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THE IMPACT OF
INCREASED POPULATION
on
DISCIPLINARY INCIDENTS

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NCJRS

OCT 17 1980

ACQUISITIONS

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Overview:

A basic correctional belief is that an increase in institutional population causes a proportional increase in the number of inmate disciplinary incidents. This study does not support this belief.

The Research Division examined Incident Reports written at the larger metropolitan correctional centers (Hartford, New Haven and Bridgeport) in each of the three summer months during 1976-79. During this time period, inmate populations at each center drastically fluctuated. The study found that:

1. There is no evidence that an increase in the inmate population at these community centers results in an increase in the number of inmate incidents reported;
2. The average number of counts per incident remains fairly constant despite fluctuations in the inmate populations;
3. While the average severity of incidents increased, the change is not statistically significant; and
4. The average number of days intervening between an incident and a disciplinary hearing for that incident does not rise with an increase in center population.

Incident Reports are, indeed, reports of behavior rather than behavior itself. While it may be logical to assume that officers faithfully report inmate behavior, other factors such as supervisors' expectations, officer-to-inmate ratio, or officers' attitudes about "writing tickets" may have as much to do with reporting incidents as does inmate behavior. These factors may not be "constant" from year to year. Such possibilities are, in fact, supported by some research on police officer reporting behavior, and by informal discussions with Connecticut correctional officers and administrators.

Nonetheless, this long-term study weakens the basic assumption that increases in correctional center population automatically trigger increases in inmate disciplinary incidents.

The Source Documents, Variables, and Calculations:

Two basic source documents for the New Haven, Hartford and Bridgeport Correctional Centers provided the necessary information: THE WEEKLY DISCIPLINARY REPORT submitted regularly to the Central Office by each facility, and the DAILY POPULATION REPORT generated by the Department's automated information system. The time period studied is June, July, and August, 1976-79. The following 5 variables were calculated from the weekly incident records: number of incidents reported, rate of incidents per 100 inmates, number of counts per incident, incident severity average and number of days between incident and hearing. The daily population report provided, in addition, the average daily inmate population (ADP).

The severity average was calculated by scoring 6 points for each Class A violation, 3 points for each Class B violation and 1 point for each Class C violation. These point scores were selected because they are commensurate with the maximum penalties which may be imposed for each of the three classes of institutional offense. The aggregate score for all counts comprising each incident was divided by the number of counts for that incident, yielding the incident severity average.

Tables 1 and 2 are summaries of data collected on all six variables. Figures 1 thru 4 graphically compare the average daily inmate population (ADP) with the number of incidents reported during the four year period for all three centers. Figures 5 thru 8 illustrate the relationship between the ADP and the severity of incidents at each of the centers during the four year period.

Also included in Figures 1 thru 8 is the size and significance of the Pearson product-moment correlation coefficient (r). When two variables are positively related (+), as one increases, the other follows. When two variables are negatively related (-), as one increases, the other decreases. The size of " r " shows the strength between the variables and can range from -1.00 to +1.00. Strengths below 0.30 are considered weak, while those above 0.80 are considered strong. "Significance" reports the probability that the described relationship would occur by chance.

Figures 10 thru 15 compare the three centers on each of the six variables.

Discussion:

COMPARISON OF ADP WITH NUMBER OF INCIDENTS

There is no strong evidence suggesting that the number of incidents in Connecticut's three largest correctional centers increases or decreases with similar movements in the ADP.

Table 1 shows that the ADP at the Hartford and New Haven Centers was on a downward trend during the summer months of 1976, but was moving up at Bridgeport. But, during the summer of 1977, the ADP at all three facilities was lower than the previous year. During the summer of 1978 an upward trend began, continuing through 1979.

During the four year period, as shown in Table 1, the average monthly number of incidents reported at all three centers peaked during 1978 at 159. This peak occurred while the ADP was also rising. However, during the summer of 1979 the average number of reported incidents declined even though the ADP still increased.

Figures 1-4, both through graphic illustration and statistical tests, illustrate that there is no consistent relationship between number of inmates and number of reported incidents. Where a strong relationship exists for one year at one center, it generally is inconsistent with other years' relationships at that center, is inconsistent with other centers' relationships for that year, and is of low statistical significance.

Not all the incidents reported during August 1979 are included in this data, due to the lag period between the incident and the consequent disciplinary hearing. It is felt, however, that this report would not be significantly different if this missing data were included.

COMPARISON OF ADP WITH RATE OF INCIDENTS PER 100 INMATES

The rate of incidents per 100 inmates at each center reached a high of 21.0 at the New Haven Center during August 1976 and fell to a low of 4.8 at the Bridgeport Center during August 1979. However, not all the August 1979 data is included; the rate may change. The previous low was 5.0, again reported at the Bridgeport Center in August 1976.

During summer 1979, when the average inmate population for all three centers reached its highest for the four year period, the average incident rate was 10.7. During the same time span the previous year, when the ADP was nearly 20.0% lower, the rate was nearly 30% higher. (See Table 1)

COMPARISON OF ADP WITH NUMBER OF COUNTS PER INCIDENT

With the exception of 1976, the Bridgeport Center has consistently recorded the highest number of counts per incident. (See Table 2) Yet, during the four year period, as Bridgeport's inmate population increased, the number of counts increased correspondingly despite a decrease in the number of incidents. (See Figure 13 & Table 1)

However, the average number of counts per incident for all three centers remained constant during the four summers: 1.7 for 1976 and 1.8 for each of the following years. (See Table 2)

COMPARISON OF ADP WITH SEVERITY OF INCIDENT

The severity scale devised for this report is scored as follows: a severity score of 6.0 is equal to a Class A infraction; a score of 3.0 equals a Class B infraction and a score of 1.0 corresponds to a Class C infraction. These values reflect the severity of the allowable penalties for the 3 classes of infractions.

Referring to Table 2 and Figures 5 thru 8, one can see that the severity of the incidents at all three centers, while rising during the past three years, is neither consistently nor statistically related to inmate population.

Not shown in either tables or figures is the proportion of each class of violation. During the past three summers the proportion of Class C infractions at all three centers has decreased from 21.0% in 1977 to 16.0% in 1979. The largest increase has been in Class A infractions, from 21.0% in 1977 to 31.0% in 1979.

Currently, of all incidents at the New Haven Center, 32% are Class A infractions while 53% are Class B. At the Hartford Center, 27% are Class A and 51% are Class B. The Bridgeport Center reports that 23% of its incidents are Class A, and 57% are Class B.

Chi-square tests of significance were performed to determine whether these changes in proportion are statistically significant. All tests indicate that the changes in proportion could as easily reflect chance as reflect changes in inmate behavior.

Thus, while the severity of reported behavior has slightly increased, neither the general increase, nor the underlying change in proportion of Class A, B, & C violations, can be statistically divorced from chance.

COMPARISON OF ADP WITH NUMBER OF DAYS BETWEEN INCIDENTS AND DISCIPLINARY HEARINGS

There is no evidence that an increase in inmate population has any bearing on the number of days required to hold a disciplinary hearing.

During summer 1979, with inmate population at its highest for the four years, the average time span between an incident and "its" hearing, as shown in Table 2, was 5.7 days. This interval is smaller than that of any of the previous three years.

The Hartford Center's interval has steadily declined during the four year period. The New Haven Center is always the quickest in holding hearings: quite often a hearing is held the day following the incident. The Bridgeport Center's time span has increased during the past four summers, though not in strict correspondence with its population.

Conclusion:

This study has produced the following unexpected findings:

1. There is no evidence that an increase in inmate population at the three metropolitan correctional centers results in an increase in the number of inmate incidents reported;
2. The average number of counts per incident has remained fairly constant despite fluctuations in the inmate population;
3. While the average severity of incidents has increased slightly, neither this change nor the underlying change in proportion of Class A, B, and C violations is statistically significant; and
4. The average number of days intervening between an incident and the disciplinary hearing for that incident does not rise with an increase in center population.

While this study may not be exhaustive, it weakens the tacit assumption that population increases cause increases in inmate disciplinary violations.

Areas of Further Study:

This report examined whether increases in urban correctional center population result in increases in four narrow areas. If there were sufficient interest, the study could profitably be expanded to include the following areas, for both institutions and centers: officer-to-inmate ratio, age of inmate, legal status of inmate, type of current offense, kinds of infraction (e.g. property, person), and severity of dispositions. It would likewise be profitable to study how dispositions change from Disciplinary Committee to Warden to Deputy to Commissioner.

