CHAPTER FOUR

The Antecedents of Gang Membership

HAVING PROVIDED a description of gang members by examining their demographic characteristics, we now extend this description considerably by identifying risk factors for gang membership. After examining how antecedent characteristics and attributes affect the likelihood that an individual will join a gang, we examine the ability of these same risk factors to distinguish transient from stable gang members. Following these bivariate analyses, we turn to multivariate models and examine how experiencing multiple risk affects the odds of joining a street gang.

A Risk Factor Approach

Risk factors are "individual or environmental hazards that increase an individual's vulnerability to negative developmental outcomes" (Small and Luster, 1994: 182; see also Farrington, 2000; Werner and Smith, 1982). Consistent with the multidimensionality of the life-course approach, risk factor models assume that there are multiple, and often overlapping, risk factors in an individual's background that lead to adverse outcomes. In the terms of developmental psychopathology, outcomes are characterized by equifinality, or multiple pathways to the same outcome (Cicchetti and Rogosch, 1996). Furthermore, this approach assumes that *cumulative* risk, that is, risk that occurs in many different life domains, is most strongly related to adversity (Werner and Smith, 1982).

Identifying risk factors, especially those that occur early in the life course, has several theoretical and practical advantages (Farrington, 2000). Theoretically, identifying factors that increase risk suggests fruitful areas for exploration in more formal causal analyses. It also helps in isolating variables that mediate or translate increased vulnerability into actually experiencing the outcome. Practically, knowledge of risk factors helps structure the design of

intervention programs by identifying "at-risk" youth for whom prevention and treatment efforts are most warranted. Also, the identification of the most salient risk factors suggests substantive areas for intervention efforts. Alleviating antecedent variables that are associated with increased risk for a particular outcome may also reduce the probability that the person will experience the outcome. Moreover, identifying the cluster or constellation of risk factors associated with a particular outcome is helpful to clinicians because they deal with the entire individual and all of his or her presenting problems.

Despite these advantages, there have been surprisingly few examinations of risk factors for gang membership. Prior studies in this area are primarily correlational in design and compare gang members to nonmembers in terms of attributes measured during periods of active gang membership. In these studies temporal order is not established and it is therefore not clear whether the factors identified are antecedent risk factors for gang membership, co-occurring problems, or consequences of being in a gang. Because most prior studies do not establish proper temporal order, they suggest, rather than identify, risk factors for gang membership. In this section we first review the results of these studies and then review in more detail the few studies that more properly assess risk factors for gang membership.

Correlational Studies

Consistent with the basic tenet of a risk factor approach – that there are likely to be multiple rather than single pathways to adverse outcomes – prior research has examined correlates of gang membership in a variety of domains. Howell (1997: 124) has categorized risk factors into five groups: community, family, school, peer, and individual characteristics. We further divide Howell's category of individual characteristics into a prior problem behavior category and other individual characteristics. We also subdivide the family category into family sociodemographic characteristics and parent-child relationship factors.

Area Characteristics

Several studies have found that living in socially disorganized areas is related to gang membership (Bowker and Klein, 1983; Curry and Spergel, 1992; Moore, 1978, 1991; Short, 1990). These findings are consistent with the general observation that gangs themselves tend to cluster in high-crime, socially disorganized neighborhoods (e.g., Fagan, 1996; Short and Strodtbeck, 1965; Vigil, 1988). Not surprisingly, youths who reside in those same neighborhoods are at increased risk for gang membership. These findings are also consistent with research results that suggest that the availability of drugs (Curry and Spergel, 1992; Hill et al., 1995) and the presence of gangs (Curry

and Spergel, 1992; Nirdorf, 1988) in the neighborhood also increase the risk for gang membership.

Other studies, however, do not link area characteristics with an increased risk of gang membership. For example, in a study by Bjerregaard and Smith (1993) using the Rochester data, social disorganization and neighborhood poverty are not significantly related to the risk of gang membership. Fagan (1990) also found no significant association between gang membership and social integration, neighborhood integration, or neighborhood violence. Similarly, Winfree, Backstrom, and Mays (1994) found that urban residence does not differentiate gang members from nonmembers.

Family Sociodemographic Characteristics

Several studies have examined sociodemographic characteristics as risk factors for gang membership. Very little research in the gang literature examines race or ethnicity as a predictor of gang membership, because most studies are conducted within racially homogeneous gangs. Among the studies that do exist, the comparison is generally between white subjects and either African American or Hispanic youths. By and large, Hispanic and African American subjects are more likely to be gang members than are white subjects (Esbensen and Huizinga, 1993; Hill et al., 1999; Schwartz, 1989; Winfree et al., 1994), an outcome consistent with our data presented in Chapter 3.

Some studies have found that low family socioeconomic status or poverty is related to gang membership (Bowker and Klein, 1983; Moore, 1991; Schwartz, 1989). Structural characteristics of families have also been examined with varying results. Bowker and Klein (1983) and Vigil (1988) found that coming from single-parent families increases the risk of joining gangs, whereas LeBlanc and Lanctôt (1998), in a study comparing gang members and nonmembers in a Quebec sample restricted to adjudicated boys, did not.

Parent-Child Relations

In addition to concerns about family structure, many studies have examined family processes and parent-child relationships as risk factors for gang involvement. In general, poor family management strategies increase the risk for gang membership by adolescents (LeBlanc and Lanctôt, 1998; Moore, 1991; Vigil, 1988). More specifically, low family involvement (Friedman, Mann, and Friedman, 1975; LeBlanc and Lanctôt, 1998), inappropriate parental discipline (Winfree et al., 1994), low parental control or monitoring (Bowker and Klein, 1983; Campbell, 1990; LeBlanc and Lanctôt, 1998; Moore, 1991), poor affective relationships between parent and child (Campbell, 1990; Moore, 1991), and parental conflict (LeBlanc and Lanctôt, 1998) put youths at risk for becoming gang members. These family-based risk factors are quite consistent with those generally observed as increasing risk for involvement in delinquency (see Hawkins, Catalano, and Miller, 1992; Loeber and Stouthamer-Loeber, 1986).

School Factors

Failure in the educational arena can also be a major source of risk for gang membership. Bowker and Klein (1983) reported that female students who have low educational expectations are at increased risk for gang membership, a finding also observed by Bjerregaard and Smith (1993) for females but not males. Gang membership is more likely among adolescents whose parents have low educational expectations for them (Schwartz, 1989). Poor school performance and low commitment to and involvement in school are correlated with gang membership (LeBlanc and Lanctôt, 1998). In a related vein, gang membership is associated with educational frustration (Curry and Spergel, 1992) and stress (LeBlanc and Lanctôt, 1998).

Teachers also play a role in predicting the likelihood of gang membership. Gang members, as compared with nonmembers, are more likely to experience negative labeling by teachers (Esbensen, Huizinga, and Weiher, 1993) and are less likely to have a teacher as a positive role model (Schwartz, 1989; Wang, 1994), although LeBlanc and Lanctôt (1998) did not find low attachment to teachers to be related to gang membership.

Low school self-esteem (Curry and Spergel, 1992; Schwartz, 1989) and educational marginality (Bjerregaard and Smith, 1993) increase the risk for gang membership. Two studies have suggested that school stress resulting from factors such as getting into trouble in school or getting poor grades is related to gang membership (Cohen et al., 1994; Shelden, Snodgrass, and Snodgrass, 1992).

Peer Relationships

Several studies have found that adolescents who associate with deviant peers are more likely to join gangs, especially peers who are themselves gang members (Curry and Spergel, 1992; Nirdorf, 1988; Winfree et al., 1994). Gang membership has been shown to be related to precocious sexual activity (Bjerregaard and Smith, 1993; LeBlanc and Lanctôt, 1998) and also, in the case of young women, dating older males, especially older gang males who are involved in deviant activity (Bowker and Klein, 1983).

Having friends who are involved in delinquency is strongly related to being a gang member (Bjerregaard and Lizotte, 1995; Bjerregaard and Smith, 1993; Bowker and Klein, 1983; Curry and Spergel, 1992; Esbensen et al., 1993; Fagan, 1990; LeBlanc and Lanctôt, 1998; Nirdorf, 1988; Winfree et al.,

1994). The relationship between deviant peers and gang membership is perhaps the strongest one observed in this literature. Because delinquent gangs are in many ways a specific version of a delinquent peer group, the finding is not surprising. Relatedly, loitering or "hanging out" with peers in unsupervised peer groups is also related to gang membership (LeBlanc and Lanctôt, 1998).

Individual Characteristics

Gang members have been characterized as being personally maladjusted, although findings in this area are rather inconsistent (see Bjerregaard and Smith, 1993, for a review). With regard to self-esteem, a number of studies found that low self-esteem increases the likelihood of gang membership (Cartwright, Tomson, and Schwartz, 1975; Rice, 1963; Schwartz, 1989; Wang, 1994). In contrast, Bjerregaard and Smith (1993), Bowker and Klein (1983), and Esbensen et al. (1993) did not find self-esteem to be related to gang membership. We have little information on the effect of stressful or negative life events as a risk factor for joining a gang except for the studies cited earlier relating to school stress and family stress.

The individual's attitudes also play a role in increasing the risk of gang membership. Winfree et al. (1994) found that progang attitudes are associated with gang membership and Esbensen et al. (1993) found that gang members have a higher tolerance for deviance and higher levels of normlessness (see also Fagan, 1990). LeBlanc and Lanctôt (1998) reported that deviant beliefs and techniques of neutralization are related to gang membership and also that gang members have significantly poorer scores than nonmembers on 10 of their 13 personality scales, including orientation to tough and adult-type behaviors, aggression, repression, denial, neuroticism, and extraversion.

Prior Deviance

Finally, several studies have found that adolescents who are already involved in deviant and problem behaviors are more likely to join gangs than are adolescents who are not involved in those behaviors. For example, gang membership has been shown to be related to alcohol and drug use (Bjerregaard and Smith, 1993; Cohen et al., 1994; LeBlanc and Lanctôt, 1998; Thornberry, Krohn, et al., 1993), violence (Friedman et al., 1975; LeBlanc and Lanctôt, 1998), being an illegal gun owner (Bjerregaard and Lizotte, 1995), and general delinquency (Curry and Spergel, 1992; Esbensen and Huizinga, 1993; LeBlanc and Lanctôt, 1998; Nirdorf, 1988). In addition, official contact with the juvenile justice system has been shown to be related to gang membership (Cohen et al., 1994; LeBlanc and Lanctôt, 1998).

Risk Factor Studies

Recently a few longitudinal studies have begun to investigate the impact of *prior* attributes and characteristics that may increase the risk of subsequent gang membership. That is, they have begun to assess more properly a risk factor model for gang membership.

Using data from the Seattle Social Development Project, Hill et al. (1999) examined risk factors measured at ages 10–12 as predictors of gang membership between ages 13 and 18. Risk factors were drawn from five domains: neighborhood, family, school, peers, and individual characteristics. They found that "[21] of the 25 constructs measured at ages 10–12 predicted joining a gang at ages 13 to 18. Predictors of gang membership were found in all of the measured domains" (Hill et al., 1999: 308). Within each of these domains the most potent risk factors are neighborhood youth in trouble and availability of marijuana; family structure, especially living with one parent and other adults or with no parents; low achievement in elementary school or being identified as learning disabled; association with deviant peers; prior involvement in marijuana use or violence; and externalizing problem behaviors. Hill et al. also found that having multiple risk factors greatly increases the chances of joining a gang.

Bjerregaard and Lizotte (1995) used the Rochester data to look specifically at the impact of earlier delinquency and gun ownership on the likelihood of being a gang member. They found that prior involvement in serious delinquency and street delinquency, but not more general forms of delinquency, increases the likelihood of later gang membership. They also found that owning guns for protection, but not for sporting purposes, increases the chances of joining a gang.

Lahey et al. (1999) examined predictors of first gang entry for the males in the Pittsburgh Youth Study. Their study was restricted to African American males because of the small number of white male gang members available for analysis. In bivariate relationships, gang membership is predicted by prior conduct disorder behaviors, self-reported delinquency, and associations with delinquent peers. Gang membership is not bivariately related to household income, household structure, neighborhood crime level, or parental supervision, however.

Summary

Overall, we have a good deal of information from prior studies that can inform a risk factor model. It appears that gang membership is a product of numerous risk factors from multiple developmental domains and that gang members are likely to have serious deficits in many developmental areas. Because of the cross-sectional nature of most of these studies, however, we

do not have a clear, well-replicated understanding of which *antecedent* conditions increase risk for *later* gang membership. In addition, a risk factor model requires a general, representative sample that includes both individuals who experience the outcome (i.e., gang membership) and those who do not experience it. Unfortunately, there are relatively few gang studies (e.g., Hill et al., 1999; Lahey et al., 1999) that have both of these design features – that is, a representative sample that follows both gang members and comparison nonmembers across time. We now capitalize on the longitudinal design of the Rochester study to help fill this gap in our knowledge.

Measurement

The key variable in this analysis is gang membership. As indicated in Chapter 2, gang membership is measured by a self-report item contained in our interviews. Unfortunately for this analysis, at Wave 2 we asked the respondents if they had *ever* been a gang member, but not the age at which they joined the gang. Thus, for subjects who were in a gang at Wave 2 proper temporal order cannot be established between Wave 1 risk factors and *later* gang membership. We therefore limit this analysis to respondents who joined a gang at Wave 3 or after. Starting at the Wave 3 interview, we asked the respondents whether they were a gang member at any time during the six-month interval since the previous interview. Because of this, we can establish proper temporal order between earlier risk factors, measured at either Wave 2 or prior to Wave 2, and later gang membership. Thus, the primary dependent variable in this chapter is joining a gang at any time between Waves 3 and 9.

Based on the domains previously identified, and consistent with a general ecological framework (Bronfenbrenner, 1979), risk factors for gang membership are grouped into seven domains: area characteristics, family sociodemographic characteristics, parent-child relations, school factors, peer relationships, individual characteristics, and early delinquency. More comprehensive descriptions of the measures within each domain were presented in Chapter 2. Briefly, area risk factors include racial composition, census-tract-level poverty, and arrest rate, as well as family perceptions of neighborhood disorganization and violence. Sociodemographic characteristics of families include economic disadvantage, race/ethnicity, and the composition of households. Measures of parent-child relations include attachment, involvement, supervision, positive parenting, child maltreatment, and family hostility. School factors include lack of school commitment, aspirations and achievement, and lack of attachment to teachers. Peer risk factors include peer delinquency, early dating, precocious sexual activity, and unsupervised time with friends. Individual factors include stressful or negative life events and various indicators of psychopathology such as high levels of externalizing behavior, low self-esteem, depressive symptoms, and

delinquent beliefs. Prior delinquency includes early general delinquency, violent delinquency, drug use, and age of onset of delinquency.

Because of the nature of the analysis to follow, especially the examination of cumulative risk, we dichotomize all the risk factor variables. Many are already dichotomies, for example, race/ethnicity and whether or not there is a history of child maltreatment. Continuous variables were divided at their median, so variables such as attachment to parents or commitment to school represent respondents who are above or below the midway point on the variable. Dichotomizing all the variables creates a common metric for the logistic regressions reported here and provides a rather intuitive interpretation for the odds ratios that are presented. Also, dichotomies are helpful in determining whether a respondent has a particular risk factor, a necessary step in assessing cumulative risk. Table 4.1 presents means for these dichotomous variables for male and female respondents separately.

Results

Bivariate Analysis

The first step in the analysis is an examination of bivariate relationships between early risk factors and subsequent gang membership. Because gang membership is a dichotomous variable, we use odds ratios from bivariate logistic regressions to estimate the strength of the associations. Odds ratios of less than 1 indicate that the risk factor is associated with a *reduced* likelihood of gang membership, whereas odds ratios greater than 1 indicate that the likelihood of gang membership is *increased* when this factor is present. For example, an odds ratio of .8 indicates that respondents who possess the particular attribute indicated by the predictor variable have a likelihood of gang membership that is 80% of that of those who do not have the attribute. On the other hand, an odds ratio of 1.3 indicates that those with the risk factor have a likelihood of gang membership that is 30% higher than those without the risk factor. An odds ratio of 2.0 indicates that the likelihood of gang membership is 100% higher or, in other words, is twice as high. An odds ratio of 1 indicates no relationship between the two variables. To examine whether the same risk factors predict gang membership for boys and girls, we do separate analyses by gender (see Table 4.2).

Male Gang Membership

For males, 25 of the 40 Wave 2 risk factors are significantly related to subsequent gang membership in the expected direction. Each domain contains a number of significant relationships indicating that diverse areas of the lives of these adolescents have the potential to put a youth at risk for joining a gang.

Table 4.1. *Means for Dichotomous Risk Factors*

	Males	Females
Area Characteristics		
Percentage African American	.50	.51
Percentage in Poverty	.47	.53
Community Arrest Rate	.49	.53
Neighborhood Disorganization	.53	.51
Neighborhood Violence	.45	.47
Neighborhood Drug Use	.33	.50
Neighborhood Integration	.59	.61
Family Sociodemographic Characteristics		
African American	.55	.71
Hispanic	.16	.18
Parent Education	.60	.54
Family Disadvantage	.56	.62
Poverty Level Income	.30	.38
Lives with Both Biological Parents	.33	.19
Family Transitions	.22	.17
Parent-Child Relations		
Attachment to Parent (Subject Report)	.45	.45
Attachment to Child (Parent Report)	.56	.57
Parental Involvement (Parent Report)	.51	.57
Parental Supervision (Subject Report)	.55	.70
Positive Parenting (Parent Report)	.35	.44
Report of Child Maltreatment	.12	.14
Family Hostility	.57	.49
School Factors		
Commitment to School	.48	.56
Attachment to Teacher	.49	.60
College Aspirations	.69	.73
Subject's College Expectations	.77	.80
Parent's College Expectations for Subject	.53	.68
Math Score	.57	.54
Peer Relationships		
Delinquent Peers	.33	.45
Early Dating	.41	.43
Precocious Sexual Activity	.29	.26
Unsupervised Time with Friends	.49	.40
Individual Characteristics		
Negative Life Events	.31	.40
Depression	.47	.62
Self-Esteem	.52	.49
Externalizing Behaviors	.46	.40
Delinquent Beliefs	.65	.62

Table 4.1. (*cont.*)

	Males	Females
Early Delinquency		
General Delinquency	.47	.41
Violent Delinquency	.27	.26
Drug Use	.07	.09
Age of Onset of General Delinquency	.26	.18

Note: To preserve temporal order, risk factors are measured either at Wave 2 or prior to Wave 2. Because of missing data, the n's vary across these measures, ranging from 488 to 534 for the males and from 169 to 183 for the females. The only exception is age of onset, which can only be calculated for offenders (n = 340 for males and n = 96 for females).

The objective indicators of area characteristics are more important predictors of gang membership than are the subjective perceptions of what neighborhoods are like. Respondents who live in neighborhoods that have a higher proportion of African Americans, poorer residents, and a higher arrest rate are more likely to become gang members. On the other hand, among indicators based on parental perceptions of problems in the neighborhood, only neighborhood drug use significantly increases the likelihood of males becoming gang members.

The risk of joining a gang is significantly related to four demographic characteristics. Being African American, having a parent with less education, living in a family with an income below the poverty level, and living in homes where both biological parents are not present increase the risk of joining a gang. The combined results from the area and family domains confirm the results of many previous gang studies and indicate that socioeconomic disadvantage is an important risk factor for gang membership.

The quality of the relationship between parents and children also contributes to the risk of joining a gang. In families where parents are less attached to their sons and do not supervise them very well, the odds that the child will become a gang member increase. Also, if there is an official record of child maltreatment, the boy's chances of being a gang member are increased.

Both objective and subjective measures of school problems significantly increase the risk that males will join gangs. Low commitment to school, weak attachment to teacher, and lower parental expectations that their son will go to college are significantly related to gang membership. Those respondents who scored lower on a standardized math test also are significantly more likely to join a gang.

Table 4.2. *Bivariate Odds Ratios between Risk Factors and Joining a Gang between Waves 3 and 9*

	Males	Females
Area Characteristics		
Percentage African American	1.59*	.81
Percentage in Poverty	1.88**	1.40
Community Arrest Rate	1.79**	1.14
Neighborhood Disorganization	.95	2.56*
Neighborhood Violence	.86	1.64
Neighborhood Drug Use	1.51*	1.87
Neighborhood Integration	.71	1.97
Family Sociodemographic Characteristics		
African American	2.28**	2.06
Hispanic	1.19	.50
Parent Education	.53**	.96
Family Disadvantage	1.39	1.90
Poverty Level Income	1.91**	1.40
Lives with Both Biological Parents	.47**	.50
Family Transitions	1.42	1.46
Parent-Child Relations		
Attachment to Parent	1.02	.80
Attachment to Child	.69*	1.36
Parental Involvement	.94	1.29
Parental Supervision	.53**	1.01
Positive Parenting	1.10	3.07
Report of Child Maltreatment	1.78*	1.77
Family Hostility	.77	1.21
School Factors		
Commitment to School	.64*	.80
Attachment to Teacher	.48**	.24**
College Aspirations	1.09	.30**
Subject's College Expectations	.70	.12**
Parent's College Expectations for Subject	.64*	.43*
Math Score	.41**	.65
Peer Relationships		
Delinquent Peers	1.97**	2.02
Early Dating	2.82**	2.91*
Precocious Sexual Activity	1.58*	1.66
Unsupervised Time with Friends	1.41	1.35
Individual Characteristics		
Negative Life Events	3.25**	1.28
Depression	1.71**	1.13
Self-Esteem	.82	.93
Externalizing Behaviors	1.98**	2.24*
Delinquent Beliefs	2.15**	4.27**
Early Delinquency		
General Delinquency	3.26**	2.82*
Violent Delinquency	4.19**	1.44
Drug Use	2.49**	2.57
Age of Onset of General Delinquency	.78	.35

Note: To preserve temporal order, risk factors are measured either at Wave 2 or prior to Wave 2. Because of missing data, the n's vary across these measures, ranging from 488 to 534 for the males and from 169 to 183 for the females. The only exception is age of onset, which can only be calculated for offenders (n = 340 for males and n = 96 for females).

