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FINAL REPORT TITLE: ~~Violence among juveniles~~ Group offending + criminal careers:
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172228

FINAL REPORT
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**GROUP OFFENDING AND CRIMINAL CAREERS: VIOLENCE AMONG
JUVENILE DELINQUENTS AND ADULT OFFENDERS**

Submitted by

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The National Institute of Justice
U.S. Department of Justice

July 1996

Supported under award #92-IJ-CX-0007 from the National Institute of Justice, Office of Justice Programs, U.S. Department of Justice. Points of view in this document are those of the author alone and do not necessarily represent the official position of the U.S. Department of Justice. The data utilized here were made available by the Inter-University Consortium for Political and Social Research. The data for Delinquency in a Birth Cohort II: Philadelphia, 1958-1986 and The 1958 Philadelphia Birth Cohort Follow-up Survey were originally collected and prepared by R. M. Figlio, P. E. Tracy, and M. E. Wolfgang.

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Summary of Findings

1. The official data revealed that offenses committed during the juvenile years were more likely to involve co-offenders than those committed during the adult years. As age at offense increased, the percentage of offenses involving lone offenders also increased.
2. With respect to co-offending and type of offense, robbery and burglary were the crimes most commonly committed with others among males. Index offenses were more likely than non-Index offenses to be committed by multiple offenders (except among female juvenile offenses). Further, offenses involving multiple offenders had higher average offense severity scores than those involving lone offenders.
3. Of the crimes committed during the adult years, a greater proportion of the violent and property Index offenses involved lone offenders, compared with the offenses of juveniles. A majority of the murders, rapes, and aggravated assaults of adults were solitary offenses, while the opposite was true for juveniles.
4. The likelihood of co-offending also depended on the rank (serial) number of the offense. For offenses during the juvenile years, the number of co-offenders tended to decrease as the serial number of the offense increased; this pattern was especially noticeable at the high end of the continuum.
5. Logistic regression of solitary versus group offenses on offense and demographic variables revealed that Index offenses, those involving younger offenders, and those with white offenders were more likely to be group offenses.
6. Offender-based analysis indicated that offending careers commonly involved a mix of solitary and companionate offending. As frequency of offending increased, the likelihood of co-offending increased. Among chronic offenders, fewer than ten percent engaged in totally solitary offending.
7. Juvenile offenders were more likely than adults to commit a mix of offenses and to have criminal careers with totally companionate offending. Juvenile offenders committed a greater proportion of their offenses with others than did adults. This was also true among the subset of chronic offenders.
8. Those offenders who committed some or all of their crimes with others generally had earlier onset. Those with later (rather than earlier) juvenile age of onset tended to commit a greater proportion of their offenses with others. Among offenders with adult age of onset, the proportion of crimes committed with others tended to decline as age at onset increased.

9. In terms of frequency of offending and co-offending, versatile offenders committed more offenses, on the average. Further, the offenders who committed a mix of solitary and companionate offenses were more frequent offenders than either the totally solitary or totally companionate offenders, even when controlling for age of onset.
10. Among the recidivists, those who committed a mix of solitary and group offenses during their careers committed more offenses in total, and more Index offenses, than those who engaged in either totally lone or companionate offending.
11. Offenders who committed a violent crime engaged in a lower proportion of offenses with companions than non-violent offenders. In addition, those who offended with others tended to have earlier age at onset for a violent offense than offenders who acted alone. Further, when controlling for age of onset, those of mixed co-offending status committed more Index offenses and more violent offenses on average than totally solitary and totally companionate offenders.
12. Multivariate analysis revealed that knowledge of co-offending helped to explain the likelihood of being a violent offender. Compared with solitary offenders, those who committed a mix of offenses both alone and with others were more likely to be violent.
13. The survey data indicated that, in general, those who had a gang affiliation engaged in more criminal behavior than those who did not. In addition, among the males, having delinquent friends was associated with greater levels of criminal behavior. During the juvenile years, those with delinquent friends engaged in more delinquency in general, more Index offenses, more felonious assaults, more thefts, and more drug use.
14. Self-reported violence was correlated with delinquent peer affiliations. Among both males and females, those with delinquent friends were more likely to admit violent behavior than those without such associations. Further, for males, gang members were more likely to report engaging in violence than non-gang members.
15. An examination of co-offending status and self-reported offending revealed that those whose records indicated they acted alone were less likely to self-report any violent offending. Among males, the solitary offenders also self-reported fewer crimes in general than offenders who committed offenses with others. The majority of high-incidence self-report offenders committed some or all of their crimes with others.
16. The relationship between gang membership and co-offending depended on sex. Among males, a greater proportion of gang members than non-gang members were versatile offenders, and they were less likely to offend alone. Female gang members, on the other hand, were more likely to offend alone consistently than non-gang females.

I. Statement of the Problem

Policy-makers and academics have long had an interest in the role of the peer group in delinquency. The peer group is central to many criminological theories (e.g., Cohen, 1955; Cloward and Ohlin, 1960; Hirschi, 1969; Sutherland and Cressey, 1974; Elliott et al., 1985), and there is a good deal of evidence that most juvenile delinquency is group behavior (e.g., Eynon and Reckless, 1961; Erickson, 1973; Erickson and Jensen, 1977; Shapland, 1978; Aultman, 1980). NCVS data indicate that one-half of serious violent crime committed by juveniles is committed in groups (Snyder and Sickmund, 1995). Interestingly, however, a majority of those who commit crimes with others are not members of highly organized gangs but are actually persons who are engaging in delinquency with a loose network of companions (Reiss and Farrington, 1991). Morash (1983) found that most of the highly delinquent boys in her study were members of highly delinquent peer groups, but these groups did not resemble the stereotypical image of a gang.

Group offending is also important in the study of crime and delinquency because of its apparent relationship with the incidence (frequency) of offending (Hindelang 1976; Shapland, 1978). For example, analysis of the Cambridge study data revealed that those who were alone at the commission of their first offense (conviction) were less likely to recidivate than those whose first offense was committed with others (Reiss and Farrington, 1991). Research indicates that stable gang membership produces high rates of delinquency (Huizinga et al., 1994).

In his review of the literature, Reiss (1988) noted that many of our ideas about group offending are based on only a handful of studies. Empirical research in the field is insufficient in scope as well, and little data are available to those concerned with policies affecting the handling of offenders by the criminal justice system. With the exception of the Cambridge Study in Delinquent Development, the research in this area is largely cross-sectional and focuses only on

juveniles. Our knowledge of group offending and its relationship to violence and recidivism is also extremely limited. Almost no information is available to assess the relationship between solitary versus group offending and involvement in serious offenses (Reiss, 1988).

There are almost no studies on group offending which perform offender-based analyses. Data as basic as the number of co-offenders in a criminal event for a given offender's career are rare (Reiss, 1988). In addition, little attention has been given to group offending in relation to the transition from juvenile to adult criminal careers (Reiss, 1986, 1988). Analysis of conviction data from the Cambridge study of British working-class males, however, revealed that companionate offending is relatively common, with the average number of co-offenders being fairly stable into young adulthood (Reiss and Farrington, 1991). One study of the offenses of male juveniles in the 1958 Philadelphia birth cohort indicated that the presence of co-offenders was of some importance in predicting the rate of transition between certain offense types (Tontodonato, 1988).

We have yet to determine the role of group offending in the onset of, persistence in, and desistance from crime (Reiss, 1986). Group offending is a salient crime control issue in terms of its relationship to recidivism and age at onset into crime and delinquency. Its connection to violence in the criminal career awaits further study, and our intervention strategies need to be informed by such information.

Given evidence of a relationship between violent offending and chronicity (Guttridge et al., 1983; Tracy et al., 1990), information on the role of group offending in the delinquent/criminal career would prove valuable in the determination of which types of offenders should receive selective attention from the criminal justice system. As Reiss (1988) points out, it is possible that patterns of co-offending are tied to individual rates of offending, and we could better maximize

the incapacitation effect by intervening early in the delinquent and criminal careers of high rate offenders.

There is therefore a pressing need for the analysis of data that focuses on the frequency and severity of group offending in order to assess the role of companionate offending over the course of the criminal career. In addition, the examination of this issue with a large urban cohort in their crime-prone years would produce needed information on the characteristics of group offenders, the relationship of group offending to violent crime, and the relative importance of group offending during the juvenile and adult years. Given support for a link between violence and co-offending (Klein and Maxson, 1989), and the recent increases in violent crime (Bureau of Justice Statistics, 1991) especially among juveniles (Federal Bureau of Investigation, 1992: 279), a clearer understanding of these perpetrators seems warranted.

II. The Present Study

Project Objectives

The research had as its goal a description of group offenders vis a vis violent and chronic offending. The extent of co-offending by age at onset, sex, race, SES, and juvenile versus adult status is a focus of the research. Analyses were designed to explore the following issues: (1) group offending and severity of offending, (2) group offending and recidivism (frequency of offending), (3) the role of group offending in the prediction of repetitive and serious criminal behavior, (4) patterns in group offending over the course of the delinquent and criminal career, (5) the extent of group offending by age, (6) the relationship between group offending and age at onset, and (7) factors predictive of solitary versus group offenses. The effect of type of first

offense (group or solitary; see Reiss and Farrington, 1991) on recidivism and frequency of offending is also investigated. Data from the interviewed cohort members are used to study gang participation, association with delinquent peers, and criminality.

The present project extends previous analyses of the data¹ in terms of scope and re-focuses the analysis in terms of subject. Previous research which has used the 1958 birth cohort has not resulted in any published material addressing the issue of group offending or its relationship to violent crime. This analysis includes the use of all cohort members (male and female) over the juvenile and adult years. Results are generally reported separately for males and females.

Data and Variables

The data used for this project constitute what is commonly known as the second Philadelphia birth cohort study conducted by the Sellin Center at the University of Pennsylvania.² This longitudinal research project followed all persons born in 1958 who resided in Philadelphia from age 10 to the age of 26. This process resulted in the identification of 27,160 cohort members (14,000 females and 13,160 males). Two types of data were used in the present analysis. The first are based on official records, and the second are self-report interview data from a sample of the cohort subjects.

¹ In Delinquency Careers in Two Birth Cohorts, Tracy et al. (1990) explore the prevalence and incidence of male juvenile delinquency. Other analyses using these data have addressed female delinquency and sex differences in delinquency (Facella, 1983; Otten, 1985), the relationship between violence and chronicity (Piper, 1985), the link between juvenile delinquency and adult criminality (Kempf, 1988, 1989, 1990), and the predictors of the transition rate between crime types for juvenile offenders (Tontodonato, 1988).

² Readers desiring more information on the variables contained in the version of the cohort data sets provided by ICPSR are referred to the User's Guides for "Delinquency in a Birth Cohort II: Philadelphia, 1958-1986" and "The 1958 Philadelphia Birth Cohort Follow-up Survey."

Three raw data files (subject (cohort), juvenile offense, and adult offense files) were used to create the necessary additional data sets and variables.³ Offender-based files were created from the subject and offense files. Offense data were gathered using police records; 13,339 juvenile offenses and 5,598 police contacts (18,937 in all) and 9,057 adult offenses were recorded.

Offense data included the type of offense (charge) as reflected in the criminal code and the severity score of the offense.⁴ Each offense record contained a measure of the number of co-offenders in the criminal event.⁵ Additional offense measures included Index and violent classifications, the presence of a weapon, and injury to the victim. Demographic data were available, such as sex, race, age, and SES.⁶ The rank (serial) number of the offense was also provided.

Offender-based files were generated for the juvenile and adult years of the cohort subjects. Offenders were classified in terms of whether (over the course of their careers) they engaged in (a) completely lone offending, (b) completely group offending, or © a mix of solitary and group offending (Reiss and Farrington, 1991). The extent of group offending was also explored through the calculation of (1) the proportion of offenses involving companions, and (2) the presence of co-

³ Only true offenses for juveniles were examined (n=13,339); police contacts were excluded from all analyses.

⁴ The Sellin-Wolfgang severity scale measures the number of victims of injury, theft, and property damage, the presence of intimidation, and the number of premises forcibly entered. For more detail see Tracy et al., 1990.

⁵ For the juvenile offense file, information was available on the number of co-offenders for 88 percent of the cases (the true offenses). For the adult offenses, data were available on the number of co-offenders for 76 percent of the cases. In terms of the offender-based data, five percent of the juvenile offenders and 17 percent of the adult offenders were missing data on co-offending.

⁶ Social status was measured using the individual's factor analytic score based on 10 indicators of SES which were measured on the census tract level. In addition to this continuous variable, a categorical measure was created by splitting this quantitative variable on the mean. See Tracy et al., 1984 for more detail.

offenders in the first offense (after Reiss and Farrington, 1991). Offenders were also classified in terms of frequency and severity of offending. In the official data, the incidence categories used were desisters (one-time offenders), non-chronic recidivists (two to four offenses), and chronic (five or more offenses). The total number of index, violent, and all offenses was determined as well. Another measure was created, recording offenders who had three offenses by age 15 (after Tracy and Figlio, 1982). Offenders were classified as violent and index offenders; severity of offending was also measured using the mean of the offense severity scores. Age at first offense and age of onset for violence were calculated. The mean time between offenses for the recidivist subset was also derived. The demographic characteristics mentioned above were also utilized (sex, race, and SES).

In addition, this project involved drawing a disproportionate stratified random sample from the cohort, resulting in 782 interviewed subjects. These men and women were surveyed in 1988 concerning (among other issues) delinquent and criminal behavior from childhood to the time of the interview (age 30). The four time periods used by the original researchers were: (1) up to 11 years; (2) 12-18 years; (3) 19-24 years; and (4) age 25 to the present (~30). The present analysis combined the four time periods used in the interview in two ways. First, for comparative purposes, the four groups were collapsed into two, resulting in information covering the periods from 1) childhood to age 18 and 2) age 19 to age 30. Second, analyses using the self-report offending data also examined the entire time period in question. Offense categories were modeled as closely as possible after National Youth Survey scales (see, e.g., Dunford and Elliott, 1984); the items used and their classifications are listed in the Appendix. Similarly, the class intervals (for levels of offending) were constructed using the marginal distributions found in

Elliott and Ageton (1980) (see also Tracy, 1987). Violence was measured using the categories reflected in the Appendix. In addition, the survey asked subjects if they had ever been violent. Two types of group offending measures were available. The first item is based on a survey question which asked whether the respondent was ever a member of a gang. The other measure used an item asking the subject how many of his/her three closest friends were picked up by the police during school years (responses were dichotomized into none versus one or more). The survey measured race, SES (for males), and gender. All analyses using the self-report survey are based on weighted data.

III. Findings

The Official Data

I. Offense-based analysis

Co-offending and age at offense

Exploratory analysis revealed a relationship between the number of offenders in an offense and age. Figures 1a-1c display measures of co-offending by sex and age group. A majority of the offenses of juveniles (61%) involved co-offenders, whereas a majority of adult offenses were committed by lone offenders (67%). Offenses involving more than one offender had younger offenders on the average than those with solitary offenders (Table 1). As age at offense increased, the percentage of offenses involving lone offenders also increased (see Figure 2). This pattern was fairly consistent for both sexes. Figure 2 also supports the idea that offenses committed during the juvenile years were more likely to involve co-offenders than those committed during the adult years.

Co-offending and the nature of the offense

In general, offenses involving multiple offenders had higher average offense severity scores than those involving lone offenders (Table 1). The relationship between type of offense and co-offending is displayed in Tables 2a and 2b. Index offenses were more likely than non-Index offenses to be committed by multiple offenders, with the exception of female juvenile offenses. However, there was some variation in the likelihood of co-offending among each of the individual Index offenses. Among the four violent Index offenses, aggravated assaults involved the greatest proportion of solitary offenders. For both juvenile and adult male offenses, robbery and burglary were the crimes most commonly committed with others. These results are represented graphically in Figures 3a and 3b.

Co-offending, age, and the nature of the offense

As indicated previously, the extent of co-offending varied by age. The relationship between the number of offenders involved in an offense, offense type, and age is displayed in Tables 2a and 2b. Of the crimes committed during the adult years, a greater proportion of the violent and property Index offenses involved lone offenders, compared with the offenses of juveniles. A majority of the murders, rapes, and aggravated assaults of adults were solitary offenses, while the opposite was true for juveniles. Age at offense was then studied, considering offenses as involving either lone or multiple offenders (table not included). There was a very slight tendency for group offenses to have younger offenders than solitary offenses. Considering the type of offense, among males, mean ages at offense for murder, rape, and aggravated assault involving adults were about one year younger for offenses involving co-offenders. The relationship between age and offense severity depended on co-offending. Among the juvenile

offenses of males which involved co-offenders, there was a tendency for offense severity to increase as age at offense increased. There was no such pattern for the solitary offenses of male juveniles, however. If we consider adult offenses and female offenses, there was no consistent linear increase in offense severity when solitary and group offenses were considered separately.

Co-offending over the criminal career

The next issue to be considered was the possibility of changes in the likelihood of co-offending with experience in offending. The mean number of co-offenders in an offense was calculated for each rank (serial) offense number. For the offenses committed during the juvenile years in particular, the number of co-offenders decreased as the serial number of the offense increased (table not included). This decline was more noticeable at the high-frequency end of the continuum. This relationship was not as dramatic for adult offenses and was not apparent among the offenses of adult females in particular.

Predictors of co-offending and the role of co-offending in offense severity

Multivariate analyses were then performed to investigate the predictors of solitary versus group offenses and the role of co-offending in offense severity. Tables 3a and 3b display the logistic regression of co-offending on age, race, SES, offense type (Index vs. non-Index), and offense severity. Analysis of these offense data indicated that offense and select demographic variables were predictive of the presence of co-offenders in an offense. For both juvenile and adult offenses, offense severity was positively related to the likelihood of an offense involving companions. Index offenses, compared with non-Index offenses, were more likely to involve co-offenders for three of the four groups studied (male offenses during the juvenile and adult years, and female offenses during the adult years). The effect of offense type was most pronounced for

the offenses of adult males. Generally speaking, offenses involving older offenders and non-whites were less likely to be group offenses. A model which included a violent offense dummy as a predictor (in place of the Index offense measure) indicated that, relative to other factors, this offense type did not significantly affect the likelihood of an offense involving multiple offenders.