Average daily population, Disciplinary incidents and Rate of Incidents at
Hartford, New Haven and Bridgeport Correctional Centers During June, July and August
of 1976, 1977, 1978 and 1979

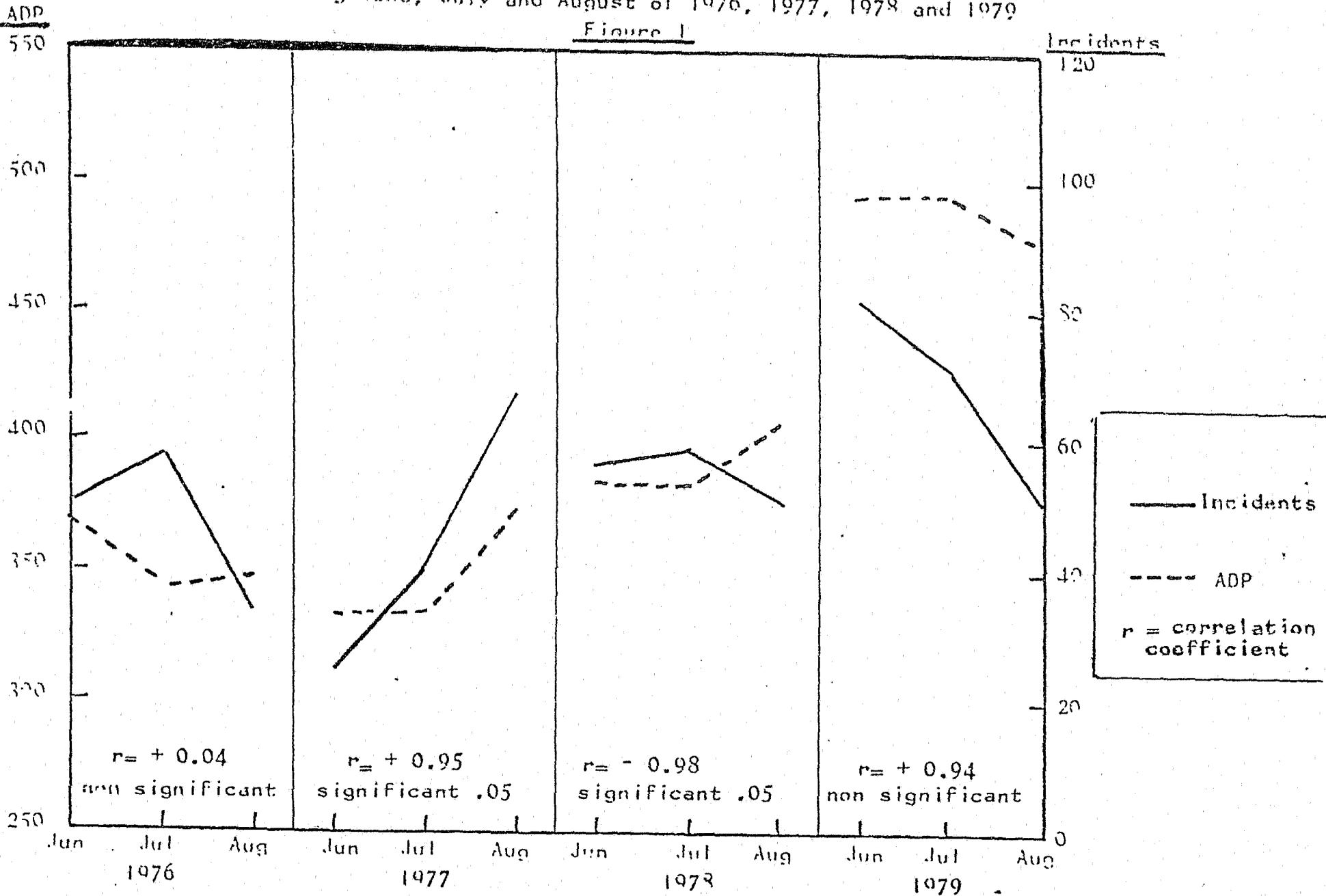
Facility & Year	June			July			August			3 Month Average		
	ADP	NO. INCIDENTS	RATE PER 100	ADP	NO. INCIDENTS	RATE PER 100	ADP	NO. INCIDENTS	RATE PER 100	ADP	NO. INCIDENTS	RATE PER 100
<u>Hartford</u>												
1976	370	50	13.5	345	58	16.8	349	34	9.7	355	47	13.2
1977	336	25	7.4	338	40	11.8	374	68	18.2	349	44	12.6
1978	386	57	14.8	385	59	15.3	408	51	12.5	393	56	14.2
1979	496	82	16.5	497	72	14.5	477	50	10.5	490	68	13.9
<u>New Haven</u>												
1976	349	56	16.0	350	45	12.9	324	68	21.0	341	56	16.4
1977	293	46	15.7	288	32	11.1	281	41	14.6	287	40	13.9
1978	318	41	12.9	343	57	16.6	346	63	18.2	336	54	16.1
1979	382	43	11.3	383	47	12.3	417	39	9.3	394	43	10.9
<u>Bridgeport</u>												
1976	427	66	15.5	442	50	11.3	444	22	5.0	438	46	10.5
1977	342	27	7.9	324	25	7.7	320	35	10.9	329	29	8.8
1978	357	47	13.2	354	58	16.4	358	42	11.7	356	49	13.8
1979	446	44	9.9	461	33	7.2	478	23	4.8	462	33	7.1
<u>All 3 Centers</u>												
1976	1146	172	15.0	1137	153	13.5	1117	124	11.1	1131	149	13.1
1977	971	98	10.1	950	97	10.2	975	144	14.8	965	113	11.7
1978	1061	145	13.7	1032	174	16.1	1112	156	14.0	1085	159	14.7
1979	1327	169	12.7	1341	152	11.3	1372	112	8.2	1346	144	10.7

Average Counts Per Incident, Severity Average Per Count and Average Time Span
Between Incident and Hearing at Hartford, New Haven and Bridgeport Correction Centers
During June, July and August of 1976, 1977, 1978 and 1979

Facility & Year	June			July			August			3 Month Average		
	COUNTS PER INCID.	SEVER-RATE	DAYS TO HEAR.	COUNTS PER INCID.	SEVER-RATE	DAYS TO HEAR.	COUNTS PER INCID.	SEVER-RATE	DAYS TO HEAR.	COUNTS PER INCID.	SEVER-RATE	DAYS TO HEAR.
Hartford												
1976	1.9	3.3	9.5	1.9	3.3	10.3	2.6	3.6	11.1	2.1	3.4	10.3
1977	1.8	3.3	9.6	1.5	3.0	17.6	1.8	2.8	8.5	1.7	3.0	11.9
1978	1.6	3.5	8.2	1.7	3.4	7.4	1.6	3.5	9.0	1.6	3.5	8.2
1979	1.4	3.7	6.2	1.8	3.3	6.5	1.4	3.7	5.3	1.5	3.6	6.0
New Haven												
1976	1.4	3.8	2.2	1.7	3.3	3.1	1.4	3.6	1.9	1.5	3.6	2.4
1977	1.3	3.3	2.2	1.5	3.9	2.9	1.5	3.7	1.7	1.4	3.6	2.3
1978	1.7	3.5	2.8	1.6	3.5	3.9	1.4	3.8	3.3	1.6	3.6	3.3
1979	1.6	3.8	4.1	1.6	3.9	5.0	1.6	3.8	4.7	1.6	3.8	4.6
Bridgeport												
1976	1.6	3.0	5.4	1.3	3.6	4.4	2.0	3.8	9.0	1.6	3.5	6.3
1977	2.4	3.3	6.1	2.2	3.2	5.2	2.3	3.0	4.9	2.3	3.2	5.4
1978	2.5	3.2	8.8	2.2	3.4	8.4	2.3	3.1	10.3	2.3	3.2	9.2
1979	2.1	3.2	6.4	2.1	3.7	5.5	2.5	3.6	7.7	2.2	3.5	6.5
All 3 Centers												
1976	1.6	3.4	5.7	1.6	3.4	5.9	2.0	3.7	7.3	1.7	3.5	6.3
1977	1.8	3.3	6.0	1.7	3.4	8.7	1.9	3.2	5.0	1.8	3.3	6.6
1978	1.9	3.4	6.6	1.8	3.4	6.6	1.8	3.5	7.5	1.8	3.4	6.9
1979	1.7	3.6	5.6	1.8	3.6	5.7	1.8	3.7	5.9	1.8	3.6	5.7

