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THE EFFECT OF FATHER ABSENCE AND FATHER ALTERNATIVES ON FEMALE AND MALE RATES OF VIOLENCE

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ABSTRACT

The disappearance of family-centered males from communities has generated considerable concern among policymakers and criminologists alike since past research on the family structure of a community has revealed father absence to be a consistent and potent predictor of variation in levels of violence across ecological contexts. However, it is unclear *why* father absence is problematic (e.g., poor supervision, economic hardship, lack of role models). Also at issue is whether alternatives to resident fathers and husbands – such as older males referred to as "old heads" and co-resident grandparents – can mitigate some of the negative effects of father absence on community levels of violence. Attention to gender is particularly important to this issue of family structure and community violence since, both historically and more recently, there is considerable debate regarding whether family-related variables, and macro-structural predictors more generally, are of more consequence to female or male offending or if they have a more global effect.

Thus, the following research questions are posed: 1) Does father absence affect female and male rates of violence similarly? 2) Do the effects of father absence persist for both females and males once structural disadvantage and neighborhood guardianship structures are taken into account? 3) Do alternatives to resident fathers, namely old heads and co-resident grandparents, mitigate the negative effects of father absence on female and male violence rates? and 4) To what extent do changes in father absence drive trends in female and male levels of violence? County-level data from the UCR and the Census Bureau are utilized with seemingly unrelated regression techniques and longitudinal

hierarchical models to address these issues.

Father absence has a strong and significant effect on both female and male levels of violence across the three types of violence examined. Furthermore, the effects of father absence are not differentiated by gender. Though both structural disadvantage and supervisory structures influence community violence rates, the effects of father absence persist even after taking these factors into consideration. The presence of other males in the community and co-resident grandparents does mitigate *some* of the negative effects of father absence, especially in areas where father absence is particularly acute. The buffering effect of old heads is largely confined to homicide whereas the presence of co-resident grandparents is effective across violent offenses. Results are not differentiated by gender. Changes over time in the level of father absence in a community significantly predict changes in female and male rates of violence, at least for homicide and robbery.

SUMMARIES

Over the past several decades, there has been a marked increase in the share of families with absent fathers and husbands. For example, the percentage of children living without a father more than tripled, from 12 percent in 1960 to almost 40 percent in 1995 (McLanahan 1997). This decline of resident fatherhood has generated considerable concern among policymakers as much evidence indicates deleterious social consequences of this trend. At the individual-level, children from father-absent homes tend to manifest more behavioral problems including fighting and physical aggression (McLanahan 1997). Further, the two-adult family form has been demonstrated to insulate its adult members from involvement in violence as well (e.g., Warr 1993).

Policymakers are concerned that the increase in non-traditional family forms is indicative of a loss of community and social capital. The family institution has been identified as a source of community functioning and stability that forms a barrier against violence. Further, a community's family structure is indicative of its ability to effectively socialize residents, exert informal social control, and garner social capital and resources that buffer against violence (Biblarz and Raferty 1999). Compatible with this concern, at the community-level, "family disorganization" has emerged across a number of contemporary studies as one of the most potent and consistent predictors of community variation in levels of adult (and juvenile) violence (Blau and Blau 1982; Sampson 1987; Land, McCall, and Cohen 1990; Shihadeh and Steffensmeier 1994). It seems that the scope of father absence helps to distinguish between communities in terms of *level* of violent offending but also there is realistic concern that trends in father absence may have important consequences for *trends* in violence.

Though it is clear from previous research that the family structure of a community impacts its ability to resist violence, it is unclear exactly why widespread father absence is problematic. Some scholars suggest that father absence is problematic because it signals weak social control via poor supervision and decreased guardianship over public areas, allowing interpersonal conflicts to escalate to criminal violence. Others assert that father absence is merely a proxy for economic disadvantage and emphasize the lack of social capital and resources in areas deficient in family-centered men. Additionally, fathers collectively perform important socialization functions within communities, acting as role models and applying social stigma to enforce community norms. However, the dynamics of the relationship between father absence, social control, structural disadvantage, and socialization has rarely been examined at the community-level within the criminological literature.

