OKLAHOMA STATEWIDE CHILD RESTRAINT SURVEY

2023

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EXECUTIVE SUMMARY

This report compares the use of child restraints (car seats and safety belts) in passenger vehicles in Oklahoma across recent years: 2016, 2017, 2018, 2019, 2021, 2022, and 2023. Visual observations were made at 100 different locations selected based on geography, population, and urban versus non-urban status. Drivers and all child passengers were observed to determine restraint usage. Twenty-five children were observed at each of the 100 sites on one specified date per site, yielding a statewide total of 2,500 observations in each year.

The 2023 Child Restraint Survey was consistent with the Child Passenger Restraint System Act effective November 1, 2015.

Percent Restrained by Year

	2023	2022	2021	2019	2018	2017	2016
Combined Rate	87.8	93.4	91.8	89.3	91.1	91.8	92.0

The results from 2023 showed generally consistent findings in comparison to the previous five surveys. Detailed results of all findings are included in the report, but the findings can be summarized as follows:

- Overall, 87.8% of children were restrained during the 2023 survey. This is lower than any other recent year, with previous years ranging from 89.3% to 93.4%.
- Both urban and rural rates decreased from the previous survey. Metro areas had lower (86.0%) usage rates than did the rural areas (90.1%). This is an atypical finding in that urban rates have traditionally been higher than rural ones.
- Differences in regional usage were very small. The usage across the counties ranged from a low of 86.0% to 90.9%.
- In terms of the vehicle type, consistent with previous years, pickup trucks were found to have lower restraint rates (77.8%) than other vehicle types (89.7%). This gap also increased in 2023 versus 2022.
- Examining the child's location in the vehicle yields two separate findings. First, children in the front seat were much less likely (74.3%) than children in the back seat (90.1%) to be restrained. Decreases in both the front and back seats showed declines from 2022. In addition, children who were rear-facing (97.2%) were significantly more likely to be restrained than children who were forward-facing (86.2%).
- The largest difference in child restraint rates was whether the driver was restrained. Children riding with a driver who was restrained had a use rate of 95.9%. Children with unrestrained drivers, however, had a restraint rate of 54.2%. Whether the driver is restrained remains the most reliable predictor of child restraint and this gap increased in 2023 to the highest rate it has been in recent years.

OKLAHOMA CHILD RESTRAINT OBSERVATION STUDY: 2023

INTRODUCTION

This report is the 35th statewide observation study of the use of child restraints in Oklahoma. The study was conducted by the University of Central Oklahoma (UCO), College of Education and Professional Studies (CEPS), Department of Adult Education and Safety Science (AESS), Adult Education program under contract with the Oklahoma Highway Safety Office (OHSO). Observations occurred during summer 2023.

The Institute for Public Affairs developed the survey instrument (Appendix A) using various sources, including but not limited to the National Highway Traffic Safety Administration's (NHTSA) 1983 Guidelines for Conducting a Survey of the Use of Safety Belts and Child Safety Seats, and NHTSA publications: Are You Using It Right? (IP0040), and Child Transportation Safety Tips (IP0835). The observation survey instrument includes:

- The use or non-use of child restraint devices, the type of restraint used based upon the position a child is facing in the vehicle, (forward-facing, rear-facing, seat belt ONLY),
- The location of the child in the vehicle, vehicle type, and the driver's use or non-use of a seat belt.

For continuity purposes, the UCO, CEPS, AESS Adult Education program used the survey instrument (Appendix A) developed by the Institute of Public Affairs at the University of Oklahoma. Some modifications have occurred based upon amendments to the Oklahoma Child Passenger Restraint System Act.

BACKGROUND

In March 1983, the Oklahoma Legislature approved H.B. 1005 which required the use of "a passenger restraint system or a properly secured seat belt for children up to the ages of four or five." The law provided that if a motorist with children was observed to be in violation of the law, a law enforcement officer had the discretion to stop the motorist and give the violator a "verbal warning" on the dangers of non-restraint. The statute granted no enforcement or punitive measures for use by the law enforcement officer.

