

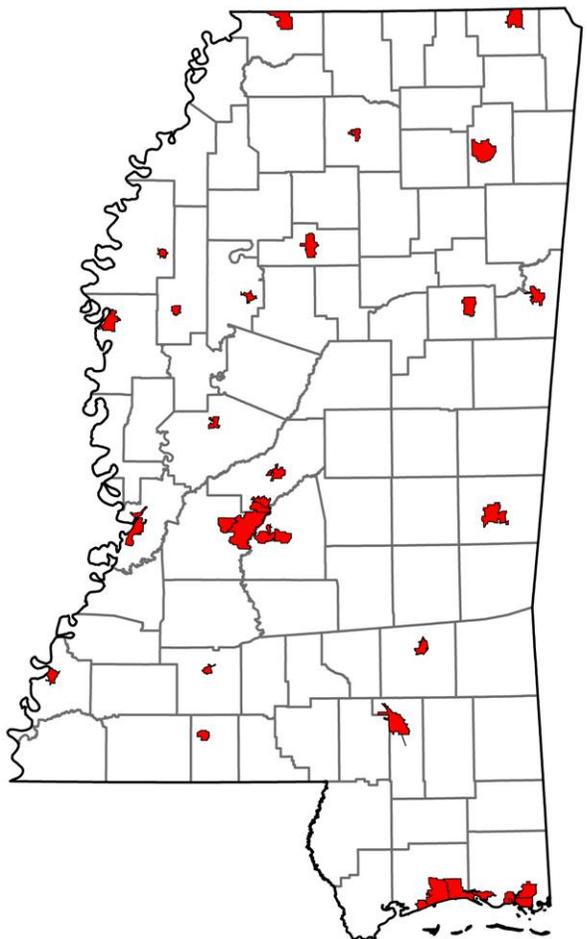
2007 Mississippi Child Restraint Survey

Prepared for:
The Office of Highway Safety
Division of Public Safety Planning,
Mississippi Department of Public Safety

November 2007



Prepared by:
David R. Parrish
Sam Dornan
Katie Holland



SSRC
Social Science Research Center
Mississippi State University

FINAL REPORT
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INTRODUCTION

In 2007, highway safety continues to be a major health problem for children in Mississippi. Each year citizens, governmental agencies and private advocacy groups participate in a major effort to combat this needless death and injury to our children. Tickets are written to those who violate the child restraint law. Large numbers of child restraint clinics staffed by highly trained child restraint technicians are provided at no cost to the public. A sizable amount of time, effort and money are devoted to increasing child restraint use. These efforts included media campaigns, brochures, programs, providing free child restraint seats to those who cannot afford them, etc. In order to help evaluate the effect of these programs, child restraint surveys are conducted in cities in every geographical area of Mississippi (See Figure 1). The surveys are not truly scientific, but do provide an overall raw analysis on child restraint use in Mississippi. Since these surveys are only observational they do not provide a measure of the proper use of child restraints, except in a very general way; i.e., incorrectly placing children in rear-facing seats on the front seat, in front of airbags.

These efforts have had gratifying results in that child restraint use in Mississippi has continued to rise over time. However, in comparison to other states, child restraint use in Mississippi continues to be low and proper restraint use even lower. Perhaps a way to increase the use of child restraints is further education and training. More emphasis placed on the training of health department staffs and human resource people could result in a positive impact in the correct use of child restraint systems in vehicles.