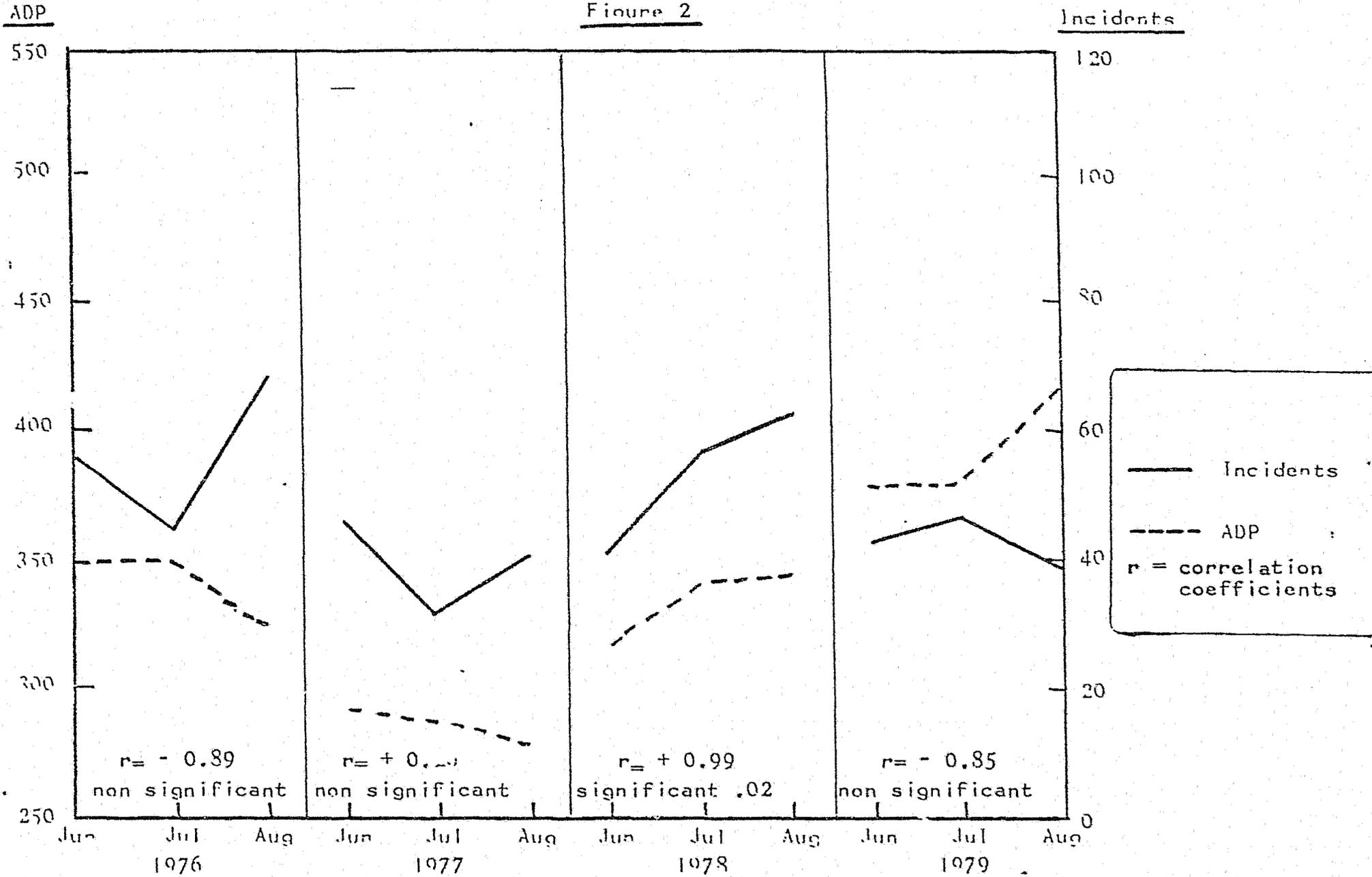
Average Daily Inmate Population and Number of Disciplinary Incidents
 at Hartford Correctional Center
 During June, July and August of 1976, 1977, 1978 and 1979

Figure 1

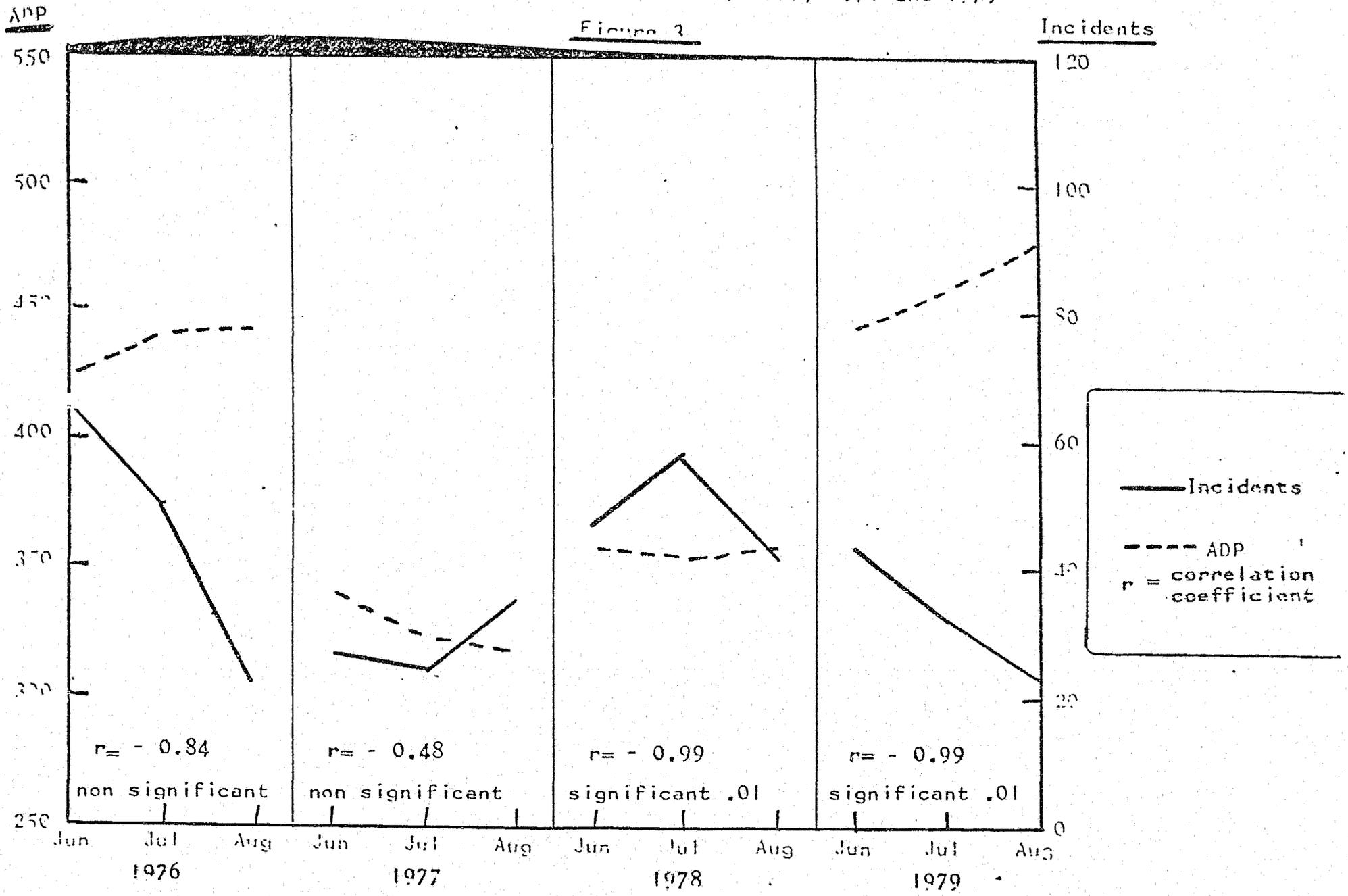


Average Daily Inmate Population and Number of Disciplinary Incidents
 at New Haven Correctional Center
 During June, July and August of 1976, 1977, 1978 and 1979

