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Traffic Injury Prevention ›

Volume 7, 2006 - Issue 4

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

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Pages 373-380 | Received 30 Dec 2005, Accepted 07 May 2005, Published online: 25 Jan 2007

Cite this article https://doi.org/10.1080/15389580600789143

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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

ACKNOWLEDGMENTS

The authors would like to acknowledge the commitment and financial support of State Farm Mutual Automobile Insurance Company for the creation and ongoing maintenance of the Partners for Child Passenger Safety (PCPS) program, the source of data for this study. In addition, these analyses were conducted as part of US DOT, National Highway Traffic Safety Administration (NHTSA) Contract DTNH22-01-C-05845. The authors also thank the many State Farm policyholders who consented to participate in PCPS. The results presented in this report are the interpretation solely of the author(s) and are not necessarily the views of State Farm. The authors would also like to thank Edith Simpson for her contributions to an earlier version of this work.

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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