



PEDESTRIAN ACCIDENT STUDY
IOWA, 1972 - 1974

Robert D. Ray, Governor

Victor Preisser, State Director
Dept. of Transportation

Charles Larson, Commissioner
Dept. of Public Safety

REPORT PREPARED BY:

AURORA P. BERENGUEL

RESEARCH & STATISTICS

MOTOR VEHICLE ADMINISTRATION

DEPARTMENT OF TRANSPORTATION

DES MOINES, IOWA

DECEMBER 1, 1975

1-515-281-3764

TABLE OF CONTENTS

	<u>Page Number</u>
Summary	i-iii
1.0 Introduction	1
1.1 Collection of Data	1
2.0 Trends in Pedestrian Accidents: Iowa	1
3.0 Pedestrians Killed by Age & by Sex: 1972-1974	2
3.1 Pedestrians Injured by Age Group: 1972-1973	2
3.2 Pedestrians Killed by Age & by Light: 1972-1974	2
4.0 Pedestrian Fatalities by Month: 1972-1974	3
5.0 Pedestrian Fatalities by Month & by Light Conditions: 1972-1974	3
6.0 Pedestrian Fatalities by Time of Day: 1972-1974	3
7.0 Pedestrian Fatalities by Day of Week: 1972-1974	4
7.1 Pedestrian Fatalities by Day of Week & by Light Conditions (Day or Night): 1972-1974	4
8.0 Pedestrian Fatalities by Vehicle Type: 1972-1974	4
9.0 Pedestrian Fatalities by Pedestrian Violation: 1972-1974	5
(1) Lack of Caution & Carelessness	6
(2) Did Not Yield Right of Way Not at Intersection	6
(3) Had Been Drinking	7
10.0 Pedestrian Actions of Pedestrians Killed in Motor Vehicle Accidents: 1972-1974	8
11.0 Pedestrian Fatalities by City Population Size, Iowa:	8
 <u>Statistical Tables</u>	
Table 1: Number & Percent Distribution of Pedestrians Killed in Traffic Accidents by Year, Iowa: 1961-1974	10
Table 2: Pedestrians Killed and Death Rate(per 100,000 Population), Iowa: 1961-1974	11
Table 3: Number & Percent Distribution of Pedestrians Killed by Age & by Sex, Iowa: 1972-1974	12
Table 4: Number of Persons(Pedestrians) Injured by Age & by Sex, Iowa: 1972-1973	13

Statistical TablesPage Number

Table 5: Number & Percent Distribution of Pedestrians Killed by Age & by Light Conditions, Iowa: 1972-1974	14
Table 5A: Collision Involvement Index of Pedestrians Killed by Age & by Light Conditions, Iowa 1972-1974	15
Table 6: Pedestrian Traffic Deaths by Time of Day, Iowa: 1972-1974	16
Table 7: Pedestrian Fatalities by Age Group During the Time Period 3:00-3:59 P.M., Iowa: 1972-1974	17
Table 8: Distribution of Pedestrians Killed by Month and by Light Conditions, Iowa: 1972-1974	18
Table 9: Pedestrians Killed by Day of Week and by Light Conditions (Day or Night), Iowa: 1972-1974	19
Table 10: Number of Pedestrians Killed by Pedestrian Violations in Motor Vehicle Traffic Accidents, Iowa: 1972-1974	20
Table 11: Number & Percent Distribution of Pedestrians Killed in Motor Vehicle Traffic Accidents by Type of Vehicle, Iowa: 1972-1974	21
Table 12: Pedestrian Actions of Pedestrians Killed in Motor Vehicle Traffic Accidents, Iowa: 1972-1974	22
Table 13: Pedestrian Fatalities by City Population Size, Iowa: 1972-1974	23
Table 14: Pedestrian Fatalities by City, Iowa: 1972-1974	24-27

Statistical Charts

Chart 1: Number of Pedestrians Killed in Traffic Accidents and Trend, Iowa: 1961-1974	28
Chart 2: Percent Distribution of Pedestrians Killed of Total Traffic Fatalities and Trend, Iowa: 1961-1974	29
Chart 3: Pedestrians Injured in Traffic Accidents & Trend, Iowa 1962-1973	30
Chart 4: Monthly Index of Pedestrian Fatalities, Iowa: 1972-1974	31
Chart 5: Pedestrian Fatality Index of Intra-week Variation, Iowa: 1972-1974	32
Chart 6: Pedestrian Violations by Type, Iowa: 1972-1974	33

Statistical Charts

Page Number

Chart 7: Pedestrian Actions of Pedestrians Killed in Motor Vehicle Accidents, Iowa: 1972-1974	34
Chart 8: Percent Distribution of Pedestrians Killed in Motor Vehicle Accidents by Type of Vehicle, Iowa: 1972-1974	35

PEDESTRIAN FATAL ACCIDENT STUDY: IOWA, 1972-1974

SUMMARY

- 1.0 Number of pedestrians killed in 1972 through 1974 accounted for 7.5% of total traffic fatalities in the State of Iowa. There were 59, 61, and 59 pedestrian fatalities during the review period respectively.
- 2.0 Number of pedestrian fatalities as well as death rate trend (long term movement 1961-1974) showed a fairly stable behavior. Average pedestrians killed per year was 61 with a standard deviation of 5.
- 3.0 Pedestrian death rate (fatalities per 100,000 population) in the state for the three year period was 2.08, 2.10 and 2.07 respectively indicating a stable death rate.
- 4.0 More than half of pedestrians killed were the younger (28% were 14 years or under) and the older group (25.7% were 65 years and older). Two thirds of total fatalities were males and one third females.
- 5.0 Analysis of fatalities by light condition showed that the younger group (9 years and under) were involved in 64.6% more collisions during the day when compared to its representation in the total for both night and day. Similarly, the 65 and up older group were involved 23.3% more during the day than their representation for both day and night.
On the other hand, the age groups 15-44 were involved more during the night-time and was peak for the 20-24 age group.
- 6.0 The months of December, January and June in that order were big months for pedestrian fatalities. A computed pedestrian monthly index showed a 47.7%, 34.4% and 27.2% more fatalities than average during these months respectively.
- 7.0 Pedestrian fatalities by time of day showed the time period 3:00-3:59 P.M. was a peak hour (11.2%) for pedestrian fatalities, these were 60% young people with ages 9 and under. The 3:00-6:59 P.M. accounted for 36.4% of the total fatalities.

- 8.0 Pedestrian fatalities by day of week indicated Saturday, Sunday and Monday had less pedestrian fatalities than other days of the week: Friday was peak day with 33% more than average.
- 9.0 Pedestrian fatalities by day of week by light condition showed that there were more pedestrian fatalities during daytime on Monday, Tuesday, Wednesday and Thursday. On the other hand, there were more pedestrian fatalities on nights during the week ends (Friday*, Saturday and Sunday).
- 10.0 Pedestrian fatalities by vehicle type showed that passenger cars accounted for 72.6% of total while the rest were pickup trucks, truck and truck combinations and others.
- 11.0 Pedestrian fatalities by pedestrian violation indicated that 75% of pedestrians that were killed were at fault and that 60% of these faults were "lack of caution and carelessness", did not yield right of way not at intersection" and "had been drinking".
- 12.0 Detailed analysis of the afore mentioned violations committed by pedestrians killed showed that 61.3% of those fatalities who had "lack of caution and carelessness" were 14 years or under and females in this age group are over represented 32% more.
- 12.1 Similar analysis of the "did not yield right of way not at intersection" showed that this violation is committed generally in all age groups except the very young (0-4) but more pronounced in the 65 years and older. Two thirds occurred during night time.
- 12.2 "Had been drinking" was found to be prevalent among the 15-64 age group with 20-34 age group accounting for 55%. All drinking pedestrians were killed during night time, 70% from midnight to 5:59 A.M.
- 13.0 Pedestrian actions of pedestrians killed showed that half of the pedestrians killed during the years under review were crossing the road (31.3% crossing

* Week end starts 6:00 P.M. Friday.

not at intersections and 20.7% crossing at intersections). Another 20% were walking or standing on roadway, 5.6% were lying on roadway and 5% were pushing or working in the roadway.

14.0 Pedestrian fatalities by geographical location indicated that of the total pedestrians killed during the period under study, 70% occurred in cities or within city limits. Half of the total fatalities happened in only 7 cities with population of 50,000 or more.

PEDESTRIAN ACCIDENT STUDY: IOWA, 1972-1974

1.0 Introduction:

This report was prepared in an effort to ascertain the magnitude of pedestrian accidents in the State of Iowa. Primary objective is to provide basic data for planning and promoting countermeasure programs in pedestrian safety.

1.1 Collection of Data:

Data used in this study were collected from fatal and non-fatal pedestrian accident reports that occurred in the state during 1972 through 1974. Presented in this study are data on age and sex, groups that pose special serious pedestrian problems, time of day, light conditions, vehicle type, pedestrian action, location and other contributing factors that led to accident occurrence.

2.0 Trends in Pedestrian Accidents: Iowa:

Presented in Table 1 of this report are the number of pedestrians killed and the percent distribution of total traffic fatalities. Data in 1972 through 1974 showed pedestrians accounted for 7.5% of total persons killed in traffic accidents indicating that pedestrian accidents is a substantial source of traffic deaths.

