

**SJTPO TRAFFIC SAFETY FACTS 2005:
OCCUPANTS**

**SOUTH JERSEY
TRANSPORTATION PLANNING
ORGANIZATION**



TRENDS IN OCCUPANT FATALITIES

Seabelt Use; Occupant Ejected

2002 - 2005

William Schiavi
Safety Analyst
SJTPO
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SJTPO Trends in Occupant Fatalities: Seat Belt Use and Occupants Ejected, 2002 - 2005

Purpose:

This paper will answer the following questions for the South Jersey region:

- 1) What are the occupant fatalities for 2005 compared to 2004?
- 2) What was the seat belt use of those occupants killed?
- 3) Was there a noticeable difference in any age group with respect to seat belt use during a fatal crash?
- 4) What was the number of occupants ejected from the vehicle in 2005 compared to 2004?
- 5) How many of those ejected resulted in a fatality?

Summary:

From the statistics that follow, we can say that: Occupant fatalities increased in 2005. There was an increase in the number of occupants killed that were not wearing a seatbelt. A high percentage of those occupants killed in a crash were not wearing their seat belt.

The young adult age category experienced a sharper increase in occupant fatalities. There was an increase in the number of young adult occupants killed that were not using seatbelts. Young adults that were killed in a crash were more likely to be non-seat belt users, than the occupants killed from the general population.

The number of occupants that were killed after being ejected from their vehicle increased and, The likelihood that an ejected occupant would be killed in the crash increased in 2005 over 2004.

Method:

This analysis utilized New Jersey crash data from the NJDOT website; this data was downloaded into an access database. Data files related to general crash information such as time, place, and number of motor vehicle fatalities were derived from the NJDOT Accident file. There is one record in the Accident database for each crash. The Occupant database was also used. This database has one record for each occupant; there is a column for occupant age and physical condition. The total occupants killed was derived from adding the number of Occupant records given the physical condition and age.

Analysis:

Occupant Fatalities

The total number of occupants (all ages) killed in crashes for 2005 was 109; this category for 2004 was 78. This represents a 40% increase for 2005 over 2004.

The young adult age category (ages 25-34) experienced a higher percentage increase in occupant fatalities. Young adult occupants that were killed in a crash increased to 22 in 2005 from 14 in 2004. This represents a 57% increase.

Occupants Not Wearing a Seatbelt & Killed

The total occupants (all ages) that were not wearing seatbelts increased to 71 in 2005 compared to 50 in 2004. This was an increase of 42%. (See Chart 1, P.3)

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The young adult occupants, ages 25-34 category also experienced a higher percentage increase in occupants that did not wear seatbelts. The number of young adults that were killed and not wearing a seatbelt was 18 in 2005 and 10 in 2004. This is an increase of 80%.

Occupants Wearing a Seatbelt, & Killed, Proportion of Total

Of all occupants killed in a crash, 65% were not wearing seatbelts (71/109). For the previous year of 2004, 64% of the occupants that were killed were not wearing a seatbelt (50/78).

It was more likely that a young adult occupant fatality did not wear a seat belt. In this age group (25-34), the young adult occupant that was killed and not wearing a seatbelt represented 82% of that age group's occupant fatalities (18/22). This 82% proportion compares to 65% for all ages.

Occupants that Wore a Seatbelt & Were Killed

The number of occupants (all ages) that were killed while wearing seatbelts also increased in 2005. The total in this category was 38 in 2005, and 28 in 2004. This a 36% increase. The number of young adult occupants killed that were wearing a seatbelt was 4 for both 2005 and 2004.

