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National Highway
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Research Note

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National Occupant Protection Use Survey: Shopping Center Study

As part of the 1994 National Occupant Protection Use Survey (NOPUS), a study was conducted at shopping centers to collect information on rear-seat belt use, shoulder belt misuse, and lap belt use. Unlike the other NOPUS studies, the ***moving traffic*** and ***controlled intersection*** studies, the shopping center data were not collected at statistically selected sites due to the difficulty of obtaining these data. Although the results from the shopping center study cannot be weighted to be representative of belt use in the country, they do provide valuable data for issues where little or no information is currently available. This note presents the results from the shopping center study. The results from the other two studies were released in research notes earlier this year.

Data Collection Methodology

Data collection for the shopping center study was conducted for one hour at each of 140 shopping centers. For each of the 50 geographic sites used for the NOPUS moving traffic study, two or three shopping centers were chosen that had separate entrance and exit lanes, preferably with curbs. Pairs of observers recorded shoulder belt use, shoulder belt misuse, and lap belt use for the driver, right front-seat passenger and rear-seat outboard passengers for automobiles only. The vehicle's make, model, and license plate number were also recorded. Data were collected from 10 a.m. to 6 p.m. on weekdays and weekends. Misuse was defined as under the arm, behind the back, or having the belt too loose, i.e., having at least a fist width of slack in the belt.

Results

Safety belt use was observed for 5,500 drivers, 2,000 front-seat passengers, and 700 rear-seat passengers of passenger cars. Even though the shopping center results are unweighted, they compare closely to the statistically weighted results from the other NOPUS studies. Shoulder belt use for passenger car drivers was estimated to be 63 percent from the controlled intersection study compared to 60 percent (shoulder belt use only or lap and shoulder belt use) from the shopping center study. However, these numbers may be even closer since some drivers with loose shoulder belts were probably counted as using their shoulder belts in the controlled intersection study, but misusing their shoulder belts (4 percent) in the shopping center study. The right-front passenger shoulder belt use from the controlled intersection study was 61 percent compared to 60 percent shoulder belt use from the shopping center study. Again, the shopping center shoulder belt number could actually be higher than the controlled intersection number if the passengers with loose shoulder belts, also 4 percent, are included.

While 56 percent of front-seat passengers were observed wearing safety belts (shoulder belt only, shoulder and lap belt, or lap belt only), only 38 percent of rear-seat outboard passengers were observed wearing safety belts. Note that if a child was in a child

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safety seat in the rear seat (or front seat), the child was counted as belted. If a child was not in a safety seat, then the child was counted like everyone else as belted, misusing, or unbelted.
Shoulder belt misuse was 8 percent for drivers and front-seat passengers and 10 percent for rear-seat passengers.

The most common misuse for front and back-seat occupants was having the shoulder belt too loose.

1994 NOPUS: Shopping Center Results

	Drivers*	Front-Seat Passengers	Rear-Seat Passengers
Use:	*61%*	*56%*	*38%*
Both Lap and Shoulder	58%	55%	32%
Shoulder Belt Only	2%	1%	**
Lap Belt Only	1%	0%	6%
Shoulder Belt Misuse:	*8%*	*8%*	*10%*
Under Arm	1%	1%	2%
Behind Back	3%	3%	4%
Too Loose	4%	4%	4%
Neither Using Nor Misusing	*32%*	*36%*	*52%*

***Percents may not add to 100 percent due to rounding.**
****Not applicable.**

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