*p < .05 (one-tailed test). **p < .01 (one-tailed test).

Three of the four measures in the peer domain significantly increase the risk that youth will join gangs. Having friends who are involved in delinquent behavior increases the risk for gang membership. Also, males who are involved in precocious sexual activity and who begin dating at an early age are more likely to become gang members.

Among the individual characteristics, experiencing negative life events has a substantial impact on the risk of gang membership, increasing the odds of joining a gang threefold. Mental health problems such as having depressive symptoms and externalizing problem behaviors also play an important role. Attitudes that are favorable to delinquent behavior increase the odds that males will become gang members. Only self-esteem is not significantly related to gang membership.

Finally, involvement in prior illegal activity increases the likelihood of later gang membership. As might be expected, this is particularly true for violence; those who self-report violence above the median value at Wave 1 are four times as likely to become gang members as are those who self-report less violence. Early age of onset of delinquency is not significantly related to gang membership, however.

In summary, a wide band of factors from different domains of the adolescent's life appear to come together to influence the chances of becoming a gang member for these young males. These range from the contextual impact of poor neighborhoods and family hardship to the more personally experienced stress of negative life events and proximity to deviant peers.

Although many risk factors are significantly related to later gang membership, fewer factors appear to have a strong effect based on the size of the odds ratios (OR) presented in Table 4.2. The following variables at least double (OR > 2.0) or cut in half (OR < .50) the odds of being a gang member: being African American; not living with both parents; low attachment to teachers; low math scores; early dating; experiencing negative life events; delinquent beliefs; and prior delinquency, violence, and drug use.

Female Gang Membership

As indicated in Chapter 3, the temporal distribution of gang membership is highly skewed for the female respondents; most joined a gang by Wave 2 and only 18 joined at Wave 3 or after. Consequently, the number of female gang members available for this analysis is quite low and that reduces statistical power. Hence, we can expect fewer risk factors to be significant predictors of gang membership for females as compared with males. Indeed, only 9 of the 40 potential risk factors are statistically significant.

For the females, none of the objective neighborhood characteristics is statistically significant, which is in direct contrast to what we found for males. Of the perceptual measures, only parental perception of neighborhood disorganization significantly increases the odds of females becoming gang members.

Among the sociodemographic characteristics, none of the measures is statistically significant. The size and direction of most of the coefficients are, however, consistent with what was found for males. It would appear that coming from a disadvantaged family background increases the odds of gang membership for females, as it did for males.

The odds of joining a gang are not significantly affected by any of the parent-child relations variables, although several of these variables were important for the males.

School variables appear to be the most important domain for predicting female gang membership. In particular, being attached to teachers and having aspirations to attend college decrease the odds of females joining gangs. Relatedly, both the parent's and the adolescent's lowered expectations about attending college are significantly related to increasing the odds of gang membership.

Early dating is the only peer variable that significantly increases the odds of joining a gang for the females; females who begin dating boys at an early age are more likely to be gang members than those who wait till an older age. Although the odds ratios are not statistically significant for precocious sexual activity and having delinquent peers, they are in the expected direction and of approximately the same magnitude as those observed for the males.

Among the individual characteristics, only externalizing behaviors and delinquent beliefs are statistically significant. Perhaps most surprising is the relatively small effect that experiencing negative life events has in increasing the odds of female gang membership. Negative life events are very important for males but appear to have little impact for females, a finding that is consistent with the general literature on gender differences in the effects of childhood and adolescent stress (e.g., Bolger et al., 1995; Emery and O'Leary, 1982).

Interestingly, prior participation in violence and drug use does not significantly increase the odds of joining a gang, perhaps because of the lower rate of female involvement in violence and drug use at these ages. The significant effect for general delinquency indicates that participation in any type of delinquency is important in predicting female gang membership rather than participation in a particular type.

Statements concerning the effect of risk factors on female gang membership cannot be as definitive as they were for males because of the smaller number of females in our sample and especially the smaller number of female gang members in this analysis. However, living in a socially disorganized neighborhood, school-related variables, early dating, externalizing behaviors, having delinquent beliefs, and prior general delinquency appear to be important factors in increasing the odds that females will join gangs. Although not as clear-cut as the situation for males, it also appears that female gang members have multiple risk factors in multiple domains, an analytic issue we return to later in this chapter.

Predicting Stable Gang Membership

Up to this point we have concentrated on identifying risk factors for gang membership. In Chapter 3 we saw that the duration of gang membership, at least for the males, varies considerably; about half of the gang members were in a gang for a year or less (short-term members) and about half remained active for more than a year (stable members). Moreover, stable gang members have significantly higher rates of self-reported and official delinquency than short-term members. Do the risk factors that predict gang membership also predict the stability of gang membership?

To answer this question, we present bivariate odds ratios between each of the risk factors and the stability of gang membership for the 166 male gang members.[1] Because the outcome variable – the duration of gang membership – unfolds over the course of adolescence, we include all male

[1] There are not enough female gang members, especially those who were stable gang members, for this analysis.

gang members in this analysis, not just those who joined at Wave 3 or after. Doing so preserves proper temporal order between the risk factors and the outcome and maximizes the sample size. All other analyses in this chapter include only those who joined a gang between Waves 3 and 9.

The results (Table 4.3) suggest that two clusters of variables increase the risk of stable gang membership. The first concerns structural disadvantage: gang members who come from poor or disadvantaged families, whose parents have lower than average levels of education, and who experience changes in family structure are more apt to remain gang members for longer periods. The second area concerns early adolescent risky behaviors: early dating and early drug use significantly increase the odds of becoming a stable gang member.

Overall, although early risk factors do an effective job of discriminating between gang members and nonmembers, they do not do an equally effective job of discriminating within the gang member population. This result is consistent with examinations of delinquent behavior conducted from a criminal career perspective (e.g., Blumstein et al., 1986), which show that the predictors of the prevalence of offending are often not very effective predictors of individual offending rates among active offenders. Presumably, the homogeneity of the onset groups – either the offenders or, in our case, the gang members – reduces the explanatory power of the antecedent variables. It would appear that developmental variables that unfold during the period of gang membership may be more predictive of the duration of membership. Given the pattern of these bivariate results, the multivariate models that follow only examine risk factors for gang membership, not the duration of membership.

Cumulative Risk

One of the basic premises of a life-course approach is that risk accumulates, and, as a consequence, exposure to risk in multiple domains of development greatly increases the person's vulnerability to adverse outcomes (see Garmezy, 1995; Rutter, 1987; Werner and Smith, 1992). In other words, while experiencing risk in one domain (e.g., family *or* school) increases the odds of adverse outcomes, experiencing risk in multiple domains (e.g., family *and* school) should have an even larger impact on behavior. To test this hypothesis we examine two models of cumulative risk, a variable-based model and a domain-based model.

Variable-Based Model

In the variable-based model we simply count the number of risk factors that each person experienced at Wave 2. The risk factors are those listed

Table 4.3. *Bivariate Odds Ratios between Risk Factors and Stability of Gang Membership, Males Only (n = 166)*

Area Characteristics		*School Factors*	
Percentage African American	.99	Commitment to School	1.15
Percentage in Poverty	1.46	Attachment to Teacher	1.72
Community Arrest Rate	.85	College Aspirations	1.12
Neighborhood Disorganization	.48	Subject's College Expectations	.61
Neighborhood Violence	.55	Parent's College Expectations for Subject	.69
Neighborhood Drug Use	1.05	Math Score	1.00
Neighborhood Integration	1.69	*Peer Relationships*	
Family Sociodemographic Characteristics		Delinquent Peers	.97
African American	.90	Early Dating	2.26**
Hispanic	.93	Precocious Sexual Activity	1.11
Parent Education	.39**	Unsupervised Time with Friends	1.67
Family Disadvantage	2.09*	*Individual Characteristics*	
Poverty Level Income	1.99*	Negative Life Events	1.39
Lives with Both Biological Parents	.80	Depression	1.55
Family Transitions	2.91**	Self-Esteem	.72
Parent-Child Relations		Externalizing Behaviors	.94
Attachment to Parent	1.48	Delinquent Beliefs	1.54
Attachment to Child	.89	*Early Delinquency*	
Parental Involvement	1.45	General Delinquency	.82
Parental Supervision	.93	Violent Delinquency	.78
Positive Parenting	1.26	Drug Use	2.14*
Report of Child Maltreatment	.84	Age of Onset of General Delinquency	1.88
Family Hostility	1.41		

Note: To preserve temporal order, risk factors are measured either at Wave 2 or prior to Wave 2.
*p < .05 (one-tailed test). **p < .01 (one-tailed test).

in the bivariate table (Table 4.2). In this analysis some of the variables are reverse coded so that a score of 1 always indicates risk. For example, coding for commitment to school is reversed, with those scoring below the median (i.e., having low commitment) receiving a score of one. Overall, scores could range from 0 to 40. For this analysis the respondents are grouped into four categories, those experiencing 10 or fewer risk factors, 11–15 risk factors,

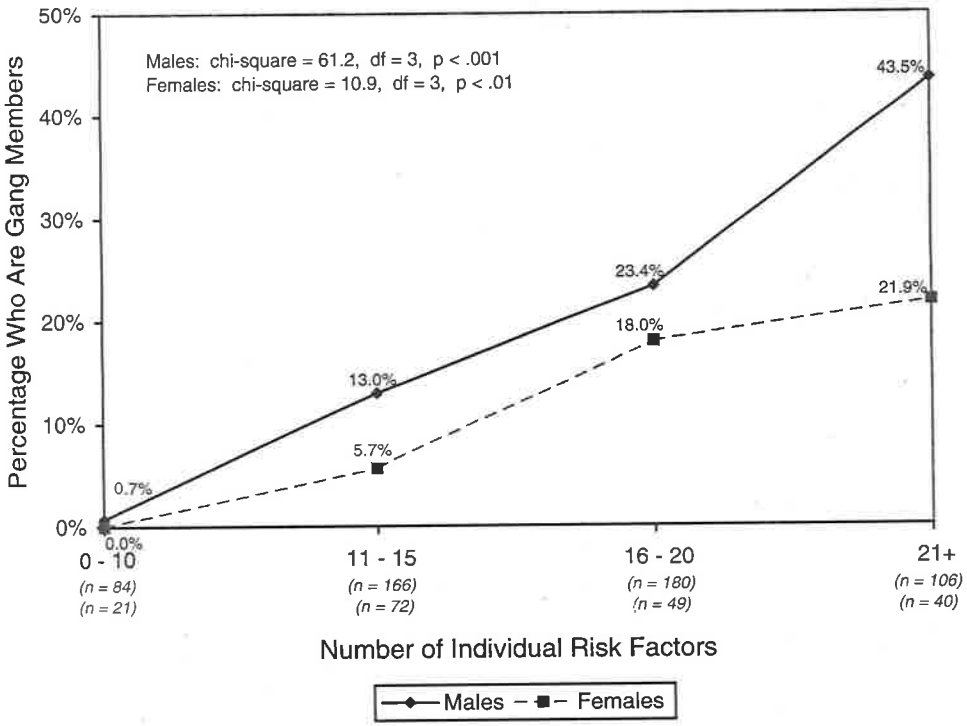

Figure 4.1. Cumulative Risk for Gang Membership, Variable-Based Model (top n is for males, bottom n is for females)

16–20 risk factors, and 21 or more.[2] The results are presented in Figure 4.1, for males and females separately. Recall that to preserve temporal order, this analysis is limited to those who first joined a gang at Wave 3 or after. The total prevalence of gang membership at these waves is 19.7% for the males and 11.9% for the females.

There is a strong positive relationship between experiencing multiple risks and the chances of becoming a gang member. For the male subjects, only 1 (0.7%) of those with 10 or fewer risk factors joined a gang. For those with 11–15 risk factors in their background 13.0% were gang members, and that percentage increased to 23.4% for those with 16–20 risk factors and to 43.5% for those with 21 or more risk factors. Clearly, a strong relationship exists between accumulated risk and the likelihood of joining a gang.

[2] Without grouping, the substantive results are the same but the pattern is not as smooth because of the uneven number of cases across the distribution.

The data for the female respondents paint much the same picture. None of the females with fewer than 10 risk factors reported being a gang member. As risk accumulates, however, the prevalence of gang membership increases to 5.7%, to 18.0%, and finally to 21.9% for those with 21 or more risk factors.

These patterns suggest that youths can experience some degree of risk – here fewer than 10 risk factors – and still be quite resilient to the lure of gang membership. As risk accumulates, however, the chances of joining a gang increase sharply. Youths experiencing many risk factors are far more likely to join a gang than are their counterparts.[3]

Domain-Based Model

The results in Figure 4.1 suggest that youths experiencing risk in multiple developmental domains are at increased risk for gang membership. Because the model is variable-based, however, it is possible that risk only accumulated in a few domains and not across multiple domains. For example, under the scoring procedure in Figure 4.1, a respondent who was a very poor student could receive a score of six, without experiencing risk in any other domain. This possibility, generated by the richness of measurement that is available, is not very consistent with the notion of multidimensionality, which is concerned with the consequences of different pathways or arenas of development on producing different outcomes. To examine the issue of multidimensionality more exactly, we now switch to a domain-based model of risk.

The domain-based measure is created in a two-step process. We first determined if the respondent experienced higher than average risk in each domain – for example, area characteristics or family sociodemographic characteristics. To do so, we calculated the median number of risk factors experienced by the subjects in each domain and then classified each subject as being above or below the median in that domain. Second, we then counted the number of domains in which the respondent was above the median. With seven domains, scores could range from 0 to 7 (see Table 4.2). The results are presented in Figure 4.2 for male and female respondents separately.

Here we see an even stronger relationship between cumulative risk and the chances of becoming a gang member. Of the males who did not

[3] The analysis just presented counts all the risk factors listed in Table 4.2, including those that are statistically significantly related to gang membership and those that are not. The inclusion of the nonsignificant variables may mute the impact of cumulative risk. We therefore repeated the analysis, including only the significant variables. The pattern is identical to that in Figure 4.1. For example, of the males in the highest category, 16–21 significant risk factors, 43% were gang members.

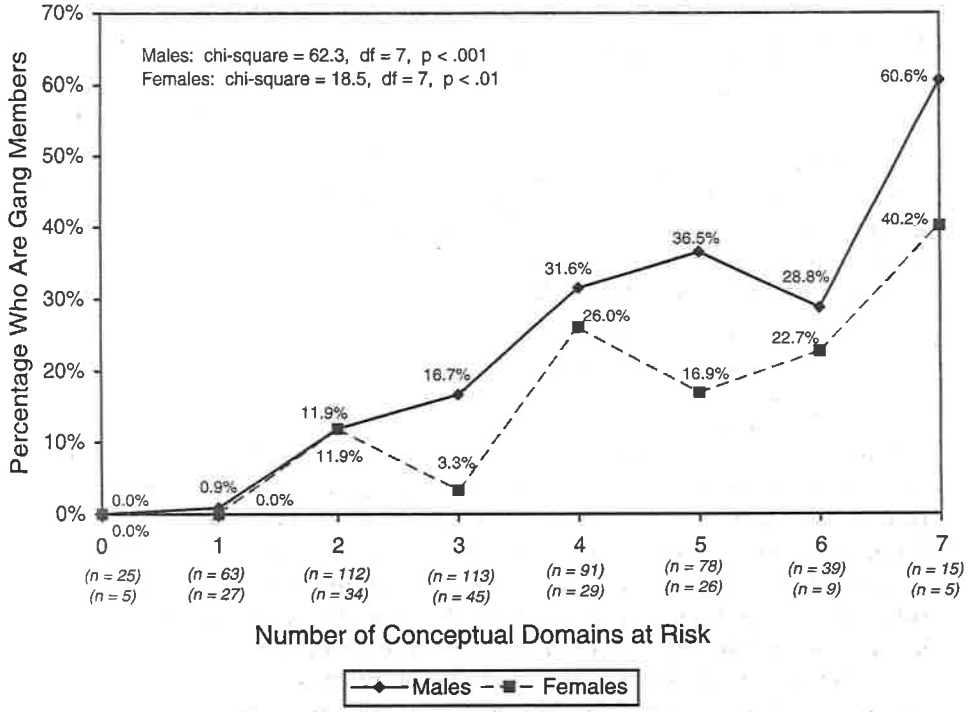

Figure 4.2. Cumulative Risk for Gang Membership, Domain-Based Model (top n is for males, bottom n is for females)

experience risk in any of these seven domains, none became a gang member. Of those who experienced risk in only one domain, only 0.9% joined a gang. After that point the prevalence of gang membership increases rather steadily from 11.9% of those who were above average on two domains to 36.5% of those experiencing risk in five of the seven domains. There is then a slight decrease – to 28.8% – for those experiencing risk in six of the seven domains. For the 15 youths who were above average in all seven domains, however, the prevalence of gang membership reaches a peak at 60.6%, a high rate compared with a total prevalence of gang membership (at Waves 3 to 9) of about 20% for the males.

The pattern of results for female respondents is similar, although somewhat more erratic because of the smaller sample sizes. None of the young girls who avoid risk or have risk in a single domain becomes a gang member. Risk in a few domains increases the chances of gang membership and the prevalence of gang membership increases to about 20% for those who experience risk in between four and six domains. At the end of the distribution,

of those experiencing risk in all seven domains, 40.2% report being a gang member.

Summary

Overall, the results for the cumulative risk analysis are quite consistent with the basic hypothesis of the multidimensionality of risk. As risk accumulates, the chances of gang membership increase dramatically. Youth are quite resilient – at least in terms of the chances of joining a gang – in light of low levels of risk. As risk accumulates, however, the likelihood of joining a gang increases substantially, a pattern observed for both males and females. For example, 43.5% of the male and 21.9% of the female respondents were gang members if they experienced 21 or more risk factors, as compared with average rates of gang membership of 19.7% for the males and 11.9% for the females. In the domain-based approach, 60.6% of the male and 40.2% of the female respondents were gang members if they experienced risk in all seven domains.

Substantively, it is interesting that the impact of cumulative risk is stronger in the domain-based approach. Consistent with a life-course model, it indicates that nonredundant disadvantages that cumulate across different domains or ecological contexts appear to generate a greater chance of adverse outcomes than do more redundant disadvantages, accumulated in one or two domains. This finding also highlights the difficulties we face in trying to intervene with individual gang members, because they are likely to experience disadvantage in multiple developmental domains.

Conclusion

The results of our examination of risk factors for gang membership are quite consistent with the multidimensionality of a life-course perspective. It does not appear that gang membership is associated with a single developmental domain; on the contrary, gang members have multiple disadvantages in multiple domains of their development. Whereas the impact of individual risk factors is rather modest, their cumulative impact is quite large. It appears that youth can tolerate lower levels of risk, or risk in a few domains, and still avoid an increased likelihood of joining a gang. As risk increases, however, so too does the likelihood of joining a gang. Indeed, in the highest category of cumulative risk the chances of joining a gang are generally more than twice as high as the mean prevalence at these ages.

In terms of individual risk factors, we saw that many more individual variables are significant for the males than for the females. This difference may be an artifact of the smaller number of female gang members and attenuated statistical power, a possibility supported in the cumulative risk

factor analysis where sample size is less important. In that case, the results are quite similar for both the males and the females. Overall, the results suggest that social disadvantage, poor performance in school, early dating, externalizing behaviors, prior delinquency, and delinquent beliefs increase the chances of a youth subsequently joining a gang. These findings, based on analyses where proper temporal order is preserved, are consistent with those from prior cross-sectional research.

Although accumulated disadvantage in these areas increases the chances of later gang membership, it does not guarantee it. Indeed, even at the highest level of risk (see Figures 4.1 and 4.2), many adolescents are *not* gang members. Despite the accumulated level of disadvantage in their backgrounds, there appear to be protective processes that help them avoid this outcome. Identifying the processes that do so is a significant challenge for future research as that information could be particularly helpful to intervention efforts.