Number of Occupants Ejected and Fatalities

The number of people that were ejected totaled 344 in 2005 compared to 333 in 2004. This was an increase of 3%. (See Chart 2, P.4)

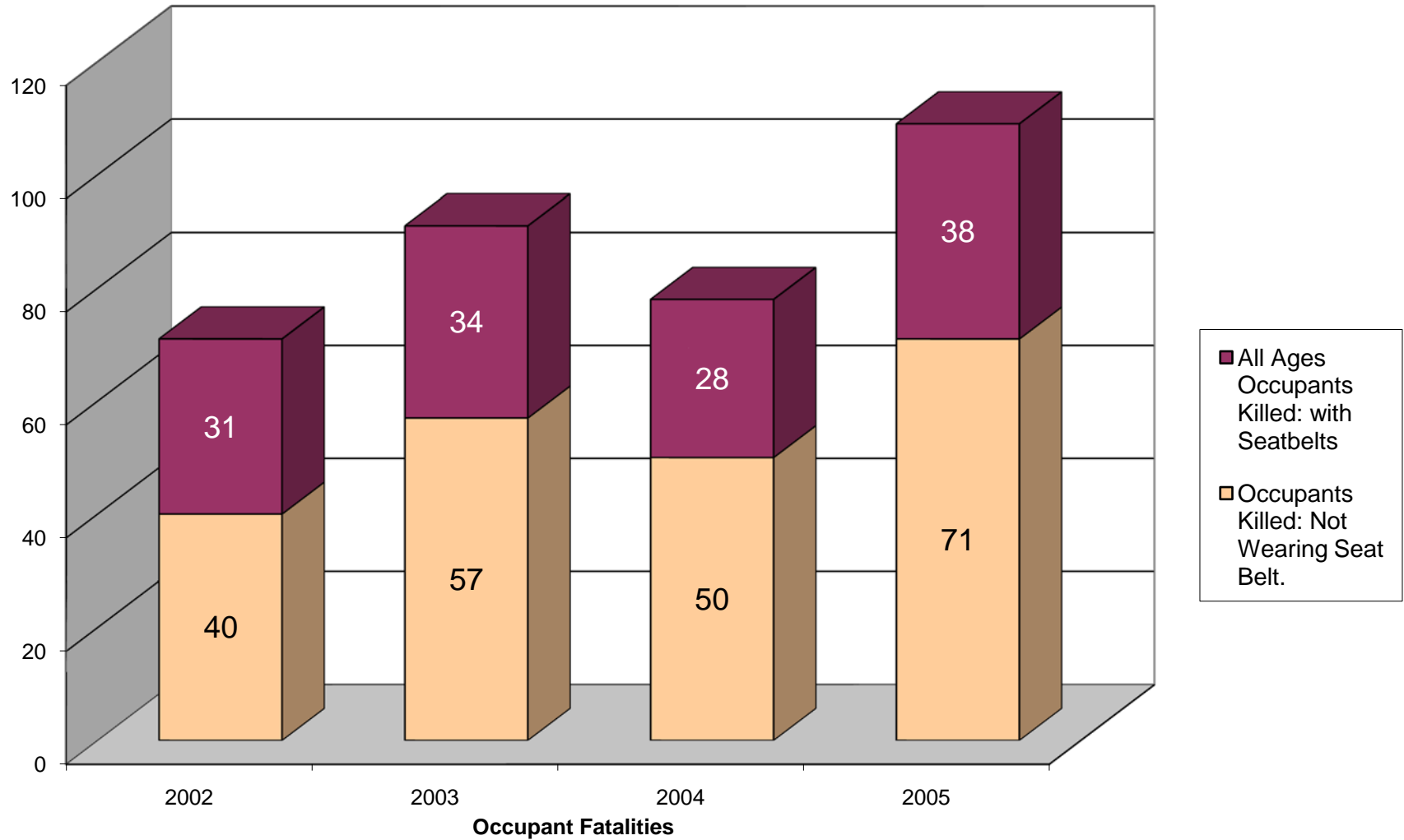
Of the 344 occupants that were ejected from their vehicle, 40 occupants were killed in 2005 compared to 27 in 2004. This was an increase of 48% for the number of ejected occupants that died.

When there was an occupant ejected from a crash vehicle in 2005, there was a 12% chance of a fatality (40 fatalities/344 occupants ejected). Note that this is based on the physical condition at the time of the report.

