slightly more likely than females (26% to 22%) to believe that "if it is your time to die, you will die, so it doesn't matter whether or not you wear your seat belt."

CHAPTER 5

ATTITUDES, KNOWLEDGE, AND EXPERIENCE WITH SAFETY BELT LAWS AND THEIR ENFORCEMENT

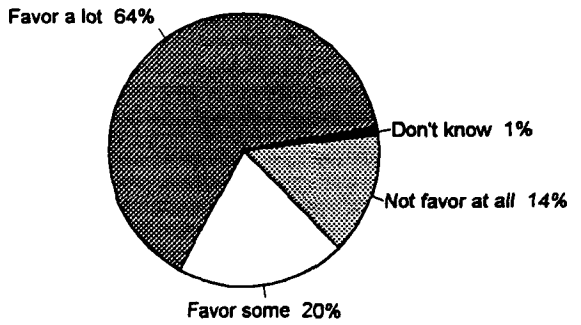
Safety belt laws have been enacted throughout the country to increase safety belt use. Respondents were asked about their attitudes toward enactment and enforcement of these laws, their knowledge of the safety belt laws within their own State, and their personal experience with safety belt law enforcement.

Attitudes Toward Safety Belt Laws

Most persons age 16 and older favor safety belt laws for drivers and front-seat passengers. About two-thirds (64%) favor such laws a lot, and an additional 20% favor them somewhat. Only about one in seven persons (14%) do not favor driver and front-seat passenger belt laws at all. A small number (1%) do not know whether they support them or not.

FIGURE 5-1

Support For Front Seat Safety Belt Laws

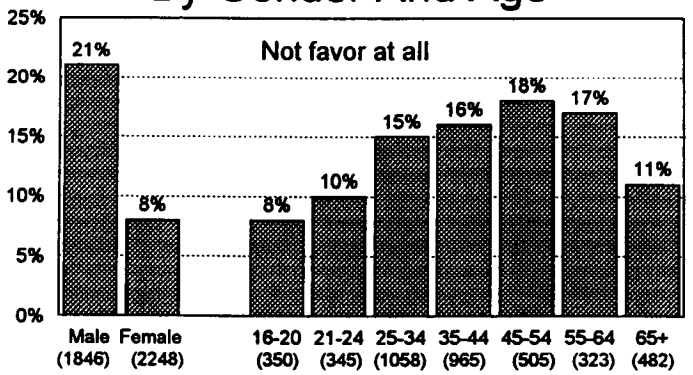


Qx: How do you feel about laws that require drivers and front seat passengers to wear seat belts? Do you favor these laws a lot, some, or do you not favor these laws at all?
Base: Total population age 16+
Unweighted N=4094

Those who oppose safety belt laws are more likely to be male and are neither the youngest nor the oldest adults. More than twice as many males as females (21% versus 8%) do not favor safety belt laws at all. Less than 10% of 16-24 year olds and only one in nine persons age 65 and older (11%) oppose safety belt laws, compared with 15% of persons age 25-34, 16% of those 35-44 years old, 18% of 45-54 year olds, and 17% of those age 55-64.

FIGURE 5-2

Oppose Front Seat Safety Belt Laws By Gender And Age

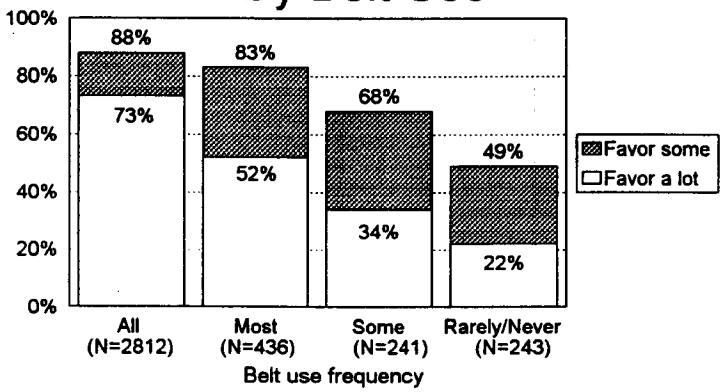


Qx: How do you feel about laws that require drivers and front seat passengers to wear seat belts?
Base: Total population age 16+ by gender and age
Unweighted Ns listed above

As might be expected, support for safety belt laws is strongest among those who use their belt most frequently.[6] Almost three quarters (73%) of drivers who use their safety belt all the time favor front seat belt laws a lot, with an additional 15% favoring such laws somewhat. Support declines steadily as frequency of use declines. Among those who use their belt most of the time, 52% favor the laws a lot, declining to a third (34%) of those who use their safety belt some of the time, and even fewer (22%) of the rare/never belt users.

FIGURE 5-3

Favor Front Seat Safety Belt Laws By Belt Use



Qx: How do you feel about laws that require drivers and front seat passengers to wear seat belts?
Base: Drive a motor vehicle
Unweighted Ns listed abore

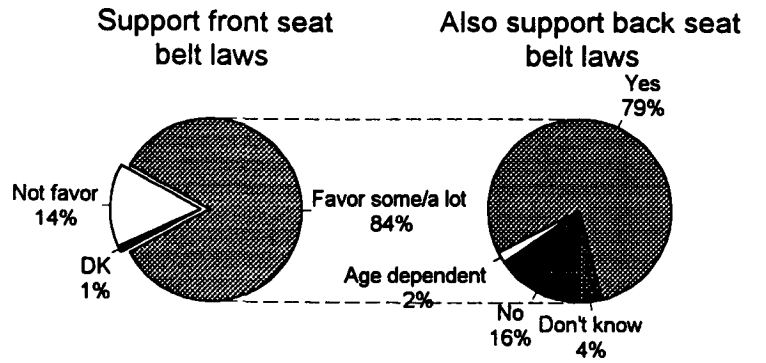
[6] See Chapter 3 for a description of the method used to calculate safety belt use frequency (unrevised).

Despite the comparatively weaker support for safety belt laws by those who rarely or never use their belts, the survey finds that even among this segment of the population, almost half (48%) favor belt laws a lot (21%) or some (27%).

Over three-fourths (79%) of those who favor front seat safety belt laws also favor the inclusion of adult back seat passengers in safety belt laws. This means that approximately two-thirds (66%) of the total population age 16 and older support safety belt laws for back-seat passengers. One in six (16%) of those who favor front seat belt laws oppose applying those laws to the vehicle's back seat passengers.

FIGURE 5-4

Support For Safety Belt Laws That Apply To Back Seat Adult Passengers

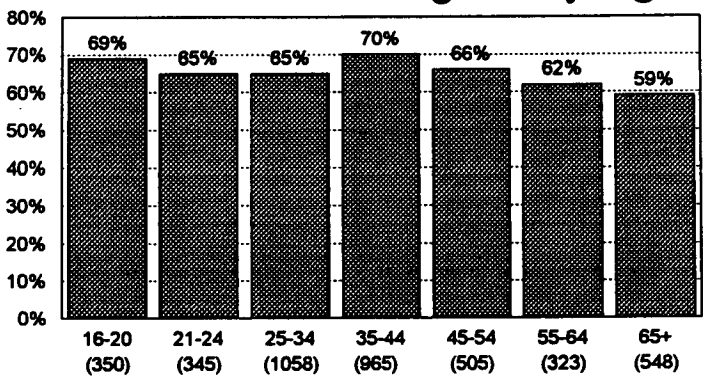


Qx: Do you think that seat belt laws should also apply to back seat adult passengers?
Base: Total population age 16+
Unweighted N=4094

Among the total population age 16 and older (including those who do not support safety belt laws for front seat passengers), support for back seat safety belt laws varies slightly by age for those between the ages of 16 and 54, then declines somewhat among those age 55 and up. Back seat belt laws are favored by about two-thirds of those ages 16-20 (69%), 21-24 (65%), 25-34 (65%), and 45-54 (66%). A slightly lower percentage of those age 55-64 (62%) and an even lower percentage of those age 65 and older (59%) support laws of this kind.

FIGURE 5-5

Favor Safety Belt Laws For Adult Back Seat Passengers By Age



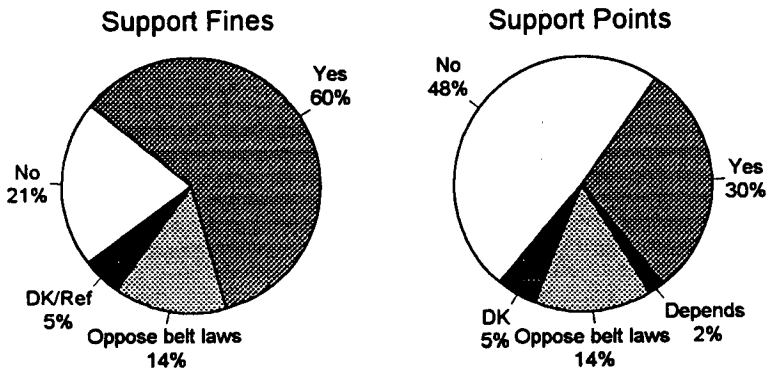
Qx: Do you think that seat belt laws should also apply to back seat adult passengers?
Base: Total population age 16+ by age
Unweighted Ns listed above

Enforcement of Safety Belt Laws

The public tends to favor enforcing safety belt laws with fines but not with points on the driver's license. A majority (60%) support fines for drivers who do not wear a safety belt. In addition to the 14% of the population age 16 and older who oppose safety belt laws in general, another 21% oppose using fines to enforce belt laws.

FIGURE 5-6

Support For Fines And Points



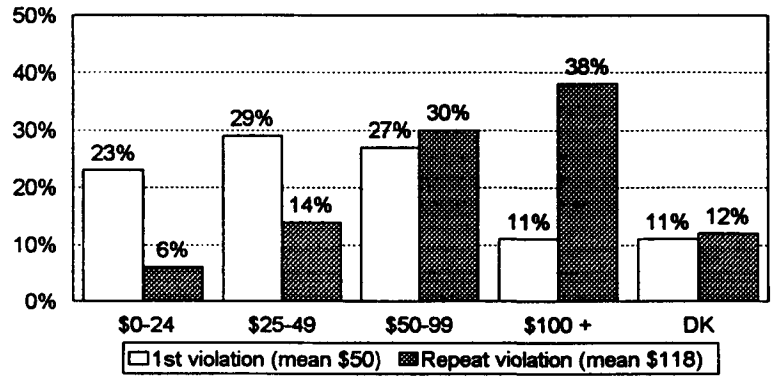
Qx: Do you support fines for drivers who do not wear seat belts?
Qx: Do you favor or oppose receiving points against a license as a penalty for seat belt violations?
Base: Total population age 16+
Unweighted N=4094

Less than one-third of the public (30%) supports giving points against a driver's license for violation of a safety belt law. A small percentage (2%) thinks it depends on the circumstances. Half of the public (48%) oppose giving points (although they support belt laws) and, as noted above, another 14% are opposed to safety belt laws.

Interviewers asked those who support giving fines for violation of a safety belt law what fine would be appropriate for the first and subsequent offenses. The average fine recommended was $50 for the first offense and $118 for repeat violations. About one in nine fine supporters (11%) favored fines of $100 or more for a first offense.

FIGURE 5-7

Suggested Minimum Fine For Violation Of Safety Belt Law: Fine Supporters

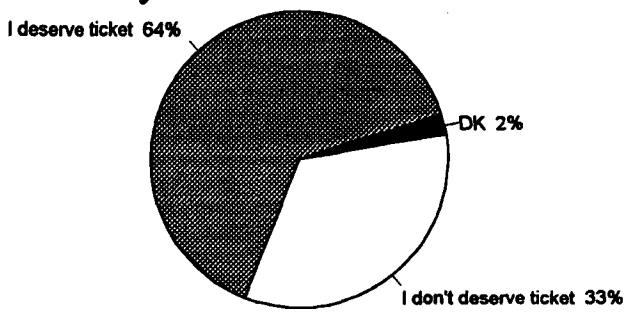


Qx: What do you think the minimum fine should be for the first seat belt violation?
Qx: What do you think the minimum fine should be for repeat seat belt violations?
Base: Support fines for safety belt law violations
Unweighted N=2467

Respondents were asked how they would likely react to getting a ticket for a safety belt violation. The interviewers gave respondents two choices and asked which was more likely: that they would believe they deserved the ticket because they broke the law, or they would believe the ticket was undeserved because wearing a safety belt should be a personal choice. This question was designed to enable comparison of people's views about safety belt laws from the societal perspective (support for belt laws in principle) and the personal perspective (reaction to personally receiving some punishment for violating the laws). According to the data, two thirds of the public (64%) would be more likely to believe that they deserved the ticket. This compares to 60% (Figure 5-6) who support fines.

FIGURE 5-8

Likely Reaction To Receiving Safety Belt Violation Ticket

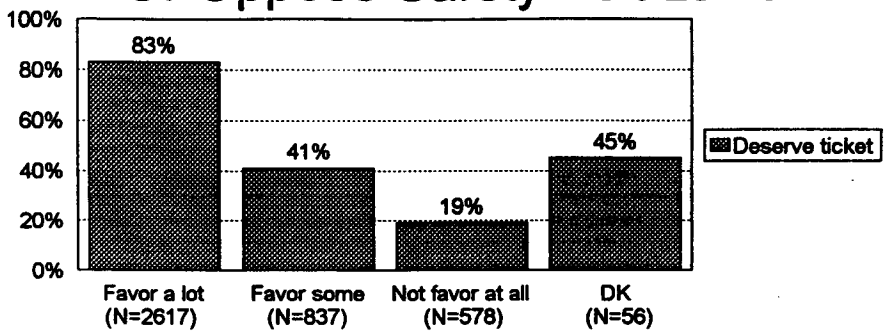


Qx: Suppose you get a ticket for not wearing your seat belt, which of the following statements better describes your likely reaction?
"I deserve the ticket because I broke the law" or "I do not deserve the ticket because wearing a seat belt should be a personal choice."
Base: Total population age 16+
Unweighted N=4094

Aggregate results suggest that the public is somewhat, but not entirely, consistent, from the societal and personal perspectives, in its views about safety belt laws and their enforcement. In general, the willingness to say that they deserve a ticket for a safety belt law violation correlates with the degree to which people favor safety belt laws. Five of six (83%) persons who favor safety belt laws a lot believe that, if they received a ticket for a safety belt violation, they would feel they deserved it, compared with only 41% of those who favor belt laws somewhat. Despite this clear correlation, the fact remains that one-sixth of those who favor belt laws a lot and more than half who support them somewhat appear resistant to fines on a personal level. By contrast, one-fifth (19%) of those who oppose safety belt laws believe that they would accept that they deserved the ticket.

FIGURE 5-9

Deserve Safety Belt Ticket By Favor Or Oppose Safety Belt Laws



Qx: Suppose you get a ticket for not wearing your seat belt, which of the following statements better describes your likely reaction? "I deserve the ticket because I broke the law," or "I do not deserve the ticket because wearing a seat belt should be a personal choice?"

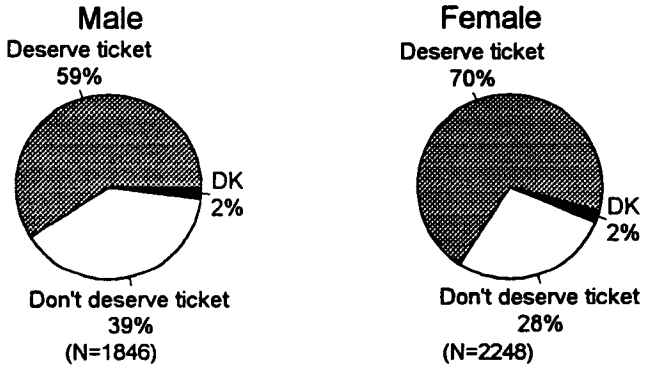
Base: Total population age 16+

Unweighted Ns listed above

Females are more likely than males to accept that they deserved the ticket. The data suggested that more than two-thirds (70%) of females would likely think they deserved the ticket, compared with 59% of males.

FIGURE 5-10

Likely Reaction To Receiving Safety Belt Ticket By Gender



Qx: Suppose you get a ticket for not wearing your seat belt, which of the following statements better describes your likely reaction: "I deserve the ticket because I broke the law" or "I do not deserve the ticket because wearing a seat belt should be a personal choice"?

Base: Total population age 16+

Unweighted Ns listed above

Knowledge of State Safety Belt Laws

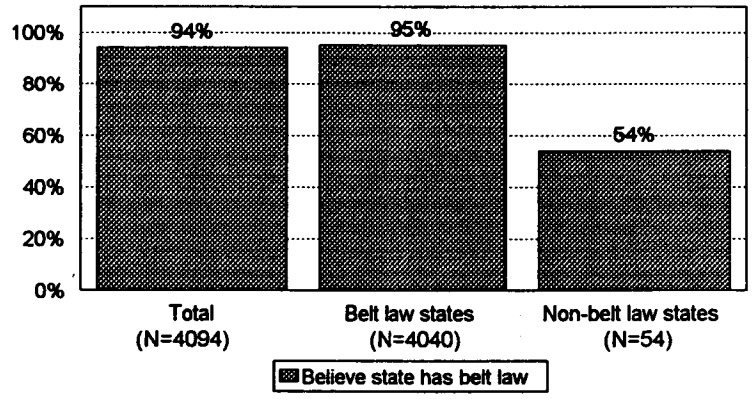
Knowledge of the safety belt laws in one's own State of residence can reasonably be expected to have an effect on compliance with the law's requirements.

Interviewers asked respondents to say whether or not their State had a safety belt law, and then asked questions about the law's coverage and enforcement guidelines.

Most people (94%) believe their State does indeed have a safety belt law. In order to determine whether or not people are correct in their beliefs, responses to this and subsequent survey questions were compared with data on safety belt laws in each respondent's State of residence. Of those who live in the 47 States (and District of Columbia) with a safety belt law effective during the time of the survey administration, 95% believe that their State has such a law, reflecting a high correspondence between fact and belief. Among respondents who live in States where there was no safety belt law at the time of the survey (Maine, New Hampshire, and South Dakota[7]), more than half (54%) believe the State has a safety belt law.

FIGURE 5-11

Believe State Has Law Requiring The Use Of Safety Belts



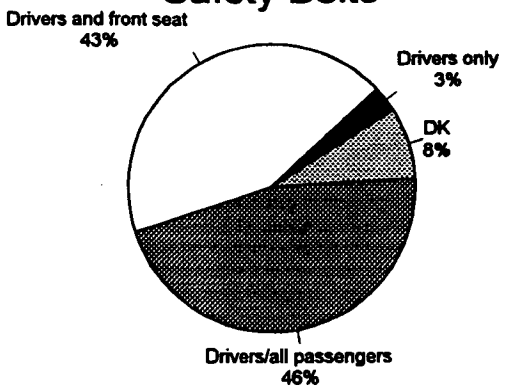
Qx: Does your state have a law requiring seat belt use?
Base: Total population age 16+
Unweighted Ns listed above

Among persons who believe that their State has a safety belt law (whether or not it actually does) 43% believe that the driver and front seat passengers only are required to wear safety belts. A slightly higher percentage (46%) believe that the driver and all adult passengers are required by their State law to use a safety belt. Only 3% think that their State law requires safety belt use by drivers only.

[7] South Dakota's safety belt law is now in effect, but was not at the time of the survey.

FIGURE 5-12

Beliefs About Who Is Required to Wear Safety Belts



Qx: Not including children, who is required to wear seat belts according to your state law?
Base: Believe their state has safety belt law
Unweighted N=3846

Comparing beliefs with reality reveals that, on the whole, citizens are reasonably well informed about the scope of their State's safety belt requirements. In States where all adults in the vehicle are required to wear a safety belt, 76% of the residents age 16 and older believe that this is what the law requires. One in six (16%) are incorrect in their belief, thinking drivers only or drivers and front seat passengers only are covered. The remainder are too unsure to guess. (Coverage of each State's safety belt law is presented in Appendix C of this report.)

TABLE 5-1
Beliefs About Who Is Required To Wear Safety Belts By State Laws

Qx: Not including children, who is required to wear seat belts according to your State law?

Who Public Believes Is Required to Wear Safety Belts	What State Law Actually Requires	
	Driver and All Passengers To Wear Safety Belts (N=926)	Only Driver and Front Seat Passengers To Wear Safety Belts (N=2893)
Driver and all passengers	76%	37%
Driver only	2%	4%
Driver and front seat passengers	14%	52%
Not sure	8%	8%
TOTAL	100%	100%

People who live in States with more limited passenger coverage seem less knowledgeable about their State law. Only about half (52%) believe that their State

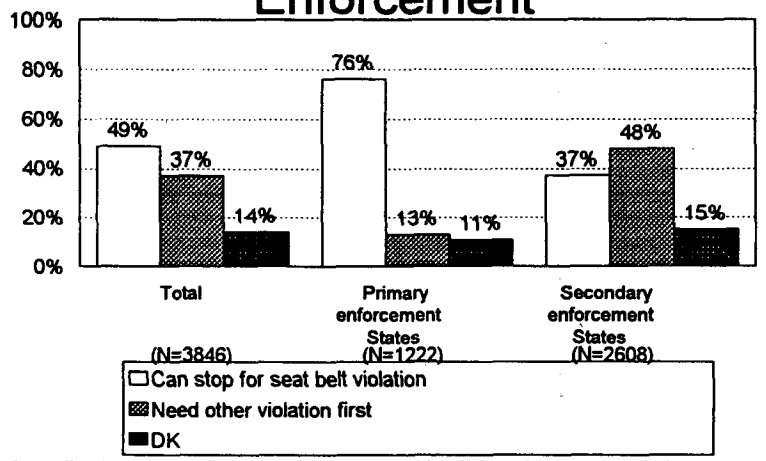
requires safety belt use by drivers and front seat passengers only, whereas 37% believe, erroneously, that the law requires belt use by all adults in the vehicle. From the perspective of occupant safety, the public's misinformation or guesswork is in the most positive direction, that is, people who do not know their State law tend to think it is more stringent than it actually is.

The survey included one additional measure of awareness of State safety belt laws relating to whether police could stop a vehicle solely for violation of the safety belt law ("primary enforcement") or whether the safety belt violation could only be cited after the vehicle had been stopped for another offense ("secondary enforcement"). Half of the public age 16 and older (49%) think their State law allows police to stop a vehicle for no other reason than a safety belt violation; in other words, primary enforcement is permitted in their State. Again comparing belief with reality, three-fourths (76%) of the residents of States where primary enforcement is permitted believe (correctly) that their vehicle can be stopped solely for safety belt violations, compared with 13% who think (incorrectly) that the police must have another reason to stop the vehicle before they can give a citation for a safety belt violation.

Residents of States where only secondary enforcement is permitted are less knowledgeable: more than a third (37%) believe (incorrectly) that their State law permits primary enforcement. About half (48%) of the population of secondary-enforcement States believe that their State law requires another cause for the police to stop the vehicle.

FIGURE 5-13

Knowledge Of Primary vs. Secondary Enforcement



Qx: According to your state law, can police stop a vehicle if they observe a seat belt violation or do they have to observe some other offense first in order to stop the vehicle?
Base: Believe their state has safety belt law
Unweighted Ns listed above

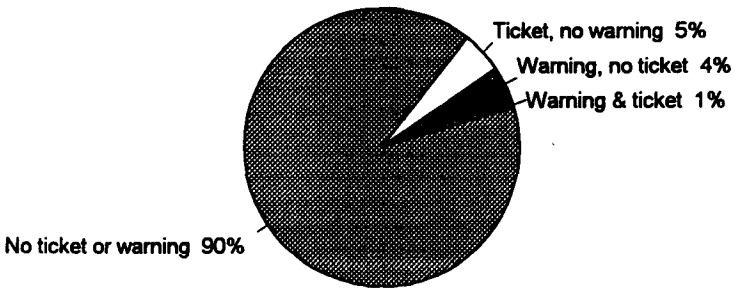
Experience with Safety Belt Law Enforcement

Most persons (90%) have never received either a ticket or a warning for violation of a safety belt law. Similar proportions have received a ticket but never a

warning (5%) as have received a warning but never a ticket (4%). Another 1% have received both a ticket and a warning for a safety belt violation.