Amendments to the law in 1987 strengthened the 1983 Child Passenger Restraint System Act by providing penalties and fines for violators who failed to properly protect child passengers in their vehicles. The law was amended again in 2004 (S.B.1224) to increase the age of children from four to six years of age who are required to be transported using a child restraint system. The 2004 amendments also state children at least six years of age but younger than 13 years of age shall be protected by the use of a child restraint system or a seat belt.

The most recent amendments to the law in 2015 brought the Child Passenger Restraint System Act more in line with recommendations of the American Academy of Pediatrics as follows:

- A child under *eight (8)* must be properly secured in a child passenger restraint system. The law previously applied only to children under age six (6).
- *0-2 years:* Must be in a rear-facing car seat until at least two (2) years of age, or until the

child reaches the weight or height limit of the car seat.
- *2-4 years:* Must be in a car seat until at least four (4) years of age.
- *4-8 years:* Must be in a car seat or child booster seat until at least eight (8) years of age unless the child is taller than 4'9".
- *8 years or taller than 4'9":* Must be in a seat belt.

Percent Restrained by Metropolitan and Rural Areas

	2023	2022	2021	2019	2018	2017	2016
Combined Rate	87.8	93.4	91.8	89.3	91.1	91.8	92.0
Metropolitan	86.0	94.2	92.1	89.8	91.9	90.8	92.1
Rural	90.1	92.3	91.5	88.6	90.0	93.8	91.8

Percent Restrained by Region

	2023	2022	2021	2019	2018	2017	2016
Combined Rate	87.8	93.4	91.8	89.3	91.1	91.8	92.0
Oklahoma City	84.2	95.1	92.4	92.2	90.9	91.1	92.0
Oklahoma City Metro	89.5	95.3	93.8	89.8	92.4	86.5	92.0
Tulsa	85.1	94.1	92.3	86.4	90.4	94.1	92.8
Tulsa Metro	90.9	91.4	90.9	87.4	93.7	87.4	86.9
Northeast	90.9	92.2	93.1	90.9	89.8	91.3	86.0
Southwest	89.0	92.3	87.4	88.9	90.3	91.1	94.3
Southeast	86.0	92.4	94.4	82.0	90.8	96.0	98.8
Northwest	89.1	92.6	89.1	96.0	93.7	98.3	94.3

Percent Restrained by Vehicle Type

	2023	2022	2021	2019	2018	2017	2016
Combined Rate	87.8	93.4	91.8	89.3	91.1	91.8	92.0
Car/SUV/Van	89.7	94.2	92.8	90.5	92.4	92.0	92.6
Pickup	77.8	92.3	85.9	80.5	83.2	90.6	87.9

Percent Restrained by the Child's Location

	2023	2022	2021	2019	2018	2017	2016
Combined Rate	87.8	93.4	91.8	89.3	91.1	91.8	92.0
Front Seat	74.3	87.1	79.9	78.2	81.8	85.9	83.3
Back Seat	90.1	94.9	94.0	91.6	93.0	93.0	93.6

Percent Restrained by Direction Child is Facing

	2023	2022	2021	2019	2018	2017	2016
Combined Rate	87.8	93.4	91.8	89.3	91.1	91.8	92.0
Forward-Facing	86.2	92.6	90.9	88.2	89.9	90.7	90.9
Rear-Facing	97.2	100.0	99.6	98.2	99.7	98.9	99.7

Percent Restrained by Driver Belted or Not

	2023	2022	2021	2019	2018	2017	2016
Combined Rate	87.8	93.4	91.8	89.3	91.1	91.8	92.0
Driver Belted	95.9	98.1	97.0	95.3	96.0	96.4	96.5
Driver not Belted	54.2	55.2	59.4	55.2	63.1	65.2	58.8

SUMMARY

The results of the 2023 survey can be summarized as follows:

➢ The statewide rate for observed child restraint use was 87.8%. This result showed a significant decrease from recent years.