CHAPTER FIVE

The Origins of Gang Membership

THE RESULTS OF the risk factor analyses are descriptively informative, but they are also theoretically limited. A risk factor approach provides a somewhat atomized view of gang members that is focused on individual variables; it fails to identify the causal processes by which more distal variables lead to more proximal variables and how they, in turn, lead to outcomes of interest. Indeed, as Farrington has noted, "a major problem with the risk factor prevention paradigm is to determine which risk factors are causes and which are merely markers or correlated with causes. It is also important to establish processes or developmental pathways that intervene between risk factors and outcomes, and to bridge the gap between risk factor research and more complex explanatory theories" (2000: 7). In this chapter we begin to address the general topic of identifying the causes of gang membership. The central question is, Why do some youths join street gangs while others manage to avoid the lure of the gang?

We address this question using two complementary approaches. The first approach is more qualitative and is based on the perceptions of the gang members. We asked them why they joined the gang and these open-ended responses provide information on their perceptions of the more immediate influences that led to their decision. The second approach is based in the tradition of causal modeling. We develop a path model of the origins of gang membership derived from the premises of interactional theory (Thornberry, 1987; Thornberry and Krohn, 2001) and test it using the longitudinal panel data of the Rochester study.

The Perceptions of Gang Members

What do gang members say about their motivation for joining a gang? To gauge their perceptions we simply asked them why they joined and recorded

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What do gang members say about their motivation for joining a gang? To gauge their perceptions we simply asked them why they joined and recorded

their responses. As expected, various answers were provided but they tend to cluster along several major dimensions. We have collapsed them into four general categories.

The first, Family/Friends, indicated that they joined because family members – usually siblings or cousins – or friends were already members of the gang and encouraged them to join. We recognize that finer distinctions in this and other categories would be helpful, but the number of cases becomes quite small when they are subdivided. It is particularly hard to subdivide this category because many respondents combined them on their actual answers, for example, "my cousins and friends were in the gang," or "my sister and friends from school asked me to." In any event, the first category indicates that access to a gang via primary group relations with a friend or family member led the youth to join the gang. Illustrations of some of the actual responses, for this and the other categories, are presented in Figure 5.1.

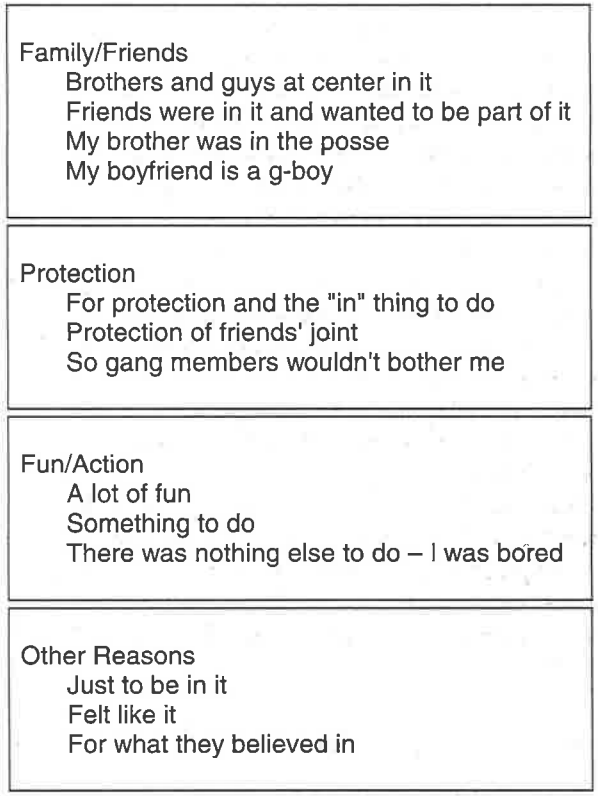

Figure 5.1. Illustrative Reasons for Joining a Gang

Table 5.1. *Reasons for Joining a Gang, by Gender*

	Males		Females		Total	
	%	*n*	%	*n*	%	*n*
Family/Friends	49.3	65	59.7	71	54.2	137
Protection	20.1	27	16.7	20	18.5	47
Fun/Action	17.6	23	11.8	14	14.8	37
Other	13.0	17	11.8	14	12.4	31
Total	100.0	133	100.0	119	100.0	252

$X^2 = 3.17$; df = 3; p = .37.

The second cluster of reasons is labeled Protection. Some youth joined because the gang was perceived to provide protection from a hostile world, typified, for example, by rival gangs or crime in their neighborhood or at school.

The third cluster, Fun/Action, is reminiscent of Thrasher's (1927) gang world and some of Miller's (1958) focal concerns. Adolescents report joining the gang for the excitement, fun, and adventure associated with gang life. In brief, they think it is where the action is. Finally, a catchall Other category combines a number of low frequency, more idiosyncratic responses.

We classified each gang member according to the primary reason he or she gave for joining the gang. Table 5.1 separates the basic data for males and females. Of the total sample, about half (54%) cited Family/Friends – they joined the gang because other family members or friends were in the gang and encouraged them to do so. The next most popular response, provided by 19% of the sample, was for Protection. A slightly smaller proportion, 15%, said they joined for the Fun/Action of gang life. Finally, 12% of the respondents were placed in the Other category.

Slight gender differences are evident in the distributions (Table 5.1). Females are more apt to be classified in the Family/Friends category than are the males (60% vs. 49%). In contrast, males are slightly more apt to report that they joined the gang for Protection (20% vs. 17%) or for Fun/Action (18% vs. 12%). Although these differences are evident, they are rather modest (and not significantly different), again reminding us of the general similarity of male and female gang members.

While the reasons for joining a gang differ only marginally by gender, there are more pronounced and statistically significant differences by race/ethnicity (Table 5.2). Compared with the other groups, the African American gang members are more apt to join a gang because of the influences of Family/Friends (59%) and for Protection (19%). The white respondents are most likely to join because of Family/Friends (63%) and for

Table 5.2. *Reasons for Joining a Gang, by Race/Ethnicity*

	African American		Hispanic		White		Total	
	%	*n*	%	*n*	%	*n*	%	*n*
Family/Friends	58.7	114	26.3	10	63.4	12	54.2	137
Protection	19.4	38	22.1	8	2.1	0[a]	18.5	47
Fun/Action	11.4	22	37.1	14	5.3	1	14.8	37
Other	10.4	20	14.6	6	29.2	6	12.4	31
Total	100.0	195	100.0	38	100.0	19	100.0	252

[a] Due to the weighting procedure used, the one subject in this category is weighted such that it rounds to 0.
$X^2 = 30.06$; df = 6; $p < .01$.

Table 5.3. *Reasons for Joining a Gang, by Onset of Gang Membership and Duration of Gang Membership, Males Only*

	Early Onset		Late Onset		Stable Duration		Short-Term Duration	
	%	*n*	%	*n*	%	*n*	%	*n*
Family/Friends	40.6	45	62.7	31	46.8	41	48.2	35
Protection	26.3	29	10.6	5	20.6	18	22.5	16
Fun/Action	20.3	22	13.4	7	21.8	19	13.8	10
Other	12.8	14	13.3	7	10.9	10	15.5	11
Total	100.0	110	100.0	49	100.0	88	100.0	72

Onset: $X^2 = 8.30$; df = 3; $p < .05$. Duration: $X^2 = 2.11$; df = 3; $p = .5$.

other, more idiosyncratic, reasons (29%).[1] In contrast, for the Hispanic gang members, Family/Friends play a smaller role in why they join gangs (26%); they are more likely than the other groups to join a gang for Fun/Action (37%) and for Protection (22%).

Finally, we examine whether the reasons for joining a gang that are provided by the adolescent boys differ by onset or duration of membership (Table 5.3).[2] Boys with an earlier onset (who joined by Wave 3) are more likely than those with a later onset to join for Protection (26% vs. 11%) and less likely to join because of influence from Family/Friends (41% vs. 63%).

[1] There are only six subjects in this category and they provided five different reasons.
[2] There are too few female gang members to conduct this analysis by gender. Also, the number of male subjects differs between Tables 5.1 and 5.3 because of the weighting procedures used to return to a random sample.

This relationship is statistically significant ($p < .05$). The enhanced importance of Protection for the younger subjects is reasonable since younger adolescents are more prone to victimization by older adolescents. There is no significant association between duration of membership and the reasons for joining, however. The distributions for short-term members and for stable members are very similar.

Summary

Overall, these findings suggest two strong themes in the reasons that gang members provide for joining a gang. The first is to be involved in a social network already populated with close friends and relatives that is centered around the excitement and action they expect to be associated with street gangs. The second is to be involved in a group that can provide protection and security from the type of hostile environment that is often associated with growing up under conditions of structural disadvantage. While these perceptions differ somewhat by gender, race/ethnicity, and age of onset of gang membership, these dominant themes emerge across the various groupings. Indeed, with the exception of Hispanic males, the role of joining up with family and friends is the predominant reason provided by these gang members.

The reasons given by the Rochester gang members are similar to those provided by a sample of gang members in St. Louis who were also interviewed during early adolescence (Decker and Curry, 2000). In that study the influence of family members and friends was also evident, as were the search for protection and for fun and excitement. There was a stronger theme of neighborhood influences in the St. Louis data – a response that was typically assigned to either the peer or protection categories in the Rochester data. Finally, Decker and Curry report that about one-fifth of the respondents indicated that they joined either to meet or to impress girls.

The reasons that are *not* frequently mentioned by these gang members, either in Rochester or St. Louis, are also informative. Relatively few instrumental reasons, including drug selling, are given. The absence of these responses is not consistent with what Decker and Curry (2000) call the instrumental-rational view of the gang as presented by such scholars as Skolnick, Correl, and Rabb (1988) or Jankowski (1991), which sees the gang as a well-organized, disciplined, profit-making group. In contrast, the pattern of these responses is much more consistent with the informal-individual view of the gang as presented by Decker and Van Winkle (1996), Hagedorn (1998), Klein (1995), and others. This view sees the gang as a poorly organized collection of youths who have difficulty achieving either the consensus or discipline needed to generate profit.

In general, the adolescent gang members in Rochester focus on rather immediate, situational reasons for joining a gang, for example, encouragement or invitations from close friends. Their responses are understandably less reflective of more distal, structural reasons, for example, the consequences of structural adversity or family disruption. To examine the role of these broader influences, we turn now to the presentation and testing of a causal model that traces the influence of more distal factors through the influence of more immediate ones to help explain the origins of gang membership.

A Causal Model of Gang Membership

Several theories of juvenile gangs provide explanations for why gangs form and why some adolescents join them. Most of the traditional theories have a strong structural orientation – that is, they argue that gang behavior is an adolescent response to structural disadvantage, minority status, and exclusion from mainstream opportunities. This approach is strongly influenced by the general image of gang members as overwhelmingly urban, lower-class, minority males.

There are several variants of this general approach. For example, Cohen (1955) and Cloward and Ohlin (1960) adopt a strain theory orientation arguing that barriers in the social structure limit the ability of lower-class youths to attain the American dream. The power and universality of the dominant success goals, coupled with limited opportunities, create an inherently frustrating situation that leads to subcultural (i.e., gang) adaptations. Miller (1958) adopts a model more consistent with culture conflict theory (Sellin, 1938). Gangs and gang behavior are seen as natural offshoots of lower-class culture, "a long-established, distinctively patterned tradition with an integrity of its own" (Miller, 1958: 5). In adhering to the norms and focal concerns of that culture, youths often run afoul of the law, not because of a desire to achieve middle-class goals but because of a conflict between the norms of the lower-class culture and the dominant middle-class culture.

More recent explanations of gangs and gang behavior continue to emphasize structural explanations. Klein discusses the influence of "poverty, inadequate educational processes, population shifts, and ethnic segregation" (1995: 137). He also discusses individual characteristics, such as the need for identity and status, but there is a strong structural theme throughout his discussion. Hagedorn's (1998) model emphasizes the impact of the current political-economic environment in this process. Not only are gang members influenced by traditional problems of limited opportunities, but those opportunities are further eroded by current societal changes. Notable among them is the de-industrialization impacting American society, especially the industrial infrastructure of large, rust-belt cities. In a related

statement, Decker and Van Winkle (1996) emphasize the twin processes of de-industrialization and the flight of middle-class and working-class families from urban America. De-industrialization, coupled with increasing racial segregation and the concentration of poverty, further alienates poor adolescents from the mainstream and enhances the lure of the gang. All of these more recent models are influenced by Wilson's (1987) classic work on the emerging and entrenched underclass population in American cities.

These theories provide a rich description of the contributions of structural conditions to the formation of gangs and to some of the factors that lead to gang membership. Nevertheless, various theoretical issues have not been fully addressed in these traditional theories. For example, our understanding of the role of social-psychological processes such as parenting behaviors, social bonding, and peer relationships – fundamental causal influences in many theories of delinquency and antisocial behavior – is not very fully developed in theories of gangs. Moreover, many of the traditional gang theories focus more on explaining why gangs emerge and why certain types of gangs emerge in certain types of areas (e.g., Cloward and Ohlin, 1960) than on accounting for why particular adolescents join gangs while other similarly situated youths do not. In order to expand our understanding of the causal processes associated with gang membership, therefore, we present a model derived from interactional theory (Thornberry, 1987; Thornberry and Krohn, 2001). This approach includes both structural conditions and social-psychological processes in its causal framework.

Interactional Theory

Interactional theory was originally developed to explain adolescent delinquency, especially prolonged involvement in serious delinquency. More recently, Thornberry and Krohn (2001) have presented a life-course extension of this model to examine antisocial behavior across the life-span, from toddlerhood to adulthood. Three fundamental premises form the structure of interactional theory. First, interactional theory adopts a developmental or life-course perspective, assuming that the causes of behavior are not set or determined in childhood. Behavior patterns continue to unfold and change across the person's life, in part because of the consequences of earlier patterns of behavior. Second, interactional theory emphasizes behavioral interactions and bidirectional causality. For example, it does not assume that if peer associations influence antisocial behavior that antisocial behavior cannot also causally influence the selection of peers. Quite the contrary, the model assumes that these and other process variables reciprocally influence one another over time. Third, interactional theory incorporates the impact of social structural influences in explaining the development of individual delinquent careers. In particular, conditions of structural disadvantage

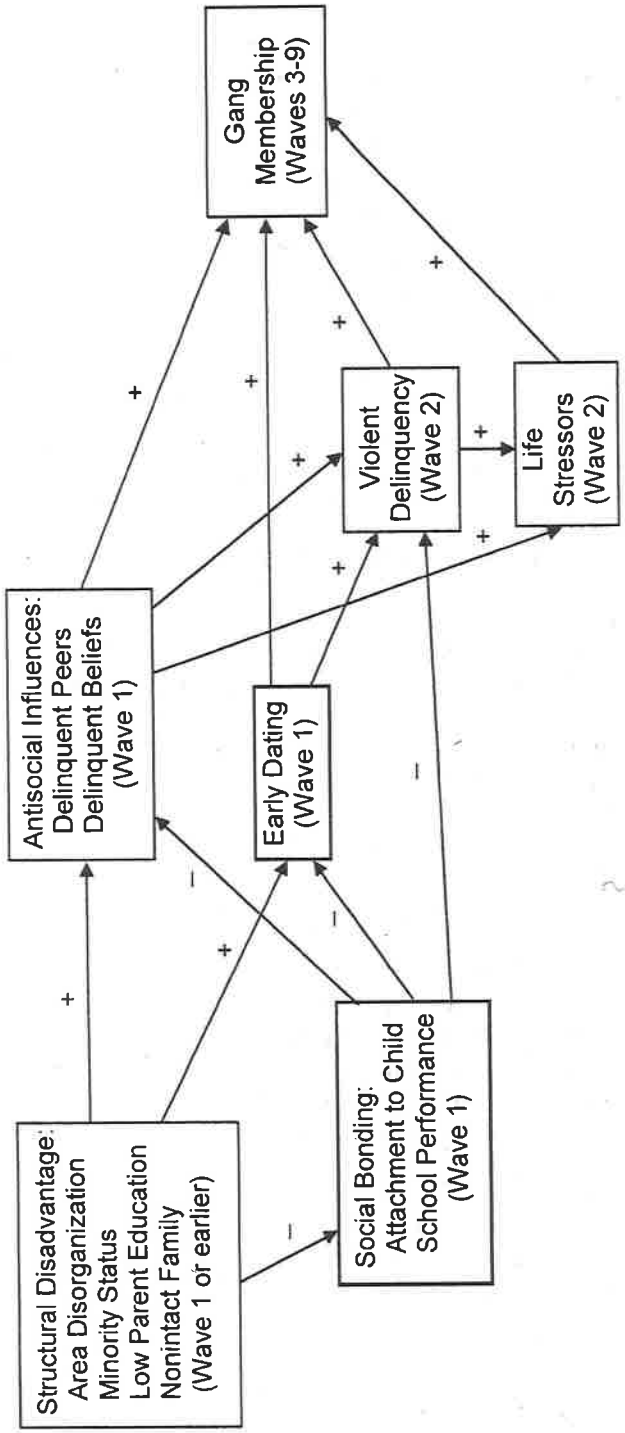

Figure 5.2. Causal Processes Associated with Gang Membership

should increase the number and level of risk factors that youth are exposed to and, via that elevated risk, the severity of the outcomes.

Interactional theory posits that a weakening of bonds to conventional society is needed before serious delinquency is likely to occur. Weak bonds are not, in and of themselves, sufficient to bring about delinquency, however. A learning environment that provides normative support for delinquency, and in which delinquency is reinforced, is also necessary. All of these conditions are more likely to emerge for youth who grow up under conditions of structural disadvantage – for example, in poor families and in areas of concentrated poverty. Finally, the strong bidirectional emphasis of interactional theory leads to the hypothesis that the bonding, associational, and behavioral variables are likely to become mutually reinforcing over time.

In Figure 5.2 we present a causal model of gang membership derived from interactional theory. The causal process that ultimately leads to gang membership starts with structural position. Consistent with the premises of interactional theory and with traditional theories of gang behavior, gang members are more likely than nonmembers to come from disadvantaged backgrounds. Specifically, they are likely to be members of minority groups, to come from disorganized neighborhoods, and from nonintact families with lower levels of parental education.

These structural variables are not expected to directly lead to gang membership, however. Structural position is expected to lead to a number of indirect paths, starting with a reduction in bonds to conventional sources of social control. In particular, the stress associated with living under conditions of structural disadvantage should lead to a deterioration in family processes – for example, the attachment relationship between parent and child – and to a reduction in the child's performance in school. These hypotheses are consistent with previous gang theories and the results of observational studies of gang members. In her observations of two generations of gang members and their families, Moore (1991) has documented how economic pressures adversely affect family life resulting in a high incidence of family problems among gang members. Vigil (1988) has suggested that the gang may act as a surrogate family in light of the disruption in the family of origin. Moore (1991), Curry and Decker (1998), and others have pointed out that gang members experience more problems in school and have a higher dropout rate.

Both structural position and attenuated prosocial bonds should increase antisocial influences such as association with delinquent peers and holding delinquent beliefs, as well as early dating. Growing up in poor neighborhoods and families, having weaker attachment to parents, and having attenuated commitment to school should all increase exposure to deviant networks and, via those networks, lead to delinquent belief systems. From a life-course perspective, off-time or early patterns of dating can be considered

an indicator of entry into problematic peer networks, for example, by increasing the exposure of younger adolescents to deviant networks and to risky behaviors associated with older dating partners. These behavior patterns should be more likely for youths from disadvantaged backgrounds and with lower prosocial bonding.

The consequences of structural disadvantage, including reductions in prosocial bonds and enhancements in antisocial influences, are likely to disrupt the normal course of adolescent development. If so, this ought to lead to increased levels of acting out, for example, involvement in antisocial behavior. It should also lead to increased levels of stress, a prediction consistent with traditional theories of gang behavior, especially those derived from a strain or opportunity structure perspective.

Finally, antisocial influences, delinquent behavior, and life stresses are all expected to have a direct impact on the chances of becoming a gang member. Being involved in deviant networks and routines, and experiencing high levels of stress should increase the chances that the excitement, fun, and activity of the gang will be viewed as a viable means of adjustment to the adolescent's somewhat bleak world. The direct effects on gang membership that are posited in the model are consistent with the gang members' stated reasons for joining presented earlier. They focused on the influence of family and friends, including boyfriends and girlfriends, as well as the search for fun, excitement, and protection.

In brief, our model derived from interactional theory posits that structural disadvantage leads to a reduction in prosocial bonds, and both of these lead to an enhancement in antisocial influences. In turn, these earlier factors increase involvement in delinquency and violence, as well as levels of stress, all of which increase the likelihood of a youth joining a gang.

Methods

To test the model presented in Figure 5.2 we estimated a set of reduced-form equations using logistic regression. The more familiar path-analytic approach is not used since the endogenous variable of interest – gang membership – is dichotomous. Thus, ordinary least squares (OLS) estimates are not appropriate for the final equation and indirect effects leading to the endogenous variable cannot be estimated. All the variables are dichotomized (as was done in Table 4.2), and variables in each of the conceptual areas in Figure 5.2 are stepped into the equation in blocks. In all the equations the dependent variable is gang membership.