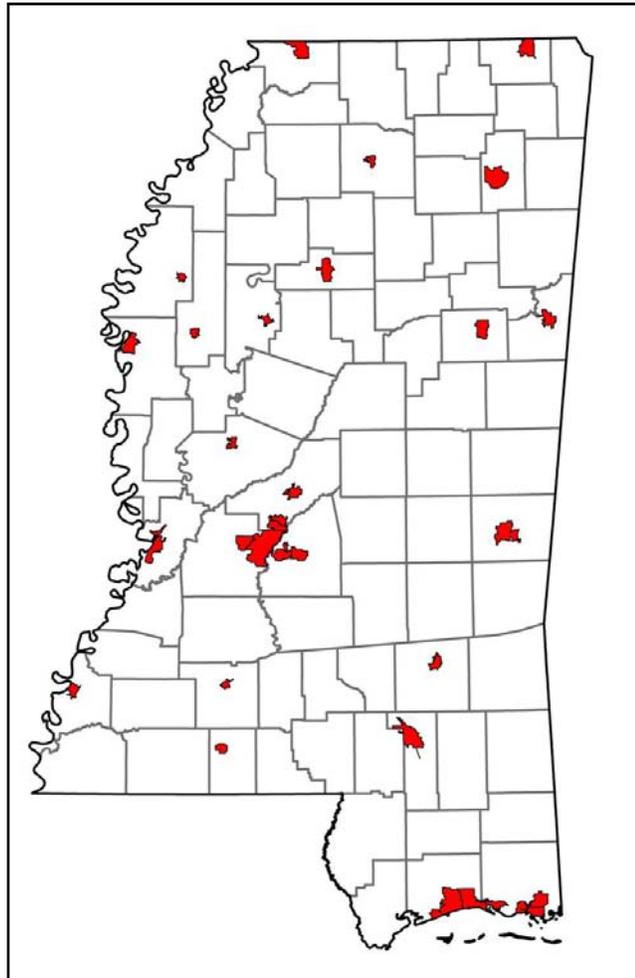


Figure 1: Surveyed city locations in Mississippi shows observational surveys conducted in every portion of the state



SURVEY METHODOLOGY

The current child restraint survey was conducted in 32 Mississippi municipalities, at 278 observation sites, covering every region in the state of Mississippi. Table 1 provides a list of the sample cities, the number of unique locations, the total number of observations, percent of observations with regard to the total number of observations, and the populations of the various cities.

Table 1: Survey Cities, Number of Locations, Number of Observations

City	Number of Locations	Total Number of Observations	Percent of Total Observations	City Population (2006 Estimate*)
1. Biloxi	8	110	2.4	44,342
2. Brandon	8	177	3.9	20,096
3. Brookhaven	8	78	1.7	9,983
4. Canton	8	158	3.5	12,578
5. Cleveland	8	104	2.3	12,671
6. Clinton	8	134	3.0	26,212
7. Columbus	8	88	1.9	24,213
8. Corinth	9	111	2.5	14,290
9. Gautier	8	82	1.8	16,251
10. Greenwood	8	93	2.1	16,742
11. Grenada	8	162	3.6	14,546
12. Gulfport	8	119	2.6	64,316
13. Hattiesburg	8	87	1.9	48,012
14. Indianola	8	110	2.4	11,264
15. Jackson	28	739	16.3	176,614
16. Laurel	8	50	1.1	18,450
17. Long Beach	8	64	1.4	15,372
18. Madison	8	196	4.3	17,191
19. McComb	8	107	2.4	13,607
20. Meridian	8	53	1.2	38,200
21. Moss Point	8	84	1.9	14,583
22. Natchez	8	128	2.8	17,162
23. Ocean Springs	8	90	2.0	17,140
24. Oxford	8	69	1.5	14,051
25. Pascagoula	8	81	1.8	23,719
26. Pearl	8	222	4.9	23,986
27. Ridgeland	8	185	4.1	21,535
28. Southaven	8	286	6.3	41,295
29. Starkville	8	89	2.0	22,638
30. Tupelo	8	49	1.1	35,930
31. Vicksburg	8	117	2.6	25,740
32. Yazoo City	9	304	6.7	11,822
Totals	278	4,526	100	884,551

* July 1, 2006 city population estimates retrieved from U.S. Census Bureau at www.census.gov

Due to the size of Jackson, data was collected from 28 sites within the city. Although 16.3 percent of the observations were made in Jackson, the population of Jackson represents about 20 percent of the population of the sample cities. Using the population figures from 2006 Census estimates, 31 of 38 cities with at least a population of 10,000



persons were included in the survey. One city, Brookhaven, had a population of less than 10,000. Brookhaven was kept in the study due to its history of being in the study. Sample cities are located in every geographical area of the State of Mississippi.