FIGURE 5-14

Ever Received Ticket Or Warning For Safety Belt Violation



Qx: Have you ever received a ticket for not wearing seat belts?
Qx: Have you ever received a warning for not wearing seat belts?
Base: Total population age 16+
Unweighted N=4094

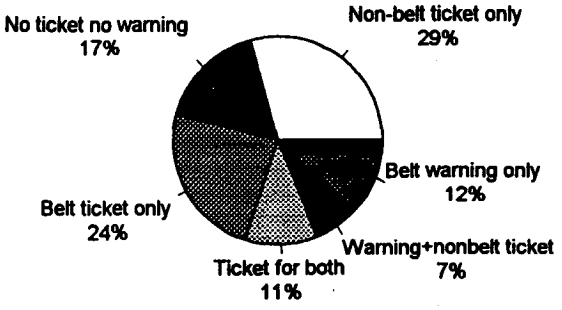
The survey included questions to assess what happens to enforcement of safety belt laws when drivers are stopped by police for other reasons. Interviewers asked those who had been stopped by the police in the past year for a traffic-related reason while driving (about 16% of drivers) whether they were wearing their safety belt at the time and, if not, whether they received either a ticket or a warning for a safety belt violation. They were then asked whether they received a ticket for a violation other than the safety belt offense. These findings provide a picture of the approach police are taking to the enforcement of safety belt laws relative to other traffic offenses. (Results should be viewed cautiously because of the small sample size [N = 131].)

Of drivers stopped by the police for a traffic-related reason and not wearing a safety belt at the time, 17% were neither given a ticket or warning for a safety belt violation nor ticketed for any other offense. More than a fourth (29%) received a ticket for a traffic offense but neither a ticket nor a warning for a safety belt violation. These data indicate that nearly half (46%) of those stopped by the police in the past year who were not wearing their safety belts were not issued either a ticket or a warning for a safety belt violation.

About a fourth (24%) of drivers stopped by the police and not wearing a safety belt at the time were given a ticket for a safety belt violation but not for any other offense and 12% received a safety belt warning and no ticket of any kind. One of nine (11%) received tickets both for the safety belt violation and another offense, and 7% got a warning for the safety belt violation as well as a ticket for another offense.

FIGURE 5-15

Outcome When Stopped For A Traffic-Related Reason While Not Wearing A Safety Belt



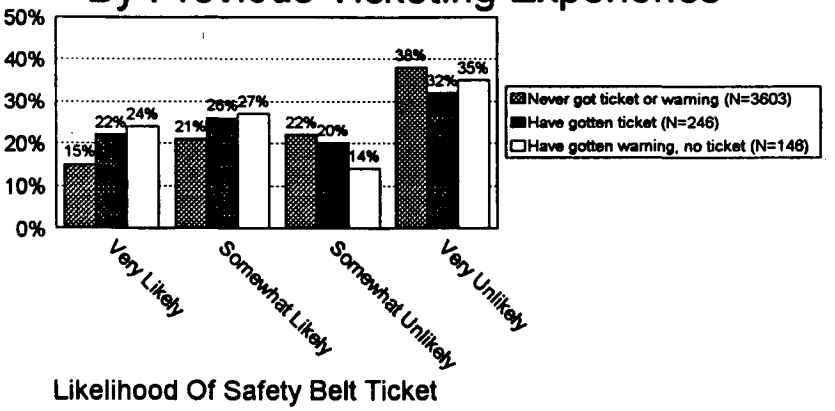
Qx: Did you receive a ticket for violating seat belt laws?
Qx: Did you receive a warning for violating seat belt laws?
Qx: Did you receive a ticket for some other traffic violation?
Base: Stopped by police in past 12 months and not wearing safety belt
Unweighted N=131

Perceived Likelihood of Being Ticketed

Only 15% of drivers consider it very likely that they would receive a ticket for a safety belt violation if they did not wear their safety belt at all for the next six months. Another 22% consider it somewhat likely. Put another way, 60% of drivers believe that they are unlikely to be ticketed for a safety belt violation during six months of nonuse of their belts.

FIGURE 5-16

Perceived Likelihood Of Safety Belt Ticket By Previous Ticketing Experience



Qx: Assume that you do not wear your seat belt at all while driving over the next six months. How likely do you think you will be to receive a ticket for not wearing a seat belt?
Base: Drive a motor vehicle
Unweighted Ns listed above

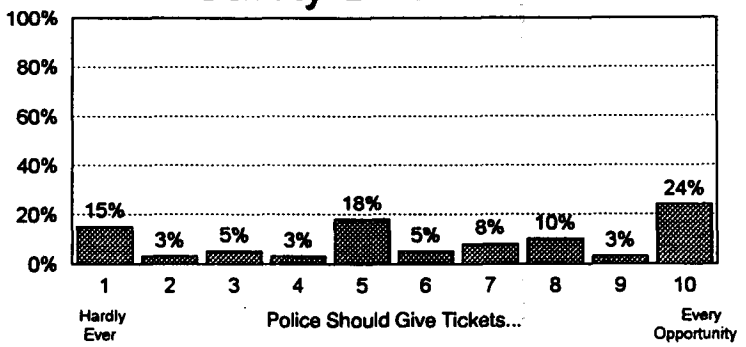
Personal experience with safety belt law enforcement affects drivers' perception of the likelihood of being ticketed, but not as much as might be expected. The percentage of drivers who think it is very or somewhat likely they would get a ticket increases from 36% of those never ticketed or warned, to 48% of those ticketed, to 50% of those warned but not ticketed.

Attitudes About Safety Belt Law Enforcement

Support for safety belt law enforcement is mixed, with some favoring strong enforcement and others wanting little or no enforcement. Interviewers asked respondents how strictly police should enforce belt laws, using a scale from 1-10, where 1 means police should hardly ever give tickets for safety belt violations and 10 means they should give tickets at every opportunity. The data show public sentiment clustering at both the middle and extremes of the scale. The average score was 6.0.

FIGURE 5-17

Level Of Support For Enforcing Safety Belt Laws



Qx: How often do you think police should ticket for seat belt violations? On a scale of 1 to 10, where 1 means police should hardly ever give tickets when it comes to enforcing seat belt laws and 10 means police should give tickets at every opportunity when it comes to enforcing seat belt laws, How strict should police enforcement be?

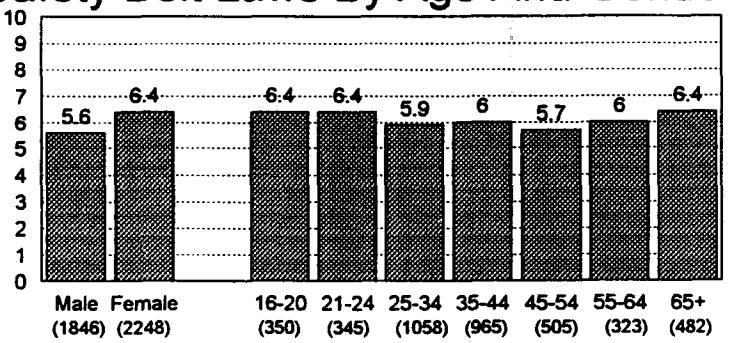
Base: Total population age 16+

Unweighted N=4094

Females tend to want stronger enforcement than males, giving an average score of 6.4 on the 10-point scale compared to 5.6 for males. The youngest and oldest respondents tend to favor the strongest enforcement.

FIGURE 5-18

Average Level Of Support For Enforcing Safety Belt Laws By Age And Gender



Qx: How often do you think police should ticket for seat belt violations? On a scale of 1 to 10, where 1 means police should hardly ever give tickets when it comes to enforcing seat belt laws and 10 means police should give tickets at every opportunity when it comes to enforcing seat belt laws, how strict should police enforcement be?

Base: Total population age 16+ by gender and age

Unweighted Ns listed above

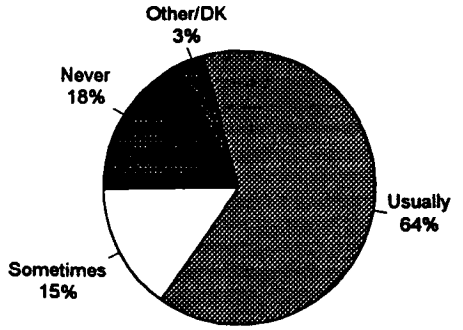
Personal Encouragement of Safety Belt Use

Perhaps as important as police enforcement of safety belt use is "enforcement" or encouragement of belt use by individual drivers. Nearly two thirds of drivers (64%) are likely to say that they usually ask unbuckled front-seat adult passengers

who are riding with them to wear their safety belt. About 15% sometimes ask and 18% never ask.

FIGURE 5-19

Ask Unbuckled Adult Front Seat Passengers To Wear Safety Belt

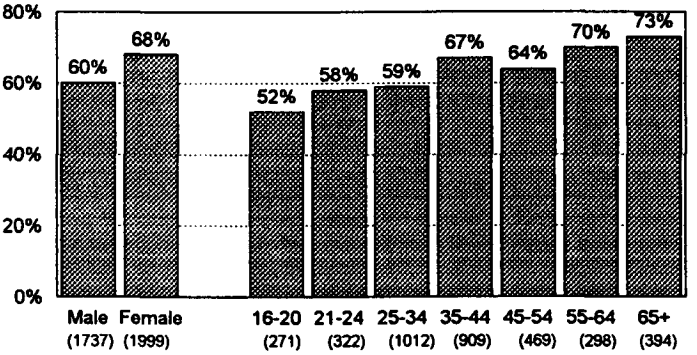


Qx: When you are driving and adult passengers in the front seat do not put on their seat belt, would you say you usually, sometimes or never ask them to put their seat belt on?
Base: Drive a motor vehicle
Unweighted N=3736

The likelihood that a driver will ask an unbuckled adult passenger to wear a safety belt varies by gender and age. Females are more likely than males (68% versus 60%) to say they usually ask adult passengers who have not put their safety belt on to wear the belt. Older drivers are more likely than younger drivers to ask their adult passengers to use a belt.

FIGURE 5-20

Usually Ask Unbuckled Adult Passengers To Wear Safety Belts By Gender And Age

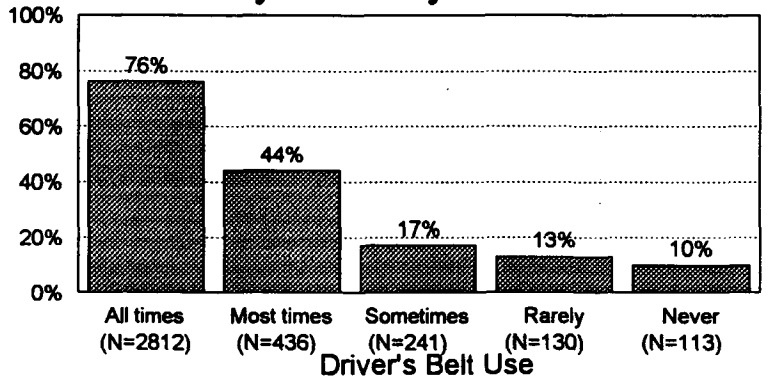


Qx: When you are driving and adult passengers in the front seat do not put on their seat belt, would you say you usually, sometimes or never ask them to put their seat belt on?
Base: Drive a motor vehicle by age and gender
Unweighted Ns listed above

Drivers who usually wear their own safety belts are much more likely than less frequent users to ask adult front-seat passengers to wear their belt.[8] According to the data, 76% of drivers who wear their safety belt all the time usually ask unbuckled adult passengers to wear their safety belt. The figure drops to 44% of the drivers who wear their safety belt most of the time, and even more dramatically for drivers who wear a safety belt only sometimes (17%), rarely (13%), or never (10%) .

FIGURE 5-21

Usually Ask Unbuckled Adult Passengers To Wear Safety Belts By Drivers' Belt Use



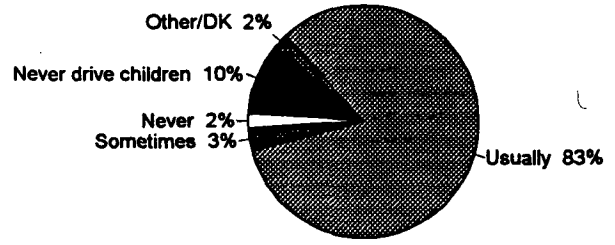
Qx: When you are driving and adult passengers in the front seat do not put on their seat belt, would you say you usually, sometimes or never ask them to put their seat belt on?
Base: Drive a motor vehicle
Unweighted Ns listed above

Drivers are more willing to insist on safety belt use with child passengers than with adults. The data suggest that five of six drivers (83%) usually ask unbuckled children (age 5 through 12) to put on their safety belt. Most remaining drivers say they never drive with children of this age.

[8] See Chapter 3 for a description of the method used to calculate safety belt use frequency (unrevised).

FIGURE 5-22

Ask Unbuckled Child Passenger To Wear Safety Belt

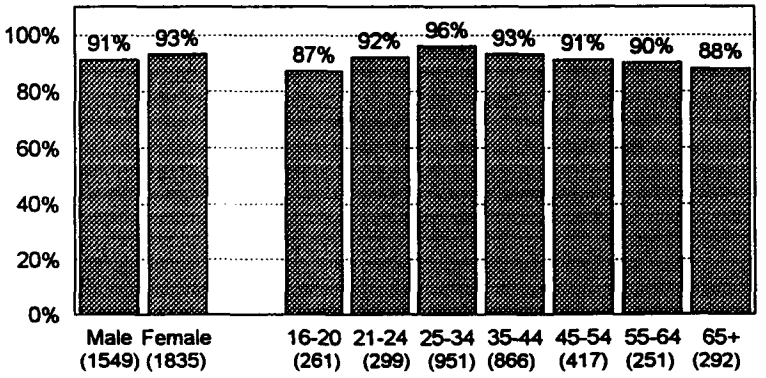


Qx: When you are driving and children ages 5 through 12 do not put on their seat belt, would you say you usually, sometimes or never ask them to put their seat belt on?
Base: Drive a motor vehicle
Unweighted N=3736

Among drivers who ever drive with children age 5-12 as passengers, there are some relatively minor demographic differences in the likelihood that they will ask a child to wear a safety belt. Females are slightly more likely than males (93% versus 91%) to say they usually ask a child to wear a safety belt. Drivers age 25-34 are the most likely group of drivers, by age, to ask children to wear a belt (96%). But even the least likely age group has a high percentage of drivers (87%) who would usually ask an unbuckled child to wear their safety belt.

FIGURE 5-23

Usually Ask Unbuckled Child Passengers To Wear Safety Belt By Gender And Age



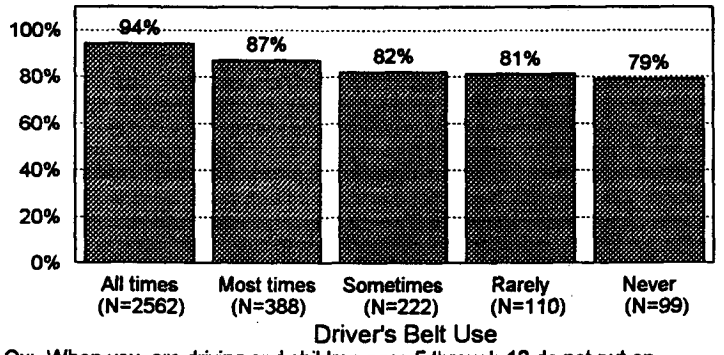
Qx: When you are driving and children ages 5 through 12 do not put on their seat belt, would you say you usually, sometimes or never ask them to put their seat belt on?
Base: Sometimes drive children age 5-12 by age and gender
Unweighted Ns listed above

The likelihood that a driver will ask a child passenger to wear a safety belt is greatest among those who frequently use their own safety belt. Of drivers who

always use their belt and sometimes drive with a passenger age 5-12, 94% usually ask an unbuckled child to wear his/her safety belt if she/he has not put it on. A slightly lesser percentage (87%) of drivers who use their own safety belt most of the time usually insist that children wear their safety belt. Even among drivers who use their safety belt only sometimes, rarely, or never, approximately 80% usually ask their child passengers to wear their safety belt.

FIGURE 5-24

Usually Ask Unbuckled Child Passengers To Wear Safety Belt By Drivers' Belt Use



Qx: When you are driving and children ages 5 through 12 do not put on their seat belt, would you say you usually, sometimes or never ask them to put their seat belt on?

Base: Sometimes drive children age 5-12 by driver's belt use
Unweighted Ns listed above

CHAPTER 6

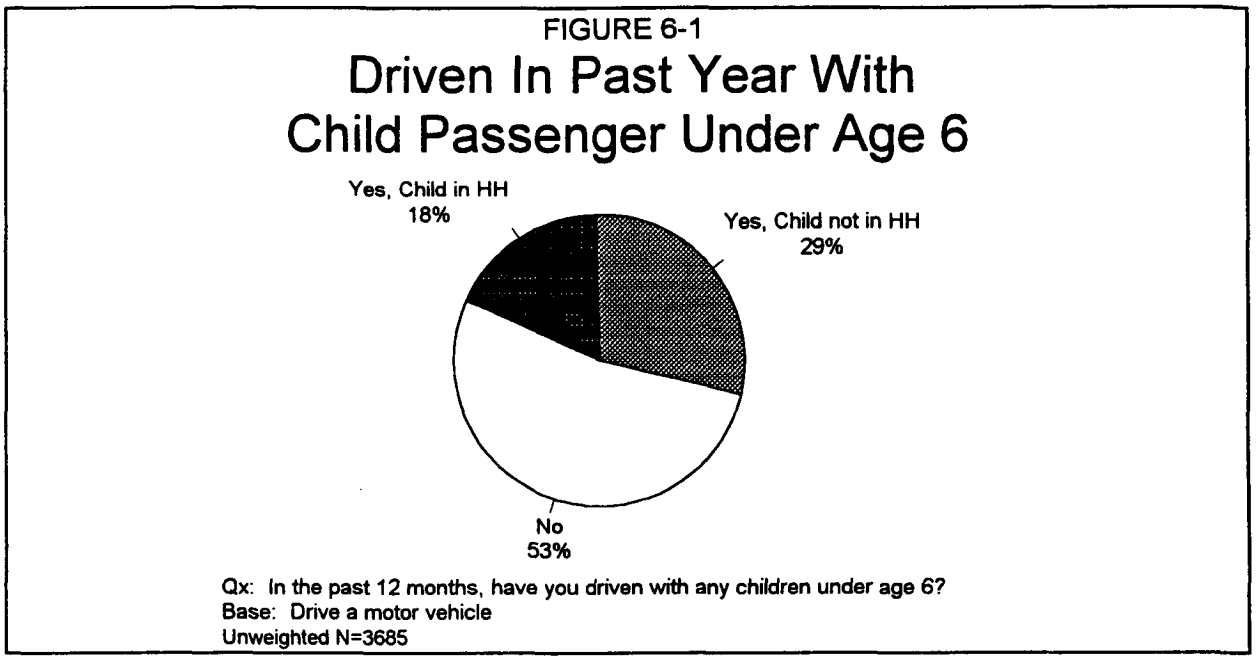
CAR SEAT USE

Child safety seats play an important role in protecting infants and young children from motor vehicle-related injury and death. The Motor Vehicle Occupant Safety Survey collected data on caregiver knowledge and use of child safety seats.

Driving with a Child Under Age 6

Nearly half (47%) of drivers age 16 and older in the United States, or about 85 million drivers, have in the past year driven a vehicle with a child under age 6 as a passenger. About a third of these, or 18% of all drivers, have driven in the past year with a young child who lives in their household. A substantially larger percentage (29%) of drivers who do not have a young child living in their household have nonetheless driven with one at some time in the past year. The fact that substantially more people have driven with a child who does not live with them than with a child who does suggests that efforts to educate the public about the importance of car seat use should include people other than parents or caregivers among the target audience.

FIGURE 6-1



Most of those who drive with a child outside their household are related to the child. More than a third are a grandparent (37%) and a similar percentage (36%) are a relative but neither parent nor sibling (e.g., aunt, uncle, cousin). Only 4% are the child's parent or step-parent and 2% are siblings. More than one in five (23%) are not related to the child.

Those who drive with a child outside the household tend to be slightly older than the general population, consistent with the over-representation of grandparents among this group of drivers: 45% are age 45 or older, compared with 40% of the public who are in this age category and only 7% of those who drive young children from their own household. They also are more likely to be female: 58% are females, compared with 52% of the public.

Parent/Caregiver Subgroup

The survey selected a subgroup of drivers to ask detailed questions about children's use of car seats. These were drivers considered most likely to have significant responsibility for transporting young children ("parents/caregivers"). The respondents were chosen for questioning if they fell into one of the following categories:

- Parents of children under age 6. Usually this involved a parent living with their child. In some cases it was a parent not living with their child, but who drove the child at least on occasion during the past year.

- Nonparents living with children under age 6. These were respondents who indicated that they at least sometimes drive with a child under age 6 who lives in their household.

The interviewers asked respondents to focus on one specific child for the questions. If more than one child under age 6 was eligible, the interviewer randomly selected one child. Priority, however, was given to selecting from the respondent's own children if other young children were also living in the household. Respondents were then asked about car seat use with this child. This procedure yields a national sample of drivers for whom car seat usage issues are likely most applicable.

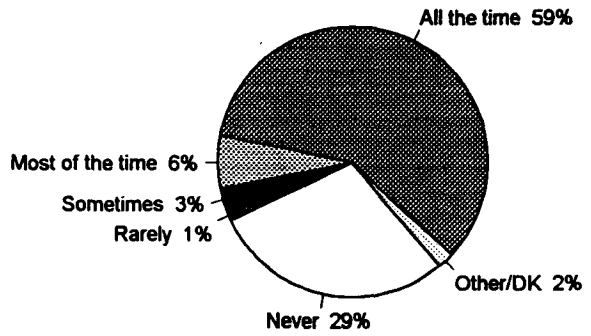
Frequency of Car Seat Use

Interviewers asked the selected drivers how frequently the child uses a car seat when riding with them. Responses to this question are to be interpreted with caution, as car seats may not be appropriate for larger children under age 6. The safety restraint system used should be the one appropriate for the child's size. Infants up to about 20 pounds should ride facing the rear of the vehicle in infant-only or convertible safety seats (seats that convert from rear-facing for infants to forward-facing for toddlers). Children weighing about 20 to 40 pounds should ride facing forward in convertible seats or harness systems. Children who have outgrown their convertible seats or harnesses should ride in booster seats until adult belts fit them properly. Older children may wear vehicle safety belts when the lap belt stays low and snug across the hips without riding up over the stomach, and the shoulder belt does not cross the face or the neck.

More than half of the parents/caregivers (59%) said the selected child uses a car seat all the time when riding in a motor vehicle with them and an additional 6% use the seat most of the time. Twenty-nine percent never use a car seat.

FIGURE 6-2

Frequency Child Under 6 Rides In Car Seat

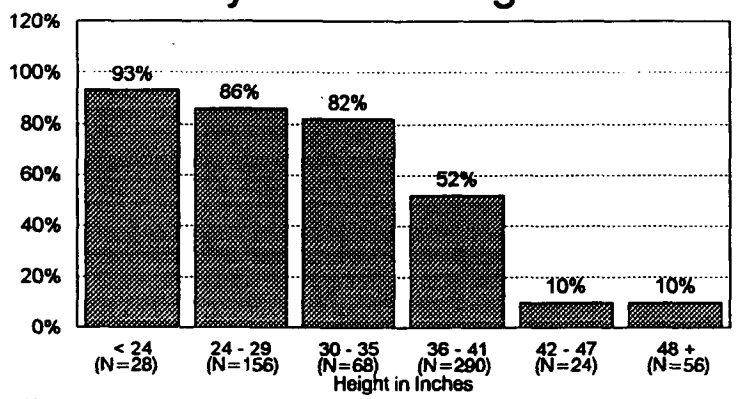


Qx: When you are driving and (the child) rides in the vehicle with you, how often does (he/she) ride in a child car seat?
Base: "Parents/caregivers" as defined on page 70
Unweighted N=794

As would be expected, car seat use varies by the child's height and weight. More than three-fourths of these children under 36" tall use a car seat all the time. The percentage drops to 52% of the children between 36" and 41" tall, and then to 10% of children 42" or taller.[9] However, the data suggest that some children who, because of their small size, should still be using a car seat are not doing so all the time.

FIGURE 6-3

All The Time Car Seat Use By Child's Height



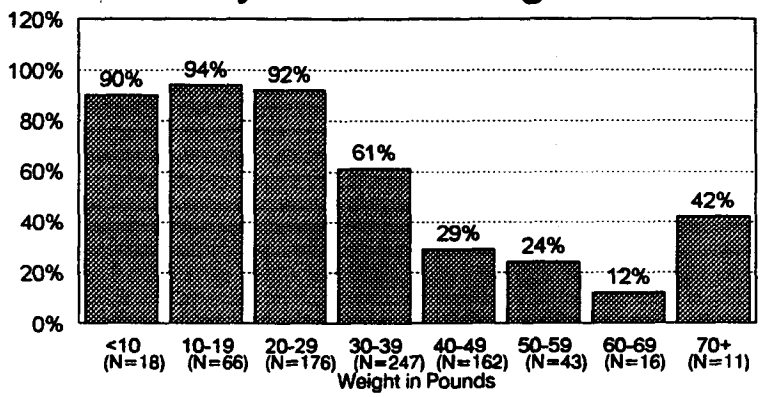
Qx: When you are driving and (the child) rides in the vehicle with you, how often does (he/she) ride in a child car seat?
Base: "Parents/caregivers" as defined on page 70
Unweighted Ns listed above

[9]Height and weight figures for some children were unknown by the respondent.

