

ABSTRACT

Title of Document:

FEMALE GANG MEMBERS AND
DESISTANCE: MOTHERHOOD AS A
POSSIBLE EXIT STRATEGY?
A QUANTITATIVE ANALYSIS OF
FLEISHER AND KRIENERT (2004)

Jennifer Anne Varriale, Master of Arts, 2006

Directed By:

Professor Shawn Bushway,
Department of Criminology and Criminal Justice

This study sought to evaluate differential gang processes as they vary by gender through a quantitative analysis of the National Longitudinal Survey of Youth, 1997. Specifically, this investigation explored the role of motherhood as a potential exit strategy for female gang membership, which had been previously examined in the qualitative work of Fleisher and Krienert (2004). In fact, Fleisher and Krienert (2004) noted that sixty-three percent of their sample had attributed pregnancy or “settling down” as the primary reason for desistance. All in all, this investigation found no support for Fleisher and Krienert’s (2004) assertions of the causality of motherhood as a potential desistance mechanism, or for the magnitude of their sixty-three percent finding.

FEMALE GANG MEMBERS AND DESISTANCE:
MOTHERHOOD AS A POSSIBLE EXIT STRATEGY?
A QUANTITATIVE ANALYSIS OF FLEISHER AND KRIENERT (2004)

By

Jennifer Anne Varriale

Thesis submitted to the Faculty of the Graduate School of the
University of Maryland, College Park, in partial fulfillment
of the requirements for the degree of
Master of Arts
2006

Advisory Committee:
Professor Shawn Bushway, Chair
Professor Jean McGloin
Professor Laura Dugan

© Copyright by
Jennifer Anne Varriale
2006

Dedication

To C. Carson, for his unwavering support in this endeavor.

Acknowledgements

I extend my particular thanks to my advisors, Dr. Shawn Bushway and Dr. Jean McGloin for their extensive constructive feedback throughout this process and for always challenging me to bring this work to the next level. I would also like to acknowledge Dr. Laura Dugan for not only her work as a committee member, but for her patience and perseverance in teaching me statistics. Finally, I would like to thank all those that supported me throughout not just this thesis, but through my masters degree as a whole. It is through your belief in me that I found the courage to believe in myself.

Table of Contents

Dedication	ii
Acknowledgements	iii
CHAPTER I: INTRODUCTION	1
CHAPTER II: LITERATURE REVIEW	3
Are Gang Members Really Unique: Delinquency and Victimization	3
Delinquency and gang membership	3
Victimization and gang membership	5
Gendered Differences among Gang Processes	6
Patterns and extent of gang participation	6
Risk factors for membership	7
Roles within the gang	10
Delinquency	11
Victimization	12
Theoretical implications	16
Desistance	17
CHAPTER III: DATA AND METHODS	20
Hypothesis	20
Data and Instrument	20
Sample	23
Analysis, Hypothesis 1	26
Analysis, Hypothesis 2	27
Analysis, Hypothesis 3	27
Logit Model	28
Measures	28
Variables of interest	30
Correlations	35
CHAPTER IV: RESULTS	37
Analysis, Hypothesis 1	37
Analysis, Hypothesis 2	39
Analysis, Hypothesis 3	41
CHAPTER V: DISCUSSION AND CONCLUSIONS	42
Summary	42
Limitations, and Future Research Recommendations	43
APPENDICES	45
Appendix 1	45
Appendix 2	47
BIBLIOGRAPHY	48

List of Tables

Table 1	Information on Youth Questionnaire	22
Table 2	Gender and Race Distribution of Sample	25
Table 3	Retention of Sample	26
Table 4	Measurement of Constructs	29
Table 5	Descriptive Statistics	29
Table 6	Correlation Matrices	36
Table 7	Bivariate Logit Analyses, Hypothesis 2	40
Table 8	Multivariate Logit Analyses with Sexual Behavior, Hypothesis 2	41

List of Figures

Figure 1	Selection Process of Sampling	24
Figure 2	Female Gang Membership across Seven Years	31
Figure 3	Temporal Analysis, Hypothesis 1, N=139	38
Figure 4	Temporal Analysis, Hypothesis 1, N=69	39

Chapter 1: Introduction

Much research has set out to establish the unique nature of those who join gangs from those who never have had affiliation (Battin et. al., 1998; Esbensen and Huizinga, 1993; Thornberry et. al., 1993). Further examinations have found that such membership is not the only distinction that must be made (Esbensen and Deschenes, 1998; Fleisher and Krienert, 2004; Thornberry, 1998). Rather, gender within the gang appears to have an influence on gang processes. Male and female gang members differ in several aspects regarding these gang processes before, during, and after gang membership. This study aimed to investigate how one of these processes, desistance, varies by gender. Specifically, this research sought to build upon Fleisher and Krienert's (2004) qualitative inquiry, which contends that female gang members most often leave the gang because of motherhood and perhaps are using such motherhood as an exit strategy to avoid violent repercussions.

It is through a quantitative examination that Fleisher and Krienert's (2004) study was directly tested. Although the gendered gang processes have been discussed at length, not enough longitudinal or quantitative research has been conducted. This study set out to rectify that by moving in the direction that much gang research has of late, that of statistical inspections. First, a descriptive analysis of a data set like the National Longitudinal Survey of Youth¹ was able to provide conclusions about the timing of pregnancies and live births in regards to affiliation². This temporal

¹ Hereafter referred to as the NLSY.

² That is, a longitudinal data set provides researchers with the ability to pinpoint the time of gang membership. Therefore, motherhood can be viewed regarding whether it occurred before, during, and/or after such membership; an advantage to that of other investigations.

analysis was necessary in order to answer the first research question of this study: Do the majority of female gang members leave the gang through pregnancy and/or having children? It was hypothesized that this sample mirrored such temporal patterns; pregnancy/live birth prior to or in the same year as desistance. Second, a quantitative analysis allowed for better interpretation regarding causal order. This causal interpretation was achieved through the use of a logit model, where certain spurious relationships were controlled. Causal interpretation was vital for both the second and third research questions: Do female gang membership and live birth have a significant positive relationship, even after adding in other sexual behavior risk factors? Do pregnancy in 1997 and 1998 and live birth in 1998 have a significant positive relationship with desistance in 1998? It was posited that these relationships do exist and must be present in order for Fleisher and Krienert's (2004) assertions to be correct in a nationally representative sample.

With this in mind, the following sections establish the unique nature of gang membership and explore the differences between affiliated males and affiliated females through examining their differential patterns of participation, risk factors for membership, their roles within the gang, the ways in which both delinquency and victimization manifests itself in their lives, and their desistance mechanisms.

Chapter 2: Literature Review

Are Gang Members Really Unique: Delinquency and Victimization

Many studies have focused on exploring the issue of whether gang members are actually that different from the general populace (Battin et. al., 1998; Bjerregaard and Smith, 1993; Esbensen and Huizinga, 1993; Thornberry et. al., 1993). These studies usually examine delinquency or victimization to determine whether either is higher among gang members than those without such affiliation. This section of the manuscript will establish why it is that a separate examination of gang members is necessary. It appears that gang members are unique; most apparent in their elevated rates of both delinquency and victimization, likely due to the relationship between these two elements.

Delinquency and gang membership

In the case of delinquency, Battin et. al. (1998) and Thornberry et. al. (1993), among others, have established that gang members exhibited higher rates of delinquency and substance use than their nongang equivalents. In fact, Esbensen et. al. (1993)³ discovered that, “the rate of offending by non-gang street offenders were at least three times the rate of the ‘non-offenders,’ while the rate for gang members was generally twice that of street offenders” (p.15). Usually this offending is considered to be what is referred to as “cafeteria style,” where gangs tend not to specialize in any one crime (Huff, 1988).

³ Although these findings show disparity between gang youth and nonaffiliated offenders, the majority of Esbensen et. al.’s (1993) results suggested that the gang youth and nonaffiliated offenders in their sample were not all that different on several social psychological measures.

Esbensen et al. (1993) also found certain distinct attitudes that gang members exhibit, which may help to explain their prevalence in offending. When these researchers compared the attitudes of nonaffiliated youth who had not offended to that of both affiliated youth and nonaffiliated youth who had offended, the latter groups were more likely to embrace norm violating attitudes. Gang members were also more likely to feel negatively labeled by their teachers than either nonaffiliated offenders or nonoffenders. Furthermore, nonaffiliated youth who had not offended had a stronger commitment to nondelinquent peers and, “lower levels of normlessness in three different contexts (family, peer group, and school)” (Esbensen et. al., 1993:16) when compared to the other groups.

Three models have emerged to address gang members’ higher participation in delinquency: the selection, the facilitation, and the enhancement (Thornberry et. al., 1993). The first model, selection, maintains that, “gang members are truly different kinds of people-those with higher propensities toward deviance-they are likely to act out those propensities regardless of their membership status at any particular time” (Thornberry et. al., 1993:57). However, there has been little support for the selection model regarding offending patterns within gangs, as most the empirical findings suggest not just selection is at work.

There is, however, evidence for the competing model, facilitation (Thornberry et. al., 1993, 2003). This model holds that it is not the gang members that are so different, but rather the gang (Thornberry et. al., 1993). That is, “if they do join a gang, the normative structure and group processes of the gang are likely to bring about high rates of delinquency and drug use” (Thornberry, 1993:58). Thornberry et.

al. (1993, 2003) found support for this model using the Rochester Youth Development Study with a sample of both males and females. Delinquent behavior increased significantly after gang membership, even though members were not any more delinquent before affiliation than those who never joined a gang.

Finally, the enhancement model is a mixture of the ideas behind both selection and facilitation (Thornberry, 1993). This model asserts that gang members are already delinquent before affiliation, but when they join the gang with its additional opportunities for such delinquency, “the enactment of the member’s delinquent propensities becomes more likely” (Thornberry, 1993:59). The enhancement model has garnered the most empirical support in that researchers often find evidence for both selection and facilitation within the same study, along with delinquency continuing on after desistance (Esbensen and Huizinga, 2003; Gordon et. al., 2004; Hill et. al., 1999). This particular research demonstrated that high rates of delinquency occurred before, during, after membership. However, Gordon and colleagues (2004) did not find the persistence of delinquency after membership, only before and during. Using the Pittsburgh Youth Study, these researchers found higher levels of drug use and selling, along with participation in certain violent and property crimes during membership.

Victimization and gang membership

Another element that separates gang members from their nonaffiliated counterparts is victimization, which appears to be related to the corresponding high levels of delinquency. Victimization is a frequent occurrence amongst both male and female gang members (Curry et. al., 2001; Huff, 1996; Peterson et. al., 2004).