Chart 1 shows the number of pedestrians killed and death rate with trend line (long term behavior) during the years 1961 through 1974. It is apparent from the graph that average number of fatalities per year was 61 with a standard deviation of 5 and is fairly stable as evident in the shape of the trend (slope=0.024175).

Number of pedestrians injured over a long period of time (1962 through 1973) was also compiled and charted as shown in Chart 3. Chart shows a curvilinear trend in number of pedestrians injured during the period.

Pedestrian death rate ^{1/} in the state during the years 1961-1974 showed a stable death rate trend. Although the death rate and fatality trend show stable trends, however if we look at Chart 2, one will notice that the percent distribution of this type of fatality increased from 6.8 in 1972 to 8.6 in 1974. It should be noted that while number of fatalities in 1974 were down to 685 from 813 in the past year, number of pedestrians killed was almost the same as in the previous year (59 in 1974 compared with 61 in 1973).

3.0 Pedestrians Killed by Age and by Sex, 1972-1974:

Data during the review period showed that almost one half of the pedestrians killed were the very young (22.9% were 9 years or under) and the older age groups (25.7% were 65 years and older), two thirds were male and one third female. Please see Table 3.

3.1 Pedestrians Injured by Age Group, 1972-1973:

Among injured pedestrians in 1972-1973, half of those injured were 14 years and younger while only a tenth were 65 years and older. Data also shows 6 out of 10 injured were male. Please see Table 4.

3.2 Pedestrians Killed by Age and by Light Conditions, 1972-1974:

On Table 5, pedestrians killed by day or night conditions were tabulated by age group. Data showed that more than half (56%) of pedestrians were killed during the day. Statistical test of significance showed however that there is no significant difference between number of pedestrians killed during the day and during the night.

A collision involvement index was also calculated to show the collision involvement of each age group during the day in relation to its representation in the total for both night time and day time. Index show the age groups 0-4 and 5-9 are involved in many more collisions during the day, 63.1% and 62.1% more for the youngest age groups respectively. Similarly, the 65-74

^{1/} Pedestrian fatalities per 100,000 population.

and 75 or older age groups are involved 22.3% and 21.4% more during the day than would be expected in the over-all pedestrian fatality picture for that specific age group. See Table 5A.

On the other hand, the age groups particularly 15-44 years old are involved more during the night. Further analysis show that the involvement is peak for the groups 20-24 years old during night time.

4.0 Pedestrian Fatalities by Month, 1972-1974:

A monthly index (unadjusted for days) to show pedestrian fatalities by month was prepared for the three year period and is shown in Chart 4. Chart indicated December as a peak month for pedestrian fatalities. There were 47.7% more fatalities during December than usual. Second to December was January which had 34.4% more and third was June which has 27.2% more than normal.

5.0 Pedestrian Fatalities by Month and by Light Condition, 1972-1974:

Previous analysis by light conditions (day or night) showed that 56% of pedestrians killed occurred during the day. Further search indicated that the month of June and December topped the other months in number of pedestrians killed during the day while the month of July and January got the highest number killed during night time.

6.0 Pedestrian Fatalities by Time of Day, 1972-1974:

Pedestrian deaths by time of day at one hour intervals are presented in Table 6. A glance at the hourly distribution showed 3:00-3:59 P.M. as a peak hour for pedestrian fatalities, 11.2% of total. Further analysis by age groups in this time period showed that 60% were very young. The ages and distribution is shown in Table 7.

7.0 Pedestrian Fatalities by Day of Week, 1972-1974:

Pedestrian fatalities by day of week indicated that Saturday, Sunday and Monday have less pedestrian fatalities than the rest of the week. As

shown in the index of weekly variation, using averages for unadjusted data during the review period, Friday had 33% more fatalities than usual while Monday had 41.2% less number of fatalities than usual (using 100% as base for each day). Tabulated below is an index of intra-week variation ranked from highest to lowest.

<u>Day</u>	<u>Pedestrian Fatality Index (%)</u>	<u>Base (%)</u>
Friday	133.0	100.0
Wednesday	121.3	100.0
Thursday	117.6	100.0
Tuesday	105.7	100.0
Saturday	89.6	100.0
Sunday	74.2	100.0
Monday	58.8	100.0

7.1 Pedestrian Fatalities by Day of Week, by Light Conditions (Day or Night) 1972-1974:

Further analysis by day of week revealed that there were more pedestrian fatalities during day time on Monday, Tuesday, Wednesday and Thursday.

On the other hand, there were more pedestrian fatalities on nights during the week ends (Friday*, Saturday and Sunday). This is shown in Table 9.

8.0 Pedestrian Fatalities by Vehicle Type, 1972-1974:

An analysis of type of vehicles involved in fatal pedestrian accident showed that passenger cars accounted for 72.6% of total, pick-up trucks (11.7%), truck and truck combinations (10.6%) and the rest either motorcycles

* Week end starts 6:00 P.M. Friday

school bus or others.

9.0 Pedestrian Fatalities by Pedestrian Violation, 1972-1974:

It was observed that 75% of pedestrian fatalities were at fault when the accident happened. A list of pedestrian faults or violations is as follows:

Violations of Pedestrians Killed in Traffic Accidents:Iowa, 1972-1974

<u>Pedestrian Violation</u>	<u>Percent</u>
Lack of Caution	24.0
Did not Yield Right of Way(not at intersection)	21.7
Had Been Drinking	14.0
Walking on Wrong Side of Road	10.8
Jumped, Ran or Walked in Front of Vehicle	10.8
Inattention	6.2
Did not Yield Right of Way at Intersection	4.6
Disregarded Traffic Signal at Intersection	2.3
Walking on Interstate	1.6
Did not Yield Right of Way at Driveway	1.6
Unknown	2.4
Total	100.0

One will see from the list that the first three violations and which accounted for 60% of total were:

(1) Lack of Caution and carelessness	24.0%
(2) Did not yield right of way(not at intersection)	21.7%
(3) Had been drinking	14.0%
Total	59.7%

In order to identify specific groups (age and sex) of pedestrians who were at fault, the first three violations were analyzed and is presented as follows:

Type of Violation

(1) Lack of Caution and Carelessness:

Analysis showed that there is a 2 to 1 ratio of males to females. The 14 years and under age groups account for 61.3% of fatalities that were under this category. Fatalities by sex by age groups revealed that females belonging to this age group are involved 32% more compared to the representation of both sexes in that aforementioned age group (81.0% females compared with 61.3% for both sexes). The following table shows details:

Pedestrians Killed Who Had "Lack of Caution and Carelessness"
By Age Group and Sex: 1972-1974

Age Group	No. % Distribution		Male		Female	
			No.	%	No.	%
0-4	5	16.1	3	15.0	2	18.0
5-9	11	35.5	6	30.0	5	45.0
10-14	3	9.7	1	5.0	2	18.0
15-19	2	6.4	2	10.0	-	-
20-24	1	3.2	1	5.0	-	-
25-34	2	6.4	2	10.0	-	-
35-44	1	3.2	1	5.0	-	-
45-54	1	3.2	1	5.0	-	-
55-64	1	3.2	1	5.0	-	-
65-74	2	6.4	1	5.0	1	9.0
75-over	2	6.4	1	5.0	1	9.0
Total	31	100.0%	20	100.0%	11	100.0%

(2) Did Not Yield Right of Way Not at Intersection:

This type of violation accounted for 21.7% of total faults committed by pedestrians killed during 1972-1974. Analysis show this violation

is committed generally in all age groups except the very young (0-4) age, about a third were 65 years and over, and there were twice as many males than females. It was also shown that two thirds of this type of pedestrian faults occurred during the night. The following table shows evidence:

Distribution of Pedestrians Killed Who "Did Not Yield Right of Way, Not at Intersection" By Age, By Sex and By Day or Night: 1972-1974

Age	Total		Sex				Light Conditions			
	No.	%	Male		Female		Day		Night	
0-4	-	-	-	-	-	-	-	-	-	-
5-9	4	14.3	3	15.8	1	11.1	3	30.0	1	5.6
10-14	1	3.6	1	5.3	-	-	1	10.0	-	-
15-19	-	-	-	-	-	-	-	-	-	-
20-24	3	10.7	3	15.8	-	-	-	-	3	16.7
25-34	3	10.7	1	5.3	2	22.2	2	20.0	1	5.6
35-44	4	14.3	4	21.0	-	-	-	-	4	22.2
45-54	3	10.7	2	10.5	1	11.1	1	10.0	2	11.1
55-64	-	-	-	-	-	-	-	-	-	-
65-74	5	17.9	1	5.3	4	44.4	1	10.0	4	22.2
75&up	5	17.9	4	21.0	1	11.1	2	20.0	3	16.7
Total	28	100.0	19	100.0	9	100.0	10	100.0	18	100.0

(3) Had Been Drinking:

The third category of pedestrian violation during the review period was pedestrian "had been drinking" and this accounted for 14.0% of total faults of pedestrians killed. It is interesting to note that those pedestrians killed and who had been drinking belong to the age group 15-64 with the 20-34 years accounting for 55%.

All of the drinking pedestrians were killed during night-time, 70% from

8.

12:00 midnight to 5:59 A.M. The victims were predominantly male,95%.