A virtually identical pattern of variation in full-time car seat use can be seen by the children's weight. More than 90% of these children who weigh less than 30 pounds use a car seat all the time. The percentage who use car seats all the time then drops sharply, to 61% of children weighing between 30 and 39 pounds. Only about a fourth of those 40 pounds and heavier use a car seat all the time. While the largest children do not need a car seat, some of the smaller children who are not using a car seat all the time should be doing so.

FIGURE 6-4

All The Time Car Seat Use By Child's Weight



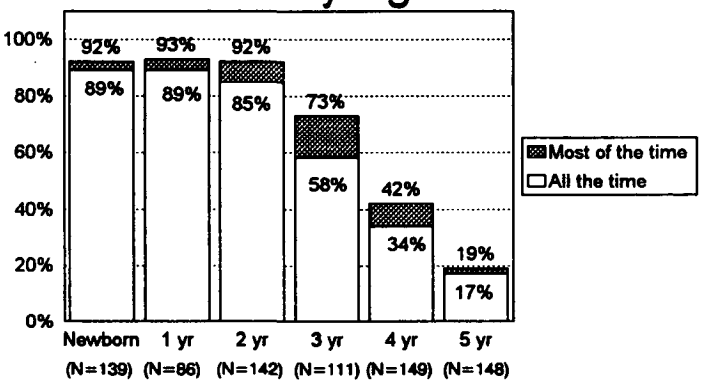
Qx: When you are driving and (the child) rides in the vehicle with you, how often does (he/she) ride in a child car seat?
Base: "Parents/caregivers" as defined on page 70
Unweighted Ns listed above

Similarly, car seat use shows a strong correlation by age: younger children use the car seats very frequently, with declining usage from age 3 on up. About 89% of the youngest children (newborn to less than a year old) are in their car seats all the time when riding in the vehicle, and an additional 3% are in their seats most of the time. For one- and two-year-olds, the figures are similarly high.

The percentage of children who use car seats declines significantly beginning at age 3. Just over half (58%) of the selected three-year-old children use a car seat all the time, and about one in six (15%) use the seat most of the time. Usage drops even further among four-year-olds, with only 34% using the seat all the time, and further still with five-year-olds, only 17% of whom use car seats all the time.

FIGURE 6-5

Frequency Child Rides In Car Seat By Age



Qx: When you are driving and (the child) rides in the vehicle with you, how often does (he/she) ride in a child car seat?
Base: "Parents/caregivers" as defined on page 70
Unweighted Ns listed above

Data presented in Chapter 7 show that the children not using car seats tend to be wearing safety belts instead. Yet the data presented in the preceding pages implies that this is occurring before many of the children are physically ready for safety belt restraint systems. Use of inappropriate restraint systems can lead to injury or death in motor vehicle crashes. This suggests a need for public education on appropriate restraint systems for children.

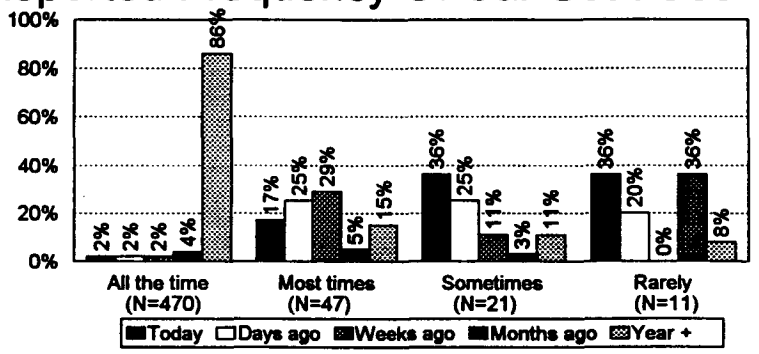
Last Time Child Did Not Use Car Seat

As with safety belts, interviewers asked respondents who reported car seat use when was the last time the child rode in the vehicle with them without being in the car seat. Three-fourths (75%) said that the child always used the car seat or that it had been a year or more since the child rode without being in the car seat. Five percent said it was months ago, another 5% said it was weeks ago, and 6% said it was days ago. Six percent said that it was just today that the child had ridden in the vehicle without being in the car seat.

As expected, the last occasion when the child rode without being in the seat was, in general, more recent for those whose children use the car seat less frequently. Only 2% of reported "all-the-time" car seat users said that the child had just today ridden without being in the seat, compared with 17% of children using the seat most of the time, and 36% of the sometimes or rare car seat users.

FIGURE 6-6

Last Time Child Didn't Use Car Seat By Reported Frequency Of Car Seat Use



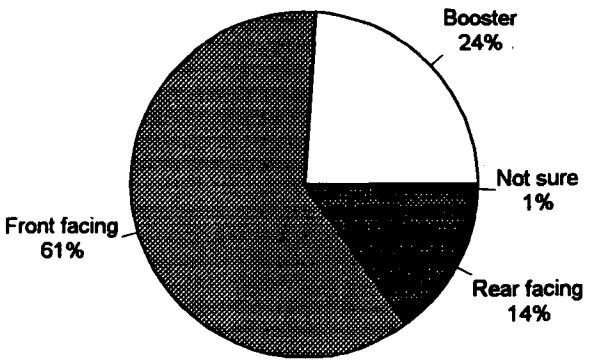
Qx: When you are driving and the child under 6 rides in the vehicle with you, how often does (he/she) ride in a child car seat?
Qx: When was the last time he/she did not ride in a child car seat when you were driving?
Base: Child uses car seat
Unweighted Ns listed above

Type and Location of Car Seat

Respondents who reported car seat use by their child were asked to identify its type and how it was being used. From the information provided, the survey determined that 24% are using booster seats (based on responses to questions concerning strap locations on the child). Of the remainder, 61% are operating in a front-facing position and 14% in a rear-facing position. The survey did not ask whether the seat was reversible.

FIGURE 6-7

Type Of Child's Car Seat

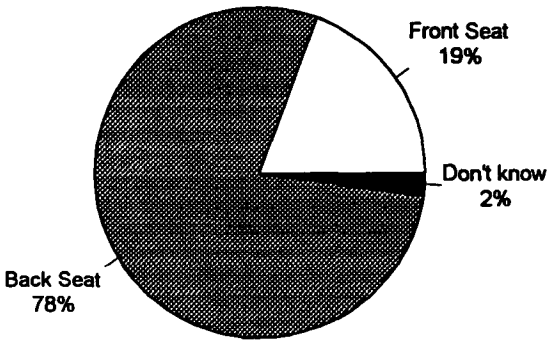


Qx: When he/she is fastened in the child car seat, are straps over both shoulders, a strap across only one shoulder, or are there no straps over either shoulder?
Qx: When you are driving and he/she is riding in the seat, is it usually front facing or rear facing?
Base: Child at least sometimes rides in a child car seat
Unweighted N=549

The positioning of the seat in the vehicle affects its ability to protect the child from injury. More than three-fourths (78%) of car seats used by the children are usually placed in the vehicle's back seat. One in five (19%) are usually placed in the front. A small percentage (2%) say they do not know where the seat is usually placed.

FIGURE 6-8

Placement Of Child's Car Seat



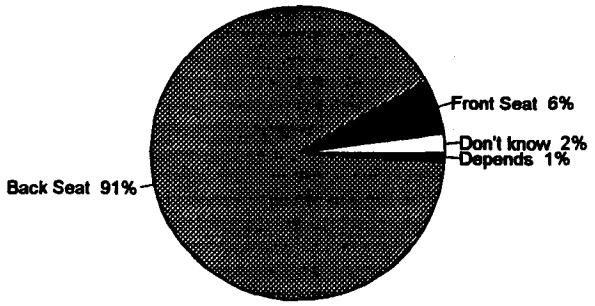
Qx: When you are driving and (he/she) rides in the child car seat, is it usually in the front seat or the back seat?
Base: Child at least sometimes rides in a child car seat
Unweighted N=549

For children who usually ride in the back seat, respondents were asked where the seat was located. Most commonly (42%) it is placed behind the passenger seat. A third (34%) put the seat in the middle of the back seat. Another 22% put the car seat behind the driver.

Despite the fact that 19% of this subgroup population place their child's car seat in the front seat, only one-third that many (6%) believe the front is the safest place for the child. The vast majority (91%) believe that the back seat is the safest location for the car seat. Clearly, for some drivers, the decision to place a child in the front seat is a decision to make safety secondary to other concerns such as being able to observe or talk to the child.

FIGURE 6-9

Child's Car Seat Is Safest In Front Or Back



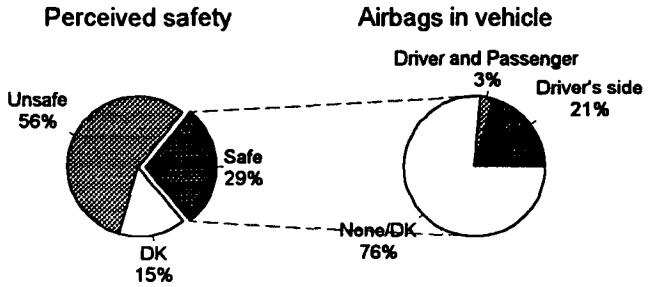
Qx: Where would you say it is safest to place a child car seat in the vehicle...in the front seat or in the back seat?
Base: Child at least sometimes rides in a child car seat
Unweighted N=549

Child Seats and Airbags

The presence of an airbag in a vehicle generally enhances passenger safety; however, it is dangerous to place a rear-facing car seat in the front seat of a vehicle having a passenger side airbag. This is because a passenger-side airbag could strike the back of the safety seat with a force that could seriously injure the child. Parents/caregivers having a child who rides in a car seat were asked a question to determine their knowledge of this danger. More than half (56%) recognize that this combination of vehicle equipment and car seat positioning is unsafe, but more than a fourth (29%) mistakenly believe it is safe. An additional 15% do not know whether it is safe or say they do not know how airbags work. Of those who mistakenly believe that there isn't any danger from the airbag, approximately 3% have a passenger-side airbag in their primary vehicle.

FIGURE 6-10

Rear Facing Car Seats In Vehicle Front Seat: Knowledge Of Danger With Airbags



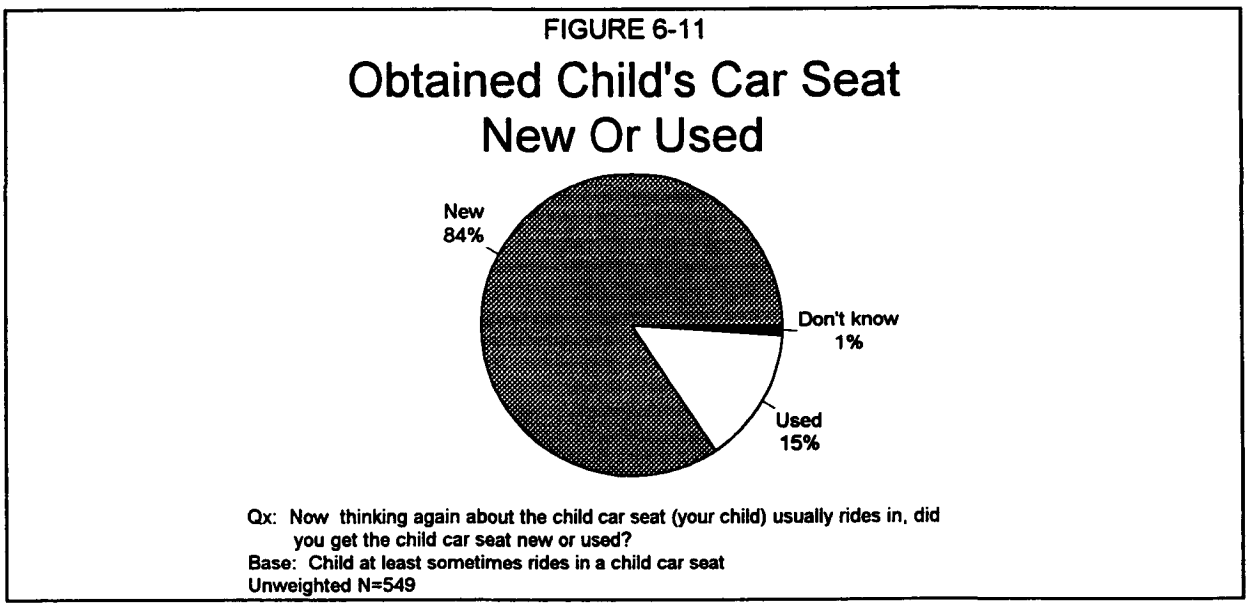
Qx: Some child car seats are designed so that the child faces backward, to the rear of the car. Suppose a child is riding in a child car seat facing backward...if the vehicle has a passenger side airbag, is it safe or unsafe to have the child car seat in the front seat?
Base: Child at least sometimes rides in a car seat
Unweighted N=549

Acquisition of Car Seat

Whether a car seat is as safe as desired may be affected by the way in which the seat is acquired and, specifically, whether the seat is new or used. A new car seat purchased in the box from a dealer normally includes information on how to position the car seat on the vehicle's seat, how to connect the car seat to the vehicle's safety belt system, and how to secure the child properly in the car seat. A used car seat, one acquired from a friend or purchased at an event like a yard sale, would not be as likely to include this vital information. Also, some older car seats may not provide adequate protection for young children, and some used car seats may be damaged, so it is important to know whether parents and caregivers are obtaining new or used car seats for their children.

The vast majority (84%) of car seats are obtained new. However, about one in seven (15%) are used seats (of unspecified age).

FIGURE 6-11

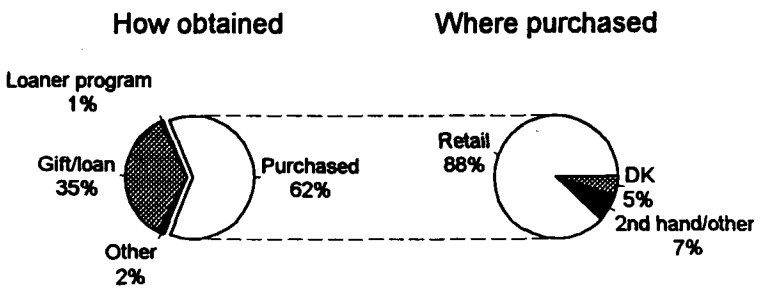


Qx: Now thinking again about the child car seat (your child) usually rides in, did you get the child car seat new or used?
Base: Child at least sometimes rides in a child car seat
Unweighted N=549

Most car seats (62%) are purchased by the parents or other caregivers in the household. About one-third (35%) are gifts or loaners from relatives or friends and only about 1% are obtained from a car seat loaner program. Most (88%) of those who purchased the car seat bought it at a retail store of some kind and 7% bought their child's car seat at a place that sells used merchandise such as a second hand store or a yard or garage sale.

FIGURE 6-12

Source Where Obtained Car Seat



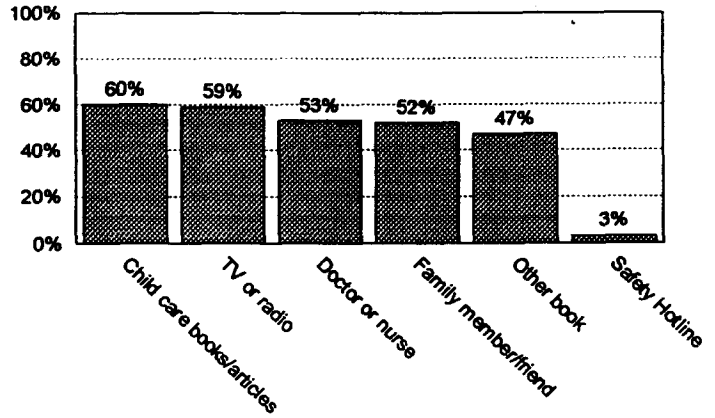
Qx: Did you purchase the child car seat, did you get it as a gift or loaner from a relative or friend or did you get it from a loaner program?
Base: Child at least sometimes rides in child car seat
Unweighted N=549

Safety Information Source for Car Seat

Those who use child safety seats obtained safety information about the seats from a variety of sources. More than half (60%) read child-care articles or books and a similar percentage (59%) obtained information from radio or television. About half learned about car seats from a doctor or nurse (53%), family member or friend (52%), or some other type of article or book (47%). Only about 3% learned about safety seats from a Safety Hotline. (No respondents specifically mentioned the NHTSA Hotline, although a few respondents said it was a government hotline or mentioned an acronym similar to NHTSA's).

FIGURE 6-13

Sources For Information On Car Seats



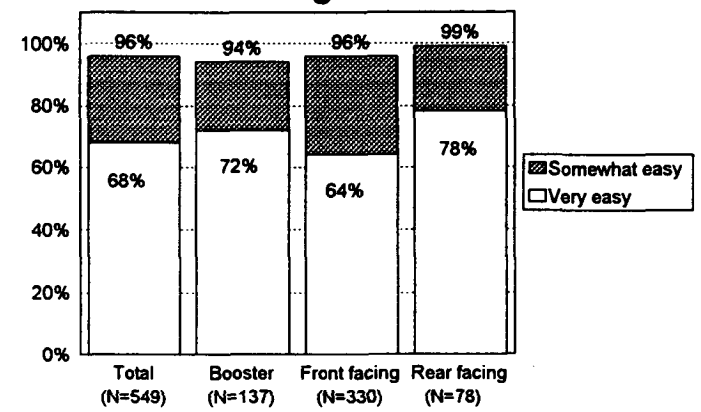
Qx: Did you ever read or hear of any information or receive any advice about the need to use child car seats from...?
Base: Child at least sometimes rides in a child car seat
Unweighted N=549

Ease of Use

Overall, parents and caregivers indicate they have relatively little difficulty using their children's car seats. More than two-thirds (68%) say it is very easy to attach the car seat to their vehicle's safety belt system, with an additional 28% saying the process is somewhat easy. Those who have rear-facing seats are most likely to say that attaching the seat is very easy (78%), followed by those with booster seats (72%), and then by those who have a front-facing seat for their child (64%). Regardless of the seat type, 94% or more say their child's safety seat is very or somewhat easy to attach to their vehicle's seat.

FIGURE 6-14

Ease Of Attaching Car Seat To Vehicle



Qx: How easy is it for you to attach the child car seat to the vehicle you usually drive?
Base: Child at least sometimes rides in a child car seat
Unweighted Ns listed above

Most car seat owners (76%) learned how to attach the seat to the vehicle by reading the instructions. About one in six (16%) figured it out themselves and 9% had a friend or relative show them how to attach the seat.

TABLE 6-1:
How Learned to Attach Car Seat

Qx: How did you learn to attach the child car seat to the vehicle?

Read the instructions	76%*
Figured it out myself	16%
Relative or friend showed me	9%
Health professional showed me	3%
Other/don't know	3%

* Those who did not volunteer that they learned how to attach the seat by reading the instructions were asked if they had read the instructions. An additional 10% said that they had, for a total of 86% who had read the car seat installation instructions.

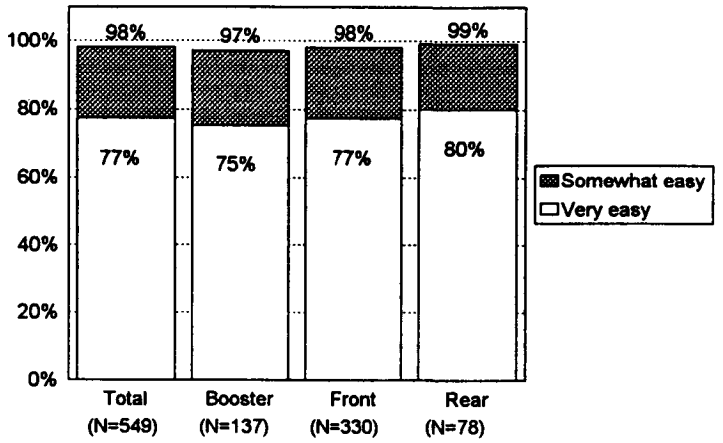
[Unweighted N = 549; totals exceed 100% due to multiple response]

Interviewers asked those who mentioned having some difficulty in attaching the car seat to the vehicle to specify the difficulty. Almost half (46%) said that the problem was fitting the vehicle's safety belt through the car seat slot or loop. A fourth (25%) said that they had trouble hooking or attaching the safety belt to its buckle. Thirteen percent mentioned having difficulty adjusting the belts, including 11% who specifically cited problems in making sure the belts were tight enough to hold the seat securely.

Buckling children into a car seat also seems to be relatively easy for those who must do it. More than three-fourths (77%) say that buckling children into the seat is very easy, and virtually all others (21%) say the process is somewhat easy. Ease of buckling varies little by the type of seat being used. Three-fourths or more of those who use each type of seat say that buckling the child into the seat is very easy.

FIGURE 6-15

Ease Of Buckling Child In Car Seat



Qx: How easy is it for you to properly buckle your child into the child car seat?
Base: Child at least sometimes rides in a child car seat
Unweighted Ns listed above

Those who mentioned having some difficulty in buckling their children into the car seat were asked to specify the problem. The most frequently mentioned problem, cited by 32% of this group, was that the belt was hard to buckle or snap. One in five (21%) said that the problem was that the child will not sit still or sit down to allow the adult to buckle him or her into the seat. One in six (16%) identified the problem as adjusting the straps to fit properly or getting the belt's tightness adjusted appropriately. Ten percent said the problem resulted from the child resisting because he or she does not like the seat. Seven percent said the buckle was difficult to get over the child's head or tended to hit the child in the head as it was being fastened.

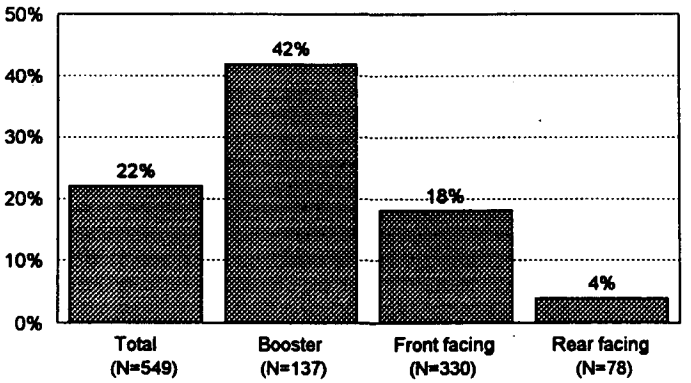
Although the survey results indicate that people have the perception that car seats are easy to install and use, observational studies have shown that many people are using the car seats incorrectly.

Children Getting Out of Car Seats

About one in five (22%) respondents report that the child has gotten out of a car seat while riding in the vehicle. As expected, there are few instances (4%) of this problem with rear-facing seats as these children are generally less than one year old. The problem rises in significance with children in front-facing seats (18% cite this occurrence), and peaks with children in booster seats, as 42% of the selected children who use booster seats have, at some time, gotten out of their seat while the vehicle was moving.

FIGURE 6-16

Child Gotten Out of Seat While Riding



Qx: Has the child ever gotten himself/herself out of that child car seat when riding with you?

Base: Child at least sometimes rides in a child car seat

Unweighted Ns listed above

CHAPTER 7

REASONS FOR NON-USE OF CAR SEATS

The survey asked a series of questions to identify reasons why children under age 6 were not always riding in car seats. Respondents were selected from the parent/caregiver subgroup defined on page 66. The selected respondents had indicated either that they never used a car seat with the specified child, or else they used a car seat with the child but less than all the time.

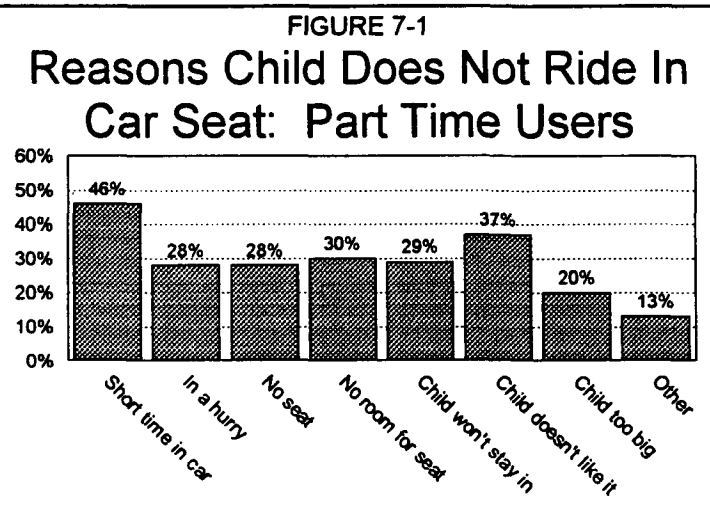
Earlier questionnaire testing plus input from experts had identified a number of likely reasons for non-use of car seats. Survey interviewers read each of these reasons to respondents, asking them whether or not it was a factor in the child not using a car seat. The interviewers then gave respondents an opportunity to volunteer other reasons why their child did not use a car seat.