By examining when the magnitudes of the odds ratios for the more distal variables increase, diminish, or become nonsignificant, patterns of indirect effects can be determined. To help interpret the mediational effect of the more proximal variables, we include several columns in Table 5.4 that are

Table 5.4. *Estimating the Causal Model: Reduced-Form Equations Predicting Gang Membership, Males Only*

	Equation 1	Equation 2		Equation 3		Equation 4		Equation 5		Cumulative Percent Change
	OR	OR	Percent Change	OR	Percent Change	OR	Percent Change	OR	Percent Change	
Structural Variables										
Area Disorganization	1.23	1.23		1.28		1.37		1.38		
African American	2.76**	2.55**	−12	2.06*	−32	1.83	[a]	1.79		−55
Hispanic	2.63**	2.31*	−20	2.21*	−8	2.08*	−11	2.27*	+18	−22
Parent Education	.63*	.69	[a]	.69		.68		.68		−8
Both Biological Parents	.63*	.58*	+8	.58*	0	.60*	−3	.56*	+7	+11
Social Bonding										
Attachment to Child		.90		.92		.88		.90		
School Performance		.48**		.44**	+8	.46**	−5	.47**	−2	+2
Antisocial Influences										
Early Dating				2.56**		2.55**	−1	2.37**	−12	−12
Delinquent Peers				1.46		1.00		.93		
Delinquent Beliefs				2.10**		1.84*	−24	1.77*	−8	−30
Earlier Deviance										
Violent Delinquency						3.09**		2.73**	−17	−17
Stress										
Life Stressors								1.91**		
Model Improvement X^2	28.66+ (n = 488)	10.38+ (n = 488)		29.38+ (n = 488)		17.33+ (n = 488)		5.87+ (n = 488)		

[a]Odds ratio is not significant.
*p < .05 (one-tailed). **p < .01 (one-tailed). +p < .05.

labeled "Percent Change." For the ones associated with Equations 2 through 5, the percent change indicates the change, either the increase or the decrease, in that variable's impact on gang membership when the *new* variables are added to the equation. If the new variables are, in fact, intervening or mediating variables the percent change indicator will be either positive or negative. Because we are presenting odds ratios where 1.0 equals no effect, it is important to bear in mind that odds ratios moving closer to 1.0 from *either* direction indicate a declining effect. For odds ratios greater than 1.0 a declining effect means the absolute value becomes smaller; for odds ratios less than 1.0 a declining effect means the absolute value becomes larger (e.g., an odds ratio moving from .50 to .60 actually indicates a declining impact). In both cases this is indicated by a negative percent change. Positive changes in odds ratios show strengthening relationships due to the added variables. This also indicates an indirect effect.

The percent change values associated with Equations 2 through 5 indicate only the change in the variable's impact from the immediately preceding equation to the current one (e.g., from Equation 1 to 2 or from Equation 3 to 4). The final column, "Cumulative Percent Change," reflects the extent to which all of the later variables mediate that variable's impact on gang membership. In this case it reflects the change in the variable's odds ratio between the first equation in which the variable appears and Equation 5. For example, for the variable Delinquent Beliefs, it is the change between Equation 3 (OR = 2.10) and Equation 5 (OR = 1.77), or −30%.

Three criteria were used in selecting the particular measures that are used as indicators of each of these constructs. First, the measure represents a core aspect of the theoretical concept. Second, when multiple measures are available, we tried to select ones that were shown to be strongly related to gang membership in the risk factor analysis (Chapter 4). Third, we selected measures to minimize problems of multicollinearity.

Two cautionary notes about the analysis should be offered. First, we can establish temporal order between the explanatory variables and gang membership because all the explanatory variables in the causal model are measured at Waves 1 or 2 and the dependent variable is joining a gang at Wave 3 or after. It is harder to establish temporal order among all the explanatory variables, such as the social bonding and antisocial influences variables, however, as they are measured at the same wave. Thus the path from the former to the latter can only be evaluated cross-sectionally. Second, for the same reasons noted with the earlier multivariate risk factor analyses in Chapter 4, these equations can only be estimated for the male respondents. The results are presented in a series of logistic regression equations in Table 5.4.

Results

The model improvement chi-square statistics are statistically significant for each of the equations reported here. This indicates that the variables that are added to the equations at each subsequent step significantly add to the fit of the model to the data.

Equation 1

The first equation in Table 5.4 examines the relationship between gang membership and the indicators of structural position. As hypothesized, they have sizable effects on the odds of joining a gang. The largest odds ratios are associated with race/ethnicity: African American males are 2.8 times as likely to be gang members as white males, and Hispanic males are 2.6 times as likely. In addition, the odds of joining a gang for youths living with both biological parents is 63% of that for youths living in other types of families. The level of parental education also alters the chances of joining a gang (OR = .63); adolescents whose parents have not graduated from high school are more apt to become gang members. The only structural variable not related to gang membership is area disorganization. In general, minority youths who come from nonintact families where there is a lower level of parental education are more likely to join a gang than are their counterparts.

Equation 2

The second equation adds the two social bonding variables: parental attachment to the adolescent and the adolescent's school performance as indicated by the California Achievement Test (CAT) math scores. Based on interactional theory we hypothesize that both will reduce the odds of joining a gang and that they will mediate part of the impact of the structural variables. If the second hypothesis is supported, the odds ratios of the distal variables in the model should diminish in size – that is, move closer to 1.0 – as the more proximal variables are entered at each step.

Of the two indicators of prosocial bonding, the level of parental attachment is unrelated to the outcome. School performance is significantly related to gang membership, however. Performing above the median on the math component of the CAT approximately halves the chances of gang membership (OR = .48). The strong impact of school performance is consistent with the earlier risk factor analyses, which indicated that a number of school variables are significantly related to later gang membership. It is also consistent with traditional gang theories (e.g., Cohen, 1955; Klein, 1995)

that emphasize the failure of the educational system to prepare lower-class youths for success, which leads to stress and frustration, making the gang world an appealing source of adjustment.

School performance also mediates a substantial part of the racial/ethnic effects evident in Equation 1.[3] For the African American males, for example, the odds ratio drops from 2.76 to 2.55 when school performance is taken into account, a 12% decline in its effect. That is, 12% of the initial impact of being African American on gang membership is due to indirect effects operating via school performance. School performance also reduces the impact of being Hispanic by 20%. It also partly mediates the impact of family structure, strengthening its impact by 8%. School performance has a major impact on mediating the impact of parental education on gang membership. Indeed, when it is entered into the equation, the odds ratio associated with this variable becomes indistinguishable from 1, that is, not statistically significant.

Overall, we see that poor performance in school has a sizable impact on gang membership. It directly increases the odds of joining a gang and helps explain why poor, minority youths are more apt to join a gang than are wealthier, white adolescents.

Equation 3

In Equation 3 we enter the variables associated with delinquent networks, delinquent beliefs, and early dating. Two are significantly related to gang membership: early dating more than doubles the odds of gang membership (OR = 2.56), and delinquent beliefs increases them by a factor of two (OR = 2.10). When these variables are taken into account, however, associating with delinquent peers is not significantly related to later gang membership.

The impacts of early dating and of delinquent beliefs suggest that the search for excitement and adventure described by Thrasher (1927) and Miller (1958) may be a particularly powerful pull for potential gang members. It is also very consistent with the perceptions of our gang members. Perhaps youths who are sexually active and who begin dating at an early age, and who have antisocial belief systems, find the gang a particularly hospitable social network for their life-style. Precocious involvement in adultlike behaviors (Moffitt, 1997) makes the gang an attractive arena for enacting those behaviors.

These variables further diminish the impact of minority group status, especially being African American. When these variables are included, the

[3] We focus on school performance as the source of the mediating effect because parental attachment is not significantly related to the outcome and cannot therefore be an important mediator.

odds ratio associated with being African American drops by an additional 32% and with being Hispanic by 8%.[4] Delinquent beliefs and early dating mediate none of the family structure effect. Finally, when they are explicitly considered, the impact of school performance on gang membership actually increases by 8%, because the odds ratio changes from .48 to .44.

To this point it appears that the process variables of prosocial bonding (especially in the school arena) and antisocial influences help explain, in large part, why structural conditions lead to gang membership. As predicted by interactional theory, youth from disadvantaged backgrounds have higher levels of the risk factors that lead to this outcome.

Equation 4

In the next equation (Equation 4) we add self-reported involvement in earlier violence, measured at Wave 2. This variable more than triples the odds of joining a gang (OR = 3.09). Youths who are already involved in violence are more likely than those who are not to seek out or to be recruited by gangs.

In addition, earlier involvement in violence plays a major mediating role, dropping the impact of being African American to statistical insignificance and diminishing the impact of being Hispanic by an additional 11%. Involvement in violence is also a major pathway by which delinquent beliefs impact gang membership. The odds ratio associated with delinquent beliefs drops by 24% when violent behavior is explicitly considered. Involvement in violence has a smaller impact in mediating the family structure effect (3%), school performance (5%), and early dating (1%).

Equation 5

The final equation in Table 5.4 adds recent life stressors to the mix. This variable almost doubles the odds of a young man joining a gang (OR = 1.91). Youths, who feel stressed perhaps because of limited opportunities or failure in school, are more apt to join a street gang than youths who experience lower levels of stress. Life stressors also mediate the impact of early dating (12%), delinquent beliefs (8%), and violence (17%). Finally, when this variable is included in the equation, the impacts of family structure (7%) and of being Hispanic (18%) increase somewhat.

The odds ratios presented in Equation 5 also provide an indication of the direct causal paths that lead to gang membership. The only structural variables that significantly affect gang membership are being Hispanic (positive

[4] The percent change statistic refers to changes in the odds ratios in adjacent equations. The final column in Table 5.4 is the only cumulative one.

effect) and having an intact family (negative effect). The other structural variables only have indirect effects. Of the social bonding variables, parental attachment is not directly related to gang membership but school performance is. Early dating, delinquent beliefs, earlier violence, and life stressors (but not earlier associations with delinquent peers) are all related in the expected direction to gang membership.

To provide a sense of the mediating pathways that lead to gang membership, the final column in Table 5.4 provides the cumulative change in the odds ratios for each of the more distal variables. For each variable this is the change between its odds ratio in the first equation in which it is statistically significant and the odds ratio in Equation 5.

A sizable part of the impact of being African American and Hispanic, 55% and 22% respectively, is mediated by more proximal variables. Put differently, in large part, the reason African American and Hispanic youths are more likely than white youths to join gangs is because of their lower performance in school, their greater involvement with antisocial influences and their earlier involvement in violent behavior, and their higher level of life stressors.

In addition to minority status, the effect of parental education is also mediated by later variables in the causal model, as its effect becomes nonsignificant. The impact of delinquent beliefs is also substantially mediated by later variables. Indeed, 30% of its initial effect on gang membership can be attributed to indirect effects.

The impacts of the other variables are also mediated by later variables but to a lesser extent. Of the initial impact of earlier violence, 17% is due to indirect effects; 12%, for early dating; and 11%, for family structure. Only the adolescent's school performance remains largely unmediated. Its initial direct effect on gang membership is sizable (OR = .48), and only 2% of this is attributable to indirect effects.

Conclusion

This chapter opened two windows into the causal processes that lead to gang membership. The first is based on the perceptions of the gang members themselves and describes their reasons for joining the gang. The second is based on the interrelations among the explanatory variables collected across time in this long-term study of antisocial behavior.

The first approach highlights the more immediate, situational factors that lead to gang membership. As with many aspects of adolescent life, peer and primary-group relationships play a major role. The cluster of reasons most often mentioned by the gang members centers around the influence of friends and family members. Many youths join gangs to associate with friends, girlfriends or boyfriends, siblings, and cousins who are already

members. The formation of social networks around deviant behaviors has been noted before (Hawkins and Fraser, 1985; Kandel, 1978; Kandel and Davies, 1991; Krohn, Massey, and Zielinski, 1988; Krohn and Thornberry, 1993; Wister and Avison, 1982) and juvenile street gangs appear to be another venue in which this takes place.

Consistent with the emphasis on peer and family relations is the role played by the fun, action, and excitement that this particular network provides. While gangs can be a violent and volatile environment, they are also a source of adolescent pleasure. The gang is often where the action is, a ready source of drugs, parties, dating and sexual partners, and risk-taking behaviors. These themes abound in the gang literature, from Thrasher (1927) to Miller (1958), Short and Strodtbeck (1965), and Vigil (1988), and it appears that gang members are also well aware of them. Wanting to be with friends and family members in that type of exciting environment is foremost in the minds of these gang members when they reflect on why they joined the gang.

The other factor consistently mentioned is for protection. Gangs in Rochester, as elsewhere, are largely territorial: many of the gang names in Rochester refer to areas or locales in the more socially disorganized areas of the city. The areas in which gang members live are often violent and dangerous. Moreover, gang members often move through other territories on the way to and from school, work, shopping malls, and the like. Membership in one's own gang is seen as offering some degree of protection from an often hostile world.

While these perceptions offer valuable insights into the attributions gang members offer for their decision to join a gang, they are rather silent about broader social, structural, and developmental influences. Not surprisingly, the gang members' accounts are focused on positive features of gang life – friendship, fun, and protection – rather than on developmental deficits that may also drive them toward gang membership. To examine these processes, we constructed and tested a causal model incorporating both structural and process variables based on the premises of interactional theory.

We found that structural disadvantage increases the likelihood of gang membership. A large part of the initial effects of the structural variables is indirect, however, flowing through the later process variables. In particular, the impact is mediated by school performance and antisocial influences.

Youths who do poorly in school are more apt to join gangs than are youths who do well in school. The strong effect of school failure has long been noted in the gang literature (e.g., Cohen, 1955; Klein, 1995) and is echoed in our longitudinal analysis. While educational performance has a sizable impact on gang membership (see also the risk factor analysis in Chapter 4), family bonding does not. This is not simply a function of the indicator we use, parent attachment to child; other indicators produce similar

results. Although this finding is not consistent with some previous models of gang membership (e.g. Vigil, 1988), it is consistent with some developmental models of delinquency (e.g., Jang, 1999; Thornberry, 1987), which argue that family effects fade as youths enter adolescence, while school and peer effects increase in magnitude. Our results also suggest that family influences on gang membership are more strongly associated with structural characteristics – for example, parent education and family structure – than with the processes within the family.

The results of the causal model also point to the strong influence that precocious or early dating has on the likelihood of joining a gang. Young males who begin dating at an early age are more apt to seek out or be recruited by the gang. These adolescents may be akin to Cloward and Ohlin's (1960) retreatists; already sexually active, they view the gang's life-style as a source of partying, dating partners, and excitement. Many of the early adolescent gang members in St. Louis indicated that they joined gangs to either meet or impress girls (Decker and Curry, 2000), and both Bowker and Klein (1983) and LeBlanc and Lanctôt (1998) have identified precocious sexual behavior and early dating as risk factors for gang membership. The impact of early dating is also consistent with the perceptions of many gang members who reported that they joined the gang for fun and excitement.

The strong impact of dating behaviors on the decision to join a gang may be a precursor to one of the consequences of gang membership. In an earlier examination of risk factors for teenage fatherhood (Thornberry, Smith, and Howard, 1997), we showed that the interaction of gang membership and heavy drug use raised the likelihood of becoming a teen father to near certainty. Similarly, Moore (1991) found that one of the reasons girls leave the gang, typically at earlier ages than boys, is because they become pregnant. Overall these results suggest that human sexuality may play a larger role in the social forces associated with street gangs than previously thought. It is certainly a topic worth investigation, especially for gang membership during younger adolescence.

Two other processes have direct effects on gang membership. Adolescents who are already involved in violence are more apt to join a gang than are other youth. That is hardly surprising given the criminal and often violent nature of the gang. The role of earlier deviance is one focus of Chapter 6 so we defer further discussion of it until a fuller examination of its role is offered. The final variable related to gang membership is experiencing higher than average levels of stress. Given the accumulation of risk in their backgrounds, it is not surprising that these youths report more negative life experiences than their counterparts. Also, given their generally positive expectations about the gang – as a source of fun and excitement, for example – many adolescents may join the gang as a way of alleviating this level of stress.

Overall, the results of the causal model analysis point to a set of structural and developmental deficits that increase the likelihood of an adolescent male joining a gang. Youths experiencing structural adversity, who are doing poorly in school, who are involved in antisocial networks and behaviors, and who have higher than average levels of stress are more likely to succumb to the lure of the gang.

The gang members' own perceptions are less deficit-laden, however. They point to the positive features of the gang. The gang is where one's friends are, where the action is, and where one can find protection from a hostile world. The two stories are, of course, not inconsistent: youths may well see the gang as an oasis of relief from the consequences of these disadvantaged, urban settings. And the gang may well be that oasis to some degree. If it is, the difficulty of preventing youths from joining the gang and of suppressing gang activity is all the harder.

CHAPTER SIX

Gangs as a Facilitating Context for Delinquent Behavior

UP TO THIS POINT the analysis has focused on the antecedents of gang membership, examining risk factors for and causal processes associated with joining a gang. Now we examine whether membership in a juvenile street gang alters the short-term behavior patterns and the long-term life-course development of gang members. The first set of issues we address concerns the extent to which the gang actually facilitates various forms of deviant behavior.

In Chapter 3 we demonstrated that gang members in Rochester have significantly higher rates of delinquency than nonmembers. This finding confirms results from earlier observational studies (Hagedorn, 1998; Klein, 1971; Miller, 1966; Moore, 1978; Taylor, 1990), from studies using official data (Cohen, 1969; Klein et al., 1986; Maxson and Klein, 1990), and from those using survey techniques (Fagan, 1989, 1990; Fagan et al., 1986; Short and Strodtbeck, 1965; Tracy, 1979). We also demonstrated that gang members account for a disproportionate share of the crime problem relative to their representation in the general population. Because gangs clearly connote groups that have a deviant or criminal orientation, a strong relationship between gang membership and high rates of involvement in delinquency and drug use is hardly surprising. What these studies do not identify, however, are the social processes that bring about the association between gang membership and higher rates of delinquency. As Fagan has noted, "it is uncertain whether the differences reflect the positive correlation between group crime and violence, features of the gang itself, or the state of social controls in the inner cities where gangs are most evident" (1990: 186).

In earlier work (Thornberry, 1998; Thornberry, Krohn, et al., 1993) we identified three competing models that could account for the strong relationship between gang membership and delinquency: selection, facilitation, and a mixed model that combines both selection and facilitation effects.

Theoretical Models

Selection

A selection or "kind of person" model posits that gangs recruit their members from adolescents who have a high propensity for delinquency and who will engage in delinquency and drug use regardless of their membership in gangs. Gangs do not cause their members to be delinquent; they recruit or attract people who are already delinquent. This view is consistent with a social control perspective (e.g., Hirschi, 1969) and especially Gottfredson and Hirschi's propensity theory of crime (1990). In this view the gang attracts adolescents who lack self-control and, therefore, are already likely to be involved in delinquency.

If a selection or "kind of person" model is accurate we would expect to observe first that gang members have higher rates of delinquency than nonmembers and, second, that this difference would hold across time – before, during, and after their membership in the gang. That is, if gang members are truly different kinds of people – those with high propensities toward deviance – they are likely to act on those propensities regardless of their gang membership status at any particular time. Indeed, in a pure version of the selection model the gang becomes epiphenomenal, as Gottfredson and Hirschi argue:

> Given the large numbers of adolescents with relatively low self-control living in close proximity and given the relatively low level of supervision exercised over them, it is inevitable that from time to time they will congregate in the streets of U.S. cities. Given these facts, it is also inevitable that the "gang" will occasionally engage in delinquent and criminal activities, ranging from shoplifting cigarettes and intimidating the elderly to using heavy drugs and participating in drive-by shootings directed at no one in particular. (1990: 209)

In this model, the gang itself, however, has no causal impact on these behaviors.

A selection model is also consistent with the view that "the gang is an aggregate of individuals with 'shared incapacities'" (Spergel, 1990: 230). Such a perspective is seen in the work of Yablonsky (1962), Gerrard (1964), and others, especially those approaching gang research from a psychiatric or clinical perspective (see Spergel, 1990: 229–231).

Facilitation

In contrast, a facilitation or "kind of group" model posits that gang members are not intrinsically different from nonmembers in terms of delinquency or drug use. They do not have a stronger propensity toward these behaviors

and, left to their own devices, are no more likely to engage in delinquency or drug use than are nonmembers. Upon joining a gang, however, the normative structure and group processes of the gang are likely to bring about high rates of delinquency and drug use. Gang membership is thus viewed as a major cause of deviant behavior.

If the facilitation model is accurate, gang members will differ from nonmembers in terms of delinquency and drug use only when they are active members of a gang. Before and after membership they should not differ substantially from nonmembers because they are, after all, not different "kinds of people." While members of a gang, however, they should have higher rates of delinquency and drug use because of the normative climate of the gang and because of the influence of group processes on the behavior of gang members.

Gangs provide strong normative support for a variety of delinquent and deviant behaviors. Indeed, Cohen (1955) and Cloward and Ohlin (1960) argue that gang norms arise in reaction to middle-class values and for that very reason support deviant behavior. Short and Strodtbeck (1965) provide empirical support consistent with this assertion. In their study in Chicago they found that gang members are more likely to grant legitimacy to deviant values than are nonmembers. More recently, Deschenes and Esbensen (1999), in a survey of eighth graders in 11 American cities, reported that gang members feel significantly less guilty than nonmembers about committing violent crimes and are more supportive of proviolence values. Indeed, "the differences between gang and non-gang members were striking – virtually all gang members, both male and female, indicated approval of physical violence" (1999: 86).