Specifically, Curry et. al. (2001) found an association between homicide victimization and gangs, while Peterson et. al. (2004) discerned that violent victimization was higher among gang members before, during, and after membership when compared to their nongang counterparts. Much research has shown that those who are delinquent are more likely to be victimized (Lauritsen et. al., 1991; Shaffer & Ruback, 2002), while gangs have become, “social groups organized around delinquency” (Miller, 1998:228). Therefore, it is not surprising that gang members endure high rates of victimization, most often at the hands of other gang members (Decker, 1996; Klein and Maxson, 1989).

Gendered Differences among Gang Processes

Evidently, it has been established that gang members are unique and consequently should be examined as their own entity. However, this affiliation is not the only distinction that must be made. Rather, as this study ascertains, gender has an influence on gang processes before, during, and after membership

Patterns and extent of gang participation

The majority of gang research has focused on males, while female gang members have been neglected overall in the empirical literature (Esbensen and Winfree, 1998). A number of the most significant contributions to this literature, such as the work of Cloward and Ohlin and of Cohen, have completely overlooked females in the context of a gang (Esbensen and Winfree, 1998). Although more recent investigations have considered young women in this context, these

investigations often look at young women as present, but not as a significant factor in any aspect of gang life.

The extent of male and female participation in gangs differs considerably among the research, although males are consistently found to have greater involvement (Esbensen and Huizinga, 1993; Miller, 1975⁴). The most current estimates cite fourteen percent of males and eight percent of females as affiliated during some point of their lives, and from one up to fifty percent of gang members as female (Esbensen and Winfree, 1998). Part of the discrepancy between estimates regarding the gender composition of gangs is the result of methodology. General survey data tends to overrepresent females, while case and observation studies, along with police data, underreports their involvement (Curry, 1998; Esbensen and Winfree, 1998). Researchers have noticed an increase in gang members, and especially affiliated females, although this may be due to the additional attention that has particularly been given to females as of late. Age appears to be factor in estimates as well. Most females both enter and exit gangs earlier in life than their male counterparts; highest participation for females has been found in the eleven to fifteen age range (Esbensen and Huizinga, 1993). Thus, the age of samples must be taken into consideration when looking at numbers involving gang members (Esbensen and Winfree, 1998).

Risk factors for membership

Although there are certain discrepancies in the research, gender is consistently found to shape community, family, school, peer, and individual risk factors for gang

⁴ To name just a few of the studies that have estimated the number/percentage of gang members.

membership (Bjerregaard and Smith, 1993; Esbensen and Deschenes, 1998; Thornberry, 1998). In regards to community risk factors, Thornberry (1998) found that males that live in neighborhoods lacking cohesion are more likely to join gangs while females in areas characterized by social disorganization and violence are likely to seek out affiliation. This mirrors what Fleisher and Krienert (2004) found in their sample of female gang members. The majority of these young women lived in neighborhoods that were characterized by community and/or racial isolation, poverty, urban decay, and most detrimental of all, violence. Overall, females have been found to be affected by community risk factors more so than males (Thornberry, 1998).

Family process risk factors also impact both genders differently. Here, according to Thornberry (1998), males are more influenced by such risks factors; poverty, not living with both biological parents, and a lack of both parental attachment and supervision were all significant predictors of membership for males. Thornberry (1998) also found that females, on the other hand, are only significantly affected by a lack of parental involvement. Other research suggests that family process risk factors may be more influential among affiliated females than what Thornberry's (1998) findings propose. Wang (2000) found that sixty-six percent of female gang members in his study credited problems at home as their primary reason for joining a gang. He maintains that female gang members in particular are often exposed to severe mistreatment from the adults in their lives, even prior to their entry into the gang. More specifically, Fleisher and Krienert (2004) found that female gang members are frequently physically abused. In fact, "twenty-six percent of the sample reported running away from home to get away from the beatings" (Fleisher and

Krienert, 2004: 611). Neglect is also a factor. Fleisher (1998) noted the recurrent presence of fatherless homes, along with parents that are disproportionately involved in criminal activity, especially drug use.

Thornberry (1998) did not find any gendered differences in the school risk factor category; all four items measured were significant for both males and females. Bjerregaard and Smith (1993) and Esbensen and Deschenes (1998), however, found a significant relationship between a lack of school commitment and affiliation only with females. Similarly, Esbensen and Deschenes (1998) uncovered that males were solely affected by thinking educational success was unobtainable and consequently became affiliated.

Peer risk factors had a significant relationship with that of affiliation for males, but not for females in Thornberry's (1998) study. This is inconsistent with Esbensen and Deschenes (1998). This study, through investigating gender disparities within a social learning model, did find that peer variables were significant predictors for both genders in regards to affiliation. However, the degree of the effects did vary as here females were more influenced by peer risk factors.

Thornberry (1998) also discovered that individual risk factors varied between genders. Although drug access was a significant risk factor for both males and females, affiliated males were significantly associated with low self-esteem, negative life events, and depression. This differs from what Esbensen and Deschenes (1998) found, through testing both a social control and a social learning model; they discovered that low self-esteem was a significant predictor of gang membership for females, while high self-esteem was such a predictor for males. Affiliated females

were also shown to be risk-takers, where such risk taking behavior did not significantly predict membership in males. Esbensen et. al. (1999) followed up this work with a study that again examined gender disparities, but this time in the context of developmental trajectories. These researchers again found similar self-esteem differences between male and female gang members, but also found females were more socially isolated than their male counterparts. It would appear from this research that female gang members have different, and perhaps more severe, emotional issues than males. However, Thornberry (1998) may argue the reverse. All in all, even though there are disparities within the risk factor literature, it has consistently been found that gendered differences do exist.

Roles within the gang

Gang members appear to take on roles that vary by gender within the gang. Males often have more positions of authority and are much more substantially involved in delinquency (see Delinquency section). Female gang members, conversely, are most often described as taking on either one of two positions based on both the accounts from both female and male members: the “tomboy” or the “sex object” (Esbensen et. al., 1999; Miller and Brunson, 2000). The tomboy is not as accepted by the male members due to their behavior, which is viewed as “inappropriate” female conduct (Campbell, 1990). Such conduct is characterized by a lack of overall femininity and a greater participation in traditional male delinquent behavior. The tomboy’s primary goal is to be seen as one of the boys and to be viewed as an equal. This is rarely the case and the tomboys are often not as accepted as the sex object girls (Campbell, 1990).

These sex object girls, the most common role of females in a gang, attributed by both female and male gang members, are recognized for their contributions on two ends. The first is the obvious sexual benefit that the females may offer (Miller and Brunson, 2000; Fishman, 1995), although the prevalence of this benefit seems to depend upon the sample surveyed and the gender composition of the gang (Miller and Brunson, 2000; Miller, 1980). Miller and Brunson (2000) found that: “young men in all-male gangs were those most likely to describe girls primarily as sexual objects or individuals to be exploited” (p. 435) while, “even when young men in mixed-gender gangs spoke about dating or sexual relationships, very few described gang girls exclusively in these terms” (p.438). When female gang members are surveyed about their role, many downplay the sexual side of membership (Rosenbaum, 1991). In fact, Rosenbaum (1991) reported that not one participant listed sex acts as part of their gang activities. The other way sex object girls are utilized is through the hiding of drugs or weapons (Campbell, 1991; Fishman, 1995). This element of the sex object role is not nearly as identified by gang members, although it is a factor.

Delinquency

Although both male and female gang members are more delinquent than both nonaffiliated males and females (Bjerregaard and Smith, 1993; Esbensen and Winfree, 1998), female gang members are less likely to participate in delinquent acts than any males (Curry et. al, 1994; Esbensen et. al., 1999). As Curry et. al. (1994) discovered, of those crimes considered gang-related, females committed only fourteen percent of the property crime, thirteen percent of the drug crime, and around three percent of the violent crime. In fact, these researchers found that this was due to

the fact that violent crime is considered to be the duty of men in the gang and as a result, women are excluded (either by themselves or by the male members).

Chesney-Lind et. al. (1994) found similar patterns. Their study discovered that female gang members had less frequent involvement in delinquency than affiliated males and that the delinquency that females did participate in was often of a less serious nature. For instance, larceny theft accounted for the largest amount of crime among affiliated females (thirty-eight percent), where male gang members most often committed assaults (twenty-seven percent). It also does not appear that there is a major increase in female offending, even among those affiliated, as certain media may suggest (Chesney-Lind et. al., 1996). Rather, the growth in arrest rates for females mirrors that of males (Chesney-Lind et. al., 1996).

Interestingly, Peterson et. al. (2001) recently examined the impact of gender composition on delinquency. They discovered that sex structure, as opposed to just normative sex differences, was more influential on the norms and activities of the gang. Mixed gender gangs (with a more balanced proportion of females and males) reported both the most delinquency and the highest level of organization, along with less participation in prosocial activities (in relation to both majority male and majority female gangs). Therefore, it is not just gender alone, but rather the gender composition, that has an effect on offending.

Victimization

The victimization of gang members takes very different forms depending upon gender. For males, this form tends to be physical violence and can often be retaliatory in nature. While it is evident that female gang members are more likely to

be violently victimized than those females not in a gang (Miller, 1998), it is not as probable that these female will endure as much of this type of victimization as male gang members. There are several studies that support this notion including the St. Louis Homicide Project which found that, “from 1990 to 1996, 229 gang homicides occurred in the project’s study area. Only nineteen (eight percent) of these involved female victims; moreover the great majority of the women were not the intended targets” (Miller and Brunson, 2000: 425)⁵.

Instead, the victimization of female gang members most often takes the form of sexual abuse, exploitation, and/or assault rather than homicide or physical assault as it does with males (Miller, 1998; Moore, 1991). As Miller (1998) notes, “my findings suggest that gender may function to insulate young women from some types of physical assault and lessen their exposure to risks from rival gang members, but also to make them vulnerable to particular types of violence, including routine victimization by their male peers, sexual exploitation, and sexual assault” (p.453). This victimization for females can be classified into two categories: internal and external.

The internal victimization that Miller (1998) addresses, that which happens by male peers, can manifest itself through a number of ways including expected sexual availability (Fishman, 1995; Moore, 1991) and the initiation of females into the gang. This initiation is sometimes conducted through a process referred to as “sexing in”⁶ (Miller, 1998; Miller and Brunson, 2000). “Sexing in” involves the initiate engaging

⁵ It should be noted that the fact that violent crime is already a male phenomenon, in respect to both the victims and offenders, does limit the significance of this finding.

⁶ It should be noted that initiation in the form of “sexing in” is not as common as entry through a physical fight (usually between the initiate and other women who are already in the gang).

in sexual acts with any male member that desires such acts, although Miller and Brunson (2000) found that the number of men allowed into the initiation may be limited if many wish to pursue sexual contact.