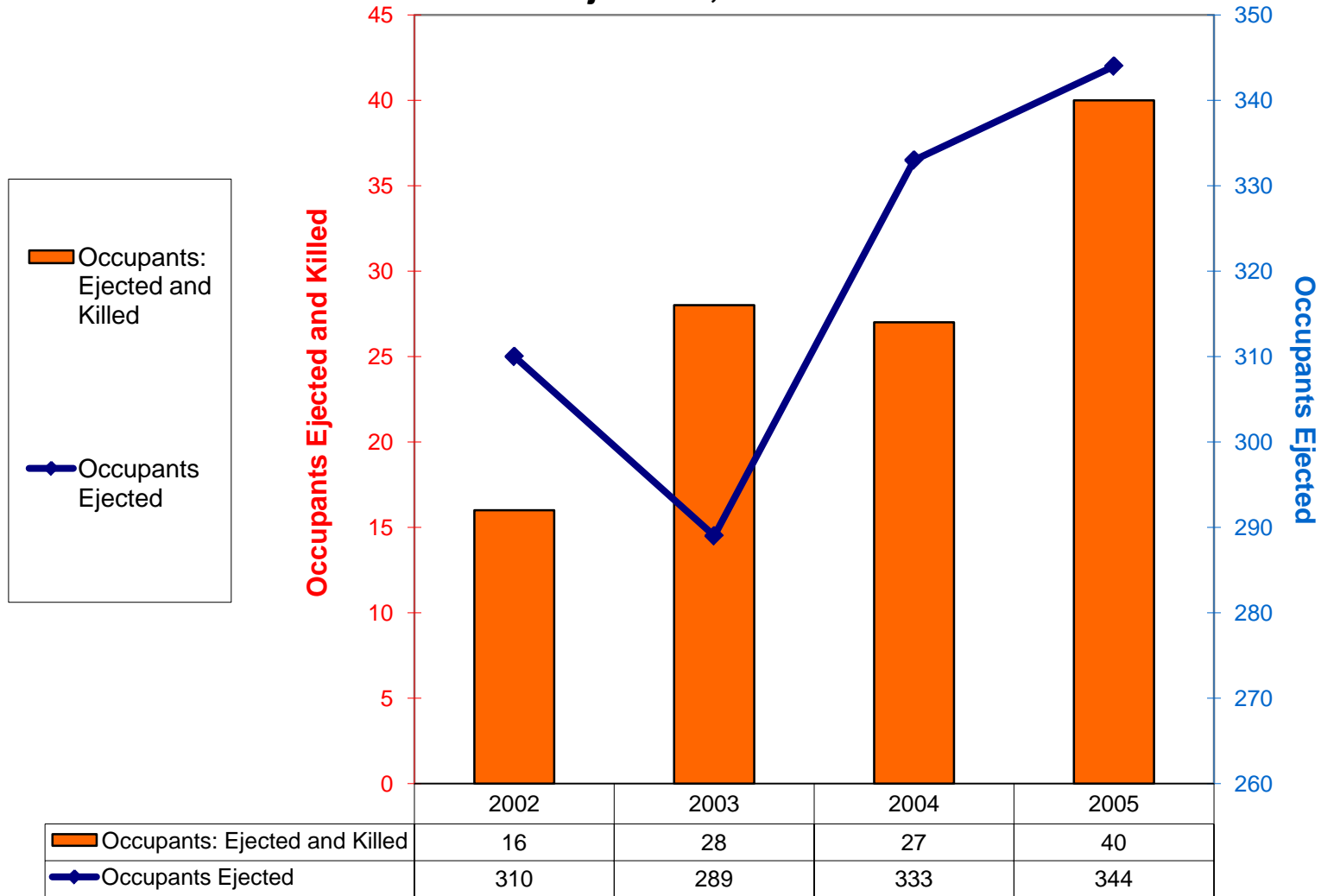
This 12% ejection/fatality proportion was higher than the prior year. For the year 2004, there was an 8% chance that an ejected occupant was killed (27 fatalities died out of the 333 occupants that were ejected).

Note that this report does not tell us about seatbelt effectiveness for preventing ejection and or death. To accomplish this we would have to look at all the occupants in a crash, determine seatbelt usage of all, whether the occupant was ejected, and whether the occupant was killed. For this report, we focused on those who were killed, and the occupants that were ejected. We then asked if seat belt were used by those occupants. We do not look at the survivors of a crash, and what the survivor seat belt usage was.