Additional analysis examined the predictors of offense severity (log of Sellin-Wolfgang seriousness score), treating co-offending as a regressor (Tables 4a and 4b). The presence of (co-) offenders in an offense exerted a positive effect on crime severity (with the exception of juvenile female offenses). However, this model, which included the co-offending measure, did not explain much of the variance in offense severity.

II. Offender-based analysis

Co-offending and incidence (frequency of offending)

The offender-based data were used to classify criminal careers as involving solely lone offending, solely co-offending, or both lone and co-offending (mixed/versatile). Tables 5a and 5b display co-offending measures used in the offender file by sex and frequency of offending (incidence categories). Offending careers commonly involved a mix of solitary and companionate offending (see also Figures 4a, 4b). Solitary offending was relatively uncommon; about 1/4 of all male offenders and 1/3 of all female offenders consistently acted alone (Tables 5a and 5b). As might be expected, as frequency of offending increased, the likelihood of co-offending increased. Among the recidivists, about one out of six males and one out of four females always acted alone. Fewer than 10 percent of the chronic offenders engaged in totally solitary offending.

Consistently solitary offending was much more characteristic of adult rather than juvenile offenders. Conversely, juvenile offenders were more likely than adults to commit a mix of

offenses and to have criminal careers with totally companionate offending. If we consider the extent of co-offending among these groups, we see that juvenile offenders committed a greater proportion of their offenses with others (about one-half) than did adults.

The proportion of an offender's offenses committed with others was also examined. For both males and females, about half of the offenses committed by these offenders involved companions (Figure 5). Among the males, the proportion of crimes involving others decreased slightly as incidence increased. Among females, this decrease was more noticeable. Further, co-offending was more common in juvenile offending careers; a greater proportion of the offenses of juvenile offenders involved companions (Tables 5a, 5b).

The first offense status variable measured whether the first official crime was committed alone or with others. In general, more likely than not, an offender's first official offense was committed with others (Tables 5a, 5b). These data also indicate that juveniles were more likely than adults to act with others in the first detected offense. In fact, the proportion of offenders who did so was fairly constant across incidence categories (recidivists and chronics specifically). In addition, offenders who acted alone in their first crime had, on the average, a much lower proportion of offenses involving co-offenders over their criminal careers (Table 6).

Co-offending, age at onset, and incidence

The relationship between co-offending and age at onset was investigated. The average official onset for males and females was 16 years. In general, there was a non-linear relationship between age at onset and the extent of co-offending (see Figures 6a and 6b). The percentage of an offender's offenses committed with others increased until the late teen years, indicating that those with later juvenile onset tended to commit a greater proportion of their offenses with others.

Among offenders with adult onset, the proportion of crimes committed with others tended to decline with increased age at onset. The non-linear relationship between the extent of co-offending and age at onset held among repeat offenders as well. These patterns generally were found also when age at first violent offense was considered.

Figures 7a and 7b compare the mean age at onset by incidence level and co-offending status. Those of lone co-offending status had older ages of onset than those who engaged in group offending. Conversely, those who committed some or all of their crimes with others generally had earlier onset. This pattern was consistent for both sexes and all incidence levels.

Figures 8a through 8f display the association between frequency of offending and co-offending status. Versatile offenders committed more offenses, on the average. A comparison of the average number of offenses across these categories indicates that the offenders who always co-offended or always acted alone were more similar to each other than the offenders who engaged in a mix of solitary and companionate offending. This pattern was consistent for both males and females, as well as for the subset of offenders partitioned by offending levels (recidivists and chronics).

This relationship was then studied controlling for age at onset. Even when taking onset into account, the offenders who committed a mix of solitary and companionate offending were more frequent offenders than either the totally solitary or totally companionate offenders (Figures 9a and 9b). The differences between categories were more extreme for the males, however.

Age at onset was also studied with respect to the other measures of co-offending (table not included). T-tests revealed that there was little difference in age of onset between those who committed their first offense alone versus with others. Similar patterns were found using the age

at first violent offense measure.

The incidence or frequency of offending did not seem to be strongly associated with the number of offenders in the first offense (table not included). There was a slight tendency among recidivists, however, for those who first acted alone to have committed a greater number of offenses than those who first acted with others. The relationship between these two variables was not consistent across sexes or levels of offending.

Recidivists who committed a mix of solitary and group offenses during their careers committed more offenses in total and more Index offenses than those who engaged in either totally lone or companionate offending (Figures 8b, 8e). Co-offending status was also related to offense seriousness. Among the recidivists, offenders who worked alone had lower offense severity scores on average than those who had companionate or mixed offending careers (table not included).

Co-offending and seriousness of the offending career

The variable which measured the extent of co-offending was compared with the likelihood of committing an Index or violent offense. For all offenders, there was a significant relationship between violent offending and extent of co-offending. That is, on the average, violent offenders had a lower proportion of offenses with companions over their offending careers (Figure 10). This difference was especially noticeable among female offenders. Figures 11a and 11b display the relationship between co-offending status and age at first violent offense. Companionate offenders tended to have earlier violent onset than offenders who acted alone. For females, those who committed an Index offense, on average, committed proportionately fewer of their crimes with co-offenders than those who did not (table not included). This difference was

not found among male offenders, however.

With respect to the first offense status variable, among male and female offenders, a greater percentage of offenders whose first offense involved companions committed a property Index offense first, compared with those whose first offense was alone (Table 6). Conversely, however, a greater proportion of those who acted alone in their first offense had a non-Index first offense. Those males whose first offense involved co-offenders were also more likely to commit an Index offense at some point in their careers. (This was not the case for females.)

Offenders who engaged in a mix of solitary and companionate offending also committed more Index and violent offenses, on the average, than the other co-offending groups (Figures 8a-8f). With a few exceptions (namely, the young adult years), when age at onset was controlled, solitary offenders committed more violent offenses on the average than totally companionate offenders, but the greatest number of violent offenses on average were committed by those of mixed co-offending status (Figures 12a and 12b).

The relationship between co-offending status and being an Index offender, controlling for age at onset, revealed a slightly different picture. Those offenders who committed crimes both with others and alone over their offending careers committed more Index offenses on the average than the other two groups, regardless of age at onset (Figures 13a and 13b). However, when comparing totally companionate and totally solitary offending groups to each other, the average number of Index offenses was sometimes higher for one group and sometimes lower, depending on the age at onset.

Role of co-offending in frequency and seriousness of offending: multivariate analysis

Tables 5a and 5b indicated that, among chronic offenders, juveniles committed

proportionately twice as many offenses with others as did adults (e.g., 53% versus 26%).

Multivariate analysis was then performed on the subset of recidivists to explore the role of co-offending status in the prediction of frequency of offending. Tables 7a through 7c display logistic regressions of non-chronic (2-4) versus chronic (5 or more) offender status by sex. Those of mixed co-offending status (relative to those who engaged in totally lone offending) were more likely to be chronic rather than non-chronic recidivists. Totally companionate offending in the criminal career had a slight but statistically significant negative bearing on the probability of being a chronic rather than a non-chronic recidivist for males (Table 7c).

The role of co-offending in the likelihood of being a violent offender was also explored (see Table 8). The variable with the largest effect on violent offending for males was mixed co-offending status. Committing some offenses alone and some with others (relative to solitary offending) increased the likelihood of being a violent offender by a factor of almost four. This variable also attained significance in the model for females. The multivariate model for males showed no effect of totally companionate offending on violence, relative to those with solitary offending careers. For females, being a totally companionate offender (compared with solitary) slightly decreased the odds of committing a violent crime.

The Self-Report Follow-up Data

The next series of results is drawn from the interview sample of cohort subjects. As previously mentioned, the data were weighted prior to analysis to adjust for the disproportionate stratified sampling technique used. Table 9 displays several self-reported measures of criminality by gender. About four out of 10 males reported that one or more of their three closest friends had been picked up by the police during their school years (the "delinquent friends" measure). A

much smaller percentage of females answered this question in the affirmative. The majority of the subjects did not report gang membership. However, males were more likely than females to report that they had ever belonged to a gang. This table also contains the frequency of offending averages for the scales created from the individual offense questions (described in the Appendix).

Gangs, delinquent peers, offense type, and incidence

The relationship between frequency of offending and the two group offending measures was examined. Tables 10a and 10b display the results of this analysis (see also Figures 14a-14d). With a few exceptions, persons who reported that they once belonged to a gang engaged in more criminal behavior than those who had not. For example, juveniles who at some point joined a gang engaged in higher levels of Index offending, felonious assaults, and theft offenses. This group also showed greater incidence of minor drug and alcohol use and general delinquency. This relationship was not consistent across age and sex groups, however. Among adult males, gang members showed higher mean offending levels for general delinquency, Index offenses, and assaults, while for adult females, gang members reported more frequent use of minor and hard drugs and lower levels of some of the more serious behaviors.

There was some indication that having delinquent friends was associated with greater levels of criminal behavior among the males. During the juvenile years, those with delinquent friends engaged in more delinquency in general, more Index offenses, more felonious assaults, more theft offenses, and more drug use. With some exceptions the same patterns were found for adult males. For females, however, there was not such a clear association between one's own incidence of offending and having delinquent friends. For some offense categories there was a positive relationship between delinquent friends and self-reported offending, while for others there

was no relationship (or even a negative relationship).

The next set of results to be reviewed is based on the categorical levels of offending described earlier in the paper. Tables 11a and 11b contain the results of contingency table analysis of self-reported offending levels and the delinquent friends and gang membership variables. Those who once belonged to a gang or had delinquent friends were significantly more likely to be found at the higher incidence levels. Generally speaking, a greater proportion of those who answered affirmatively to these two questions were chronic repeat offenders, compared with those who never belonged to a gang or had delinquent friends, especially for males. This pattern was true not only for the general delinquency scale but also held in most cases for Index and assaultive offenses specifically.

A separate question on the survey instrument asked the subjects if they had ever been violent. A greater proportion of males (twice as many) with delinquent friends (than non-delinquent friends) self-reported violence (Figure 15). Likewise, gang members were more likely to report engaging in violence than non-gang members (in fact, over two times more likely). Thus, for males, the two group measures were related to self-reported violence. This tends to confirm the pattern found previously with respect to Index offending and felony assaults for analysis which considered juveniles and adults separately. Male subjects who reported ever belonging to a gang were more likely to report repeat Index offending than their non-gang counterparts (Table 11a). The same pattern with respect to repeat Index offending was found for the delinquent peer measure. A greater proportion of gang members as well as those with delinquent friends reported chronic levels of felony assault.

For females, gang membership was not significantly related to the general self-report

violence measure (Figure 15). However, a greater proportion of female subjects who associated with criminal peers (compared with those who didn't) self-reported violence. The relationship of the incidence of Index offenses and felony assaults over the entire study period to the group delinquency measures revealed slightly different patterns than that found for males (see Table 11b). Gang members were more likely to repeat felonious assaultive behavior. A majority of the female chronic Index offenders did not ever belong to a gang, while the opposite was true for males (99% and 56%, respectively). Similarly, almost all of the women who reported chronic Index offending (99%) did not report association with delinquent friends, while 90 percent of such males did. The same patterns were found for chronic felony assault offenders.

The Merged Data Files

The subject (cohort), offense (official), and interview (self-report) data files were merged so that the records of the 782 interviewed cohort subjects would reflect all variables over the three data sets. Table 12 displays measures of onset, prevalence, incidence, and co-offending for the sample (after weighting) by sex.

This table reveals that a majority of the cohort subjects in the sample were official non-offenders. Males were more likely to have official records than females; further, males were also more likely to self-report criminality than females. There was a statistically significant relationship between official and self-reported delinquency for both males and females (tables not included). About 3/4 of official male offenders also self-reported offending. The proportion for females was smaller (slightly more than half of official female offenders self-reported criminality).

Co-offending status and self-reported offending

Obviously, officially detected offending is some subset of all offending. Nonetheless, it

would be useful to examine the prevalence and incidence of self-reported offending with respect to the co-offending variables available only from the official data.

Figures 16a and 16b display the mean number of self-reported offenses across offense types by co-offending status. Without exception, those males whose official records indicated they always acted alone self-reported fewer crimes than offenders who committed offenses with others. This was true for overall self-report incidence. Among males, the incidence differences were notable for Index offending, assaultive behaviors, and minor drug use. Among females, solitary offenders typically reported fewer offenses, although this was not always the case.

Those whose records indicated they acted alone were least likely to self-report any violent offending (Figure 17). This was true for both males and females. For males, this pattern held as well when the juvenile and adult years were considered separately.

Using the cut-points displayed in Tables 11a and 11b, the co-offending status measure was compared against the categorical general delinquency variable. For the males, about 3/4 of the offenders who acted alone reported three or fewer crimes during the juvenile or adult reporting period (Table 13a). Conversely, the majority of higher-incidence self-report offenders committed some or all of their crimes with others. Similar patterns were found for females. Among female offenders, a majority of those classified as solitary official offenders did not report committing any of the items on the general delinquency scale (about 2/3 during the juvenile years and 3/4 during the adult years) (Table 13b).

Figures 18a and 18b display the relationship between co-offending status and the two self-report measures of group offending. Among males, a greater proportion of gang members (compared with those who were not members) were versatile offenders, committing some but not

all of their known offenses with others. Further, gang members were less likely to offend alone than non-gang members. Over 2/3 of those reporting association with delinquent peers were mixed or totally companionate offenders. However, the proportion of those with and without delinquent friends across co-offending categories was very similar. For females, there was no significant association between co-offending status and having delinquent friends. Female gang members, compared with those who did not belong to a gang, were more likely to offend alone consistently.

IV. Policy Implications

The results of this study raise a number of crime control issues confronting criminal justice policy-makers. Any solutions, however, must reflect the complicated role group offending plays in criminal careers. Like Reiss and Farrington (1991), the present study found solitary offending careers to be relatively rare but for solitary offending to be more common at later ages. These authors argue that the explanation for this phenomenon is behavioral changes within individual criminal careers, while part of this decline in co-offending is attributed to the accumulation of experience. The present analysis supports this interpretation. As the serial number of the offense increased, the average number of co-offenders in the offense decreased. Chronic offenders exhibited great versatility, committing offenses both alone and with others. Further, versatile offenders were more frequent offenders, even when controlling for age at onset. Therefore, crime control efforts need to focus on both the individual and the sociological causes of offending. Focusing only on one set of causes may produce little change in offending behavior.

The relationship between age at onset and the extent of co-offending was non-linear, rising throughout the juvenile years and declining during the young adult years. Juvenile

offenders who started their careers later tended to engage in more group offending. This may be a reflection of greater peer influence at the later teen years, encouraging criminality in those who had not yet manifested deviant inclinations. In the same vein, the juveniles who started at earlier ages, who tended to commit a lower proportion of their offenses with others, may be exhibiting a greater commitment to delinquency and require less external impetus to offend. These results imply that peer associations are common contributors to criminality, especially during the juvenile years. Perhaps prevention efforts should be targeted at adolescents who are more vulnerable to the influence of such anti-social affiliations.

The relationship between companionate offending and the seriousness of a criminal career is not a simple one. Repeat offenders who committed some or all of their offenses with others committed more serious crimes on the average than those who worked alone. Among the chronic subset of offenders, those who always acted alone committed fewer violent, index, and total offenses than those who had mixed offending careers. Multivariate analysis indicated that versatile offenders were more likely to be violent offenders, compared with totally solitary offenders. On the other hand, there was no significant difference between male companionate offenders and solitary offenders with respect to the probability of being violent. At this point we can only guess whether this is simply a reflection of the greater frequency of offending of versatile offenders, or some other, more meaningful explanation exists. Nonetheless, the data indicate a connection between chronic, violent offending and versatility in offending.

On the other hand, the importance of the number of offenders in the first official offense is less clear. Assessing these data is complicated by the possibility that the risk of detection may be affected by the number of perpetrators involved in the offense. Among both juvenile and adult

male offenders, those whose first offense involved co-offenders were more likely to have begun with a violent Index offense. In addition, those whose first adult offense involved companions committed more serious offenses on average than those who first acted alone. There was no such relationship for juvenile offenders. There was also no clear association between the number of offenders in the first offense and the incidence or frequency of offending.

The self-report data support previous studies indicating a relationship between delinquent peers and criminality. Those with delinquent friends were more likely to admit violent behavior than those without such associations. In addition, those who reported gang involvement were typically more frequent offenders, and, in particular, males who were at some point gang members reported higher levels of serious criminality. Males who reported having delinquent friends were more likely to engage in Index and assaultive offenses, to use drugs, and to be found at the high end of the offending frequency continuum.

Knowledge that a large proportion of juvenile offending is committed in groups (not necessarily by highly organized gangs) and that highly delinquent boys tend to be members of highly delinquent peer groups (see also Morash, 1983) implies that the system should focus attention on these delinquents (not just members of gangs per se). While those involved in gangs are responsible for more than their fair share of offending, they are clearly not the only source of violent behavior. Gang membership tends to be transitory, so simply attempting to eliminate the gang ignores what we know about the nature of much delinquency and gang structure and function. If delinquent peers support the continuation of delinquent behavior, then significant reductions in offending are possible if we target peers as a risk factor (Farrington et al., 1990). These results, as well as others, indicate that prevention of such delinquent associations is

necessary, and that those with delinquent friends should be integrated into pro-social groups, rather than put into programs with other known offenders (Huizinga et al., 1994). Institutions such as the family and school play an important role in preventing deviant behavior. Current gang research indicates that approaches which emphasize prevention (targeting at-risk youth) and intervention with new, younger gang members offer the most promise (e.g., Klein and Maxson, 1989). Work in this area also reinforces the importance of developing programs which are community-based, not just gang-based (see also Wilson and Howell, 1994).