Ironically, girls who endure this type of initiation are then the object of an overall lack of respect from both the male and female members of the gang (Schalet et al., 2003; Curry, 1998; Miller, 2001). The girls are often regarded as “whores” (Schalet et al., 2003). As one participant in the Schalet et al.’s (2003) study states about those females that are sexed in, “We don’t like them. They’re hood rats. They ain’t down. We don’t consider (the girls who have been sexed in) homegirls, as a whole” (p. 126). Similarly, these females who are sexed in are seen as more sexually available and thus, more likely to be sexually victimized. An intense amount of gossiping and “othering” takes place in the gang, due to this form of initiation (Schalet et al., 2003). Even if a female gang member is not initiated through sexing in, other members may claim that she was in order to severely damage her reputation. Miller (2001) believes that both the gossiping and othering not only perpetuates the double standard that already exists in society regarding female sexual behavior, but is used in order to deal with the differing norms of both the femininity that this society expects and the toughness that gang life demands. The perfect balance for female gang members is found in this idea of a “patriarchal bargain,” where the primary goal is to be one of the boys. This is achieved through the labeling of other young women in the gang as “whores,” while at the same time, reverently rejecting the label for themselves. Thus, sexing in can be used as a weapon against other female gang members, regardless of whether the member was initiated in that way.

A further form of what could be argued to be internal sexual victimization is the prevalence of sexually transmitted diseases among female gang members. An unfortunate lack of research exists regarding this topic, save one study conducted by Wingood et. al. in 2002. These researchers found significant differences in sexually transmitted infections between those who did and did not report a history of gang involvement. As they stated, “A key finding is the significant association between STD/HIV-associated sexual behaviors and STD status, with adolescents reporting a history of gang involvement being more than 3 ½ times likely to test positive for N gonorrhoeae and twice as likely to test positive for T vaginalis” (Wingood et al., 2002:60). These findings are particularly disturbing; however, the generalizability of this study is limited as the participants were all Southern, African American females. Thus, before the conclusion that gangs are breeding grounds for sexually transmitted diseases is drawn, further replications in diverse populations need to be made.

External sexual victimization is victimization that takes place outside of the gang. One form of external victimization is the targeting of females by rival male gang members through the kidnapping and then the resulting sexual assault (Miller and Brunson, 2000). This form of victimization is used, “to send a message or retaliate against the gang” (Miller and Brunson, 2000:439). These incidences are also used to gain information about the rival gang. Females are targeted for this purpose based on the male view that such females are more vulnerable and willing to give up information. Females do agree that they are viewed as more vulnerable and as a result are in danger of kidnapping and/or sexual victimization; although these females

do not necessary identify with notions of being vulnerable (Miller and Brunson, 2000).

Theoretical implications

It is from this research on female gang members that both the liberation and social injury hypotheses were formed. The main proponent of the former hypothesis, Chesney-Lind (1993), has characterized gang involvement as a source of empowerment for female gang members. This empowerment is focused on both independence from men and overall autonomy. Similarly, the liberation hypothesis depicts females in gangs as having a sisterhood of sorts due to apparent cohesion and cooperation within the group (Curry, 1998). Evidence has been found for this hypothesis in both the work of Lauderback et al. (1992) and Taylor (1993). Both researchers discover the previously mentioned characteristics (autonomy, independence from men, sisterhood) among female gang members when looking at their role in drug sales. As Taylor (1993) states, “A new attitude of female criminal independence is emerging. The male-female gang relationship is also being altered” (p. 23).

The social injury hypothesis holds that, “any benefit in personal liberation that girls may gain from gang involvement is outweighed by the social costs of such affiliation” (Curry, 1998, p. 106). Moore (1991) has been one of the leading proponents of this hypothesis and has extended social injury beyond that of just victimization into the stigma and pervading sexism due to and within the gang. One such extension of Moore’s (1991) found that female gang members, while at times may exert some level of autonomy, more often fall victim to this stigma and to these

harms, including sexism. Moore (1991) also discovered that several female gang members were often impaired from having a stable marriage or employment due to their past involvement in the gang. Furthermore, several female gang members had a difficult time with breaking ties to the gang and many went on to have children that became members themselves. In relation to sexism, both Miller (1998) and Moore (1991) found males and females to consistently verbalize attitudes that supported such sexism. These proposed elements (stigma, harms, and sexism) of the lives of female gang members fuel social injury supporters' claims.

Desistance

The processes by which and the reasons that motivate the disaffiliation of gang members have been examined through a number of studies (Decker and Lauritsen, 2002; Fleisher and Krienert, 2004; Molitor, 1996; Wang, 2000). The majority of gang members are active for less than one year and certain research would suggest that such short and uninvolved affiliation often garners little to no response from the gang (Decker and Lauritsen, 2002; Thornberry et. al., 2003). However, Molitor's (1996) small sample of female gang members suggested that when such a female decides to leave she is then raped and beaten by the other members the majority of the time. Wang (2000), in his sample of at-risk females, did not find as strong of a relationship between leaving a gang and retaliatory aggression as Molitor (1996) had, but a relationship existed nonetheless. In response to this researcher's question, "What happens if a girls wants to quit a gang?...Thirty-nine percent

indicated being beaten, thirty-five percent reported getting killed, and six percent forcing sex” (Wang, 2003:624)⁷.

As for reasons behind the desistance of gang members, research has found that those that maintain affiliation do so to either preserve the status that they feel they receive from the gang or because of limited educational or employment opportunities that may otherwise encourage desistance (Decker and Lauritsen, 2002). In regards to gendered differences, Fleisher and Krienert (2004) found that sixty-three percent of their sample⁸ cited pregnancy as their main influence for becoming an inactive gang member due to their need to “settle down.” Of those that did not claim pregnancy, “a proxy for pregnancy was often used. One respondent stated, ‘I was getting older and wanted to settle down.’ When asked to elaborate, it was found that ‘settling down’ meant motherhood and establishing an independent residence” (Fleisher and Krienert, 2004:619). For those that do not completely leave the gang after pregnancy, most alter the amount of or types of activities they engage in. As Fleisher and Krienert (2004) state,

Even members who considered their gang status active reported differences in their activities when they became mothers. A few women in their early to mid 20s said (paradoxically) they were still active gang members, but had stopped hanging out, fighting, and being ‘crazy.’ Pregnancy leads to a disinterest in hanging around the streets and an interest in the safety of the fetus that leads to reduced (or eliminated) drug use. Some women said when they got pregnant they thought for the first time about employment. Active gang

⁷ A significant weakness to this finding is that at-risk youth were surveyed, not gang members per se. Rather, Wang (2000) surveyed those that had been sanctioned at least twice for delinquent acts and had, “one or two of the following situations: (a) been a wanna-be (one who tries to look or behave like a gang member) according to teachers’ reports, (b) showed behavioral signs of possible gang affiliation, and (c) been an associate (close friend) with a known gang member(s), according to campus police reports” (p.620-621).

⁸ Fleisher and Krienert (2004) utilized a sample of seventy-four black females in a poverty stricken area of Champaign, Illinois. The study was field work conducted over several years with women that identified with the Gangster Disciples, Vice Lord, or Black P-Stones.

women said they did not fight pregnant women, fearing injury to the fetus (p. 619).

Thus, pregnancy would appear to have a positive effect on the lives of these female gang members, through removing them from a detrimental situation or by limiting their engagement in that situation. It could be argued that affiliated females seek out this pregnancy in order to leave the gang without repercussions. That is, are female gang members using pregnancy as an exit strategy to avoid being beaten or raped? As one participant noted in Fleisher and Krienert's (2004) study, "You can't punch a pregnant girl in the stomach. That's just wrong" (p.619).

It is important to evaluate this contention, pregnancy and/or having children as potential exit strategies for affiliated females, as it would establish a unique gendered process within gangs and add to the desistance literature as a whole. Therefore, the next sections seek to operationalize and determine if the majority of female gang members leave the gang due to pregnancy/live birth, if these pregnancies result more often in children for affiliated females, and if there is a causal connection between motherhood and desistance..

Chapter 3: Data and Methods

Hypothesis

From the review of the literature, it is clear that gender differences exist within gang processes. It has also been established that such gender differences are especially apparent in the manner in which males and females desist from the gang; for females, pregnancy is the main reason given for desistance and perhaps a way out of gang life without repercussion (Fleisher and Krienert, 2004). This study hypothesizes that within a nationally representative sample, verification of this assertion, pregnancy as a potential exit strategy, will be discovered. This will be analyzed through the testing of three main hypotheses. (1) The majority of female gang members will fit patterns that would be consistent with Fleisher and Krienert (2004) in relation to the timing of their membership and any pregnancies and/or live births. These patterns will be especially apparent in a more comparable sample to that of Fleisher and Krienert's (2004). (2) Of those that have been pregnant, female gang members will be more likely to have live births resulting from their pregnancies, even when controlling for other sexual behavior risk factors. (3) A significant positive relationship between both pregnancy in 1997 and 1998 and having a live birth in 1998 and desistance exists.

Data and Instrument

The data used to examine this issue will be the National Longitudinal Survey of Youth, 1997, or the NLSY, a subset of the National Longitudinal Surveys administered by the Bureau of Labor Statistics. The initial purpose of this data set

was to, “document(s) the transition from school to work...and to be representative of people living in the United States who were born during the years 1980 through 1984” (Center for Human Resource Research, 2005: 11). Currently, data through 2003 is available (seven waves).

The BLS works in conjunction with a number of agencies and, as a result, utilizes instruments designed by and collects variables of interest to these agencies. Such agencies include the Department of Defense, National School-to-Work Office, Department of Justice, Office of Juvenile Justice and Delinquency, and the National Institute of Child Health and Human Development. These instruments that make up that of the NLSY are the Screener, Household Roster, Nonresident Roster Questionnaire, Youth Questionnaire, Parent Questionnaire, school transcript information, Armed Services Vocational Aptitude Battery, and the Household Income Update. From these instruments, several variables have been and continue to be collected on the participant’s demographics, both social and economic background, health, criminal activities and history, academic and vocational goals/achievement, personal relationship information, and overall attitudes and behavior.

Of particular interest to this study is that of the Youth Questionnaire, a CAPI instrument administered to the participants in each round, which takes, on average, an hour for the interviewee to complete. This questionnaire, due to the sensitive nature of its inquiries, allows for participants to enter their answers into the interviewer’s laptop directly⁹. Such inquiries cover topics such as the, “respondent’s family background, social behavior, health status...(and) focus in detail on the youth’s

⁹ Participants were allowed to take this portion in either English or Spanish. Audio assistance was also available via headphones attached to the laptop.

schooling and employment activities” (Center for Human Resource Research, 2005:18). Table 1 lists these and the other categories of information collected on the instrument. The Youth Questionnaire provides for a number of variables useful to this investigation, and again allows for these variables to be studied over time.