In their study of female gang members, Miller and Decker (2001) found additional evidence for the view that the gang normatively supports violent behavior. Although female gang members were not as heavily involved in violent crime as were the male gang members, they expressed strong normative support for gang violence and accorded enhanced status to male gang members "who 'did dirt' for the gang by committing gang-motivated assaults and by confronting rivals" (2001: 127).

Short and Strodtbeck (1965) also described a number of group processes that bring about high rates of delinquency for active gang members. When the status of gang leaders is threatened, the leaders often resort to outgroup aggression "because of the limited resources they have for internal control of the group" (1965: 185). More generally, threats to the status of gangs and gang members are likely to lead to delinquent behavior, especially violent behavior, as a way of regaining status: "Specifically, it is our hypothesis that much of what has previously been described as short-run hedonism may, under closer scrutiny, be revealed to be a rational balancing from the actor's perspective, of the near certainty of *immediate* loss of status in the group against the remote possibility of punishment by the larger society *if* the most serious outcome eventuates" (1965: 250). Other gang researchers have also pointed to group processes that are likely to increase delinquency by active gang members. Klein (1971) has reported that enhanced group cohesion increases levels of delinquency. In a similar vein, Miller, Geertz, and Cutter (1961) reported that aggression is important for creating and maintaining group cohesion, and Jansyn (1966) reported that delinquency is often a response to threats to the gang's solidarity. Decker (1996) has presented a seven-step model in which external threats increase group identification and cohesion, which, in turn, lead to violence.

More recently, Rosenfeld, Bray, and Egley (1999) have pointed to two gang processes that may facilitate gang violence. The first is that the routine activities of gang members "may facilitate access to risky situations such as drug markets" and the second is the "public and participatory nature of gang violence," such as gang fights and retaliatory assaults (Rosenfeld et al., 1999: 514). In a parallel vein, Miller and Brunson (2000) found that male gang members attribute many violent victimizations to being in risky situations and to being targets of rival gangs.

In sum, prior gang studies suggest that group norms and group processes revolving around dimensions such as status, solidarity, and cohesion, as well as exposure to risky and violent situations, are likely to increase the level of delinquency for gang members. Because these are properties of the group, however, they should have no impact on delinquent behavior either before or after the person is a gang member.

Enhancement

The third model identified by Thornberry, Krohn, et al. (1993) is a mixed or enhancement model that combines the other two. It suggests that both selection and facilitation effects operate to account for the high levels of delinquency and violence observed for gang members. That is, gangs recruit or attract adolescents who have already shown a propensity for delinquent behavior but, once in the gang, the norms and group processes enhance their involvement in delinquency. A mixed model, therefore, predicts that even when they are not active members, gang members will have significantly higher rates of delinquency than nonmembers; *and* delinquency rates will be particularly high when they are active gang members.

In sum, three plausible models could account for the well-established relationship between gang membership and delinquency. There is little empirical information about the relative validity of these competing models, however.

Prior Research

In an earlier analysis of the Rochester data, Thornberry, Krohn, et al. (1993) tested these competing models. After comparing male gang members with nonmembers, they reported strong support for the facilitation model and virtually no support for the selection model:

> Perhaps the strongest support for the social facilitation model is found in the analysis of the type of behavior most often associated with gangs – crimes against the person. . . . Gang members have higher rates of person offenses only when they are active gang members. Of particular interest is the drop-off in the rate of person crimes once boys leave the gang. The means for crimes against the person for boys when they are active members of the gang are, by and large, at least twice as high as when they are not. Clearly, being in the gang is generative of violent behavior among these boys. (1993: 80–81)

A gang facilitation effect was also observed for general delinquency, drug sales, and, to a somewhat lesser extent, drug use. It was not observed for property offenses.

Subsequent to the publication of these findings, other longitudinal studies have examined the processes associated with the relationship between gang membership and delinquency. Results from the Denver Youth Survey are consistent with the mixed or enhancement model. Esbensen and Huizinga (1993) reported that there is some elevation in the prevalence of delinquency by future gang members in the year prior to joining a gang. Prevalence rates, however, are highest during the year that the gang members are in the gang.

Hill et al. (1996), using data from the Seattle Social Development Project, reported findings that are consistent with those reported by Thornberry, Krohn, et al. (1993). Violent delinquency is only slightly elevated in the year prior to joining a gang, increases substantially during active membership, and is lower in the years following active gang membership. Hill et al. (1996) reported that drug sales do not follow this pattern, however; the prevalence of drug sales is very high during periods of active membership and stays high after the individual leaves the gang. Subsequent research using the Rochester Youth Development Study data support this finding on drug sales (Bjerregaard and Lizotte, 1995; Lizotte et al., 1997).

This issue has also been examined with data collected on 1,034 boys drawn from 53 low socioeconomic status schools in Montreal (Tremblay et al., 1994). The initial results based on the Montreal gang data were reported in Thornberry (1998), and more recent results have been presented by Gatti et al. (2002). Overall, the Montreal results replicated Thornberry, Krohn, et al.'s results (1993), finding that the facilitation model best describes the pattern of results for general delinquency, property crimes, and violence. They also found that drug sales increase during periods of gang membership and remain high even after the adolescent leaves the gang. Unlike prior studies of the facilitation effect that have been conducted in American cities using predominately African American or Hispanic gang members, the Montreal results are based on a predominately white, French-speaking sample in a large Canadian city. The similarity of the findings suggests that gang processes in fairly diverse settings may be similar.

Overall, results from these studies provide rather consistent support for the gang facilitation effect described by Thornberry, Krohn, et al. (1993) and little, if any, support for a pure selection model. Rates of delinquency, especially violent delinquency and drug sales, increase substantially once an adolescent becomes an active gang member. With the exception of drug sales, there is also a general drop-off in delinquency following periods of gang membership. While there is little evidence to support a social selection model, there is some evidence, especially in the Denver study (Esbensen and Huizinga, 1993), to support the mixed or enhancement model. Support for a mixed model, however, is both less powerful and less consistent across studies than is the facilitation effect.

The Current Study

In this chapter, we extend our examination of the processes that lead to higher rates of delinquent behavior among gang members in two important ways. First, prior research, including our own, has only examined rates of delinquency at three points in time. Here we extend the data analysis to a fourth year. Doing so provides additional data points for comparing pre- and postgang effects and allows us to examine whether the temporal patterns observed in the earlier studies are seen for gang members who remain in the gang over a more extended period of time.

Second, we examine more explicitly whether gang members have higher rates of delinquency and violence, not because of a gang facilitation effect, but because of the accumulation of other deficits in their backgrounds. In the tabular analyses reported to date (e.g., Esbensen and Huizinga, 1993; Thornberry, Krohn, et al., 1993), each individual serves as his own control because we are comparing changes in the individual's delinquency over time as a function of his changing status as a gang member. LeBlanc and Lanctôt (1998: 25) suggest, however, that "to thoroughly verify the nature of the causal role of the gang, longitudinal data sets should be reanalyzed controlling self and social control characteristics of individuals." To address this issue, we use two different statistical approaches. In the first we statistically hold major risk factors for delinquency and gang membership constant while examining the impact of selection and facilitation effects on delinquency. In the second we estimate a "random effects model" (Nagin and Farrington, 1992; Nagin and Paternoster, 1991), which allows us to

Table 6.1. *Number and Percentage of Subjects in Various Groupings of Gang Membership, Males Only*

Group	Gang Member in	Subjects	
		%	n
1	(Nonmember)	75.3	426
2	Year 1 only	7.4	42
3	Year 2 only	2.5	14
4	Year 3 only	1.8	10
5	Year 4 only	1.8	10
6	Year 1 & 2	3.0	17
7	Year 1–3	3.5	20
8	Year 2–3 or 2–4	2.8	16
9	Year 1–4	1.9	11
Total		100.0	566

control unmeasured population heterogeneity as well as the measured risk factors.

Methods

In this analysis, we again group data from Waves 2 through 9 into four annual time periods. Data from Waves 2 and 3 are combined to form Year 1, data from Waves 4 and 5 form Year 2, Waves 6 and 7 form Year 3, and Waves 8 and 9 form Year 4. Because of the limited number of female gang members, especially after Wave 4, this analysis is conducted only for males.

To make the necessary comparisons between gang members and nonmembers, and between gang members before, during, and after gang membership, respondents are divided into nine groups (Table 6.1). Group 1, the largest group with 75.3% of the respondents, includes the adolescents who never reported being a member of a gang throughout the data collection period. Groups 2 through 5 represent gang members who were in a gang during only one annual time period and were not in a gang during the other three annual periods. Thus, Group 2 includes respondents who were in the gang *only* during Year 1; Group 3 include respondents who were members *only* during Year 2, and so on. By grouping respondents in this manner, we are able to compare their delinquency rates before, during, and after gang membership.

Groups 6 through 9 include more stable gang members – those respondents who were in a gang at more than one time period. We were not able to include all the possible combinations because the number of cases for some categories is too low. Group 6 includes respondents who were in a gang in Years 1 and 2, but not 3 and 4. Group 7 includes those who were members during the first three years, but not the last year. Group 8 includes respondents who did not join until Year 2 but remained in the gang for at least one additional year. Some were members in Years 2 and 3 and some in Years 2, 3, and 4. Though not ideal, this grouping is necessitated by the low frequencies. Finally, Group 9 contains the adolescents, only 1.9% of the sample, who were gang members at all four years.

Because membership is a low-frequency status even in this high-risk urban sample, the number of cases in each of the gang groupings is fairly small. The low number of cases makes it more difficult to obtain statistically significant findings; hence, the following analysis represents a conservative test of our hypotheses.

All of the variables used in this chapter have been described in Chapter 2. Measures of delinquency include the general delinquency and violent delinquency indices (without gang fighting), drug use, and drug sales. Risk factors from major developmental domains – family poverty level, parental supervision, commitment to school, association with delinquent peers, negative life events, and prior involvement in delinquency – are also included in this analysis.

Hypotheses

In empirically contrasting the facilitation and selection models, two types of comparisons can be made: *cross-group* comparisons between gang members and nonmembers and *cross-time* comparisons within group, comparing rates of delinquency before, during, and after periods of gang membership. In Table 6.2 we indicate the pattern of results that would be expected in a pure facilitation model and in a pure selection model. We label the delinquency rate of the nonmembers as "average," reflecting the general age-specific rates of delinquency for each time period. The label "high" indicates delinquency rates that are hypothesized to be significantly higher than the corresponding rate for the nonmembers at that same time point, and significantly higher than the "average" rates for that same group at different time points. Delinquency rates that occur during time periods of active gang membership are placed in boxes in Table 6.2. Thus, only the Year 1 delinquency rate for Year-1-only gang members is in a box; the Year 1 and 2 delinquency rates are placed in a box for adolescents who were gang members in Years 1 and 2 only, and so forth. We do not expect significant differences in delinquency rates across time for the nonmembers. That is, during this four-year period we do not necessarily anticipate sizable age effects.

Panel A of Table 6.2 presents the expected pattern of delinquency rates if a pure facilitation model is operating. In this case the only time periods in which delinquency is elevated for gang members are during the time

Table 6.2. *Hypothetical Relationships Expected under the Facilitation and Selection Models*

Gang Member in	Year 1	Year 2	Year 3	Year 4
(Nonmember)	Average	Average	Average	Average
A. Facilitation Model				
Year 1 only	High	Average	Average	Average
Year 2 only	Average	High	Average	Average
Year 3 only	Average	Average	High	Average
Year 4 only	Average	Average	Average	High
Year 1 & 2	High	High	Average	Average
Year 1–3	High	High	High	Average
Year 2–3 or 2–4	Average	High	High	High
B. Selection Model				
Year 1 only	High			
Year 2 only	High	High		
Year 3 only	High	High	High	
Year 4 only	High	High	High	High
Year 1 & 2	High	High		
Year 1–3	High	High	High	
Year 2–3 or 2–4	High	High	High	High

periods of active gang membership. Graphically, that means that there is a perfect overlap between the labels of "high" and the boxes indicating being a member of a gang. Two specific predictions follow: gang members will have significantly higher rates of delinquency than the nonmembers only in those time periods when they are actively involved in the gang; and for the various groups of gang members, rates of delinquency will be higher during periods of active gang membership than either before or after those periods.

Panel B of Table 6.2 presents the expected pattern of relationships if a selection model is operating. In this case gang members have higher rates of delinquency both prior to joining *and* during periods of active gang membership. That is, gangs attract or recruit adolescents *already* highly involved in delinquency, and their high delinquency involvement continues once they are in a gang; the gang, however, has no causal impact on delinquency. In this case we make no predictions about the rate of delinquency following involvement in the gang because the expectations are ambiguous. On the one hand, a pure version of a selection model, such as that offered by Gottfredson and Hirschi (1990), would predict that the rates of delinquency for the gang members would always be "high." That is, if the association between gang membership and delinquency is truly spurious – both being

produced by a common prior cause such as low self-control – then these adolescents will always have higher rates of delinquency than nonmembers and those rates will not fluctuate as a function of entering or leaving a gang. On the other hand, higher rates of delinquency following a period of gang membership may reflect learning processes and opportunity structures provided by the gang, not selection effects. In this case, the gang plays a causal role in bringing about delinquent behavior, but once initiated by the gang the behavior continues after the person leaves the gang. Because of these varying possibilities, we focus on the rates of delinquency prior to and during periods of active membership to assess the selection model.

Finally, in a mixed or enhancement model (not represented graphically) both selection and facilitation effects are hypothesized to operate. First, the selection effect predicts that prior to joining the gang, gang members have significantly higher rates of delinquency than the nonmembers. Second, the facilitation effect predicts that those rates then increase significantly once the youth joins the gang.

The design outlined in Table 6.2 has a number of positive features for comparing these conceptual models. First, as mentioned earlier, because we are comparing the behavior of the same individual before, during, and after he becomes a gang member, each respondent acts as his own control. Thus, time-stable covariates are controlled by design. Second, because the gang members join and leave gangs at different ages (Year-1-only members are 14 years old; Year-4-only members are 17), we can see if the effect of gang membership runs counter to the general age-trend for the various measures of delinquency. For example, if there is a decreasing trend with age (represented by the delinquency rates for the adolescents who were never gang members) but, regardless of that trend, delinquency always increases when the person joins the gang, that would further support the notion that the gang facilitates delinquent behavior. In contrast, if the changing patterns of delinquency for the gang members merely reflect the underlying age trend, it would weaken the argument for a facilitation effect.

Results

Results are presented in three sections. We first look at temporal patterns of involvement in delinquency and drug use to see if they conform to the patterns expected under the facilitation, selection, or mixed model. We then examine multivariate models to see if the gang effect remains once major time-varying risk factors are controlled. Finally, we examine random effects models that test for unmeasured heterogeneity.

Patterns of Delinquency

We begin with an examination of the omnibus index of general delinquency (Table 6.3). For the nonmembers there is an upward trend in the incidence

Table 6.3. *Relationship between General Delinquency and Periods of Active Gang Membership, Males Only*

Gang Member in	Year 1	Year 2	Year 3	Year 4
(Nonmember)	7.00[c,d]	11.86	13.59	20.38
Year 1 only	40.12[a]	19.63	25.76	23.25
Year 2 only	15.71[b,c]	34.82[a]	51.95[a]	53.22
Year 3 only	15.49	34.41[a]	50.14	22.95
Year 4 only	10.32[d]	31.20[d]	35.07[d]	144.49[a]
Year 1 & 2	80.76[a]	112.81[a,c]	37.97[a]	48.58
Year 1–3	84.38[a]	71.82[a]	66.00[a]	44.34
Year 2–3 or 2–4	12.26[c]	25.77[a]	53.52[a]	57.18
Year 1–4	123.93[a]	47.51[a]	74.26[a]	143.03[a]

[a] $p < .05$ (one-tailed t-test) compared with nonmembers.
[b] $p < .05$ (one-tailed t-test) compared with Year 2.
[c] $p < .05$ (one-tailed t-test) compared with Year 3.
[d] $p < .05$ (one-tailed t-test) compared with Year 4.

of general delinquency across these four years. The mean incidence scores increase from 7.00 at Year 1 to 20.38 at Year 4 and the means at Years 3 and 4 are significantly higher than the Year 1 mean.

There appears to be a substantial "main effect" of gang membership. That is, the means in the lower two sections of Table 6.3, for both the short-term and the more stable gang members, are generally higher than those for the nonmembers. This observation essentially replicates the basic association between gang membership and delinquency that we saw in Chapter 3. The issue now is: are the delinquency rates of gang members particularly high, relative to those of nonmembers, during their periods of active membership?

Recall from Table 6.2 that the facilitation effect predicts a perfect overlap between periods of active gang membership and the location of significant group differences. Thus, the gang members should exhibit significantly higher rates of delinquency *only* during the year(s) in which they are active gang members. With few exceptions, that is what we observe in Table 6.3. Of the 16 delinquency means appearing in boxes (indicating periods of active gang membership), 14 are statistically significantly higher than the mean for the nonmembers at the same year. For example, the mean at Year 1 for the Year-1-only gang members is 40.12, compared with a mean of 7.00 for the nonmembers in that same year. In contrast, of the 16 delinquency means not appearing in boxes, 13 are not statistically different from the delinquency means for the nonmembers at the same year. Thus, for

the cross-group comparisons the results are quite consistent with a facilitation effect. Gang members self-report significantly more delinquency than nonmembers when they are in a gang; they do not report significantly higher rates of delinquency either before or after they are in a gang.

The within-group temporal patterns are also consistent with the facilitation model. With only a few exceptions, the mean delinquency scores that appear in the boxes are higher than those not in the boxes. For the Year-1-only gang members, for example, the mean at Year 1 is 40.12 and that drops to 19.63 at Year 2, after these subjects leave the gang, and continues at about that level through Year 4. For the Year 1 and 2 gang members the means while they are in the gang are 80.76 and 112.81; after they leave the gang the means are 37.97 and 48.58. It is important to note that this postgang decline runs counter to the general, increasing age trend reflected in the data for the nonmembers.

A few general comments about the cross-time comparisons in Table 6.3 can be made. First, while the direction of the cross-time comparisons is consistent with a facilitation effect, only some of the comparisons attain statistical significance. This may be due to the relatively small sample sizes, which range from 10 to 42, for these within-group comparisons. Nevertheless, the mean delinquency scores for the year immediately prior to joining the gang are *always* lower than those observed in the first (or only) year of gang membership. Moreover, except for the Year-2-only gang members, the mean delinquency scores for the year immediately after leaving the gang are always lower than those observed for the last (or only) year of gang membership. Therefore, general delinquency tends to increase upon joining a gang and to decrease upon leaving.

In Table 6.4 we present results for violent delinquency. For the nonmembers there is a downward drift in the frequency scores over these four years. At Year 1 the mean is .88 and that drops to .39 at Year 4. Again, we see a rather substantial "main effect" of gang membership. Overall, the violent delinquency means observed for the gang members are larger than those observed for the nonmembers.

The cross-group comparisons between the nonmembers and the gang members are quite consistent with predictions based on the facilitation model. Of the 16 comparisons between active gang members and nonmembers, 14 are statistically significant in the expected direction; of the 16 comparisons made either before or after periods of active membership, only 3 are statistically significant. As was the case with general delinquency, therefore, gang members have significantly higher frequency scores on violent delinquency than nonmembers only during periods when they are active members of the gang.

The cross-time comparisons for each of the groupings reveal that in all but one instance the rates of violent delinquency are higher during periods

Table 6.4. *Relationship between Violent Delinquency and Periods of Active Gang Membership, Males Only*

Gang Member in	Year 1	Year 2	Year 3	Year 4
(Nonmember)	.88[c,d]	.74[c,d]	.50[d]	.39
Year 1 only	3.52[a,b,c,d]	.68	.79	.56
Year 2 only	4.11	5.50	1.26	2.27
Year 3 only	2.53	1.46	2.97[a]	1.19
Year 4 only	4.10	2.56[a]	3.42	5.41[a]
Year 1 & 2	10.08[a,c]	5.07[a,c]	1.67	5.90
Year 1–3	7.97[a]	3.60[a]	4.86[a]	2.80[a]
Year 2–3 or 2–4	2.19[a]	3.92[a]	3.71	2.33[a]
Year 1–4	13.04[a]	3.52[a]	3.30[a]	5.29[a]

[a] $p < .05$ (one-tailed t-test) compared with nonmembers.
[b] $p < .05$ (one-tailed t-test) compared with Year 2.
[c] $p < .05$ (one-tailed t-test) compared with Year 3.
[d] $p < .05$ (one-tailed t-test) compared with Year 4.

of gang membership than either before or after, although these differences are seldom statistically significant. Differences in the comparisons between the year prior to joining a gang and the first (or only) year of membership are more muted here than was the case for general delinquency. Although in every case there is an increase in violent delinquency across these adjacent years, none of the differences is statistically significant. The differences are more pronounced for the postgang year. After adolescents leave the gang, they generally exhibit substantial reductions in their level of violent offending. Indeed, for all groups except the Year 1–3 members, the mean in the year after the last (or only) year of gang membership is less than half of the mean in the preceding year.