Given the important roles within communities that fathers play such that pervasive father absence leads to high levels of violence, family sociologists and some criminologists have suggested that the presence of other types of adults might together be able to substitute for resident fathers and be able to mitigate some of the negative effects of father absence. For example, Steffensmeier and Harer (1999) identify a relatively recent shift in the nation's collective conscience, such that the aging cohort of baby boomers exert a moral influence over communities as well as a greater willingness to intervene for the common good. More specifically, Anderson (1990) identifies the presence of "old heads" within a community as powerful agents of socialization and social control for young adults. In fact Anderson even suggests that the old head "acted as surrogate father to those who needed...moral support" (3). Additionally, the presence

of these hard-working, family-centered males might bring resources and social capital to localities that would benefit the community as a whole. The female counterpart, sometimes identified as "othermothers" or community mothers, is also integral to a community's efforts to resist violence. These women, often grandmothers responsible for child-care and general supervision over the area, are part of a network of collective control and caregiving (Collins 2000). They are supportive of the family institution and may alleviate some of the stress and strain experienced by single mothers. The presence in communities of these alternatives to resident fathers may mitigate some of the negative effects of father absence, yet until now this has not been empirically examined.

The approach of this study is unique in that it considers these issues from a macro-perspective, with the community as the unit of analysis. Though macro-level community research has witnessed a revival over the past decade, a focus on gender as an analytical variable has remained virtually absent (but see Steffensmeier and Haynie 2000a, 2000b; Steffensmeier and Streifel 1992; Weisheit 1993). Attention to gender is particularly poignant to the issue of family structure's impact on rates of violence as well as to the larger debate regarding the universality of macro-structural predictors of violence. Both historically and more recently there has been debate over whether family-related variables are of more consequence to female offending or male offending. Many have argued that females will be more affected by disruptions within the private, familial sphere whereas males are more resistant to these pressures but more subject to economic hardship (Broidy and Agnew 1997; Durkheim 1952; Elliot and Voss 1974; Messner 1985; Parmelee 1918). Others contend that father absence will be more detrimental to male levels of violence due to the lack of positive male role models and the presence of

an authority figure (Reiss 1986; Wilson 1987). Yet others claim the effects of non-resident fathers are similar for males and females, arguing for global effects of father absence and macro-structural predictors more generally (McLanahan 1985; Steffensmeier and Haynie 2000).

Thus, there are several gaps in the criminological literature. The current research links together the emergent focus on community-level family structure (and other structural features of place) and the debate regarding the applicability of macro-factors to female offending with the concern among criminologists and family sociologists regarding the importance of family variables for female and male violence. Using data from the Uniform Crime Reports and the 2000 Census aggregated to the county-level, we explore the effects of father absence and alternatives to resident fathers on gender-disaggregated rates of violence across counties. This study also seeks to understand *under what conditions* father absence will have a criminogenic impact on communities. In addition, we use an HLM longitudinal framework and data from earlier time points (1970-2000) to examine the dynamic relationship between trends in father absence and female and male violent offending. Specifically, we ask: 1) Does father absence affect female and male rates of violence similarly?; 2) Do the effects of father absence persist for both males and females once community social control structures and structural disadvantage are taken into account; and 3) Can alternatives to resident fathers such as older responsible males (e.g., old heads) and care-taking grandmothers mitigate the negative effects of father absence on violence for both males and females? After establishing a firmer understanding of the functioning of father absence and gender-disaggregated violent offending, we examine the dynamic nature of this relationship: To

what extent do changes in father absence drive trends in female and male levels of violence?

This research goes beyond previous investigations by a) gender disaggregating violent crime rates and indicator variables, where theoretically appropriate, across metropolitan counties; b) drawing on a comparative approach to evaluate the effects of father absence and other structural variables on both female and male rates of violence; c) disentangling the family disruption-crime link by examining whether economic disadvantage associated with father absence or the lack of supervision attributed to female headed households is problematic; d) investigating whether alternate sources of economic resources, social control, and socialization aside from resident fathers are capable of mitigating female and male violence ; e) employing new analytic methods (i.e., HLM growth modeling techniques) to examine how female and male violence varies over time and place as a function of father absence.

Because this project examines the conditions under which father absence compromises a community's ability to resist male and female violence, this project requires ecological rather than individual-level data. Therefore, the unit of analysis for the gender-disaggregated analyses of the impact of father absence on violent crime is the approximately 2000 counties on which violent crime data are available for 2000. The dependent variables, adult female and male violent crime rates, are obtained from the Uniform Crime Reporting Program for police agencies in metropolitan areas. The agency-level crime data has been corrected for incomplete reporting by police agencies (i.e., less than 12 months of data); aggregated to the county level; adjusted for incomplete population coverage (i.e., non-participating or missing police agencies); averaged over a

three-year period to avoid annual fluctuations in events as rare as violent crime; and transformed into crime rates using US Census Bureau population figures to yield sex-specific county level arrest rates for those 18 and over. The sex-specific dependent variables are logarithmically transformed to induce homoscedasticity and to counteract the possible floor effect of these right-skewed distributions. Violent crimes included in this analysis are homicide, robbery and felony assault.