Table 1. Information on Youth Questionnaire (Center for Human Resource Research, 2005:19)

SECTION	DESCRIPTION OF DATA COLLECTED
Information	In Rd. 1, verified youth data in the Screener, Household Roster, and Nonresident Roster Questionnaire
Household Information	Confirms and updates information on members of the youth’s household after rd. 1
CPS	In rds. 1 and 4, established employment status using questions from the Current Population Study
Schooling	Gathers information about current schooling and school environment
Peers/Opportunity Sets	In rd 1, provided the youth with a list of activities and asked him or her to estimate the percentage of peers who participate in each
Time Use	In rds. 1-3, asks the youth about time spent during the day and week on various activities
Employment	Collects data about each employer for whom the youth worked since age 14; also includes data on freelance employment
Training	Ask about training programs the youth has participated in outside of regular schooling
Health	Asks about the general state of the youth’s health and long-standing problems he or she has
Self-Administered	Completed by youth; asks sensitive questions. Subsections include household and neighborhood environment, relationship with parents, puberty, dating and sexual activity, pregnancy and abortion, attitudes toward self, substance use, and criminal and delinquent activities. (This section is divided into SAQ1 and SAQ2 sections in round 5 and beyond).
Marriage	Ask questions about any marriages or marriage-like relationships that the youth may have had.
Fertility	Gather information about any biological children of the youth and the parentage of each.
Child Care	In rd. 5, collects details about child care arrangements or child care availability.
Program Participation	Gathers data about any assistance programs in which the youth and youth’s spouse/partner may have participated.
Income/Assets	Collects data on the income and assets of youth and the youth’s spouse/partner. These questions were combined in the YINC section in rd. 1 but split into two sections for subsequent rounds.
Expectations	In rds. 1, 4, and 5, asked youth to predict characteristics of their lives at certain points in the future.
PIAT Math	Administers PIAT Math Assessment to eligible respondents.

Sample

A total of 8,984 youth between the ages of 12 and 16¹⁰ were surveyed in the first wave. These youth are broken down in two subsets: “(1) a cross-sectional sample of 6,748 respondents born between January 1, 1980, and December 31, 1984 (2) a supplemental sample of 2,236 respondents, which is designed to oversample Hispanic and black people during the same time period as the cross-sectional sample” (Center for Human Resource Research, 2005:14). Table 2 lists the distribution of gender and race within these two samples. The analysis will only be conducted on those females in the total sample, approximately 4,385 individuals at the first wave. Figure 1 details the selection process that is utilized in order to formulate the samples. Several steps are taken in order to ensure that the cross-sectional sample is, “an accurate representation of different sections of the population defined by race, income, region, and other factors” (Center for Human Resource Research, 2005:25). This complicated sampling procedure increases the amount of external validity overall, allowing for the generalizability of this youth cohort to youth overall in the United States.

¹⁰ These ages were as of December 31, 1996.

Figure 1. Selection Process of Sampling (Center for Human Resource Research, 2005)

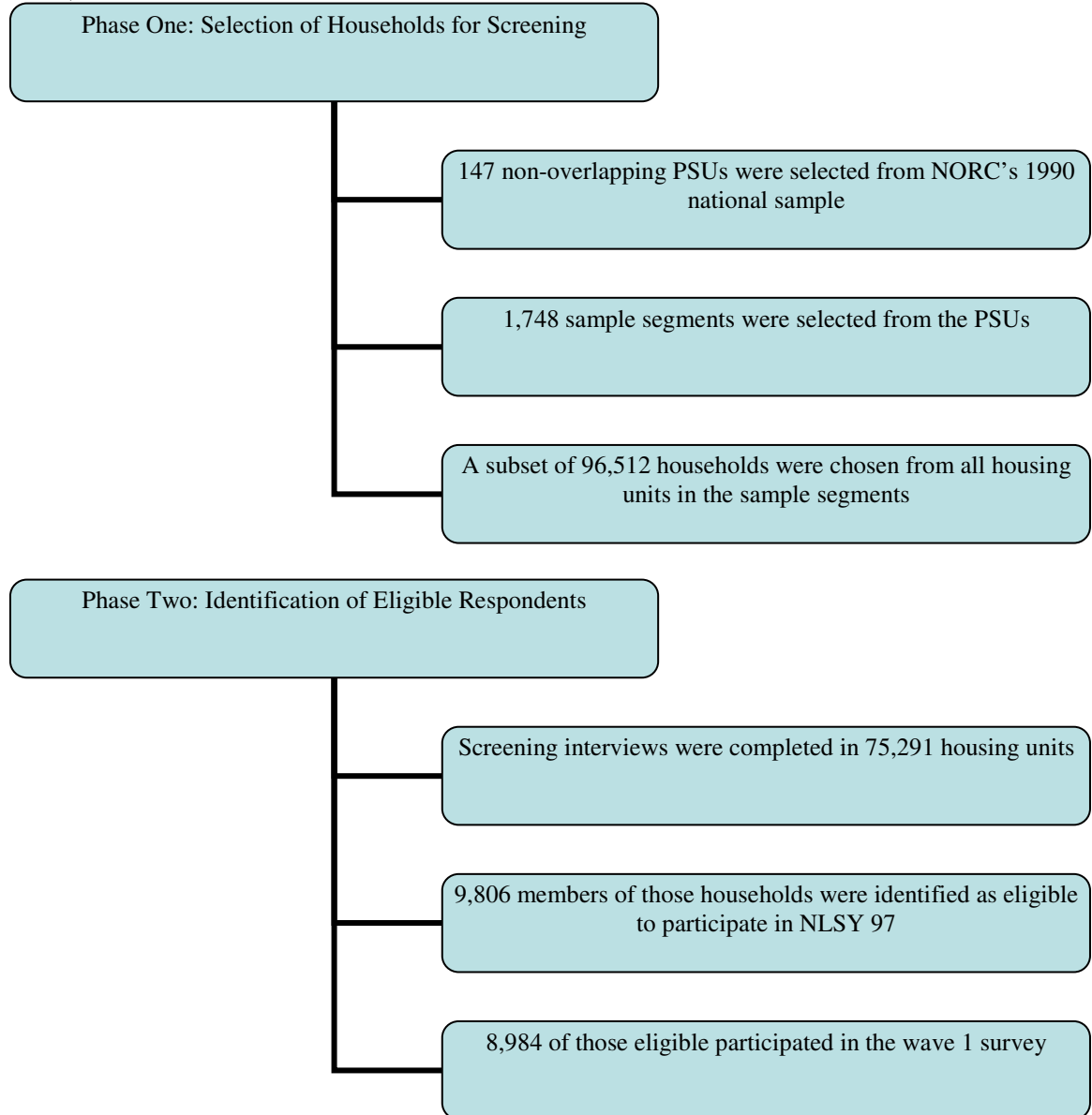


Table 2. Gender and Race Distribution of Sample (Center for Human Resource Research, 2005)

	CROSS-SECTIONAL SAMPLE				SUPPLM. SAMPLE		
RACE ROUND/GENDER	Non-Black/Non-Hispanic	Black/Non-Hispanic	Hispanic	Mixed Race	Black/Non-Hispanic	Hispanic	Mixed Race
One							
Male	2413	537	469	40	632	508	-
Female	2522	544	453	41	622	472	2
Two							
Male	2238	504	433	38	599	471	-
Female	2095	517	417	37	584	451	2
Three							
Male	2193	490	422	39	572	454	-
Female	2076	503	412	38	568	441	1
Four							
Male	2153	485	423	37	580	439	-
Female	2027	489	402	39	570	435	2
Five							
Male	2110	455	411	36	541	436	-
Female	1991	478	401	37	558	427	2

Compensation in the form of ten dollars is given for each interview in the first three rounds, while a range of between ten and twenty dollars was implemented in the latter rounds (Center for Human Resource Research, 2005). Interviews occurred within a six month period, save the first which utilized two fielding periods in order to collect the initial background information. Table 3 lists the retention rate after each wave. After the fifth wave, retention is relatively high, with roughly eight-eight percent of those participants originally in the sample continuing to be active in the study. Thus, attrition is not a major threat to this study¹¹.

¹¹ Despite this contention, this study does acknowledge that gang members or delinquent youth in general, may be more likely to drop out of a study than their nondelinquent counterparts.

Table 3. Retention of Sample (Center for Human Resource Research, 2005)

		CROSS-SECTIONAL SAMPLE		SUPPLEMENTAL SAMPLE	
ROUND	Fielding Period	Total	Retention Rate	Total	Retention Rate
1	February-October 1997 and March-May 1998	6748	---	2236	---
2	October 1998-April 1999	6279	93.0	2107	94.2
3	October 1999-April 2000	6173	91.5	2036	91.1
4	November 2000-May 2001	6055	89.7	2026	90.6
5	November 2001-May 2002	5919	87.7	1964	87.8
6	November 2002-May 2003	NA	NA	NA	NA

Analysis, Hypothesis 1

A descriptive analysis was employed in order to determine the role of pregnancy and live birth as desistance mechanisms among affiliated females. Specifically, this analysis distinguished the temporal order of pregnancy, live birth, and gang membership. This assisted in pinpointing whether pregnancy occurred before, during, or after affiliation and whether that pregnancy resulted in a child. That is, are females becoming pregnant/having a child and then joining a gang, becoming pregnant/having a child during membership, or becoming pregnant/having

a child after desistance? Only by identifying when each event occurred can such conclusions were made. The same descriptive analysis was also run on a subsample, similar to that in the Fleisher and Krienert (2004) study: urban, African American affiliated females. This allowed for more direct comparisons to be made between Fleisher and Krienert (2004) and this current work.

Analysis, Hypothesis 2

A quantitative analysis was run on female gang membership and live birth first alone and then with other sexual behavior controls to determine the robustness of the relationship. This established whether affiliated females are more likely than those without affiliation to have their pregnancies result in live births. “Settling down” as an exit strategy is more believable if the pregnancy results in a child. Cross-sectional sampling weights were employed in order to guarantee that the sample was representative.

Analysis, Hypothesis 3

Finally, a quantitative analysis was also conducted on the wave with the most female gang members, the 1997 wave, to determine whether pregnancy in 1997 and 1998 and or/live birth in 1998¹² predicted desisting from the gang in the 1998 wave. As previously noted, either temporal pattern would be evidence of Fleisher and Krienert’s (2004) findings and consequently their causality was tested here. Again, cross-sectional sampling weights were utilized.