Summary

Overall, it would appear that there is a strong facilitation effect of gang membership on general delinquency and on violent delinquency for the male gang members in the Rochester Youth Development Study. The highest rates of delinquency and violence are exhibited during periods of active gang membership. With very few exceptions, only at these times are the gang members significantly different from the nonmembers. Also, across time, the highest rates are observed during, as compared with either before or after, periods of gang membership. It is important to note that these differences apply regardless of the underlying age trend indicated by the nonmembers. All of these results suggest a strong facilitating effect of gang

Table 6.5. *Relationship between Drug Use and Periods of Active Gang Membership, Males Only*

Gang Member in	Year 1	Year 2	Year 3	Year 4
(Nonmember)	2.40[c,d]	3.61[c,d]	4.28[d]	8.76
Year 1 only	6.92	6.85	3.82[d]	13.52
Year 2 only	.39[d]	6.26	4.33	15.55
Year 3 only	2.36	2.47	16.93	29.76
Year 4 only	.39	.00	.00	10.62
Year 1 & 2	7.59[b]	75.28[a,c]	5.09[d]	35.04
Year 1–3	27.08[a]	8.07	36.22[a]	25.97
Year 2–3 or 2–4	.30	1.73	1.47	57.40[a]
Year 1–4	3.74[d]	16.06[d]	16.38[d]	83.11[a]

[a] $p < .05$ (one-tailed t-test) compared with nonmembers.
[b] $p < .05$ (one-tailed t-test) compared with Year 2.
[c] $p < .05$ (one-tailed t-test) compared with Year 3.
[d] $p < .05$ (one-tailed t-test) compared with Year 4.

membership on delinquency. Put simply, when gang members join gangs their behavior worsens; when they leave gangs their behavior improves.

At the same time there also appear to be some selection effects at play. Although rarely statistically significant, gang members, as compared with nonmembers, do exhibit higher rates of delinquency and violence in the year prior to joining the gang. This observation, combined with the main effect of gang membership on rates of delinquency, suggests that gang members are recruited from adolescents who are somewhat predisposed to delinquency. Once in the gang, however, involvement in delinquency increases further and then decreases once they leave the gang. Overall, it would appear that these data on general delinquency and on violent delinquency are most consistent with a strong facilitation effect with an overlap of a weaker and less consistent selection effect.

Patterns of Drug Involvement

In this section we examine the impact of gang membership on the use of drugs and on the selling of drugs. We begin with the former behavior, which, at these ages, refers primarily to marijuana use.

As expected from the general literature on the age distribution of drug use, there is an increase in drug use across the ages represented by these four years (Table 6.5). For the nonmembers drug use more than triples from a mean frequency of 2.40 at Year 1 to a mean frequency of 8.76 at Year 4. The increase is particularly pronounced from Year 3 to Year 4.

Table 6.6. *Relationship between Drug Sales and Periods of Active Gang Membership, Males Only*

Gang Member in	Year 1	Year 2	Year 3	Year 4
(Nonmember)	.61[c,d]	1.08[c,d]	1.21	4.04
Year 1 only	2.48	.36	1.61	2.62
Year 2 only	.00	2.60	6.32	18.90
Year 3 only	.00	.07	2.82	4.08
Year 4 only	.00	.00	.00	.96
Year 1 & 2	7.08[b]	37.92[a]	11.80	11.40
Year 1–3	4.33	4.13	11.82	18.77
Year 2–3 or 2–4	.00	1.45	7.00	8.31
Year 1–4	2.66	6.84	14.11	65.36[a]

[a] $p < .05$ (one-tailed t-test) compared with nonmembers.
[b] $p < .05$ (one-tailed t-test) compared with Year 2.
[c] $p < .05$ (one-tailed t-test) compared with Year 3.
[d] $p < .05$ (one-tailed t-test) compared with Year 4.

The evidence of a gang effect on drug use is somewhat ambiguous. On the one hand, gang members, when they are actively involved in the gang, do have higher rates of drug use than the nonmembers. For example, among the short-term members, the rates along the main diagonal in Table 6.5 are consistently higher than the rates for the nonmembers at the same time period. On the other hand, few of these differences are statistically significant. Indeed, in only 5 of the 16 comparisons between active gang members and nonmembers do the results attain statistical significance.

The cross-time comparisons for the gang members are also somewhat ambiguous. Gang members do exhibit an increase in drug use from the year prior to joining the gang to the first (or only) year of gang membership. For example, for the Year-2-only gang members, their drug use increases from .39 at Year 1 to 6.26 at Year 2, when they join the gang; for the Year-4-only gang members the increase is from 0 to 10.62. Even though these increases are large, the differences are not statistically significant. Finally, after leaving the gang, levels of drug use generally decline but the pattern is somewhat erratic.

The last form of deviant behavior we examine is selling drugs (Table 6.6). The mean frequencies for the nonmembers increase with age, from .61 at Year 1 to 4.04 at Year 4. The means at the earlier years are significantly lower than those at the later years.

Relatively few statistically significant differences are reported in Table 6.6; this may be due to the combination of low n's and the somewhat low prevalence of drug selling at these ages. Nevertheless, the pattern of results is generally consistent with a facilitation effect. The most compelling evidence

comes from the observation that it is extremely rare for gang members to become involved in drug sales prior to joining a gang. For gang members from Year 2 only, Year 4 only, and Years 2–3 or 2–4, there is *no* involvement in drug sales in the years prior to joining a gang; for the Year-3-only gang members, there is no involvement in drug sales at Year 1 and minimal involvement at Year 2 (mean = .07). In contrast, drug sales increase substantially during the first year of gang membership. Active gang members generally exhibit rates of drug sales that are higher than those of nonmembers, even though the differences are seldom statistically significant.

Some evidence from recent studies suggests that involvement in drug sales remains high for gang members after they leave the gang (Hill et al., 1996; Lizotte et al., 1997). The data in Table 6.6 are fairly consistent with this finding. The postgang means for those who were in a gang in Year 2 only, Years 1 and 2, and Years 1–3 are considerably higher than those observed for the nonmembers at the same time periods. The only exception concerns the Year-1-only gang members; for them the postgang means are generally lower than those of the nonmembers.

Overall, there appears to be a rather pronounced effect of gang membership on the frequency of drug sales. Prior to joining a gang, gang members have virtually no involvement in selling drugs, but once in a gang their rates increase substantially. There also appears to be an increasing involvement in drug sales the longer one stays in the gang. Indeed, the highest rates are observed for the stable gang members, at the end of their period of gang involvement.

Summary

In assessing the impact of gang membership on involvement in drug use and drug sales for male adolescents, three general conclusions seem warranted. First, there is virtually no support for a social selection model. Prior to joining the gang, gang members do not have particularly elevated rates of drug use and they have virtually no involvement in drug sales.

Second, there is some support for a gang facilitation effect. For drug use, the support is modest; drug use does increase when adolescents join gangs, and the drug use of gang members is higher than that of nonmembers during periods of active membership. Few of the expected differences are statistically significant, however. For drug sales, there appears to be a more powerful gang facilitation effect. For the gang members, involvement in drug sales is virtually nonexistent prior to becoming a gang member. Drug selling increases after joining the gang and remains high after the gang members leave the gang.

There are several possible explanations for the postgang maintenance of drug selling. One is that the gang is a gateway to drug dealing for some gang members but, once introduced to drug markets and suppliers by the gang,

the individual does not require the gang to continue in this line of behavior. Second, there is growing evidence that gang members or cliques within the gang are involved in selling drugs, but not the gang itself (Decker, 2000; Decker and Van Winkle, 1996; Fagan, 1989; Hagedorn, 1998; Maxson, Klein, and Cunningham, 1991). The structure of the gang is too disorganized and volatile to support this profit-making behavior in the long run. One consequence of this may be to force drug dealers to leave the gang, for business purposes if you will, if they plan on continuing to sell drugs.[1] In general, it appears that street gangs facilitate drug dealing by their members, but once the individual members have learned this behavior and acquired access to its opportunity structure, the behavior can continue without the support of the gang.

Third, gang membership appears to have a more consistent and powerful impact on general delinquency and on violence than on either drug sales or drug use. That is, delinquency and violence appear to increase and decrease more precisely as a function of gang membership and there are consistently more significant differences between gang members and nonmembers for these behaviors. Drug involvement exhibits similar patterns but they are not as crisp and there are fewer significant differences.

Multivariate Models

In the previous analysis we examined the temporal patterning of delinquency and drug use in relation to periods of active gang membership in order to assess the competing models that may explain why gang membership is so strongly related to delinquent behavior. In that analysis each individual acts as his own control because we are examining changing patterns of behavior for the same individual as that person enters and leaves gangs. Doing so helps control the impact of a number of possible covariates.

An alternate strategy is to control explicitly for the impact of major risk factors for both gang membership and delinquency in multivariate equations. Doing so allows us to assess whether gang membership still has an impact on delinquency and drug involvement after the impact of those risk factors is held constant. The literature on risk factors for gang membership (see Chapter 4; see also Hill et al., 1999) and for delinquency and violence (e.g., Farrington, 1987; Hawkins et al., 1998) suggests that risk is generated in multiple domains. These include social class position, family, school, peers, individual characteristics, and prior deviant behavior. We include one central indicator from each of these domains in this analysis:[2] family

[1] We thank Malcolm Klein for suggesting these hypotheses.
[2] Multiple indicators from each domain often generate problems of multicollinearity.

poverty level, parental supervision, commitment to school, association with delinquent peers, negative life events, and prior deviant behavior. The particular indicator of prior deviance that is included in each equation varies to match the dependent variable. The risk factors are measured in the year immediately prior to the measurement of the dependent variable. Also, the dependent variable is logged because of the skewness of self-reported delinquency data.

To assess the relative impact of selection versus facilitation effects, we estimate separate regression equations at each of the four annual observation points. In each equation, two dummy variables are incorporated to examine the role of gang membership. The first, "current gang member," includes all respondents who were gang members during the year in which the dependent variable was measured. The second, "not current gang member," includes all respondents who were gang members in some other year but who are not currently a gang member. Some of them were gang members in prior years, some will be in future years, or both. In all cases, the omitted category is "never gang member."

A pure facilitation effect would be indicated by finding a significant impact only for the variable signifying current gang membership. That is, net of other risk factors, deviance would be elevated only during periods of active gang membership, but one's status as either a past or future gang member would have no significant impact on current levels of deviance. In contrast, a selection effect would be consistent with the additional finding that the impact of the variable representing gang members who are not currently active is significant and of a similar magnitude. This would indicate that gang members in general, whether they are active or not, have higher rates of delinquency than youth who never join gangs.

OLS Models

In Table 6.7 we present the results for general delinquency for Years 1 through 4. At each of the four years the coefficient for "current gang member" is positive and significant. These coefficients are of the same magnitude as or larger than the coefficients for association with delinquent peers and prior delinquency, typically two of the strongest predictors of delinquent behavior. Active gang membership facilitates involvement in delinquency even when family poverty level, parental supervision, commitment to school, association with delinquent peers, negative life events, and prior general delinquency are held constant.

If there were a strong selection effect, the coefficients for "not current gang member" would be statistically significant and of approximately the same magnitude as the coefficients observed for "current gang member." The coefficients for "not current gang member" are significant at three

Table 6.7. *The Impact of Gang Membership Status on Self-Reported General Delinquency, OLS Estimates, Males Only (standardized regression coefficients)*

	Self-Reported General Delinquency (logged)			
	Year 1[a]	Year 2[b]	Year 3[c]	Year 4[d]
Gang Membership Status				
Current Gang Member	.26**	.29**	.27**	.22**
Not Current Gang Member	.10**	.12**	.13**	.02
Risk Factors				
Family Poverty Level	.02	.00	−.04	−.02
Parental Supervision	−.07*	−.01	−.01	−.10*
Commitment to School	−.12**	−.15**	−.22**	−.04
Association with Delinquent Peers	.31**	.10**	.15**	.22**
Negative Life Events	.17**	.14**	.18**	.16**
Prior General Delinquency	.23**	.16**	.14**	.13**
Adjusted R^2	.56 (n = 518)	.34 (n = 525)	.37 (n = 480)	.26 (n = 428)

[a]Year 1 general delinquency combines data from Waves 2 and 3; risk factors are from Wave 2.
[b]Year 2 general delinquency combines data from Waves 4 and 5; risk factors are from Wave 3.
[c]Year 3 general delinquency combines data from Waves 6 and 7; risk factors are from Wave 5.
[d]Year 4 general delinquency combines data from Waves 8 and 9; risk factors are from Wave 7.
*p < .05. **p < .01.

of the four years but these coefficients are less than half the size of those observed for "current gang member."

Table 6.8 presents parallel results for violent delinquency. Current gang membership exerts a strong, positive influence on violent delinquency; indeed, in three of the four years it has the largest coefficient of any variable in the equation. The coefficients for the other central variable, "not current gang member," while statistically significant, are of smaller magnitude, usually about a third of the size of the coefficients for "current gang member." These effects are observed, net of the control variables.

These results, in which major risk factors for both gang membership and delinquency are controlled, are quite similar to those observed in the earlier

Table 6.8. *The Impact of Gang Membership Status on Self-Reported Violent Delinquency, OLS Estimates, Males Only (standardized regression coefficients)*

	Self-Reported Violent Delinquency (logged)			
	Year 1[a]	Year 2[b]	Year 3[c]	Year 4[d]
Gang Membership Status				
Current Gang Member	.26**	.35**	.33**	.33**
Not Current Gang Member	.13**	.08*	.10**	.12**
Risk Factors				
Family Poverty Level	.02	−.05	.04	.03
Parental Supervision	−.05	−.08*	−.01	−.04
Commitment to School	−.04	−.03	.01	−.03
Association with Delinquent Peers	.32**	.08*	.13**	.24**
Negative Life Events	.14**	.15**	.20**	.02
Prior Violent Delinquency	.15**	.10*	.12**	.09*
Adjusted R^2	.42 (n = 518)	.28 (n = 525)	.27 (n = 480)	.26 (n = 428)

[a]Year 1 violence combines data from Waves 2 and 3; risk factors are from Wave 2.
[b]Year 2 violence combines data from Waves 4 and 5; risk factors are from Wave 3.
[c]Year 3 violence combines data from Waves 6 and 7; risk factors are from Wave 5.
[d]Year 4 violence combines data from Waves 8 and 9; risk factors are from Wave 7.
*p < .05. **p < .01.

tabular analysis. There appears to be a substantial facilitation effect of gang membership on delinquency (represented here by the variable "current gang member") and a smaller selection effect (represented here by the variable "not current gang member").

Tables 6.9 and 6.10 present the results for drug use and for drug sales, respectively. Here the evidence for a gang facilitation effect is clearer. When risk factors from the major adolescent life domains of social class, family, school, peers, individual characteristics, and prior deviance are held constant, current gang membership exerts a strong positive impact both on drug use (Table 6.9) and on drug sales (Table 6.10) in all four years. In contrast, in the equations for drug use, only the coefficient for "not current gang member" at Year 4 attains statistical significance. In the four equations for drug sales, none of the coefficients for "not current gang member" attains statistical significance.[3]

[3] The "not current gang member" group can be subdivided into "past gang member," those who previously had been a member of a gang but are not currently, and "future gang member," those who will join a gang but have not done so yet. When this is done, the results are the

Table 6.9. *The Impact of Gang Membership Status on Self-Reported Drug Use, OLS Estimates, Males Only (standardized regression coefficients)*

	Self-Reported Drug Use (logged)			
	Year 1[a]	Year 2[b]	Year 3[c]	Year 4[d]
Gang Membership Status				
Current Gang Member	.14**	.23**	.18**	.23**
Not Current Gang Member	.03	.01	−.05	.09*
Risk Factors				
Family Poverty Level	.01	.07*	.00	−.02
Parental Supervision	−.04	−.01	−.01	−.00
Commitment to School	−.03	−.04	−.13**	−.12**
Association with Delinquent Peers	.36**	.16**	.17**	.09*
Negative Life Events	−.02	.04	.03	.12**
Prior Drug Use	.05	.28**	.28**	.30**
Adjusted R^2	.19 (n = 518)	.22 (n = 525)	.22 (n = 480)	.24 (n = 428)

[a]Year 1 drug use combines data from Waves 2 and 3; risk factors are from Wave 2.
[b]Year 2 drug use combines data from Waves 4 and 5; risk factors are from Wave 3.
[c]Year 3 drug use combines data from Waves 6 and 7; risk factors are from Wave 5.
[d]Year 4 drug use combines data from Waves 8 and 9; risk factors are from Wave 7.
*p < .05. **p < .01.

Random Effects Models

Finally, we reestimate the impact of gang membership on involvement in delinquency and drugs using a random effects model. This type of model represents the most stringent test of the facilitation model as it controls for unmeasured heterogeneity in the population, as well as measured risk factors, while examining the impact of gang membership status on delinquency. Population heterogeneity refers to time-stable individual differences, such as criminal propensity, that can produce varying rates of crime across individuals that are not a function of changing states, such as movement into and out of gangs, but are really a function of the individual's stable underlying propensity. Ordinary least squares (OLS) regression ignores this possibility by assuming (somewhat questionably) that the error terms vary independently over time for a given individual.

same as those reported here. There is a large effect for "current gang member" but smaller, and less consistently significant, effects for past and future gang members. The appropriate tables are presented in Appendix C.

Table 6.10. *The Impact of Gang Membership Status on Self-Reported Drug Sales, OLS Estimates, Males Only (standardized regression coefficients)*

	Self-Reported Drug Sales (logged)			
	Year 1[a]	Year 2[b]	Year 3[c]	Year 4[d]
Gang Membership Status				
Current Gang Member	.23**	.34**	.23**	.15**
Not Current Gang Member	.00	−.02	−.01	−.01
Risk Factors				
Family Poverty Level	.00	.11**	.01	−.04
Parental Supervision	.04	−.03	−.01	.00
Commitment to School	−.02	.07	−.05	.03
Association with Delinquent Peers	.17**	.21**	.17**	.22**
Negative Life Events	−.03	.02	.04	.08*
Prior Drug Sales	.36**	−.01	.06	.31**
Adjusted R^2	.27 (n = 518)	.21 (n = 525)	.11 (n = 480)	.21 (n = 428)

[a]Year 1 drug sales combine data from Waves 2 and 3; risk factors are from Wave 2.
[b]Year 2 drug sales combine data from Waves 4 and 5; risk factors are from Wave 3.
[c]Year 3 drug sales combine data from Waves 6 and 7; risk factors are from Wave 5.
[d]Year 4 drug sales combine data from Waves 8 and 9; risk factors are from Wave 7.
*p < .05. **p < .01.

Random effects models correct for this by dividing the error term into two components. The first is an individual-specific part that does not vary over time; that is, it is time-stable. "This component of the error structure captures the influence of any enduring but unmeasured individual (e.g., impulsivity) or environmental (e.g., persistent poverty) characteristics affecting potential to offend" (Nagin and Farrington, 1992: 240). The second part of the error term is assumed to vary across time and population. This decomposition of the error term allows one to control for persistent unmeasured heterogeneity, and to measure its magnitude by the coefficient ρ. A random effects model offers a strong test of the gang facilitation hypothesis because both measured risk factors and unmeasured, enduring characteristics are controlled when we examine the impact of gang membership status on delinquency.[4]

[4] We recognize that there are advantages to estimating "fixed effects" as opposed to "random effects" models. Unfortunately, fixed effects models cannot estimate coefficients for variables that are constant within persons. For example, one cannot estimate a coefficient for gender in a fixed effects model, because each person is either male or female over all waves. In

Table 6.11. *The Impact of Gang Membership Status on Involvement in Delinquency and Drugs, Random Effects Models, Males Only (unstandardized coefficients)*

	General Delinquency	Violent Delinquency	Drug Use	Drug Sales
Gang Member Status				
Current Gang Member	1.49**	.72**	.70**	.57**
Not Current Gang Member	.61**	.26**	.20**	.07
Risk Factors				
Family Poverty Level	−.03	.01	.05	.00
Parental Supervision	−.17	−.03	−.01	.00
Commitment to School	−.46**	−.05	−.17**	.01
Association with Delinquent Peers	.56**	.23**	.29**	.27**
Negative Life Events	.83**	.38**	.03	−.03*
Prior Deviance[a]	.01**	.01**	.02**	.01
Control Variables				
Year 2	.10	.12**	.05	.06
Year 3	.20**	−.16**	.14**	.13*
Year 4	.31**	−.18**	.32**	.19**
ρ	.26	.17	.34	.18

[a]The measure of prior deviance matches the dependent variable.
*p < .05. **p < .01.

Results are presented in Table 6.11. One equation is estimated for each dependent variable because in these models the effects of independent variables are assumed to be stable over time. We also include dummy variables for different years, which controls for maturation effects.