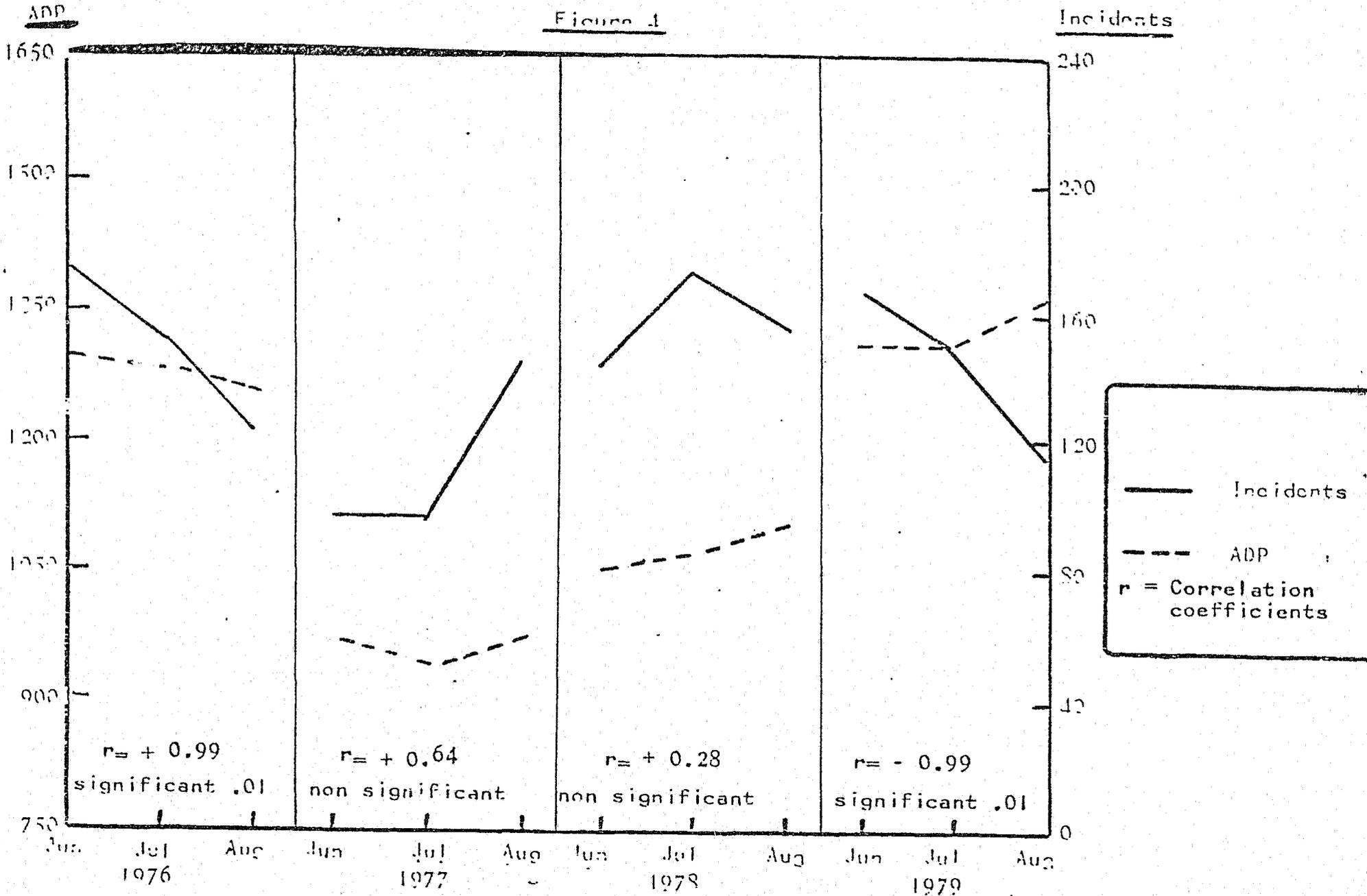
Figure 2



Monthly Inmate Population and Number of Disciplinary Incidents
 at Bridgeport Correctional Center
 During June, July and August of 1976, 1977, 1978 and 1979

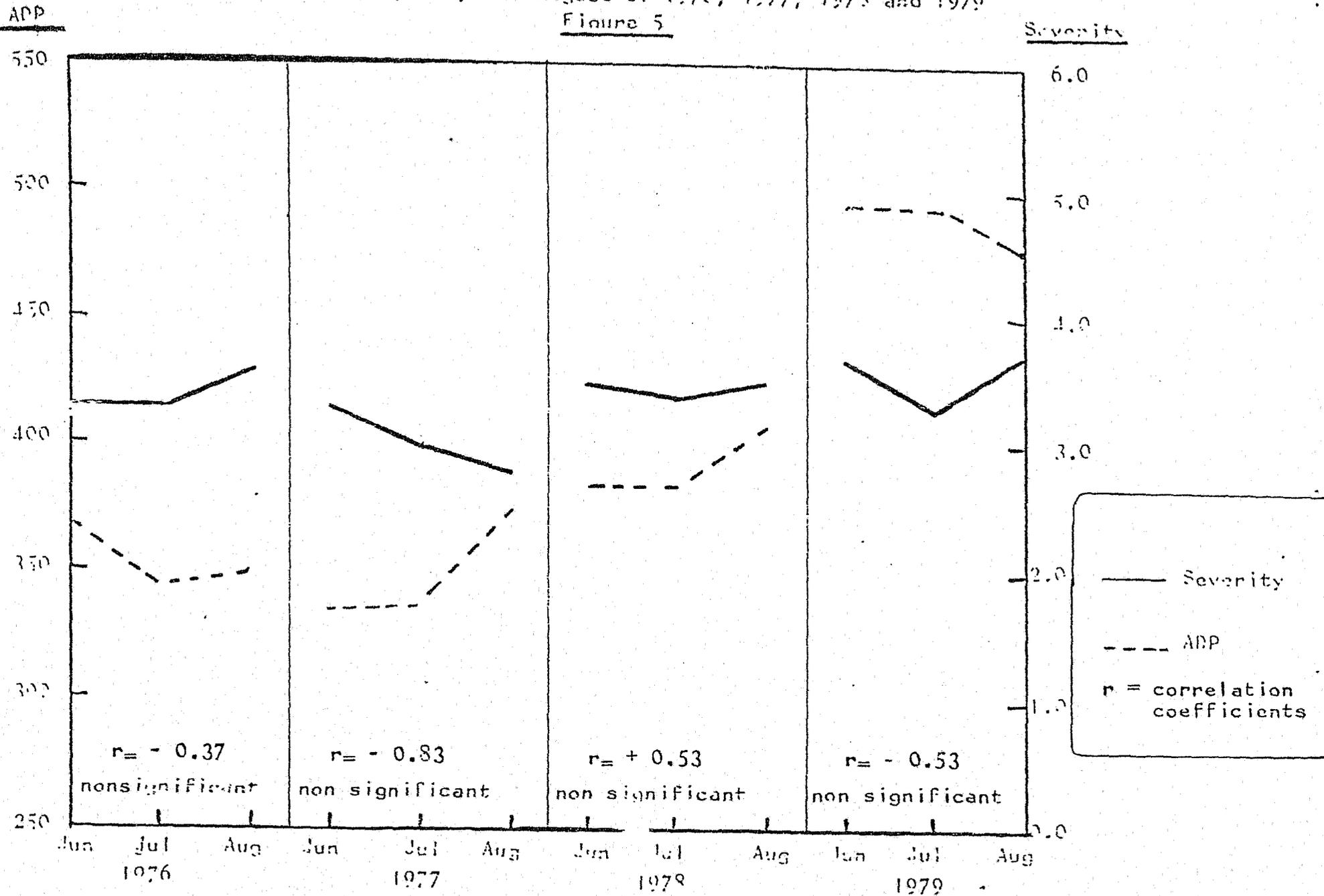


Population and Number of Disciplinary Incidents
 at Hartford, New Haven and Bridgeport Correction Centers
 During June, July and August of 1976, 1977, 1978 and 1979