¹² There is no measure of live birth in 1997 so that cannot be tested. See *Measures* section for further detail.

Logit Model

Due to the fact that the dependent variables in hypotheses (2) and (3) were dichotomous, a binary logit model was utilized. These models allow for interpretation through either odds ratios or predicted probabilities. The former gives, “the odds of having an event occurring versus not occurring, per unit change in an explanatory variable, other things being equal,” (Liao, 1994:32) while the latter permits direct comparison among independent variables. For straightforward interpretation purposes, odds ratios are utilized here. Thus, the models are as follows:

$$(2)P(LiveBirth) = \frac{Exp(\beta_0 + \beta_1GangMem + \beta_2SexInter + \beta_3FreqSex + \beta_4MplPartn + \beta_5 Pr Ctrc)}{1 + Exp((\beta_0 + \beta_1GangMem + \beta_2SexInter + \beta_3FreqSex + \beta_4MplPartn + \beta_5 Pr Ctrc))}$$

$$(3)(a)P(Desistance98) = \frac{Exp(\beta_0 + \beta_1Pregnancy97)}{1 + Exp(\beta_0 + \beta_1Pregnancy97)}$$

$$(b)P(Desistance98) = \frac{Exp(\beta_0 + \beta_1Pregnancy98)}{1 + Exp(\beta_0 + \beta_1Pregnancy98)}$$

$$(c)P(Desistance98) = \frac{Exp(\beta_0 + \beta_1LiveBirth97)}{1 + Exp(\beta_0 + \beta_1LiveBirth97)}$$

Measures

It is from this model that the four main constructs of the hypothesis will be operationalized: gang membership, desistance from gang membership, pregnancy, and live birth. In addition, four sexuality variables will be added to this examination to determine the robustness of certain relationships: sexual intercourse, amount of sex, number of partners, and poor birth control use. Table 4 lists how each construct

will be operationalized, while Table 5 is the descriptive statistics of each of the included variables among the entire female sample (N=4385)¹³.

Table 4. Measurement of Constructs

CONSTRUCT	Variables Included	Waves Measured	Variable Definition
Gang Membership	Female Gang Member	1997-2003	Dummy variable, where one indicates that the participant was a female gang member.
Desistance	Left Gang	1998-2003	Dummy variable, where one indicates that the participant desisted from affiliation.
Motherhood	Pregnancy	1997-2003	Dummy variable, where one indicates that the participant was pregnant at or before the age of 20.
	Live Birth	1998-2003	Dummy variable, where one indicates that the participant had a live birth at or before the age of 20.
Sexual Behavior	Sexual Intercourse	1997-2003	Dummy variable, where one indicates that the participant had sexual intercourse at or before the age of 20.
	Frequent Sexual Activity	1997-2003	Dummy variable, where one indicates that the participant engaged in sexual intercourse once a week or more.
	Multiple Partners	1997-2003	Dummy variable, where one indicates that the participant engaged in sexual intercourse with two or more partners.
	Poor Contraceptive Use	1997-2000	Dummy variable, where one indicates that the participant did not use contraceptives and condoms.

Table 5. Descriptive Statistics, Averaged for Years 1997-2003, N=4385

VARIABLE	N	MISSING VALUES	MEAN	STANDARD DEVIATION
Female Gang Member	4288	97	0.0324	0.1771
Left Gang	4288	97	0.3032	0.1715
Pregnancy	2939	78	0.3682	0.4824
Live Birth	4382	3	0.2652	0.4415
Sexual Intercourse	4101	284	0.7342	0.4418
Frequent Sexual Activity	2132	1016	0.5807	0.4936
Multiple Partners	2873	124	0.7010	0.4580
Poor Contraceptive Use	4313	72	0.1929	0.3946

¹³ Missing values in this table refers to those answers that were an “invalid skip,” “refused to answer,” and “don’t know.” “Valid skip” and “noninterview” were not included.

Variables of interest

One primary variable of interest in this study is gang membership. The NLSY defines a gang as, “a group that hangs out together, wears gang colors, has set clear boundaries of its territory or turf, and protects its members and turf against other gangs through fighting or threats” (Center for Human Resource Research, 2005:208). This was operationalized through variables collected on the Youth Questionnaire concerning this membership at waves 1997 through 2003. Such variables include not only whether a female participant has ever been a member of a gang, but also if she has been a member, her membership status since the last round of interviews, and the age at which she joined the gang and if applicable, desisted. A dummy variable was created indicating whether a subject was a gang member in the years 1997-2003 (one is equal to gang membership).

It should be clarified that the NLSY has certain discrepancies involving the gang membership questions. Therefore, both “Have you ever been a gang member?” and “Have you been a gang member since the date of the last interview?”¹⁴ were used to measure gang membership in the years 1997-2001. That is, if a participant answered yes to both questions they were considered to be a gang member. Both questions were utilized in the coding because the latter was only asked if the former was answered in the affirmative. As timing was crucial to this study, the former questions could not be used in and of themselves. For the years 2002-2003, the question “Have you been a gang member since the date of the last interview?” was inexplicably asked of the entire group, consequently allowing for that question to be

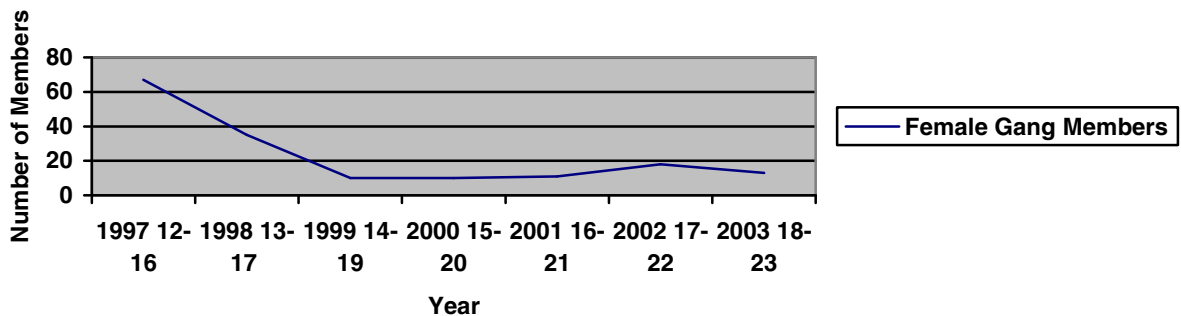
¹⁴ This question was worded as, “Have you been a member of a gang in the last twelve months?” in the 1997 wave.

the sole measure of membership in those waves. Again, those participants that answered “yes” to this question were classified as gang members.

Three percent of the female sample divulged that they had been a member of a gang in the years 1997-2003. This number is less than the previously noted eight percent that Esbensen and Deschenes reported in their 1998 study. Nevertheless, the current sample is more nationally representative and less urban contingent than that of the Esbensen and Deschenes (1998) investigation, which may explain the lower percentage here.

Figure 2 demonstrates gang membership over the seven years of the survey. These patterns are consistent with the aforementioned research ascertaining that membership is highest between eleven and fifteen (Esbensen and Huizinga, 1993); here membership peaks during 1997, when all participants were between the ages of 12 and 16. This also mirrors the idea that females enter and exit gangs at an early age (Esbensen and Winfree, 1998) and that they spend one year or less as an active member (Thornberry et. al., 2003), as discussed in the literature review. That is, the majority of these females are joining during the peak of membership (1997-1998, ages 12-16) and then desisting soon afterwards (by 1999, ages 14-18).

Figure 2: Female Gang Membership Across Seven Years



Of the gang members, twenty-five percent were female. As previously noted, estimates of female gang members vary to upwards of fifty percent of the gang and general survey data tends to overrepresent females (Esbensen and Winfree, 1998). Therefore, this study's sample (twenty-five percent of the gang members as female) appears to fall well within the range of estimates and explains why this particular sample may be on the higher side.

Another variable of interest is desistance, operationalized again through a dummy variable. Here, one is equal to a female not reporting gang affiliation during at least one wave subsequent to the same female divulging membership in a previous wave. Around three percent of this total female sample and ninety-four percent of the female gang member subsample desisted affiliation in the years 1998 through 2003. This again is similar to previous findings that suggest that gang members are only active for one year or less (Thornberry et. al., 2003).

Other variables employed in this study include the most influential risk factors of parenthood (Woodward & Fergusson, 1999; Yampolskaya, et. al., 2004). These variables helped in distinguishing the robustness of the relationship between gang membership and live birth, and then with gang desistance and pregnancy/live birth. The first risk factor is that of sexual intercourse, measured between 1997 and 2003. A dummy variable indicating whether a female had engaged in sexual intercourse before she turned 21 was created (one is equal to being sexually active)¹⁵. In reference to this sexual activity, seventy-three percent of females had had sexual

¹⁵ This variable was created by using an "or" logic statement. That is, if a female answered yes to either, "Have you ever engaged in sexual intercourse?" or "Have you engaged in sexual intercourse since the date of the last interview?" they were considered to be sexually active. Both questions were employed in order to reduce measurement error. The first wave was the exception as only the former question was asked.

intercourse by the age of 21. This is similar to other estimates of female sexual activity; around seventy-five percent of young women are sexually active before their twentieth birthday (Guttmacher Institute, 1999).

Second, the amount of sexuality activity was investigated. Research has consistently shown that the more sexual incidences a female engages in, the higher likelihood she has of becoming pregnant (Guttmacher Institute, 1999). A dummy variable was developed; where one is equal to a woman disclosing that she had sexual intercourse once a week or more since the date of the last interview.¹⁶ Of those females that had admitted to being sexually active, fifty-eight percent constituted this “frequent sexual activity” group in at least one wave from 1997 to 2003. This is consistent with the Guttmacher Institute, which notes that of those that have engaged in sexual activity in the last three months, around half report such activity on a weekly basis (1999).

The number of sexual partners will also be an essential element to observe through the use of another dummy variable. Here one is equal to a female reporting two¹⁷ or more sexual partners since the date of the last interview.¹⁸ From this investigation, approximately seventy-percent of sexually active females noted that they had two or more partners in at least one wave from 1997 to 2003. According to the Guttmacher Institute, this group of females compromised around sixty-three percent¹⁹ (1999).

¹⁶ The question for 1997 was worded as, “How many times have you had sexual intercourse in the last twelve months?”

¹⁷ Two or more partners, although seemingly a small cut off, had been previously established in the literature (Guttmacher Institute, 1999) and consequently was utilized in this study.

¹⁸ The question for 1997 was worded as, “How many partners have you had sexual intercourse with in the last twelve months?”

¹⁹ This statistic only includes females ages 15 to 19.