The following shows drinking pedestrians killed by age group:

Distribution of Drinking Pedestrians Killed by Age Group: 1972-1974

<u>Age Group of Drinking Pedestrian</u>	<u>Percent Distribution</u>
0-4	-
5-9	-
10-14	-
15-19	5.0%
20-24	30.0%
25-34	25.0%
35-44	10.0%
45-54	10.0%
55-64	20.0%
65-74	-
75&up	-
Total	100.0%

10.0 Pedestrians Actions of Pedestrians Killed in Motor Vehicle Accidents:
Iowa, 1972-1974

Pedestrian actions ranked according to magnitude of occurrence showed that half of pedestrians killed were "crossing the road". Those "crossing the road not at intersections" accounted for 31.3% and those "crossing at intersections" accounted for 20.7%. "Walking on the roadway" or "standing on the roadway" accounted for about 20% of the total. It is also important to note that 5.6% of total were lying on the roadway (most of them intoxicated) and 5.0% were pushing or working on vehicle in the roadway. Chart 7 shows details.

11.0 Pedestrian Fatalities by City Population Size:

An investigation of the location of pedestrian accident occurrence

revealed that 70.0% of all pedestrians killed in traffic accidents occurred in cities or within the city limits during the three year review period.

The city of Des Moines which has a population of 201,404 had 22 pedestrian fatalities in 1972-1974 out of a total 63 traffic fatalities indicating 35%. This gives an annual pedestrian death rate of 3.64 pedestrians per 100,000 population for Des Moines.

Table 14 shows pedestrian fatalities by city population size during 1972 through 1974. From table it is shown that approximately one half of the total fatalities occurred in cities with population of 50,000-99,999, or about half of pedestrians killed occurred in only 7 cities with population size 50,000 and up.

NUMBER AND PERCENT DISTRIBUTION OF PEDESTRIANS
KILLED IN TRAFFIC ACCIDENTS, BY YEAR: IOWA,
1961-1974

TABLE 1:

Year	Pedestrians Killed	Total Traffic Fatalities	% Distribution of Pedestrians Killed To Total
1961	57	636	9.0
1962	52	618	8.4
1963	60	695	8.6
1964	68	834	8.2
1965	69	796	8.7
1966	67	904	7.4
1967	64	818	7.8
1968	58	870	6.7
1969	56	781	7.2
1970	67	911	7.4
1971	60	828	7.2
1972	59	874	6.8
1973	61	813	7.5
1974	59	685	8.6

PEDESTRIANS KILLED AND DEATH RATE
(PER 100,000 POPULATION) IOWA,
1961-1974

TABLE 2:

Year	Pedestrians Killed	Iowa Population	Death Rate Pedestrians Killed Per 100,000 Population
1961	57	2,768,210 ^{1/}	2.059
1962	52	2,774,494	1.874
1963	60	2,780,793	2.158
1964	68	2,787,106	2.440
1965	69	2,793,433	2.470
1966	67	2,799,775	2.393
1967	64	2,806,130	2.280
1968	58	2,812,501	2.062
1969	56	2,818,886	1.987
1970	67	2,825,285 ^{2/}	2.371
1971	60	2,831,821 *	2.119
1972	59	2,838,334 *	2.079
1973	61	2,844,011 *	2.145
1974	59	2,855,000 *	2.070

^{1/} Figures from Department of Health Vital Statistics Publication

^{2/} Census

* Projected based on 1970 census growth rate.

NUMBER AND PERCENT DISTRIBUTION
OF PEDESTRIANS KILLED BY AGE AND BY SEX
IOWA, 1972-1974

TABLE 3 :

Age Group	1972-1974						1972			1973			1974											
	T	%	M	%	F	%	T	%	M	%	F	%	T	%	M	%	F	%						
0-4	15	8.4	10	8.6	5	7.9	8	13.6	6	15.4	2	10.0	1	1.6	1	2.4	-	-	6	10.2	3	8.3	3	13.0
5-9	26	14.5	15	12.9	11	17.5	10	17.0	7	17.9	3	15.0	9	14.8	5	12.2	4	20.0	7	11.9	3	8.3	4	17.4
10-14	9	5.0	2	1.7	7	11.1	4	6.8	-	-	4	20.0	2	3.3	-	-	2	10.0	3	5.1	2	5.6	1	4.4
15-19	15	8.4	12	10.3	3	4.8	6	10.2	4	10.3	2	10.0	4	6.6	4	9.8	-	-	5	8.5	4	11.1	1	4.4
20-24	13	7.3	13	11.2	-	-	1	1.7	1	2.6	-	-	9	14.8	9	22.0	-	-	3	5.1	3	8.3	-	-
25-34	19	10.6	12	10.3	7	11.1	4	6.8	2	5.1	2	10.0	9	14.8	6	14.6	3	15.0	6	10.2	4	11.1	2	8.7
35-44	8	4.5	8	6.9	-	-	2	3.4	2	5.1	-	-	3	4.9	3	7.3	-	-	3	5.1	3	8.3	-	-
45-54	15	8.4	12	10.3	3	4.8	2	3.4	2	5.1	-	-	7	11.5	6	14.6	1	5.0	6	10.2	4	11.1	2	8.7
55-64	13	7.3	10	8.6	3	4.8	5	8.5	4	10.3	1	5.0	3	4.9	2	4.9	1	5.0	5	8.5	4	11.1	1	4.4
65-74	20	11.2	5	4.3	15	23.8	8	13.6	4	10.3	4	20.0	6	9.8	-	-	6	30.0	6	10.2	1	2.8	5	21.7
75&up	26	14.5	17	15.7	9	14.3	9	15.2	7	17.9	2	10.0	8	13.1	5	12.2	3	15.0	9	15.2	5	13.9	4	17.4
Total	179	100.0	116	100.0	63	100.0	59	100.0	39	100.0	20	100.0	61	100.0	41	100.0	20	100.0	59	100.0	36	100.0	23	100.0

* Details do not always add up to 100.0% due to rounding.

TABLE 4: NUMBER OF PERSONS INJURED BY AGE AND BY SEX: IOWA, 1972-1973
(PEDESTRIANS)

Age	1972-1973						1973			1972		
	Total	%	Male	%	Female	%	Total	Male	Female	Total	Male	Female
0-4	271	11.3	177	12.5	94	9.5	140	89	51	131	88	43
5-9	628	26.2	373	26.4	255	25.8	281	174	111	343	199	144
10-14	336	14.0	189	13.4	147	14.9	176	99	77	160	90	70
15-19	260	10.8	157	11.1	103	10.4	127	75	52	133	82	51
20-24	155	6.5	92	6.5	63	6.4	82	51	31	73	41	32
25-34	148	6.2	98	6.9	50	5.0	87	57	30	61	41	20
35-44	77	3.2	46	3.3	31	3.1	36	21	15	41	25	16
45-54	94	3.9	50	3.5	44	4.4	44	23	21	50	27	23
55-64	117	4.8	54	3.8	63	6.2	55	26	29	62	28	34
65-74	133	5.5	72	5.1	61	6.2	56	30	26	77	42	35
75&up	91	3.8	45	3.2	46	4.6	43	21	22	48	24	24
NS	92	3.8	58	4.1	34	3.4	41	25	16	51	33	18
Total	2402	100.0	1411	100.0	991	100.0	1172	691	481	1230	720	510
% Distribution	100%		58.8%		41.2%							

NUMBER AND PERCENT DISTRIBUTION OF PEDESTRIANS
KILLED BY AGE AND BY LIGHT CONDITION ^{1/}

IOWA: 1972-1974

TABLE 5:

Age Group	Total		1972-1974				1972			1973			1974		
	No.	%	Day		Night		Total	Day	Night	Total	Day	Night	Total	Day	Night
			No.	%	No.	%									
0-4	15	8.4	14	13.7	1	1.3	8	7	1	1	1	-	6	6	-
5-9	26	14.5	24	23.5	2	2.6	10	9	1	9	9	-	7	6	1
10-14	9	5.0	5	4.9	4	5.2	4	3	1	2	-	2	3	2	1
15-19	15	8.4	3	2.9	12	15.6	6	1	5	4	-	4	5	2	3
20-24	13	7.3	1	2.0	12	14.3	1	-	1	9	1	8	3	-	3
25-34	19	10.6	5	4.9	14	18.2	4	1	3	9	3	6	6	1	5
35-44	8	4.5	2	2.0	6	7.8	2	1	1	3	-	3	3	1	2
45-54	15	8.4	8	7.8	7	9.1	2	-	2	7	5	2	6	3	3
55-64	13	7.3	7	6.9	6	7.8	5	2	3	3	2	1	5	3	2
65-74	20	11.2	14	13.7	6	7.8	8	6	2	6	3	3	6	5	1
75&up	26	14.5	18	17.6	8	10.4	9	5	4	8	7	1	9	6	3
Total	179	100.0	101	100.0	78	100.0	59	35	24	61	31	30	59	35	24

^{1/} 6:00 A.M.-5:59 P.M. Day
6:00 P.M.-5:59 A.M. Night

TABLE 5A: COLLISION INVOLVEMENT INDEX OF PEDESTRIANS KILLED BY AGE AND BY LIGHT CONDITIONS, IOWA: 1972-1974

Age	Total 1972-1974		Day		Collision Index ^a
	No.	%	No.	%	%
0-4	15	8.4	14	13.9	+ 65.5
5-9	26	14.5	24	23.8	+ 64.1
10-14	9	5.0	5	4.9	- 2.0
15-19	15	8.4	3	3.0	- 64.3
20-24	13	7.3	1	1.0	- 86.3
25-34	19	10.6	5	4.9	-53.8
35-44	8	4.5	2	2.0	-55.6
45-54	15	8.4	8	7.9	- 6.0
55-64	13	7.3	7	6.9	- 5.5
65-74	20	11.2	14	13.9	+24.1
75&up	26	14.5	18	17.8	+22.8
Total	179	100.0	101	100.0	

a. The collision involvement index presents the collision involvement during the day in relation to its representation for both day and night within each age group. This difference is expressed in percent.

$$\frac{\text{Observed} - \text{Expected}}{\text{Expected}} \times 100 = \text{Collision Involvement Index (\%)} \text{ for each Age Group.}^b$$

b. Journal of Safety Research (Berkenstein et al., 1964).

