



The 2016 Motor Vehicle Occupant Safety Survey: Child Passenger Safety

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Background

Despite improvements in child passenger safety (CPS) over several decades, the number of motor vehicle traffic fatalities among children 13 and younger has not changed substantially from 2010 to 2017. Proper use of child restraint systems (CRSs, including car seats and booster seats) prevents deaths and reduces crash injury severity among children. According to the National Highway Traffic Safety Administration's 2015 National Survey of Use of Booster Seats (Li, Pickerell, and KC, 2016), the percentage of children unrestrained in passenger vehicles increases with age from 2.6 percent for children less than 1 year to 15.6 percent for children 8 to 12 years old. Furthermore, NHTSA's National Child Restraint Use Special Study (Greenwell, 2015) documented 59 percent of car seats used by children 8 and younger were incorrectly secured, which may have decreased their efficacy. To move the needle on child fatalities and improve overall traffic safety, it is important to understand who drives motor vehicles with child passengers, beliefs about passenger safety law enforcement, and issues faced when using CRSs.

Methods

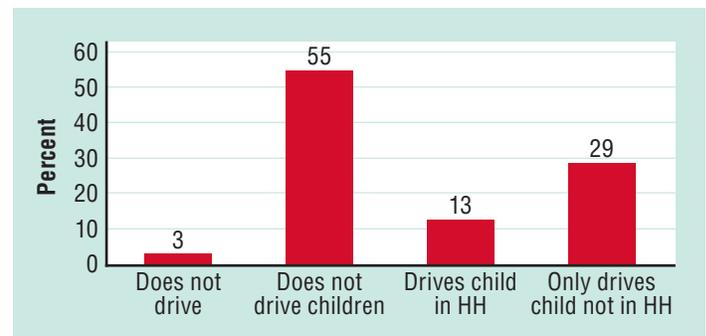
The 2016 Motor Vehicle Occupant Safety Survey (MVOSS), the seventh in a series of periodic national surveys on occupant protection issues, consisted of two questionnaires administered to a nationally representative sample of approximately 12,000 people. One questionnaire included questions about CPS that are reported here. Survey administration began June 14, 2016, and ended February 24, 2017. Respondents 18 or older were recruited using address-based sampling to create a probability-based, nationally representative sample. Respondents received \$1 non-contingent and \$5 contingent incentive for participation and responded using an online or a mailed paper survey. For Version B, MVOSS contacted a random sample of 24,000 households allocated proportionally by population across the

10 NHTSA regions. The final sample included 5,410 completed questionnaires. About half (49%, 2,665) of respondents completed the online version. The data is weighted to yield national estimates.

Results

Who Drives Children. Overall, 42 percent (2,086) of adults have each driven with a child under 13 in the past year. Of those who drove children, 31 percent drove a child in their households, and the remaining 69 percent only drove children who lived outside of their households. The questionnaire asked adults who drove children in

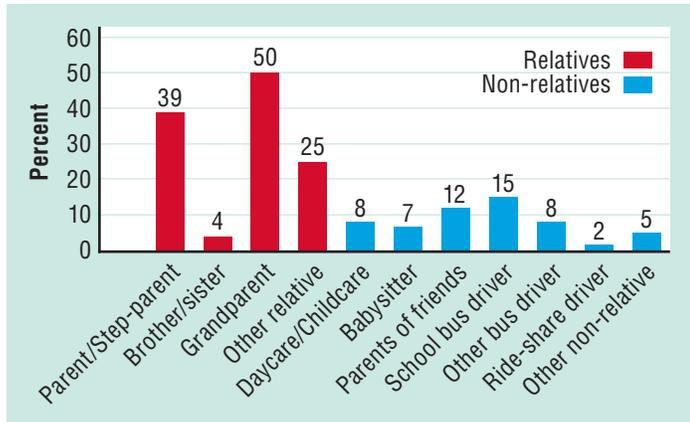
Figure 1. Who Drives Children (n = 5129)



their households or who were related to the children they drove to answer more questions about a single (randomly-selected) child. Adults who reported the children they drove used car seats or booster seats were also asked whether the children were driven by people not living in the households in the past 30 days. Almost half (46%, 352) of these adults indicated the children were driven by someone else. A very small number of these adults (10) reported that the children under 13 were driven by ride-share service drivers (e.g., Uber or Lyft) in the past 30 days.

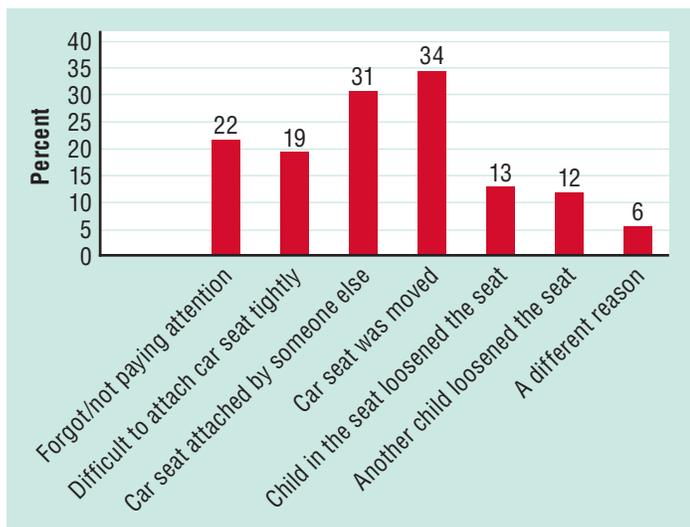
Ease of Use/Correct Use of CRSs. Overall, 21 percent of adults reported finding child car seats insecurely