Part-Time Car Seat Users

One subset of the survey population are respondents who use a car seat with the child but less than all the time. These are identified as the "part-time" car seat user group.

Part-time car seat users give several reasons for nonuse of car seats. The reason most frequently mentioned, by nearly half of this group (46%), is that they would only be driving in the vehicle for a short time. The second most frequently cited reason, given by over a third of part-time car seat users (37%), is that the child doesn't like the car seat. Four other reasons are cited by between 28% and 30% of part-time car seat users: not having room for the car seat in their vehicle (30%), the child's unwillingness or inability to stay in the seat (29%), being in a hurry (28%), and not having a car seat to use (28%). One in five (20%) said the child was too big for the seat, and 13% said there was another reason.

FIGURE 7-1



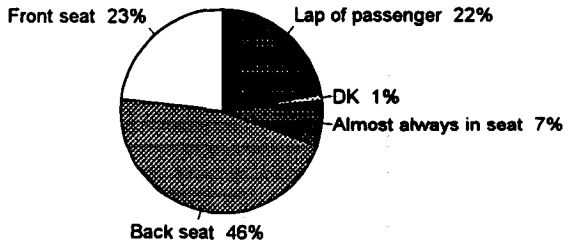
Qx: When my child doesn't ride in a child car seat, it is sometimes because...
Base: Part-time car seat users
Unweighted N=137

The relatively high percentage (46%) who cite "short time in the car" as a reason why their children sometimes do not use the car seat seems somewhat puzzling in light of other data from the survey. Most people (98%) say that putting the child in the car seat is easy (Chapter 6 of this report), and most (83%) also indicate that their child usually uses a safety belt when not in the car seat (discussed later in this chapter). This suggests that, even for short trips, parents/caregivers are buckling the child into a safety belt when, with very little additional effort, they could fasten them into the car seat. It may be that for short trips, the adult does not want to deal with a more basic reason for non-use such as the child's discomfort or his/her resistance to being in the seat. Alternatively, adults may consider it too much trouble to use the car seat on a short trip if they first have to retrieve the seat from another vehicle or from the house.

Respondents were asked where the child rides when not in the car seat. Nearly half (46%) ride in the back seat and about a fourth (23%) ride in the front seat. Of particular concern from the perspective of child safety are the 22% who ride in another passenger's lap when not in their car seat.

FIGURE 7-2

Where Child Rides While Not In Car Seat

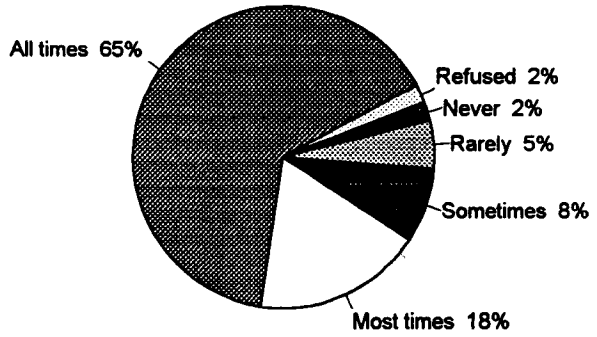


Qx: When the child doesn't ride in the child car seat, when riding with you, does he/she usually sit on someone's lap, sit by him/herself in the front seat or sit in the back seat?
Base: Part-time car seat users
Unweighted N=137

Most children who are part-time car seat users wear a safety belt when they are not in their car seats. About two thirds (65%) reportedly use their safety belt all the time when they are not in their car seat, and 18% use it most of the time. A smaller group (8%) use the belt only sometimes when out of their car seats and 7% rarely or never use a safety belt on these occasions. About half (56%) of the children who usually ride in another passenger's lap when not in the car seat are also reported as always buckled into a safety belt and an additional 18% are buckled most of the time, presumably sharing a safety belt with that other passenger (although these respondents may have misunderstood the question).

FIGURE 7-3

Frequency Of Safety Belt Use When Child Is Not In Car Seat

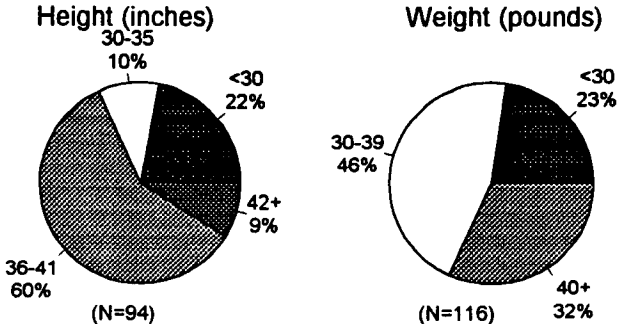


Qx: When the child doesn't ride in the child car seat when riding with you, how often is he/she buckled in a seat belt?
Base: Part-time car seat users
Unweighted N=137

Children who always, most of the time, or sometimes use a safety belt when not in their car seat are not the smallest of the young children but many are too small to be safe outside the car seat. A third (33%) are less than three feet tall, including 23% who are less than 30 inches tall. Most (69%) weigh less than 40 pounds and more than one in five (23%) weighs less than 30 pounds. Those children who rarely or never use a safety belt when out of the car seat are even smaller, averaging only 33 inches tall and 33 pounds.

FIGURE 7-4

Size Of Children Who Always, Most Of The Time, Or Sometimes Use A Safety Belt Instead Of A Car Seat



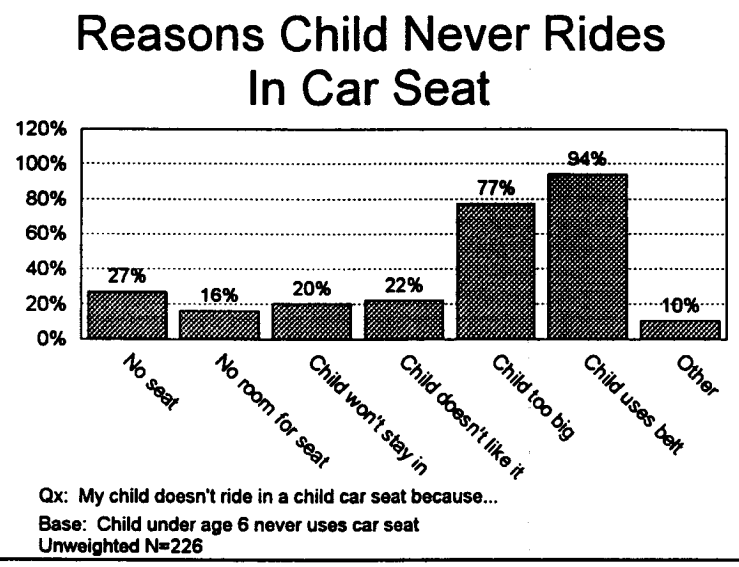
Qx: When the child doesn't ride in the child car seat when riding with you, how often is he/she buckled in a seat belt?
Base: Part-time car seat users who all the time, most of the time, or sometimes wear a seat belt when not in car seat
Unweighted Ns listed above

Never Users of Car Seats

The children who never use a car seat are mostly larger children. More than two-thirds of them (70%) weigh at least 40 pounds and most (90%) are at least three feet tall.

The most common reasons given for non-use are that the child uses a safety belt (94%) or that he/she is too big (77%). Virtually all of these children (97%) fall into one or both of these categories.

FIGURE 7-5

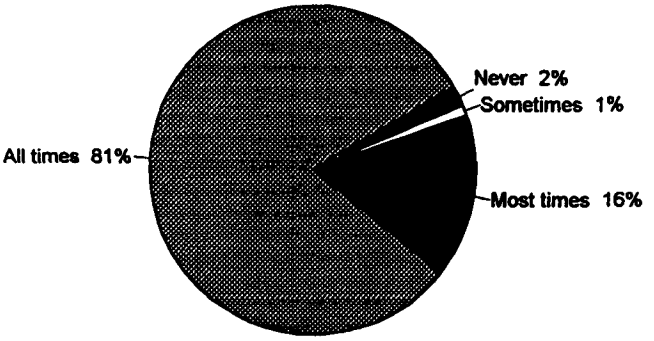


Other reasons given for not using a car seat include the child does not have one (27%), he/she doesn't like it (22%), or won't stay in it (20%), and that there is no room in the vehicle for the car seat (16%). About one in ten (10%) give some other reason why their child never uses a car seat.

Respondents were asked the frequency with which the child uses a safety belt. Eight of ten (81%) whose child never uses a car seat say that their child uses a safety belt all of the time and another 16% say the child uses a belt most of the time.

FIGURE 7-6

Frequency Child Uses Safety Belt: Never Uses Car Seat

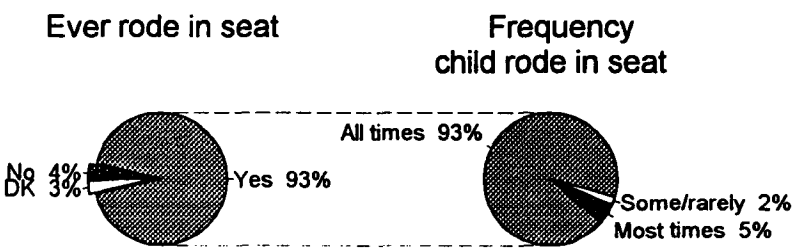


Qx: How often does he/she use a seat belt?
Base: Child under age 6 never uses car seat
Unweighted N=226

These respondents were asked whether their child had used a car seat in the first year of his/her life, and if so, how often. The vast majority had done so. Among the former users, more than nine of ten (93%) used the car seat all the time with their child under age 1 and an additional 5% placed the child in the car seat most of the time. These results suggest that, for those children who never use a car seat, non-use does not result from parent/caregiver resistance to car seats in general or an inability to afford one, but rather from other factors such as the child's size and his/her use of safety belts.

FIGURE 7-7

Child Ever Rode In Car Seat in First Year of Life: Never Uses Car Seat



Qx: Did the child ever ride in a child car seat during the first year of life?
Qx: How often did he/she use the child car seat during that first year?
Base: Child under age 6 never uses car seat
Unweighted N=226

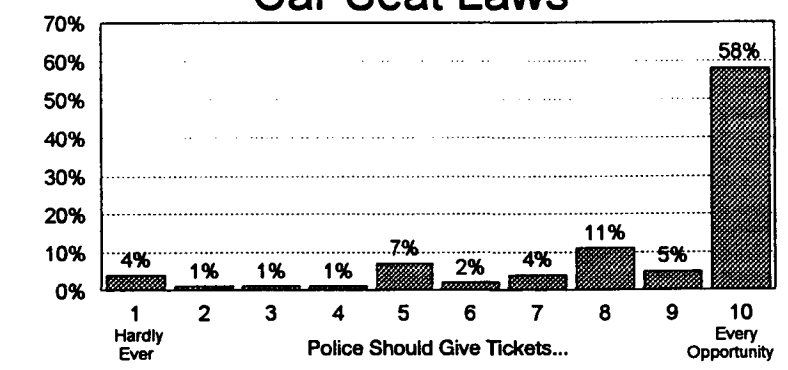
CHAPTER 8

ATTITUDES TOWARD ENFORCEMENT OF CAR SEAT LAWS

Every State in the United States has laws requiring the use of vehicle restraint systems for infants and young children. This chapter examines public attitudes toward the enforcement of these child car seat laws.

The public (age 16 and older) favors stringent enforcement of car seat laws. Interviewers asked respondents their opinion of how strict police enforcement of child car seat laws should be. Respondents were told to respond on a scale of 1 to 10, where 1 meant that police should hardly ever give a ticket for a car seat violation and 10 meant that police should give a ticket at every opportunity. Based on the data, nearly three-quarters of the public favor strict enforcement (8-10) of the child car seat laws. Indeed, nearly six out of ten (58%) favor police ticketing child car seat violations at every opportunity.

FIGURE 8-1

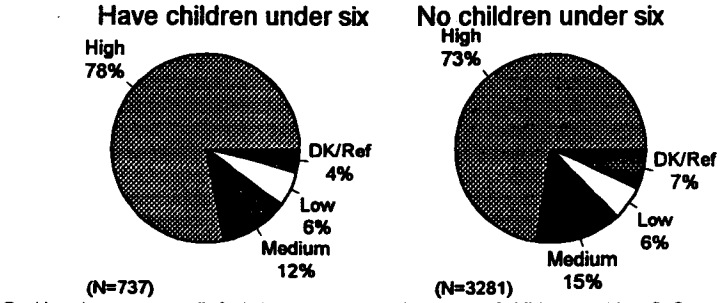


Qx: How do you personally feel about the police enforcement of child car seat laws? On a scale of 1 to 10, where 1 means police hardly ever give a ticket for violations of child car seat laws and 10 means police give a ticket at every opportunity for violations of child car seat laws, how strict should police enforcement be?
Base: Total population age 16+
Unweighted N=4018

Approval of strict enforcement (ratings of 8 through 10) of car seat laws is found both among those with and those without children under age six in the household. Seventy-eight percent of persons with children under age six favor strict enforcement of the car seat laws. Among adults without children under age six in the household, 73% favor strict enforcement of the law by police.

FIGURE 8-2

Level Of Support For Enforcement Of Car Seat Laws By Children Under Age 6 In Household

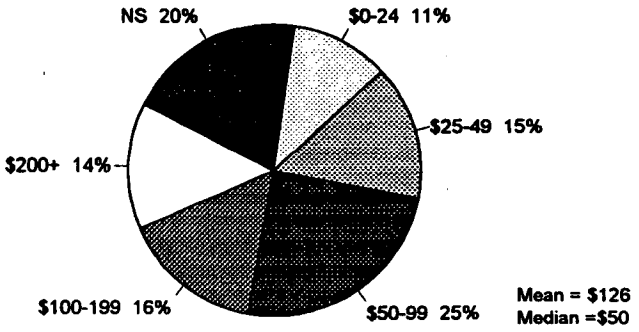


Qx: How do you personally feel about the police enforcement of child car seat laws? On a scale of 1 to 10, where 1 means police hardly ever give a ticket for violations of child car seat laws and 10 means police give a ticket at every opportunity for violations of child car seat laws, how strict should police enforcement be?
Base: Total population age 16+
Unweighted Ns listed above

Regardless of their attitude about police enforcement of child car seat laws, respondents were asked what they thought the minimum fine should be for violation of the laws. At one end of the continuum, about one in ten persons (11%) feel that the minimum fine should be less than $25. This includes four percent who feel there should be no fine for violating the child car seat law. At the other end, a slightly higher percentage (14%) feel that the minimum fine should be $200 or more. One out of five people (20%) are not sure what the minimum fine should be. Among those who have an opinion, the average (mean) minimum fine recommended for a car seat violation is $126. The median amount is $50.

FIGURE 8-3

Preferred Minimum Fine For Violation Of Car Seat Laws



Qx: What do you think the minimum fine should be for a violation of child car seat laws?
Base: Total population age 16+
Unweighted N=4018

It is noteworthy that the average (mean) minimum fine recommended for a child car seat violation ($126) is substantially higher than the average recommended fine for a first time safety belt violation ($50). Indeed, it is slightly higher than the recommended fine for repeat safety belt violations ($118). Moreover, the average fines for safety belt violations do not include the 35% of the public who oppose safety belt laws and/or fines. Also, the median recommended fine for car seat violations ($50) is twice the median amount recommended for first time safety belt violations ($25).

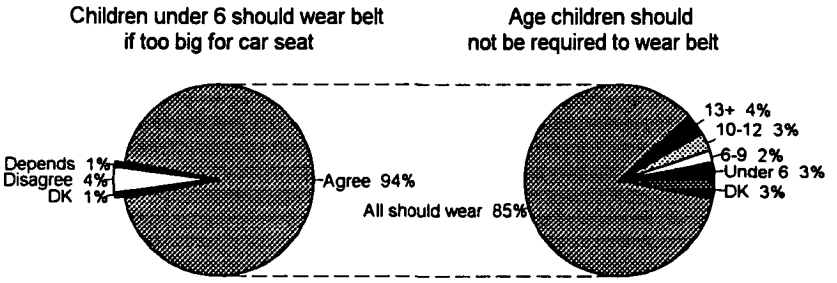
It is also noteworthy that those who have been involved in a crash as a driver where someone was injured tend to favor higher fines for car seat violations than those who have not. Crash-involved drivers recommend an average fine of $143 for car seat violations. Those who have never been involved in a serious crash as a driver recommend a somewhat smaller fine ($123), on average.

Ninety-four percent of persons age 16 and older agree that young children should be required to wear a safety belt when they outgrow a car seat. Only four percent disagree. The remaining 2% are not sure (1%) or feel it depends on the child's age (1%).

Those who agreed that young children should wear a safety belt if they have outgrown their car seat were asked how old children should be before they are <u>not</u> required by law to wear safety belts. The vast majority (85%) believe that all children should be required to wear safety belts, regardless of their age.

FIGURE 8-4

Applying Restraint Laws To Children: Preferred Ages



Qx: What about when children under the age of 6 outgrow a child car seat? Do you agree or disagree that they should be required by law to wear seat belts when riding in a vehicle?

Qx: How old do you think children should be before they are not required by law to wear seat belts or do you think all children should wear them?

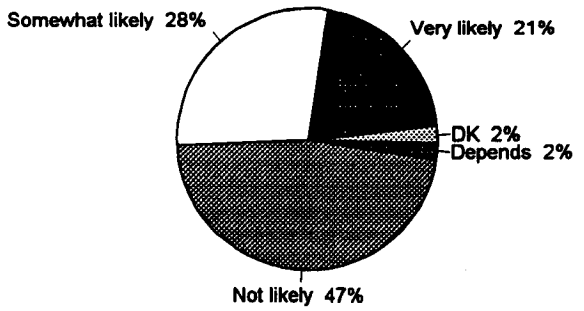
Base: Total population age 16+

Unweighted N=4018

Although the public favors strict enforcement of car seat laws by police, they are divided on their personal responsibility for enforcing those laws. One in five (21%) believe that, if there was a telephone number they could call to report child car seat violations, they would be very likely to use it if they saw a violation. Another 28% believe that they would be somewhat likely to use such a number if they saw a violation. By contrast, 47% report that they would not be very likely to report such violations if they saw them.

FIGURE 8-5

Likelihood Of Reporting Car Seat Violations

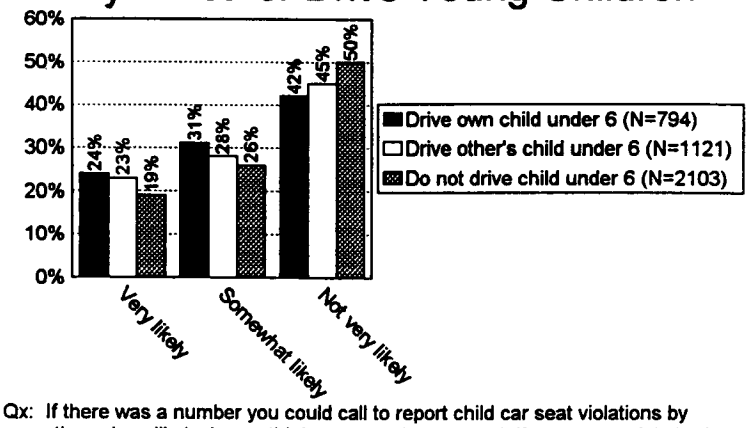


Qx: If there was a number you could call to report child car seat violations by others, how likely do you think you would be to use it if you saw a violation?
Base: Total population age 16+
Unweighted N=4018

Parents/caregivers of young children (under age 6) are more likely to report a car seat violation than either those persons who sometimes drive a young child that is not their own or those who do not have and do not drive young children. Just over half (55%) of parents/caregivers of young children would be very or somewhat likely to report a car seat violation, compared with 51% of those who drive others' children and only 45% of those who never drive young children. Correspondingly, 50% of those who do not drive young children are not very likely to report a car seat violation, compared with 42% of parents/caregivers of young children.

FIGURE 8-6

Likelihood Of Reporting Car Seat Violations By Whether Drive Young Children



Qx: If there was a number you could call to report child car seat violations by others, how likely do you think you would be to use it if you saw a violation?
Base: Total population age 16+
Unweighted Ns listed above

Those who place their child in a car seat most or all of the time are more willing to report violations than those who still use the car seat with their child, but infrequently. Only 38% of those who use car seats most or all of the time say they would not be very likely to report violations by others. By contrast, 70% of those who only sometimes or rarely use car seats with a child say that they would not be very likely to report violations by others.

CHAPTER 9

AIRBAGS

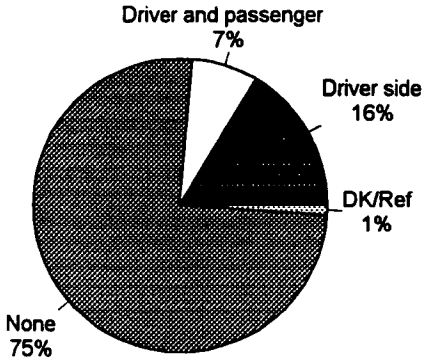
The increased availability of airbags is expected to reduce serious injuries and deaths resulting from motor vehicle crashes. The Motor Vehicle Occupant Safety Survey gathered information about the public's knowledge, attitudes, and behaviors related to airbags.

Prevalence of Airbags

By late 1994, almost one-fourth of drivers had an airbag in their primary driving vehicle. One of every six (16%) had a driver side airbag only, while 7% had both driver and passenger side airbags.

FIGURE 9-1

Airbags In Primary Vehicle



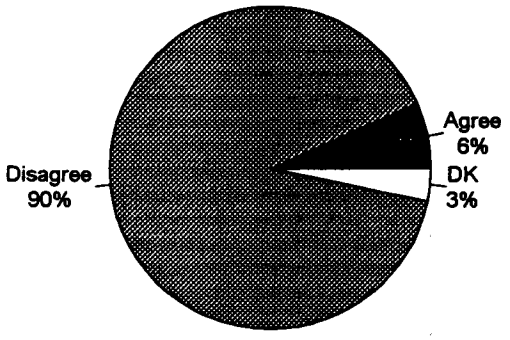
Qx: Does the (vehicle) you normally drive have an airbag?
Qx: Is the airbag for the driver only or is there also a passenger side airbag?
Base: Drivers whose primary vehicle is not a motorcycle
Unweighted N=7418

Airbags and Seat Belt Use

Almost all persons know that the presence of an airbag does not eliminate the need to use safety belts. Interviewers asked respondents whether they agreed or disagreed with this statement: "If my car has an airbag, I don't need to wear my seat belt when driving" (or "when I am a passenger" if a nondriver). Nine out of ten persons age 16 and older disagree with the statement.

FIGURE 9-2

Believe Safety Belt Unnecessary When Airbag is Present

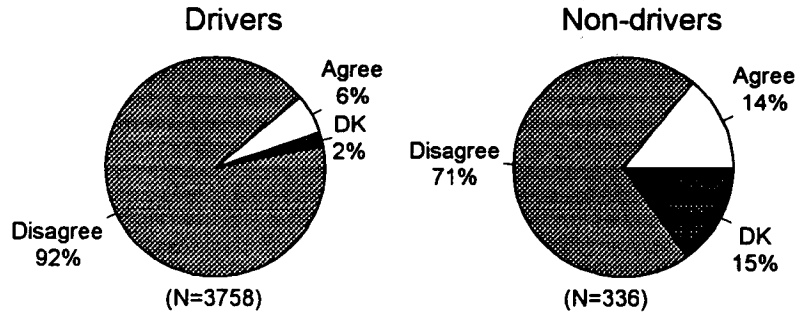


Qx: Please tell me whether you agree or disagree with the following statement. If my car has a (drivers/passenger) side airbag, I don't need to wear my seat belt when (I am driving/ I am a passenger).
Base: Total population age 16+
Unweighted N=4094

Drivers are more likely than non-drivers to understand that safety belts should still be used when the vehicle has an airbag. More than nine out of ten drivers (92%) disagreed that, "If my car has a driver side airbag, I don't need to wear my seat belt when driving." This compares with only 71% of non-drivers. Non-drivers are much more likely than drivers to say that they don't know whether safety belts are still needed with an airbag: 15% of non-drivers said they do not know whether the statement about safety belts and airbags is true, compared to only 2% of drivers.