PEDESTRIAN TRAFFIC DEATHS BY TIME OF DAY
IOWA: 1972-1974

TABLE 6:

Time	1972	1973	1974	1972-1974	
12:00-12:59 A.M.	-	1	4	5	2.8%
1:00- 1:59 A.M.	-	2	3	5	2.8%
2:00- 2:59 A.M.	2	6	1	9	5.0%
3:00- 3:59 A.M.	1	2	-	3	1.7%
4:00- 4:59 A.M.	1	2	-	3	1.7%
5:00- 5:59 A.M.	1	-	-	1	0.6%
6:00- 6:59 A.M.	-	5	2	7	3.9%
7:00- 7:59 A.M.	1	2	1	4	2.2%
8:00- 8:59 A.M.	2	2	-	4	2.2%
9:00- 9:59 A.M.	1	1	2	4	2.2%
10:00-10:59 A.M.	1	-	3	4	2.2%
11:00-11:59 A.M.	3	1	1	5	2.8%
12:00-12:59 P.M.	4	2	-	6	3.4%
1:00- 1:59 P.M.	2	2	5	9	5.0%
2:00- 2:59 P.M.	1	4	1	6	3.4%
3:00- 3:59 P.M.	12	3	5	20	11.2%
4:00- 4:59 P.M.	-	5	8	13	7.3%
5:00- 5:59 P.M.	6	1	7	14	7.8%
6:00- 6:59 P.M.	7	7	4	18	10.1%
7:00- 7:59 P.M.	1	3	4	8	4.5%
8:00- 8:59 P.M.	3	3	2	8	4.5%
9:00- 9:59 P.M.	6	3	2	11	6.2%
10:00-10:59 P.M.	2	1	3	6	3.4%
11:00-11:59 P.M.	2	3	1	6	3.4%
Total	59	61	59	179	100.0% ^{1/}

^{1/} Details don't always add up to 100.0% due to rounding

TABLE 7:

PEDESTRIAN FATALITIES BY AGE GROUP
 DURING THE TIME PERIOD 3:00-3:59 P.M.
 IOWA, 1972-1974

Age	1972	1973	1974	1972-1974	
0-4	2	-	3	5	25.0%
5-9	4	2	1	7	35.0%
10-14	1	-	-	1	5.0%
15-19	1	-	-	1	5.0%
20-24	-	-	-	-	-
25-34	1	-	-	1	5.0%
35-44	-	-	-	-	-
45-54	-	-	1	1	5.0%
55-64	2	-	-	2	10.0%
65-74	-	-	-	-	-
75&up	1	1	-	2	10.0%
Total	12	3	5	20	100.0%

DISTRIBUTION OF PEDESTRIANS KILLED BY MONTH
AND BY LIGHT CONDITIONS: IOWA, 1972-1974

Table 8:

Month	Total %		1972-1974				1972			1973			1974		
			Day	%	Night	%	Total	Day	Night	Total	Day	Night	Total	Day	Night
January	20	11.2	10	9.9	10	12.8	4	3	1	9	3	6	7	4	3
February	6	3.4	5	5.0	1	1.3	2	2	-	3	2	1	1	1	-
March	14	7.8	9	8.9	5	6.4	7	4	3	4	3	1	3	2	1
April	13	7.3	9	8.9	4	5.1	3	1	2	3	2	1	7	6	1
May	13	7.3	6	5.9	7	9.0	3	2	1	4	1	3	6	3	3
June	19	10.6	15	14.8	4	5.1	8	7	1	7	5	2	4	3	1
July	16	8.9	5	5.0	11	14.1	5	2	3	6	3	3	5	-	5
August	15	8.4	7	6.9	8	10.3	6	4	2	4	2	2	5	1	4
September	13	7.3	7	6.9	6	7.7	6	3	3	4	2	2	3	2	1
October	16	8.9	9	8.9	7	9.0	4	1	3	6	4	2	6	4	2
November	12	6.7	5	5.0	7	9.0	4	1	3	4	1	3	4	3	1
December	22	12.3	14	13.9	8	10.3	7	5	2	7	3	4	8	6	2
Total	179	100.0	101	100.0	78	100.0 ^{1/}	59	35	24	61	31	30	59	35	24

^{1/} Details do not always add up to 100% due to rounding.

PEDESTRIANS KILLED BY DAY OF WEEK AND BY LIGHT CONDITIONS
(DAY OR NIGHT) IOWA, 1972-1974

TABLE 9:

Day	Total		1972-1974 Day		Night		1972			1973			1974		
	No.	%	No.	%	No.	%	Total	Day	Night	Total	Day	Night	Total	Day	Night
Monday	15	8.4	10	9.9	5	6.4	5	2	3	2	2	-	8	6	2
Tuesday	27	15.1	15	14.9	12	15.4	8	5	3	12	6	6	7	4	3
Wednesday	31	17.3	24	23.8	7	9.0	6	5	1	12	9	3	13	10	3
Thursday	30	16.8	19	18.8	11	14.1	14	8	6	7	5	2	9	6	3
Friday	34	19.0	15	14.9	19	24.4	14	8	6	14	5	9	6	2	4
Saturday	23	12.8	9	8.9	14	18.0	7	3	4	9	2	7	7	4	3
Sunday	19	10.6	9	8.9	10	12.8	5	4	1	5	2	3	9	3	6
Total	179	100.0	101	100.0	78	100.0	59	35	24	61	31	30	59	35	24

NUMBER OF PEDESTRIANS KILLED BY PEDESTRIAN VIOLATIONS
IN MOTOR VEHICLE TRAFFIC ACCIDENTS: IOWA 1972-1974

TABLE 10:

Pedestrian Violations	1972-1974		1972		1973		1974	
	Total	%	Total	%	Total	%	Total	%
No Violation	50	27.9	16	27.1	18	29.5	16	27.1
Had Been Drinking	18	10.1	3	5.1	10	16.4	5	8.5
Disregarded Traffic Signal at Intersection	3	1.7	1	1.7	1	1.6	1	1.7
Did not Yield Right of way at Driveway	2	1.1	-	-	1	1.6	1	1.7
Inattention	8	4.5	5	8.5	2	3.3	1	1.7
Walking on Wrong Side of Road	14	7.8	7	11.9	4	6.6	3	5.1
Did not Yield Right of way at intersection	6	3.4	-	-	5	8.2	1	1.7
Did not Yield Right of way not at Intersection	28	15.6	9	15.2	9	14.8	10	17.0
Hitch-hiking on Road	2	1.1	1	1.7	-	-	1	1.7
Lack of Caution	31	17.3	12	20.3	6	9.8	13	22.0
Walking on Interstate	2	1.1	1	1.7	1	1.6	-	-
Jumped in Front of Vehicle or ran or walked Walked	14	7.8	3	5.1	4	6.6	7	11.9
Unknown or Not Stated	1	0.6	1	1.7	-	-	-	-
Total	179	100.0	59	100.0	61	100.0	59	100.0

NUMBER AND PERCENT DISTRIBUTION OF PEDESTRIANS KILLED
IN MOTOR VEHICLE TRAFFIC ACCIDENTS BY TYPE OF VEHICLE
IOWA, 1972-1974

TABLE 11:

Vehicle	1972 No.	1973 No.	1974 No.	1972-1974	
				No.	%
Passenger Car	43	44	43	130	72.6
Pick up Truck	5	7	9	21	11.7
Truck	4	5	3	12	6.7
Truck Tractor	-	1	1	2	1.1
Truck & Tractor(Semi)	1	2	-	3	1.7
Other Truck	1	1	-	2	1.7
Farm Tractor	-	-	-	-	-
Motor Cycle	-	-	1	1	0.6
School Bus	-	1	-	1	0.6
Others	1	-	-	1	0.6
Unknown	4	-	2	6	3.4
Total	59	61	59	179	100.0

PEDESTRIAN ACTIONS OF PEDESTRIANS KILLED
IN MOTOR VEHICLE TRAFFIC ACCIDENTS: IOWA
1972-1974

TABLE 12:

Pedestrian Actions	1972-1974		1972	1973	1974
	No.	%	No.	No.	No.
Crossing at Intersection	37	20.7	14	12	11
Crossing not at Intersection	56	31.3	23	17	16
Walking on Roadway with Traffic	18	10.1	8	8	2
Walking on Roadway against Traffic	5	2.8	1	-	4
Standing in Roadway	17	9.5	6	4	7
Getting on or off other Vehicle	1	0.6	-	-	1
Pushing or Working on Vehicle in Roadway	9	5.0	1	5	3
Playing in Roadway	4	2.2	1	-	3
Not in Roadway	7	3.9	1	5	1
Lying in Roadway	10	5.6	-	8	2
Other Actions	12	6.7	2	2	8
Not Stated	3	1.7	2	0	1
Total	179	100.0	59	61	59