The present research adds to our basic knowledge about co-offending, but more needs to be done regarding the role of group offending as one aspect of the mix of offenses committed by high incidence offenders. Given the theoretical importance of the peer group in criminology, empirical research needs to consider companionate offending in its testing efforts. The reason or reasons for group offending deserves more attention. For example, Sarnecki's (1986) work in Sweden suggests that delinquents offend with others simply as "a way of socializing with peers" (:53). In addition, if the importance of group offending can be established with respect to onset, recidivism, and severity, then there is stronger evidence for the inclusion of co-offending measures in studies of juveniles and young adults. Future research may find it fruitful to follow in the tradition of Hirschi (1969) and Elliott et al. (1985, 1989) and study group offending in relation to major societal institutions such as the family and schools. In fact, OJJDP's Program of Research on the Causes and Correlates of Delinquency indicates that, while there are multiple causes of delinquency, peers, school, family, and neighborhood factors are the major correlates of chronic violence in our society (Wilson and Howell, 1994).

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VI. Appendix

Classification scheme used for offense scales in self-report sample

General Delinquency

Stolen a car for joyriding
 Taken some money from someone without his or her knowing it
 Stole money or property from your employer
 Bought or accepted property which you knew was stolen
 Carried a switch blade or other large blade
 Used a weapon to threaten another person
 Carried a handgun
 Have you hurt someone in any way, like knocking him or her down
 Hurt some bad enough for him or her to require medical treatment
 Attacked someone with the purpose of killing him or her
 Sold drugs illegally
 Disturbed the neighborhood with loud noisy behavior
 Forced someone to have sex with you
 Broken into a residence, store, school or other enclosed area
 Killed someone not accidentally

Index Offenses

Killed someone not accidentally
 Hurt some bad enough for him or her to require medical treatment
 Attacked someone with the purpose of killing him or her
 Forced someone to have sex with you
 Used a weapon to threaten another person
 Threatened to hurt someone if he or she didn't give you money or something else
 Broken into a residence, store, school or other enclosed area
 Stolen a car for joyriding

Felony Assault

Killed someone not accidentally
 Hurt someone bad enough for him or her to require medical treatment
 Attacked someone with the purpose of killing him or her
 Forced someone to have sex with you

Minor/Other Assault

Have you hurt someone in any way, like knocking him or her down
 Used a weapon to threaten another person

Felony Theft

Broken into a residence, store, school or other enclosed area
 Bought or accepted property which you knew was stolen

Minor/Other Theft

Taken some money from someone without his or her knowing it
 Stole money or property from your employer
 Stole a car for joyriding

Vandalism

Purposely damaged or destroyed property

Hard Drug Use

Used heroin
 Had heroin or cocaine in your possession
 Used cocaine
 Used "uppers" like amphetamines
 Used "downers" like barbiturates or morphine

Minor Drug Use

Smoked pot
 Been drunk in public

Table 1				
Mean scores for offenses involving lone vs. multiple offenders				
Males				
Variable	<u>Juveniles</u> Lone offender		<u>Adults</u> Lone offender	
	Yes	No	Yes	No
Age at offense	15.43	15.14	21.68	20.92
Offense severity	6.06	7.27	8.97	11.42
SES	-0.45	-0.41	--	--

Females				
Variable	<u>Juveniles</u> Lone offenders		<u>Adults</u> Lone offender	
	Yes	No	Yes	No
Age at offense	15.06	14.80	22.00	21.00
Offense severity	5.07	5.46	8.14	10.67
SES	-0.63	-0.33	--	--

Table 2a
Number of co-offenders in offense by offense type
Males

Variable	Juveniles				Adults			
	Number of co-offenders			Percent Alone	Number of co-offenders			Percent Alone
	0	1	2+		0	1	2+	
Offense type								
murder	17	5	26	35.4	42	16	12	60.0
rape	30	22	37	33.7	108	23	29	67.5
robbery	326	430	386	28.5	408	298	189	45.6
agg assault	240	101	158	48.1	531	125	95	70.7
burglary	339	549	518	24.1	437	291	162	49.1
theft	638	512	311	43.7	733	316	117	62.9
auto theft	213	206	149	37.5	0	0	0	0.0
arson	22	11	13	47.8	13	3	1	76.5
non-index	2022	908	1600	44.6	1794	243	119	83.2
other	163	163	211	30.4	72	12	14	73.5
UCR offense type								
violent index	613	558	607	34.5	1089	462	325	58.0
property index	1212	1278	991	34.8	1183	610	280	57.1
non-index	2022	908	1600	44.6	1794	243	119	83.2
other	163	163	211	30.4	87	13	15	75.7
Violent offense								
yes	613	558	607	34.5	1089	462	325	58.0
no	3397	2349	2802	39.7	3064	866	414	70.5
Weapon present								
yes	775	392	450	47.9	909	312	214	63.3
no	3235	2515	2959	37.1	3232	1010	520	67.9
Index offense								
yes	1825	1836	1598	34.7	2272	1072	605	57.5
no	2185	1071	1811	43.1	1881	256	134	82.8

Table 2b
Number of co-offenders in offense by offense type
Females

Variable	Juveniles				Adults			
	Number of co-offenders			Percent	Number of co-offenders			Percent
	0	1	2+	Alone	0	1	2+	Alone
Offense type								
murder	0	1	1	00.0	2	1	1	50.0
rape	0	0	2	00.0	0	0	0	0.0
robbery	4	13	20	10.8	14	14	8	38.9
agg assault	56	12	24	60.9	85	17	14	73.3
burglary	9	19	16	20.5	11	10	5	42.3
theft	177	199	83	38.6	99	42	15	63.5
auto theft	3	3	10	18.8	0	0	0	0.0
arson	4	1	4	44.4	1	0	0	100.0
non-index	279	143	293	39.0	211	49	24	74.3
other	20	30	40	22.2	12	0	1	92.1
UCR offense type								
violent index	60	26	47	45.1	101	32	23	64.7
property index	193	222	113	36.6	111	52	20	60.7
non-index	279	143	293	39.0	211	49	24	74.3
other	20	30	40	22.2	16	0	1	94.1
Violent offense								
yes	60	26	47	45.1	101	32	23	64.7
no	492	395	446	36.9	338	101	45	69.8
Weapon present								
yes	70	22	28	58.3	88	27	15	67.7
no	482	399	465	35.8	351	106	53	68.8
Index offense								
yes	253	248	160	38.3	212	84	43	62.5
no	299	173	333	37.1	227	49	25	75.4

Table 3a
Logistic Regression of Number of Offenders in Offense (One versus multiple)
Males

Juveniles						
Variable	b	s.e.	Wald	d.f.	R	exp(b)
Offense seriousness	0.02	0.00	***24.89	1	0.04	1.02
Index offense	0.27	0.05	***29.89	1	0.04	1.31
Age	-0.14	0.01	***97.05	1	-0.08	0.87
Race (0=wh, 1=nw)	-0.39	0.05	***56.46	1	-0.06	0.67
SES (dummy)	0.01	0.05	0.08	1	-0.08	0.87
Constant	2.56	0.22	***138.44	1		
Total cases	11471					
Adults						
Variable	b	s.e.	Wald	d.f.	R	exp(b)
Offense seriousness	0.02	0.00	***44.09	1	0.07	1.02
Index offense	1.15	0.07	***290.80	1	0.19	3.14
Age	-0.12	0.01	91.77	1	-0.11	0.89
Race (1=wh, 2=nw)	-0.18	0.07	**7.09	1	-0.03	0.83
SES (dummy)	-0.09	0.07	2.04	1	-0.00	0.91
Constant	1.08	0.28	***14.73	1		
Total cases	8149					

Table 3b
Logistic Regression of Number of Offenders in Offense (One versus multiple)
Females

Juveniles						
Variable	b	s.e.	Wald	d.f.	R	exp(b)
Offense seriousness	0.03	0.01	*6.50	1	0.05	1.03
Index offense	-0.06	0.13	0.25	1	0.00	0.94
Age	-0.14	0.03	***15.63	1	-0.08	0.87
Race (0=wh, 1=nw)	-0.72	0.14	***25.27	1	-0.11	0.49
SES (dummy)	0.36	0.14	**7.05	1	0.05	1.43
Constant	2.83	0.54	***27.25	1		
Total cases	1617					
Adults						
Variable	b	s.e.	Wald	d.f.	R	exp(b)
Offense seriousness	0.04	0.01	**10.05	1	0.10	1.04
Index offense	0.54	0.19	**8.31	1	0.09	1.71
Age	-0.11	0.04	**7.94	1	-0.09	0.90
Race (1=wh, 2=nw)	-0.49	0.22	*4.77	1	-0.06	0.61
SES (dummy)	0.38	0.20	3.44	1	0.04	1.46
Constant	1.65	0.93	3.13	1		
Total cases	908					

Note. The Wald statistic tests the hypothesis that the coefficient is zero. The R statistic is the partial correlation between the dependent variable and each of the independent variables. Exp (B) represents the factor by which the odds change when a particular independent variable increases by one unit.

*p < .05 **p < .01 ***p < .001

Table 4a
Multiple regression of offense severity (log)
Males

Juveniles				
Variable	b (SE b)	Beta	R ² Change	t
Race (0=white, 1=non-white)	0.35 (0.03)	0.15	0.03	***13.62
Co-offenders (0=none, 1=1+)	0.16 (0.02)	0.07	0.01	***7.44
SES (dummy)	0.10 (0.02)	-0.04	0.00	***-3.97
Age	0.01 (0.01)	0.01	0.00	1.39
Constant	0.94 (0.11)			***8.72
R ²	0.033			
Adults				
Variable	b (SE b)	Beta	R ² Change	t
Co-offenders (0=none, 1=1+)	0.33 (0.02)	0.19	0.04	***14.89
Race (1=white, 2=non-white)	0.09 (0.02)	0.05	0.00	***3.50
SES (dummy)	-0.05 (0.02)	-0.03	0.00	*-2.28
Age	0.00 (0.00)	0.01	0.00	0.63
Constant	1.68 (0.10)			***16.25
R ²	0.03			

Table 4b
Multiple regression of offense severity (log)
Females

Juveniles				
Variable	b (SE b)	Beta	R ² Change	t
Race (0=white, 1=non-white)	0.31 (0.06)	0.14	0.03	***4.91
SES (dummy)	-0.16 (0.06)	-0.08	0.00	*-2.58
Age	0.03 (0.02)	0.05	0.00	1.82
Co-offenders (0=none, 1=1+)	0.07 (0.05)	0.04	0.00	1.37
Constant	0.57 (0.25)			*2.27
R ²	0.036			
Adults				
Variable	b (SE b)	Beta	R ² Change	t
Co-offenders (0=none, 1=1+)	0.35 (0.08)	0.19	0.04	***4.67
SES (dummy)	0.09 (0.08)	0.05	0.00	1.13
Age	-0.01 (0.02)	-0.02	0.00	-0.61
Race (1=white, 2=non-white)	-0.04 (0.09)	-0.02	0.00	-0.47
Constant	2.02 (0.37)			***5.44
R ²	0.043			

 *** p < .05
 p < .01
 p < .001

Table 5a						
Co-offending measures, Official data: Offender file (Males)						
Variable	Juvenile		Adult		All	
	%	n	%	n	%	n
Co-offending status						
Always alone	20.3	(732)	49.4	(1274)	26.6	(1277)
Always w/others	37.8	(1362)	17.0	(438)	27.0	(1292)
Mixed	41.9	(1512)	33.6	(868)	46.4	(2225)
First offense status						
Alone	34.9	(1258)	63.9	(1648)	42.2	(2022)
With others	65.1	(2348)	36.1	(932)	57.8	(2772)
Recidivists						
Co-offending status						
Always alone	9.3	(193)	38.7	(591)	17.0	(531)
Always w/others	18.0	(374)	4.6	(70)	11.9	(372)
Mixed	72.7	(1512)	56.8	(868)	71.1	(2225)
First offense status						
Alone	34.6	(719)	63.1	(965)	40.8	(1276)
With others	65.4	(1360)	36.9	(564)	59.2	(1852)
Chronics						
Co-offending status						
Always alone	1.2	(9)	21.1	(100)	5.5	(73)
Always w/others	3.9	(28)	0.0	(0)	1.9	(25)
Mixed	94.9	(686)	78.9	(373)	92.6	(1233)
First offense status						
Alone	35.0	(253)	61.1	(289)	38.9	(518)
With others	65.0	(470)	38.9	(184)	61.1	(813)
Percent of offenses with co-offenders						
	\bar{x}	(s.d.)	\bar{x}	(s.d.)	\bar{x}	(s.d.)
	59.3	(38.5)	30.4	(37.5)	48.4	(38.7)
Recidivists						
Percent of offenses with co-offenders	55.3	(29.3)	27.2	(27.9)	44.7	(30.6)
Chronics						
Percent of offenses with co-offenders	53.2	(21.9)	26.4	(21.6)	42.8	(23.4)

Table 5b
Co-offending measures, Official data: Offender file (Females)

Variable	Juvenile		Adult		All	
	%	n	%	n	%	n
Co-offending status						
Always alone	30.4	(310)	60.9	(245)	36.6	(476)
Always w/others	53.7	(547)	23.4	(94)	44.8	(582)
Mixed	15.9	(162)	15.7	(63)	18.6	(241)
First offense status						
Alone	35.4	(361)	68.2	(274)	42.1	(547)
With others	64.6	(658)	31.8	(128)	57.9	(752)
Recidivists						
Co-offending status						
Always alone	18.0	(53)	45.8	(65)	26.1	(122)
Always w/others	27.1	(80)	9.9	(14)	22.3	(104)
Mixed	54.9	(162)	44.4	(63)	51.6	(241)
First offense status						
Alone	35.3	(104)	66.2	(94)	41.3	(193)
With others	64.7	(191)	33.8	(48)	58.7	(274)
Chronics						
Co-offending status						
Always alone	3.6	(1)	26.3	(5)	8.7	(6)
Always w/others	0.0	(0)	0.0	(0)	4.3	(3)
Mixed	96.4	(27)	73.7	(14)	87.0	(60)
First offense status						
Alone	46.4	(13)	78.9	(15)	37.7	(26)
With others	53.6	(15)	21.1	(4)	62.3	(43)
Summary Statistics						
	\bar{x}	(s.d.)	\bar{x}	(s.d.)	\bar{x}	(s.d.)
Percent of offenses with co-offenders	61.8	(44.6)	29.8	(41.8)	53.7	(45.4)
Recidivists						
Percent of offenses with co-offenders	55.1	(34.7)	28.1	(32.3)	46.9	(36.3)
Chronics						
Percent of offenses with co-offenders	46.9	(22.5)	18.6	(16.6)	40.6	(25.2)

Table 6
Presence of co-offenders in first official offense
by offense types

Males						
Variable	Juvenile		Adult		All	
	% Alone	% With others	% Alone	% With others	% Alone	% With others
Type of first offense						
Other	5.5	7.8	2.0	1.4	4.2	6.9
Non-index	55.8	46.9	52.4	24.9	55.3	44.4
Property index	28.2	33.4	22.0	39.5	25.7	34.0
Violent index	10.5	11.8	23.6	34.2	14.8	14.8
Index offender						
No	38.2	36.2	36.2	14.2	34.7	27.8
Yes	61.8	63.8	63.8	85.8	65.3	72.2
Violent offender						
No	76.7	75.2	62.5	52.8	65.8	63.9
Yes	23.3	24.8	37.5	47.2	34.2	36.1
	Alone (mean)	With others (mean)	Alone (mean)	With others (mean)	Alone (mean)	With others (mean)
Percent of offenses with co-offenders	18.3	81.2	7.6	70.7	14.0	73.4
Females						
Variable	Juvenile		Adult		All	
	% Alone	% With others	% Alone	% With others	% Alone	% With others
Type of first offense						
Other	3.3	8.5	3.6	0.8	3.5	7.6
Non-index	52.4	47.7	50.4	43.0	53.6	47.2
Property index	33.5	36.6	19.0	28.9	27.8	35.1
Violent index	10.8	7.1	27.0	27.3	15.2	10.1
Index offender						
No	45.2	49.7	42.0	36.7	44.4	45.9
Yes	54.8	50.3	58.0	63.3	55.6	54.1
Violent offender						
No	84.5	91.2	67.2	69.5	76.8	84.4
Yes	15.5	8.8	32.8	30.5	23.2	15.6
	Alone (mean)	With others (mean)	Alone (mean)	With others (mean)	Alone (mean)	With others (mean)
Percent of offense with co-offenders	6.4	92.1	3.7	85.7	5.5	88.7

Table 7a

Logistic Regression of Offender Group (Non-chronic vs. Chronic Recidivists)

Males

Juveniles						
Variable	b	s.e.	Wald	d.f.	R	exp(b)
Age of onset	-.22	.02	***83.1	1	-.17	.80
Mean offense severity	.04	.02	**7.0	1	.04	1.04
Mixed co-offending status ^a	2.87	.35	***66.3	1	.15	17.56
Always co-offends ^a	.77	.40	3.7	1	.02	2.16
Index offender	1.68	.21	***63.7	1	.15	5.36
SES	-.09	.07	1.9	1	.00	.91
Race (0=white)	-.14	.14	1.1	1	.00	.87
Constant	-1.77	.50	***12.6	1		
Number of cases	2101					
Adults						
Variable	b	s.e.	Wald	d.f.	R	exp(b)
Age of onset	-.37	.05	***50.64	1	-.19	.69
Mean offense severity	-.03	.02	3.5	1	-.03	.97
Mixed co-offending status ^a	1.02	.16	***40.98	1	.17	2.77
Always co-offends ^a	-7.05	8.49	0.7	1	.00	.00
Index offender	1.48	.36	***17.07	1	.11	4.38
Early third offense	.62	.20	**9.73	1	.08	1.86
SES	-.05	.09	0.3	1	.00	.95
Race (0=white)	.10	.19	0.3	1	.00	1.11
Constant	4.66	1.06	***19.45	1		
Number of cases	1626					

^a Comparison category is solitary co-offending status

* p < 0.05

** p < 0.01

*** p < 0.001

Table 7b
Logistic Regression of Offender Group (Non-chronic vs. Chronic Recidivists)

