

Traffic Safety Facts

Research Note



DOT HS 810 896

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Seat Belt Use in 2007 – Race and Ethnicity Results Among Occupants Traveling With Children

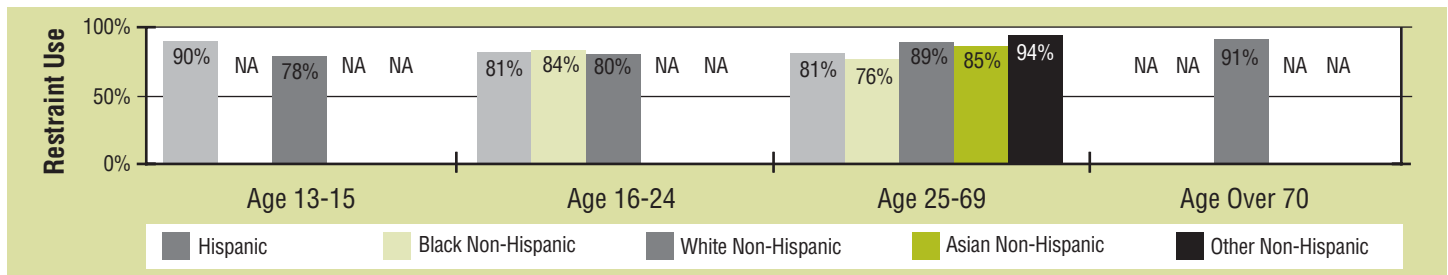
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Seat belt use was statistically significantly lower for non-Hispanic African Americans than other race and ethnicity groups among passenger vehicle occupants age 25 to 69 traveling with children in 2007. This result is from the National Survey of the Use of Booster Seats (NSUBS), the only probability-based nationwide survey that observes seat belt use and collects race and ethnicity. The NSUBS is conducted by the National Center for Statistics and Analysis of the National Highway Traffic Safety Administration.

Please note that by design and necessity, the NSUBS survey only collects restraint use of vehicle occupants who are transporting or riding with children under age 13 to a restricted set of site types such as gas stations, day care centers, recreation centers, and restaurants in five fast-food chains, not of all vehicle occupants on the road. See the section “What Do the Survey Results Tell Us? Are the Results Representative?” below for more information.

The 2007 NSUBS also found that seat belt use was lower for Hispanics than non-Hispanics among passenger vehicle occupants age 25 to 69 traveling with children.

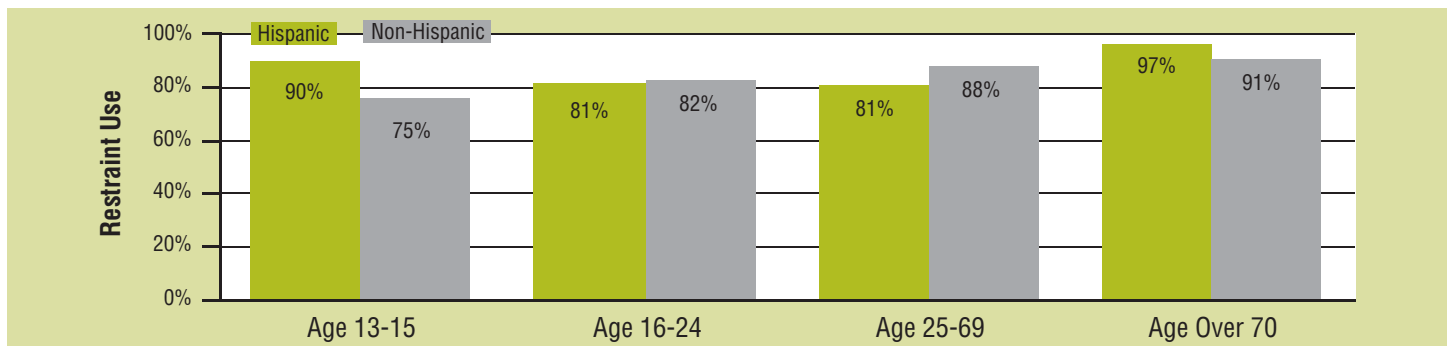
Seat Belt Use by Age and Race/Ethnicity for Occupants Traveling With Children in 2007