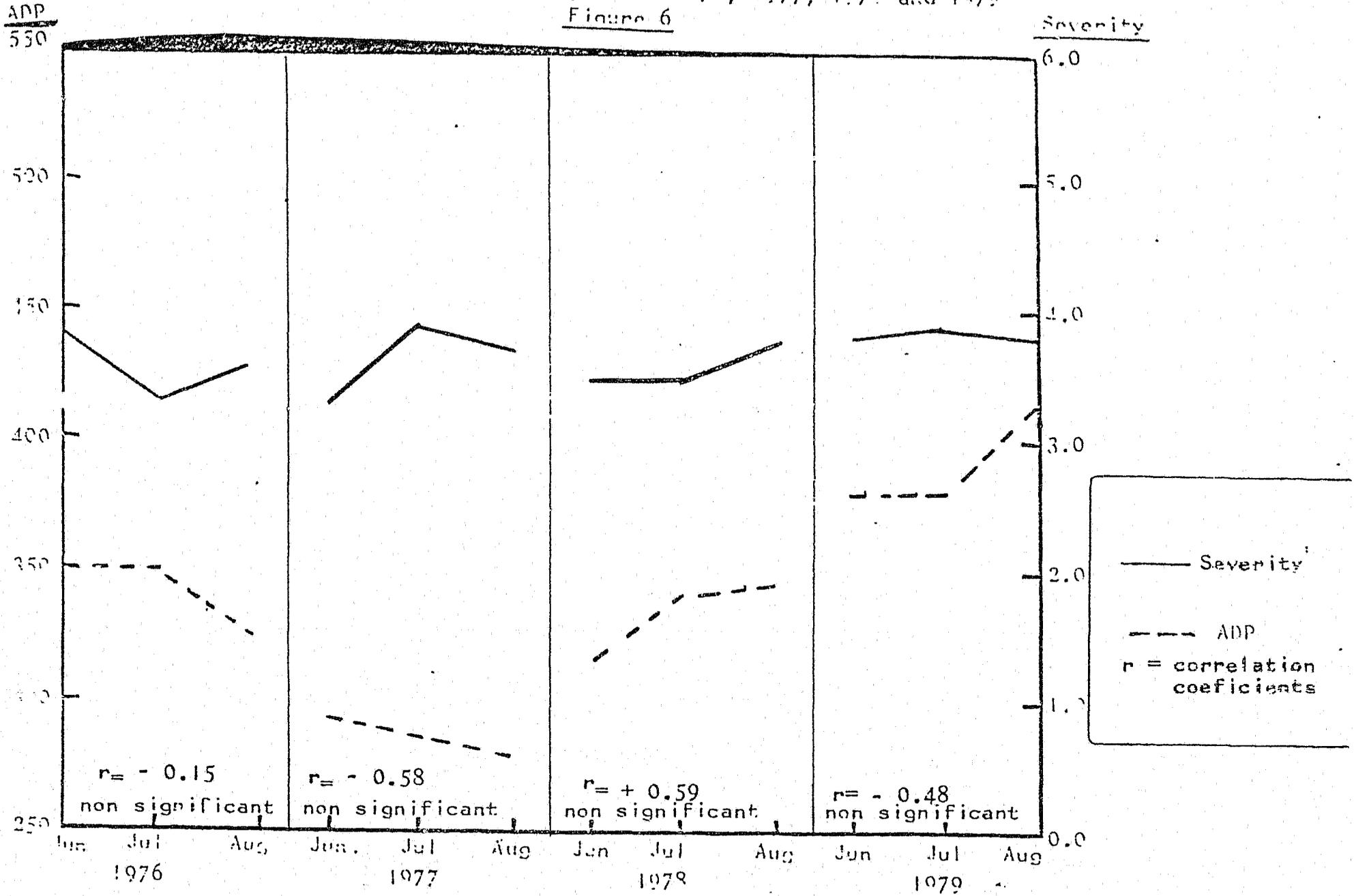
Average Daily Inmate Population and Severity of Disciplinary Incidents
 at Hartford Correctional Center
 During June, July and August of 1976, 1977, 1978 and 1979

Figure 5



Average Daily Inmate Population and Severity of Disciplinary Incidents
 at New Haven Correctional Center
 During June, July and August of 1976, 1977, 1978 and 1979

Figure 6

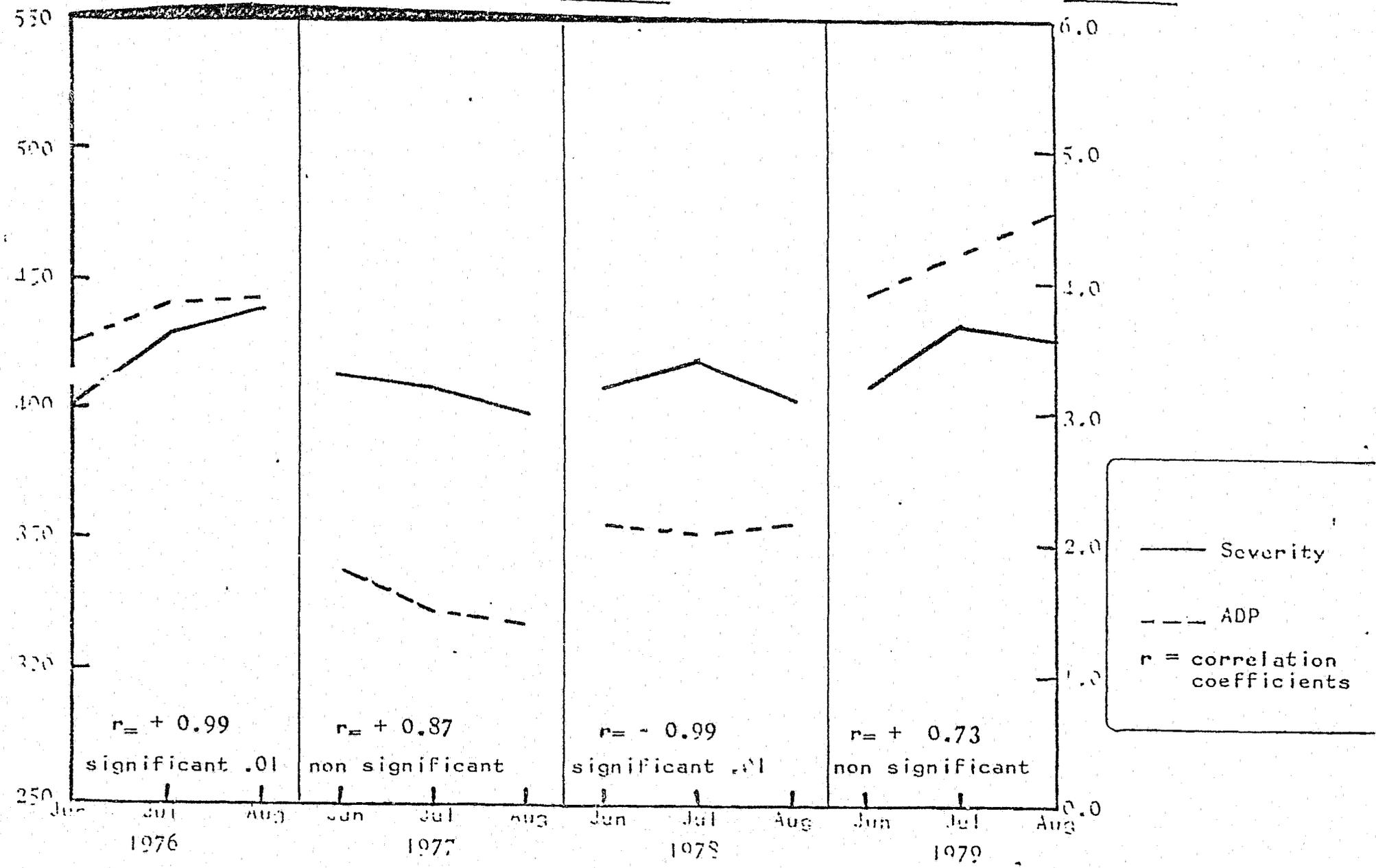


Average Daily Inmate Population and Severity of Disciplinary Incidents
 at Bridgeport Correctional Center
 During June, July and August of 1976, 1977, 1978 and 1979

Figure 7

ADP

Severity



Relationships between the Number of Disciplinary Incidents
 at Hartford, New Haven and Bridgeport Correction Centers
 During June, July and August of 1976, 1977, 1978 and 1979