Females

Juveniles						
Variable	b	s.e.	Wald	d.f.	R	exp(b)
Age of onset	-.50	.14	***13.3	1	-.24	.61
Mean offense severity	.09	.10	0.8	1	.00	1.09
Mixed co-offending status ^a	2.46	1.05	*5.5	1	.14	11.72
Always co-offends ^a	-5.83	17.02	0.1	1	.00	.00
Index offender	2.22	1.07	*4.34	1	.11	9.25
SES	-.05	.28	0.0	1	.00	.96
Race (0=white)	-.55	.57	0.9	1	.00	.58
Constant	.54	2.23	0.1	1		
Number of cases	299					
Adults						
Variable	b	s.e.	Wald	d.f.	R	exp(b)
Age of onset	-.32	.26	1.5	1	.00	1.04
Mean offense severity	-.05	.08	0.5	1	.00	.95
Mixed co-offending status ^a	1.43	.82	3.0	1	.12	4.16
Always co-offends ^a	-8.26	59.75	0.0	1	.00	.00
Index offender	9.27	44.85	0.0	1	.00	10592.99
Early third offense	.04	.96	0.0	1	.00	1.04
SES	.43	.44	1.0	1	.00	1.54
Race (0=white)	.48	1.00	0.2	1	.00	1.61
Constant	-4.25	45.10	0.0	1		
Number of cases	155					

^a Comparison category is solitary co-offending status

* p < 0.05

** p < 0.01

*** p < 0.001

Table 7c
Logistic Regression of Offender Group (Non-chronic vs. Chronic Recidivists)
by Sex

Males						
Variable	b	s.e.	Wald	d.f.	R	exp(b)
Early third offense	1.77	.20	***81.26	1	.14	5.88
Age of onset	-.13	.02	***60.70	1	-.12	0.88
Mean offense severity	.03	.01	**10.21	1	.04	1.04
Mixed co-offending status ^a	1.60	.14	***132.15	1	.17	4.94
Always co-offends ^a	-.96	.25	***14.91	1	-.05	0.38
Index offender	2.06	.20	***110.12	1	.16	7.84
SES	-.03	.05	0.35	1	.00	0.97
Race (0 = white)	-.04	.11	0.11	1	.00	0.96
Constant	-1.86	.33	***31.07	1		
N of cases	3189					
Females						
Variable	b	s.e.	Wald	d.f.	R	exp(b)
Early third offense	1.99	.45	***19.12	1	.21	7.31
Age of onset	-.06	.06	1.11	1	.00	0.94
Mean offense severity	.03	.04	.38	1	.00	1.03
Mixed co-offending status ^a	1.43	.44	**10.67	1	.15	4.16
Always co-offend	-.76	.73	1.10	1	.00	0.47
Index offender	1.80	.62	**8.29	1	.13	6.05
SES	-.03	.19	.02	1	.00	0.97
Race (0 = white)	-.01	.40	.00	1	.00	0.99
Constant	-3.67	1.15	**10.15	1		
N of cases	480					

^a Comparison category is solitary co-offending status

* p < 0.05

** p < 0.01

*** p < 0.001

Table 8
Predictors of the likelihood of being a violent offender, by Sex
Logistic Regression

Males						
Variable	b	s.e.	Wald	d.f.	R	exp(b)
Age of onset	.03	.01	**8.05	1	.03	1.03
Early third offense	.86	.13	***41.67	1	.08	2.35
Mixed co-offending status ^a	1.32	.08	***253.83	1	.19	3.75
Always co-offends ^a	.07	.09	.51	1	.00	1.07
SES	-2.00	.04	***25.14	1	-.06	.82
Race (ø = white)	.90	.08	***117.01	1	.13	2.47
Constant	-2.54	.20	***158.78	1		
N of cases	5209					
Females						
Variable	b	s.e.	Wald	d.f.	R	exp(b)
Age of onset	.07	.02	***14.22	1	.09	1.08
Early third offense	1.39	.39	***12.39	1	.09	4.00
Mixed co-offending status ^a	.86	.19	***21.24	1	.12	2.37
Always co-offends ^a	-.51	.18	**8.34	1	-.07	.60
SES	-.26	.09	**8.34	1	-.07	.77
Race (ø = white)	.55	.20	**7.30	1	.06	1.73
Constant	-3.32	.40	***69.47	1		
N of cases	1467					

^a Comparison category is solitary co-offending status

* p < 0.05

** p < 0.01

*** p < 0.001

Table 9
Self-Report Data^a: Selected Variables

Variable	Males		Females	
	%	n	%	n
Delinquent Friends				
Yes	44.1	3345	8.0	442
No	55.9	4234	92.0	5058
Gang Member (ever)				
Yes	17.4	1321	4.0	218
No	82.6	6259	96.0	5268
	Offense Measures			
	Males		Females	
Variable ^b	Juvenile x (s.d)	Adult x (s.d)	Juvenile x (s.d)	Adult x (s.d)
General Delinquency	7.4 (17.9)	8.4 (20.7)	2.4 (11.8)	2.0 (8.2)
Index Offenses	0.5 (2.6)	0.5 (2.8)	0.0 (0.7)	0.2 (1.5)
Felony Assaults	0.3 (2.2)	0.4 (2.7)	0.0 (0.4)	0.2 (1.4)
Minor/Other Assaults	1.7 (4.8)	1.2 (4.4)	1.7 (11.3)	0.2 (1.6)
Felony Theft	0.4 (3.0)	1.3 (5.7)	0.1 (0.9)	0.4 (2.2)
Minor/Other Theft	1.4 (5.9)	2.1 (8.0)	0.3 (1.3)	0.4 (2.2)
Vandalism	0.9 (4.9)	0.3 (1.6)	0.0 (0.4)	0.1 (0.4)
Hard Drug Use	1.4 (7.8)	2.7 (11.0)	0.5 (3.7)	0.3 (2.7)
Minor Drug Use	6.2 (14.1)	10.8 (22.5)	2.8 (7.9)	8.4 (19.2)

a Weighted Sample

b See Appendix A for items comprising these scales

Table 10a

Frequency of self-reported offending by gang and peer measures: Means

Males

Variable	Juvéniles				Adults			
	Gang member		Delinquent friends		Gang member		Delinquent friends	
	Yes	No	Yes	No	Yes	No	Yes	No
General Delinquency	21.8	9.9 ^c	16.7	8.6 ^c	15.2	13.2 ^a	16.6	10.4 ^c
Index Offenses	3.8	1.7 ^c	3.3	0.8 ^c	3.2	1.6 ^c	2.6	1.3 ^c
Felony Assaults	3.9	1.1 ^c	3.1	0.7 ^c	2.8	1.8 ^b	4.7	1.8 ^c
Minor/Other Assaults	5.0	4.5 ^{ns}	3.9	5.4 ^c	3.6	2.9 ^b	3.4	2.8 ^b
Felony Theft	3.2	1.9 ^c	3.2	1.3 ^c	5.4	5.9 ^{ns}	7.3	4.0 ^c
Minor/Other Theft	9.8	4.3 ^c	7.4	3.8 ^c	5.6	10.7 ^c	8.7	9.6 ^{ns}
Vandalism	5.9	7.1 ^{ns}	8.9	2.5 ^c	1.9	2.5 ^a	2.3	2.1 ^{ns}
Hard Drug Use	14.0	6.7 ^c	11.0	2.9 ^c	16.4	14.7 ^{ns}	17.8	7.3 ^c
Minor Drug Use	13.8	10.0 ^c	13.9	7.9 ^c	18.0	19.7 ^{ns}	19.3	19.2 ^{ns}

a p < 0.05
b p < 0.01
c p < 0.001

Table 10b
Frequency of self-reported offending by gang and peer measures: Means
Females

Variable	Juveniles				Adults			
	Gang member		Delinquent friends		Gang member		Delinquent friends	
	Yes	No	Yes	No	Yes	No	Yes	No
General Delinquency	11.5	6.6 ^c	3.5	7.5 ^c	6.1	5.6 ^{ns}	3.9	5.8 ^b
Index Offenses	1.7	0.6 ^c	1.7	0.7 ^b	2.0	4.6 ^c	0.3	4.5 ^c
Felony Assaults	1.6	0.4 ^c	0.4	3.9 ^c	2.2	4.0 ^c	0.4	3.9 ^c
Minor/Other Assaults	6.5	11.6 ^c	6.7	11.1 ^b	1.6	1.3 ^{ns}	1.2	1.4 ^{ns}
Felony Theft	0.7	1.4 ^a	0.4	1.8 ^c	1.2	5.3 ^c	2.0	6.1 ^c
Minor/Other Theft	6.8	2.7 ^c	4.8	2.9 ^a	3.3	4.7 ^{ns}	3.7	4.6 ^{ns}
Vandalism	0.3	1.3 ^c	0.1	1.4 ^c	3.5	1.2 ^c	1.5	1.4 ^{ns}
Hard Drug Use	3.6	4.7 ^{ns}	2.1	5.3 ^c	7.8	2.1 ^a	4.2	2.0 ^b
Minor Drug Use	10.3	5.4 ^a	8.4	5.2 ^b	20.9	13.9 ^a	15.3	14.0 ^{ns}

a p < 0.05
b p < 0.01
c p < 0.001

Table 11a
Levels of self-reported offending by gang and peer measures
Males

Variable	Juveniles				Variable	Adults			
	Gang member		Delinquent friends			Gang member		Delinquent friends	
	Yes	No	Yes	No		Yes	No	Yes	No
General Delinquency					General Delinquency				
0-3	39.8	73.6 ^c	58.2	75.3 ^c	0-3	49.7	73.1 ^c	60.2	76.0 ^c
4-10	12.6	11.7	16.2	8.4	4-10	17.3	8.9	9.9	10.8
11-29	29.9	9.9	13.0	13.7	11-29	22.5	11.8	19.8	8.8
30+	17.7	4.8	12.5	2.6	30+	10.6	6.2	10.0	4.5
Index Offenses					Index Offenses				
0	65.1	90.9 ^c	76.2	94.6 ^c	0	70.1	90.4 ^c	79.4	92.7 ^c
1	15.4	6.1	12.2	4.3	1	14.1	4.7	10.7	2.9
2-4	9.7	1.2	5.1	0.7	2-4	9.9	4.1	6.5	4.0
5+	9.8	1.7	6.6	0.4	5+	5.9	0.9	3.4	0.4
Felony Assaults					Felony Assaults				
0	76.1	94.4 ^c	85.8	95.6 ^c	0	72.2	90.7 ^c	80.2	93.2 ^c
1	7.8	4.2	6.6	3.4	1	14.3	4.6	10.8	2.8
2-4	8.4	1.0	4.4	0.6	2-4	9.1	4.0	6.2	3.8
5+	7.6	0.3	3.2	0.4	5+	4.4	0.7	0.2	2.7
Minor/Other Assaults					Minor/Other Assaults				
0	65.7	76.0 ^c	70.2	77.4 ^c	0	58.0	75.3 ^c	62.0	80.5 ^c
1-5	18.7	15.2	20.0	12.5	1-3	23.8	16.2	25.7	11.1
6-10	9.9	4.8	7.0	4.7	4-7	11.3	4.8	6.4	5.4
11+	5.7	4.0	2.8	5.5	8+	6.9	3.7	5.9	3.0

a p < 0.05
b p < 0.01
c p < 0.001

Table 11b
Levels of self-reported offending by gang and peer measures

Females

Variable	Juveniles				Variable	Adults			
	Gang member		Delinquent friends			Gang member		Delinquent friends	
	Yes	No	Yes	No		Yes	No	Yes	No
General Delinquency					General Delinquency				
0	37.5	77.5 ^c	68.7	76.6 ^c	0	77.7	76.3 ^c	68.5	77.1 ^c
1-2	34.8	10.1	21.8	10.1	1-2	8.4	11.2	25.7	9.8
3-6	3.8	6.4	3.3	6.5	3-10	2.1	7.1	2.5	7.3
7+	23.9	6.0	6.2	6.7	11+	11.8	5.4	3.3	5.8
Index Offenses					Index Offenses				
0	84.8	99.5 ^c	95.8	99.2 ^c	0	92.0	95.8 ^c	99.4	95.4 ^c
1+	15.2	0.5	4.2	0.8	1-3	8.0	2.2	0.6	2.6
					4+	0.0	2.0	0.0	2.0
Felony Assaults					Felony Assaults				
0	85.7	99.6 ^c	96.3	99.3 ^c	0	92.0	95.8 ^c	99.4	95.4 ^c
1+	14.3	0.4	3.7	0.7	1	1.7	1.9	0.6	2.0
					2+	6.3	2.3	0.0	2.6
Minor/Other Assaults					Minor/Other Assaults				
0	50.5	88.7 ^c	93.9	86.7 ^c	0	86.2	95.0	95.5	94.6 ^a
1-4	36.9	8.4	2.9	10.1	1	4.6	1.9	3.1	2.0
5+	12.6	2.8	3.1	3.2	2+	9.2	3.1	1.4	3.5

a p < 0.05
b p < 0.01
c p < 0.001

Categorical Variables	Males		Females	
	%	n	%	n
Co-offending status (official)				
Always alone	30.0	821	36.3	151
Always with others	32.9	900	46.4	194
Mixed	37.0	1012	17.3	72
Level of official offending				
Non-offender	62.3	4716	91.2	5017
One-time	15.7	1192	6.2	343
Non-chronic (2-4)	14.4	1089	2.3	125
Chronic (5+)	7.5	571	0.3	16
Hidden (self-report) delinquency, General delinquency items				
Non-offender	37.9	2871	63.0	3465
Offender	62.1	4696	37.0	2035
Continuous Variables	Mean	(s.d.)	Mean	(s.d.)
Age at Official Onset	15.84	(3.3)	14.16	(1.8)
Age at Official Violent Onset	17.95	(4.3)	15.53	(2.0)
Total Official Offenses	1.29	(1.9)	0.13	(0.3)
Total Official Index Offenses	0.63	(1.0)	0.06	(0.1)
Total Official Violent Offenses	0.26	(2.9)	0.02	(0.5)
Total Self-Report Offenses	24.77	(37.3)	17.71	(29.8)
Total Self-Report Violent Offenses	6.97	(18.7)	2.60	(12.5)

* Weighted Sample

Table 13a
Levels of self-reported offending by co-offending status
Males

Co-offending status							
Variable	Juveniles			Variable	Adults		
	Always alone	Always w/ others	Mixed		Always alone	Always w/ others	Mixed
General Delinquency				General Delinquency			
0-3	76.8	59.8	51.5 ^c	0-3	73.0	49.1	52.8 ^c
4-10	13.1	13.8	11.6	4-10	11.4	13.7	14.4
11-29	4.6	23.2	17.8	11-29	8.7	22.2	22.4
30+	5.4	3.3	19.2	30+	6.9	15.0	10.4
Felony Assaults				Felony Assaults			
0	52.4	57.8	23.4 ^c	0	31.5	22.0	17.7 ^c
1	22.2	10.0	33.9	1	26.6	37.7	31.4
2-4	25.4	24.9	11.4	2-4	36.5	37.3	26.2
5+	0.0	7.3	31.3	5+	5.4	3.0	24.8
Minor/Other Assaults				Minor/Other Assaults			
0	84.9	62.4	63.1 ^c	0	68.7	57.4	60.1 ^c
1-5	9.0	18.8	17.1	1-3	21.0	19.9	17.0
6-10	3.7	14.1	8.2	4-7	5.8	15.3	15.2
11+	2.4	4.6	11.6	8+	4.5	7.4	7.7

a p < 0.05
b p < 0.01
c p < 0.001

Table 13b
Levels of self-reported offending by co-offending status
Females

Co-offending status							
Variable	Juveniles			Variable	Adults		
	Always alone	Always w/ others	Mixed		Always alone	Always w/ others	Mixed
General Delinquency				General Delinquency			
0	61.8	79.1	61.0 ^b	0	75.2	57.8	49.6 ^c
1-2	9.1	5.2	13.7	1-2	22.4	11.4	16.5
3-6	10.9	7.1	16.5	3-10	1.7	18.8	23.8
7+	18.2	8.7	8.7	11+	0.7	11.9	10.1
Felony Assaults				Felony Assaults			
0	90.9	92.4	89.0 ^{ab}	0	99.3	84.7	91.3 ^c
1+	9.1	7.6	11.0	1	0.0	15.3	3.7
				2+	0.7	0.0	5.0
Minor/Other Assaults				Minor/Other Assaults			
0	72.7	94.3	78.4 ^c	0	90.2	82.5	71.6 ^b
1-4	18.2	5.2	16.5	1	0.7	6.6	8.7
5+	9.1	0.5	5.0	2+	9.1	10.9	19.7