An attempt was made to select sites in each city that would provide a cross sample of the population. A systematic sample was selected by obtaining sites from four different types of locations: (1) a day care or controlled intersection with a signal light; (2) county or city health departments, welfare, or social service offices; (3) hospitals or pediatric offices; (4) shopping centers and fast food establishments.

Where it was feasible, local observers were utilized because they were familiar with the diversity of people in the area and could determine the most appropriate site locations. Previous observers were employed when available to promote consistency. Additional information was collected for each car. These data were the driver's gender, the time of day, the day of week, the weather during the time period of the observation, and whether or not the driver was wearing a seat belt.

Each surveyor was given a checklist for making observations. Locations were observed for 40-minute periods and surveyors were instructed to skip cars when they were unsure of the observation. The following instructions were given to the surveyors: (1) Record the use of vehicles only with children as passengers. (2) Observe all children under the age of five. Devices designed to be rear facing are recorded as infant seats. Devices designed to be forward facing devices are recorded as toddler seats. (3) Correct use of an infant restraint is determined if the seat installed is facing the rear of the vehicle, along with proper use of the harness system and a compatible vehicular restraint system. (4) Correct use of a toddler seat is determined if a harness and/or shield apparatus in the forward facing position protected the toddler. (5) Proper booster seat use is determined when the vehicular restraint system was correct for the size of the child.



RESTRAINT USAGES OF CHILDREN AND ADULTS

There were children in 4,526 cars observed during the survey period. These cars contained a total of 6,796 children under the age of 5, in 32 municipalities.

In Table 2, information is provided on the type of location, the number of children observed and whether they were restrained. It should be noted that none of the locations are definitive of that type of location, but only provide some indication of the level of use. Also, the overall calculated child restraint usage rate for Mississippi was found to be 77.5%.

Table 2: Child Restraint Use by Type of Location

Type of Location	Not Using Restraints	Using Restraints	Total Observations	Percent Using Restraints (%)
1. Fast Food	215	731	946	77.3 %
2. Large Shopping Mall	44	137	181	75.7 %
3. Grocery Store	98	284	382	74.3 %
4 Daycare or Child Learning Center	297	942	1,239	76.0 %
5. Health Dept. or Human Resources	81	210	291	72.2 %
6. Medical Care Complex	49	319	368	86.7 %
7. Playground, Park, Museum or Zoo	68	234	302	77.5 %
8. Small Shopping Center or Wal-Mart	272	719	991	72.6 %
9. Discount or Dollar Store	17	61	78	78.2 %
10. Street Intersection	288	971	1,259	77.1 %
11. Church or Church Nursery	85	536	621	86.3 %
12. Service Station	9	37	46	80.4 %
13. Restaurant	4	48	52	92.3 %
14. Post Office	0	11	11	100.0 %
15. Bank	3	26	29	89.7 %
Totals	1,530	5,266	6,796	77.5 %

In Table 3, the percentage of drivers using seat belts by gender is presented. Of the drivers observed, 73.0% of the female drivers were belted while 68.1% of the male drivers used their seat belts. Overall, 71.4% of the adults observed were belted, and this percentage coincides perfectly with this year's official seat belt usage rate of 71.8% observed in the *2007 Seat Belt and Motorcycle Helmet Survey*.