Inadequate contraceptive use was also explored. Of the seventy-three percent of females who had become sexually active, nineteen percent noted that they did not use contraceptives and specifically indicated that they did not use condoms since the date of the last interview²⁰. This number is similar to what national statistics indicate. According to the Center for Disease Control, around eight-three percent of females are actively using contraception compared to the eight-one percent in this sample (2002).

Another primary variable of interest, pregnancy, was measured²¹. through a female participant disclosing that she has been pregnant either at or before the age of 20.²² Again, these questions were taken from the Youth Questionnaire from waves 1997 through 2003. From such questions, a dichotomous variable, where one indicates pregnancy was created. Of the entire sexually-active female sample, thirty-seven percent had experienced a pregnancy. This statistic is around that of the national average reported in 2003; thirty-four percent of the sexually-active female population became pregnant²³ (National Campaign to Prevent Teen Pregnancy). Of the subsample, that of female gang members, forty-three percent were pregnant at or before the age of 21 (twenty-six percent of nonaffiliated females had experienced a teenage pregnancy).

²⁰ The question regarding condoms was not asked in 1997.

²¹ Here, only the date of the last interview question was needed as that was asked of the entire sample in the years 1998 through 2003. To measure pregnancy in 1997, however, the inquiry, "Are you currently pregnant?" was used as it was the only question that could distinguish that a pregnancy occurred in the last year.

²² The age of 21 was employed as a cutoff to garner a more similar sample to that of Fleisher and Krienert (2004).

²³ This statistic does not include twenty-year-olds, as this study does. When this research omits twenty-year-olds, the percentage of sexually active females that experience pregnancy is reduced to thirty.

A dummy variable, where one is equal to a subject having a live birth at or before the age of 21 was also added to the analysis. This variable was constructed through the question, “How many of these pregnancies have resulted in children born alive to you?” asked in waves 1998²⁴ through 2003 and was conditioned on an affirmative response to the pregnancy variable. Approximately twenty-six percent of females who had experience a pregnancy reported that these pregnancies resulted in children. The percentage of these pregnancies drops to forty-nine percent when twenty-year-olds are removed from the sample. This is similar to national statistics, which estimate around fifty-six percent of all teen (age 19 or younger) pregnancies produce children (Weiss, 2006).

Correlations

Gang membership, and pregnancy and live birth, have positive correlations of 0.08. Other correlations with pregnancy and live birth have larger magnitudes, with the highest being that of sexual intercourse (0.37), followed by poor contraceptive use (0.32), frequent sexual activity (0.31, 0.32 respectively), and then multiple partners (0.28). Leaving the gang has virtually the same correlations with the dependent variables as gang membership alone (0.08). Other correlations of note are those among the sexual behavior variables. Despite the fact that these high associations may result in multicollinearity, a scale would reduce important variation. Therefore, all sexual behavior variables are included separately. Table 6 lists all correlations. All correlations were significant at the 0.001 level.

²⁴ There was no question regarding live births asked in 1997.

Table 6. Correlation Matrices

	Pregnancy	Live Birth	Female Gang Member	Sexual Intercourse	Frequent Sexual Activity	Multiple Partners	Poor Contraceptive Use
Pregnancy	1						
Live Birth	0.9947***	1					
Female Gang Member	0.0821***	0.0788***	1				
Sexual Intercourse	0.3678***	0.3656***	0.0926***	1			
Frequent Sexual Activity	0.3133***	0.3149***	0.0681***	0.4583***	1		
Multiple Partners	0.2827***	0.2821***	0.1081***	0.5491***	0.3995***	1	
Poor Contraceptive Use	0.3185***	0.3157***	0.1318***	0.2797***	0.2193***	0.2037***	1
Left Gang	0.0849***	0.0814***	0.9575***	0.0897***	0.0684***	0.1053***	0.1248***

*p<0.05, **p<0.01, ***p<0.001 (One-tail test)

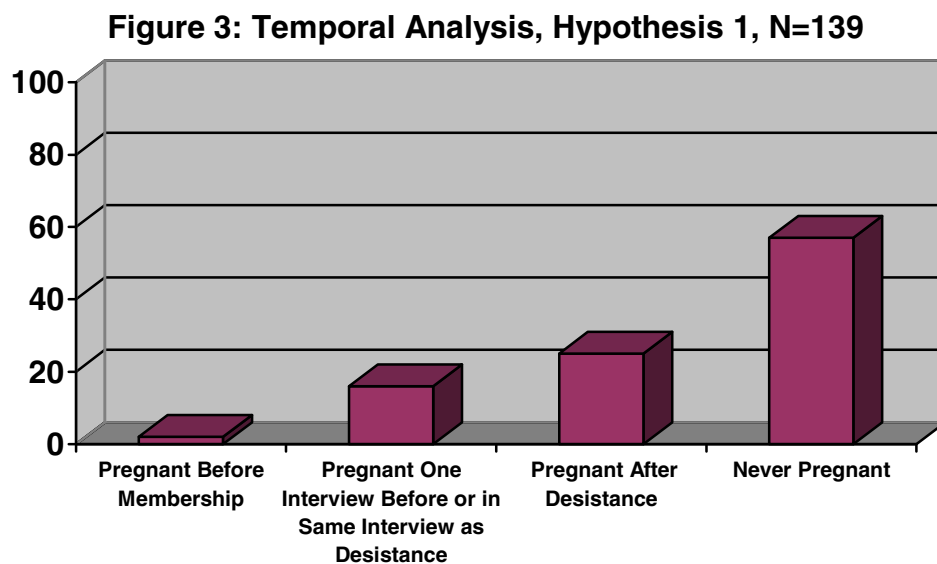
Chapter 5: Results

Analysis, Hypothesis 1

In regards to Fleisher and Krienert's (2004) findings, their study would be validated here if (1) the majority of female gang members become pregnant and (2) two temporal patterns occurred among those that became pregnant. Sixty of the 139 female gang members, forty-three percent, had experienced a pregnancy (although not necessarily had a child) during at least one wave between 1997 through 2003. Of these females, all but two had desisted at some point during their membership. Appendix 1 lists all females in this subsample and the waves in which they were in the gang, became disaffiliated, were pregnant, and if applicable, had children. This particular group of female gang members also remained affiliated for only a short time. Once again, similar to the aforementioned research that suggests gang members are only active for a year or less (Thornberry et. al., 2003), only two of the fifty-eight females were a member for more than one year. Interestingly, most female gang members who were pregnant at some point experienced multiple pregnancies. In fact, around sixty percent of these affiliated females who became pregnant were pregnant more than once. Moreover, the greater part of this sample, sixty-six percent, went on to have children.

If motherhood is the main reason that affiliated women leave the gang, then such motherhood must occur either one interview period prior to or in the same interview period as desistance. However, the minority of female gang members, around sixteen percent, fit these temporal patterns in regards to pregnancy (compared to Fleisher and Krienert's (2004) sixty-three percent); although most of this sixteen

percent went on to have a live birth. Twenty-five percent of female gang members became pregnant and had children after desistance, while around two percent of the sample, were pregnant or had children before gang membership.²⁵ Both of these patterns would not support Fleisher and Krienert (2004). Figure 3 demonstrates these summary statistics.

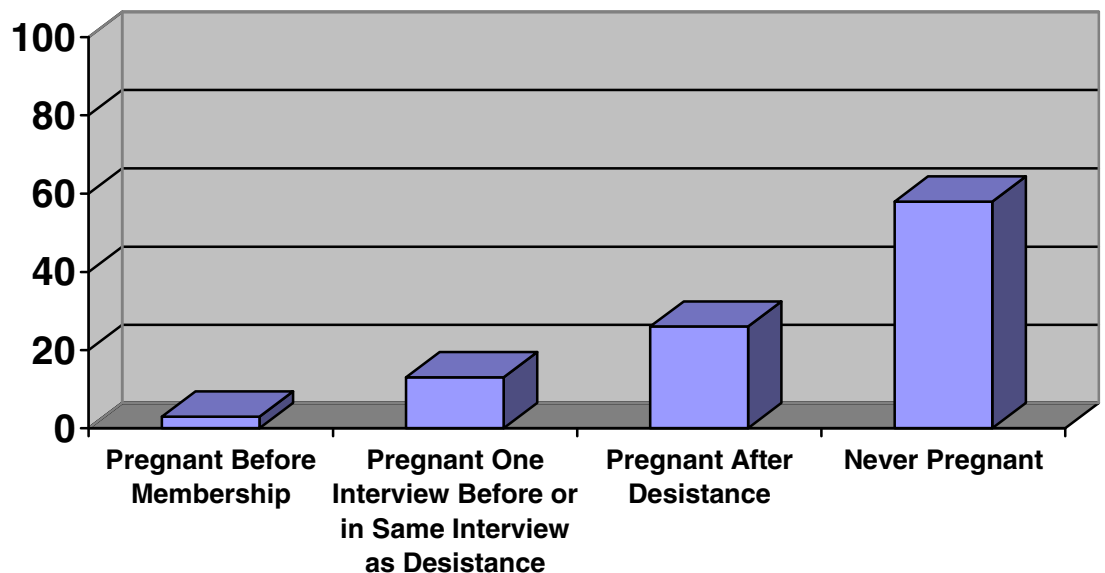


A second temporal analysis was conducted on a more similar sample to that in the Fleisher and Krienert (2004) study. Here, only urban, African American female gang members were examined. This sample was actually less representative of Fleisher and Krienert’s (2004) findings (again, sixty-three percent of their sample desisted because of motherhood). Similar to the larger sample, the minority of female gang members here, forty-two percent, had experienced a pregnancy. Appendix 2

²⁵ In the case of multiple pregnancies, if one such pregnancy transpired in the same interview period as desistance, it was classified as a match under Fleisher and Krienert’s model. Similarly, if participants desisted more than once from the gang, but if the timing of either desistance fit the necessary temporal pattern, it was included.

lists these twenty-nine females with again the wave(s) they were in the gang, desisted, had a pregnancy, and if applicable, had a live birth. Thirteen percent of female gang members left the gang either one interview period prior to or in the same interview period that they became pregnant/had a live birth. The majority of this thirteen percent again did go on to have children. Twenty-six percent of female gang members experienced motherhood after desistance, while seven percent became pregnant/had a live birth before affiliation. Figure 4 demonstrates these summary statistics.

Figure 4: Temporal Analysis, Hypothesis 1, N=69



Analysis, Hypothesis 2

A bivariate logit analysis was run on only the female gang membership and live birth variables with cross-sectional sample weights among the sample of females who had been pregnant. Table 7 lists the odds ratios and significance levels for gang

membership. This initial analysis did not produce a significant relationship between female gang membership (reported in at least one wave from 1997 through 2003) and ever having a live birth (reported in at least one wave from 1998 through 2003). In addition, the pseudo R² of 0.0701 would suggest that gang memberships explains very little of the variation in live birth.