a p < 0.05
b p < 0.01
c p < 0.001

Number of co-offenders in offense

Juvenile offenses

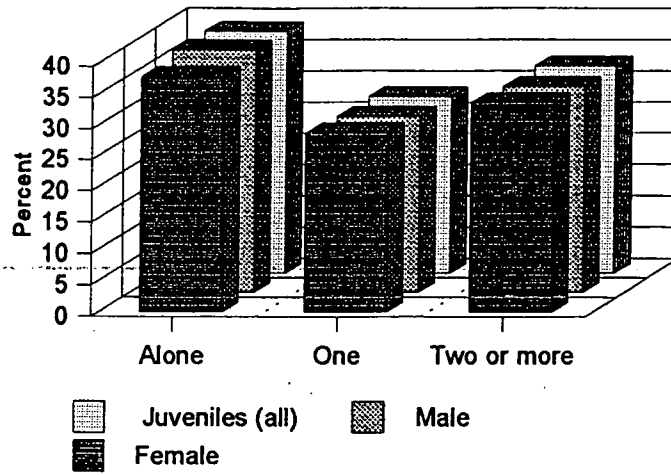


Figure 1a

Number of co-offenders in offense

Adult offenses

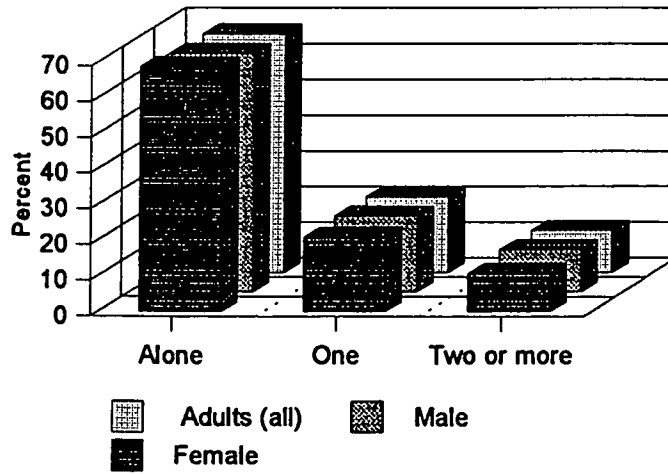


Figure 1b

Total other offenders in offense

Juvenile versus adult offenses

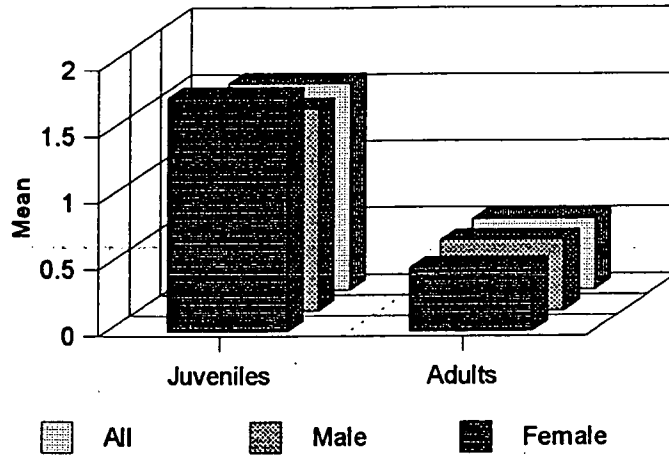


Figure 1c

Percent of offenses alone

by gender

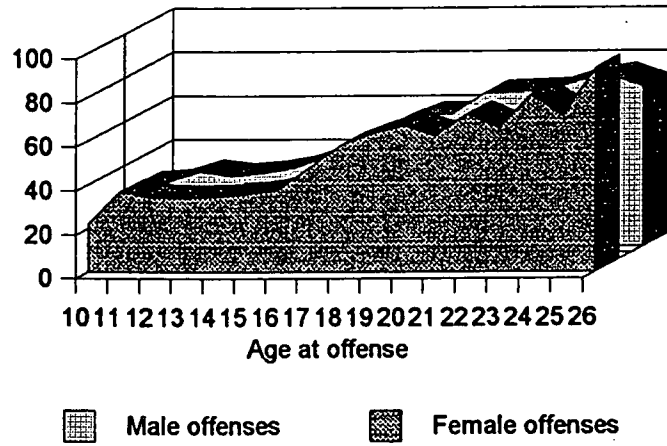


Figure 2

Number of co-offenders in offense by Offense type

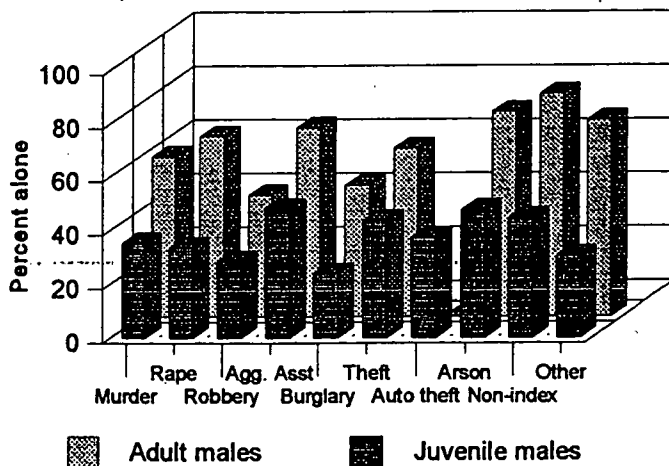


Figure 3a

Number of co-offenders in offense by Offense type

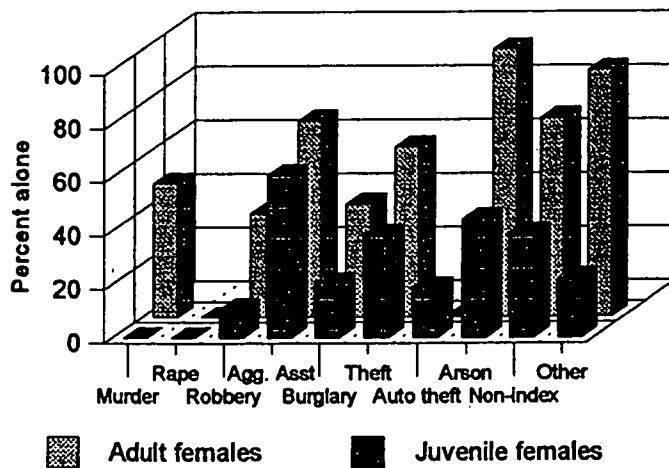


Figure 3b

Co-offending status

Male Offenders

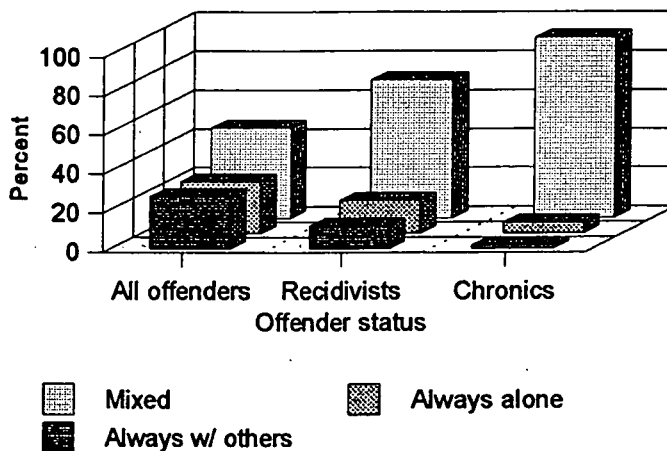


Figure 4a

Co-offending status

Female Offenders

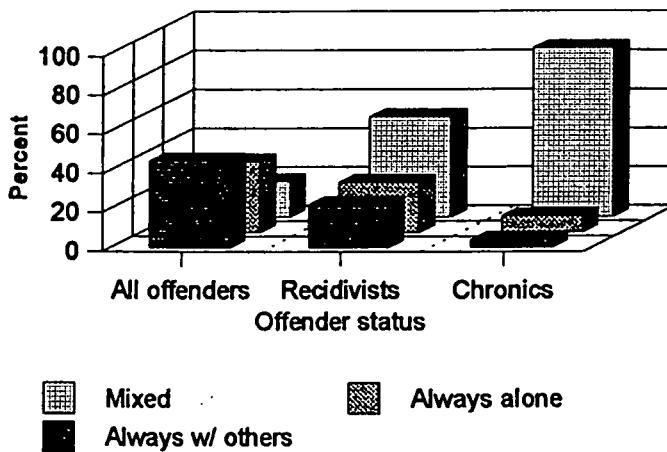


Figure 4b

Percent of offenses with co-offenders by offender status and gender

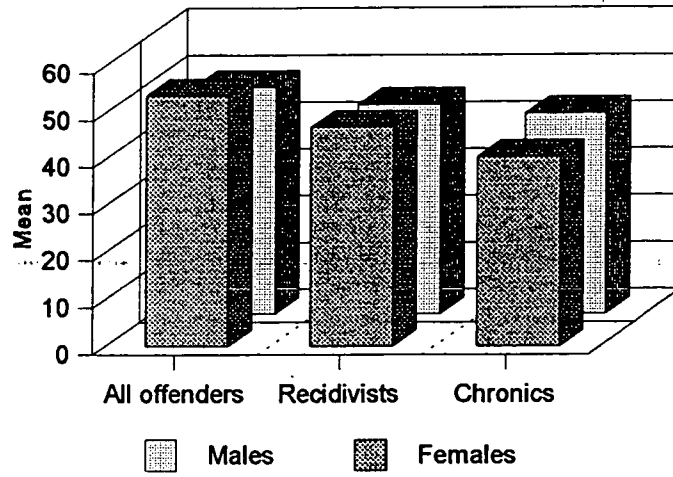


Figure 5

Extent of co-offending by Age of onset

Males

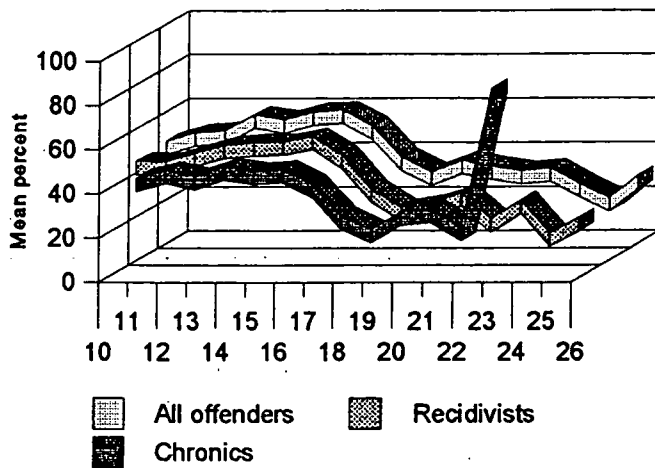


Figure 6a

Extent of co-offending by Age of onset

Females

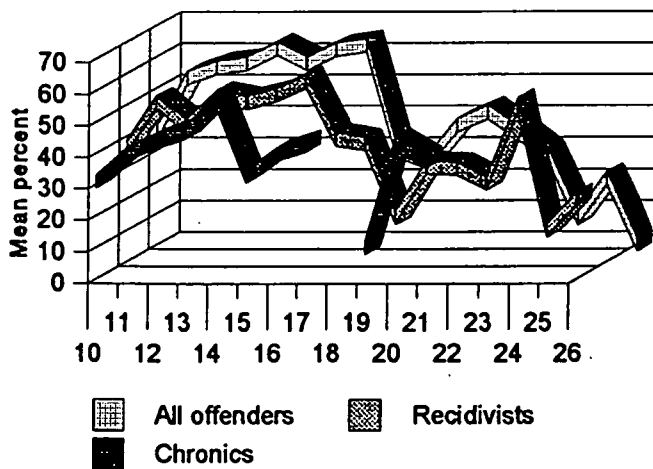


Figure 6b

Mean Age at Onset by co-offending status

by Offender Status: Males

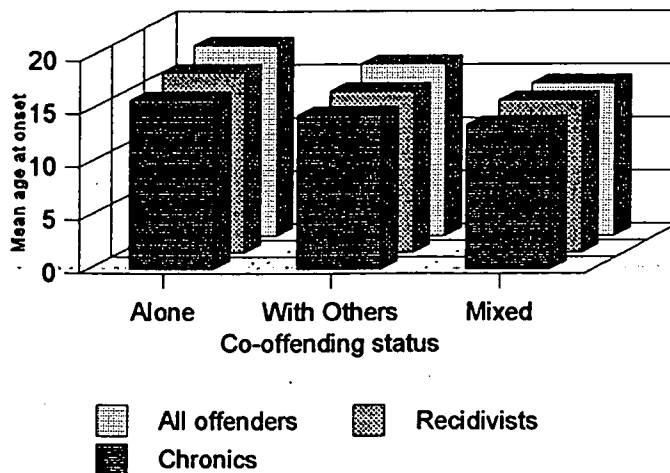


Figure 7a

Mean Age at Onset by co-offending status

by Offender Status: Females

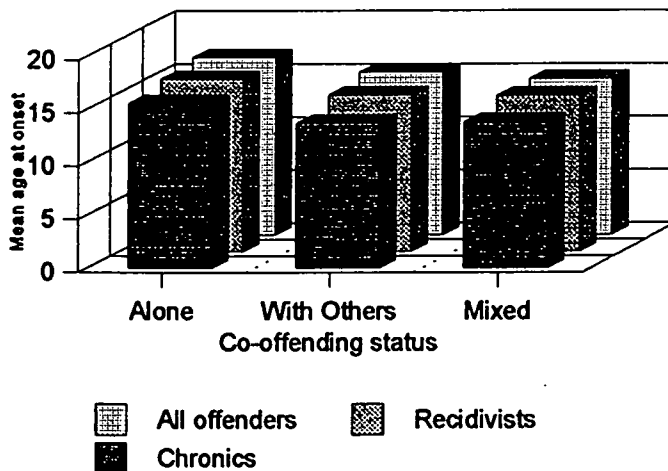


Figure 7b

Frequency of official offending by co-offending status

Males

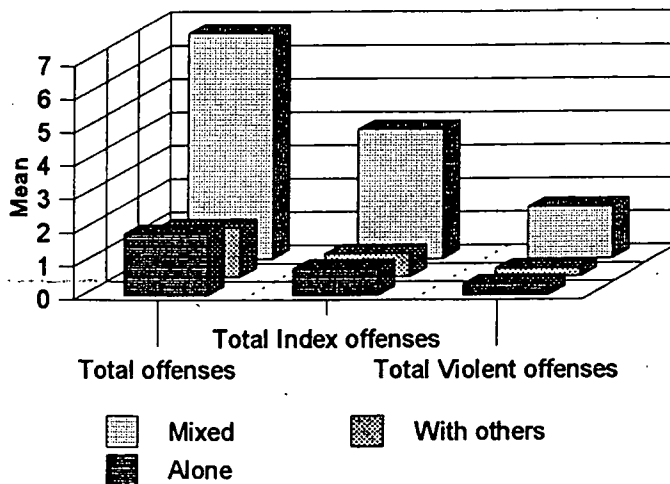


Figure 8a

Frequency of official offending by co-offending status

Males: Recidivists

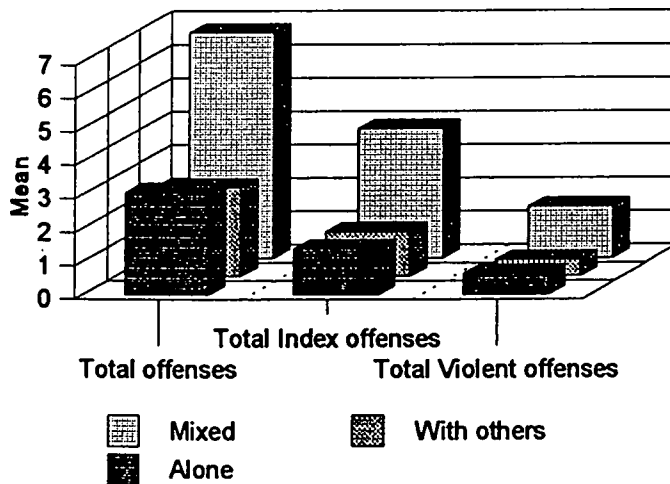