Table 3: Seat Belt Usage Status for Drivers

Gender	Using Seat Belt	Not Using Seat Belt	Total Observations	Percent Using Seat Belts (%)
1. Male	992	465	1,457	68.1 %
2. Female	2,229	824	3,053	73.0 %
Totals	3,221	1,289	4,510	71.4 %



CHILD RESTRAINT USE BY SEATING POSITION OF CHILD

It is known that the safest place for a child to be restrained, or for that matter to ride unrestrained, is on the back seat of a car. It would therefore be expected that adults putting children in the back seat of a car would also have more awareness of the importance of using child restraints. The seating position, as well as whether the child was restrained, was recorded in the present survey. As expected children on the back seat of automobiles were restrained at a higher rate than were those on the front seat. Children in the back seat were restrained at a rate of 79.5% while children on the front seat were restrained at a rate of 72.1%

Table 4: Child Restraint by Position of Child

Seating Position	Not Restrained		Restrained		Total	
	Count	Percent (%)	Count	Percent (%)	Count	Percent (%)
1. Front Seat	521	27.9 %	1,344	72.1 %	1,865	27.4 %
2. Back Seat	1,009	20.5 %	3,922	79.5 %	4,931	72.6 %
Totals	1,530	22.5 %	5,266	77.5 %	6,796	100.0 %

CHILD RESTRAINT USE BY SEATING POSITION OF CHILD AND GENDER OF DRIVER

Male drivers were slightly more likely to place a child on the front seat than were female drivers. Children in cars driven by male drivers were placed on the front seat of the car 30.4% of the time as compared to 25.9% when the driver of the vehicle was female. Likewise, female drivers who placed their children on the front seat were slightly more likely to use child restraints than were male drives with children on the front seat. Approximately 70.6% of the children on the front seat were restrained when the driver was male, while 73.1% of the children in the front seat of cars driven by females were restrained. However, children placed on the front seat, as opposed to the back seat, were more likely to be unrestrained regardless of the sex of the driver. Interestingly, male and female drivers choosing to place their children on the back seat were almost identical in restraining the children. The data suggests four out of five Mississippi males and females buckle up children when placing them in the back seat. Obviously educational efforts directed at placing children on back seat have had some effect. Refer to Table 5 on the next page for more details.



Table 5: Child Restraint by Position of Child by Gender of Driver

MALES

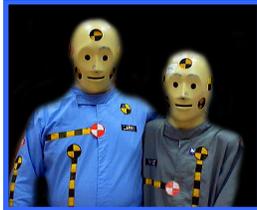
Seating Position	Not Restrained		Restrained		Total	
	Count	Percent (%)	Count	Percent (%)	Count	Percent (%)
1. Front Seat	198	29.4 %	475	70.6 %	673	30.4 %
2. Back Seat	329	21.4 %	1,210	78.6 %	1,539	69.6 %
Totals	527	23.8 %	1,685	76.2 %	2,212	100.0 %

FEMALES

Seating Position	Not Restrained		Restrained		Total	
	Count	Percent (%)	Count	Percent (%)	Count	Percent (%)
1. Front Seat	318	26.9 %	866	73.1 %	1,184	25.9 %
2. Back Seat	676	20.0 %	2,704	80.0 %	3,380	74.1 %
Totals	994	21.8 %	3,570	78.2 %	4,564	100.0 %

CONCLUSION

Child restraint use in Mississippi was found to be **77.50% for the year 2007**. This rate represents a definite upward trend in child restraint in belt usage compared to the rates found in the last four years – 2003 (70%), 2004 (71%) and 2005 (68.3%), 2006 (75.0%). Over time, the effort toward increasing and improving child restraint use has been both extensive and intensive. There is also little doubt that having a primary child restraint law has made a significant impact on the high use of child restraints in Mississippi. Also, the relatively new 2006 primary seat belt law for all front seat passengers could be an influential factor in the usage rate increase. Nevertheless, Mississippi is moving in the right direction with regard to child passenger safety, and perhaps with continued education and enforcement child restraint usage rates could be brought to an even higher level.



Please Buckle Up Your Child



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