➢ Both urban and rural use showed decreases. Metro areas had lower (86.0%) usage rates than did the rural areas (90.1%).

➢ Differences in regional usage were very small. Usage varied between 86.0% and 90.9% in 2023.

➢ Children traveling in automobiles were more likely to be restrained (89.7%) than those riding in pickup trucks (77.8%). This use gap increased compared to recent years where it had been declining.

➢ Examining the child's location in the vehicle yields two separate findings. First, children in the front seat were much less likely (74.3%) than children in the back seat (90.1%) to be restrained. Both front and back seat decreased from 2022. In addition, children who were rear-facing (97.2%) were significantly more likely to be restrained than children who were forward-facing (86.2%).

➢ Like previous surveys, the most striking distinction was in the difference between the safety of children riding in vehicles when the driver was using a seat belt (95.9% restrained) than when the driver was not belted (54.2% restrained) - a 41.7% difference. This gap remains the best predictor of whether the child will be restrained or not.

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Pickrell, Timothy and Tony Jianqiang Ye. 2009. *Child Restraint Use in 2008 – Overall Results.* DOT HS 811 135. Washington, D.C.: National Highway Traffic Safety Administration, National Center for Statistics and Analysis. May.

Oklahoma Child Restraint Observation Form

County: _____

Site # & Location: _____

Observer: _____ **Date:** _____ **Start Time:** _____ **End Time:** _____

If location changed, indicate where you were when you observed. If you moved during the observation period to another location, indicate that below, in addition to identifying the site # to which you relocated.

After 1 hour, I changed location to: _____ within 1 mile of the original site locale.

INFANT OR CHILD DRIVER				
Location of Child 1=Front 2=Back	Child Protection 1=Car Seat 2=Belted 3=No Protection	Child Facing 1=Front 2=Back	Vehicle 1=Car 2=Pickup	Belted 1=Yes 2=No 9=unknown
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				

INFANT OR CHILD DRIVER					
	Location of Child 1=Front 2=Back	Child Protection 1=Car Seat 2=Belted 3=No Protection	Child Facing 1=Front 2=Back	Vehicle 1=Car 2=Pickup	Belted 1=Yes 2=No 9=Unknown
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					

Please add any comments, corrections, or additional observation dates (including start and end times) if applicable:

_____

_____

_____

_____

_____

_____

_____

:

The methodology employed to conduct the child restraint survey was based on several considerations:

- The approach followed should conform to NHTSA recommendations described in the 1983 Guidelines for Conducting a Survey of the Use of Safety Belts and Child Safety Seats.

- Only privately-owned passenger vehicles (including vans and pickups) were observed, consistent with the requirements of the state law.

- All children were counted. The 2015 amendments to the law require all children from birth to age 8 be in an approved "child passenger restraint system" whether in the front or back seat. Given the limitations of observing children in a few seconds at roadway intersections and shopping malls, no distinction was made between the ages of children or whether the restraint was "proper". Thus, if a child was restrained in the front or back seat, it was recorded as a restrained observance. Observers also recorded the type of device being utilized as forward-facing, rear-facing, or seat belt only.

- Drivers would be counted because of their culpability under the law and to permit a comparison to the statewide surveys of automobile safety belt use.

- In part because of procedures established when earlier child restraint surveys were conducted, the actual mode of observation would follow both a training manual prepared by the Institute for Public Affairs under a previous contract with OHSO and NHTSA's Guidelines.

- A modified random selection of sites was used that assured an adequate dispersion of sites geographically and by a metropolitan/non-metropolitan division.

General Site Selection

The total number of observation sites selected was first determined by a division of the state by metropolitan statistical area (MSA) and non-MSA classification. Using Census data for 2000, 60.8% of the state's population resides in an MSA.

One hundred randomly chosen sites with 25 observations per site were selected, yielding a sample size of 2,500. Of these 100 sites, 57 were in MSAs and 43 were in non-MSAs. Assignment for sites within the MSAs was based on the weighing of a particular MSA's population against the total metropolitan population in the state (less the Ft. Smith, Arkansas MSA). Using this criterion, the Oklahoma City MSA was assigned the greatest number of sites (29). Enid, being the smallest MSA, had the fewest sites (2).