NA: Data not sufficient to produce a reliable estimate

Source: National Survey of the Use of Booster Seats, NHTSA's National Center for Statistics and Analysis, 2007

Seat Belt Use by Age and Hispanic Origin for Occupants Traveling With Children in 2007



Source: National Survey of the Use of Booster Seats, NHTSA's National Center for Statistics and Analysis, 2007

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Seat Belt Use of Occupants Traveling With Children by Age and Race/Ethnicity

Subgroup of Occupants ¹	2006			2007			2006-2007 Change	
	Estimated Restraint Use ²	Standard Error	Confidence That Use Is High or Low in Group ³	Estimated Restraint Use ²	Standard Error	Confidence That Use Is High or Low in Group ³	Change in Percentage Points	Confidence in a Change in Use ⁴
Occupants Age 13-15								
Occupants Who Are Reported to Be ¹								
White Non-Hispanic	86%	5%	86%	78%	3%	79%	-8	96%
Black or African-American Non-Hispanic	NA	NA	NA	NA	NA	NA	NA	NA
Asian Non-Hispanic	NA	NA	NA	NA	NA	NA	NA	NA
Other Non-Hispanic	NA	NA	NA	NA	NA	NA	NA	NA
Hispanic or Latino	55%	49%	84%	90%	7%	98%	36	78%
Occupants Reported to Be ⁴								
Hispanic or Latino	55%	49%	84%	90%	7%	98%	35	78%
Neither Hispanic nor Latino	83%	6%	84%	75%	4%	98%	-8	94%
Occupants Age 16-24								
Occupants Who Are Reported to Be ¹								
White Non-Hispanic	82%	5%	68%	80%	5%	67%	-2	30%
Black or African-American Non-Hispanic	87%	14%	51%	84%	8%	62%	-3	21%
Asian Non-Hispanic	NA	NA	NA	NA	NA	NA	NA	NA
Other Non-Hispanic	NA	NA	NA	NA	NA	NA	NA	NA
Hispanic or Latino	91%	44%	61%	81%	5%	52%	-9	28%
Occupants Reported to Be ⁴								
Hispanic or Latino	91%	44%	61%	81%	5%	52%	-10	28%
Neither Hispanic nor Latino	83%	5%	61%	82%	4%	52%	-1	25%
Occupants Age 25-69								
Occupants Who Are Reported to Be ¹								
White Non-Hispanic	87%	3%	73%	89%	2%	100%	2	70%
Black or African-American Non-Hispanic	78%	6%	100%	76%	5%	99%	-2	29%
Asian Non-Hispanic	79%	6%	99%	85%	8%	60%	6	44%
Other Non-Hispanic	91%	10%	71%	94%	4%	100%	3	33%
Hispanic or Latino	95%	8%	98%	81%	2%	97%	-14	99%
Occupants Reported to Be ⁴								
Hispanic or Latino	95%	8%	98%	81%	2%	97%	-14	99%
Neither Hispanic nor Latino	86%	2%	98%	88%	3%	97%	2	58%
Occupants Over 70								
Occupants Who Are Reported to Be ¹								
White Non-Hispanic	93%	11%	58%	91%	4%	61%	-2	18%
Black or African-American Non-Hispanic	NA	NA	NA	NA	NA	NA	NA	NA
Asian Non-Hispanic	NA	NA	NA	NA	NA	NA	NA	NA
Other Non-Hispanic	NA	NA	NA	NA	NA	NA	NA	NA
Hispanic or Latino	NA	NA	NA	NA	NA	NA	NA	NA
Occupants Reported to Be ⁴								
Hispanic or Latino	NA	NA	NA	NA	NA	NA	NA	NA
Neither Hispanic nor Latino	92%	10%	84%	91%	4%	87%	-1	16%

¹ Survey data was obtained on drivers and passengers of passenger vehicles appearing to contain a child under 13 years old at a nationwide probability sample of gas stations, day care centers, recreation centers, and restaurants in five fast-food chains.