PEDESTRIAN FATALITIES BY CITY POPULATION SIZE
IOWA, 1972-1974

TABLE 13:

City Population Size	1972-1974			1972		1973		1974	
	No. of Cities	No. of Fatalities	%	No. of Fatalities	%	No. of Fatalities	%	No. of Fatalities	%
200,000-249,999	1	22	17.5	7	16.7	7	15.9	8	20.0
100,000-199,999	1	5	4.0	1	2.4	2	4.5	2	5.0
50,000- 99,999	5	33	26.2	10	23.8	10	22.7	13	32.5
25,000- 49,999	7	13	10.3	3	7.1	5	11.4	5	12.5
10,000- 24,999	7	11	8.7	6	14.3	3	6.8	2	5.0
5,000- 9,999	13	16	12.7	7	16.7	6	13.6	3	7.5
1,000- 4,999	17	19	15.1	6	14.3	8	18.2	5	12.5
Less than 1,000	7	7	5.6	2	4.8	3	6.8	2	5.0
Total	58	126	100.0	42	100.0	44	100.0	40	100.0

PEDESTRIAN FATALITIES BY CITY: IOWA, 1972-

TABLE 14:

County	City	(1970) City Population	1972	1973	1974	Total
Polk	Des Moines	201,404	7	7	8	22
Linn	Cedar Rapids	110,642	1	2	2	5
Scott	Davenport	98,469	2	3	4	9
Woodbury	Sioux City	85,925	2	2	6	10
Black Hawk	Waterloo	75,533	3	-	1	4
Dubuque	Dubuque	62,309	1	2	2	5
Pottawattamie	Council Bluffs	60,348	2	3	-	5
Johnson	Iowa City	47,477	-	1	-	1
Story	Ames	39,505	-	-	2	2
Clinton	Clinton	34,719	-	1	1	2
Black Hawk	Cedar Falls	32,964	1	2	-	3
Cerro Gordo	Mason City	31,839	-	-	2	2
Wapello	Ottumwa	29,610	2	-	-	2
Marshall	Marshalltown	26,210	-	1	-	1
Scott	Bettendorf	22,315	2	1	-	3
Polk	West Des Moines	16,441	-	-	1	1
Lee	Keokuk	15,173	1	-	-	1
Clinton	Camanche	14,367	-	1	-	1

County	City	(1970) City Population	1972	1973	1974	Total
Lee	Fort Madison	13,996	-	1	-	1
Mahaska	Oskaloosa	11,224	1	-	-	1
Clay	Spencer	10,278	1	-	-	1
Jefferson	Fairfield	8,715	-	-	1	1
Poweshiek	Grinnell	8,402	1	1	-	2
Plymouth	Le Mars	8,159	1	-	-	1
Winneshiek	Decorah	7,703	-	1	-	1
Cherokee	Cherokee	7,272	1	-	-	1
Henry	Mount Pleasant	7,007	1	-	-	1
Dallas	Perry	6,906	-	1	-	1
Johnson	Coralville	6,605	-	2	-	2
Appanoose	Centerville	6,531	-	1	-	1
Hardin	Iowa Falls	6,454	1	-	-	1
Crawford	Denison	6,213	-	-	1	1
Montgomery	Red Oak	6,210	1	-	1	2
Page	Shenandoah	5,968	1	-	-	1
Delaware	Manchester	4,641	1	-	-	1
Madison	Winterset	3,686	-	-	2	2
Chickasaw	New Hampton	3,621	-	1	-	1

County	City	(1970) City Population	1972	1973	1974	Total
Clarke	Osceola	3,124	1	-	-	1
Tama	Tama	3,000	-	-	1	1
Audubon	Audubon	2,907	2	-	-	2
Grundy	Grundy Center	2,712	-	-	1	1
Lyon	Rock Rapids	2,632	-	1	-	1
Wright	Belmond	2,421	1	-	-	1
Muscatine	West Liberty	2,296	1	-	1	2
Clayton	Guttenberg	2,177	-	1	-	1
Louisa	Wapello	1,873	-	2	-	2
Guthrie	Guthrie Center	1,834	-	-	1	1
Boone	Ogden	1,661	1	-	-	1
Pottawattamie	Avoca	1,535	-	1	-	1
Carroll	Coon Rapids	1,381	-	1	-	1
Des Moines	Mediapolis	1,242	-	1	-	1
Shelby	Shelby	868	-	1	-	1
Ida	Battle Creek	837	-	1	-	1
Grundy	Wellsburg	754	1	-	-	1
Webster	Lehigh	739	-	1	-	1
Adair	Orient	324	-	-	1	1
Lee	Franklin	111	1	-	-	1

County	City	(1970)	1972	1973	1974	Total	
		City Population					
Louisa	Cotter	55	-	-	1	1	
Cities			42	44	40	126	70.4%
Countryside			17	17	19	53	29.6%
Total			59	61	59	179	100.0%