FIGURE 9-3

Believe Safety Belt Unnecessary When Airbag Is Present: Drivers vs. Non-Drivers

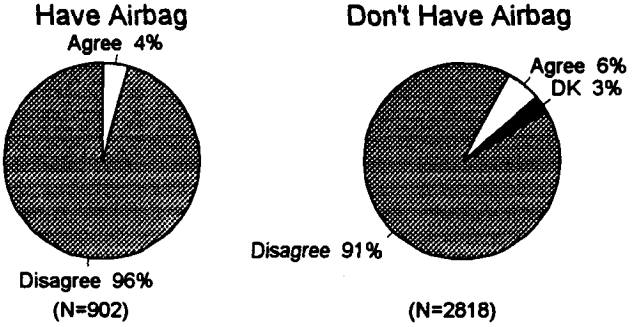


Qx: Please tell me whether you agree or disagree with the following statement. If my car has an airbag, I don't need to wear my seat belt.
Base: Total population age 16+
Unweighted Ns listed above

Drivers who have airbags in their primary vehicle are slightly more likely than those without to know that airbags do not eliminate the need for safety belts. Fully 96% of those with airbags disagreed with the statement mentioned above, compared to 91% of those without airbags in the primary vehicle.

FIGURE 9-4

Believe Safety Belt Unnecessary When Airbag Is Present: Primary Vehicle Comparison



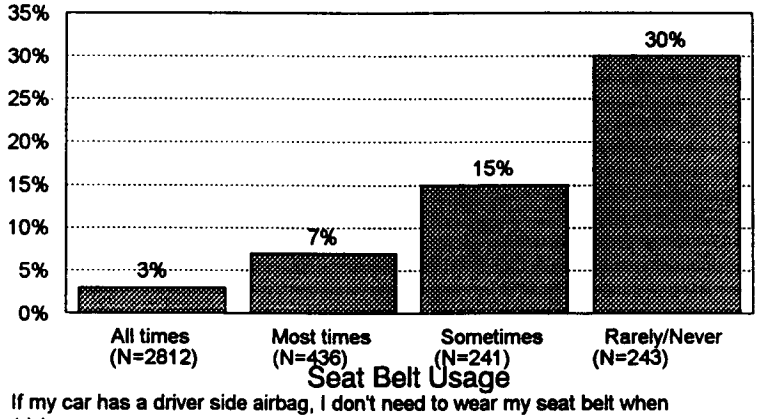
Qx: Please tell me whether you agree or disagree with the following statement. If my car has an airbag, I don't need to wear my seat belt.
Base: Drivers whose primary vehicle is not a motorcycle
Unweighted Ns listed above

The more frequently someone uses a safety belt[1], the more likely he or she is to know that airbags do not eliminate the need for safety belt use. Only 3% of drivers who use their safety belt all the time while driving agreed with the statement, "If my car has a driver side airbag, I don't need to wear my seat belt when driving." A slightly larger percentage (7%) of those who use their safety belt most of the time gave the wrong response. The likelihood of responding incorrectly to the statement increased substantially among those who use their safety belt only sometimes (15%) and jumped dramatically, to 30%, among those who rarely or never use their safety belts.

[1] See Chapter 3 for the definition of safety belt use frequency (unrevised).

FIGURE 9-5

Believe Safety Belt Unnecessary With Airbag By Belt Use

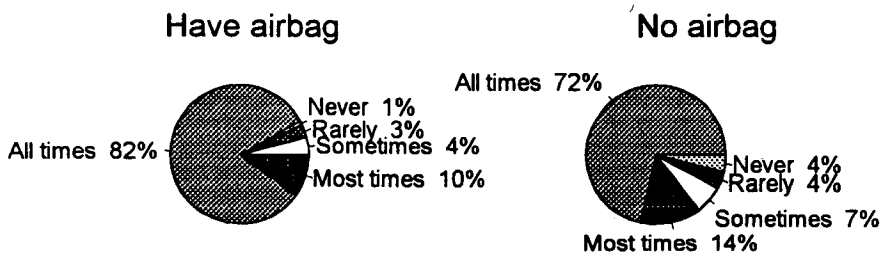


Qx: If my car has a driver side airbag, I don't need to wear my seat belt when driving.
Base: Drivers whose primary vehicle is not a motorcycle
Unweighted Ns listed above

Safety belt use does not decline if the vehicle has an airbag, and, in fact, is actually somewhat higher among people whose vehicle has an airbag. Among drivers who have an airbag in their primary vehicle, 82% use their safety belt all the time and 10% most of the time. By comparison, a somewhat lower percentage (72%) of drivers whose primary vehicle does not have an airbag use their safety belt all the time with an additional 14% using their belt most of the time.

FIGURE 9-6

Frequency Of Driver Safety Belt Use By Whether Vehicle Has Airbag



Qx: Does the vehicle you normally drive have an airbag?
Base: Drivers whose primary vehicle is not a motorcycle
Unweighted N=7388

Likelihood of Injury with Airbag in Vehicle

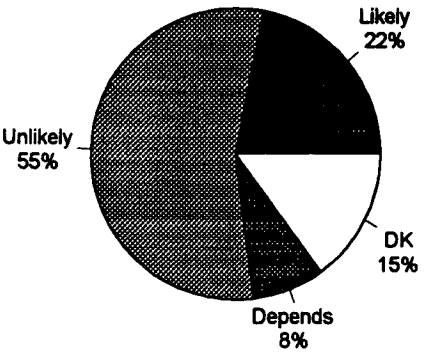
The interviewers asked drivers whether they thought that being in a crash involving major vehicle damage while in an airbag-equipped vehicle would be likely

or unlikely to result in injury.

More than half (55%) believe it is unlikely they would be injured in a vehicle with an airbag. Slightly more than one in five (22%) think it is likely they would be injured and 8% believe it would depend on the nature of the crash. More than one in seven (15%) do not know.

FIGURE 9-7

Perceived Likelihood Of Being Injured In Crash While In Airbag-Equipped Vehicle

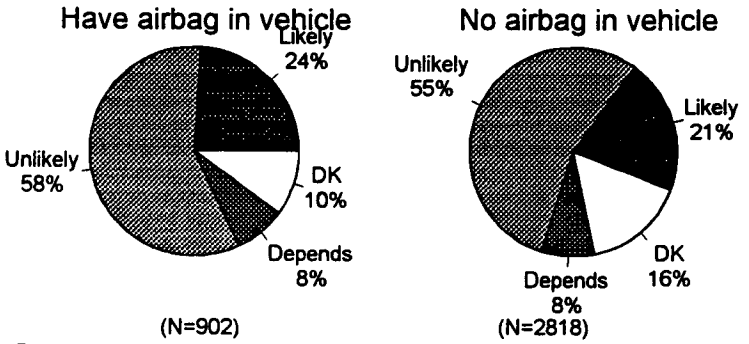


Qx: If you are driving in a vehicle that has an airbag and you got into an accident involving major vehicle damage, is it likely or unlikely that you would be injured?
Base: Drivers whose primary vehicle is not a motorcycle
Unweighted N=3758

Whether or not drivers have an airbag in their primary vehicle does not seem to have much impact on the perceived protective capabilities of airbags. The main difference between the two groups is that drivers not having an airbag are less willing to venture a guess as to whether airbags are likely or unlikely to prevent injury in a serious crash.

FIGURE 9-8

Perceived Likelihood of Being Injured In Crash With Airbag in Vehicle: Primary Vehicle Comparison

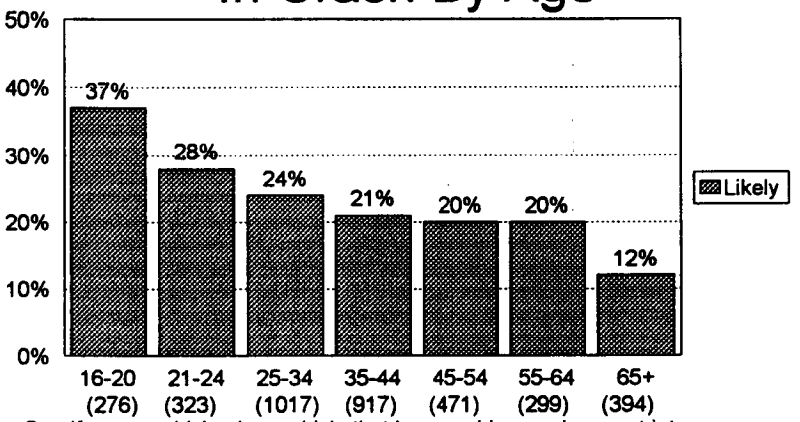


Qx: Does the vehicle you normally drive have an airbag?
Qx: If you are driving in a vehicle that has an airbag and you got into an accident involving major vehicle damage, is it likely or unlikely that you would be injured?
Base: Drivers whose primary vehicle is not a motorcycle
Unweighted Ns listed above

Youth are more likely than adults to believe they will be injured if they are in a crash in an airbag-equipped vehicle. More than one-third (37%) of 16-20 year olds believe it is likely they would be injured, with the percentage steadily declining across successive age groups. This age correlation in beliefs may be a function of driving speed or other factors rather than a reflection of the degree of confidence in airbags' ability to prevent injuries in crashes.

FIGURE 9-9

Perceived Likelihood Of Being Injured In Crash By Age



Qx: If you are driving in a vehicle that has an airbag and you got into an accident involving major vehicle damage, is it likely or unlikely that you would be injured?

Base: Drivers whose primary vehicle is not a motorcycle
Unweighted Ns listed above

The survey data indicate that drivers who engage in unsafe driving behavior such as speeding or drinking and driving are more likely to believe that they are vulnerable to injury in an airbag-equipped vehicle than are those who do not engage in such behaviors (see Table 9-1).

TABLE 9-1
Perceived Likelihood of Being Injured in a Crash While in an Airbag-Equipped Vehicle By Driving Behavior

	N	LIKELIHOOD OF INJURY				
		Likely	Unlikely	Depends	Don't know	Total
Highway Passing						
Tend to pass others	1103	27%	57%	7%	9%	100%
Others pass me	2353	20%	56%	8%	16%	100%
Highway Driving Speed (55 mph limit)						
Less than 55 mph	141	19%	48%	7%	26%	100%
55 mph	955	16%	55%	8%	20%	100%
56-60 mph	1649	23%	57%	7%	13%	100%
61-65 mph	778	27%	55%	10%	8%	100%
Over 65 mph	194	28%	52%	10%	10%	100%
Drinking and Driving						
Drove after drinking in past 30 days	595	26%	52%	10%	11%	100%
Drove when drank too much to drive safely (past year)	43	23%	64%	3%	10%	100%
Frequency of Safety Belt Use						
All the time	2812	22%	56%	8%	14%	100%
Most of the time	436	18%	55%	8%	20%	100%
Some of the time	241	29%	48%	8%	15%	100%
Rarely/Never	243	25%	57%	5%	13%	100%

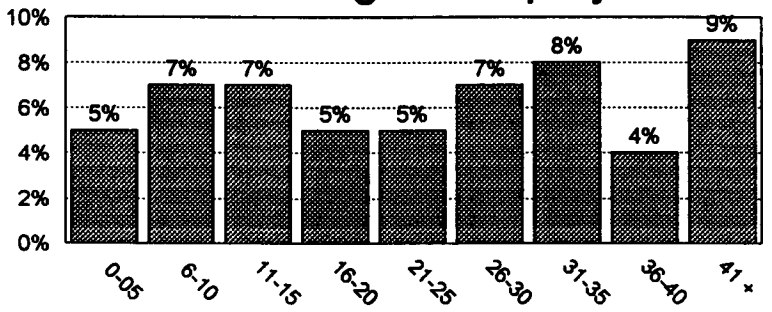
Minimum Speed for Airbag Deployment

The minimum speed at which an airbag deploys can vary depending on such factors as the abruptness of the collision, the impact-absorbing capabilities of a vehicle's front-end construction, or the angle of impact. Even given this range of variability, the general public appears to have little idea of how fast a vehicle must be

going in order to activate the airbag upon impact. Forty-three percent said they did not know. The estimates offered by others spread fairly evenly across a wide range of speeds. Clustering the ranges by 10 mph increments, 12% say 0-10 mph, 12% say 11-20 mph, 12% say 21-30 mph, and 12% say 31-40 mph. In other words, they really do not know.

FIGURE 9-10

Estimated Minimum Speed For Airbag To Deploy



Miles Per Hour

Qx: Based on what you know or have heard, what is the minimum speed a vehicle would have to be hit, in order for an airbag to open up?
Base: Total population age 16+
Unweighted N=4094

43% Did not know at what speed an airbag would deploy

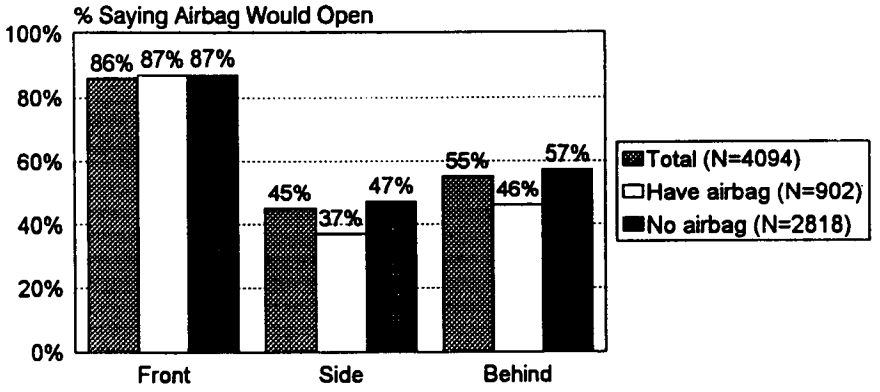
Location of Impact and Airbag Deployment

The interviewers asked whether airbags would deploy if a vehicle was hit in the front, on the side, or from behind. Even though airbags are designed for front-end impact only, many persons may believe they will be activated by collisions at the side or rear of the vehicle.

Most people (86%) know that a front-end impact at moderate speed will activate an airbag. Just under half (45%) also say that a side impact will activate the airbag and just over half (55%) say that the airbag will deploy upon a rear impact. Drivers of airbag-equipped vehicles are less likely than others to assume, erroneously, that side and rear impacts can cause airbags to deploy, though the percentage incorrect is still substantial. Among drivers with airbags in their primary vehicle, 37% believe that a side impact will activate the airbag and 46% think a rear impact will do so. By comparison, 47% of drivers whose primary vehicle does not have an airbag think a side impact will activate an airbag and 57% believe that a rear impact will deploy the bag.

FIGURE 9-11

Expectations Concerning Airbag Deployment: Front, Side, and Rear Impacts



Qx: If a vehicle is hit from the (front, side, behind) at a moderate speed, would you expect the airbag to open?
Base: Total population age 16+
Unweighted Ns listed above

CHAPTER 10

BICYCLE AND MOTORCYCLE HELMET USE

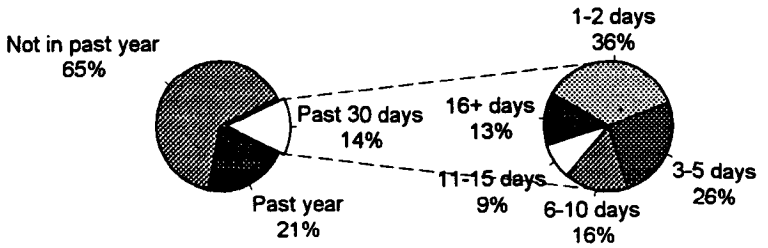
In 1993, 814 bicyclists were killed and approximately 65,000 were injured in crashes involving motor vehicles. More than 300 of the bicycle fatalities were children 15 years of age or younger. In the same year, over 2,000 people were killed and 58,000 injured while riding a motorcycle. Many of the most serious injuries and a high percentage of deaths among bicycle and motorcycle riders are caused by head injuries. As a result, efforts to reduce injury and loss of life among those riding bicycles and motorcycles have concentrated heavily on the use of protective helmets. This portion of the survey report provides insight into the use of helmets among persons who ride bicycles and motorcycles and the extent of public support for helmet laws.

Bicycle Riding

About a third (35%) of persons age 16 and older, or about 70 million youth and adults, have ridden a bicycle at some time in the past year (excludes stationary or exercise bikes). Only one in seven (14%) had ridden within the prior month; however, because the survey was conducted in the fall and winter months (October to December), the number of regular or frequent bike riders may be higher than the survey results suggest.

FIGURE 10-1

Number Of Days Ridden A Bicycle



Qx: Have you ridden a bicycle at all during the past 30 days?
Qx: How many days in the last 30 days did you ride a bicycle?
Qx: Have you ridden a bicycle at all during the past 12 months?
Base: Total population age 16+
Unweighted N=4018

Of those who had ridden a bicycle in the past month, 36% had ridden only one or two days in the month, 26% rode three to five days, and 16% rode a bike on six to ten of the previous 30 days. More than one in five (22%) of those who had ridden

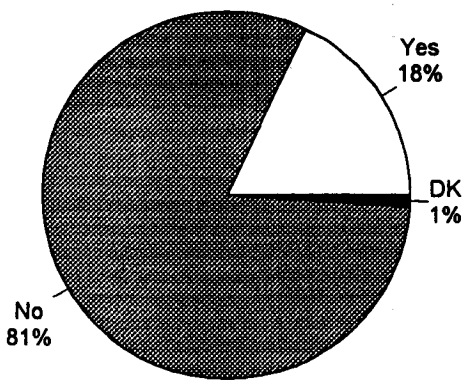
a bike at all in the past month had ridden 11 or more days of the previous 30.

Bicycle Helmet Use by Adults

Those who had ridden a bicycle within the past year were asked whether they usually wear a bicycle helmet when they ride a bike. Less than one in five (18%) bike riders age 16 and older usually wear a helmet. More than four of five (81%), or about 57 million, bike riders usually do not wear a bicycle helmet when they ride.

FIGURE 10-2

Usually Wear A Bicycle Helmet

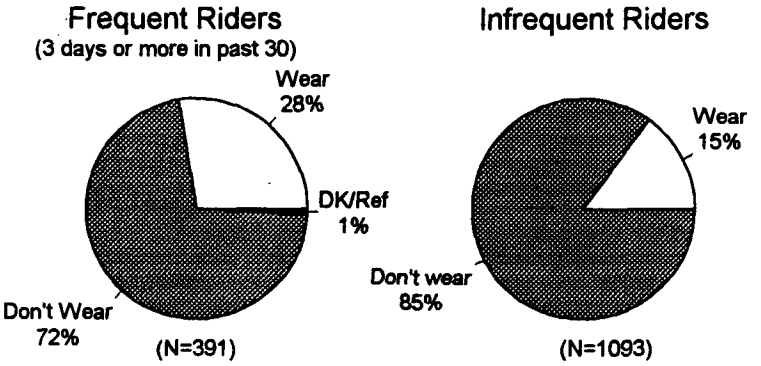


Qx: Do you usually wear a bicycle helmet when you ride a bike?
Base: Rode a bicycle in the past 12 months
Unweighted N=1484

More frequent bicycle riders are nearly twice as likely as infrequent riders to wear a bicycle helmet, although even among frequent riders, a large majority do not normally wear helmets. Of those who had ridden a bicycle three or more days in the prior month, 28% normally wear a helmet, compared with 15% of those who rode less than three days in the previous month.

FIGURE 10-3

Usually Wear A Bicycle Helmet By Frequent vs. Infrequent Riders



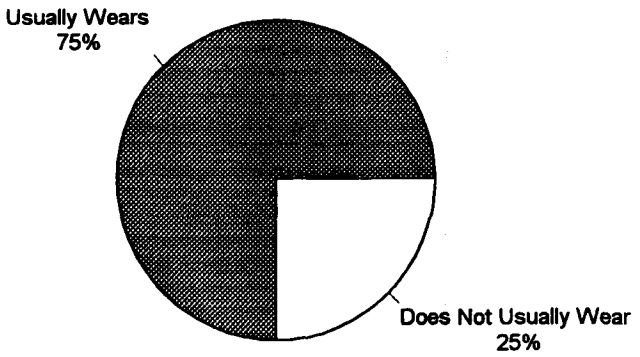
Qx: How many days in the past 30 days did you ride a bicycle?
Qx: Do you usually wear a bicycle helmet when you ride a bicycle?
Base: Rode a bicycle in the past year
Unweighted Ns listed above

Bicycle Helmet Use by Children Riding With Parents

Adults sometimes ride their bicycles with young children sitting on a seat attached to the bike. The survey examined the use of bicycle helmets by the children in these situations. Interviewers asked respondents if they ever rode with their young child seated on the bike with them (the survey randomly selected one specific child under age 6 as the referent if there was more than one eligible child in the household). If they said yes, interviewers asked if the child usually wears a helmet when riding with them. Most (75%) say that their child normally wears a bicycle helmet on these occasions; however, one-fourth (25%) of the young children who ride a bicycle with an adult usually do so without wearing a helmet.

FIGURE 10-4

Bicycle Helmet Use By Children Under 6 Riding On Bike With Adult



Qx: Do you ever bicycle with your (age) old seated on the bike with you?
Qx: Does he/she usually wear a bicycle helmet when riding with you?
Base: Rode bicycle with child under 6
Unweighted N=112

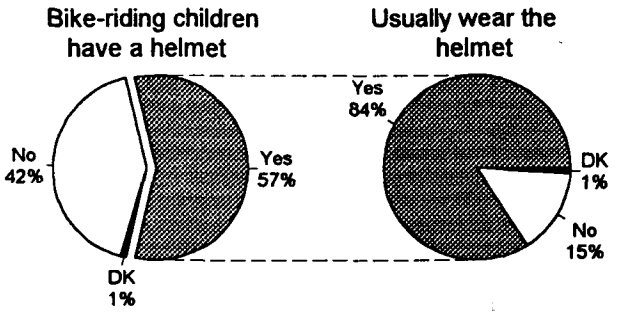
Bicycle Helmet Use by Children Age 4-12

The survey also gathered information about bicycle riding and bicycle helmet use by children age 4-12. Survey respondents with a child in this age range living in their household were asked whether the child (or a randomly-selected child if they had more than one in the 4-12 age category) rode a bike, and if so, whether he/she had a bicycle helmet. For those whose child had a helmet, interviewers asked whether the child usually wears the helmet when riding.

Four out of five children age 4-12 had ridden a bicycle in the past year. A majority (57%) of these children have a bicycle helmet. The data also indicate that if they have a helmet, they usually wear it.

FIGURE 10-5

Bicycle Helmet Use By Children Age 4-12



Qx: Does he/she have a bicycle helmet?
Qx: Does he/she usually wear the bicycle helmet?
Base: Child between 4-12 rode a bike in the past 12 months
Unweighted N=952

However, these results also indicate that half of children age 4-12 who ride a bicycle do not have a bicycle helmet or do not normally wear it when riding a bike. Among those children who have a helmet but still don't wear it, the most frequent reason for non-use (28%) is dissatisfaction with the way the helmet looks. The second most common reason is that the child thinks the helmet is too much trouble to put on or, in the words of respondents, the child is too "lazy" to put it on (20%). A similar percentage (19%) report that the child does not use a helmet because his or her bicycle riding is restricted to the driveway or yard. Another 8% say that the helmet is too small for the child's head.

TABLE 10-1
Reasons for Nonuse of Bicycle Helmets

Qx: Why does he/she not wear the bicycle helmet?

Doesn't like looks	28%
Lazy/too much trouble	20%
Rides mostly in driveway	19%
Helmet is too small	8%
Other	18%
Don't know/refused	16%

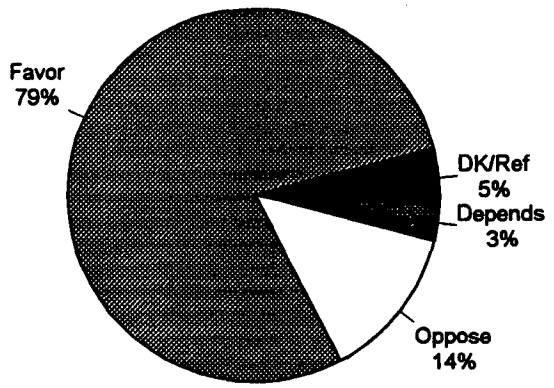
Base: Children who have a bicycle helmet but do not usually wear it
Unweighted N = 85

Bicycle Helmet Laws

Public support for bicycle helmet laws for children is strong. More than three-fourths (79%) of the public supports bicycle helmet laws for children. About one in seven (14%) oppose such laws and another 3% condition their support on specific circumstances or provisions in the law such as the ages covered.