Figure 8b

Frequency of official offending by co-offending status

Males: Chronics

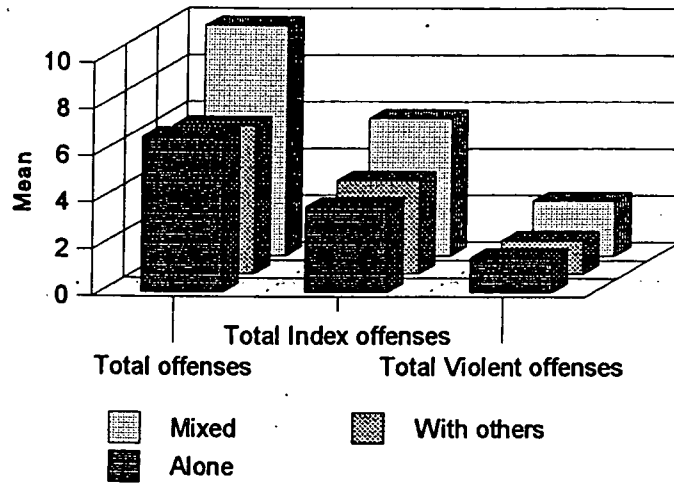


Figure 8c

Frequency of official offending by co-offending status

Females

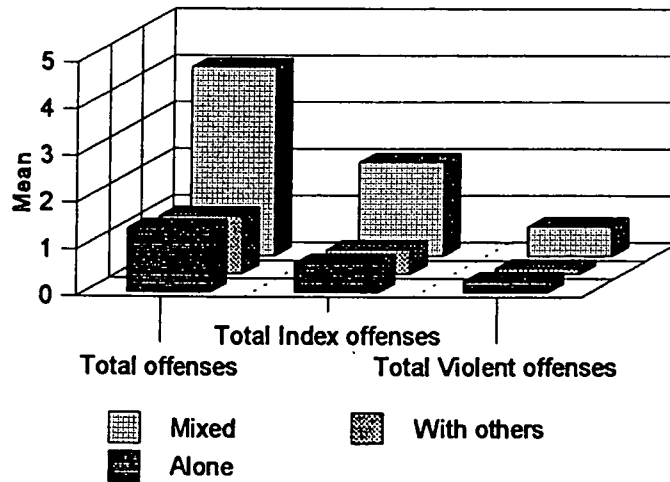


Figure 8d

Frequency of official offending by co-offending status
 Females: Recidivists

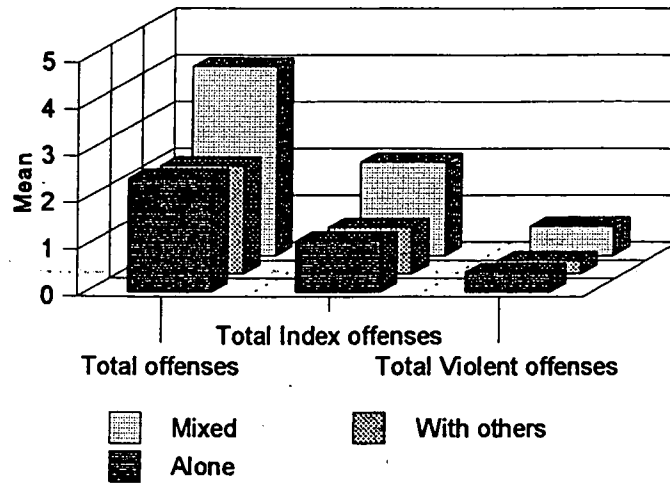


Figure 8e

Frequency of official offending by co-offending status
 Females: Chronics

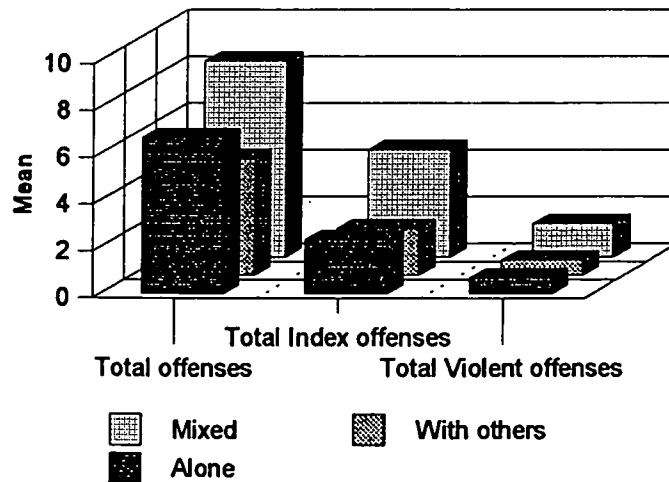


Figure 8f

Mean number of official offenses by age at onset
by co-offending status: Males

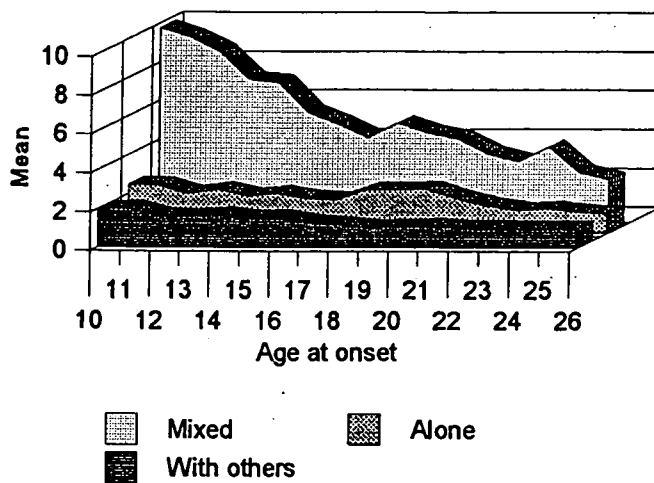


Figure 9a

Mean number of official offenses by age at onset
by co-offending status: Females

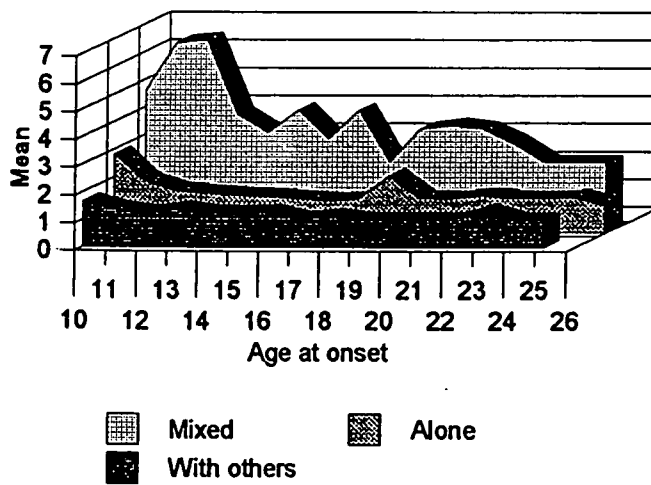


Figure 9b

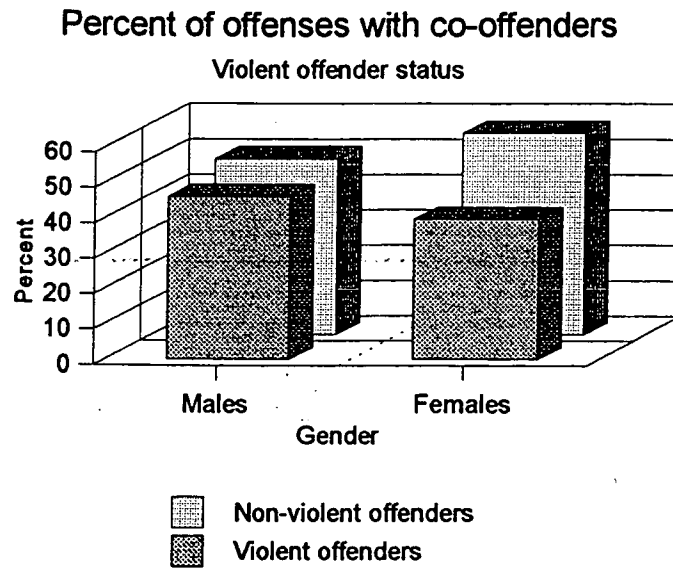


Figure 10

Mean Age at Violent Onset by co-offending status
by Offender Status: Males

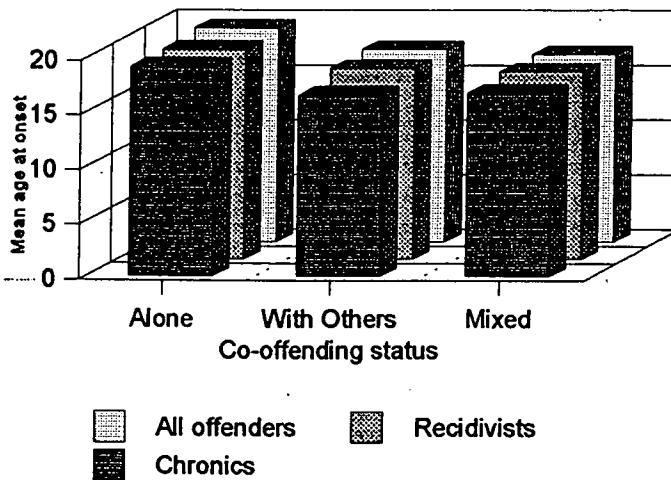


Figure 11a

Mean Age at Violent Onset by co-offending status
by Offender Status: Females

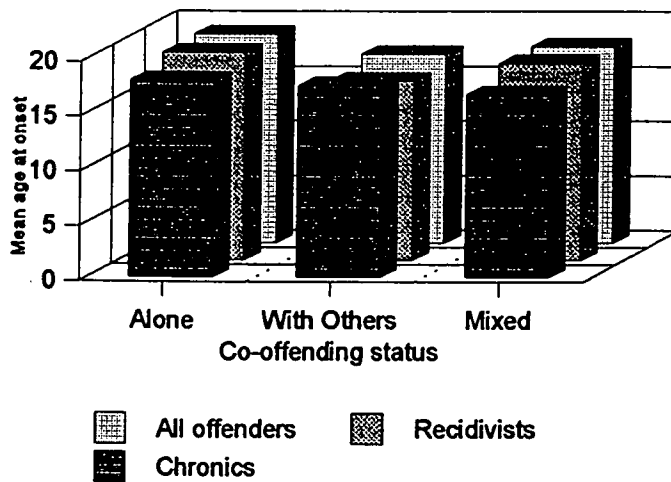


Figure 11b

Mean number of official Violent offenses by age at onset
by co-offending status: Males

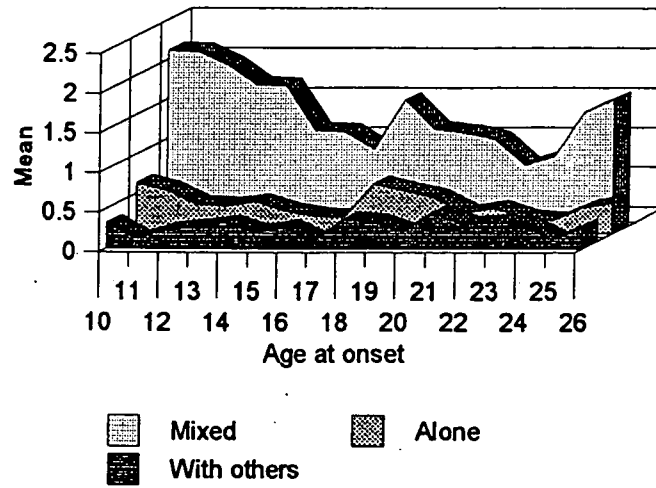


Figure 12a

Mean number of official Violent offenses by age at onset
by co-offending status: Females

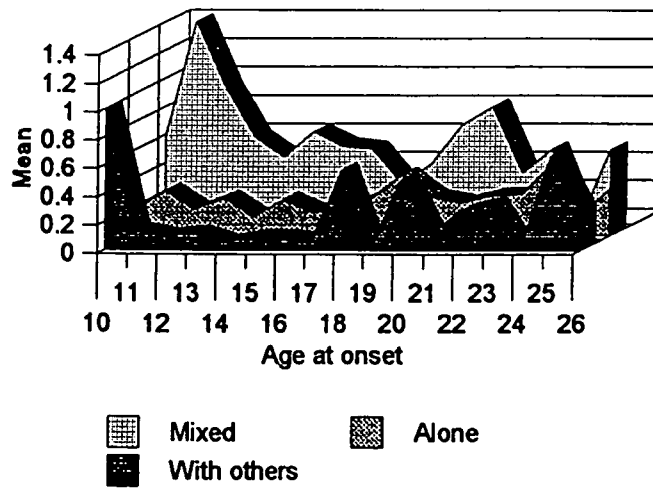


Figure 12b

Mean number of official Index offenses by age at onset
by co-offending status: Males

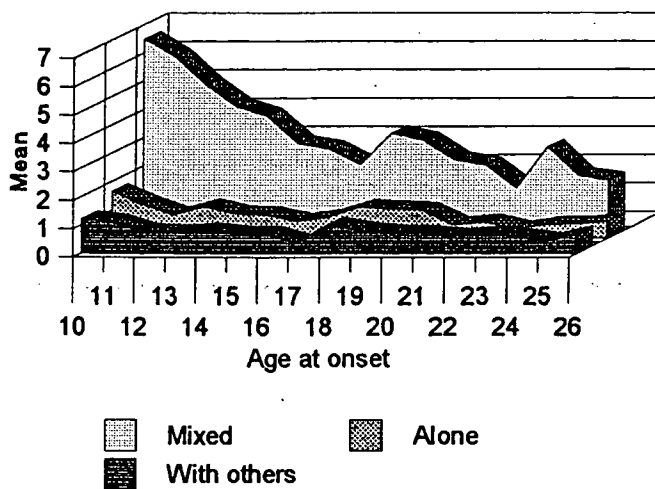


Figure 13a

Mean number of official Index offenses by age at onset
by co-offending status: Females