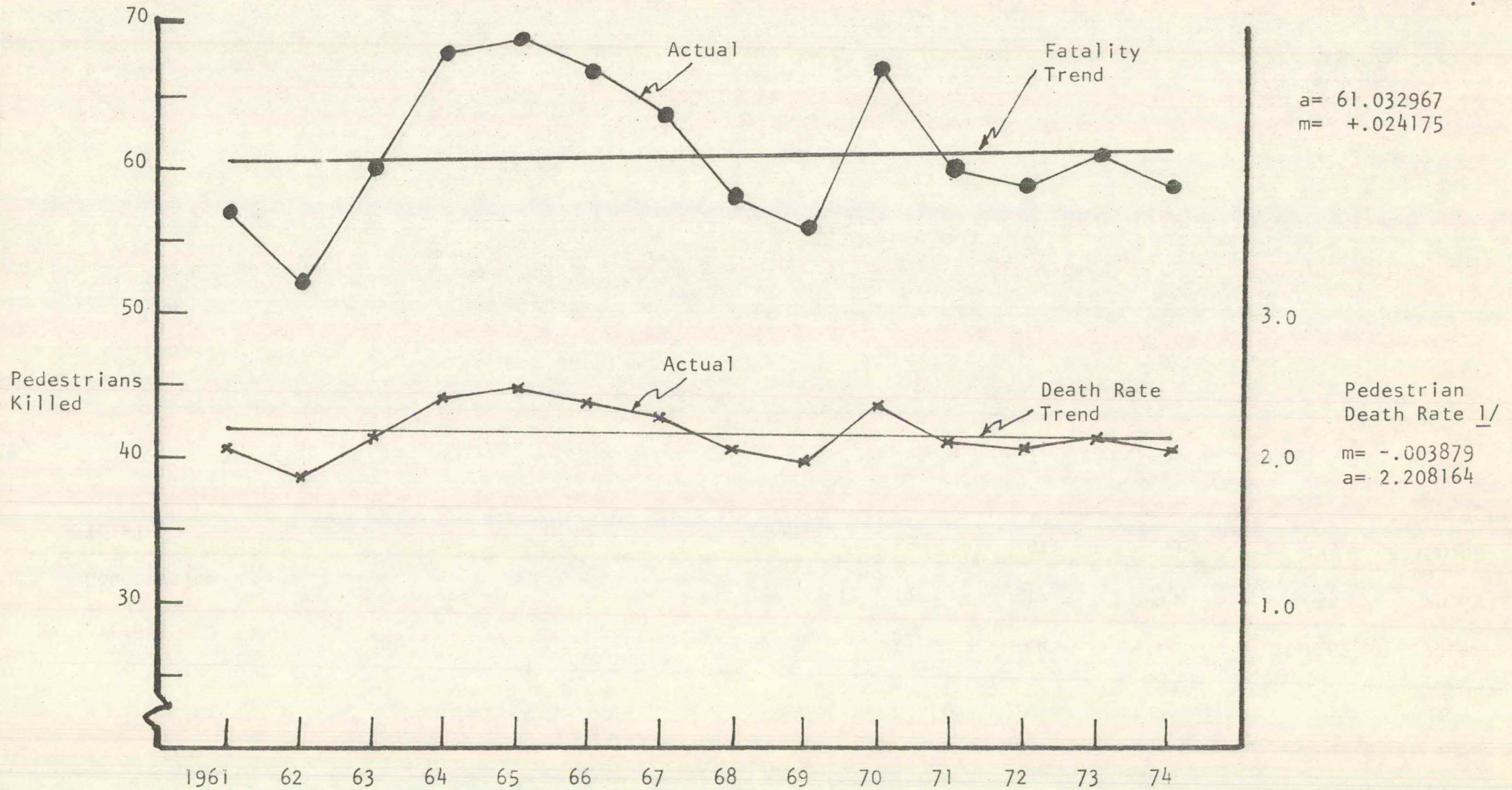


CHART 1: NUMBER OF PEDESTRIANS KILLED IN TRAFFIC ACCIDENTS AND TREND

STATE OF IOWA, 1961-1974

1/ Pedestrians killed per 100,000 population

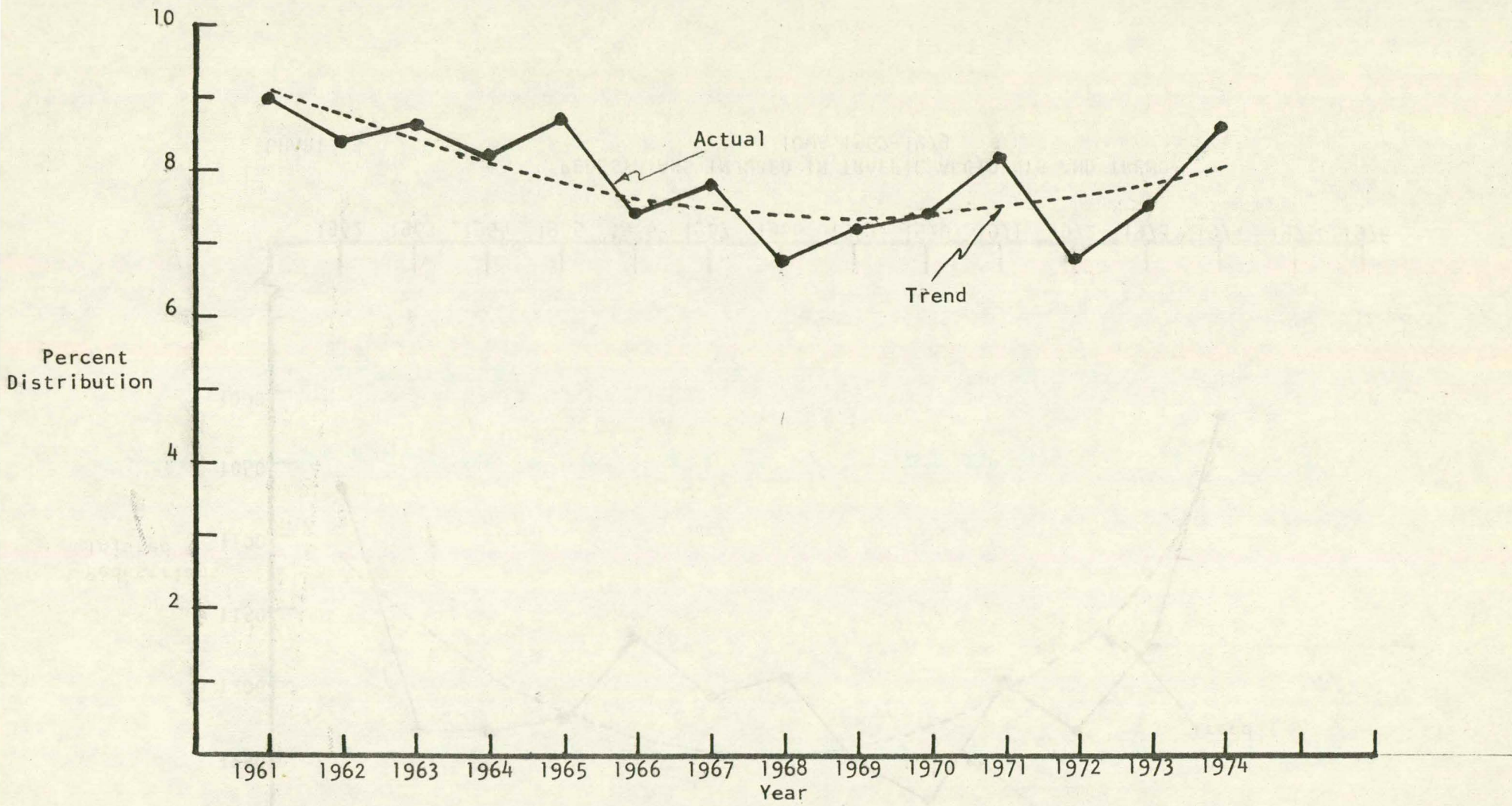


CHART 2 : PERCENT DISTRIBUTION OF PEDESTRIANS KILLED OF TOTAL TRAFFIC FATALITIES AND TREND: IOWA, 1961-1974

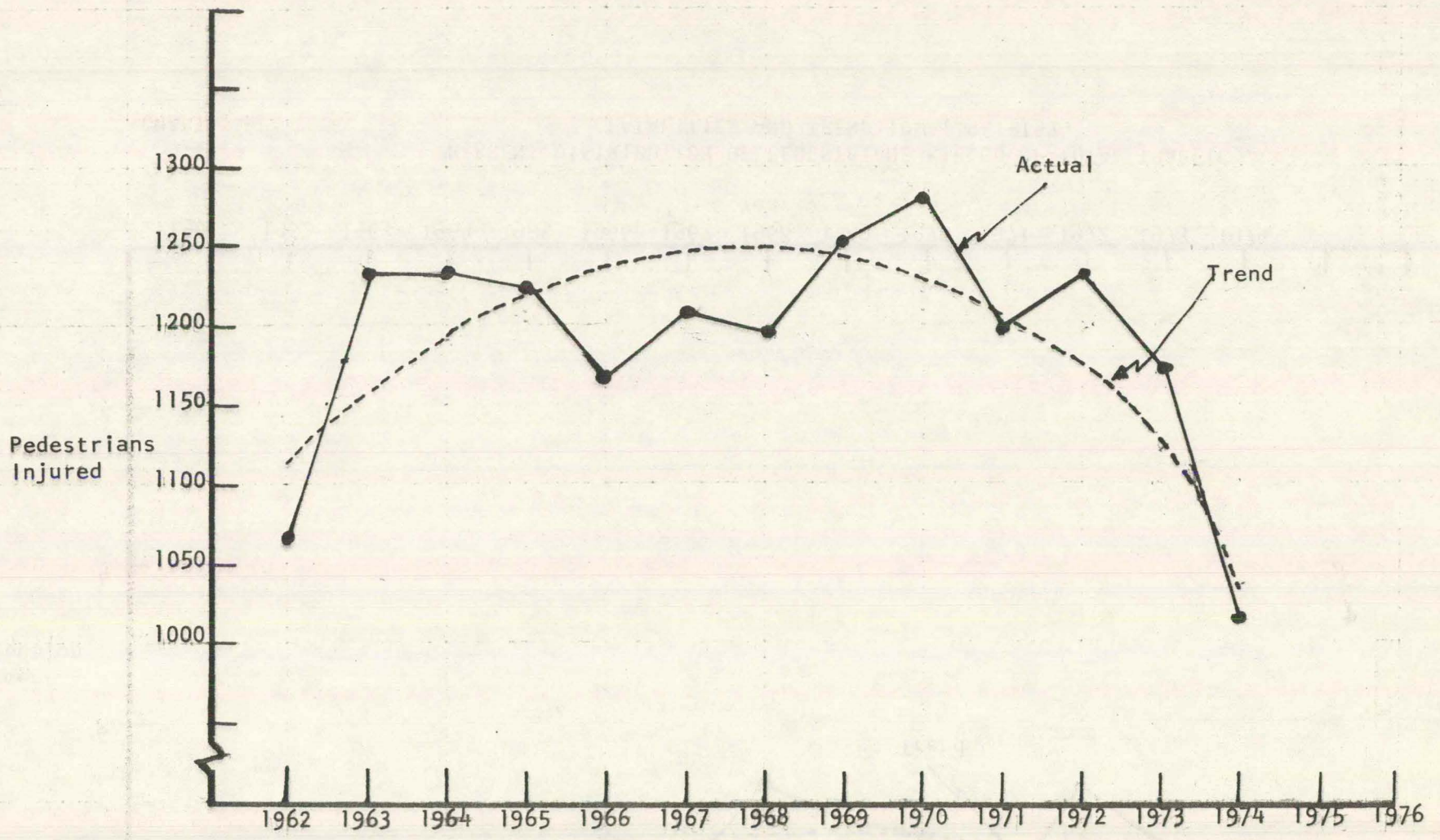
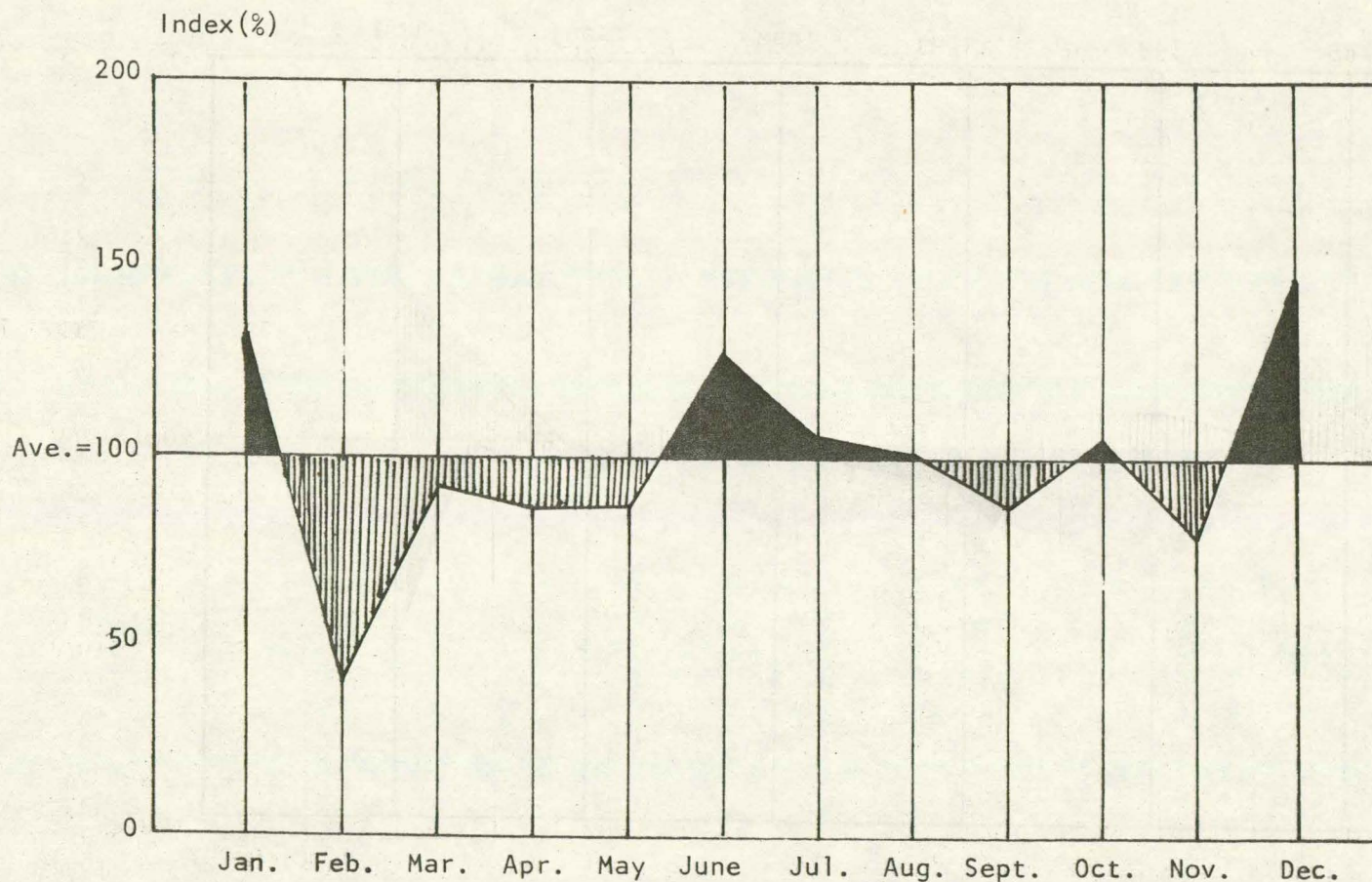