The non-MSA remainder of the state was divided into four quadrants using the two principal north-south and east-west arterial highways bisecting the state, Interstate Highway 35 (I-35, north-south) and Interstate Highway 40 (I-40, east-west). Each quadrant was allotted its proportionate number of the 43 remaining sites based on its share of the state's population. Certain unusual site determinations resulted from the procedure outlined above.

The 100 observation sites were chosen as follows:

Oklahoma City and Metro	29
Tulsa and Metro	22
Enid	2
Lawton	4
Non-MSA	43
	100

Specific Site Selection

The sites were chosen in the following manner:

- City maps were used to provide a geographical distribution of sites in each city. Further, U.S. Bureau of the Census population data were used to capture an adequate measure of the socioeconomic and racial mix of each city;

- Tentative locations chosen for both their suitability and accessibility by the general population were designated;

- Field checks by survey teams were then made to ascertain the suitability of each tentative site. Shopping malls, fast food restaurant chains, department store chains, and recreation facilities were selected based on the following characteristics:

  a) accessibility by the general population to the selected site;
  b) accessibility to vehicular traffic;
  c) sufficient traffic volume existing to generate 25 observations of children in cars;
  d) locations represented the regional variations in socioeconomic and racial characteristics;

The observer was advised that upon arrival at a specific observation site a determination should be made as to its suitability following the criteria enumerated above. If the pre-assigned site was not suitable, the observer was permitted to make another selection that would be more satisfactory. In most cases when a change was necessary, a site within one mile of the original site was used.

The following lists the specific communities and exact locations where child restraints were observed:

Site	Location	Area
1	Enid: McDonald's (Maine at Van Buren)	Enid
2	Enid: McDonald's - Oakwood Mall (4125 W Owen K Garriott Rd)	Enid
3	Lawton: Central Mall (2nd at C Streets)	Lawton
4	Lawton: Hobby Lobby (36 NW Sheridan Rd)	Lawton
5	Lawton: Shopping Center Strip Mall (Sheridan at Gore) & McDonald's	Lawton
6	Lawton: Walmart Supercenter (Sheridan at Gore)	Lawton
7	Bartlesville: Braum's (2526 SE Washington Blvd)	NE
8	Bartlesville: Walmart (4000 SE Green Country Rd)	NE
9	Chandler: IBC Bank (3108 E 1st St) (In front of Wal Mart)	NE
10	Claremore: Walmart (1500 Lynn Riggs Blvd.)	NE
11	Claremore: Ne-Mar Center (1015 W. Will Rogers)	NE
12	Coweta: Country Mart (13937 S. Highway 51)	NE
13	Cushing: Walmart Supercenter (3100 E Main St)	NE
14	Drumright: Sonic (810 E. Broadway)	NE
15	Ft. Gibson: Harp's Food Store (1010 E Poplar St)	NE
16	Gore: Harp's Grocery (State Hwy 100 at State Hwy 10)	NE
17	Guthrie: OnCue (I-35 @ Waterloo Road on east side)	NE
18	Muskogee: Braum's (2909 Old Shawnee Road)	NE
19	Muskogee: McDonald's (101 S. 32nd Street)	NE
20	Muskogee: McDonald's (2415 Chandler) Arrowhead Mall	NE
21	Okmulgee: YMCA Swim Center (106 W. 13th St.)	NE
22	Okmulgee: Walmart (Hwy 75 South)	NE
23	Okmulgee: Walmart (1800 S. Wood Dr.)	NE
24	Owasso: Walmart & Kohl's (12405 E. 96th St. N.)	NE
25	Pawhuska: McDonald's (1900 E Main St) & Sonic	NE
26	Ponca City: McDonald's (N. 14th St.)	NE
27	Sallisaw: Walmart (1101 W Ruth Ave)	NE
28	Skiatook: Walmart (778 W. Rogers Blvd.)	NE
29	Stillwater: Chic-Fil-A (600 E. Hall of Fame Ave.)	NE
30	Stillwater: Walmart (Virginia at Perkins Rd.)	NE
31	Stillwater: YMCA (131 West Elm Ave.)	NE
32	Stroud: McDonald's (801 Ada Webb Dr.)	NE
33	Wagoner : Walmart (State Highway 51)	NE
34	El Reno: McDonald's (2424 S Country Club Dr.)	NW
35	Fairview: Fairview Aquatic Center (523 Park Ln)	NW
36	Fairview: Sonic Drive In (1121 N. Main, Fairview, OK	NW
37	Kingfisher: Walmart Supercenter (200 Starlight Dr.)	NW
38	Kingfisher: Vernie Snow Aquatic Center (400 Park Rd)	NW
39	OKC: Science Museum (2100 NE 50th @ MLK Blvd.	OKC
40	OKC: McDonald's (6700 N. May)	OKC
41	OKC: McDonald's (10809 N. May at Hefner Rd.)	OKC