Table 7. Bivariate Logit Analyses, Hypothesis 2

INDEPENDENT VARIABLE	Live Birth N=1135
Female Gang Member	0.3547 (0.3858)
Pseudo R ²	0.0701

*p<0.05, **p<0.01, ***p<0.001 (One-tail test)

The multivariate logit analysis with the sexual behavior variables yielded similar results. Again, cross-sectional sample weights were utilized. Table 8 lists the odds ratios and significance levels for all variables. Surprisingly, only frequent sexual activity had a significant (p<0.05) relationship with live birth among those females that had experienced a pregnancy. Again, female gang membership and having a child does not have a significant relationship.

Table 8. Multivariate Logit Analysis with Sexual Behavior, Hypothesis 2

INDEPENDENT VARIABLE	Live Birth N=753 ²⁶
Female Gang Member	0.3241 (0.3706)
Frequent Sexual Activity	4.6726** (4.2113)
Multiple Partners	1.3647 (1.2230)
Poor Contraceptive Use	0.5956 (0.5052)
Pseudo R ²	0.1191

*p<0.05, **p<0.01, ***p<0.001 (One-tail test)

Analysis, Hypothesis 3

The results of the three bivariate logit analyses with cross-sectional sampling weights produced interesting findings. As previously noted, the 1997 wave was originally chosen for this analysis due to the fact that it had the largest number of female gang members. Unfortunately, every one of the sixty-seven females that joined in 1997 desisted in 1998, thus rendering a desistance analysis impossible as the outcomes do not vary.

²⁶ The sample size drop is due to missing values.

Chapter 5: Discussions and Conclusions

Summary

This investigation has purported to examine gendered processes within a distinct group, that of gang members, in order to discern whether motherhood is an exit strategy for these females. This study served as a direct quantitative test of prior qualitative research; specifically of Fleisher and Krienert (2004). An initial temporal analysis indicated that the majority of female gang members did not become pregnant/have children and those that did became pregnant after desistance from membership rather than prior to or within the same interview period as such desistance. A further look at a sample more similar to that of Fleisher and Krienert (2004), urban, African American females, yielded comparable results. In fact, the urban, African American females in this examination fit Fleisher and Krienert's (2004) were pregnant/had children and fit temporal patterns less often than did the general sample. In addition, a causal examination of gang membership and live birth was conducted to determine whether affiliated females were more likely to have children than those without affiliation. This examination yielded an insignificant relationship between these two variables both within a bivariate analysis and when sexual behavior controls were added. Such a finding limits support for the notion of pregnancy as an exit strategy; this idea is more convincing if children result from such pregnancies. Finally, the bivariate logit analyses could not be conducted regarding pregnancy in 1997 and both pregnancy and live birth in 1998 in relation to desistance in 1998. This was due to the fact that the outcomes did not vary because all female gang members that joined in 1997 had desisted in 1998. All in all, this

investigation found no support for Fleisher and Krienert's (2004) assertions of the causality of motherhood as a potential desistance mechanism, or for the magnitude of the sixty-three percent finding.

Limitations and Future Research Recommendations

There are certain limitations to this study that should be considered, particularly those that come with any research that utilizes self-report data. Memory issues, under and overreporting, telescoping, interviewer bias and exhaustion are just a few of the potential problems that this data can present. However, the NLSY's procedures and policies are such that they address these problems and may decrease them more so than most self-report surveys can. Moreover, reliability regarding participants' answers was extremely high. For example, those that answered "yes" to ever having sexual intercourse in the first wave answered "yes" to the same question in the latter waves.

In addition to the general issues that result from using self-report data are the prospective drawbacks and potential measurement error specific to the NLSY. As noted in the measures section of this manuscript, certain questions are asked of the entire population at times, while others are not of the whole group, and still other questions are not asked in every wave. This is likely due to the fact that this is a survey constructed primarily to measure economic outcomes of youth. Therefore, it would seem that delinquency and health variables are not as precisely operationalized as perhaps these economic outcome measures. Moreover, the NLSY does not oversample at-risk youth and as a result provides for small sample sizes in which to make conclusions about gang members. This may limit the external validity

somewhat. Finally, the statistical techniques utilized in this particular investigation are basic and can only be preliminarily utilized to comment on the role of motherhood as a desistance mechanism. More sophisticated statistical techniques are needed in order to analyze the larger picture of gang membership and motherhood.

Despite these limitations, this investigation has served as an advance in the general scope of gang literature. The development of qualitative research into quantitative testing is the direction that gang research should continue. Both avenues should serve as complimenting, rather than competing resources. Without Fleisher and Krienert's (2004) work, this study would have been without focus. Conversely, without this research, reconsideration of a qualitative finding would not occur.

This research also is strong in that it utilizes a data set relying on females' interpretations of their own behavior rather than on male accounts. This is significant due the fact that female gang members often differ in the way they view themselves and their behavior than what is relayed in accounts of male gang members' perceptions. On the whole, the studies in the literature review utilized female samples, as has the majority of gang research as of late. Nevertheless, it is vital that research continues on this path as this study has, mostly because women are more often in tune with their own attitudes and experiences than the males in their lives.

Appendices

Appendix 1. Temporal Analysis of Desistance and Motherhood,
Entire Subsample (N=58)

ID	Gang Membership	Gang Desistance	Pregnancy	Live Birth	Possible Motherhood as Exit Strategy?
291	2	3	2,3,4	4	Yes
403	4	5	4,5,6,7	7	Yes
605	1	2	5,6	-	No
660	2	3	5,6	6	No
802	2	3	4,6	6	No
985	1	2	2	2	Yes
1128	5	6	7	-	No
1436	1	2	6,7	-	No
1689	3	4	6,7	6	No
1877	1	2	4,5	5	No
1928	6	7	5	-	No
2124	6	7	3	-	No
2502	1	2	6	-	No
2645	1	2	7	-	No
2653	2	3	2,3,4	4	Yes
2729	1	2	4	-	No
2839	1	2	5	-	No
2970	1	2	1,2,3	3	Yes
3430	1	2	4,5,6	4,5,6	No
3531	1	2	2,4,5	2,4,5	Yes
4220	1	2	6	6	No
4318	1	2	3	3	No
4319	2	3	5	5	No
4350	2	3	2,3	3	Yes
4594	1,6	2,7	7	-	Yes
4651	5	6	4,5,6,7	4,5,6	Yes
4777	2	3	4	-	No
4999	1	2	3,4	4	No
5217	6	7	7	7	Yes
5257	1	2	4,5	5	No
5263	2	3	7	-	No
5291	2	3	3,4,7	7	Yes
5399	1	2	2,4	2	Yes
5463	1	2	4,5,7	5,7	No
5548	1	2	2,3,4	-	Yes
5597	4	5	4	-	Yes

5608	1	2	4	-	No
5674	4	5	6,7	7	No
5900	2	3	4,5	5	No
5987	1	2	5	-	No
6016	1	2	2,4	2,4	Yes
6169	1	2	4,5	4,5	No
6208	1	2	4,5,7	5	No
6688	5,7	6,-	5,7	5,7	Yes
6748	1	2	3,4,5,6	6	No
6811	6	7	6	-	Yes
6895	1	2	1	-	Yes
6989	1	2	2,4	-	Yes
7105	2	3	4,5,6	6	No
7199	2	3	6	-	No
7925	2	3	6,7	6,7	No
8066	1	2	4,6	4	No
8093	6	7	2,5	5	No
8283	1	2	2,3,4,5	4,5	Yes
8373	1	2	5	5	No
8589	3	4	4,5,6,7	5,6,7	Yes
8728	1	2	5	5	No
8827	1	2	4,6,7	4,6,7	No

Appendix 2. Temporal Analysis of Desistance and Motherhood
 Urban, African American Females (N=29)

ID	Gang Membership	Gang Desistance	Pregnancy	Live Birth	Possible Motherhood as Exit Strategy?
403	4	5	4,5,6,7	7	Yes
660	2	3	5,6	6	No
802	2	3	4,6	6	No
1128	5	6	7	-	No
1928	6	7	5	-	No
2645	1	2	7	-	No
4220	1	2	6	6	No
4318	1	2	3	3	No
4319	2	3	5	5	No
4350	2	3	2,3	3	Yes
4651	5	6	4,5,6,7	4,5,6	Yes
4777	2	3	4	-	No
5597	4	5	4	-	Yes
5608	1	2	4	-	No
5900	2	3	4,5	5	No
5987	1	2	5	-	No
6016	1	2	2,4	2,4	Yes
6688	5,7	6,-	5,7	5,7	Yes
6748	1	2	3,4,5,6	6	No
6895	1	2	1	-	Yes
6989	1	2	2,4	-	Yes
7105	2	3	4,5,6	6	No
7199	2	3	6	-	No
8066	1	2	4,6	4	No
8093	6	7	2,5	5	No
8283	1	2	2,3,4,5	4,5	Yes
8373	1	2	5	5	No
8728	1	2	5	5	No
8827	1	2	4,6,7	4,6,7	No

Bibliography

- Akers, R. (1994). *Criminological theories*. Los Angeles: Roxbury.
- Bardone, A., Moffitt, T., Caspi, A., Dickson, N., & Silva, P. (1996). Adult mental health and social outcomes of adolescent girls with depression and conduct disorder. *Development and Psychopathology*, 8, 811-829
- Battin, S. R., Hill, K. G., Abbott, R. D., Catalano, R. F., & Hawkins, J. D. (1998). The contribution of gang membership to delinquency beyond delinquent friends. *Criminology*, 36, 93-115.
- Bjerregaard, B. & Smith, C. (1993). Gender differences in gang participation, delinquency and substance use. *Journal of Quantitative Criminology*, 4, 329-355.
- Brotherton, D. (1996). 'Smartness, toughness, and autonomy:' Drug use in the context of gang female delinquency. *Journal of Drug Issues*, 26, 261-277
- Caldwell, L. & Altschuler, D. (2001). Adolescents leaving gangs: An analysis of risk and protective factors, resiliency and desistance in a developmental context. *Journal of Gang Research*, 8, 21-34.
- Campbell, A. (1984, 1991). *The girls in the gang*. Cambridge: Basil Blackwell
- Center for Disease Control. (2002). *Teenagers in the United States: Sexual activity, contraceptive use, and childbearing*. Washington, D.C.
- Center for Human Resource Research. (2005). *NLSY user's guide: A guide to the rounds 1-7 data*. Columbus: Ohio State University Press.
- Chesney-Lind, M. (1993). Girls, gangs, and violence: Anatomy of a backlash. *Humanity & Society*, 17, 321-344.
- Cohen, L. & Felson, M. (1979). Social change and crime rate trends: A routine activity approach. *American Societal Review*, 44, 588-608.
- Curry, G. D. (1998). Female gang involvement. *Journal of Research on Crime and Delinquency*, 35, 100-118.
- Curry, D., Ball, R. & Fox, R. (1994). *Gang crime and law enforcement recordkeeping*. Washington, D.C.: U.S. Department of Justice, National Institute of Justice.
- Cyr, J. & Decker, S. (2003). Girls, guys, and gangs: Convergence or divergence in the gendered construction of gangs and groups. *Journal of Criminal Justice*, 31, 423-433.
- Decker, S. (1996). Collective and normative features of gang violence. *Justice Quarterly*, 13, 243-264.
- Decker, S. & Lauritsen, J (2002). Breaking the bonds of membership: Leaving the Gang. In C.R. Huff (Ed.), *Gangs in America III* (pp. 103-122), Thousand Oaks: Sage Publications, Inc.
- Esbensen, F. & Deschenes, E. (1998). A multisite examination of gang membership: Does gender matter?" *Criminology*, 36, 799-827.
- Esbensen, F. & Huizinga, D. (1993). Gangs, drugs, and delinquency. *Criminology*, 31, 565-590.

