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

Flaura K. Winston, Irene G. Chen, Rebecca Smith & Michael R. Elliott

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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

¹unweighted sample size = 5146.

²unweighted sample size = 520.

³unweighted sample size = 1706.

⁴unweighted sample size = 2920.

*P < 0.05;

**P < 0.01;

***P < 0.001.

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