² Restraint use (or seat belt use, since only one case of booster seat use for occupants age 13 and older was observed in 2007 and none was observed in 2006) is observed by trained data collectors prior to or just as the vehicle comes to a stop, except in the case of observation at fast-food drive-through lanes, where restraint use is observed prior to the vehicle reaching the drive-through window.

³ The level of statistical confidence that use in the occupant group (e.g., occupants who are Hispanic or Latino) is higher or lower than use in the corresponding complementary occupant group (e.g., occupants who are neither Hispanic nor Latino). Confidence levels that meet or exceed 90 percent are formatted in boldface type. Confidence levels are rounded to the nearest percentage point, and so levels reported as "100 percent" confidence are between 99.5 percent and 100.0 percent.

⁴ The degree of statistical confidence that the 2007 use rate is different from the 2006 rate. Confidence levels that meet or exceed 90 percent are formatted in boldface type.

Note: Some estimates have large standard errors, e.g., belt use among Hispanic 25- to 69-year-olds was 8 percent in 2006, which means that the margin of error for this estimate was +/- 16 percentage points, and thus the estimate could be as low as 79 percent.

NA: Data not sufficient to produce a reliable estimate.

Source: The National Survey of the Use of Booster Seats, NHTSA, National Center for Statistics and Analysis

Survey Methodology

The National Survey of the Use of Booster Seats obtains its data by sending trained data collectors to a probability sample of gas stations, day care centers, recreation centers, and restaurants in five national fast-food chains across the United States. The choice of these types of data collection sites stems from the necessity of observing restraint use from a close range in a slow-moving or stopped vehicle, the ability to conduct interviews, the survey's primary purpose of estimating booster seat use, and the desire to capture large numbers of children.

Data collectors approach passenger vehicles appearing to have child occupants under the age of 13, observe the restraint use of up to nine occupants in the first three rows of seats and conduct interviews to obtain the race and ethnicity of all occupants (obtained in compliance with OMB standards for such data) and the heights, weights, and ages of child occupants appearing to be under age 13. (The approximate ages of other occupants (expressed as an age range, such as 16-24 years), and the genders of all occupants, are subjectively assessed by the data collectors.)

In order to capture restraint usage before children unfasten the restraints, restraint use is observed by the data collectors prior to or just as the vehicle comes to a stop, except in the case of observation at fast-food drive-through lanes, where restraint use is observed prior to the vehicle reaching the drive-through window.

In order to reach as wide an audience as possible, the NSUBS uses some Spanish-speaking data collectors.

This (2007) is the second year for the NSUBS survey. The 2007 survey data is based on the observation of 14,000 occupants, 7,500 of whom were under age 13, in 4,800 vehicles at 38 day care centers, 134 fast-food restaurants, 218 gas stations, and 40 recreation centers nationwide. The survey observed 306 occupants age 13-15, 611 occupants age 16-24, 5,632 occupants age 25-69, and 89 occupants age 70 and above. The data was collected between July 19 and August 2, 2007, while the 2006 data was collected between July 17 and July 29, 2006.

Sites, Vehicles, and Occupants in NSUBS

Numbers of	2006	2007	Percentage Change
Data Collection Sites	390	430	9%
Vehicles Observed	3,500	4,800	38%
Occupants Age 13 and Older Observed	4,620	6,640	44%

The 2007 survey yielded nearly a 50-percent increase in the number of occupants observed. This could be due in part to dropping certain questions from the occupant interviews, shortening the interview time per vehicle from about 5

minutes in 2006 to about 2 minutes in 2007, thus allowing for the collection of data on more vehicles per site. The increase in observations in 2007 could also be due to the addition of some sites to the survey and increased site participation rates.

The NSUBS uses a complex multistage probability sample, statistical data editing, imputation of unknown values, and complex estimation and variance estimation procedures. See the NHTSA Technical Report referenced below for more information on these procedures, as well as for more information on the survey's data collection protocols.

Please note that some estimates have large standard errors, e.g., belt use among Hispanic 25- to 69-year-olds was 8 percent in 2006, which means that the margin of error for this estimate was +/- 16 percentage points, and thus the estimate could be as low as 79 percent.