Figure 8

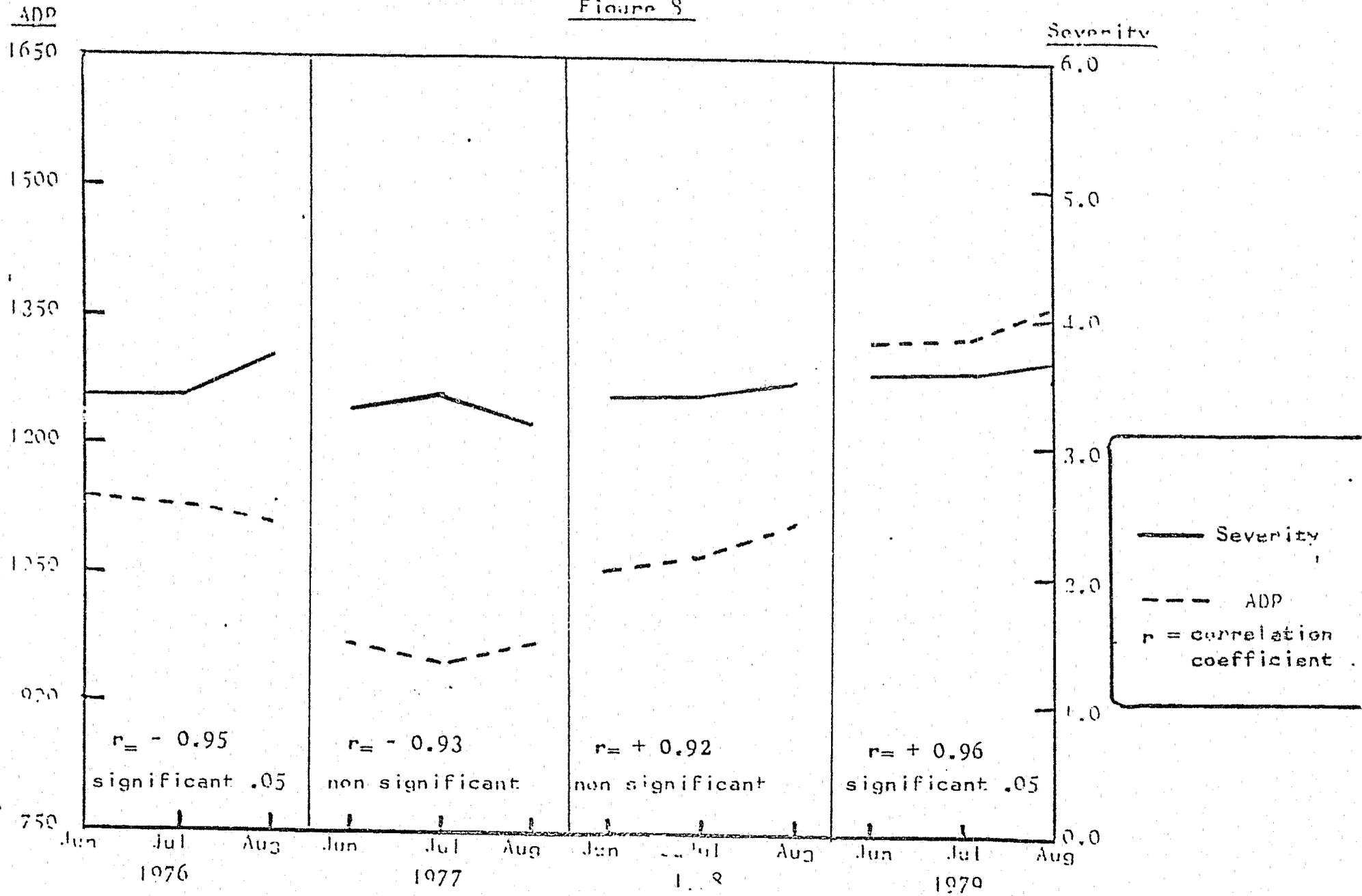


Figure 9

The following tables show the statistical significance of the correlation coefficient (r) shown in Figures 1 thru 8.

ADP/Number of Incidents

Year	Facilities			
	Hartford	New Haven	Bridgeport	All 3 Center
1976	NS	NS	NS	+ .01
1977	+ .05	NS	NS	NS
1978	- .05	+ .05	- .01	NS
1979	NS	NS	- .01	- .01

ADP/Severity of Incident

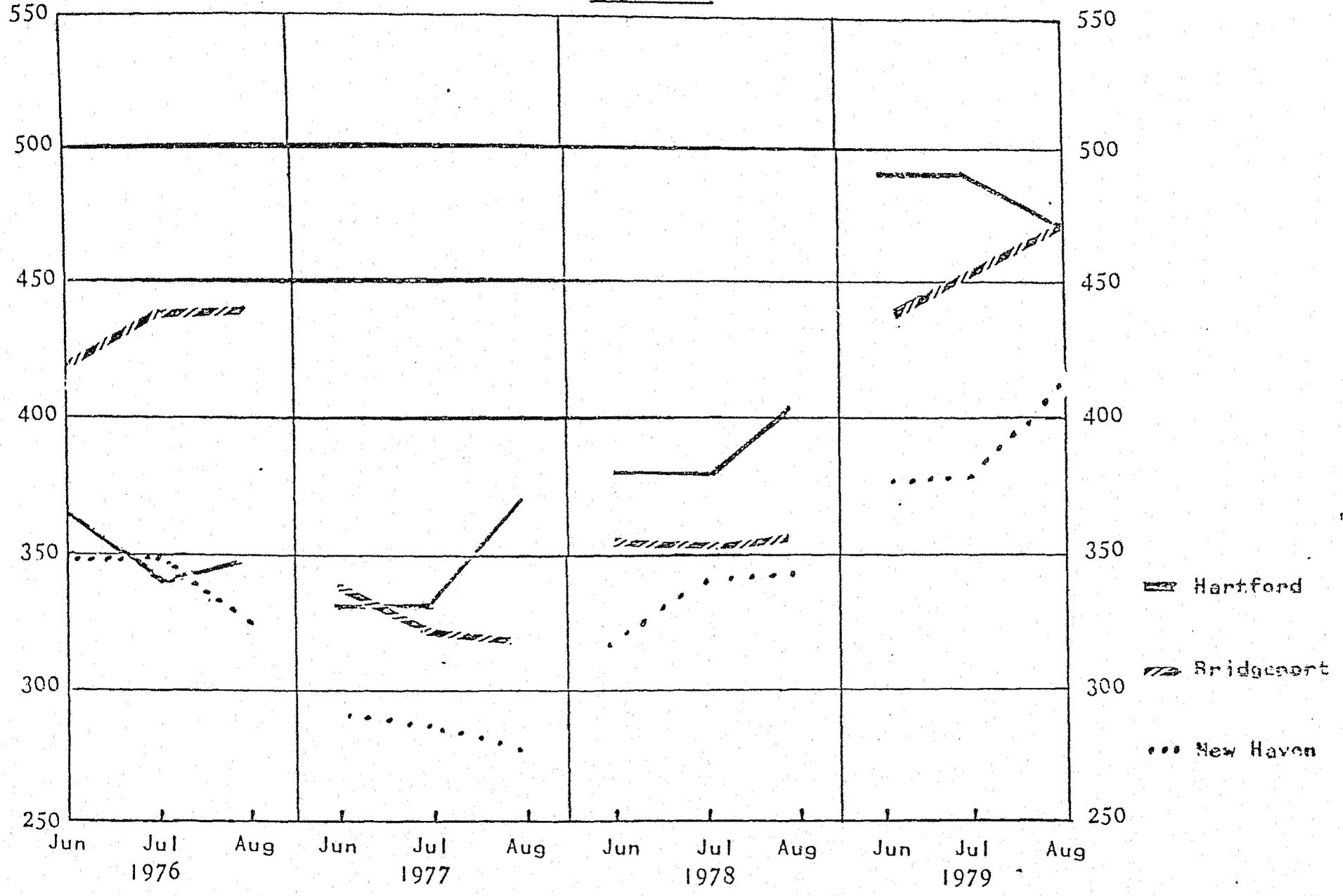
Year	Facilities			
	Hartford	New Haven	Bridgeport	All 3 Center
1976	NS	NS	+ .01	- .05
1977	NS	NS	NS	NS
1978	NS	NS	- .01	NS
1979	NS	NS	NS	+ .05

NS = non significant

Average Daily Inmate Population at the Hartford, Bridgeport and New Haven Correction Centers
 During June, July and August of 1976, 1977, 1978 and 1979