CHART: 3

PEDESTRIANS INJURED IN TRAFFIC ACCIDENTS AND TREND
IOWA, 1962-1973

Unadjusted Monthly Index
For Pedestrian Fatalities



Month	Index%
Jan.	134.4
Feb.	40.8
Mar.	93.6
April	87.6
May	87.6
June	127.2
July	106.8
Aug.	100.8
Sept.	87.6
Oct.	105.6
Nov.	80.4
Dec.	147.7
Ave. per Mon.	100.0

Peak Months	Rank	% more than usual
Dec.	(1)	47.7%
Jan.	(2)	34.4%
June	(3)	27.2%
July	(4)	6.8%
Oct.	(5)	5.6%
Aug.	(6)	.8%

CHART: 4

MONTHLY INDEX OF PEDESTRIAN FATALITIES
IOWA: 1972-1974

Above Average ■
Below Average ▨

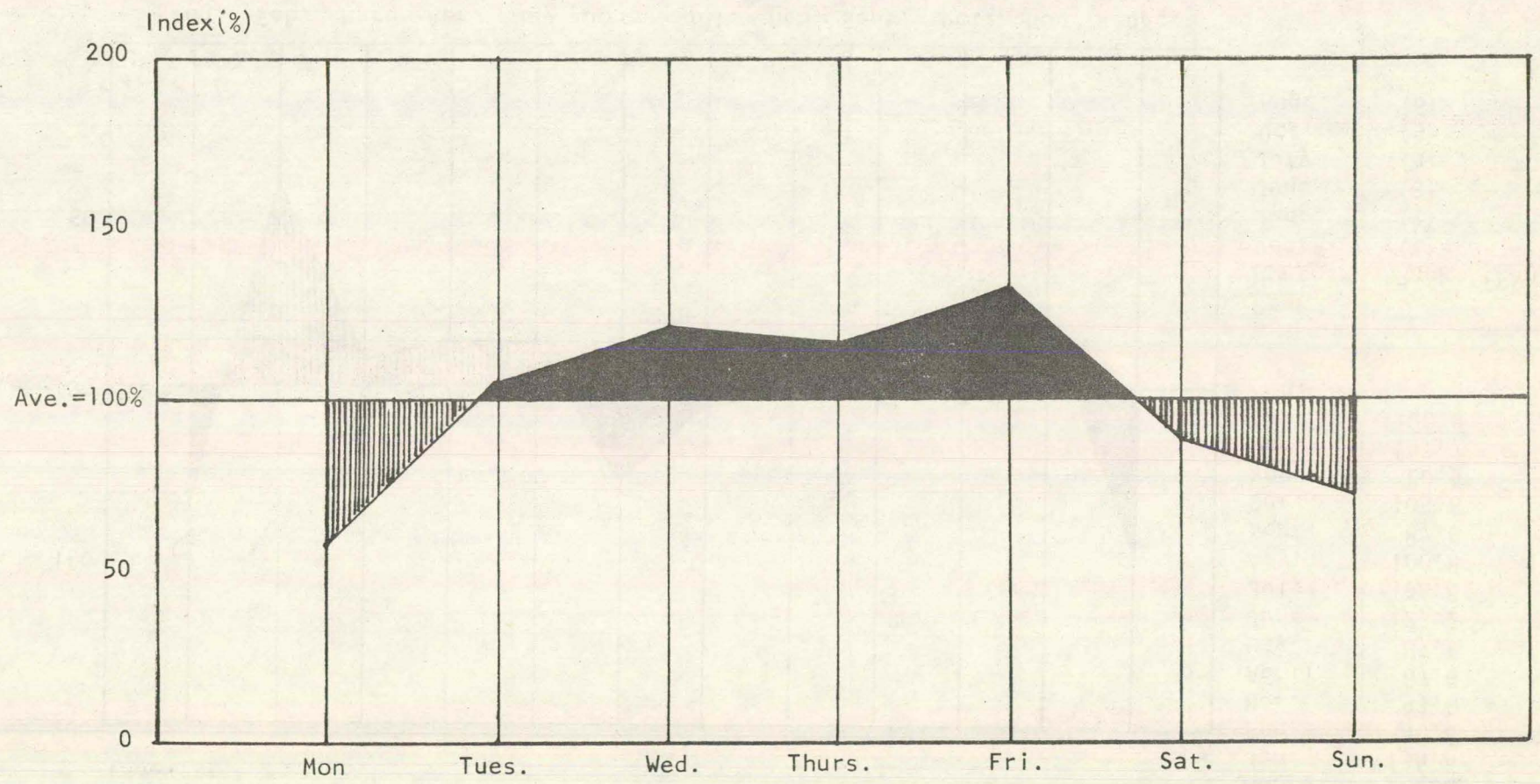
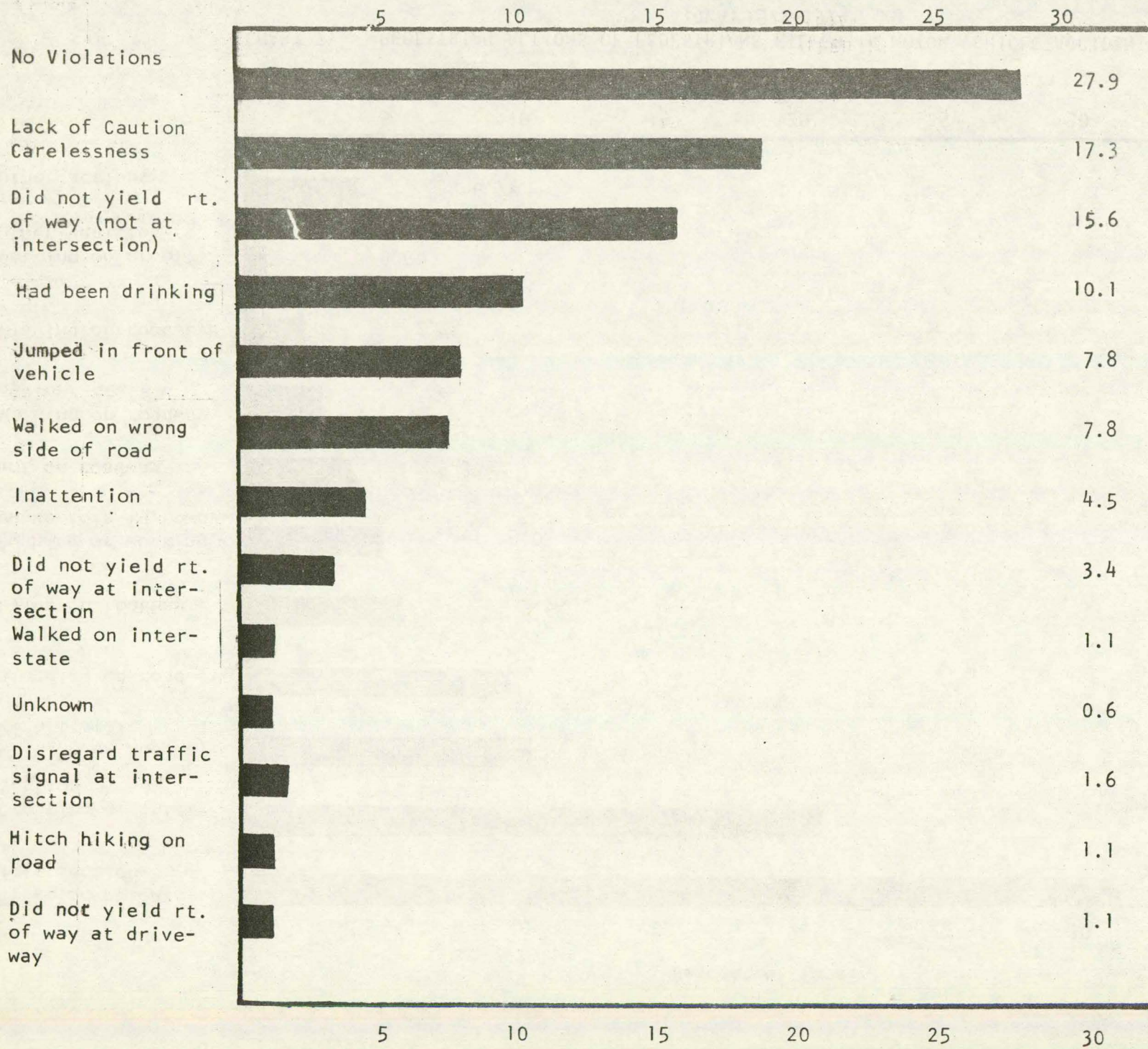