The design of the survey, survey preparation activities, data collection, estimation, and variance estimation for the NSUBS were conducted by Westat, Inc., under the direction of the National Center for Statistics and Analysis in NHTSA under Federal contract number DTNH22-07-D-00057. The OMB clearance number for the NSUBS is 2127-0644.

What Do the Survey Results Tell Us? Are the Results Representative?

By design and necessity, the NSUBS survey data is obtained from a restricted set of site types, namely gas stations, day care centers, recreation centers, and restaurants in five fast-food chains and restricts its observed vehicles to those appearing to contain a child under age 13. However the survey uses a probability sample of these site types, and so its results are representative of people who frequent these types of sites and travel with children.

For instance, the survey result of 81 percent restraint use among Hispanic or Latino occupants age 25 to 69 means that among occupants in this category who were riding with children in passenger vehicles to gas stations, day care centers, recreation centers, or fast-food restaurants in 2007, 81 percent were in seat belts. Whether or not the seat belt use rate for occupants of this age group and ethnicity who do not frequent these site types or do not travel with children is higher or lower is an open question, and not one that the NSUBS (or any other available survey) can answer.

Definitions

The NSUBS supports NHTSA's multicultural initiative by providing critical data on restraint use by race/ethnicity. Race/ethnicity data in the NSUBS is collected in accordance with Federal standards set forth by the Office of Management and Budget (OMB). Specifically, the following 10 race/ethnicity categories are employed in the survey data collection:

Not Hispanic or Latino and

- American Indian or Alaska Native
- Asian
- Black or African-American
- Native Hawaiian or Pacific Islander
- White

Hispanic or Latino and

- American Indian or Alaska Native
- Asian
- Black or African-American
- Native Hawaiian or Pacific Islander
- White

The NSUBS data collectors ask the adult occupants of vehicles to report the race and ethnicity of all occupants. Respondents reporting themselves (or others) to be multiracial are recorded by the data collector as such.

Because of insufficient numbers of occupants observed in certain race/ethnic groups, we report the NSUBS data using the following five collapsed race/ethnicity groups:

- Hispanic or Latino
- White Non-Hispanic
- Black or African-American Non-Hispanic
- Asian Non-Hispanic
- Other Non-Hispanic (which comprises people not of Hispanic origin who are American Indian, Alaska Native, Native Hawaiian or Pacific Islander)

In the survey, an occupant considered to be restrained in a seat belt if the occupant is sitting on the vehicle seat and the seat belt is across front of the body (includes lap belts).

For More Information

The NSUBS provides a rich data source for information on the restraint use of child and adult occupants. In particular, the NSUBS provides the agency's estimate of booster seat use among 4- to 7-year-olds and provides data on the premature graduation of children age 12 and younger to restraint types that are inappropriate for their height or weight. This publication is part of a series that presents overall results from the survey on these topics. Please see the companion publications "Booster Seat Use in 2007" and "Child Restraint Use in 2007—Use of Correct Restraint Types" for the latest data on these topics. Detailed information on the NSUBS survey design and analysis procedures are provided in the NHTSA Technical Report "The 2007 National Survey of the Use of Booster Seats—Methodology Report." These publications will be available at the Web site <http://www-nrd.nhtsa.dot.gov/CMSWeb/ViewCatalogbyCategory.aspx> in 2007 or 2008.

Additional results related to demography and child restraints are provided by NHTSA's National Occupant Protection Use Survey, a survey that employs purely observational means (i.e., does not conduct interviews) to measure restraint use on the nation's roadways. Please see the publications "Seat Belt Use in 2006 – Demographic Results" for the latest results on these topics. These are available at the above NHTSA Web page.

For more information on the campaign by NHTSA to increase child restraint use, see www.nhtsa.gov.

For information on the OMB standards for the collection of race and ethnicity data in government surveys, please see "Revisions to the Standards for the Classification of Federal Data on Race and Ethnicity, Federal Register Notice, Volume 62, Number 210, pages 58781-58790, October 30, 1997," available at www.omb.gov.



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