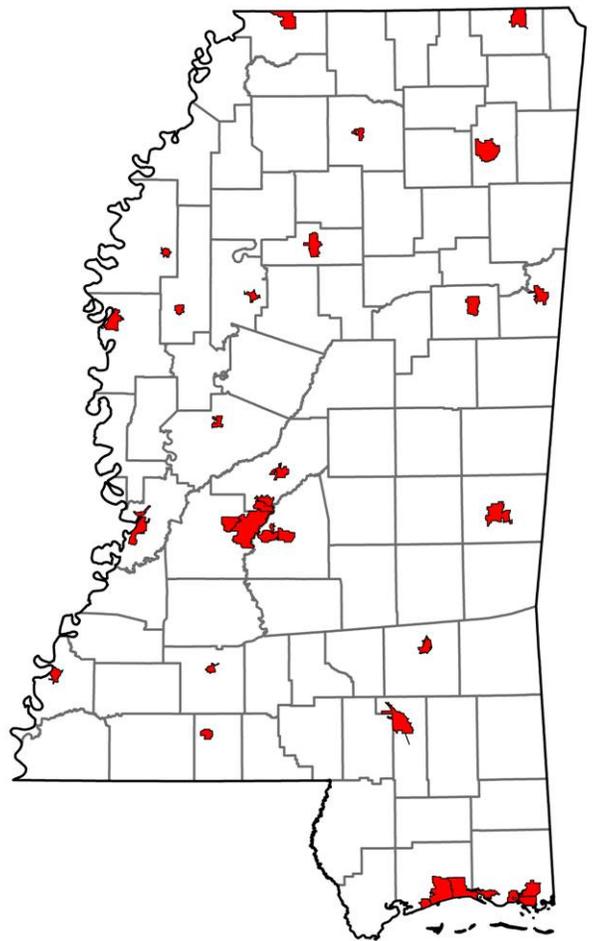


2005 Mississippi Child Restraint Survey

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

November 2005



Prepared by:
David R. Parrish
James W. Landrum
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SSRC

Social Science Research Center
Mississippi State University

FINAL REPORT
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INTRODUCTION

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.

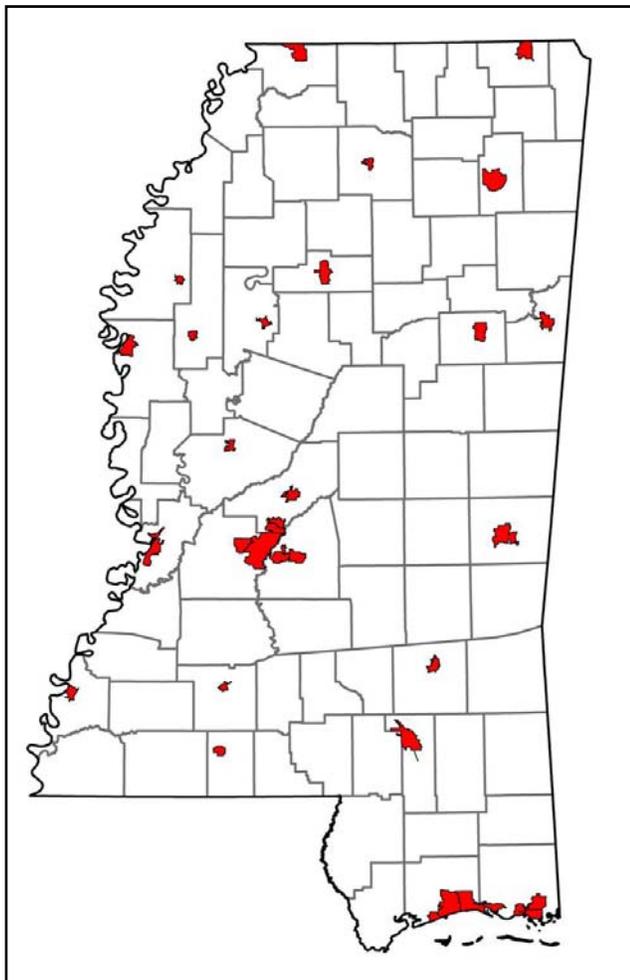


Figure 1: Surveyed city locations in Mississippi shows observational surveys conducted in every portion of the state