ADP

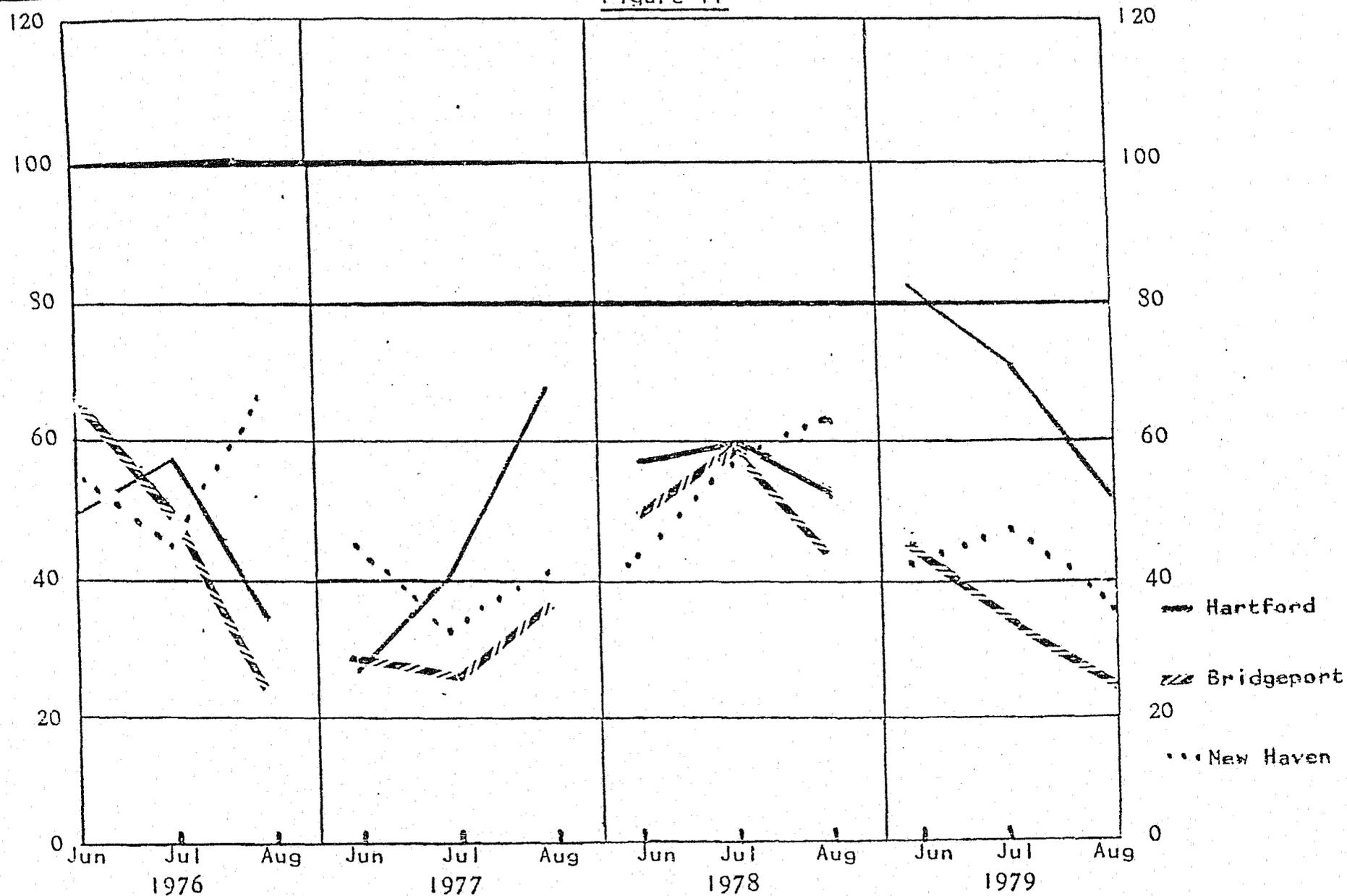
Figure 10



Number of Disciplinary Incidents at the Hartford, Bridgeport and New Haven Correction Centers
 During June, July and August of 1976, 1977, 1978 and 1979

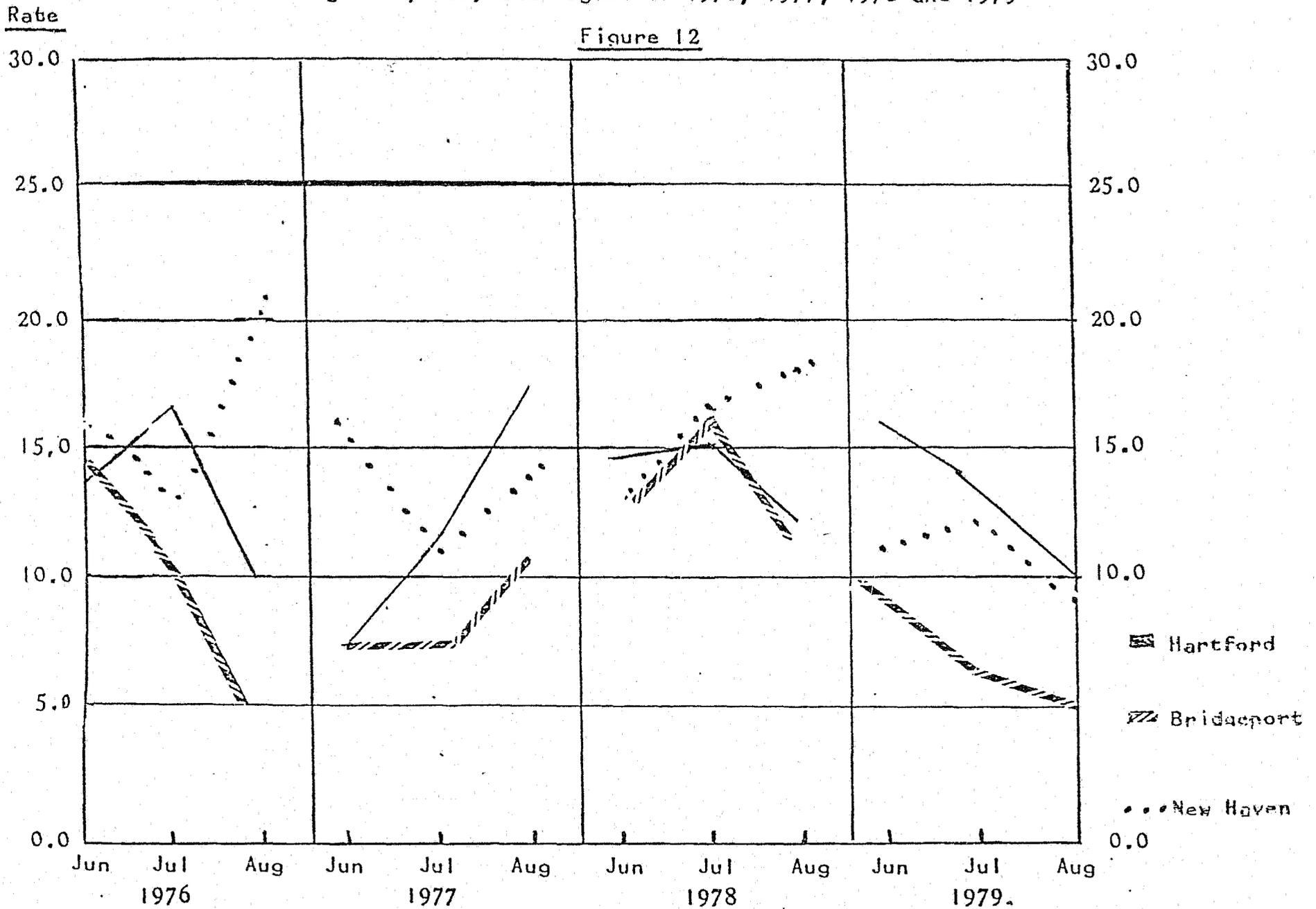
Incidents

Figure 11



Rate Per 100 Inmates of Incidents at the Hartford, Bridgeport and New Haven Correction Centers
During June, July and August of 1976, 1977, 1978 and 1979

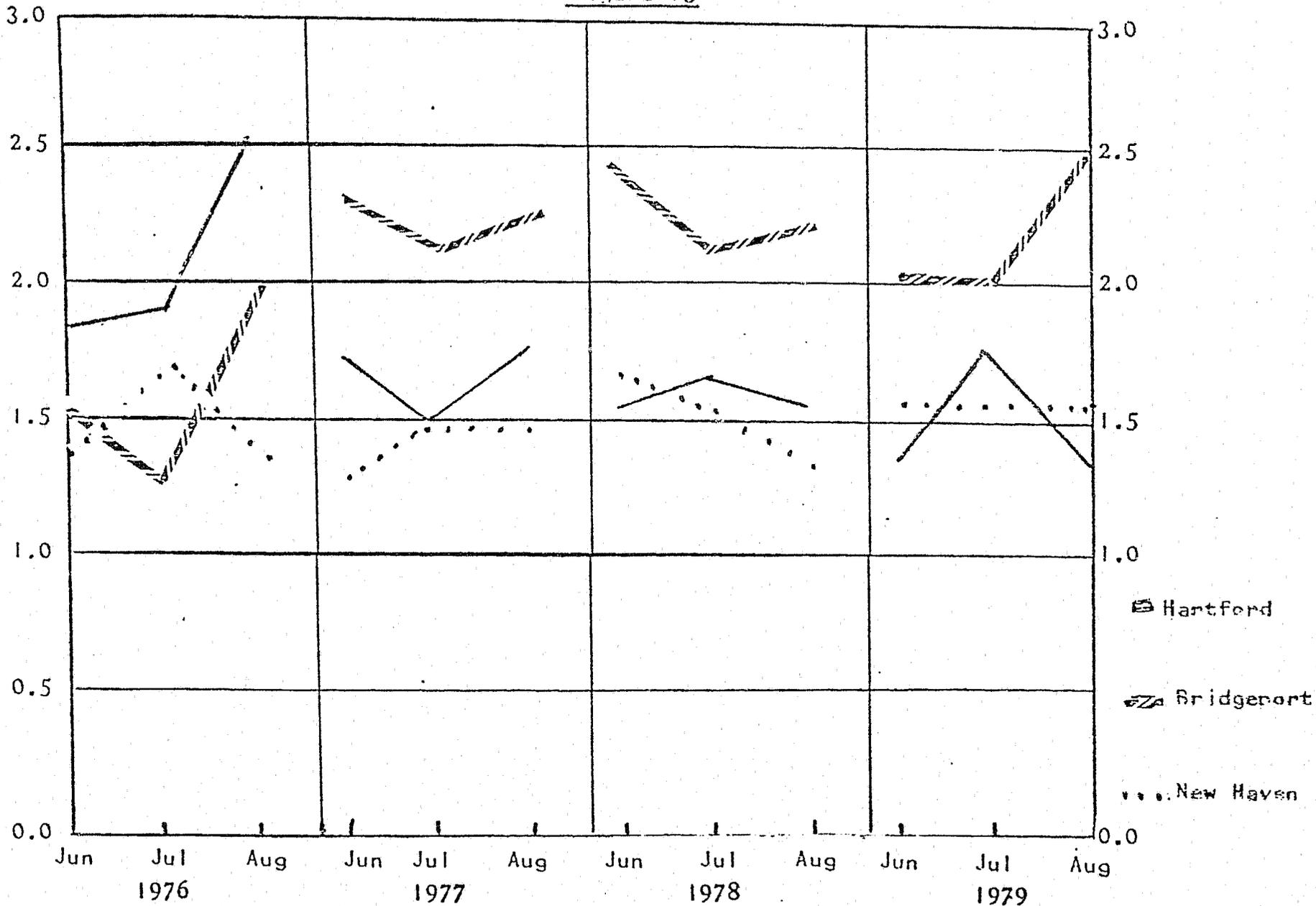
Figure 12



Number of Counts Per Incident at the Hartford, Bridgeport and New Haven Correction Centers
 During June, July and August of 1976, 1977, 1978 and 1979