**Trends in Occupant Fatalities,
Occupant's Seat Belt Use, SJTPO 2002-2005**



Trends in Occupant Fatalities Ejections, SJTPO 2002-2005



SJTPO Trends in Occupant Fatalities: Seat Belt Use and Occupants Ejected, 2002 - 2005

Table

FATALITIES AND SEATBELT USE					Change From 2004-2005
	2002	2003	2004	2005	
1 All Ages Occupants Killed	71	91	78	109	40%
2 All Ages Occupants Killed Not Wearing Seatbelts	39	55	47	69	
3 All Ages Occupants Killed Not Wearing Seatbelts Null	1	2	3	2	
(See Chart 1)	40	57	50	71	42%
4 All Ages Occupants Killed with Seatbelts	(See Chart 1) 31	34	28	38	36%
5 All Ages Occupants Killed Not Wearing Seatbelts	56%	63%	64%	65%	
6 All 25-34 Occupants Killed	8	17	14	22	57%
7 All 25-34 Occupants Killed and Not Wearing Seatbelts	6	16	10	18	
8 All 25-34 Occupants Killed and Not Wearing Seatbelts Null	0	0	0	0	
	6	16	10	18	80%
9 All 25-34 Occupants Killed with Seatbelts	2	1	4	4	0%
10 All 25-34 Occupants Killed and Not Wearing Seatbelts	75%	94%	71%	82%	
Occupants Ejected					Change From 2004-2005
	2002	2003	2004	2005	
11 All Ages Ejected	(See Chart 2) 310	289	333	344	3%
12 All Ages Ejected and Killed	(See Chart 2) 16	28	27	40	48%
13 All Ages Ejected and Killed	5%	10%	8%	12%	

SJTPO Trends in Occupant Fatalities: Seat Belt Use and Occupants Ejected, 2002 - 2005

Table Notes:

Table Line No.	Comments relate to the Table, (Exhibit 3).
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Occupant Fatalities

All Ages, Occupant Fatalities

- 1 The total number of occupants killed in crashes for 2005 was 109; this category for 2004 was 78. This represents a 40% increase for 2005 over 2004.

Ages 25-34, Occupant Fatalities

- 6 The occupants that were killed in a crash increased to 22 in 2005 from 14 in 2004. This represents a 57% increase.

Occupants Not Wearing a Seatbelt & Killed

All Ages, Not wearing seatbelts and killed.

- 2 & 3 The total occupants that were not wearing seatbelts increased to 71 in 2005 compared to 50 in 2004. This was an increase of 42%.

Ages 25-34, Not wearing seatbelts and killed.

- 7 & 8 The number that were killed and not wearing a seatbelt was 18 in 2005 and 10 in 2004. This is an increase of 80%.

Occupants that Wore a Seatbelt & Were Killed

All Ages, Wearing Seatbelt, & Killed

- 4 The number of occupants killed who were wearing seatbelts also increased in 2005. The total in this category was 38 in 2005, and 28 in 2004. This a 36% increase.

Ages 25-34, Wearing Seatbelt, & Killed

- 9 The number of occupants killed that were wearing a seatbelt was 4 for both 2005 and 2004.

All Ages, Wearing Seatbelt, & Killed, Proportion of Total

- 5 Of all occupants killed in a crash, 65% were not wearing seatbelts (71/109). For the previous year of 2004, 64% of the occupants that were killed were not wearing a seatbelt (50/78).

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Ages 25-34, Wearing Seatbelt, & Killed, Proportion of Total

- 10 Note that for this age group (25-34), the percentage of fatalities that were not wearing a seatbelt was 82% (18/22). This compares to 65% for all ages in 2005.

Number of Occupants Ejected and Fatalities

- 11 The number of people that were ejected totaled 344 in 2005 compared to 333 in 2004. This was an increase of 3%.
- 12 Of the total number of occupants ejected, 40 occupants were killed in 2005 compared to 27 in 2004. This was an increase of 48% for the number of ejected occupants that died.
- 13 When there was an occupant ejected from a crash vehicle in 2005, there was a 12% chance of fatality (40 fatalities/344 occupants ejected). Note that this is based on the physical condition at the time of the report.
- 13 There was an 8% chance that an occupant that was ejected was killed in the prior year of 2004 (27 fatalities / 333 occupants that were ejected).