The data for the independent and control variables are derived from Bureau of Census Summary Tape Files 3 and 4 (STF). Key variables include father absence (defined as the percent of *families* that are headed by females), male capital (presence of old heads), community caregivers (presence of caregiving grandparents), structural disadvantage, supervisory structure (measure of available guardians), and a number of control variables (e.g., age structure, residential stability, etc.).

"Seemingly unrelated regression" techniques (SUR) are used to estimate separate models for females and males. This method corrects for correlated error across the equations. F-tests for equality of coefficients between female and male models estimated from this approach are used to determine if there are any significant differences across sub-groups in the strength of the effects of the independent and control variables. An overdispersed, hierarchical linear model is used to conduct a growth-curve analysis of the impact of changing family structure on within-county trends in female and male violence.

There were several key findings of this research. Father absence had strong and significant effects on variation in female and male violence rates across ecological contexts. Further, the effects of father absence are largely similar in magnitude for females and males. Both cross-sectional seemingly unrelated regression models from

1990 and 2000 as well as longitudinal growth curve models estimated using hierarchical linear modeling support these conclusions. Father absence as a predictor of violence is extremely robust for both female and male violence. Even after controlling for factors related to the deleterious consequences of father absence – structural disadvantage and community social control mechanisms– the association between father absence and female and male offending remained. Though these two factors likely mediate *some* of the effect of father absence on violence, other processes that are not as amenable to measurement using Census indicators, such as the capacity of resident fathers to mentor, protect, and act as moral compasses within communities, are likely at work.

Though the absence of resident fathers continues to exert direct effects on female and male violence, the presence of male capital and collective caregiving within communities can mitigate *some* of the violence producing effects of father absence. It is likely that the increased presence of a relatively large cohort of older males has a direct violence-reducing effect on both female and male violence, though results were not definitive. Old heads were found to be more effective in curbing homicide in localities that acutely lacked resident fathers, though they did little to stem robbery or felony assault and may even work to increase these types of violent offending by females and males. Results did not vary by gender. Though collective caregiving by resident grandparents was not found to be an effective alternative to resident fathers on average, in high father absence areas, the increased presence of these caregivers was significantly associated with reduced rates of violence across gender and violence type. Thus, the presence of grandmothers has a clear buffering effect where father absence is particularly acute for both females and males. However, it should be noted that although male capital

and collective care-giving made up for some of the community deficits associated with widespread father absence, father absence continued to exert significant, violence producing effects on gender-disaggregated violence rates.

Consistent with the robust nature of the cross-sectional father absence-violence relationship for both females and males, longitudinal models suggest changes in father absence are significantly related to variability in trends in homicide and robbery, but not felony assault. Further, trends in father absence explained a substantial proportion of variance (i.e., overdispersion) in trends in violence. Few significant gender differences emerged in the relationship between changes in father absence and trends in violence.

Though this project represents a considerable advance in the field's knowledge of the relationship between family structure and gender-disaggregated rates of violence across ecological contexts, several questions emerge and there are a number of caveats of the current study to be attended to by future research. The main issues discussed include: Why might we expect such similarities across gender in the effect of father absence on violence across ecological contexts? In what ways and why might older adults benefit communities in terms of violent crime? In light of the mixed findings regarding male capital, why might older males be detrimental to community violence control efforts? Related to these issues, are there gender differences in the ability of older adults to suppress violence within communities? In reviewing and exploring the nature of findings from this research, a number of caveats and directions for future research are embedded throughout the discussion. They include: the paucity of official statistics as measures of both violence and independent variables; the failure of this research to explore linkages between micro- and macro- factors associated with the family structure-violence

relationship; and the inability of this research to address issues of race and ethnicity. Future research should examine whether these relationships vary by gender*ethnicity; use alternate sources of data to verify these findings; examine whether the institution of old heads has changed over time; and qualitatively flesh out the mediating mechanisms of identified relationships between gender, father absence, and violence.