42	OKC: McDonald's (5812 NW Expressway)	OKC
43	OKC: McDonald's (113 NW 23)	OKC
44	OKC: Braums (I-240 at S. May - 7512 South May Ave.)	OKC
45	OKC: OnCue (5920 S. Western)	OKC
46	OKC: Walmart Supercenter (NW 136 & Memorial/Penn)	OKC
47	OKC: Walmart Supercenter (I-44 & Classen - 1801 Belle Isle Blvd)	OKC
48	OKC: Academy Sports (I-240 at SW 74th)	OKC
49	OKC: Walmart Neighborhood Market (2217 NW 23rd St / Penn)	OKC
50	OKC: McDonald's (SW 59th at Penn) & Walmart	OKC
51	OKC: Walmart Neighborhood Market (SW 44th & Western)	OKC
52	OKC: Walmart Supercenter (I-240 at Santa Fe)	OKC
53	OKC: Winnco Foods @ NW 39th & Portland	OKC
54	OKC: Target (7012 NW Expressway & Rockwell)	OKC
55	Bethany: McDonald's (7061 NW 23rd)	OKC Metro
56	Edmond: Braum's/Walmart (15th at I-35)	OKC Metro
57	Edmond: Super Target (1200 E. 2nd St.)	OKC Metro
58	Midwest City: McDonald's (7025 SE 15th)	OKC Metro
59	Midwest City: Walmart Supercenter (9001 NE 23rd)	OKC Metro
60	Moore: Walmart (501 S.E. 19th at I-35)	OKC Metro
61	Moore: McDonald's (6340 N.W. 12th St.)	OKC Metro
62	Mustang: McDonald's (I-40 at Mustang Rd. [4 South Mustang Road])	OKC Metro
63	Noble: McDonald's, 3525 W. Tecumseh Road	OKC Metro
64	Norman: Walmart Supercenter (Main at I-35 - 333 N Interstate Dr.)	OKC Metro
65	Norman: Super Target (Robinson at I-35) 1400 24th Ave NW	OKC Metro
66	Norman: Walmart Supercenter (Main at 601 12th Ave NE)	OKC Metro
67	Yukon: McDonald's (31 W Main)	OKC Metro
68	Holdenville: Walmart (500 E Highway 270)	SE
69	McAlester: Walmart (Hwy 69 @ Comanche)	SE
70	McAlester: McDonald's (1758 E Carl Albert Pkwy)	SE
71	Seminole: Jasmine Moran Children's Museum (1714 OK-9)	SE
72	Seminole: Sonic (525 N. Milt Phillips Rd.)	SE
73	Shawnee: McDonald's (4849 N Kickapoo St)	SE
74	Sulphur: Walmart Supercenter (2705 W. Broadway Ave.)	SE
75	Tecumseh: Sonic (109 E Walnut St) & Fire Lake Grocery	SE
76	Tecumseh: McDonald's (1210 Gordon Cooper Highway)	SE
77	Duncan: Burger King (1501 N US-81)	SW
78	Duncan: Walmart (1845 N. Hwy 81	SW
79	Jenks: McDonald's (605 W Main)	Tulsa
80	Tulsa: McDonald's (4935 S Memorial)	Tulsa
81	Tulsa: Chick-Fil-A (Southroads Mall 4933 E. 41st St)	Tulsa
82	Tulsa: Wendy's (1905 E 21st @ Utica)	Tulsa
83	Tulsa: Walmart (6625 S Memorial Dr)	Tulsa
84	Tulsa: Walmart (81st at Lewis)	Tulsa
85	Tulsa: Quik Trip (41st & Memorial)	Tulsa
86	Tulsa: Quik Trip (12910 E 21st St)	Tulsa