FIGURE 10-6

Favor Or Oppose Bicycle Helmet Laws



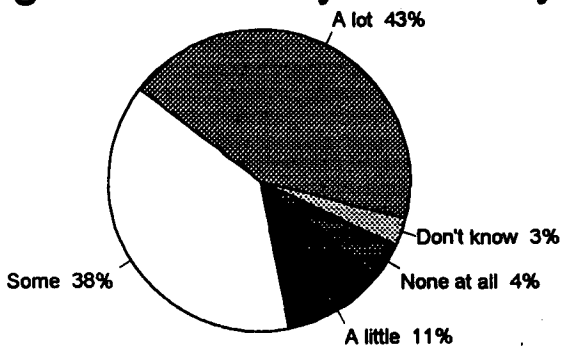
Qx: Do you favor or oppose laws which require children to wear bicycle helmets?
Base: Total population age 16+
Unweighted N=4018

School Bicycle Safety Training

The public (age 16 and older) is generally optimistic about the benefit of school training programs on bicycling and bicycle safety. Over 40% believe such programs would reduce the number of bicycle injuries and deaths by a lot, while another 38% think that school training programs would reduce deaths and injuries by some. Only about one in nine (11%) think that the programs would result in only a little reduction and a mere 4% think they would have no effect at all on the number of bicycle-related deaths and injuries.

FIGURE 10-7

Perceived Benefit Of School Training Programs On Bicycle Safety



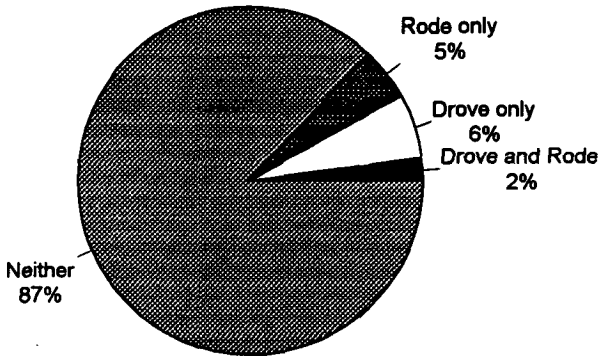
Qx: Do you think school training programs on bicycling and bicycle safety could reduce the number of bicycle injuries and deaths by a lot, some, a little, or none at all?
Base: Total population age 16+
Unweighted N=4018

Motorcycle Riding

While the vast majority (87%) of the public have not ridden or driven a motorcycle in the past year, one in eight, or about 26 million people, have done so. About equal percentages have driven a motorcycle but not ridden as a passenger (6%) as have ridden as a passenger but not driven a motorcycle (5%). Only 2% have been both a passenger and a driver of a motorcycle in the past year.

FIGURE 10-8

Motorcycle Drivers and Passengers

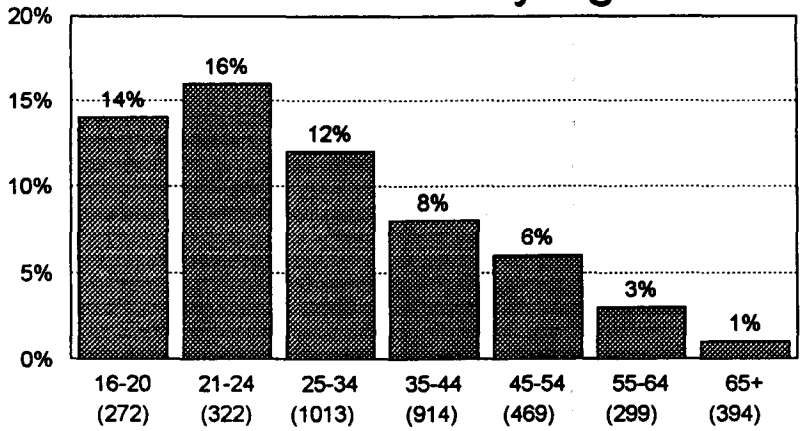


Qx: Have you driven a motorcycle in the past year?
Qx: During the past 12 months, have you ridden as a passenger on a motorcycle?
Base: Total population age 16+
Unweighted N=4094

Not surprisingly, younger adults are much more likely than older adults to have driven a motorcycle in the past year. One in seven (14%) youth age 16-20 have driven a motorcycle in the past year. A slightly higher percentage of 21-24 year olds (16%) have driven a motorcycle in that time period, with the proportion then declining steadily with age. Less than one in ten adults over age 35 have driven a motorcycle in the past year, and 3% or less of those age 55 and older have done so.

FIGURE 10-9

Have Driven A Motorcycle In Past Year By Age



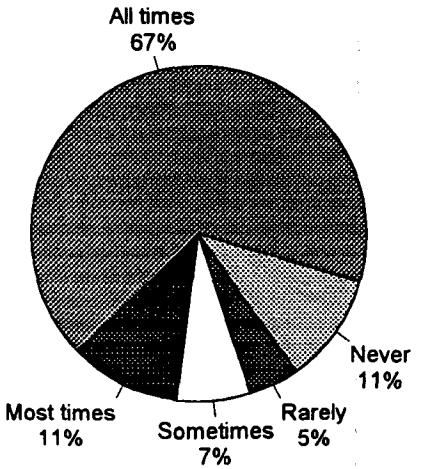
Qx: Have you driven a motorcycle in the past year?
Base: Drive a motor vehicle
Unweighted Ns listed above

Motorcycle Helmet Use

Motorcycle drivers were asked how often they use a helmet. Two-thirds (67%) use a helmet all the time. An additional 11% use a helmet most of the time and 7% use it some of the time. However, about one in seven motorcycle drivers (15%) rarely or never use a helmet.

FIGURE 10-10

Helmet Use By Motorcycle Drivers

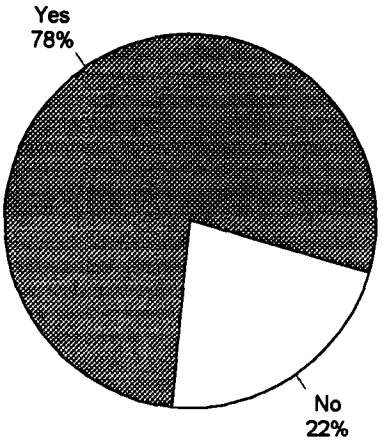


Qx: How often do you wear a helmet when you drive a motorcycle?
Base: Drive a motorcycle
Unweighted N=336

Respondents who had ridden as a passenger on a motorcycle were asked whether they used a helmet the last time they rode as a motorcycle passenger. More than three quarters (78%) said they had. However, more than one in five (22%) were riding without protective head gear.

FIGURE 10-11

Helmet Use By Motorcycle Passengers

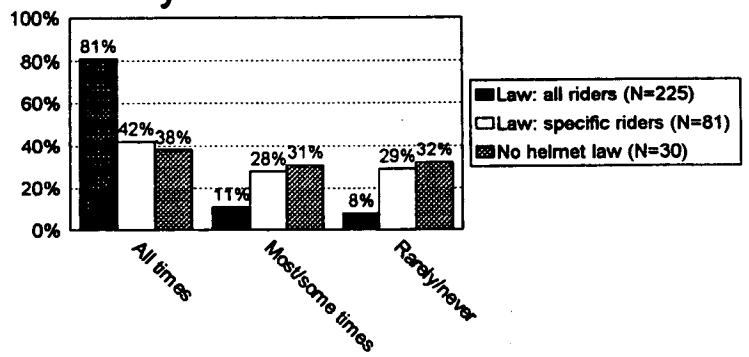


Qx: Did you wear a helmet the last time you rode (a motorcycle) as a passenger?
Base: Ridden as passenger on motorcycle
Unweighted N=329

Motorcycle helmet use is substantially higher in States that have a motorcycle helmet use law. (Results should be viewed cautiously because of the small sample sizes.) In States where the law requires that a helmet be worn by all riders, 81% of motorcycle drivers wear a helmet all the time. This contrasts sharply with helmet use by drivers in States with a more limited helmet law (for specific categories, typically younger drivers), where only 42% use a helmet all the time and, even more sharply with helmet use by drivers from States with no helmet law, where only 38% use their helmet all the time. In States with a universal helmet law, very few drivers (8%) say they rarely or never wear a helmet. By comparison, more than a fourth (29%) of drivers from States with a limited law and a third (31%) of drivers from States with no helmet law say they rarely or never wear a motorcycle helmet. (Appendix C contains a listing of State motorcycle helmet laws.)

FIGURE 10-12

Motorcycle Helmet Use By State Helmet Laws



Frequency of Helmet Use

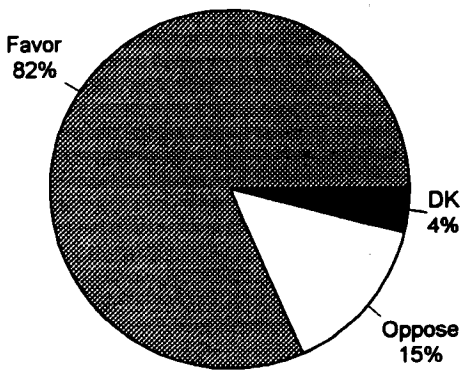
Qx: How often do you wear a helmet when you drive a motorcycle? Would you say...
Base: Drive a motorcycle
Unweighted Ns listed above

Motorcycle Helmet Laws

Support for motorcycle helmet laws in the United States is very strong: more than four of five persons age 16 and older (82%) support such laws. Only about one in seven (15%) oppose motorcycle helmet laws and 4% are uncertain whether they favor or oppose them.

FIGURE 10-13

Favor Or Oppose Motorcycle Helmet Laws: General Public



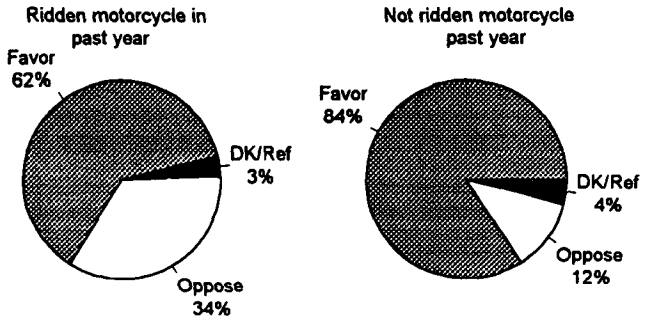
Qx: Do you favor or oppose mandatory helmet use laws for motorcyclists?
Base: Total population age 16+
Unweighted N=4094

Support for motorcycle helmet laws is strong even among motorcyclists, although their level of support is substantially below that of the general public. Sixty-

two percent of persons who had driven or ridden a motorcycle in the past year support helmet laws, compared with 84% of those who had not. Almost three times as many motorcyclists (34%) as non-motorcyclists (12%) oppose helmet laws. These data suggest that while public support for helmet laws is strong, a significant number of motorcycle riders may resist them.

FIGURE 10-14

Favor Or Oppose Motorcycle Helmet Laws By Motorcycle Use

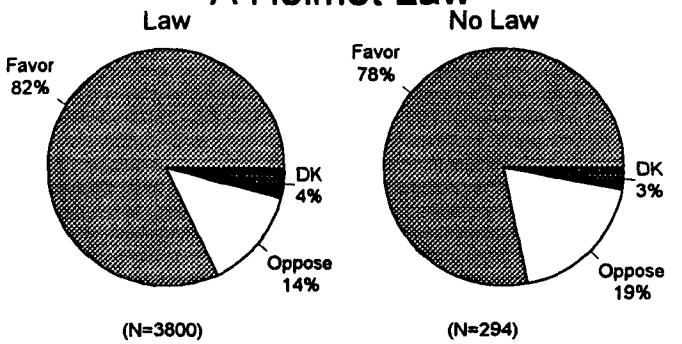


Qx: Do you favor or oppose mandatory helmet use laws for motorcyclists?
Base: Total population age 16+
Unweighted Ns listed above

The public strongly supports motorcycle helmet laws regardless of whether their State currently has such a law, with a slightly larger degree of support in States with an existing law. More than four out of five (82%) residents of States with a helmet law favor such a law, with only 14% opposing helmet laws. In States with no helmet law, 78% favor helmet laws and 19% oppose them.

FIGURE 10-15

Favor Or Oppose Motorcycle Helmet Laws By Whether State Has A Helmet Law



Qx: Do you favor or oppose mandatory helmet use laws for motorcyclists?
Base: Total population age 16+ by motorcycle helmet law in state
Unweighted Ns listed above

CHAPTER 11

HIGHWAY SAFETY BEHAVIOR AND ATTITUDES

Drivers' attitudes toward safety and driving behavior can have a significant impact upon driving and occupant protection behavior, which in turn affects the number and severity of crashes and injuries on America's highways. Safety-related attitudes and behaviors addressed in the survey include drivers' perceptions of their own and others' driving skill, their (reported) highway driving speed and speed relative to other drivers, their attitudes about speed laws, their alcohol or drug use and driving, and the relationship between safety belt use and other highway safety issues and concerns.

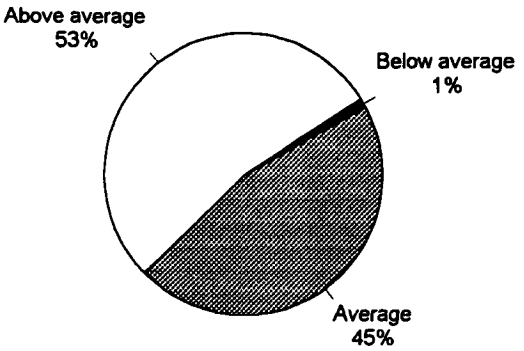
Driving Ability

Drivers were asked to rate their own driving ability and that of most other drivers. Overall, drivers tend to have a more positive view of their own driving skill compared to the skills of others.

More than half (53%) of drivers believe that, compared to other drivers, their own driving is above average. Virtually all remaining drivers (45%) think they are about average in their driving skill. A mere 1% describe their driving as below average.

FIGURE 11-1

Perceptions Of Own Driving Skill

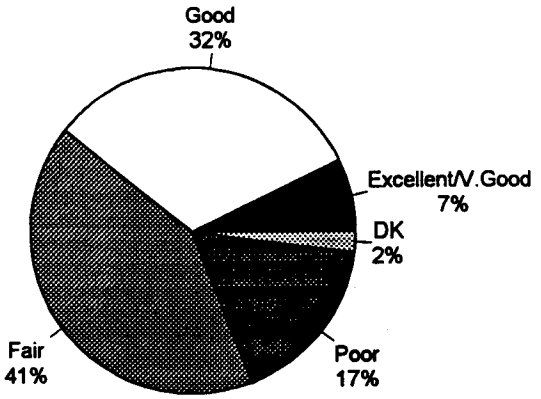


Qx: Comparing your driving to other drivers, would you say you are average, better than average, or below average?
Base: Drive a motor vehicle
Unweighted N=3758

Interviewers asked both drivers and non-drivers about their perception of most others' driving. The results suggest that people tend not to think very highly of most other people's driving. More than half think that most others' driving is fair (41%) or poor (17%). Less than one in ten think that most other people's driving is excellent (2%) or very good (6%), and a third (32%) think it is good.

FIGURE 11-2

Perceptions Of Others' Driving Skill



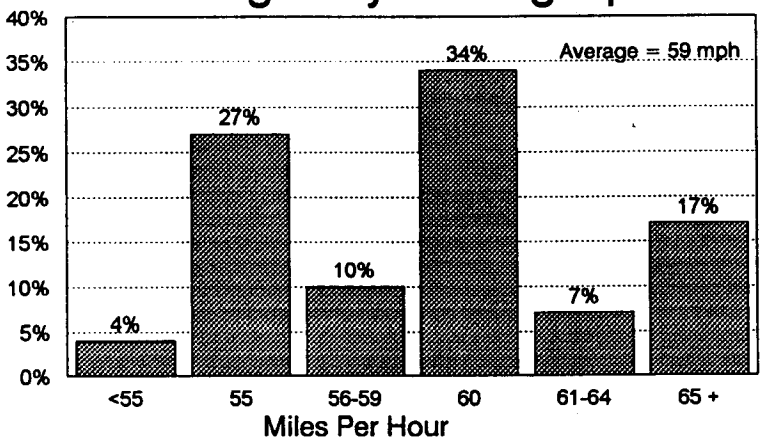
Qx: Would you say the driving of most others is...?
Base: Total population age 16+
Unweighted N=4094

Highway Driving

Most drivers (68%) say they drive faster than the 55 mile per hour (mph) speed limit on the highway. Half this group, or about a third of all drivers (34%), say they drive 60 mph on highways with a 55 mph speed limit. One in six drivers (17%) report their normal highway driving speed as 65 mph or higher. The average reported highway speed is 59 mph.

FIGURE 11-3

Usual Highway Driving Speed

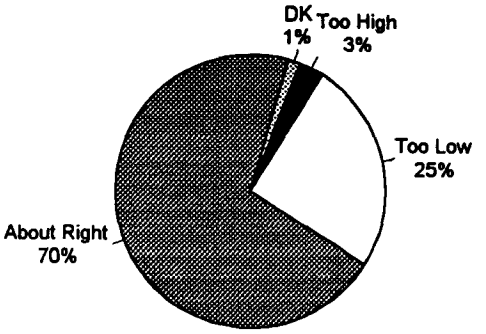


Qx: In general, how fast do you drive on a highway with a posted speed limit of 55 miles per hour?
Base: Drive a motor vehicle
Unweighted N=3745

Although most drivers normally exceed the posted speed limit on the highway, only about a fourth of drivers (25%) think most highway speed limits are too low. More than two-thirds (70%) believe current highway speed limits are about right. Only 3% think the current limit is too high. This shows little public demand for increasing highway speed limits.

FIGURE 11-4

Attitudes About Current Highway Speed Limits

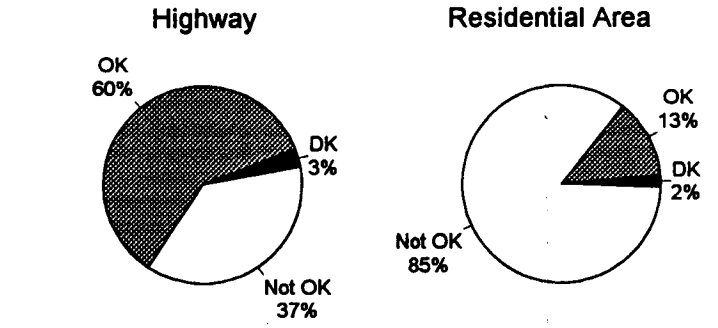


Qx: In general, do you think most highway speed limits are too low, too high or about right?
Base: Total population age 16+
Unweighted N=4094

A partial explanation for the seeming inconsistency between drivers' behavior (exceeding the speed limit) and their attitudes about current speed limits ("about right") is that a majority (60%) of the public believe it is "OK" to drive 60 mph on a highway with a 55 mph speed limit. This supports other research suggesting that persons use speed limits as guides rather than absolute limits.

FIGURE 11-5

OK To Exceed Speed Limit By 5 MPH



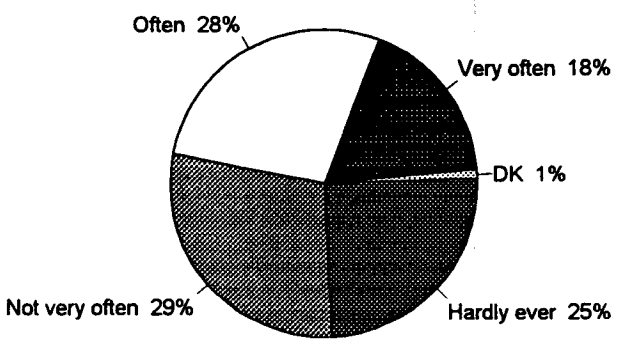
Qx: If the posted speed limit is 55 mph, do you personally think it is OK for drivers to go 60 or should they not go over the 55 mph speed limit?
Qx: How about for local driving in residential areas? If the posted speed limit is 35 mph, do you personally think it is OK for drivers to go 40 or should they not go over the 35 mph speed limit?
Base: Total population age 16+
Unweighted N=4094

Although most persons believe that exceeding the speed limit on the highway is OK, more than five out of six youth and adults (85%) think that drivers should not exceed the speed limit in residential areas. Only 13% believe that driving 40 mph in a residential area with a 35 mph speed limit is OK.

Interviewers asked drivers how often they felt pressure from other drivers to go faster than the speed limit. Nearly half of drivers (46%) often or very often feel this kind of pressure, suggesting that this may be a fairly common reason (or rationalization) for driving at excessive speed.

FIGURE 11-6

Pressure From Other Drivers To Speed

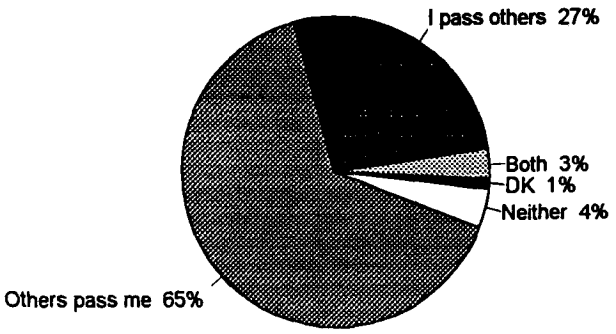


Qx: How often do you feel pressure from other drivers to go faster than the speed limit?
Base: Drive a motor vehicle
Unweighted N=3758

The survey also asked drivers whether, when they drove on the highway, they tended to pass other cars more often than others passed them, or vice versa. Two-thirds of drivers (65%) said that others tended to pass them more often than they passed others. Only about a fourth (27%) said that they tended to pass other cars more often. The drivers who say they tend to pass others report a faster average highway driving speed (63 miles per hour) than do those who say that others tend to pass them (58 mph), although both groups report an average highway speed greater than the 55 mph speed limit.

FIGURE 11-7

Highway Driving Characteristics

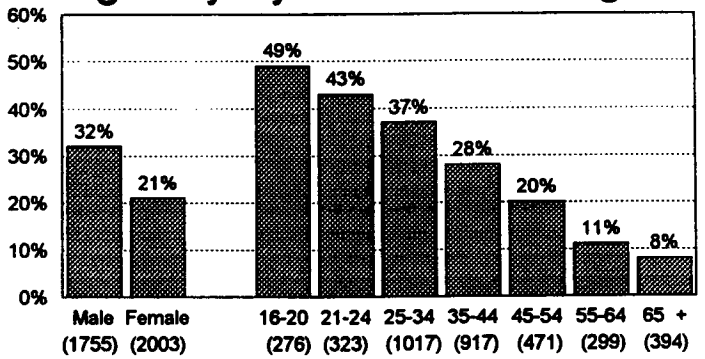


Qx: Which statement best describes your highway driving? I tend to pass other cars more often than other cars pass me. Other cars tend to pass me more often.
Base: Drive a motor vehicle
Unweighted N=3758

Drivers' passing behavior on highways varies by some key demographic characteristics, most notably gender and age. Males are more likely than females (32% to 21%) to say they more often pass other vehicles. On the age variable, the tendency to pass other vehicles is strongest among the youngest drivers, age 16-20, where half (49%) say that passing others is the norm. The percentage of drivers who tend to pass other vehicles declines steadily with the driver's age, to a low of about 10% of drivers age 55 and older.

FIGURE 11-8

Tendency To "Pass Others" On The Highway By Gender And Age



Qx: Which statement best describes your highway driving? I tend to pass other cars more often than other cars pass me. Or, other cars tend to pass me more often.
Base: Drive a motor vehicle
Unweighted Ns listed above

Drinking, Drugs, and Driving

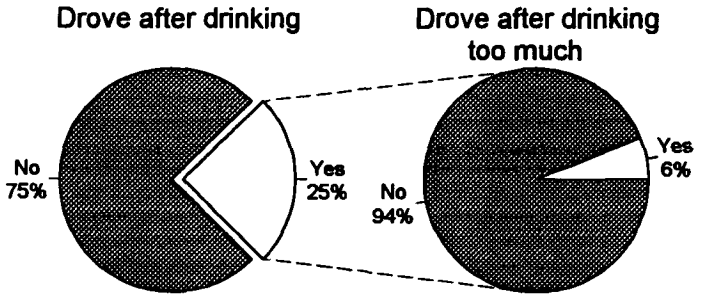
The contribution of drinking and driving to motor vehicle-related injuries and deaths is well-documented. Interviewers asked drivers if they had driven after drinking alcohol or taking medicines that contained warnings about causing drowsiness.

The survey's question series on alcohol and driving gradually narrowed down the respondents to potential impaired drivers. First, all respondents were asked whether they drank any alcoholic beverages in the past month; half (50%) had done so. These respondents were then asked how many days they had drunk alcohol in the past month; the average was between six and seven days.