- Esbensen, F., Huizinga, D., & Weiher, A. (1993). Gang and non-gang youth: Differences in explanatory variables. *Journal of Contemporary Criminal Justice*, 9, 94-116.
- Esbensen, F., Miller, M., Taylor, T., He, N., & Freng, A. (1999). Differential attrition rates and active parental consent. *Evaluation Review*, 23, 316-335.
- Esbensen, F. & Winfree, L. (1998). Race and gender differences between gang and non-gang youth: Results from a multi-site survey. *Justice Quarterly*, 15, 505-525.
- Estes, R. & Weiner, N. (2001). The commercial sexual exploitation of children in the U.S., Canada, and Mexico. Philadelphia: University of Pennsylvania, School of Social Work, Center for the Study of Youth Policy.
- Fergusson, D. & Woodward, L. (1999). Maternal age and educational and psychosocial outcomes in early adulthood. *Journal of Child Psychology & Psychiatry & Allied Disciplines*, 40, 479-489.
- Fishman, L. (1995). The vice queens: An ethnographic study of black female gang behavior. Pp. 83-92 in *The Modern Gang Reader*, edited by M. Klein, C. Maxson, and J. Miller. Los Angeles: Roxbury.
- Fleisher, M. (1998). *Dead end kids: Gangs girls and the boys they know*. Madison: University of Wisconsin Press.
- Fleisher, M. & Krienert, J. (2004). Life-course events, social networks, and the emergence of violence among female gang members. *Journal of Community Psychology*, 32, 607- 622.
- Glueck, S. & Glueck, E. (1950). *Unraveling juvenile delinquency*. New York: Commonwealth Fund.
- Gordon, R., Lahey, B., Kawai, E., Loeber, R., Stouthamer-Loeber, M., & Farrington, D. (2004). Antisocial behavior and youth gang membership: Selection and socialization. *Criminology*, 42, 55-89.
- Gottfredson, M. R. & Hirschi, T. (1990). *A general theory of crime*. Stanford, CA: Stanford University Press.
- Guttmacher Institute. (1999). *Teen sex and pregnancy*. New York.
- Hill, K., Howell, J., Hawkins, J., & Battin-Pearson, S. (1999). Childhood risk factors for adolescent gang membership: Results from Seattle, *Journal of Research in Crime and Delinquency*, 36, 300-322.
- Hindelang, M., Gottfredson, M., & Garofalo, J. (1978). *Victims of personal crime*. Cambridge: Ballinger.
- Huff, R. (1996). The criminal behavior of gang members and nongang at-risk youth. In C. Ronald Huff (ed.), *Gangs on America* (2nd edition). Thousand Oaks: Sage Publications.
- Huizinga, D., Loeber, R., & Thornberry, T. (1993). Longitudinal study of delinquency, drug use, sexual activity, and pregnancy among children and youth in three cities. *Public Health Reports*, 108, 90-96.
- Joe, K. & Chesney-Lind, M. (1995). 'Just every mother's angel': An analysis of gender and ethnic variations in youth gang membership. *Gender and Society*, 9, 408-430.
- Joe, K. & Hunt, G. (1997). Violence and social organization in female gangs. *Social Justice*, 24, 148-169.

- Klein, M. & Maxson, C. (1989). Street gang violence. Pp. 198-213 in *Violent Crime, Violent Criminals*, edited by Neil Weiner and Marvin Wolfgang. Newbury Park: Sage.
- Klepinger, D., Lundberg, S., & Plotnick, R. (1995). Adolescent fertility and the educational attainment of young women. *Family Planning Perspectives*, 27, 23-28.
- Lancot, N. & Smith, C. (2001). Sexual activity, pregnancy, and deviance in a representative urban sample of African American girls. *Journal of Youth and Adolescence*, 30, 349-372.
- Lauderback, D. (1992). Sisters are doin' it for themselves: A black female gang in San Francisco. *The Gang Journal*, 1, 57-70.
- Lauritsen, J., Sampson, R., & Laub, J. (1991). The link between offending and victimization among adolescents. *Criminology*, 29, 265-292.
- Liao, T. (1994). *Interpreting probability models: Logit, probit, and other generalized linear models series: Quantitative applications in the social sciences*. London.
- Miller, J. (1998). Gender and victimization risk among young women in gangs. *Journal of Research in Crime and Delinquency*, 35, 429-453.
- (2001). *One of the guys: Girls, gangs, and gender*. New York: Oxford Press.
- Miller, J. & Brunson, R. (2000). Gender dynamics in youth gangs: A comparison of males' and females' accounts. *Justice Quarterly*, 17, 419-447.
- Miller, W. (1975). *Violence by youth gangs and youth groups as a crime problem in major American cities*. Washington, D.C.: Government Printing Office.
- Molidor, C. (1996). Female gang members: A profile of aggression and victimization. *Social Work*, 41, 251-257.
- Moore, J. (1991). *Goin' down to the barrio: Homeboys and homegirls in change*. Philadelphia: Temple University Press.
- Moore, H. & Hagedorn, J. (1996). What happens to girls in the gang? pp. 205-218 in *Gangs in America*, 2nd ed., edited by C. Ronald Huff. Thousand Oaks, CA: Sage.
- (2001). *Female gangs: A focus on research*. Bulletin. Youth Gang Series. Washington, DC: U.S. Department of Justice, Office of Juvenile Justice and Delinquency Prevention.
- National Campaign to Prevent Teen Pregnancy. (2003). *Fact sheet: A look at the real costs of teen pregnancy*. Washington, DC.
- Peterson, D., Miller, J., Esbensen, F. (2001). The impact of sex composition on gangs and gang member delinquency. *Criminology*, 39, 411-447.
- Peterson, D., Taylor, T.J., & Esbensen, F. (2004). Gang membership and violent victimization. *Justice Quarterly*, 21, 793-815.
- Pintoff, R. (2006). *Do arrest and incarceration affect high school graduation?*
Submitted for publication
- Portillos, E. (1999). Women, men, and gangs: The social construction of gender in the barrio. In *Female gangs in America: Essays on girls, gangs, and gender*, edited by Meda Chesney-Lind and John M. Hagedorn, 232-244. Chicago: Lake View Press.

- Santelli, J., Lowry, R., Brener, N. (2000). The association of sexual behaviors with socioeconomic status, family structure, and race/ethnicity among us adolescents. *American Journal of Public Health*, 90, 1-7.
- Shaffer, J. N., & Ruback, R. B. (2002). Violent victimization as a risk factor for violent offending among juveniles. *Juvenile Justice Bulletin*. Washington, DC: U.S. Department of Justice, Office of Justice Programs, Office of Juvenile Justice and Delinquency Prevention.
- Schalet, A., Hunt, G., & Joe-Laidler, K. (2003). Respectability and autonomy: The articulation and meaning of sexuality among the girls in the gang. *Journal of Contemporary Ethnography*, 32, 108-143.
- Sutherland, E. (1947). *Criminology*. Philadelphia: Lippincott.
- Taylor, Carl. (1993). *Girls, gangs, women, and drugs*. East Lansing: Michigan State Press.
- Thornberry, T. (2001). Membership in youth gangs and involvement in serious and violent offending. In *The Modern Gang Reader*, edited by Miller et al., 164-172. Los Angeles: Roxbury Publishing.
- Thornberry, T. P., Krohn, M. D., Lizotte, A. J., Smith, C., & Tobin, K. (2003). *Gangs and delinquency in developmental perspective*. Cambridge: Cambridge University Press.
- Thornberry, T., Krohn, M., Lizotte, A., & Chard-Wierschem, D. (1993). The role of juvenile gangs in facilitating delinquent behavior. *Journal of Research in Crime and Delinquency*, 30, 55-87.
- Tolman, Deborah. (1994). Daring to desire: Culture and bodies of adolescent girls. In *Sexual cultures and the construction of adolescent identities*, edited by Janice M. Irvine, 250-284. Philadelphia: Temple University.
- Venkatesh, Sudhir A. (1998). Gender and outlaw capitalism: A historical account of the black sisters united "girl gang." *Signs*, 23, 683-709.
- Wang, John Z. (2000). Female gang affiliation: Knowledge and perceptions of at-risk girls. *International Journal of Offender Therapy and Comparative Criminology*, 44, 618-632.
- Weiss, Deborah. (2006). *Pregnancy and childbearing among U.S. teens*. Washington: McCormick Library.
- Wingood, G., DiClemente, R., Crosby, R., Harrington, K., Davies, S., & Hook, E. (2002). Gang involvement and the health of African American female adolescents. *Pediatrics*, 110, 57-64.
- Woodward, L., Fergusson, D., & Horwood, L. (2001). Risk factors and life processes associated with teenage pregnancy: Results from a prospective study from birth to 21 years. *Journal of Marriage and the Family*, 63, 1170-1184.
- Woodward, L., & Fergusson, D. (1999). Early conduct problems and later risk of teenage pregnancy in girls. *Development and Psychology*, 11, 127-141.
- Yamaguchi, K., & Kandel, D. (1987). Drug use and other determinants of premarital pregnancy and its outcome: A dynamic analysis of competing life events. *Journal of Marriage and the Family*, 49, 257-270.
- Yampolskaya, S., Brown, E.C., & Vargo, A. C. (2004). Assessment of teen pregnancy prevention interventions among middle school youth. *Child & Adolescent Social Work Journal*. 21, 69-83.