



U.S. Department
of Transportation

National Highway
Traffic Safety
Administration

TRAFFIC TECH

Technology Transfer Series



DOT HS 813 533

January 2024

Child Passenger Safety Practices in Ride-Sharing Vehicles

By Dr. Kathy Sifrit, NHTSA Research Psychologist

Background

One of the most effective ways to protect a child in the event of a crash is proper use of a child restraint system (CRS) until the vehicle seat belt fits the child properly. The National Highway Traffic Safety Administration recommends that children 12 and younger be properly restrained in rear seats using restraint systems appropriate to their height and weight. Restraining children in rear seats reduces fatal injury risk by approximately 75% for children up to age 3, and almost 50% for children 4 to 8 years old.¹ Of the 796 child passenger vehicle occupants killed in traffic crashes in 2021 whose vehicle restraint use was known, 40% were unrestrained.² Yet some children continue to travel unrestrained or in CRSs inappropriate to their height and weight.

Proper child restraint use is important not only in family vehicles but in ride-sharing service vehicles like Uber and Lyft. Ride-share use, including by people traveling with children, has increased dramatically over the past few years. However, there has been limited research into how caregivers and drivers use CRSs in these vehicles. Increased use of ride-share vehicles, particularly by parents of young children, gives rise to concerns about how children are being transported in ride-share vehicles. This report provides insight into that concern.

Methods

From July through August 2022 researchers observed children 12 and younger transported in ride-share vehicles in the Mid-Atlantic and Northeastern regions. The team recorded restraint use of ride-share vehicle occupants at places such as museums, zoos, and airports, sites selected for their relatively high number of children visitors and likelihood to attract children in ride-share vehicles. "Age-appropriate use" was coded based on the estimated age of the child and typical CRS for that age.

Results

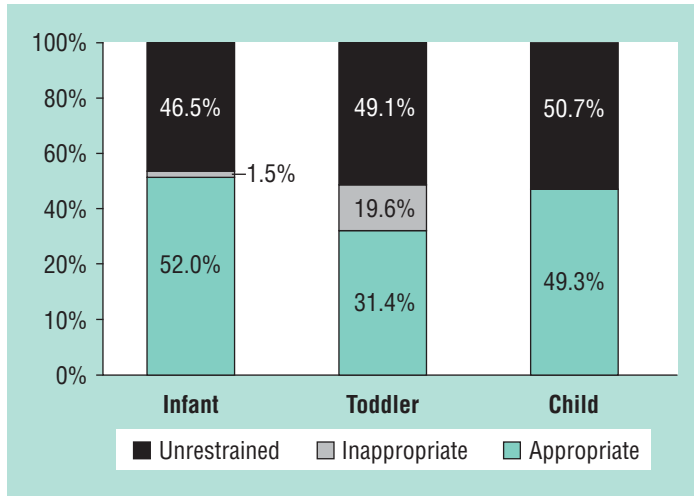
Researchers observed 13,294 occupants in 2,989 vehicles. Of these, 4,379 were children 12 and younger. Among them, 87% were 4 to 12 years old (child), 9% were 1 to 3 years old (toddler), and 4% were under 1 year old (infant). Overall, half of these children were traveling unrestrained, and the rest were either using the vehicle seat belts or some type of CRS. A substantial percentage of infants (46%), toddlers (49%), and children (51%) traveled unrestrained. The percentage of restrained children in this study was considerably lower than the national estimate for children traveling in private vehicles of 89.8% (Boyle, 2023).³ In this study, 8.1% of children were in CRSs and 41% used seat belts. Less than half of the restrained children were using the proper restraint for their height and weight.

¹ Durbin, D. R., Jermakian J. S., Kallan, M. J., McCart, A. T., Arbogast, K. B., Zonfrillo, M. R., & Myers, R. K. (2015). Rear seat safety: Variation in protection by occupant, crash and vehicle characteristics. *Accident Analysis & Prevention*, 80, 185–192. <https://doi.org/10.1016/j.aap.2015.04.006>

² National Center for Statistics and Analysis. (2023, May). *Children: 2021 data* (Traffic Safety Facts. Report No. DOT HS 813 456). National Highway Traffic Safety Administration. <https://crashstats.nhtsa.dot.gov/Api/Public/ViewPublication/813456>

³ Boyle, L. (2023, March). *The 2021 National Survey of the Use of Booster Seats* (Report No. DOT HS 813 396). National Highway Traffic Safety Administration. <https://crashstats.nhtsa.dot.gov/Api/Public/ViewPublication/813396.pdf>

Figure 1. Observed Child Restraint Type by Apparent Age Group



Observers at airports reported a higher rate of restraint use in infants, toddlers, and children as compared to other sites. As other observational studies have reported, restraint use by the driver and other adult vehicle occupants was positively related to child restraint use.

See the full report at

De Leonardis, D., Levi, S., Benedick, A., Eisenhauer, E., Ferg, R., & Petraglia, E. (2024, January). *Child passenger safety perceptions and practices in ride-sharing vehicles* (Report No. DOT HS 813 532). National Highway Traffic Safety Administration.

Suggested APA format citation for this report:

Sifrit, K. J. (2024, January). *Child passenger safety practices in ride-sharing vehicles*. (Traffic Tech. Report No. DOT HS 813 533). National Highway Traffic Safety Administration.