Counts

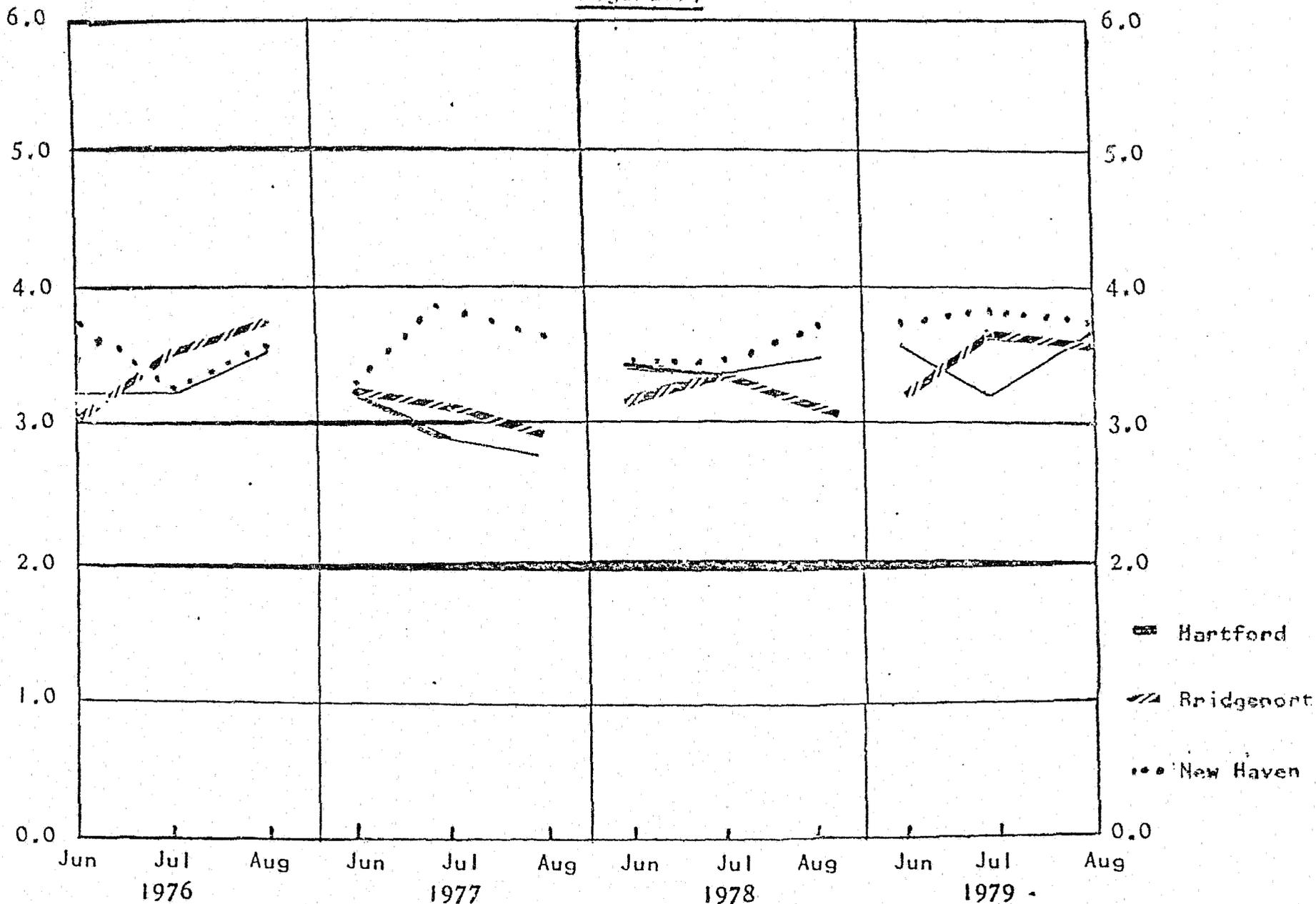
Figure 13



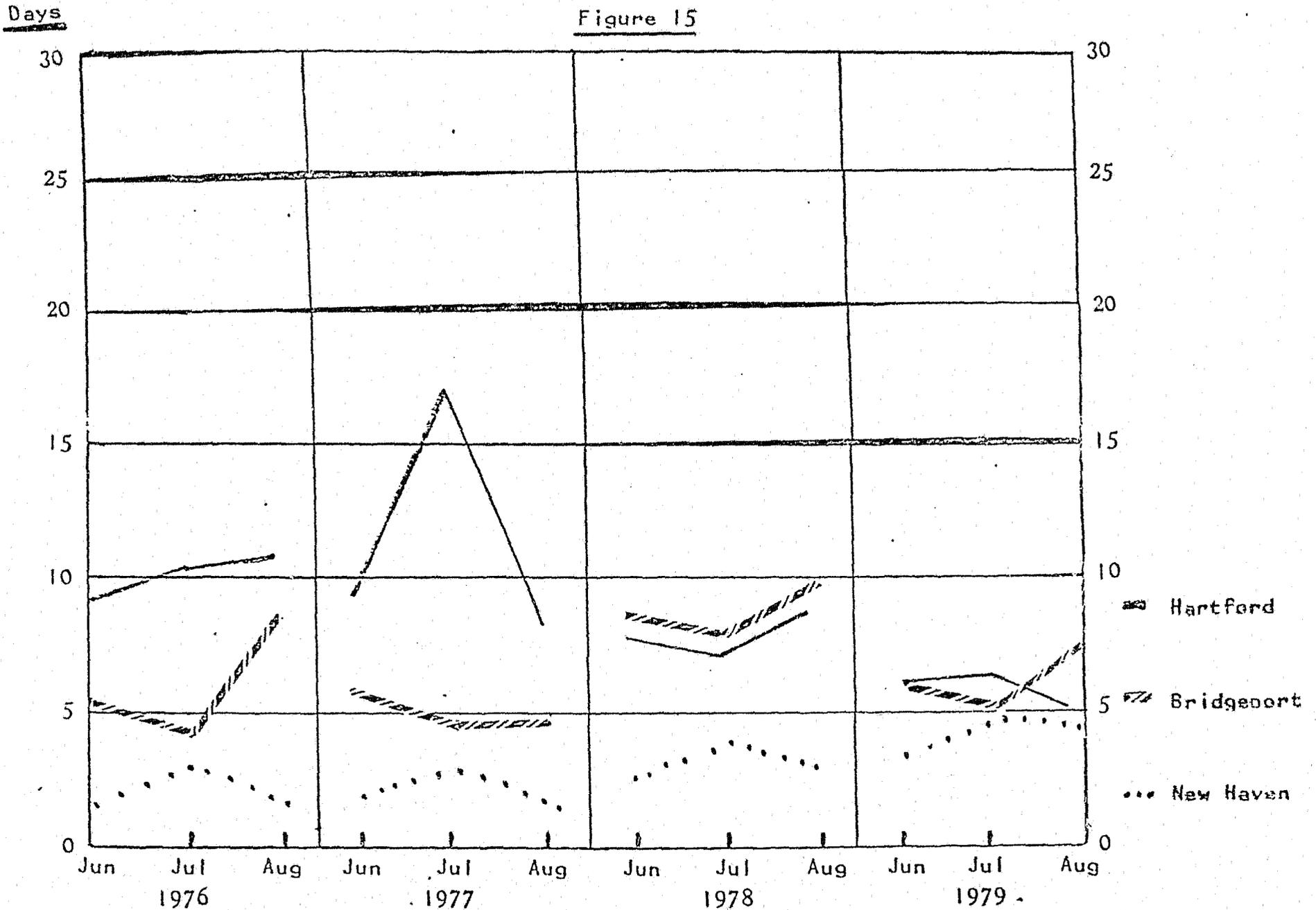
Severity of Incidents at the Hartford, Bridgeport and New Haven Correction Centers
 During June, July and August of 1976, 1977, 1978 and 1979

Severity

Figure 14



Number of Days From Incident to Hearing at the Hartford, Bridgeport and New Haven Centers
 During June, July and August of 1976, 1977, 1978 and 1979



END