By and large, the results here replicate the earlier ones based on the OLS estimates. For all four dependent variables the coefficient for "current gang member" is statistically significant and sizable. For general delinquency, violence, and drug use, but not drug sales, the coefficient for the variable "not current gang member" is statistically significant. These coefficients,

other words, fixed effects models allow estimates only for variables that change over time. This leads to an interesting difficulty in the current case. Gang membership is divided into three dummy variables: never gang member, not current gang member, and current gang member. A fixed effects model cannot estimate a coefficient for the first variable, because it is constant within persons. A fixed effects model can estimate effects for the other two variables, because their values change within people. *But*, within person, "current gang member" and "not current gang member" are perfectly collinear. So, as a practical matter, only one effect can be estimated. As that does not allow for a test of our core hypothesis, we have opted to estimate random effects models, which do.

however, are substantially smaller in size. For general delinquency, for example, the coefficient for being a "current gang member" is 1.49, 2.5 times as large as the coefficient of .61 for "not current gang member." The coefficient for "current gang member" is 2.8 times larger for violence, 3.5 times larger for drug use, and 8.1 times larger for drug sales than the respective coefficient for "not current gang member." The other variables in the equations, the measured risk factors, behave in approximately the same ways they did in the OLS equations.

Summary

In this section we adopted a multivariate approach to assessing possible gang facilitation and selection effects, by estimating two types of regression models. The OLS regressions, estimated at each year, explicitly control for a number of important risk factors both for gang membership and for deviance, while assessing the impact of gang membership status on involvement in delinquency and drugs. The random effects model additionally controlled for enduring unmeasured characteristics of the individual. Recall that this analysis is limited to male respondents because of the temporal distribution of female gang membership in the Rochester sample.

Net of the impact of family poverty, parental supervision, commitment to school, association with delinquent peers, negative life events, prior deviance, and unobserved population heterogeneity, the coefficients associated with "current gang member" are sizable and statistically significant in predicting general delinquency, violence, drug use, and drug sales in all the equations. The coefficients associated with "not current gang member" are of smaller magnitude and are less consistently significant, however. In general, the pattern of these results is quite consistent with the one derived from the earlier, tabular analysis: there seems to be a strong facilitation effect and a rather modest selection effect.

Discussion

Gang members have higher rates of delinquency than do nonmembers and gang members are responsible for a very substantial proportion of all offenses that are reported. In this chapter we identified and tested three competing processes that could account for this behavior pattern for male gang members. The selection model adopts a "kind of person" perspective, whereas the facilitation model adopts a "kind of group" perspective. The enhancement model is a mixed approach, combining aspects of both selection and facilitation effects.

These models, especially the two pure types, offer fundamentally different perspectives on the motivation for delinquency and on the way in which gang

membership affects delinquency. The selection model offers a static orientation (Nagin and Paternoster, 1991) in which the causes of delinquency are set early in life and are carried by the individual to different situations (see Gottfredson and Hirschi, 1990). Changing social environments, such as joining and leaving street gangs, have relatively little, if any, causal impact on behavior. Indeed, in a pure selection model the relationship between gang members and delinquency is spurious.

The facilitation model offers a more dynamic perspective consistent with a life-course orientation (Nagin and Paternoster, 1991) in which delinquency is viewed as a product of both enduring characteristics of the person *and* changing social environments. From this theoretical orientation, changing life-course circumstances – such as changing family and peer relationships or status transitions like marriage and employment – can have causal impacts on behavior (see Sampson and Laub, 1993; Thornberry and Krohn, 2001). So too, can gang membership. Delinquent careers are not predetermined but are malleable, changing as the person's life course unfolds.

To assess the empirical validity of these two perspectives, we examined changing patterns of delinquency for male members of the Rochester Youth Development Study as they moved into and out of active participation in gangs. Two analytic strategies were adopted. The first looked to see if involvement in general delinquency, violence, drug use, and drug selling cooccurred with periods of active gang membership. This approach focused on within-individual change. The second strategy explicitly controlled for the effect of major risk factors for both gang membership and delinquency and for unobserved population heterogeneity in a series of multivariate regression equations. The risk factors included family poverty, parental supervision, commitment to school, association with delinquent peers, negative life events, and prior deviance.

These results, as well as those reported by Esbensen and Huizinga (1993), Hill et al. (1996), and Gatti et al. (2002), indicate that there is a strong, consistent gang facilitation effect. When male adolescents join gangs their behavior changes; delinquency, violence, drug selling, and – to a lesser extent – drug use increase. When they leave the gang, their behavior changes again; involvement in deviant behavior decreases, with the exception of involvement in drug selling.

In contrast, there is very little convincing evidence for a selection model. Gang members do not have consistently higher rates of delinquency than nonmembers either before or after the time periods they are in the gang. Indeed, the most consistent finding in this chapter is that gang members do *not* have significantly higher rates of general delinquency, violence, drug use, and drug selling than the nonmembers unless they are actively involved in the gang. We do not know how well these findings would apply to female adolescents.

Finally, we note that in some ways these results can be interpreted as being consistent with a mixed or enhancement model. Gang members generally have higher rates of delinquency than nonmembers, what we referred to earlier as a "main effect"; but they have statistically significantly higher rates only when they are in the gang. If the mixed model is the appropriate one, it comprises a large facilitation effect and a small selection effect.

At a more general level, these findings are consistent with recent research on a life-course approach to understanding delinquent and criminal careers that indicates a substantial dynamic component to offending (Bushway, Brame, and Paternoster, 1999). Although static, enduring attributes of the person are important, so too are dynamic components and changing life circumstances. This research suggests that membership in street gangs may be one of the more important social environments for explaining patterns of adolescent delinquency. As indicated by the earlier work of Short and Strodtbeck (1965), Klein (1971), and Miller et al. (1961), the normative climate and the group processes associated with American street gangs provide a fertile ground for eliciting delinquent behavior, especially violent behavior.

delinquent behavior. Because these concepts are conceptually interrelated, though, these two findings may be redundant. That is, street gangs may be nothing more than one variant of a delinquent peer group, and really all that is involved in the impact of gangs on behavior is a specific version of the well-established impact of peers. Gang researchers often disagree with this view, however. Many of them (e.g., Klein, 1995; Moore, 1991) have suggested that gangs are qualitatively different from peer groups, generating an enhanced involvement in delinquency, over and above that generated by simple association with delinquent peers.

The Rochester Youth Development Study data indicate that gang membership is indeed different from associations with delinquent peer groups. Even though gang members have the same density of delinquent peers in their social networks as the nonmembers in the highest quartile group and fewer delinquent friends than the nonmember matched group, they generally exhibit higher rates of delinquency and drug involvement.

It is important to bear in mind that these findings are based on a conservative test of the hypothesis: gang members are only compared with nonmembers in highly delinquent networks. When comparisons are made to those in more average or typical delinquent peer networks, the differences are far more dramatic.

The findings presented here are particularly strong for those behaviors that are typically associated with gangs. The most convincing evidence of the effect of gang membership is for violent delinquent behavior. Gang membership also has the expected effect on the sale of drugs. In contrast, for drug use, a behavior that is widely dispersed in the juvenile population, being a member of a gang has no greater impact than associations with delinquent peers.

These findings have important implications for understanding the dynamics of delinquency, especially serious and violent delinquency. Future work must examine what it is about the organization and culture of a gang that produces this effect on behavior. For, in combination with the results presented in Chapters 6 and 7, these results highlight the strong, short-term criminogenic effect of the gang. Gang membership appears to facilitate delinquency, violence, drug involvement, and gun carrying. Moreover, this effect seems to be due to the specific impact of the gang, and not merely the fact that gangs provide access to delinquent peers. If gangs have this short-term impact on their members, do they also exert a long-term toll, interrupting the normal course of development? That is the last issue we address – the long-term consequences of gang membership.

CHAPTER NINE

Long-Term Consequences of Gang Membership

GANGS HAVE A POWERFUL, contemporaneous effect on the lives of the adolescents who become involved with them. It is also reasonable to expect that gang membership will have long-term consequences as well, interfering with the normal course of adolescent development and affecting the transition to adult roles and statuses. Although reasonable, there has been surprisingly little research conducted in this area. As early as 1971 Klein commented that "Though the need is great, there has been no careful study of gang members as they move on into adult status" (1971: 136), a view more recently advanced by Hagedorn (1998) and by Decker and Lauritsen (1996). In this chapter we examine whether adolescent involvement in street gangs has long-term consequences in such important developmental areas as family formation, parenthood, and employment. We begin by introducing basic concepts from the life-course perspective to guide the analysis.

Life-Course Perspective

The life-course perspective recognizes that as people age they enter and move along various trajectories. Trajectories are age-graded patterns of development with respect to major social institutions such as family, school, and work. They capture the long view of development, "linking social and psychological states over a substantial portion of the life span" (Elder, 1997: 955). Short-term changes in the life course, including movement into and out of trajectories, are referred to as transitions.

One of the most volatile stages of human development occurs as individuals move from adolescence to adulthood. These years are "demographically dense" (Rindfuss, 1991) because they involve transitions in multiple institutional arenas. The important transitions that adolescents are expected to make include completing their education, leaving the parental home,

beginning a stable pattern of employment, getting married, and having children (Kamerman, 1981). Transitions are normative in that they are expected to take place in roughly the order just presented and at particular ages in the life cycle. In fact, however, the sequence of transitions tends to be more complicated and is often quite disorderly (Rindfuss, Swicegood, and Rosenfeld, 1987).

Disorder in the life course can be thought of in at least three different ways. One is the failure to complete some developmental tasks before moving on to later, age-graded roles. For example, school dropouts fail to complete one of the most fundamental requisites of adolescent development – their basic education – before they move on to other trajectories like work and family. A second source of disorder in the life course is transitions that are out of sequence. In our culture, for example, it is expected that marriage will precede parenthood. A third sense in which there is disorder in the life course is when transitions are made off time – either too early or too late. Teen parenthood is a good example of an early or "precocious" transition.

Disorder in the life course is not simply a descriptive concept; disorder often has problematic consequences. Failure to complete developmental tasks and off-time, out-of-sequence transitions often reduce long-term economic prospects and increase economic burdens, stress, and depression when one tries to assume a role for which one is not prepared. In addition, disorder in life-course transitions often has cumulative, cascading effects, creating hardship in multiple domains. For example, teenage parenthood can necessitate dropping out of school, which in turn may limit job opportunities, increase economic disadvantage, reduce prospects of marriage, and disrupt parenting behaviors. Because of these and other consequences, it is essential that we understand the causes of disorder in the life course.

Gangs, Crime, and Disorder in the Life Course

Among the probable contributing factors, recent interest has focused on deviant behavior, including adolescent delinquency and drug use (Jessor et al., 1991; Krohn, Lizotte, and Perez, 1997; Newcomb and Bentler, 1988; Sampson and Laub, 1993). Although the long-term deleterious effects of involvement in adolescent deviance have been recognized since criminologists began to study delinquency systematically, not until researchers obtained longitudinal data could the effect of deviance on the life course be empirically investigated. A growing number of studies have found that involvement in delinquent behavior increases the likelihood that a person will experience disorderly transitions in the domains just identified. Children who either use drugs or are involved in other forms of delinquent behavior are more likely to drop out of school (Fagan and Pabon, 1990; Kaplan and Liu, 1994; Krohn et al., 1995; Mensch and Kandel, 1988), to become pregnant (or impregnate someone else) or become a teenage parent (Newcomb and Bentler, 1988; Smith, 1997; Thornberry et al., 1997), and to be unemployed in their early adult years (Caspi et al., 1998; Kandel, Chen, and Gill, 1995; Kandel et al., 1986; Newcomb and Bentler, 1988). They are also likely to experience disorderly transitions in multiple areas of development. Clearly these consequences can have a dramatic effect on their ultimate social, emotional, and economic well-being as well as their subsequent antisocial behavior, as these youths enter and traverse their adult years. Having found that childhood antisocial behavior predicts adult employment status, occupational status, job stability, income, and mobility, Lee Robins concluded that "antisocial behavior [in childhood] predicts class status more efficiently than class status predicts antisocial behavior" (1966: 305).

For various reasons early involvement in misbehavior predicts later disorder in the life course. Participating in illegal behaviors may distract one from conventional pursuits; for example, drug use can lower performance in school. Involvement in deviance may also lead the individual to be labeled and excluded from conventional pursuits.

Another, much less studied pathway from deviance to disorderly transitions concerns the impact of deviant behavior on social networks. First, participation in deviance discourages friendships with conventional others and reduces the individual's social capital. Prosocial friends, teachers, and family members can assist individuals in getting through school, obtaining a job, and selecting a mate. Involvement in adolescent deviance can cut the person off from these conventional social networks and sources of social capital (Coleman, 1988, 1990).

Second, exclusion from conventional social networks is also likely to encourage involvement in social networks that arise in opposition to conforming norms. Recent studies have established that involvement in deviant behavior leads to increasing association with deviant peers (Krohn et al., 1996; Thornberry et al., 1994). Hagan (1997) has suggested that when normative opposition forms in groups, the effect has added salience. Often there is a closure of networks within these groups, generating a form of social embeddedness that leads to "criminal capital" (Hagan, 1997). This process leads to the integration of youths into the criminal underworld and further distances them from the job market and other conventional institutions. Indeed, Hagan argues that embeddedness in crime networks seals the economic fate of these youths.

This perspective suggests that not only does involvement in deviant *behavior* lead to an increased probability of disorder in the life course, but that involvement in deviant *social networks* should have an added, independent impact on creating disorderly transitions. Social network theory argues

that all social networks constrain the actor's behavior to be consistent with that of the network (Krohn, 1986). It further suggests that the tighter the social network, the stronger the constraint on the actor's behavior. Involvement in a social network whose members regularly participate in deviant behavior will, therefore, facilitate deviance on the part of each network member and impair the actor's ability to make successful transitions to adult statuses.

Juvenile street gangs can be viewed as prototypical deviant social networks whose actors are embedded in a culture and behavior system that both facilitates deviant behavior and isolates the individual from prosocial networks. Because of that, we hypothesize that adolescent gang membership will have a disruptive influence on life-course trajectories, leading to off-time and disorderly transitions. This influence should be observed even after involvement in delinquent behavior and associations with deviant peers are taken into account. Moreover, members of a gang who are more committed to that social network should be particularly likely to experience problematic transitions. Hence, we hypothesize that gang members who remain in the gang for an extended period of time will be more likely to experience problematic transitions than short-term members.

Experiencing precocious transitions, especially multiple precocious transitions, can lead to either continuing antisocial behavior or initiating antisocial behavior in early adulthood. Therefore, we examine the hypothesis that precocious transitions will mediate the relationship between being a member of a gang during adolescence and being arrested as a young adult.

Examining these hypotheses provides an interesting test of the power of gang membership to influence life-course development as there is a substantial temporal lag between the period of gang membership and the occurrence of these transitions. Recall from Chapter 3 that gang membership was most prevalent at ages 14 and 15, especially for females. Most of the transitions examined here occur well after that point; for example, teen parenthood extends through age 19 and our measure of employment covers ages 19 to 21.

Prior Research

As noted earlier there has been relatively little research on the impact of gang membership on precocious transitions. One exception is Hagedorn's work with gangs in Milwaukee. He reinterviewed the sample of gang members, originally studied as adolescents, when they were in their early 20s and again in their late 20s (Hagedorn, 1998: 124ff., 171ff.). Of the male gang members, only a third had a high school diploma and about a third were working. About two-thirds were still gang-involved, more than 60% had been to jail, and many of them had resorted to the drug trade as a source of financial

support. The female gang members fared no better. About two-thirds did not graduate from high school and, while few were still gang involved (5%), half had been to jail and half had used cocaine "to some degree." Almost all were mothers (88%), only 6% were married, and more than half (58%) were supported by welfare (Aid to Families with Dependent Children, or AFDC). All of these results are descriptive, bivariate findings, and it is not clear if gang membership causally contributed to these outcomes. There are no comparison subjects, and the impact of other variables (e.g., prior criminal behavior) is not controlled. Nevertheless, Hagedorn's results do suggest that former gang members are at risk for later disorder in the life course.

Moore's (1991) results in Los Angeles are similar. Only about 40% of the former gang members were employed (1991: 115–116), and the female gang members had high rates of early parenthood and were more responsible for raising their children than were the male gang members (1991: 114).

These earlier findings suggest that adolescent gang membership may well contribute to disorder in the life course. To address this issue more fully, we examine the impact of gang membership on several precocious or off-time transitions: dropping out of school, early pregnancy, teenage parenthood, living independently from one's parents (early nest leaving), unstable employment patterns, and cohabiting.[1]

Measures

School dropout was measured by the respondent's self-report of dropping out of high school before graduation. If respondents indicated that they were not in school and had not graduated from high school as of Wave 10 (when they were 19–21 years of age), they are considered to have dropped out of high school. Thirty-seven percent of the females and 42% of the males left school prematurely.

Female respondents were asked whether they had ever been pregnant and male respondents were asked whether they had ever gotten a girl pregnant. *Early pregnancy* is determined by an affirmative response at or prior to Wave 9, when the mean age of the respondents was 17.4 and they should have been in the spring term of their 11th or 12th grade. Using this definition, 37% of the females and 23% of the males were considered to have experienced this precocious transition during their high school years.

Teenage parenthood is indicated by whether the respondent had a child prior to his or her twentieth birthday. This measure is based on items on

[1] Another precocious transition that is frequently studied is marriage before graduating from high school. Early marriage was eliminated from the analysis because so few (7%) of our total sample had experienced this transition.

which respondents self-reported becoming a parent and provided the birthdates of their children. Forty-six percent of the females and 22% of the males reported having biological children by age 20.[2] We also asked the respondent's parent or guardian if their son or daughter had a biological child. There is over 95% agreement between parent reports and respondent self-reports of the respondent having become a parent (see Thornberry et al., 1997).

Adolescents who no longer resided with a parent or guardian *and* who had not graduated from high school by Wave 9 are considered to have experienced the precocious transition of *early nest leaving*. Twenty-five percent of the females and 7.6% of the males indicated that they were living away from the home of their parents or guardians by Wave 9.

To measure *unstable employment* patterns we calculated the percentage of months from age 19 to age 21 that the subject did *not* have a job. For our purposes, respondents were considered to be "employed" if they were working, in the military, or still attending school. The number of months unemployed ranges from 0 (complete employment) to 36 (complete unemployment) over this three-year period. Unstable employment refers to those respondents above the median in terms of the percentage of months they were unemployed. Forty-one percent of the males and 59% of the females are categorized as having unstable employment.

Cohabitation is indicated if unmarried subjects reported living with a partner in either Wave 10, 11, or 12. Thirty-two percent of the male respondents and 30% of the female respondents are considered to have cohabited.

In addition to the variables measuring separate transitions, we constructed a variable that summed the total number of transitions each respondent experienced. Early pregnancy is not included in this sum because it is highly correlated with teenage parenthood. The total number of transitions ranges from 0 to 5.

In addition to these precocious transitions, we also examine the extent to which adolescent gang membership increases the chances of being arrested during the early adult years, ages 19 to 22. This measure is based on official arrest histories collected in Rochester and in New York State (see Chapter 2).

Results

As in previous chapters, we present results separately for male and female respondents. For the males we compare respondents who were never gang

[2] The prevalence of parenthood is higher than the prevalence of pregnancy because the former refers to becoming a parent prior to age 20, while "early pregnancy" refers to prior to the end of high school.

Table 9.1. *Bivariate Relationships between Gang Membership and Precocious Transitions, Males Only (%)*

		Gang Members	
	Nonmembers	Short-Term	Stable
School Dropout (n = 555)	33.6	45.2	71.5[a,b]
Early Nest Leaving (n = 547)	7.7	6.1	7.6
Early Pregnancy (n = 572)	14.9	31.7[a]	46.9[a]
Teenage Parenthood (n = 576)	19.3	22.0	55.0[a,b]
Unstable Employment (n = 536)	37.0	45.8	59.2[a]
Cohabitation (n = 537)	25.3	44.8[a]	58.5[a]

[a]Significantly different from nonmembers, $p < .05$ (one-tailed).
[b]Significantly different from short-term members, $p < .05$ (one-tailed).

members with the short-term gang members, that is, those who report being members for less than a year, and with the more stable, long-term members, those who were members for a year or more. We hypothesize that nonmembers are the least likely to experience precocious transitions and that stable gang members are the most likely to do so. Because of the smaller number of cases for the females, we use the simple ever-prevalence gang measure, comparing nonmembers with those who were ever a member of a street gang.

We begin by examining bivariate relationships between gang membership and the various transitions. We then examine multivariate models in which other predictors of these transitions are held constant.

Bivariate Relationships: Male Respondents

The six dichotomous transitions variables are presented in Table 9.1. The effect of gang membership is strong on five of the six transitions for the male respondents. Whereas 33.6% of those who were never members of a gang dropped out of high school, 45.2% of the short-term and 71.5% of the stable gang members did. Thus, there is not only a general effect of gang membership but also an increased impact with long-term exposure to the gang environment.