CHART:5

PEDESTRIAN FATALITY INDEX OF INTRA-WEEK VARIATION
IOWA:1972-1974

CHART 6: PEDESTRIAN VIOLATIONS BY TYPE: IOWA 1972-1974



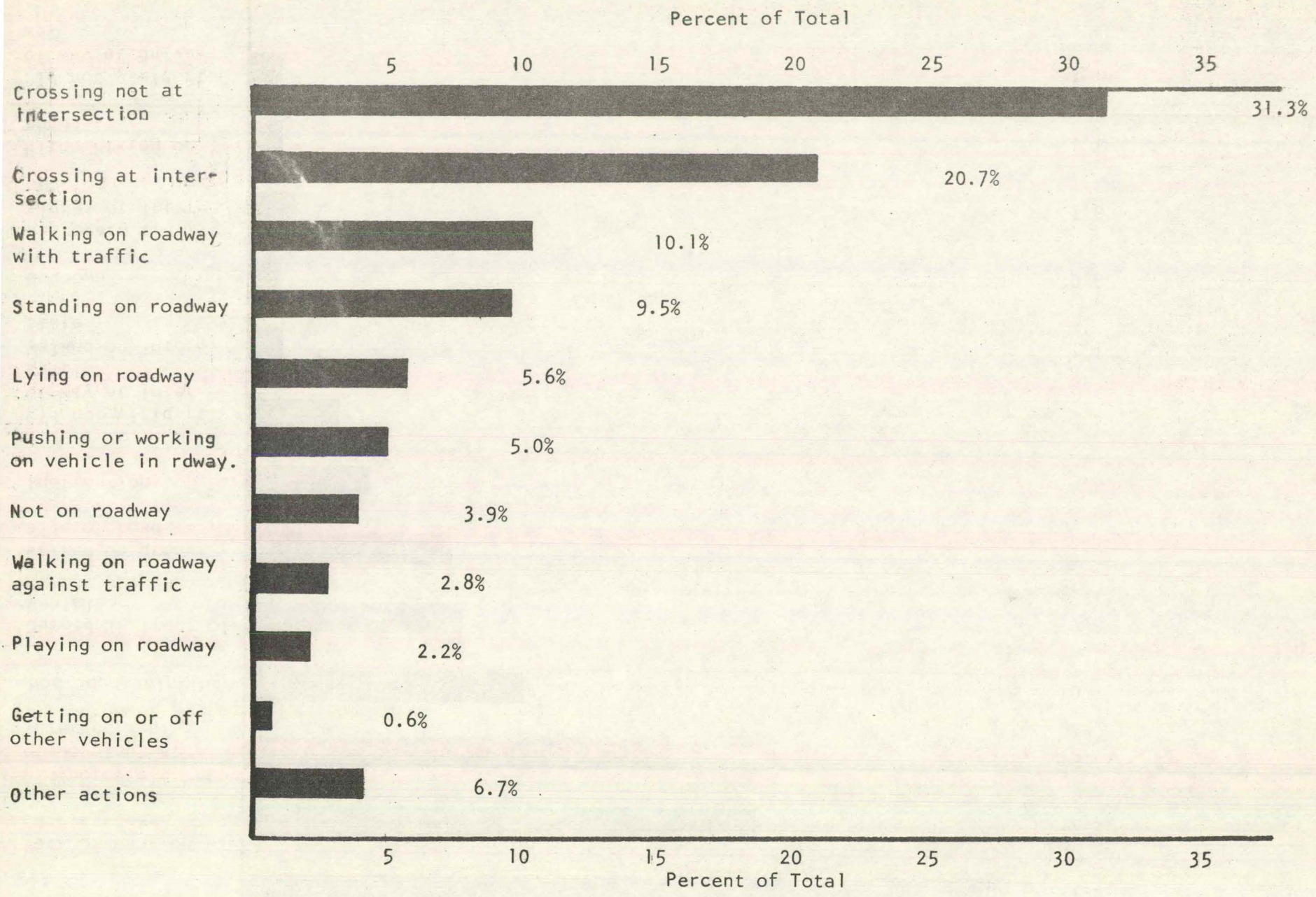


CHART 7: PEDESTRIAN ACTIONS OF PEDESTRIANS KILLED IN MOTOR VEHICLE ACCIDENTS
IOWA: 1972-1974

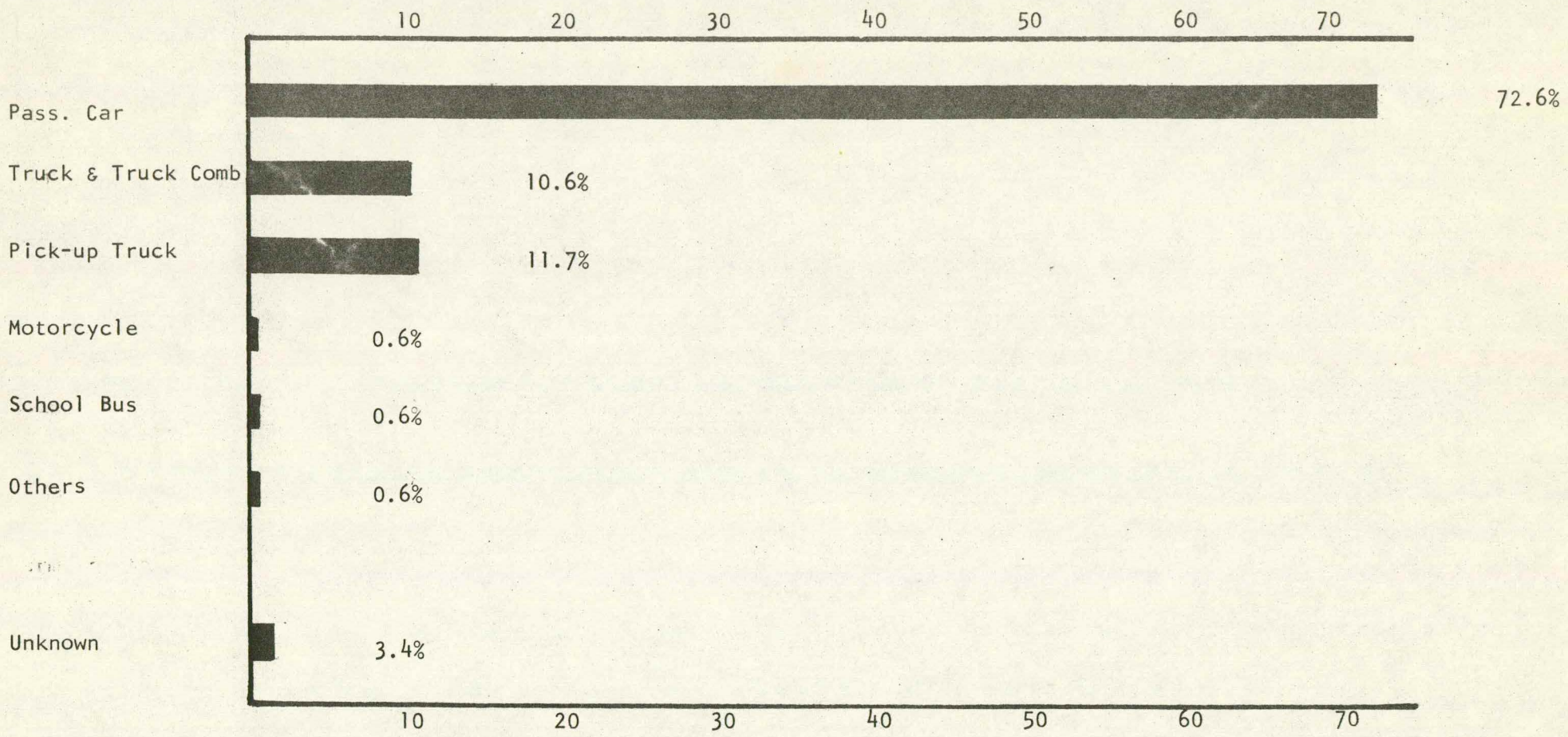


CHART 8: PERCENT DISTRIBUTION OF PEDESTRIANS KILLED IN MOTOR VEHICLE ACCIDENTS BY TYPE OF VEHICLE: 1972-1974, STATE OF IOWA

STATE LIBRARY OF IOWA



3 1723 02091 9890