The survey then asked drivers who had drunk alcoholic beverages in the previous month (about half of drivers) whether they had, in that 30 day period, driven after drinking alcohol. One in four (25%) said they had done so, indicating that approximately one of eight drivers, or 23 million persons, had driven after drinking in the past month.

FIGURE 11-9

Drinking And Driving, Past Month: Drivers Who Drank Alcohol In The Past Month



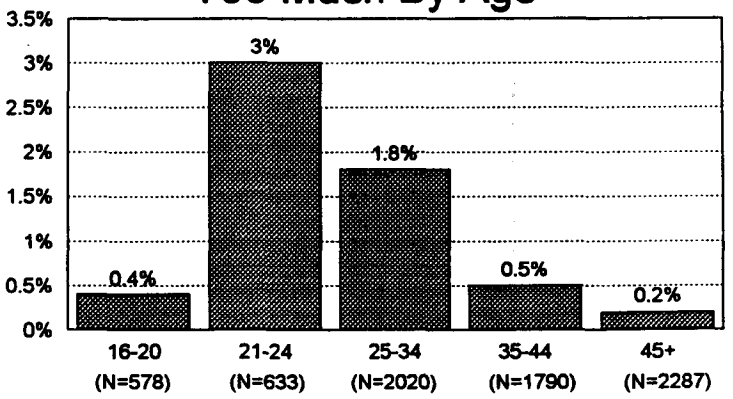
Qx: During the past 30 days, have you driven a vehicle after you had been drinking alcohol?
Qx: In the past 30 days, have you driven a vehicle when you thought you might have consumed too much alcohol to drive safely?
Base: Drivers who used alcohol in the past 30 days
Unweighted N=4048

Those drivers who had driven after drinking were then asked whether they had driven in the past month when they thought they might have consumed too much alcohol to drive safely. About 6% of this group said they had done so. This suggests that, in a given month, approximately 0.8% of drivers, or about 1.5 million persons, drive when they believe they are too alcohol-impaired to drive safely.

Those who drive when they believe they are alcohol-impaired are most likely to be drivers in their 20s. About 3% of drivers age 21-24 drove in the past 30 days when they believed they were too impaired to drive safely. Just under 2% (1.8%) of 25-34 year old drivers did the same. The percentages drop noticeably among drivers age 35-44 (0.5%) and even further for drivers age 45 and up (0.2%). About the same percentage of 16-20 year old drivers (0.4%) as 35-44 year old drivers report this behavior, despite the fact that these youngest drivers are below the legal drinking age.

FIGURE 11-10

Drivers Who Drove After Drinking Too Much By Age

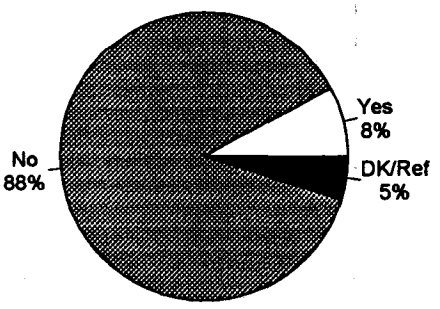


Qx: During the past 30 days, have you driven a vehicle when you thought you might have consumed too much alcohol to drive safely?
Base: Drive a motor vehicle
Unweighted Ns listed above

Motorcycle drivers were asked in the survey about whether they had, in the past year, driven a motorcycle after drinking alcoholic beverages. A total of 8% said they had done so.

FIGURE 11-11

Driven Motorcycle After Drinking In Past Year



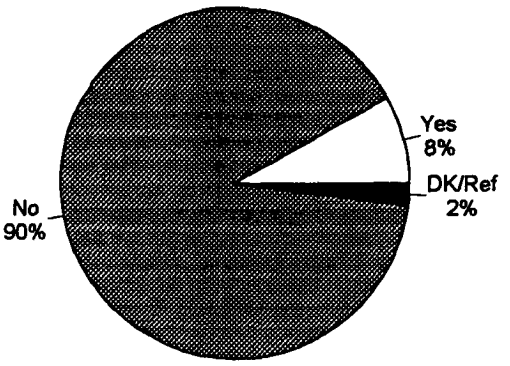
Qx: During the past 12 months, have you driven a motorcycle after drinking alcoholic beverages?
Base: Drive a motorcycle
Unweighted N=336

Interviewers also asked drivers of motor vehicles whether they had, in the previous month, driven after taking either a prescription drug or an over-the-counter

(OTC) medicine that can cause drowsiness. Although the percentage of drivers who reported having done so (8%) seems relatively small, this amounts to approximately 15 million drivers each month, not including drivers who may not have been aware of a medicine's potential to make them drowsy.

FIGURE 11-12

Medicine Use And Driving: Past Month



Qx: During the past 30 days, have you driven a vehicle after taking a prescription or over-the-counter medicine which had a warning that drowsiness may occur?
Base: Drive a motor vehicle
Unweighted N=7443

Drivers identified a wide variety of medications which they had taken before driving that contained warnings about potential drowsiness. Those most frequently mentioned were cold and sinus medications (about a third of all medications named), including antihistamines, decongestants, cold medicines and cough syrups. The second most frequently mentioned category of medications was painkillers, including both prescription and non-prescription varieties. The medication most often specifically identified was Tylenol (6% of the total number of medications cited), followed by Sudafed (4%) and codeine (4%).

APPENDIX A

METHODOLOGY

Sample Design

Because the Motor Vehicle Occupant Safety Survey was conducted by telephone, the study procedures called for the construction of a national sampling frame of telephone households from which an unbiased population sample could be derived. For each of the two survey instruments (one focusing on safety belts and the other on car seats, with a common core of questions relating to personal characteristics and driving behaviors), a national probability sample was developed. Each sample was composed of approximately 4,000 persons age 16 and older, including oversamples of persons age 16-39. Since the sampling procedures and data collection methodology for the two samples were identical, procedures described in this appendix for one sample apply to the other as well.

The procedure for developing a population-based sample for this telephone survey involved four stages. The first stage sample involved a population-based sample allocation, distributed in proportion to the geographic distribution of the target population according to the most recent Census estimates. The second stage employed a systematic selection of assigned telephone banks within the geographically stratified first stage sample design. The third stage in the sampling procedure was to conduct a random digit dialing (RDD) sampling of telephone households within the telephone banks selected in the second stage. The fourth stage required the identification and selection of one eligible respondent within each sampled household so that the household sampling frame yielded a population sample of the eligible population. These procedures yielded national estimates of the target population, within specified limits of expected sampling variability, from which valid generalizations can be made to the general public.

Sample Construction

Most of the statistical formulas associated with sampling theories are based upon the assumption of simple random sampling. Specifically, the statistical formulas for specifying the sampling precision (estimates of sampling variance), given particular sample sizes, are premised on simple random sampling. Unfortunately, random sampling requires that all of the elements in the population have an equal chance of being selected. Since no enumeration of the total population of the United States (or its subdivisions) is available, all surveys of the general public are based upon an approximation of the actual population and survey samples are generated by a process closely resembling true random sampling.

The survey sample was based on a modified stratified random digit dialing method, using an area probability/RDD sample rather than a single-stage/RDD sample. There are several important advantages to using an area probability base: (1) it draws the sample proportionate to the geographic distribution of the target population rather than the geographic distribution of telephone households, which is vital to

constructing unbiased population estimates from telephone surveys; (2) it allows greater geographic stratification of the sample to control for known geographic differences in non-response rates; and (3) it facilitates the use of Census estimates of population characteristics to weight the completed sample to correct for other forms of sampling bias.

The initial stage of the sample construction process required the development of a national area probability sample based upon the distribution of the target population for this study, i.e., the non-institutionalized population age 16 and older of the United States.

The precision of sample estimates is generally improved by stratification. Hence, as specified for this survey, the adult household population of the United States was stratified by the ten NHTSA regions, as shown in Table A-1. The estimated distribution of the population by stratum was calculated on the basis of the 1990 Census of Population and Housing: Summary of Population and Housing Characteristics: United States.[1] Based on these Census data on the geographic distribution of the target population, the total sample was proportionately allocated by stratum. The geographic allocation of the cross-sectional sample for the survey is presented in Table A-1.

TABLE A-1
NHTSA Regional Population Age 16+: 1990

				Cross-Section
		Population	Proportion	Sample
		191,820,393	100.00%	(3,000)
Region I	CT, ME, MA, NH, RI, VT	10,472,85	5.46%	164
Region II	NJ, NY	20,318,076	10.59%	318
Region III	DE, DC, MD, PA, VA, WV	20,398,987	10.63%	319
Region IV	AL, FL, GA, KY, MS, NC, SC, TN	34,845,872	18.17%	545
Region V	IL, IN, MI, MN, OH, WS	35,552,945	18.53%	556
Region VI	AR, LA, NM, OK, TX	21,086,898	10.99%	330
Region VII	IA, KS, MO, NE	9,144,069	4.77%	143
Region VIII	CO, MT, ND, SD, UT, WY	5,602,703	2.92%	88
Region IX	AZ, CA, HI, NV	27,354,951	14.26%	428
Region X	AK, ID, OR, WA	7,043,041	3.67%	110

Source: 1990 Census of Population and Housing: Summary of Population and Housing Characteristics: United States. CPH-1-1.

[1] Population figures used in the body of the report were taken from Projections of the Population of States by Age, Sex and Race: 1988 to 2010 (Current Population Reports, P-25, No. 1017), Middle Series estimates for 1994, the year of the field period.

Once the sample had been geographically stratified with sample allocation proportionate to population distribution, a sample of assigned telephone banks were randomly selected from an enumeration of the Working Residential Hundred Blocks of the active telephone exchanges within the region. The Working Hundreds Blocks were defined as each block of 100 potential telephone numbers within an exchange that included 3 or more residential listings. (Exchanges with one or two listings were excluded because in most cases such listings represent errors in the published listings.) This second stage sampling frame included more than 96.5% of all U.S. telephone households.

In the third stage sample, a two digit number was randomly generated by computer for each Working Residential Hundreds Block selected in the second stage sample. This third stage sampling process is the random digit dialing (RDD) component. Every telephone number within the Hundreds Block has an equal probability of selection, regardless of whether it is listed or unlisted.

The third stage RDD sample of telephone numbers was then dialed by SRBI interviewers to determine which were currently working residential household phone numbers. Non-working numbers and non-residential numbers were immediately replaced by other RDD numbers selected within the same stratum in the same fashion as the initial number. Ineligible households (e.g., no adult in the household, language barriers) were also immediately replaced. Non-answering numbers were not replaced until the research protocol (in this study, a five call protocol) was exceeded. However, one or more open numbers per case may have been permitted in order to permit the replicate to be completed within a reasonable period.

Screening to Determine Household Eligibility

The sample construction process yielded a population-based, random-digit dialing sample of telephone numbers. The systematic dialing of those numbers to obtain a residential contact yielded an unbiased sample of telephone households. The next step was to select eligible households within the total sample of working numbers.

An adult respondent at each number drawn into the sampling frame was contacted about the composition of the household. Telephone numbers that yielded non-residential contacts such as businesses, churches, and college dormitories, were screened out. Only households, i.e., residences at which any number of related individuals or no more than five unrelated persons living together, were eligible for inclusion in the sample. This minimal screening was only to ascertain that the sample of telephone numbers reached by interviewers are residential households.

Selection of Respondent within Household

The multi-stage sampling process described in the previous sections yielded an unbiased national sample of households with telephones, drawn proportionate to the population distribution. The final stage required the selection of one respondent per household for the interview.

A systematic selection procedure was used to select one designated respondent for each household sampled. The "most recent/next birthday method" was used for

within household selection among multiple eligibles. The Within Household Selection Procedure is presented in Figure A-1. The CATI system alternated the "most recent" and "next" birthday specification for the selected respondent to avoid a temporal bias for birthdays before (or after) the field period.

FIGURE A-1
Within Household Selection Procedure:
Adult Cross-Section

TIME START: _____ TIME END: _____
DATE: _____ BATCH #:_____ CATI RESP. #: _____
SAMPLE POINT #: ___ ___ ___ GENDER OF RESP.: MALE [ ] FEMALE [ ]
RESP PHONE NUMBER: _____
RESP POSITION IN HOUSEHOLD: _____
INTERVIEWER NAME: _____
THIS INTERVIEW IS A: COMPLETE [ ] CALLBACK FOR COMPLETION [ ]
TERMINATE AT Q.____ [ ]

INTRODUCTION TO BE ADMINISTERED TO ANY ADULT HOUSEHOLD MEMBER:
Hello, I'm calling for the U.S. Department of Transportation. We are conducting a study of Americans' attitudes about current driving laws. The interview is completely confidential.
C1. In order to select just one person to interview, could I speak to the person in your household, age 16 and older, who has had the most recent/next birthday?
Respondent is that person [CONTINUE WITH CATI AND ENTER Q.1 AS C1].....1
Other respondent came to phone [CONTINUE WITH CATI ANDNTER Q.1 AS C1].....2
Respondent is not available
[ARRANGE CALLBACK AND RECORD IT, ALONG WITH THE RESPONDENT'S FIRST NAME OR HH POSITION, ON THE SAMPLE SHEET. ATTACH THIS SHEET TO SAMPLE AFTER FILLING OUT APPLICABLE RESPONDENT INFO AT THE TOP. WHEN THE NEXT INTERVIEWER REACHES THIS PERSON, THEY WILL ENTER Q.1 AS C1].....3

Young Adult Oversample

The survey design specified an oversample of 16-39 year olds in the achieved sample in order to permit more detailed analysis of this subset of the population. A random sample of all persons age 16 and over in an RDD sample of 4,000 households yields too few individuals in this range to allow very close examination. Therefore, to increase the subsample sizes of the 16-39 year olds, within a projectable national sample, an independent national sample was conducted of that population. The allocation of sample by region for the young adult oversample is proportional to the regional distribution of that population. The household selection procedures through RDD is the same for the oversample as for the national cross-sectional sample.

The screening criteria for the oversample were different from the simple cross-section in that households were screened for persons age 16 to 39. This systematic screening of a national probability sample of households for a subset of the total household population should yield an unbiased sample of that population. As in the case of the simple cross-sectional sample, if there were only one eligible respondent in the household then he or she was selected. If there were more than one eligible respondent, then the "most recent/next birthday" method of selection was used. The oversample screener script is presented in Figure A-2.

FIGURE A-2
Within Household Selection Procedure:
Young Adult Oversample

TIME START: _____ TIME END: _____
DATE: _____ BATCH #:_____ CATI RESP. #: _____
SAMPLE POINT #: ___ ___ ___ GENDER OF RESP.: MALE [ ] FEMALE [ ]
RESP PHONE NUMBER: _____
RESP POSITION IN HOUSEHOLD: _____
INTERVIEWER NAME: _____

THIS INTERVIEW IS A: COMPLETE [ ] CALLBACK FOR COMPLETION [ ]
TERMINATE AT Q.____ [ ]

INTRODUCTION TO BE ADMINISTERED TO ANY ADULT HOUSEHOLD MEMBER:
Hello, I'm calling for the U.S. Department of Transportation. We are conducting a study of Americans' attitudes about current driving laws. The interview is completely confidential.
D1. Is there anyone age 16 to 39 years old living in your household?

|---------- Yes [ASK Q.D2].....1

| No [SCREEN OUT - D1 AGE].....2 |

D2. Could I speak to the person in your household, age 16 to 39, who has had the most recent/next birthday?
Respondent is that person [CONTINUE WITH CATI AND ENTER Q.1 AS D2].....1
Other respondent came to phone [CONTINUE WITH CATI ANDENTER Q.1 AS D2].....2
Respondent is not available [ARRANGE CALLBACK AND RECORDIT, ALONG WITH THE RESPONDENT'S FIRST NAME OR HH POSITION, ON THE SAMPLE SHEET. ATTACH THIS SHEET TO SAMPLE AFTER FILLING OUT APPLICABLE RESPONDENT INFO AT THE TOP. WHEN THE NEXT INTERVIEWER REACHES THIS PERSON, THEY WILL ENTER Q.1 AS D2].....3

Table A-2 presents the national population figures and projected sample distribution by age and sex for the total sample of 4,000 respondents, including the cross-sectional sample of 3,000 respondents and the oversample of 1,000 persons age 16-39.

TABLE A-2
Population and Expected Sample Distribution*

	Population		Sample		
	Total Population (thousands)	%	Cross-Sectional Sample	Young Adult Sample	Total
Total (16+)	199,575	100	3,000	1,000	4,000
Males (16+)	95,986	48.1	1,443	503	1,946
16-20	8,945	4.5	135	92	227
21-29	17,699	8.9	266	183	449
30-39	22,079	11.1	332	228	560
40-64	33,803	16.9	508	-	508
65+	13,459	6.7	202	-	202
Females(16+)	103,589	51.9	1557	497	2,054
16-20	8,520	4.3	128	88	216
21-29	17,375	8.7	261	179	440
30-39	22,247	11.1	335	230	565
40-64	35,740	17.9	537	-	537
65+	19,710	9.9	296	-	296

* Source: Population Projections of the United States, by Age, Sex, Race, and Hispanic Origin: 1993-2050, Current Population Reports, Series P-25, No. 1104, Bureau of the Census, p.14.

Initial Contact

Initial telephone contact was attempted during the hours of the day and days of the week which have the greatest probability of respondent contact. The primary interviewing period was from 5:30 p.m. to 10:00 p.m. on weekdays, from 9:00 a.m. to 10:00 p.m. on Saturdays, and from 10:00 a.m. to 10:00 p.m. on Sundays (all times are local time). Since interviewing was conducted across time zones, the interviewing shift lasted until 1:00 a.m. Eastern Time (10:00 p.m. Pacific Time).

If the interview was not conducted at the time of initial contact, the interview was rescheduled at a time convenient to the respondent. Although initial contact attempts were made on evenings and weekends, daytime interviews were scheduled when necessary. If four telephone contacts on the night and weekend shifts did not elicit a respondent contact, the fifth contact was attempted on a weekday.

Interviewers attempted a minimum of five calls to each telephone number. When the household was reached, the interviewer asked to speak to an adult to screen the household for eligibility and to determine the designated respondent. When the designated respondent was reached but an interview at that time was inconvenient or inappropriate, interviewers set up appointments with respondents. When contact was made with the household, but not the designated respondent(s), interviewers probed for appropriate callback times and attempted to set up an appointment.

Spanish Language Interviews

Spanish language versions of the two survey instruments were developed in order to eliminate language barriers for a small proportion of the U.S. adult population. If the interviewer encountered a language barrier at the telephone number, either with the person answering the phone or with the designated respondent, the interviewer thanked the person and terminated the call. If the case was designated as Spanish language, it was turned over to the next available Spanish-speaking interviewer.

All households in which a language barrier (Spanish) was encountered were assigned to a Spanish-speaking interviewer. These bilingual interviewers recontacted the Spanish-speaking households to screen for eligibility and conduct interviews with eligible respondents.

Refusal Conversion

The process of converting terminations and refusals, once they had occurred, involved the following steps. First, there was a diagnostic period, when refusals and terminates were reported on a daily basis and the Project Director and Operations Manager reviewed them after each shift to see if anything unusual was occurring. Second, after enough time had passed to see a large enough sample of refusals and terminations, the Project Director and his staff developed a refusal conversion script. Third, the refusal conversion effort was fielded with reinterview attempts scheduled about a week after the initial refusal. Fourth, the Project Director and Operations Manager received the outcomes of the refusal conversion efforts on a daily basis. Minor revisions of the script and the procedures were made, as needed. The final refusal conversion script is shown in Figure A-3, on the following two pages.

FIGURE A-3
Refusal Conversion Script

Hello, my name is _____. I am a field supervisor with SRBI, a national research organization in New York. I believe that someone in your household may have been contacted by one of our interviewers concerning a public policy study that we are conducting for the U.S. Department of Transportation in Washington, D.C.

Yes, respondent.....1
Yes, other.....2
No, don't recall.....3

1. In order to assess the effectiveness of current traffic laws, the U.S. Department of Transportation is conducting a study of Americans' attitudes about current driving laws. It is a public opinion study that will help the government to consider traffic laws in light of what the public really wants and does. It only takes about fifteen minutes and it's strictly confidential.

   Willing to proceed.....1 GO TO SELECTION GRID
   Refuses.....2

2. I understand. My job as a field supervisor is to find out if there are any problems with our surveys or interviewers that are discouraging people from participating. Could you tell me if we have done something wrong or is there something about the interview that concerns you?

IF: I don't do surveys.
ANSWER: I understand, but this is the first survey to really examine whether our traffic laws are realistic and appropriate in terms of what people really want and really do. The results will be presented to Congress and may affect laws in your state. It is really important.

IF: I don't have time.
ANSWER: It doesn't take very long and we can schedule it at a time convenient to you. We need to represent the opinions of busy people like you, as well as people who have more time, if we are to present an accurate picture to Congress of what the public thinks and wants.

IF: I don't know if you are who you say you are.
ANSWER: I can give you our 800 number to call and confirm the authenticity of the study.

IF: I don't know how the results will be used.
ANSWER: The Department of Transportation has been charged by the Congress to report to them about public opinion and behavior related to traffic laws, in order to assist them in determining whether certain laws should be changed or not. That's why we need to talk to you.

FIGURE A-3
Refusal Conversion Script
(continued)

IF: I don't drive.

ANSWER: Then the interview should only take only a few minutes. Even if you don't drive, we need to get your opinion about some traffic laws that may affect you as a pedestrian. We also need a little background about non-drivers, but it won't take long at all.

IF: Don't know enough.

ANSWER: This is an opinion survey about driving, traffic safety and traffic laws based on your experience. We need to talk to all kinds of people to get a true picture of what ordinary Americans think, not just what "experts" say.

IF: I don't want the government to know about me/ what I do.

ANSWER: The interview is strictly confidential. Your telephone number was selected at random. As soon as we complete the interview andverify it, we destroy the phone number. No one will ever know who you are. We do this so that you can be comfortable in telling us what you really think, not what you think the government wants to hear.

IF: It's a bad time.

ANSWER: We can schedule a callback for a time that would be good for you.

Date _____ Time _____

IF STILL HESITANT SAY:

It is really important that we represent the views and experience of people like yourself so that the findings will be fair and accurate. You don't often get a chance to participate in studies that may affect the laws in your community. It's really important and we really want to represent your household in the study. If now is a bad time, we can schedule interview during the day, in the evening, or on the weekend whenever is better for you.

(IF SUGGESTS A TIME MORE THAN TWO WEEKS HENCE:

We are supposed to finish the study by the end of November. Could we find some time this week (or next) to do the interview?)

Date _____ Time _____

IF AGREEABLE, GO TO THE SELECTION GRID.
IF STILL REFUSES, THANK AND COMPLETE.

Field Outcomes

The field interviewing for the study commenced on October 5, 1994, following training of the field interviewers, and was completed on December 11, 1994. However, some callbacks were made to respondents with missing data after the field period ended. Status of cases as of the end of the field period are reported using the categories defined below.

FIGURE A-4
Sample Disposition Categories

NIS/Dis/change #	The number was not in service, had been disconnected, or yielded a recording indicating that it was no longer an active number
Non-residential	The number yielded a contact with a business, government agency, pay telephone, or other non-residential unit
Computer/fax	The number yielded an electronic tone indicating a fax machine or data line
No answer	The number rang, but no one answered
Busy	A busy signal was encountered
Answering machine	An answering machine was reached at the telephone number
Language	The interview could not be completed because of language barriers
Away for duration	The designated respondent was out of the area for the entire field period
Callback	Contact was made with the household, but not necessarily the designated respondent. By the end of the field period, the case had neither yielded a refusal or completed interview
Callback to complete	The interview was interrupted, but not terminated. The field period ended before the full interview could be completed
Refusal -- Initial	Someone in the household refused to participate in the study
Refusal -- Second	During a refusal conversion attempt, a second refusal to participate in the study was encountered
Terminate	A respondent began the interview but refused to finish
Complete	An interview was completed with the designated respondent

For survey Version 1 - Safety Belt Usage Issues, a total of 13,858 randomly selected telephone numbers were sampled within a geographically stratified national sampling frame for both sample components (the cross-section of youth and adults age 16 and older and the oversample of persons age 16-39):

- 19% of the numbers were not active residential phone numbers, including 8% not-in-service, 10% business or government, and 2% computer or fax tones;

- 15% of the numbers were no answers (despite repeated attempts) and 6% were answering machines; and

- 1% were households in which the designated respondent was not interviewable (away for an extended period, incapacitated, or deaf) and an additional 2% were non-interviewable due to language barriers (non-Spanish).

At the close of the field period,only 364 cases (less than 3%) were in callback status.