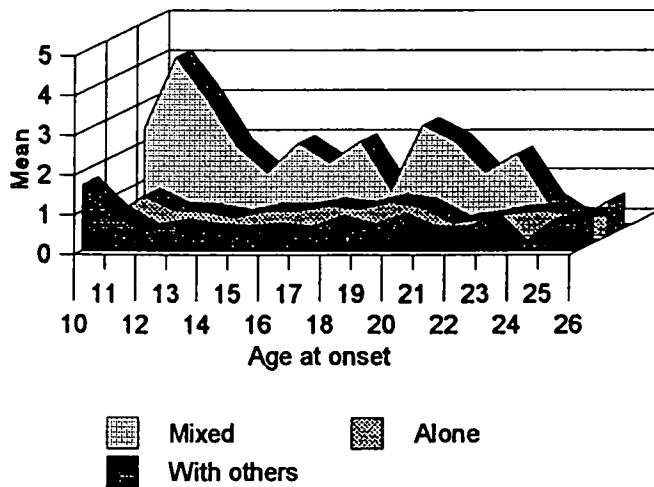


Figure 13b

Frequency of self-reported offending by group measures

Juvenile Males

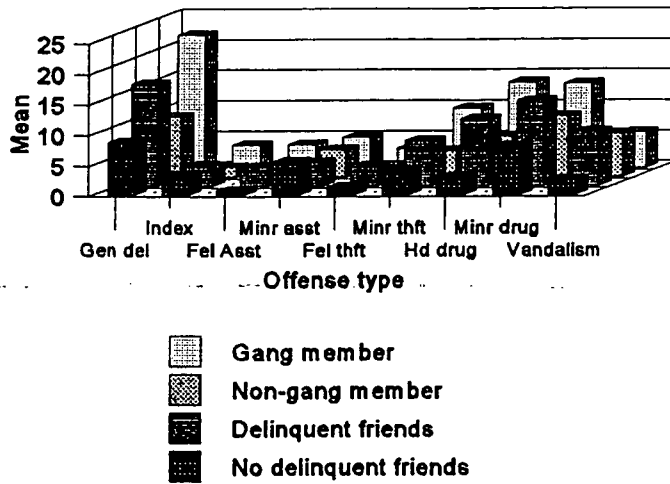


Figure 14a

Frequency of self-reported offending by group measures

Adult Males

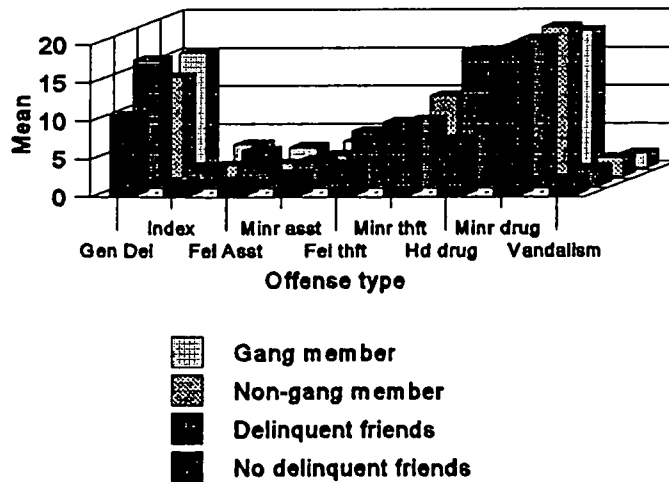


Figure 14b

Frequency of self-reported offending by group measures

Juvenile Females

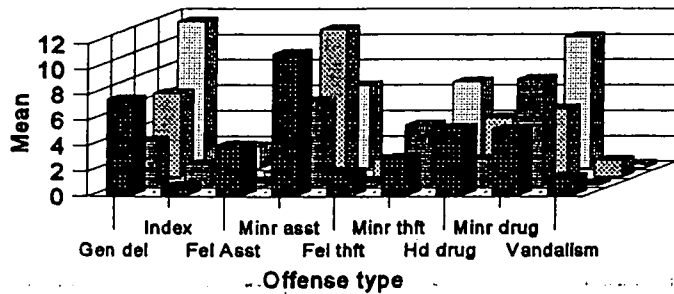


Figure 14c

Frequency of self-reported offending by group measures

Adult Females

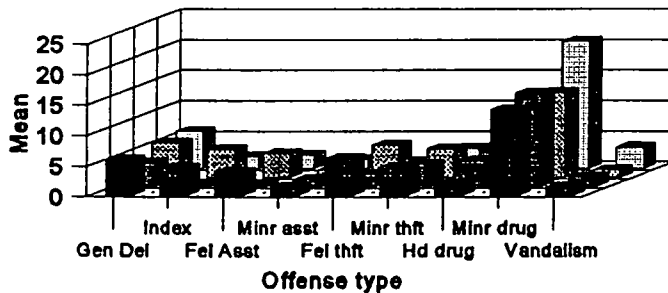


Figure 14d

Self-reported violence and group measures

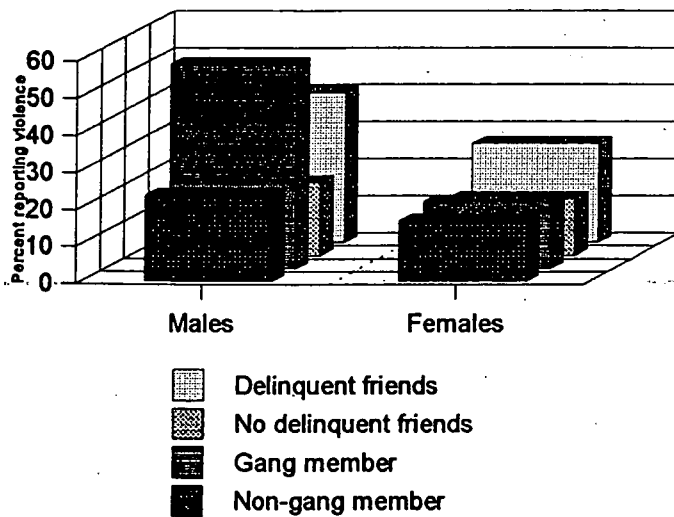


Figure 15

Self-reported offending and co-offending status

Males

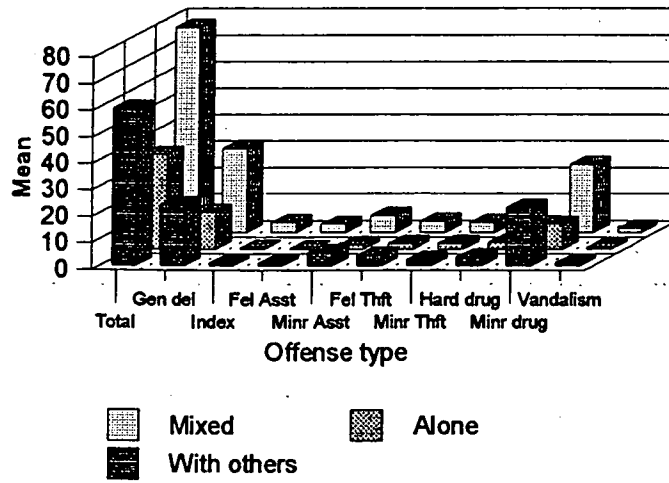


Figure 16a

Self-reported offending and co-offending status

Females

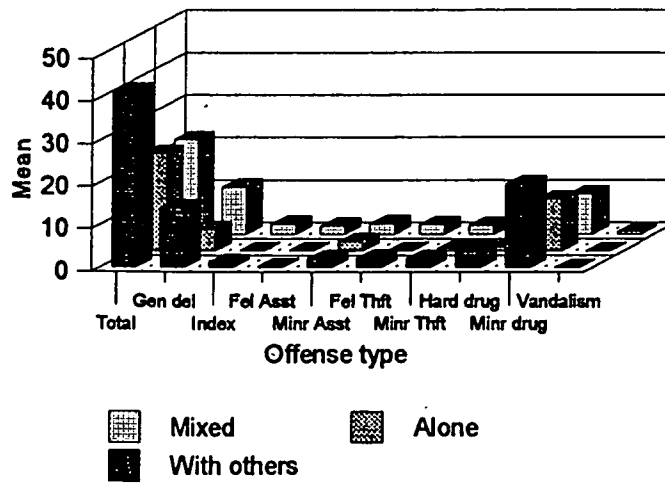


Figure 16b

Self-reported violence and co-offending status

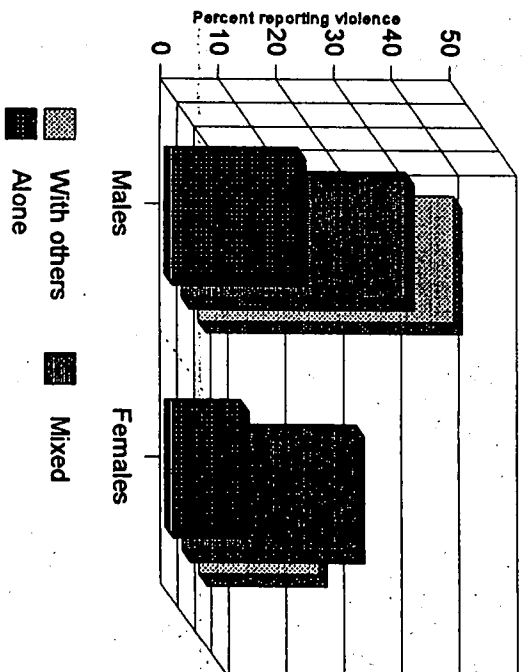


Figure 17

Group measures and co-offending status

Males

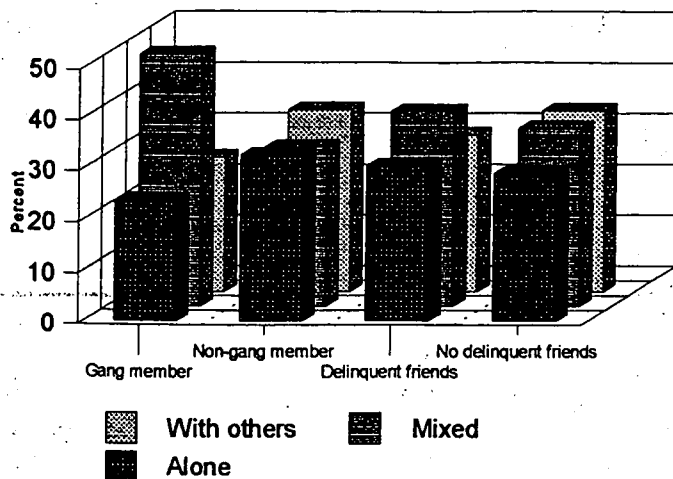


Figure 18a

Group measures and co-offending status

Females

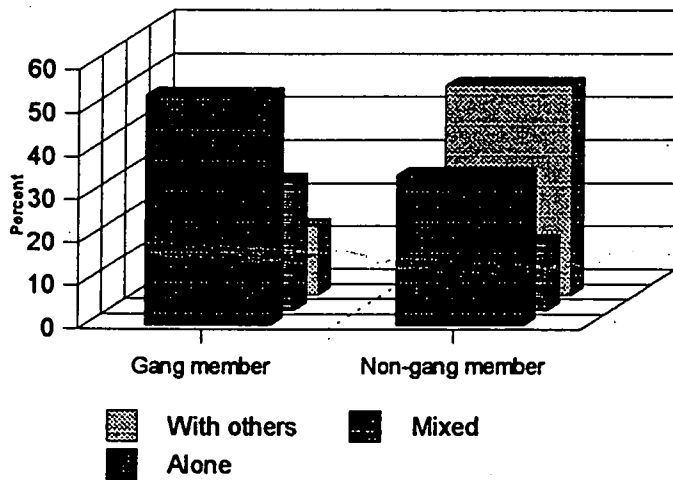


Figure 18b

92-IJ-CX-0007

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SUMMARY

**GROUP OFFENDING AND CRIMINAL CAREERS: VIOLENCE AMONG
JUVENILE DELINQUENTS AND ADULT OFFENDERS**

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Office of Justice Programs
U.S. Department of Justice

August 1996

Supported under award #92-IJ-CX-0007 from the National Institute of Justice, Office of Justice Programs, U.S. Department of Justice. Points of view in this document are those of the author alone and do not necessarily represent the official position of the U.S. Department of Justice. The data utilized here were made available by the Inter-University Consortium for Political and Social Research. The data for Delinquency in a Birth Cohort II: Philadelphia, 1958-1986 and The 1958 Philadelphia Birth Cohort Follow-up Survey were originally collected and prepared by R. M. Figlio, P. E. Tracy, and M. E. Wolfgang.

I. Introduction

Policy-makers and academics have long had an interest in the role of the peer group in delinquency. The peer group is central to many criminological theories,¹ and there is evidence that most juvenile delinquency is group behavior.² NCVS data indicate that one-half of serious violent crime committed by juveniles is committed in groups.³ Interestingly, however, a majority of those who commit crimes with others are not members of highly organized gangs but are actually persons who are engaging in delinquency with a loose network of companions.⁴

However, in his review of the literature, Reiss⁵ noted that many of our ideas about group offending (also referred to as co-offending) are based on only a handful of studies. There are almost no studies on group offending which perform offender-based analyses. In addition, little attention has been given to group offending in relation to the transition from juvenile to adult criminal careers.⁶ Group offending is also important in the study of crime and delinquency because of its apparent relationship with the incidence (frequency) of offending.⁷ Group offending is a salient crime control issue in terms of its relationship to recidivism and age at onset into crime and delinquency. Its connection to violence in the criminal career is not well known, and our intervention strategies need to be informed by such information.

II. The Present Study

The research had as its goal a description of group offenders vis a vis violent and chronic offending. The data used for this project constitute what is commonly known as the second Philadelphia birth cohort study conducted by the Sellin Center at the University of Pennsylvania.⁸ This longitudinal research project followed all persons born in 1958 who resided in Philadelphia

from age 10 to the age of 26. This process resulted in the identification of 27,160 cohort members (14,000 females and 13,160 males). Previous research which has used the 1958 birth cohort has not resulted in any published material addressing the issue of group offending or its relationship to violent crime. This analysis includes the use of all cohort members (male and female) over the juvenile and adult years.

Two types of data were used in the present analysis. The first is based on official records,⁹ and the second are self-report interview data from a sample of the cohort subjects (n=782).¹⁰ Offender-based files were generated for the juvenile and adult years of the cohort subjects. Offenders were classified in terms of whether (over the course of their careers) they engaged in (a) completely lone offending, (b) completely group offending, or (c) a mix of solitary and group offending.¹¹ The extent of group offending was also explored through the calculation of the proportion of offenses involving companions. Offenders were also classified in terms of frequency and severity of offending. In the official data, the incidence categories used were desisters (one-time offenders), non-chronic recidivists (two to four offenses), and chronic offenders (five or more offenses). The total number of index, violent, and all offenses was determined as well. Another measure was created, recording offenders who had three offenses by age 15.¹² Offenders were classified as violent and index offenders; severity of offending was also measured using offense severity scores.¹³ Age at first offense and age of onset for violence were calculated.

A sample of men and women were surveyed in 1988 concerning (among other issues) delinquent and criminal behavior from childhood to the time of the interview (age 30). Offense categories were modeled as closely as possible after National Youth Survey scales;¹⁴ the items

used and their classifications are listed in the Appendix. Similarly, the class intervals (for levels of offending) were constructed using the marginal distributions found in Elliott and Ageton.¹⁵

Violence was measured using the categories reflected in the Appendix. In addition, the survey asked subjects if they had ever been violent. Two types of group offending measures were available. The first item is based on a survey question which asked whether the respondent was ever a member of a gang. The other measure used an item asking the subject how many of his/her three closest friends were picked up by the police during school years (responses were dichotomized into none versus one or more). All analyses using the self-report survey are based on weighted data.

III. Findings

The Official Data

Exploratory analysis revealed a relationship between the number of offenders in an offense and age. The official data revealed that offenses committed during the juvenile years were more likely to involve co-offenders than those committed during the adult years. As age at offense increased, the percentage of offenses involving lone offenders also increased.

In general, offenses involving multiple offenders had higher average offense severity scores than those involving lone offenders. With respect to co-offending and type of offense, robbery and burglary were the crimes most commonly committed with others among males. Index offenses were more likely than non-Index offenses to be committed by multiple offenders (except among the offenses of female juveniles). Among the four violent Index offenses, aggravated assaults involved the greatest proportion of solitary offenders.

Of the crimes committed during the adult years, a greater proportion of the violent and

property Index offenses involved lone offenders, compared with the offenses of juveniles. A majority of the murders, rapes, and aggravated assaults of adults were solitary offenses, while the opposite was true for juveniles.

The likelihood of co-offending also depended on the rank (serial) number of the offense. For offenses during the juvenile years, the number of co-offenders tended to decrease as the serial number of the offense increased; this pattern was especially noticeable at the high end of the continuum.

Multivariate (logistic) regression of solitary versus group offenses on offense and demographic variables revealed that Index offenses, those involving younger offenders, and those with white offenders were more likely to be group offenses.

The offender-based data were used to classify criminal careers as involving solely lone offending, solely co-offending, or both lone and co-offending (mixed/versatile). Analysis indicated that offending careers commonly involved a mix of solitary and companionate offending. As frequency of offending increased, the likelihood of co-offending increased. Among chronic offenders, fewer than ten percent engaged in totally solitary offending. Juvenile offenders were more likely than adults to commit a mix of offenses and to have criminal careers with totally companionate offending. Juvenile offenders committed a greater proportion of their offenses with others (about one-half) than did adults. This was also true among the subset of chronic offenders.

The relationship between co-offending and age at onset was investigated. Those offenders who committed some or all of their crimes with others generally had earlier onset. In general, there was a non-linear relationship between age at onset and the extent of co-offending. Those with later (rather than earlier) juvenile age of onset tended to commit a greater proportion of their offenses with others. Among

offenders with adult age of onset, the proportion of crimes committed with others tended to decline as age at onset increased. The non-linear relationship between the extent of co-offending and age at onset held among repeat offenders as well. These patterns generally were found also when age at first violent offense was considered. Figures 1a and 1b compare the mean age at onset by incidence level and co-offending status.

Figures 2a and 2b display the association between frequency of offending and co-offending status for males. In terms of incidence and co-offending, versatile offenders committed more offenses, on the average. This pattern was consistent for both males and females, as well as for the subset of offenders partitioned by offending levels (recidivists and chronics). Further, the offenders who committed a mix of solitary and companionate offenses were more frequent offenders than either the totally solitary or totally companionate offenders, even when controlling for age of onset (see Figures 3a and 3b). The differences between categories were more extreme for the males, however.

Among the recidivists, those who committed a mix of solitary and group offenses during their careers committed more offenses in total, and more Index offenses, than those who engaged in either totally lone or companionate offending. Co-offending status was also related to offense seriousness. Among the recidivists, offenders who worked alone had lower offense severity scores on average than those who had companionate or mixed offending careers.

The variable which measured the extent of co-offending was compared with the likelihood of committing an Index or violent offense. Offenders who committed a violent crime engaged in a lower proportion of offenses with companions than non-violent offenders (Figure 4). In addition, those who offended with others tended to have earlier age at onset for a violent offense than offenders who acted alone. Further, when controlling for age of onset, those of mixed co-offending status committed more

Index offenses and more violent offenses on average than totally solitary and totally companionate offenders. This difference was especially noticeable among female offenders.

The data revealed that, among chronic offenders, juveniles committed proportionately twice as many offenses with others as did adults. Multivariate analysis was then performed on the subset of recidivists to explore the role of co-offending status in the prediction of frequency of offending. Those of mixed co-offending status (relative to those who engaged in totally lone offending) were more likely to be chronic rather than non-chronic recidivists. Totally companionate offending in the criminal career had a slight but statistically significant negative bearing on the probability of being a chronic rather than a non-chronic recidivist for males.

The role of co-offending in the likelihood of being a violent offender was also explored. Multivariate analysis revealed that knowledge of co-offending helped to explain the likelihood of being a violent offender. Compared with solitary offenders, those who committed a mix of offenses both alone and with others were more likely to be violent. The variable with the largest effect on violent offending for males was mixed co-offending status. Committing some offenses alone and some with others (relative to solitary offending) increased the likelihood of being a violent offender by a factor of almost four. This variable also attained significance in the model for females. The multivariate model for males showed no effect of totally companionate offending on violence, relative to those with solitary offending careers. For females, being a totally companionate offender (compared with solitary) slightly decreased the odds of committing a violent crime.

The Self-Report Follow-up Data

The next series of results is drawn from the interview sample of cohort subjects. As previously mentioned, the data were weighted prior to analysis to adjust for the sampling technique used. About

four out of 10 males reported that one or more of their three closest friends had been picked up by the police during their school years (the "delinquent friends" measure). A much smaller percentage of females answered this question in the affirmative. The majority of the subjects did not report gang membership. However, males were more likely than females to report that they had ever belonged to a gang.

The relationship between frequency of offending and the two group offending measures was examined. In general, those who had a gang affiliation engaged in more criminal behavior than those who did not. For example, juveniles who at some point joined a gang engaged in higher levels of Index offending, felonious assaults, and theft offenses. This group also showed greater incidence of minor drug and alcohol use and general delinquency. This relationship was not consistent across age and sex groups, however. Among adult males, gang members showed higher mean offending levels for general delinquency, Index offenses, and assaults, while for adult females, gang members reported more frequent use of minor and hard drugs and lower levels of some of the more serious behaviors.

In addition, among the males, having delinquent friends was associated with greater levels of criminal behavior. During the juvenile years, those males with delinquent friends engaged in more delinquency in general, more Index offenses, more felonious assaults, more thefts, and more drug use. For females, however, there was not such a clear association between one's own incidence of offending and having delinquent friends. For some offense categories there was a positive relationship between delinquent friends and self-reported offending, while for others there was no relationship (or even a negative relationship).

Those who once belonged to a gang or had delinquent friends were significantly more likely to be found at the higher incidence levels. Generally speaking, a greater proportion of those who answered

affirmatively to these two questions were chronic repeat offenders, compared with those who never belonged to a gang or had delinquent friends, especially for males. This pattern was true not only for the general delinquency scale but also held in most cases for Index and assaultive offenses specifically.

A separate question on the survey instrument asked the subjects if they had ever been violent. Self-reported violence was correlated with delinquent peer affiliations. Among both males and females, those with delinquent friends were more likely to admit violent behavior than those without such associations (Figure 5). Further, for males, gang members were more likely to report engaging in violence than non-gang members. For females, gang membership was not significantly related to the general self-reported violence measure.

The Merged Data Files

The subject (cohort), offense (official), and interview (self-report) data files were merged so that the records of the 782 interviewed cohort subjects would reflect all variables over the three data sets.

Obviously, officially detected offending is some subset of all offending. Nonetheless, it would be useful to examine the prevalence and incidence of self-reported offending with respect to the co-offending variables available only from the official data. Among males, the solitary offenders self-reported fewer crimes in general than offenders who committed offenses with others. The majority of high-incidence self-report offenders committed some or all of their crimes with others. Among males, the incidence differences were notable for Index offending, assaultive behaviors, and minor drug use. Among females, solitary offenders typically reported fewer offenses, although this was not always the case. In addition, those whose records indicated they acted alone were less likely to self-report any violent offending.

The relationship between gang membership and co-offending depended on sex. Among males, a greater proportion of gang members than non-gang members were versatile offenders, committing some

but not all of their known offenses with others. Further, gang members were less likely to offend alone than non-gang members. Female gang members, on the other hand, were more likely to offend alone consistently than non-gang females.

IV. Policy Implications

The results of this study raise a number of crime control issues confronting criminal justice policymakers. Any solutions, however, must reflect the complicated role group offending plays in criminal careers. Like Reiss and Farrington's 1991 work, the present study found solitary offending careers to be relatively rare but for solitary offending to be more common at later ages. These authors argue that the explanation for this phenomenon is behavioral changes within individual criminal careers, while part of this decline in co-offending is attributed to the accumulation of experience. The present analysis supports this interpretation. As the serial number of the offense increased, the average number of co-offenders in the offense decreased. Chronic offenders exhibited great versatility, committing offenses both alone and with others. Further, versatile offenders were more frequent offenders, even when controlling for age at onset. As Reiss¹⁶ points out, it is possible that patterns of co-offending are tied to individual rates of offending, and we could better maximize the incapacitation effect by intervening early in the delinquent and criminal careers of high rate offenders. In addition, given the prevalence of versatility in offending, crime control efforts need to focus on both the individual and the sociological causes of offending. Focusing only on one set of causes may produce little change in offending behavior.

The relationship between age at onset and the extent of co-offending was non-linear, rising throughout the juvenile years and declining during the young adult years. Juvenile offenders who started their careers later tended to engage in more group offending. This may be a reflection of greater peer influence at the later teen years, encouraging criminality in those who had not yet manifested deviant

inclinations. In the same vein, the juveniles who started at earlier ages, who tended to commit a lower proportion of their offenses with others, may be exhibiting a greater commitment to delinquency and require less external impetus to offend. These results imply that peer associations are common contributors to criminality, especially during the juvenile years. Perhaps prevention efforts should be targeted at adolescents who are more vulnerable to the influence of such anti-social affiliations.

The relationship between companionate offending and the seriousness of a criminal career is not a simple one. Repeat offenders who committed some or all of their offenses with others committed more serious crimes on the average than those who worked alone. Among the chronic subset of offenders, those who always acted alone committed fewer violent, index, and total offenses than those who had mixed offending careers. Multivariate analysis indicated that versatile offenders were more likely to be violent offenders, compared with totally solitary offenders. On the other hand, there was no significant difference between male companionate offenders and solitary offenders with respect to the probability of being violent. At this point we can only guess whether this is simply a reflection of the greater frequency of offending of versatile offenders, or some other, more meaningful explanation exists. Nonetheless, the data indicate a connection between chronic, violent offending and versatility in offending.