87	Tulsa: Southroads Shopping Center (41st Street at Yale)	Tulsa
88	Tulsa: Quik Trip (1302 S Garnett Rd)	Tulsa
89	Tulsa: Reasor's (15th & Lewis [2429 E. 15th Street])	Tulsa
90	Tulsa: Big Splash Water Park/Centennial Wayne Plaza (21st St @ Yale)	Tulsa
91	Tulsa: Walmart (6310 S. Elm Place)	Tulsa
92	Tulsa: Quick Trip (3304 W 42nd Pl)	Tulsa
93	Tulsa: Super Mercado Morelos, 5147 S. Peoria Ave. @ 51st	Tulsa
94	Bristow: Walmart (Main at SH 16)	Tulsa Metro
95	Broken Arrow: Walmart (2301 W Kenosha)	Tulsa Metro
96	Broken Arrow: McDonald's (3800 S. Elm Place)	Tulsa Metro
97	Broken Arrow: McDonald's (2525 N Aspen)	Tulsa Metro
98	Owasso: Smith Farm Market Place, 9055 N. 121st E. Ave.	Tulsa Metro
99	Sand Springs: Walmart Supercenter (SH 97 @ Marrow Rd.)	Tulsa Metro
100	Sapulpa: Walmart (Hwy 117 & US 66)	Tulsa Metro

Comment on Sampling Procedure

As indicated previously, the procedure followed for selecting locations does not produce a strictly random sample. The design employed for this effort does bear some similarity, however, to a multistage cluster sampling procedure, in which samples are taken of groups of elements (clusters) followed by the selection of elements within each selected cluster. In this case, the initial clusters were MSA/non-MSA. Then a further stratification was employed on the basis of geographical regions of the state. Finally, population size and observation site were incorporated into the final selection process. Strictly speaking, the decision to choose one city or town over another was not completely random; however, the procedure followed in selecting observation locations along with total number of sites and observations collected should, in combination, yield a fairly representative picture of the actual proportion of Oklahoma children covered under the law who may or may not be currently protected by either child safety seats or seat belts. The continued use of the procedure and design employed for the initial survey should permit a reasonably accurate assessment of changes in restraint use over time.

Observer Selection and Training

The observers participated in a classroom seminar session in which the nature of the project was discussed followed by a detailed briefing of data collection procedures based on the previously mentioned NHTSA Guidelines (1983) and the Institute for Public Affairs Training Manual (2010). The second training phase involved a field exercise, which required the actual observation of child restraint use at a particular location simulating actual field conditions and the completion of the forms for recording those observations.

Data Collection Procedures

Observers were told to follow the procedures outlined in the Guidelines and Training Manual. The child safety seat observation form was provided for each site (Appendix A). Observers were instructed to:

1) Record the date, day of week, and time of observations;
2) Record the exact location of each site;
3) Record whether or not the child was restrained, the type of restraint, and the direction the child was facing in the vehicle;
4) Record the type of vehicle (automobile or pickup); and,
5) Record whether or not the driver was belted.

Comment of Historical Analyses

Due to rule changes in 2015, subsequent surveys were analyzed without regard to the age of the child.