

Traffic Safety Facts

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Nighttime Seat Belt Use is Lower Than Daytime in New Mexico

In June 2005, Preusser Research Group, under contract from the National Highway Traffic Safety Administration, conducted a nighttime seat belt use survey in New Mexico. Previous studies found lower nighttime seat belt use rates in Connecticut, New York and Pennsylvania. This study sought to confirm those findings, using military-grade night-vision technology to collect nighttime belt use data, measuring day and night belt use in both densely and sparsely populated locations throughout New Mexico.

Method

Each June, the New Mexico Department of Health typically conducts a statewide survey of seat belt use based on a random proportional selection of observational survey sites on roadways that represent the State's population demographics and roadway travel. The present nighttime study used the New Mexico Statewide Survey of Safety Belt Use as a template. During the first two weeks of June 2005, observations were made at 108 sites, once during the day between 7 a.m.-7 p.m., and again at night between 9 p.m. and 3:59 a.m. (similar time periods in studies conducted in Connecticut, New York, and Pennsylvania). This study was conducted, immediately following the May – June 2005 *Click It or Ticket* high-visibility enforcement program. There were 9,707 observed occupants during the day and 5,791 occupants observed during the night.

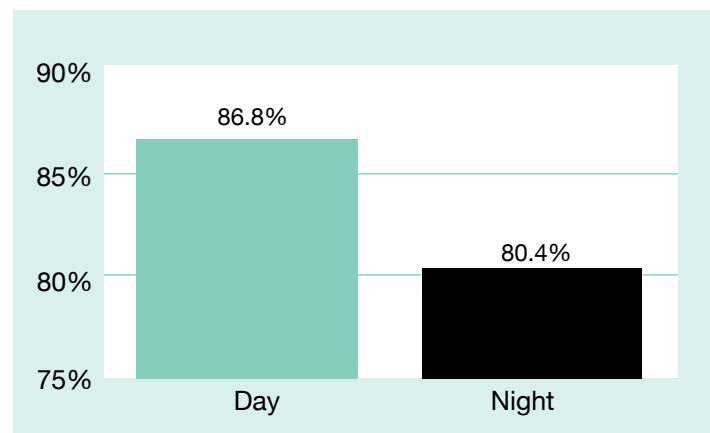
Daytime observations were made for 20 minutes at each location. Paired observers, one to observe and another to record, collected data. Survey teams observed and recorded information regarding occupant type (driver or passenger), vehicle type (passenger car, pickup truck, sport utility or van), sex (male or female) and Seat Belt usage (wearing or not wearing). Day of week and hour of day also were recorded, as was roadway type (Interstate, U.S./State highway or local road). Roadways were sub-classified as located inside or outside city limits. Only front-seat outboard passengers were observed.

Survey teams made nighttime observations at the same locations as the daytime observations and usually on the same day. However, the nighttime observation periods lasted 45 minutes in order to sample a sufficient number of vehicles given the lower traffic volume at night. In addition, nighttime observers used night vision technology. AutoGated brand night vision goggles (XR5 image-enhancing tube) were used in tandem with an infrared spotlight to provide adequate illumination of the vehicle occupants without affecting the occupants of the vehicle (infrared light is not visible to the naked human eye but is visible to the goggles).

Results

When belt use observations across all 108 sites were combined, daytime belt use (86.6%) was greater than nighttime belt use (80.4%), a statistically significant difference of 6.2 percentage points.

Daytime versus Nighttime Belt Use (2005)



Occupant

For drivers, the rate of belted drivers was less at night (80.7%) than during the day (86.9%). The effect was similar for passengers – the rate of belted passengers was lower at night than during the day (Night: 81.1%; Day: 86.0%).

Sex

Both men and women wore their seat belts less at night than during the day. At night, men used their belts 78.2 percent of the time, and 85.1 percent during the day. At night, women used their seat belts 86.3 percent of the time compared to 89.9 percent during the day.

Vehicle

Seat belt use was lower during at night than during the day across all vehicle types: passenger cars (Night: 80.9%; Day: 90.4%), pickup trucks (Night: 77.7%; Day: 83.8%), sport utility vehicles (Night: 85.3%; Day: 87.9%), and vans (Night: 87.9%; Day: 88.2%). Observed nighttime belt use rates were also particularly low in pickup trucks and high in SUVs and vans.

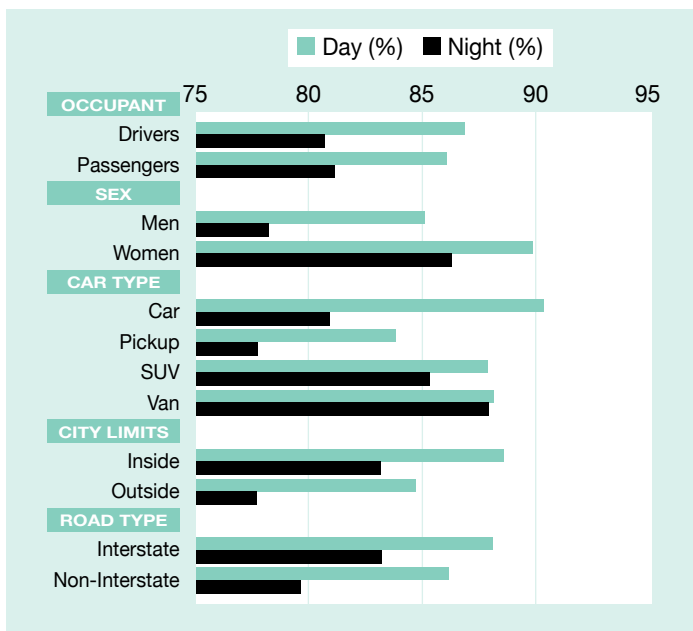
Roadway Characteristics

Outside city limits/rural locations, seat belt use was lower at night than during the day (Night: 77.6%; Day: 84.7%). Inside city limits, seat belt use was also lower at night (Night: 83.1%; Day: 88.6%).

Road Type

Regardless of road type, belt usage was lower at night than during the day. Belt use on interstates was 83.2 percent at night and 88.1 percent during the day. Belt use on non-interstates was 79.6 percent at night and 86.2 percent during the day. Seat belt use characteristics of those observed in New Mexico by day and night are summarized in the table.

Percentage Belt Usage at Day and Night (2005)



† For some observations, Sex and/or Vehicle type were not determined

Discussion

The results of the observational surveys presented here suggest that belt usage is lower at night than during the day. These results are similar to those reported by Chaudhary et al. (2005). Day/night belt use differences were consistent for men and women, for drivers and passengers, across road types, and for urban (inside city limits) and rural areas. The results of this study also suggest that the day/night belt use difference exists across vehicle types.

The seat belt use figures reported here cannot necessarily be considered descriptive of the entire State of New Mexico. There was no weighting of the site-by-site results, necessary to make the data representative of the whole State. However, there is similarity of the current findings to a representative daytime and nighttime seat belt use study conducted in Connecticut, suggesting that the current findings, while descriptive, may mirror what is taking place in the the entire State.

How to Order

For a copy of Daytime and Nighttime , write to the Office of Behavioral Safety Research, NHTSA, NTI-130, 400 Seventh Street SW., Washington, DC 20590, send a fax to 202-366-7096, or download from www.nhtsa.dot.gov. John Siegler, Ph.D. was the Project Manager.



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