SURVEY METHODOLOGY

The current child restraint survey was conducted in 33 Mississippi municipalities, at 269 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 (2004 Estimates*)
1. Biloxi	7	110	1.9	50,115
2. Brandon	8	216	3.7	18,631
3. Brookhaven	5	69	1.2	9,854
4. Canton	10	243	4.2	12,826
5. Cleveland	8	166	2.9	12,897
6. Clinton	8	171	2.9	24,392
7. Columbus	8	59	1.0	24,791
8. Corinth	8	159	2.7	14,222
9. Gautier	8	39	0.7	16,853
10. Greenville	8	45	0.8	38,979
11. Greenwood	4	76	1.3	17,439
12. Grenada	7	192	3.3	14,492
13. Gulfport	5	96	1.7	71,851
14. Hattiesburg	7	116	2.0	46,442
15. Indianola	6	117	2.0	11,449
16. Jackson	28	979	16.9	179,298
17. Laurel	8	66	1.1	18,186
18. Long Beach	1	16	0.3	17,258
19. Madison	8	243	4.2	16,462
20. McComb	8	189	3.3	13,213
21. Meridian	7	138	2.4	38,833
22. Moss Point	8	190	3.3	15,318
23. Natchez	8	214	3.7	17,272
24. Ocean Springs	8	256	4.4	17,698
25. Oxford	8	103	1.8	13,301
26. Pascagoula	7	43	0.7	25,873
27. Pearl	9	308	5.3	23,039
28. Ridgeland	8	244	4.2	21,577
29. Southaven	8	259	4.5	36,244
30. Starkville	8	105	1.8	21,964
31. Tupelo	8	150	2.6	35,418
32. Vicksburg	7	168	2.9	25,776
33. Yazoo City	8	257	4.4	11,936
Totals	262	5,802	100.0	933,899

* 2004 city population estimates retrieved from U.S. Census Bureau at www.census.gov

Due to the size of Jackson, data were collected from 28 sites within the city. Although 16.9 percent of the observations were made in Jackson, the population of Jackson represents about 19 percent of the population of the sample cities. Using the population



figures from 2004 Census estimates, 32 of 36 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's population dropped from over 10,000 in the 1990 census to slightly under 10,000 in the 2000 census. 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 3,838 cars observed during the survey period. These cars contained a total of 5,802 children under the age of 5, in 33 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 68.3%.

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	190	446	636	70.1%
2. Large Shopping Mall	16	40	56	71.4%
3. Grocery Store	147	377	524	71.9%
4. Daycare or Child Learning Center	336	860	1196	71.9%
5. Health Dept. or Human Resources	190	217	407	53.3%
6. Medical Care Complex	54	102	156	65.4%
7. Playground, Park, Museum or Zoo	64	201	265	75.8%
8. Small Shopping Center or Wal-Mart	301	589	890	66.2%
9. Discount or Dollar Store	24	63	87	72.4%
10. Street Intersection	409	737	1,146	64.3%
11. Church or Church Nursery	39	251	290	86.6%
12. Service Station	42	37	79	46.8%
13. Restaurant	24	41	65	63.1%
14. Post Office	2	3	5	60.0%
Totals	1,838	3,964	5,802	68.3%

In Table 3, the percentage of drivers using seat belts by gender is presented. Of the drivers observed, 63% of the female drivers were belted while only 59.5% of the male drivers used their seat belts. Overall, 62% of the adults observed were belted.

Table 3: Seat Belt Usage Status for Drivers

Gender	Using Seat Belt	Not Using Seat Belt	Total Observations	Percent Using Seat Belts (%)
1. Male	665	453	1,118	59.5%
2. Female	1,714	1,006	2,720	63.0%
Totals	2,379	1,459	3,838	62.0%



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 70.0% while children on the front seat were restrained at a rate of 64.2%

Table 4: Child Restraint by Position of Child

Seating Position	Not Restrained		Restrained		Total	
	Count	Percent (%)	Count	Percent (%)	Count	Percent (%)
1. Front Seat	596	35.8%	1,071	64.2%	1,667	28.8%
2. Back Seat	1,236	30.0%	2,879	70.0%	4,115	71.2%
Totals	1,832	31.7%	3,950	68.3%	5,782	100.0%

Note: Chart based on 3,821 valid cases (17 cases were missing)

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 31.9 % of the time as compared to 27.6% when the driver of the vehicle was female. However, female drivers who placed their children on the front seat were much more likely to use child restraints than were male drives with children on the front seat. Only 60.6% of the children on the front seat were restrained when the driver was male, while 66.0% of the children in cars driven by females were restrained. Children placed on the front seat were much 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 fairly comparable in restraining the children. Children placed on the back seat were restrained a much higher percentage of time than were those whose driver placed them on the front seat, regardless of the gender of the driver. Obviously educational efforts directed at placing children on back seat have had some effect. These findings are presented in Table 5.



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	214	39.4%	329	60.6%	543	31.9%
2. Back Seat	354	30.5%	807	69.5%	1,161	68.1%
Totals	568	33.3%	1,136	66.7%	1,704	100.0%

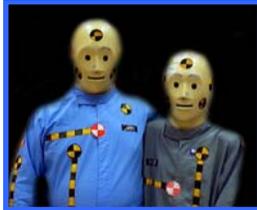
FEMALES

Seating Position	Not Restrained		Restrained		Total	
	Count	Percent (%)	Count	Percent (%)	Count	Percent (%)
1. Front Seat	382	34.0%	742	66.0%	1,124	27.6%
2. Back Seat	882	29.9%	2,072	70.1%	2,954	72.4%
Totals	1,264	31.0%	2,814	69.0%	4,078	100.0%

Note: Chart based on 3,821 valid cases (17 cases were missing)

CONCLUSION

Child restraint use in Mississippi was found to be **68.3% for the year 2005**. This is slightly lower than the rates found in 2003 (70%) and 2004 (71%). 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. The next challenge is to raise child restraint usage to an even higher level.



Please Buckle Up Your Child



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