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## Traffic Injury Prevention >

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Original Articles

# Parent Driver Characteristics Associated with Sub-Optimal Restraint of Child Passengers

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# **Abstract**

Objectives. To identify parent driver demographic and socioeconomic characteristics associated with the use of sub-optimal restraints for child passengers under nine years.

Methods. Cross-sectional study using in-depth, validated telephone interviews with parent drivers in a probability sample of 3,818 vehicle crashes involving 5,146 children. Sub-optimal restraint was defined as use of forward-facing child safety seats for infants under one or weighing under 20 lbs, and any seat-belt use for children under 9.

Results. Sub-optimal restraint was more common among children under one and between four and eight years than among children aged one to three years (18%, 65%, and 5%, respectively). For children under nine, independent risk factors for sub-optimal restraint were: non-Hispanic black parent drivers (with non-Hispanic white parents as

reference, adjusted relative risk, adjusted RR = 1.24, 95% CI: 1.09-1.41); less educated parents (with college graduate or above as reference: high school, adjusted RR = 1.27, 95% CI: 1.12-1.44; less than high school graduate, adjusted RR = 1.36, 95% CI: 1.13-1.63); and lower family income (with \$50,000 or more as reference: <\$20,000, adjusted RR = 1.23, 95% CI: 1.07-1.40). Multivariate analysis revealed the following independent risk factors for sub-optimal restraint among four-to-eight-year-olds: older parent age, limited education, black race, and income below \$20,000.

Conclusions. Parents with low educational levels or of non-Hispanic black background may require additional anticipatory guidance regarding child passenger safety. The importance of poverty in predicting sub-optimal restraint underscores the importance of child restraint and booster seat disbursement and education programs, potentially through Medicaid.

### Keywords:

Child Passenger Safety Health Disparity Poverty Child Safety Seats Booster Seats

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# Notes

 $^{1}$ unweighted sample size = 5146.

 $^{2}$ unweighted sample size = 520.

 $^{3}$ unweighted sample size = 1706.

 $^{4}$ unweighted sample size = 2920.

\*P < 0.05;

\*\*P < 0.01;

\*\*\*P < 0.001.

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