Figure 2. In the past 30 days, who, other than members of your household, have driven the child? (n = 352)



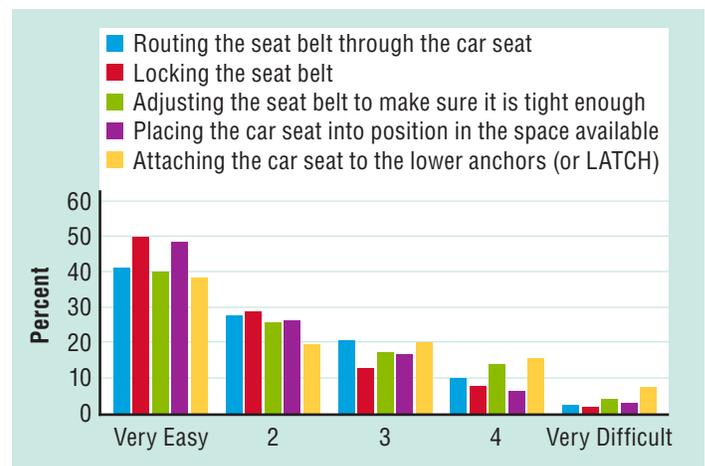
attached, and 16 percent of adults have had children get out of car seats while they were driving. Adults mostly attributed the children’s ability to get out of car seats to having moved the car seats between cars or within the cars, or someone else having attached the car seats incorrectly. But 22 percent indicated they forgot or were not paying attention. Adults who reported transporting children and using CRSs generally indicated that the steps involved in using CRSs were “easy” or “very easy,” and 82 percent of adults felt very confident that they correctly secure car seats (compared to 18 percent somewhat confident and < 1 percent not confident).

Figure 3. Reason(s) for child getting out of car seat (n = 113)



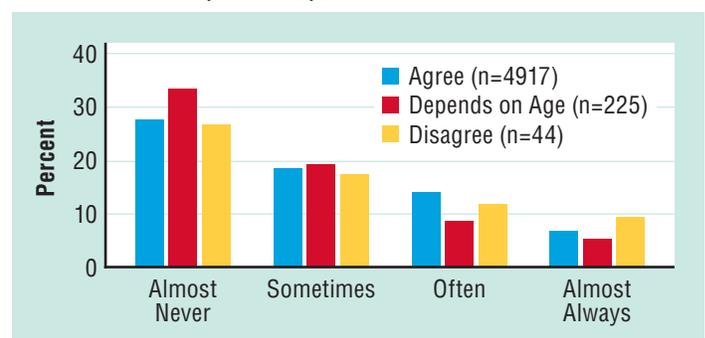
The most frequent “difficult” and “very difficult” responses were given for attaching the car seat to lower anchors or LATCH (total difficult and very difficult, 22%) and adjusting the seat belt to make sure it is tight enough (total 17%).

Figure 4. Ease of use of CRS steps (n = 478)



CPS Law Enforcement. Adults generally believed that children should be required to wear seat belts (94%). Only 5 percent of adults believed requirements to wear seat belts should depend on the child’s age. Thirty-two percent of adults who disagreed that children should be required to wear seat belts believed that police will “almost always” ticket drivers with unrestrained children. Overall, 89 percent (4,890) of adults believed there should be a fine for violating car seat laws. The largest portion of adults indicated the fine should be from \$51 to \$100 (29%, 1,537), and the average fine suggested by respondents was close to \$200 (mean ± standard error = 198.53 ± 4.14).

Figure 5. Perceived frequency a police officer will ticket for an unrestrained child by belief a child should be required to wear a seat belt (n = 5186)



Discussion

The 2016 MVOSS data on CPS indicated that there were many adults who infrequently drove children. The use of CRSs in passenger vehicles with drivers who are not members of the households is a common practice that merits further study. In addition, it is expected that use of ride-share services will increase over time, and questions remain as to how to ensure children are safely transported when using these services.

This data also indicated there was broad support for fines for driving with unrestrained children (89%), but only about one-half of adults (55%) believed police regularly ticket drivers with unrestrained children in their vehicles. There was also a disconnect between confidence in installing CRSs (82% are very confident) and how secure CRSs are. While most adults believed the steps involved in securing car seats were not difficult, about one in five children reportedly got out of their car seats or were insecurely attached in car seats while vehicles were in motion. Caregivers' inattention while securing the car seats, other people securing the car seats, and the need to move the car seats within or between cars are issues to address in efforts to improve CPS.

Conclusion

This survey found that a significant number of children younger than 13 were being driven by adults who did not live in the households, most adults supported fines for driving with unrestrained children, and approximately one in five children were insecurely attached while being driven. Further use of MVOSS can explore statistical relationships among the questionnaire items to better understand CPS and develop programs to improve use of CRSs.

References

- Greenwell, N. K. (2015, May). Results of the national child restraint use special study. (Report No. DOT HS 812 142). Washington, DC: National Highway Traffic Safety Administration
- Li, H. R., Pickrell, T. M., & KC, S. (2016, September). The 2015 National Survey of the Use of Booster Seats (Report No. DOT HS 812 309). Washington, DC: National Highway Traffic Safety Administration

How to Order

Download the reports *2016 Motor Vehicle Occupant Safety Survey, Volumes 1, Methodology Report* (DOT HS 812 851) and *Volume 3, Child Passenger Safety Report* prepared by ICF Macro International, Inc., at the National Transportation Library (<https://ntl.bts.gov/>).

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