Similar effects are seen for the two indicators of precocious sexuality – early pregnancy and teenage parenthood. The effect of gang membership on early pregnancy is fairly linear. Of the nonmembers, 14.9% report impregnating a girl, whereas 31.7% of the short-term members and 46.9% of the stable members do. In terms of teenage fatherhood, one-fifth (19.3%) of the males who never joined a gang report becoming a teenage father,

Table 9.2. *Bivariate Relationships between Gang Membership and Precocious Transitions, Females Only (%)*

	Nonmembers	Gang Members
School Dropout (n = 210)	30.0	46.5[a]
Early Nest Leaving (n = 209)	18.1	29.9[a]
Early Pregnancy (n = 216)	30.6	56.1[a]
Teenage Parenthood (n = 216)	40.1	60.7[a]
Unstable Employment (n = 210)	55.6	70.1[a]
Cohabitation (n = 212)	28.2	33.6

[a]Significantly different from nonmembers, $p < .05$ (one-tailed).

and this rate increases very slightly to 22.0% for the short-term members. For the stable gang members the rate of teen fatherhood increases sharply to 55.0%, however.

Earlier gang membership also increases the chances of unstable employment histories during the early adult years. Thirty-seven percent of the nonmembers are above the median in terms of the percent of time spent unemployed, as compared with 45.8% of the short-term and 59.2% of the long-term gang members.

Stable gang membership also has an impact on cohabitation. Among stable gang members, 58.5% have cohabited in early adulthood, whereas only 25.3% of nonmembers cohabited. Among short-term gang members, 44.8% cohabited.

The only transition for which we do not see an impact of gang membership is early nest leaving – that is, living without direct parental or adult supervision prior to finishing high school. There is a low base-rate of this outcome for the male members of this sample (7.6%) and no variation by gang membership.

Being a member of a street gang during early adolescence may have a long-term impact on a number of life-course transitions for male subjects. Gang members, especially the more stable gang members, are more likely than nonmembers to be high school dropouts, to impregnate a girl, to become a teen father, to have less stable employment careers, and to have cohabited.

Bivariate Relationships: Female Respondents

Table 9.2 presents the bivariate relationships for the dichotomous outcome variables for female respondents. Again, we see a substantial impact of gang membership on the probability of making these early, off-time transitions.

Table 9.3. *Relationship between Gang Membership and Number of Precocious Transitions (%)*

		Gang Members		
	Nonmembers	Short-Term	Stable	Total
Males (n = 577)				
Mean Number of Precocious Transitions	1.15	1.51	2.42[a,b]	
Females (n = 216)				
Mean Number of Precocious Transitions	1.67			2.30[a]

[a]Significantly different from nonmembers, $p < .05$ (one-tailed).
[b]Significantly different from short-term members, $p < .05$ (one-tailed).

Whereas 30.0% of the female respondents who never joined a gang dropped out of high school, nearly half (46.5%) of the gang members did. For the female sample members there is also a statistically significant impact on early nest leaving. Of the female nonmembers, 18.1% report living independently, whereas 29.9% of the female gang members do.

There are substantial effects on precocious sexuality. Of the nonmembers, 30.6% experienced an early pregnancy as compared with 56.1% of the gang members; 40.1% of nonmembers became teenage mothers as compared with 60.7% of the gang members.

The link between gang membership and employment patterns for the female respondents is also significant. The female gang members spend a higher percentage of time unemployed as compared with the nonmembers – 70.1% versus 55.6%.

The only precocious transition not related to gang membership for females is cohabitation. Female gang members are only slightly (33.6% vs. 28.2%) more likely to cohabit than nonmembers.

Multiple Precocious Transitions

Although precocious transitions can occur separately, they are often bundled together, in part because of common causes and in part because of the cascading impact of cumulative disadvantage triggered by each of these precocious transitions. In Table 9.3 we examine whether earlier gang membership is related to experiencing multiple transitions. Recall that five transitions – dropping out of school, teen parenthood, early nest leaving, unemployment, and cohabitation – are used in this analysis; early pregnancy is not included because of its overlap with teen parenthood.

The top panel of Table 9.3 presents the mean number of precocious transitions for male respondents. Stable gang members experience on average 2.42 precocious transitions, whereas short-term gang members experience 1.51 and nonmembers only 1.15. The differences in the means for stable gang members when compared with both short-term members and nonmembers are statistically significant.

The lower panel of Table 9.3 presents the results for the female respondents. The pattern is quite similar. Gang members experience a significantly higher number of precocious transitions than do nonmembers.

Multivariate Models

Although there appears to be a fairly strong relationship between adolescent gang membership and precocious transitions, that relationship could be spurious, produced by common antecedent variables. To examine this possibility we regress each of these transitions on gang membership, holding the effect of other variables constant. We use logistic regression to estimate the models for the dichotomous transitions variables and ordinary least squares regression to estimate the model for multiple transitions.

The control variables cover several major domains – neighborhoods, social class, family, school, peers, psychological stress, and prior deviance – that have been shown to be linked to either gang membership (see Chapter 4) or to these precocious transitions. The specific indicators are percent poverty in the census tract of residence, family poverty-level income, parental supervision, commitment to school, early dating, peer delinquency, negative life events, and general delinquency. General delinquency is measured cumulatively from Wave 2 to Wave 4; all other indicators are measured at or prior to Wave 4 to preserve temporal order. (A description of these measures appears in Chapter 2.)

Table 9.4 presents the results for the male subjects, comparing the short-term gang members and the stable gang members with the nonmembers (the omitted category). Although stable gang membership does not have a significant impact on early nest leaving, it does on school dropout, early pregnancy, teenage parenthood, unstable employment, and cohabitation net of the control variables. In contrast to nonmembers, being a stable gang member increases the likelihood of dropping out of school 3.42 times, the likelihood of early pregnancy by 2.38 times, of teen parenthood by 2.78 times, of unstable unemployment by 2.76 times, and of cohabitation by 1.94 times. The short-term gang members, however, are only significantly more likely to experience cohabitation as compared with the nonmembers.

The control variables operate much as expected. Living in impoverished neighborhoods increases the odds of early pregnancy, fatherhood, early

Table 9.4. *Odds Ratios for Logistic Regression Predicting Precocious Transitions, Males Only*

	School Dropout	Early Nest Leaving	Early Pregnancy	Teenage Parenthood	Unstable Employment	Cohabitation
Short-Term Gang Membership	.98	.38	1.40	.69	1.18	1.71*
Stable Gang Membership	3.42**	.84	2.38**	2.78**	2.76**	1.94*
Area Percentage in Poverty	1.01	1.04**	1.05**	1.02*	1.04**	1.02*
Family Poverty-Level Income	1.57*	1.84	1.29	1.70*	2.17**	1.85**
Parental Supervision	1.28	.94	1.03	.93	.81	.74
Commitment to School	.27**	.88	.73	1.08	.60	.48*
Early Dating	1.00	.68	1.36	1.30	.90	1.05
Peer Delinquency	.79	.74	1.05	1.11	.86	1.14
Negative Life Events	4.86**	3.33	3.58*	8.88**	1.15	5.34**
General Delinquency	2.39**	3.29**	2.72**	1.32	1.25	1.08
Model Improvement X^2	93.31†	21.65†	70.60†	66.61†	66.40†	60.56†
	(n = 490)	(n = 484)	(n = 489)	(n = 507)	(n = 471)	(n = 470)

*p < .05 (one-tailed test). **p < .01 (one-tailed test). †p < .05.

nest leaving, unstable employment, and cohabitation. Family poverty level increases the odds of dropping out of school, teenage parenthood, unstable employment, and cohabitation. Also, psychological stress, indicated here by the number of negative life events that were experienced, has a sizable effect on the likelihood of high school dropout, early pregnancy, teenage parenthood, and cohabitation. General delinquency increases the likelihood of dropping out of school, early nest leaving, and early pregnancy. Commitment to school only affects dropping out and cohabiting.

Table 9.5 presents the results for the female respondents. Gang membership has a significant impact on three of the six transitions, after the control variables are considered. Female gang members are more likely to experience an early pregnancy (OR = 2.32), to become a teen mother (OR = 2.53), and to have unstable employment patterns (OR = 2.03). Although the effects are in the expected direction for dropping out of high school and prematurely moving out of the parental home, they are not statistically significant. Surprisingly, neither gang membership nor any of the control variables significantly predicts cohabitation for females.[3] In terms of the control variables, commitment to school reduces the odds of school dropout, early nest leaving, early pregnancy, and teenage motherhood. Early dating increases the odds of early nest leaving and early pregnancy. Negative life events increase the odds of unstable employment, family poverty level increases the odds of dropping out of school, and peer delinquency increases the odds of early nest leaving. The central finding, though, is that, net of the impact of these variables, gang membership still exerts an impact on several of these precocious transitions.

Finally, we examine the impact of earlier gang membership on the likelihood of experiencing multiple precocious transitions. The results of the OLS regressions are presented in Table 9.6 for both males and females. For males there is a strong effect of stable gang membership, net of the other variables, on experiencing multiple disorderly transitions. As compared with nonmembers, being a short-term member does not significantly increase the number of transitions experienced, but being a more stable, longer-term member does. Indeed, stable gang membership has the highest standardized regression coefficient ($\beta = .23$) of all the variables in the equation. In addition, area percentage in poverty, family poverty, commitment to school, negative life events, and general delinquency all affect the number of negative transitions in the expected direction.

[3] The model improvement chi-square statistic is not statistically significant for this equation. This is not surprising given that there are no significant predictors in the equation. Similarly, the model improvement chi-square is insignificant for the equation in predicting unstable employment. When this equation is trimmed to include only the two significant predictors, it is statistically significant, however.

Table 9.5. *Odds Ratios for Logistic Regression Predicting Precocious Transitions, Females Only*

	School Dropout	Early Nest Leaving	Early Pregnancy	Teenage Parenthood	Unstable Employment	Cohabitation
Gang Membership	1.55	1.86	2.32*	2.53**	2.03*	.85
Area Percentage in Poverty	1.01	1.01	1.01	1.00	1.00	.99
Family Poverty-Level Income	2.24*	.58	1.06	1.28	1.33	.97
Parental Supervision	1.38	1.07	1.40	1.16	1.03	.89
Commitment to School	.34*	.14**	.18**	.33*	.60	.56
Early Dating	1.27	3.67**	2.97**	1.30	1.24	1.43
Peer Delinquency	1.15	5.36**	1.89	2.11	.90	1.88
Negative Life Events	3.70	.92	2.97	1.57	6.65**	.33
General Delinquency	.85	.28*	.36*	.44*	.54	1.94
Model Improvement X^2	18.57†	30.09†	31.39†	18.36†	14.06	12.17
	(n = 195)	(n = 193)	(n = 195)	(n = 200)	(n = 194)	(n = 196)

*p < .05 (one-tailed test). **p < .01 (one-tailed test). †p < .05.

Table 9.6. *OLS Regression Predicting Total Number of Transitions*

	Males		Females	
Gang Membership			.45*	(.14)
Short-Term Gang Membership	.02	(.01)		
Stable Gang Membership	.87**	(.23)		
Area Percentage in Poverty	.02**	(.16)	.00	(.01)
Family Poverty-Level Income	.43**	(.16)	.23	(.08)
Parental Supervision	−.09	(−.03)	.01	(.00)
Commitment to School	−.40**	(−.12)	−.83**	(−.20)
Early Dating	.00	(.00)	.36*	(.12)
Peer Delinquency	−.06	(−.02)	.49	(.13)
Negative Life Events	1.03**	(.19)	.39	(.07)
General Delinquency	.29**	(.11)	−.34	(−.12)
R^2	.25 (n = 510)		.12 (n = 193)	

Note: Unstandardized coefficients are reported, with standardized coefficients in parentheses.
*p < .05 (one-tailed test). **p < .01 (one-tailed test).

Gang membership also significantly increases the number of transitions experienced by the female respondents. Even when other significant predictors of multiple transitions – commitment to school and early dating – are controlled, the effect of gang membership remains significant.

Gang Membership, Precocious Transitions, and Adult Arrests

Another long-term consequence of being a member of a juvenile gang and experiencing precocious transitions is that gang members will be less likely to desist from criminal behavior as they enter early adulthood and will be more likely to acquire official labels. As stated earlier, the gang can embed members in a criminal network and inhibit their participation in conventional arenas. Thus earlier gang membership is expected to be directly related to being arrested as an adult.

Gang membership is also expected to be indirectly related to adult criminality through its impact on precocious transitions. Experiencing precocious transitions directly affects the ability to fulfill adult roles and statuses successfully. Difficulty in making a living or experiencing family problems may make it more difficult for people to desist from criminal behavior. Thus, we expect that experiencing multiple precocious transitions will mediate, at least partially, the relationship between adolescent gang membership and adult arrests.

Table 9.7. *Odds Ratios for Logistic Regression Predicting Adult Arrests, Males Only*

	Equation 1	Equation 2	Equation 3
Short-Term Gang Membership	1.74*	1.24	1.21
Stable Gang Membership	4.03**	2.83**	2.01*
Number of Transitions			1.51**
Area Percentage in Poverty		1.01	1.00
Family Poverty-Level Income		1.10	.92
Parental Supervision		.77	.79
Commitment to School		.40**	.46**
Early Dating		1.02	1.01
Peer Delinquency		.79	.82
Negative Life Events		3.64**	2.41*
General Delinquency		1.46	1.29
Model Improvement X^2	25.61†	31.00†	17.02†
	(n = 505)	(n = 505)	(n = 505)

*p < .05 (one-tailed test). **p < .01 (one-tailed test). †p < .05.

We examine these hypotheses separately for males and females. Equation 1 provides the bivariate relationship between gang membership and adult arrests for males (Table 9.7). Both short-term and stable gang membership significantly increase the odds that males will be arrested as adults. Short-term gang membership increases the chances of adult arrests by 1.74 times and stable gang membership increases the chances by 4.03 times. Thus stable gang members are four times as likely as nonmembers to be arrested during their early 20s.

To see if the impact of gang membership is spurious, Equation 2 adds the same control variables that have been held constant in the previous tables in this chapter. When their effects are controlled, the impact of short-term gang membership becomes nonsignificant. The impact of stable gang membership diminishes in size, but its effect remains significant and sizable. Stable gang members are almost three times as likely as the nonmembers to have an adult arrest. In addition, commitment to school significantly reduces the odds of adult arrests (OR = .40), and negative life events significantly increase the odds of adult arrests (OR = 3.64). Finally, in the third equation we add the total number of precocious transitions experienced to examine its mediating effect on the relationship between

Table 9.8. *Odds Ratios for Logistic Regression Predicting Adult Arrests, Females Only*

	Equation 1	Equation 2	Equation 3
Gang Membership	3.98**	2.70*	2.33*
Number of Transitions			1.54**
Area Percentage in Poverty		1.04*	1.04*
Family Poverty-Level Income		1.01	.84
Parental Supervision		.79	.91
Commitment to School		1.74	2.58
Early Dating		.68	.57
Peer Delinquency		1.52	1.34
Negative Life Events		1.58	1.97
General Delinquency		1.44	1.71
Model Improvement X^2	8.88†	6.06	7.01
	(n = 198)	(n = 198)	(n = 198)

*p < .05 (one-tailed test). **p < .01 (one-tailed test). †p < .05.

gang membership and adult arrests. The total number of transitions has a significant impact on the likelihood of having an adult arrest, increasing the chances by 50%. The number of precocious transitions also mediates part of the impact of gang membership; the odds ratio drops from 2.83 to 2.01. Thus, a substantial part of the total effect of gang membership is indirect, operating through the experience of multiple precocious transitions.

Table 9.8 presents the results for the females in our sample. Gang membership significantly increases the odds of adult arrests (OR = 3.98) when examined bivariately. Female gang members are about four times as likely to be arrested as young adults as nonmembers. The impact of gang membership drops somewhat when the control variables are included (Equation 2) but remains statistically significant.

Finally, we consider the number of precocious transitions experienced. Women who experience a greater number are more likely to be arrested (OR = 1.54). Moreover, experiencing precocious transitions further mediates the impact of earlier gang membership on later arrests for the females, dropping the odds ratio for gang membership to 2.33. Thus, the impact of gang membership on arrests is largely indirect, mediated in part by disorderly transitions.

Discussion

Late adolescence is a critical time in the life course when youths are expected to prepare for and make successful transitions into adult roles and statuses. Events, behaviors, and associations all play important roles in determining whether those transitions are made at the appropriate time and in the normative order and, ultimately, whether they lead to successful adult outcomes.

Being a member of a street gang facilitates delinquent behavior (see Chapter 6), and prior research has established that delinquent behavior adversely affects transitions to adult statuses. On the premises of social network theory (Krohn, 1986), gang membership is expected to have an independent effect on the likelihood of disorderly transitions, over and above the impact of delinquent behavior. As an important and powerful social network, the gang constrains the behavior of its members, limits access to prosocial networks that may act as social capital in facilitating adult transitions, and increases the criminal embeddedness of its members. All of these characteristics cut the individual off from conventional pursuits and increase the chances of disorder in the life course.

We examined the impact of gang membership on important transitions that youths are expected to make – specifically, dropping out of school, prematurely leaving the parental home, early pregnancy, teenage parenthood, unstable employment, cohabitation, and experiencing multiple transitions. The results strongly support the general conclusion that being a member of a gang increases the likelihood that youths will experience off-time and unsuccessful transitions.

Support for the relationship between gang membership and precocious transitions is somewhat stronger for male than for female gang members. Both bivariately and in multivariate models, stable gang membership significantly increases the odds of dropping out of school, impregnating a girl, being a teenage father, unstable employment, cohabitation, and experiencing multiple transitions even when several other potential predictors of these transitions, including prior delinquency and associations with delinquent peers, are in the equation. The fact that these effects are most evident for stable gang members, but not for short-term members, provides further support for the debilitating effect of being in a gang.

For female gang members, the bivariate results indicate that gang members are significantly more likely to drop out of school, leave home early, become pregnant, become a teenage mother, have unstable employment patterns, and experience multiple transitions. When other predictors of these transitions are controlled, however, gang membership is significantly related only to early pregnancy, teen motherhood, unstable employment, and multiple transitions. The link between gang membership and precocious sexual

activity is consistent with descriptions of the roles that female gang members are often portrayed as playing in the gang.

Moore (1991), for example, reports that half of male gang members view female gang members as "possessions" and objects of sexual exploitation. Although this view was challenged by many female gang members (Moore and Hagedorn, 2001), there is ample evidence that female gang members are sexually exploited (Fishman, 1995; Hagedorn, 1998; Miller, 1998; Moore, 1991; Venkatesh, 1998). As a result, these young women have high rates of teenage pregnancy and motherhood. Gang membership and the precocious transitions that it generates also appear to foreclose future opportunities for these young women. For example, in Moore's study, gang membership "virtually ruled out marrying nongang mates. Most female gang members married male gang members whose careers often involved repeated imprisonments" (Moore and Hagedorn, 2001: 8).

The consequences of experiencing disorderly transitions, for both males and females, can have devastating effects on the lives of former gang members. We followed our sample to about age 22 and examined one problematic outcome of precocious transitions – being arrested in the young adult years. Even with this short time horizon, we found that for both boys and girls, gang membership significantly increased the odds of later arrest. We also found that the number of precocious transitions experienced during adolescence increased the odds of later arrest. Consistent with our theoretical expectations, the number of transitions also mediated a substantial part of the effect of gang membership on this outcome. For the males the number of transitions mediated much of the effect of stable gang membership and rendered the impact of short-term membership insignificant. For the females the number of transitions also mediated much of the relationship between gang membership and adult arrests.

The dire effect of being a member of a youth gang on behavior in young adulthood is evident. Affiliating with a delinquent gang during the adolescent years has been shown to be related to early and inappropriate transitions to adult statuses and roles. Such problematic transitions are likely to reduce the gang member's eventual success in the conventional adult world. The effects of disorderly transitions can lead to a cascading series of difficulties that result in dysfunctional family life, unstable employment, and, in some cases, continued involvement in criminal activity. In assessing the negative impact that gangs have on society, we must take into account not only their immediate impact on crime but also their continuing impact on the life chances of gang members.

CHAPTER TEN

Gangs in Developmental Perspective: Substantive and Policy Implications

PREVIOUS STUDIES OF gangs and gang members have not, by and large placed the study of gang members in a life-course perspective. As a consequence there are a variety of important topics in the study of gangs about which we have inadequate information. They include, first, studies of risk factors in which antecedent variables are linked to the odds of later gang membership and studies of causal processes that attempt to identify why certain youngsters join gangs while others do not. Second, although we know from many studies that gang members are more delinquent than nonmembers, few studies of within-individual change examine the extent to which gang membership itself may facilitate this outcome. Finally, although we have some indication of the short-term impact of gang membership on the individual, we have little information on long-term developmental consequences of being a member of a street gang during adolescence.

In this book, we have tried to flesh out the picture of gang life by focusing on developmental questions within the context of the Rochester Youth Development Study. This study has a number of design features that aid in the examination of these issues. The Rochester study has a representative community-based sample of an initial panel of 1,000 adolescents followed from early adolescence to early adulthood. Subjects were not selected on the basis of whether they were gang members, and gang membership was observed as it naturally occurred over the life course, if it occurred at all. Prospective longitudinal data on a host of variables are measured – both before, during, and after periods of active gang membership. And, regardless of the age at which gang membership takes place, there is a group of adolescents of the same age who never joined a gang available for comparative purposes. Because of these design features we are able to study how adolescent development influences gang membership, how being a gang member influences behavior patterns, and how gang membership alter