Knowledge that a large proportion of juvenile offending is committed in groups (not necessarily by highly organized gangs) and that highly delinquent boys tend to be members of highly delinquent peer groups¹⁷ implies that the system should focus attention on these delinquents (not just members of gangs *per se*). While those involved in gangs are responsible for more than their fair share of offending, they are clearly not the only source of violent behavior. Simply attempting to eliminate the gang ignores what we know about the nature of much delinquency and gang structure and function. If delinquent peers support the continuation of delinquent behavior, then significant reductions in offending are possible if we

target peers as a risk factor.¹⁸ These results, as well as others, indicate that prevention of such delinquent associations is necessary, and that those with delinquent friends should be integrated into pro-social groups, rather than put into programs with other known offenders.¹⁹ Institutions such as the family and school play an important role in preventing deviant behavior. Current gang research indicates that approaches which emphasize prevention (targeting at-risk youth) and intervention with new, younger gang members offer the most promise.²⁰ Work in this area also reinforces the importance of developing programs which are community-based, not just gang-based.²¹

The present research adds to our basic knowledge about co-offending, but more needs to be done regarding the role of group offending as one aspect of the mix of offenses committed by high incidence offenders. Given the theoretical importance of the peer group in criminology, empirical research needs to consider companionate offending in its testing efforts. The reason or reasons for group offending deserves more attention. For example, work in Sweden suggests that delinquents offend with others simply as "a way of socializing with peers".²² In addition, if the importance of group offending can be established with respect to onset, recidivism, and severity, then there is stronger evidence for the inclusion of co-offending measures in studies of juveniles and young adults. Future research may find it fruitful to follow in the tradition of Hirschi²³ and Elliott et al.²⁴ and study group offending in relation to major societal institutions such as the family and schools. In fact, OJJDP's Program of Research on the Causes and Correlates of Delinquency indicates that, while there are multiple causes of delinquency, peers, school, family, and neighborhood factors are the major correlates of chronic violence in our society.²⁵

V. Appendix

Classification scheme used for offense scales in self-report sample

General Delinquency

Stolen a car for joyriding
 Taken some money from someone without his or her knowing it
 Stole money or property from your employer
 Bought or accepted property which you knew was stolen
 Carried a switch blade or other large blade
 Used a weapon to threaten another person
 Carried a handgun
 Have you hurt someone in any way, like knocking him or her down
 Hurt some bad enough for him or her to require medical treatment
 Attacked someone with the purpose of killing him or her
 Sold drugs illegally
 Disturbed the neighborhood with loud noisy behavior
 Forced someone to have sex with you
 Broken into a residence, store, school or other enclosed area
 Killed someone not accidentally

Index Offenses

Killed someone not accidentally
 Hurt some bad enough for him or her to require medical treatment
 Attacked someone with the purpose of killing him or her
 Forced someone to have sex with you
 Used a weapon to threaten another person
 Threatened to hurt someone if he or she didn't give you money or something else
 Broken into a residence, store, school or other enclosed area
 Stolen a car for joyriding

Felony Assault

Killed someone not accidentally
 Hurt someone bad enough for him or her to require medical treatment
 Attacked someone with the purpose of killing him or her
 Forced someone to have sex with you

Minor/Other Assault

Have you hurt someone in any way, like knocking him or her down
 Used a weapon to threaten another person

Felony Theft

Broken into a residence, store, school or other enclosed area
 Bought or accepted property which you knew was stolen

Minor/Other Theft

Taken some money from someone without his or her knowing it
 Stole money or property from your employer
 Stole a car for joyriding

Vandalism

Purposely damaged or destroyed property

Hard Drug Use

Used heroin
 Had heroin or cocaine in your possession
 Used cocaine
 Used "uppers" like amphetamines
 Used "downers" like barbiturates or morphine

Minor Drug Use

Smoked pot
 Been drunk in public

Notes

- 1 . Cohen, Albert K. (1955), *Delinquent Boys*. New York: Free Press; Cloward, Richard and Lloyd Ohlin (1960), *Delinquency and Opportunity*. New York: Free Press; Hirschi, Travis (1969), *Causes of Delinquency*. Berkeley: U. of California Press; Sutherland, Edwin and Donald R. Cressey (1974), *Criminology* (9th ed.). Philadelphia: Lippincott; Elliott, Delbert S., David Huizinga, and Suzanne S. Ageton (1985), *Explaining delinquency and drug use*. Newbury Park: Sage.

- 2 . Eynon, Thomas G. and Walter C. Reckless (1961), "Companionship at delinquency onset." *British Journal of Criminology* 2:162-170; Erickson, Maynard L. (1973), "Group violations, socioeconomic status, and official delinquency." *Social Forces* 52:41-52; Erickson, Maynard L. and Gary F. Jensen (1977), "Delinquency is still group behavior: Toward revitalizing the group premise in the sociology of deviance." *Journal of Criminal Law and Criminology* 68 (2): 262-273; Shapland, Joanna M. (1978), "Self-reported delinquency in boys aged 11-14." *British Journal of Criminology* 18 (3): 255-266; and Aultman, Madeline (1980), "Group involvement in delinquent acts: A study of offense types and male-female participation." *Criminal Justice and Behavior* 7 (2): 185-192.

- 3 . Snyder, Howard N. and Melissa Sickmund (1995), *Juvenile offenders and victims: A focus on violence (Statistics Summary)*. Washington, DC: Office of Juvenile Justice and Delinquency Prevention, US Department of Justice.

- 4 . Reiss, Albert J. and David Farrington (1991), "Advancing knowledge about co-offending: Results from a prospective longitudinal survey of London males." *Journal of Criminal Law and Criminology* 82 (2): 360-395.

- 5 . Reiss, Albert J. (1988), "Co-offending and criminal careers." Pages 117-170 in Michael Tonry and Norval Morris (eds.), *Crime and Justice: An annual review of research, Volume 10*. Chicago: University of Chicago Press.

- 6 . Reiss, Albert J. (1986), "Co-offender influences on criminal careers." Chapter 4 (pages 121-160) in Alfred Blumstein, Jacqueline Cohen, Jeffrey Roth, and Christy Visher (eds.), *Criminal Careers and "Career Criminals," Volume 2*. Washington, DC: National Academy Press and Reiss, note 5.

- 7 . Hindelang, Michael (1976), "With a little help from their friends: Group participation in reported delinquent behavior." *British Journal of Criminology* 16 (2): 109-125; and Shapland, note 2.

- 8 . Readers desiring more information on the variables contained in the version of the cohort data sets provided by ICPSR are referred to the User's Guides for "Delinquency in a Birth Cohort II: Philadelphia, 1958-1986" and "The 1958 Philadelphia Birth Cohort Follow-up Survey."

9. Offense data were gathered using police records; 13,339 juvenile offenses and 5,598 police contacts (18,937 in all) and 9,057 adult offenses were recorded. Only true offenses for juveniles were examined (n=13,339); police contacts were excluded from all analyses.
10. A disproportionate stratified random sample was drawn from the cohort.
11. after Reiss and Farrington, note 4.
12. after Tracy, Paul E. and Robert M. Figlio (1982), "Chronic recidivism in the 1958 birth cohort." *Paper presented at the Annual meetings of the American Society of Criminology, Toronto.*
13. The Sellin-Wolfgang severity scale measures the number of victims of injury, theft, and property damage, the presence of intimidation, and the number of premises forcibly entered. For more detail, see Tracy, Paul E., Marvin E. Wolfgang, and Robert M. Figlio (1990), *Delinquency careers in two birth cohorts*. New York: Plenum.
14. See, e.g., Dunford, Franklyn W. and Delbert S. Elliott (1984), "Identifying career offenders using self-reported data." *Journal of Research in Crime and Delinquency* 21 (1): 57-86..
15. Elliott, Delbert S. and Suzanne S. Ageton (1980), "Reconciling race and class differences using self-reported data." *American Sociological Review* 45: 95-110; see also Tracy, Paul E. (1987), "Race and class differences in official and self-reported delinquency." Chapter 10 (pages 87-121) in Marvin E. Wolfgang, Terence P. Thornberry, and Robert M. Figlio (eds.), *From boy to man, from delinquency to crime*. Chicago: U. of Chicago Press.
16. Reiss, note 5.

17. See also Morash, Merry (1983), "Gangs, groups, and delinquency." *British Journal of Criminology* 23 (4): 309-335.
18. Farrington, David P., Rolf Loeber, Delbert S. Elliott, J. David Hawkins, Denise B. Kandel, Malcolm W. Klein, Joan McCord, David C. Rowe, and Richard E. Tremblay (1990), "Advancing knowledge about the onset of delinquency and crime." Chapter 8 (pages 283-342) in Benjamin B. Lahey and Alan E. Kazdin (eds.), *Advances in clinical child psychology, volume 13*. New York: Plenum.
19. Huizinga, David, Rolf Loeber, and Terence P. Thornberry (1994), *Urban delinquency and substance abuse: Initial findings*. Research summary. Washington, DC: Office of Juvenile Justice and Delinquency Prevention, US Department of Justice.
20. For example, Klein, Malcolm W. and Cheryl L. Maxson (1989), "Street gang violence." Chapter 5 (pages 198-234) in Neil A. Weiner and Marvin E. Wolfgang (eds.), *Violent crime, violent criminals*. Newbury Park: Sage.
21. See also Wilson, John J. and James C. Howell (1994), *Comprehensive strategy for serious, violent, and chronic juvenile offenders*. Program summary. Washington, DC: Office of Juvenile Justice and Delinquency Prevention, US Department of Justice.
22. Sarnecki, Jerzy (1986), *Delinquent Networks*. Report number 1986:1. Stockholm: The National Council for Crime Prevention, Sweden (page 53).
23. Hirschi, note 1.
24. Elliott et al., note 1, and Elliott, Delbert S., David Huizinga, and Scott Menard (1989), *Multiple problem youth: Delinquency, substance use, and mental health problems*. New York: Springer-Verlag.
25. Wilson and Howell, note 21.

Mean Age at Onset by co-offending status by Offender Status: Males

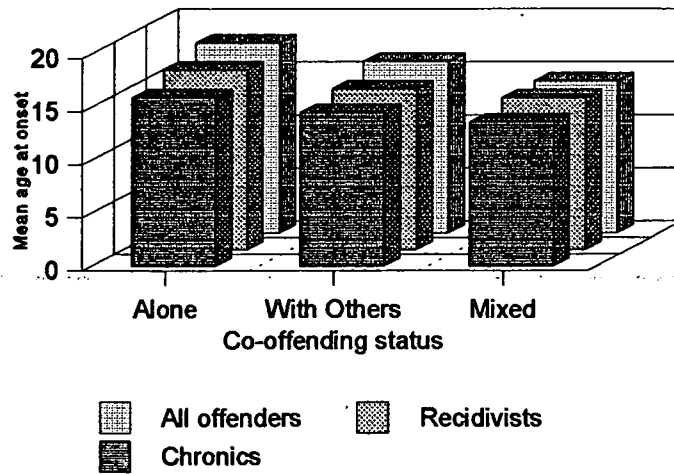


Figure 1a

Mean Age at Onset by co-offending status by Offender Status: Females

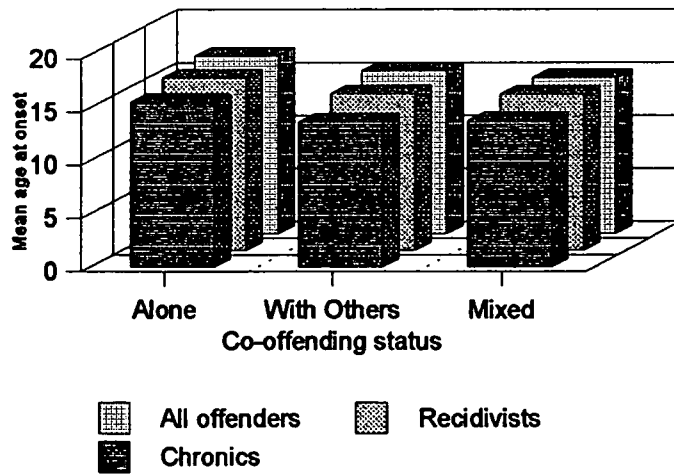


Figure 1b

Frequency of official offending by co-offending status

Males: Chronics

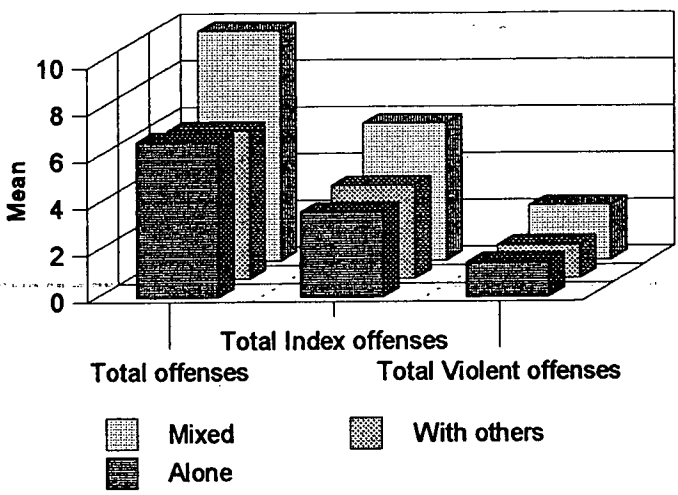


Figure 2a

Frequency of official offending by co-offending status

Females: Chronics

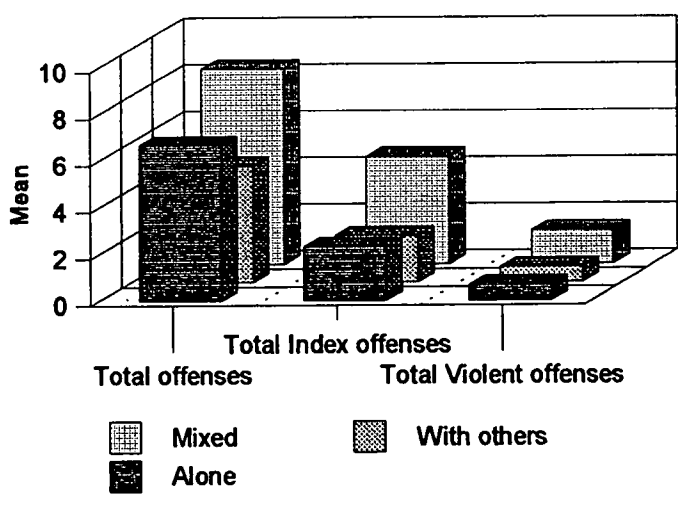


Figure 2b

Mean number of official offenses by age at onset
by co-offending status: Males

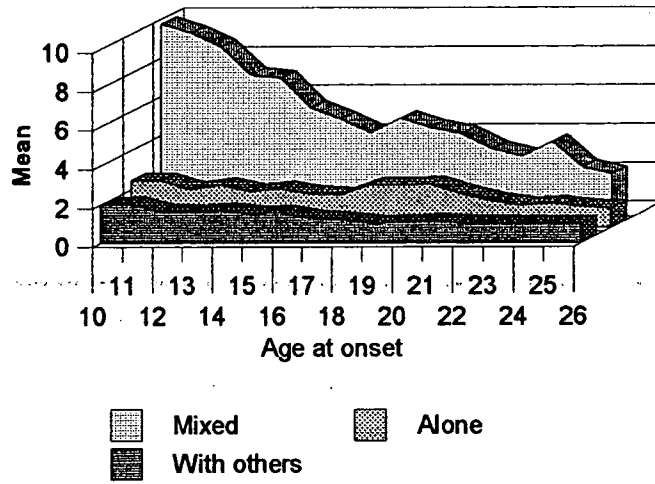


Figure 3a

Mean number of official offenses by age at onset
by co-offending status: Females

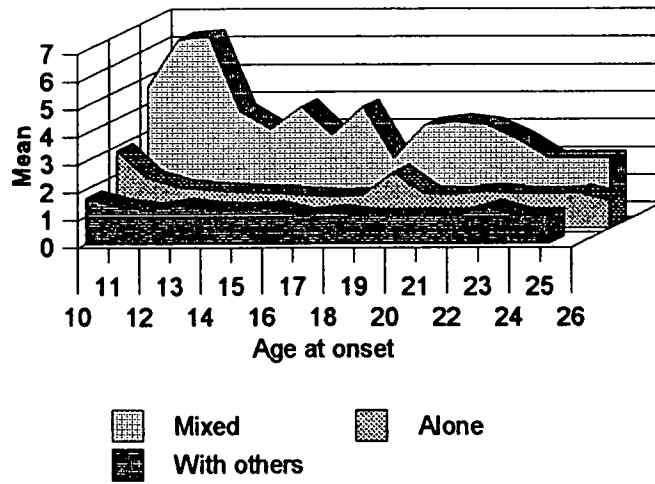


Figure 3b



Figure 4

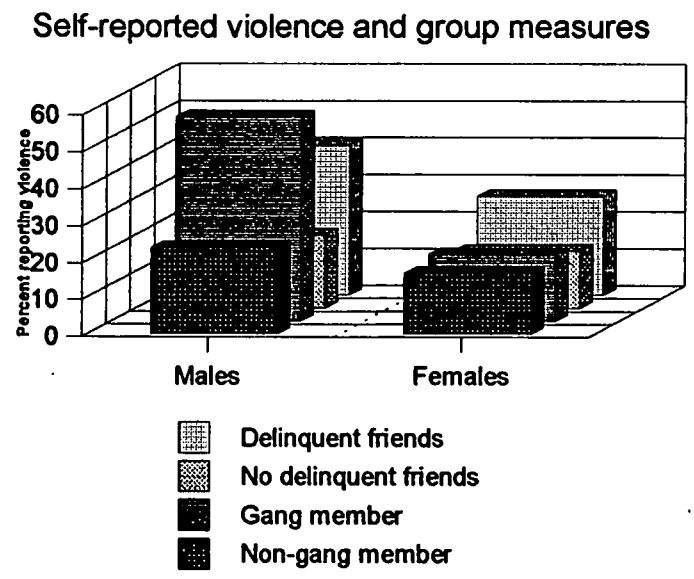


Figure 5

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