The participation rate represents one of the most critical measures of potential sample bias because it indicates the degree of self-selection by potential respondents into or out of the survey. The participation rate is calculated as the number of completed interviews (including respondents who screen out as ineligible) divided by the combined total number of completed interviews, terminated interviews, and refusals to interview. (The inclusion of screen outs in the numerator and denominator is mathematically equivalent to discounting the refusals by the estimated rate of non-eligibility among refusals.) The participation rate for Version 1 is based on the following elements:

- 4110 completed interviews

- 1490 cases in which someone in the household completed the household screen, but no one in the household was found to be eligible for the full interview (1448 were age-related screen-outs among the age 16-39 oversample)

- 1272 refusals to be interviewed (including 667 second refusals) and 140 terminated interviews

Based on the standard calculations of participation rate, the participation rate for Version 1 was 79.9%.

The Final Summary Disposition of the Version 1 sample is given in Table A-3. The table includes breakouts for each survey component (national youth and adult cross-section and the age 16-39 oversample).

TABLE A-3
Sample Disposition:
Version 1, Safety Belt Usage Issues

	CROSS-SECTION	OVER-SAMPLE	TOTAL
TOTAL NUMBERS DIALED	8463	5395	13858
NIS/Dis/Change#/Wrong#	739	428	1167
Non-residential	864	557	1421
Computer/fax	135	97	132
Duplicates	0	0	0
Other Reason Terminating	35	16	51
Not Available	59	48	107
No Answer	1293	842	2135
Answering Machine	455	321	776
Busy	62	49	111
Callback	186	178	364
Language	209	73	282
Health/Deaf/Deceased	133	24	157
Away for Duration	30	13	43
Refusals -- Initial	448	157	605
Refusals -- Second	548	119	667
Total Contacts	3267	2473	5740
Screen out	42	1448	1490
Total Qualified	3225	1025	4250
Callback to Complete	0	0	0
Terminates	115	25	140
Completes	3110	1000	4110
Completion Rate	73.9%	89.0%	79.9%

For survey Version 2 - Child Safety Seat Issues, a total of 14,933 randomly selected telephone numbers were sampled within a geographically stratified national sampling frame for both sample components (the cross-section of youth and adults age 16 and older and the oversample of persons age 16-39):

- 21% of the numbers were not active residential phone numbers, including 8% not-in-service, 10% business or government, and 2% computer or fax tones;

- 16% of the numbers were no answers (despite repeated attempts) and 6% were answering machines; and

- 2% were households in which the designated respondent was not interviewable (away for an extended period, incapacitated, or deaf) and an additional 2% were non-interviewable due to language barriers (non-Spanish).

At the close of the field period, there were 548 cases (4%) in callback status.

The participation rate for Version 2 is based on the following elements:

- 4018 completed interviews

- 1654 cases in which someone in the household completed the household screen, but no one in the household was found to be eligible for the full interview (1586 were age-related screen-outs among the age 16-39 oversample)

- 1466 refusals to be interviewed (including 813 second refusals) and 158 terminated interviews

Based on the standard calculations of participation rate, the participation rate for Version 2 was 77.7%.

The Final Summary Disposition of the Version 2 sample is given in Table A-4, on the next page. The table includes breakouts for each survey component (national youth and adult cross-section and the age 16-39 oversample).

For the two survey versions combined (including both the national youth and adult cross-sections and the age 16-39 oversamples), the participation rate, based on 8112 completed interviews, 2738 refusals, 298 terminates, and 3144 screen-outs, was 78.8%.

TABLE A-4
Sample Disposition:
Version 2, Child Safety Seat Issues

	CROSS-SECTION	OVER-SAMPLE	TOTAL
Total Numbers Dialed	8945	5988	14933
NIS/Dis/Change#/Wrong#	807	449	1256
Business #	985	573	1558
Computer/Fax Tone	178	90	268
Duplicates	1	0	1
Other Reason Terminating	55	10	65
Not Available	72	55	127
No Answer	1453	932	2385
Answering Machine	476	396	872
Busy	42	37	79
Callback	184	364	548
Language	167	70	237
Health/Deaf/Deceased	166	32	198
Resp. Away for Duration	35	8	43
Refusals	474	179	653
Second Refusals	632	181	813
Total Contacts	3219	2612	5831
Screen out	68	1586	1654
Total Qualified	3151	1026	4177
Callback to Complete	0	0	0
Terminates	132	26	158
Completes	3018	1000	4018
Completion Rate	71.4%	87.0%	77.7%

Sample Weighting

The characteristics of a perfectly drawn sample of a population will vary from true population characteristics only within certain limits of sample variability (i.e., sampling error). Unfortunately, social surveys do not permit perfect samples. The sampling frames available to survey research are less than perfect. The absence of perfect cooperation from sampled units means that the completed sample will differ from the drawn sample. In order to correct these known problems of sample bias, the achieved sample is weighted to certain characteristics of the total population. Each of the survey samples was weighted separately.

The weighting plan for the survey was a multi-stage sequential process of weighting the achieved sample to correct for sampling and non-sampling biases in the final sample. The first stage in the sample weighting procedures was designed to correct the cases in the completed sample for known selection biases in the sampling procedures. At the household selection stage, a random digit dialing process will give households with more than one telephone number an unequal likelihood of selection. Nationally, about ten percent of households selected by random digit dialing will have more than one telephone number. This selection bias was corrected by giving each household a first stage weight equal to the inverse of the number of different telephone numbers in the household.

The second step in the weighting process was to correct for selection procedures that yielded unequal probability of selection within sampled households. Although the survey was designed as a population survey, only one eligible person per household could be interviewed (because multiple interviews per household are burdensome and introduce additional design effects into the survey estimates). A respondent's probability for selection is inverse to the size (number of other eligible adults) of the household. Hence, the second stage weight was equal to the number of eligible respondents within the household.

The next step in the weighting process was to correct the study design for deliberate disproportionate selection of population subsets in the sample design. The survey included both a cross-sectional sample of 3,000 respondents, aged 16 and older, and an oversample of 1,000 persons, aged 16 to 39 years old. Hence, the total achieved sample yielded a disproportionate sample distribution by age. A third stage weight was used to correct the achieved sample for disproportionate sampling by dividing the expected population distribution, based on Census projections, by the achieved sample distribution on the stratification variables.

The previous steps in the sample weighting process were designed to correct the achieved sample for known biases in sample selection. There is also a self-selection bias in sample surveys in which participation is voluntary. The primary self-selection biases involve age, gender, and race. A fourth procedure weighted the sample to the cell distribution of the population by age and gender, using the Census Population Projections for Age, Sex and Race for 1994. After these corrections were made, no further weighting by other Census characteristics (e.g., race) was considered necessary or desirable.

FIGURE A-5

SPSS Program for Assigning Weights

```
COMPUTE SAMTYPE=Q21.
RECODE SAMTYPE (SYSMIS=0).
COMPUTE YADULT=0.
COUNT YADULT=Q197 Q199 TO Q203 (16 THRU 39).
IF ((SAMTYPE EQ 1 AND YADULT EQ 0) AND Q197 EQ 99) YADULT=1.
COMPUTE CATAGE=Q197.
RECODE CATAGE (16 THRU 20=1)(21 THRU 29=2)(30 THRU 39=3)
(40 THRU 64=4)(65 THRU 97=5).
IF ((SAMTYPE EQ 1) AND (CATAGE EQ 4 OR CATAGE EQ 5)) SAMTYPE=0.
VALUE LABELS SAMTYPE 0 'CROSS SECTION' 1 'OVERSAMPLE'.
COMPUTE NADULTS=Q198.
IF (Q200 GE 98) NADULTS=3.
IF (Q200 LT 98 AND Q201 GE 98) NADULTS=4.
IF (Q201 LT 98 AND Q202 GE 98) NADULTS=5.
IF (Q202 LT 98 AND Q203 GE 98) NADULTS=6.
IF (Q203 LT 98 AND Q204 GE 98) NADULTS=7.
COMPUTE NADULTS=(NADULTS + 1).
IF (NADULTS=100) NADULTS=1.
IF (NADULTS GT 10) NADULTS=10.
COMPUTE NPHONES=Q223.
RECODE NPHONES (SYSMIS=1)(4 THRU 10=3)(11 THRU HIGHEST=1).
COMPUTE WEIGHT1=(1/NPHONES).
COMPUTE WEIGHT2=0.
IF (SAMTYPE EQ 0) WEIGHT2=NADULTS.
IF (SAMTYPE EQ 1) WEIGHT2=YADULT.
COMPUTE WEIGHT3=(WEIGHT1*WEIGHT2).
COMPUTE WEIGHT4=0.
IF ((SAMTYPE EQ 0 AND Q254 EQ 1) AND CATAGE EQ 1) WEIGHT4=.447.
IF ((SAMTYPE EQ 0 AND Q254 EQ 1) AND CATAGE EQ 2) WEIGHT4=.57.
IF ((SAMTYPE EQ 0 AND Q254 EQ 1) AND CATAGE EQ 3) WEIGHT4=.55.
IF ((SAMTYPE EQ 0 AND Q254 EQ 1) AND CATAGE EQ 4) WEIGHT4=.544.
IF ((SAMTYPE EQ 0 AND Q254 EQ 1) AND CATAGE EQ 5) WEIGHT4=.62.
IF ((SAMTYPE EQ 0 AND Q254 EQ 2) AND CATAGE EQ 1) WEIGHT4=.448.
IF ((SAMTYPE EQ 0 AND Q254 EQ 2) AND CATAGE EQ 2) WEIGHT4=.431.
IF ((SAMTYPE EQ 0 AND Q254 EQ 2) AND CATAGE EQ 3) WEIGHT4=.472.
IF ((SAMTYPE EQ 0 AND Q254 EQ 2) AND CATAGE EQ 4) WEIGHT4=.428.
IF ((SAMTYPE EQ 0 AND Q254 EQ 2) AND CATAGE EQ 5) WEIGHT4=.644.
IF (SAMTYPE EQ 0 AND WEIGHT4 EQ 0) WEIGHT4=.565.
IF ((SAMTYPE EQ 1 AND Q254 EQ 1) AND CATAGE EQ 1) WEIGHT4=.666.
IF ((SAMTYPE EQ 1 AND Q254 EQ 1) AND CATAGE EQ 2) WEIGHT4=.74.
IF ((SAMTYPE EQ 1 AND Q254 EQ 1) AND CATAGE EQ 3) WEIGHT4=.693.
IF ((SAMTYPE EQ 1 AND Q254 EQ 2) AND CATAGE EQ 1) WEIGHT4=.625.
IF ((SAMTYPE EQ 1 AND Q254 EQ 2) AND CATAGE EQ 2) WEIGHT4=.626.
IF ((SAMTYPE EQ 1 AND Q254 EQ 2) AND CATAGE EQ 3) WEIGHT4=.50.
IF (SAMTYPE EQ 1 AND WEIGHT4 EQ 0) WEIGHT4=.875.
COMPUTE WEIGHT5=(WEIGHT3*WEIGHT4).
COMPUTE WEIGHT6=0.
IF (Q254 EQ 1 AND CATAGE EQ 1) WEIGHT6=.797.
IF (Q254 EQ 1 AND CATAGE EQ 2) WEIGHT6=.797.
IF (Q254 EQ 1 AND CATAGE EQ 3) WEIGHT6=.797.
IF (Q254 EQ 1 AND CATAGE EQ 4) WEIGHT6=1.320.
IF (Q254 EQ 1 AND CATAGE EQ 5) WEIGHT6=1.317.
IF (Q254 EQ 2 AND CATAGE EQ 1) WEIGHT6=.797.
IF (Q254 EQ 2 AND CATAGE EQ 2) WEIGHT6=.795.
IF (Q254 EQ 2 AND CATAGE EQ 3) WEIGHT6=.795.
IF (Q254 EQ 2 AND CATAGE EQ 4) WEIGHT6=1.320.
IF (Q254 EQ 2 AND CATAGE EQ 5) WEIGHT6=1.319.
IF (WEIGHT6 EQ 0) WEIGHT6=1.00.
COMPUTE WEIGHT7=(WEIGHT5*WEIGHT6).
```

The final step in the weighting process was designed to correct for the fact that the total number of cases in the weighted sample was larger than the unweighted sample size because of the use of the number of eligibles weight. In order to avoid misinterpretation of sample size, the total number of cases in the unweighted sample was divided by the total number of cases in the weighted sample to yield a sample size weight. The weight adjusts the 8112 completed interviews in the achieved sample to correct for known sampling and participation biases.

Precision of Sample Estimates

The objective of the sampling procedures used on this study was to produce an unbiased sample of the target population. An unbiased sample shares the same properties and characteristics of the total population from which it is drawn, subject to a certain level of sampling error. This means that with a properly drawn sample we can make statements about the properties and characteristics of the total population within certain specified limits of certainty and sampling variability.

The confidence interval for sample estimates of population proportions, using simple random sampling without replacement, is calculated by the following formula:

$$\text{var}(x) = z \sqrt{\frac{p\,(q)}{n - 1}}$$

Where:

var (x)	=	the expected sampling error of the mean of some variable, expressed as a proportion
p	=	some proportion of the sample displaying a certain characteristic or attribute
q	=	(1 - p)
z	=	the standardized normal variable, given a specified confidence level (1.96 for samples of this size).
n	=	the size of the sample

The sample sizes for the surveys are large enough to permit estimates for subsamples of particular interest. Table A-5, on the next page, presents the expected size of the sampling error for specified sample sizes of 8,000 and less, at different response distributions on a categorical variable. As the table shows, larger samples produce smaller expected sampling variances, but there is a constantly declining marginal utility of variance reduction per sample size increase.

TABLE A-5
Expected Sampling Error (Plus or Minus)
At the 95% Confidence Level
(Simple Random Sample)

Size of Sample or Subsample	Percentage of the Sample or Subsample Giving A Certain Response or Displaying a Certain Characteristic for Percentages Near: 10 or 90	20 or 80	30 or 70	40 or 60	50
8,000	0.7	0.9	1.0	1.1	1.1
4,000	0.9	1.2	1.4	1.5	1.5
3,000	1.1	1.4	1.6	1.8	1.8
2,000	1.3	1.8	2.0	2.1	2.2
1,500	1.5	2.0	2.3	2.5	2.5
1,300	1.6	2.2	2.5	2.7	2.7
1,200	1.7	2.3	2.6	2.8	2.8
1,100	1.8	2.4	2.7	2.9	3.0
1,000	1.9	2.5	2.8	3.0	3.1
900	2.0	2.6	3.0	3.2	3.3
800	2.1	2.8	3.2	3.4	3.5
700	2.2	3.0	3.4	3.6	3.7
600	2.4	3.2	3.7	3.9	4.0
500	2.6	3.5	4.0	4.3	4.4
400	2.9	3.9	4.5	4.8	4.9
300	3.4	4.5	5.2	5.6	5.7
200	4.2	5.6	6.4	6.8	6.9
150	4.8	6.4	7.4	7.9	8.0
100	5.9	7.9	9.0	9.7	9.8
75	6.8	9.1	10.4	11.2	11.4
50	8.4	11.2	12.8	13.7	14.0

NOTE: Entries are expressed as percentage points (+ or -).

The sampling design included a separate, concurrently administered oversample of youth and young adults (age 16-39). Both the cross-sectional sample and the oversample of the youth/younger adult population were drawn as simple random samples; however, the disproportionate sampling of the age 16-39 population introduces a design effect that makes it inappropriate to assume that the sampling error for total sample estimates will be identical to those of a simple random sample.

To assess the design effect for sample estimates, we have calculated sampling errors for the disproportionate sample for twelve of the key behavioral variables (Table A-6). These estimates were then compared to the sampling errors for the same variables, assuming a simple random sample of the same size. Overall, the

disproportionate sample reduces the confidence interval by more than 25%, compared to a simple random sample of the same size. Because the variance is consistently greater in the 16-39 age group than the 40+ age group, the oversampling reduces the total variance in the sample estimates. Hence the sampling error table for a simple random sample will be a conservative guide to the precision of sampling estimates.

TABLE A-6
Design Effect on Confidence Intervals for Sample Estimates Between Disproportionate Sample Used in Occupant Protection Survey And a Proportionate Sample of Same Size

	CONFIDENCE INTERVALS — PERCENTAGE POINTS ± AT 95% CONFIDENCE LEVEL		
	HYPOTHETICAL PROPORTIONATE SAMPLING*	CURRENT PROPORTIONATE SAMPLING	DIFFERENCE IN CONFIDENCE INTERVALS ABOUT ESTIMATES
USE NEW VARIABLES			
Driven in the past year	*.61*	*.45*	*-26.7%*
Drunk alcohol in past year	*1.05*	*.77*	*-26.7%*
Always use safety belt	*1.00*	*.73*	*-27.0%*
Always use belt (revised)	*1.11*	*.81*	*-27.0%*
Dislike seat belts	*1.56*	*1.16*	*-25.6%*
Always use passenger belt	*1.48*	*1.07*	*-27.7%*
Favor (a lot) seat belt laws	*1.46*	*1.08*	*-26.0%*
Secondary enforcement	*1.68*	*1.24*	*-26.2%*
Stopped by police in past year	*1.17*	*.82*	*-30.0%*
OK to go 60 in 55 mph zone	*1.51*	*1.10*	*-27.2%*
Crash dummies	*.78*	*.58*	*-25.6%*
Driver in a serious accident	*.79*	*.60*	*-24.1%*
AVERAGE DIFFERENCE IN PERCENTAGE POINTS			*-26.6%*

* Weighted sample proportions using SRS formula

The appropriate statistical formula for calculating the allowance for sampling error (at a 95% confidence interval) in a stratified sample is:

$$ASE = 1.96 \sqrt{\left[\sum_{h=1}^{g} W^2 \{(1-f_h)\ (s_h^2/n_h - 1)\}\right]}$$

where:

ASE = allowance for sampling error at the 95% confidence level;

h = a sample stratum;

g = number of sample strata;

w_h = stratum h as a proportion of total population;

f_h = the sampling fraction for group h -- the number in the sample divided by the number in the universe;

s_h^2 = the variance in the stratum h -- for proportions this is equal to $p_h\ (1.0 - p_h)$;

n_h = the sample size for the stratum h.

While the earlier table provides a useful approximation of the magnitude of expected sampling error, precise calculation of allowances for sampling error requires the use of this formula.

Estimating Statistical Significance

The estimates of sampling precision presented in the previous section yield confidence bands around the sample estimates, within which the true population value should lie. This type of sampling estimate is appropriate when the goal of the research is to estimate a population distribution parameter. However, the purpose of some surveys is to provide a comparison of population parameters estimated from independent samples (e.g. annual tracking surveys) or between subsets of the same sample. In such instances, the question is not simply whether or not there is any difference in the sample statistics which estimate the population parameter, but rather is the difference between the sample estimates statistically significant (i.e., beyond the expected limits of sampling error for both sample estimates).

To test whether or not a difference between two sample proportions is statistically significant, a rather simple calculation can be made. Call the total sampling error (i.e., var

(x) in the previous formula) of the first sample s1 and the total sampling error of the second sample s2. Then, the sampling error of the difference between these estimates is sd which is calculated as:

$$sd = \sqrt{s1^2 + s2^2}$$

Any difference between observed proportions that exceeds sd is a statistically significant difference at the specified confidence interval. Note that this technique is mathematically equivalent to generating standardized tests of the difference between proportions.

An illustration of the pooled sampling error between subsamples for various sizes is presented in Table A-7. This table can be used to indicate the size of difference in proportions between drivers and non-drivers or other subsamples that would be statistically significant.

Statistical Comparisons between Samples

In order to permit statistical comparisons between the two samples, the data sets from the two separate samples were merged together on like questions. The sample versions (1 for Safety Belt Usage and 2 for Child Safety Seats) were crosstabulated with each of the survey questions which had been asked in an equivalent fashion in the two samples. A chi square test was conducted for each of these crosstabulations to test for the independence of samples.

An exact test of independence was calculated to test the differences between the two samples. Pearson's chi square is a widely used statistic to test the hypothesis that the row and column variables are independent. It is calculated by summing over all cells the squared residuals divided by the expected frequencies. The calculated chi-square is compared to the critical points of the theoretical chi-square distribution to produce an estimate of how likely (or unlikely) this calculated value is, if the two variables are in fact independent. This probability is also known as the observed significance level of the test. If the probability is small (usually less than 0.05), the hypothesis that the two variables are independent is rejected.

In the trend analysis, the two surveys are the columns and the response categories represent the rows. A statistically significant difference means that the row proportions (attitude and behavioral responses) are not independent of the columns (survey year). Hence, there is a "real" difference in sample estimates between surveys. It should be noted that chi square is a test of independence. It provides little information about the strength or form of the association between the variables.

TABLE A-7

Pooled Sampling Error Expressed as Percentages For Given Sample Sizes (Assuming P = Q)

Sample Size											
2,000	10.0	7.2	6.1	5.4	4.9	4.6	4.3	4.1	4.0	3.8	3.1
1,000	10.3	7.6	6.5	5.8	5.4	5.1	4.9	4.7	4.5	4.4	
900	10.3	7.6	6.6	5.9	5.5	5.2	5.0	4.8	4.7		
800	10.4	7.7	6.7	6.0	5.6	5.3	5.1	5.0			
700	10.5	7.8	6.8	6.1	5.8	5.4	5.2				
600	10.6	8.0	7.0	6.3	5.9	5.7					
500	10.7	8.2	7.2	6.6	6.2						
400	11.0	8.5	7.5	6.9							
300	11.3	9.0	8.1								
200	12.0	9.8									
100	13.9										

Sample Size	100	200	300	400	500	600	700	800	900	1000	2000

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APPENDIX B

KEY PROVISIONS OF SAFETY BELT USE LAWS

STATE	ENFORCEMENT	SEATS
Alabama	Secondary	Front
Alaska	Secondary	All
Arizona	Secondary	Front
Arkansas	Secondary	Front
California	Primary	All
Colorado	Secondary	Front
Connecticut	Primary	Front
Delaware	Secondary	Front
District of Columbia	Secondary	Front
Florida	Secondary	Front
Georgia	Secondary	Front
Hawaii	Primary	Front
Idaho	Secondary	Front
Illinois	Secondary	Front
Indiana	Secondary	Front
Iowa	Primary	Front
Kansas	Secondary	Front
Kentucky	Secondary	All
Louisiana	Secondary	Front
Maryland	Secondary	Front
Massachusetts	Secondary	All
Michigan	Secondary	Front
Minnesota	Secondary	Front
Mississippi	Secondary	Front
Missouri	Secondary	Front
Montana	Secondary	All
Nebraska	Secondary	Front
Nevada	Secondary	All
New Jersey	Secondary	Front
New Mexico	Primary	Front
New York	Primary	Front
North Carolina	Primary	Front
North Dakota	Secondary	Front
Ohio	Secondary	Front
Oklahoma	Secondary	Front
Oregon	Primary	All
Pennsylvania	Secondary	Front
Puerto Rico	Primary	Front
Rhode Island	Secondary	All
South Carolina	Secondary	Front
South Dakota*	Secondary	Front
Tennessee	Secondary	Front
Texas	Primary	Front
Utah	Secondary	Front
Vermont	Secondary	All
Virgin Islands	Primary	Front
Virginia	Secondary	Front
Washington	Secondary	All
West Virginia	Secondary	Front
Wisconsin	Secondary	All
Wyoming	Secondary	Front

* Effective January 1, 1995
** Maine and New Hampshire do not have safety belt laws.

APPENDIX C

STATUS OF STATE MOTORCYCLE HELMET USE REQUIREMENTS (March 1994)

25 STATES, DC AND PR REQUIRE USE FOR ALL RIDERS	22 STATES REQUIRE USE FOR A SPECIFIC SEGMENT OF RIDERS (USUALLY UNDER 18)
Alabama	Alaska
Arkansas	Arizona
California	Connecticut
District of Columbia	Delaware (2)
Florida	Hawaii
Georgia	Idaho
Kentucky	Indiana
Louisiana	Kansas
Maryland	Maine (4)
Massachusetts	Minnesota
Michigan	Montana
Mississippi	New Hampshire
Missouri	New Mexico
Nebraska	North Dakota
Nevada	Oklahoma
New Jersey	Ohio (3)
New York	Rhode Island (1)
North Carolina	South Carolina
Oregon	South Dakota
Pennsylvania	Utah
Puerto Rico	Wisconsin
Tennessee	Wyoming
Texas	**NOT REQUIRED IN 3 STATES**
Vermont	
Virginia	Colorado
Washington	Illinois
West Virginia	Iowa

1. Riders under 21 and first year operators must wear helmets.
2. Riders under 19 must wear helmets and helmets must be in the possession of passengers, even though use is not required.
3. Riders under 18 and first year novices are required to wear helmets.
4. Required only under 15 years of age, first year novices, and holders of learners permits.