Observed Pre-Law Safety Belt Use by Adult Front Seat Occupants in Twelve Texas Cities

by

Nancy J. Hatfield Wanda M. Hinshaw Nancy G. Bunch Ronald Bremer

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EXECUTIVE SUMMARY

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Texas Transportation Institute (TTI) was brought under contract by the Texas State Department of Highways and Public Transportation (SDHPT) in 1984 to conduct an observational survey of occupant restraint use in 12 Texas cities. This survey was to be conducted in conjunction with an ongoing survey of child safety seat use that began the previous year. At the time this contract was negotiated, occupant restraint legislation was not pending in Texas. However, it was agreed that collecting baseline data on occupant restraint use would prove beneficial for supporting and evaluating subsequent legislative measures.

Study Methodology

The observed safety belt usage rates discussed in this report should not be interpreted as representative estimates for either the study cities or for the State of Texas. This survey was designed to collect data at a number of locations that could be replicated at future points in time. These repeated measurements allow an assessment of changes in observed restraint use over time, but are not necessarily representative estimates of actual safety belt wearing rates.

Cities included in the survey are listed below:

Amarillo	Corpus Christi	Lubbock
Austin	Dallas	San Antonio
Brownsville	El Paso	Tyler
Bryan/College Station	Houston	Waco

This sample of cities covers the major population centers in the east, central, and Gulf Coast regions of the state, as well as the less populated areas of West Texas, the Panhandle, and the Rio Grande Valley.

Because the survey is intended to assess changes in safety belt use over time, an attempt was made to control for as many external variables as possible. Specifically, all observation sites were located in urban areas, at street intersections controlled by either stop signs or stop lights, and on roadways with traffic volume sufficient to allow for adequate sample sizes. In addition, all observations were recorded during daylight hours and on weekdays, with an attempt made to collect a comparable number of observations during rush hour and non-rush hour periods.

Observations were limited to drivers and adult front seat passengers, with restraint use determined by the use of a shoulder harness. Eligible vehicles included passenger cars and pick-up trucks registered in the State of Texas.

Results for the Combined Sample

In the combined 12-city sample, approximately 15 percent of the drivers and 10 percent of the adult front seat passengers were observed to be restrained. Driver restraint use was seen to vary by both age and sex of the driver, with females wearing safety belts more often than their male counterparts (17 percent vs. 14 percent, respectively). When driver restraint use was broken down by age of the driver, older drivers (over 60 years of age) were found to buckle up proportionately more often than younger drivers, particularly those drivers under 20 years of age.

Cross-classification of the data by age and sex revealed that the difference between the sexes was most striking for the youngest drivers, where the females were restrained twice as often as the males in that age group (15-19 years old).





Passenger restraint use was also observed to vary by the passenger's sex and age. As with drivers, a greater percentage of females than males used their safety belts (11 percent vs. 8 percent, respectively). However, among passengers, the oldest age group evidenced the highest wearing rate, followed by those in the youngest age category.

For both drivers and passengers, restraint use was found to be higher for occupants of passenger cars than for pick-up trucks, although the differences observed were quite small.

Perhaps the most noteworthy finding of the analysis was the strong association between the driver and passenger restraint use--often referred to as the audience effect. In this combined data set, if the driver was not restrained, it was extremely unlikely that the passenger was restrained (less than 2 percent of the time). Similarly, if the driver was restrained, the passenger was also restrained approximately 75 percent of the time. These data suggest that two adults are very likely to behave in the same manner in terms of restraint use. However, unaccompanied drivers were found to be restrained more often than drivers accompanied by another adult, regardless of whether or not that passenger was wearing a safety belt.

Results by Study City

As shown in Figure 1, the percentage of safety belt use varied greatly by city. Brownsville had the lowest observed proportions of restraint use, with only 3 percent of the drivers and 3 percent of the adult front seat passengers wearing safety belts. On the other hand, Austin had the highest percentages of belt use, with 28 percent of the drivers, and 18 percent of the passengers riding restrained.

In all cities, the percentage of drivers restrained was equal to or greater than the observed percentage of passengers restrained. It should be noted, however, that there was tremendous variation across sites within each city.

Future Study Plans

Since the end of the first data collection period, Texas has adopted a mandatory safety belt use law that went into effect with penalties on December 1, 1985. TTI will again be observing safety belt use in the study cities in 1986 to determine if wearing rates have increased, as expected. These 1986 data will be collected following the same procedures used in the 1985 survey.

The complete report, from which this Executive Summary is taken, is cited below:

Hatfield, N.J., Hinshaw, W.M., Bunch, N.G., and Bremer, R., <u>Observed</u> <u>Pre-Law Safety Belt Use by Adult Front Seat Occupants in Twelve</u> <u>Texas Cities</u>, Texas Transportation Intitute, Texas A&M University System, December 1985.

Request for a copy of the final report should be sent to:

Nancy J. Hatfield Traffic Accident Research and Evaluation Texas Transportation Institute Texas A&M University System College Station, Texas 77843