The findings from this research suggest that solutions to violence for both females and males can be applied at the community-level. Of note, the marked similarities in factors driving community violence levels for both females and males suggests that prescriptions against violence are, to some extent, gender neutral. Female and male violence are entwined so measures taken to reduce male violence are also likely to reduce female violence, and vice versa. By the same token, there were also some gender differences identified and it was suggested that the mechanisms underlying female and male violence might differ. As such, gender-specific policies that identify what it means to be "female" or "male" are complementary to more global violence-reducing policies.

Regarding the finding that the presence of fathers strengthens community abilities to resist violence, the policy implications are to make men more "marriageable" as partners. This would require that there be sufficient job opportunities at the requisite skill-level of residents. In addition, incarceration policies that remove males from the community may have negative consequences for these areas in at least two respects. First, the large-scale removal of young males from a community tips the sex ratio such that competition over males is intensified. Research on family formation processes suggests that marriage is less likely where males are scarce. Further, the competition over marriageable partners is hypothesized to aggravate stress among women in a way

that fosters female violence. Second, the imprisonment of males, especially for non-violent (e.g., drug) offenses stigmatizes a substantial portion of males in some communities such that the ability to secure viable employment in the legitimate sector is severely handicapped. Not only does this reduce the "marriageability" of males in these types of areas, but the economic deprivation associated with unemployment also exacerbates the likelihood of male (as well as female) violence. The findings from this research also suggest that extended kin networks, primarily grandmothers, can alleviate some of the violence-producing qualities of high father absence areas. Governmental support to co-resident grandparents, including health care as well as transfer payments, that recognizes the importance of these networks is warranted. Also of note, the findings regarding the similarity of underlying factors that produce violence for females and males suggests that community solutions

There are also some micro-level policy implications as well. The results from this research suggest that, though the economics and supervisory capacity of an area are important, there are other immeasurable qualities that fathers offer to communities, such as mentorship. As such, Big Brother/Sister programs and other programs that create opportunities for mentorship may work to reduce violence. Supervision and guardianship of communities is also important, so programs that engage youth in after-school activities and young adults in activities such as work or legitimate leisure pursuits (e.g., the arts, sports, etc.) might aid mother-only families in the ability to supervise young adults as well as offer opportunities to create networks of collective control.

Chapter 1: Introduction and Literature Review

Introduction

Over the past several decades, there has been a marked increase in the share of families with absent fathers and husbands. For example, the percentage of children living without a father more than tripled, from 12 percent in 1960 to almost 40 percent in 1995 (McLanahan 1997). This decline of resident fatherhood has generated considerable concern among policymakers as much evidence indicates deleterious social consequences of this trend. At the individual-level, children from father-absent homes tend to manifest more behavioral problems including fighting and physical aggression (McLanahan 1997). Further, the two-adult family form has been demonstrated to insulate its adult members from involvement in violence as well (e.g., Warr 1993).

Policymakers are concerned that the increase in non-traditional family forms is indicative of a loss of community and social capital. The family institution has been identified as a source of community functioning and stability that forms a barrier against violence. Further, a community's family structure is indicative of its ability to effectively socialize residents, exert informal social control, and garner social capital and resources that buffer against violence (Biblarz and Raferty 1999). Compatible with this concern, at the community-level, "family disorganization" has emerged across a number of contemporary studies as one of the most potent and consistent predictors of community variation in levels of adult (and juvenile) violence (Blau and Blau 1982; Sampson 1987;

Land, McCall, and Cohen 1990; Shihadeh and Steffensmeier 1994). It seems that the scope of father absence helps to distinguish between communities in terms of *level* of violent offending but also there is realistic concern that trends in father absence may have important consequences for *trends* in violence.

Though it is clear from previous research that the family structure of a community impacts its ability to resist violence, it is unclear exactly why widespread father absence is problematic. Some scholars suggest that father absence is problematic because it signals weak social control via poor supervision and decreased guardianship over public areas, allowing interpersonal conflicts to escalate to criminal violence. Others assert that father absence is merely a proxy for economic disadvantage and emphasize the lack of social capital and resources in areas deficient in family-centered men. Additionally, fathers collectively perform important socialization functions within communities, acting as role models and applying social stigma to enforce community norms. However, the dynamics of the relationship between father absence, social control, structural disadvantage, and socialization has rarely been examined at the community-level within the criminological literature.

Given the important roles within communities that fathers play such that pervasive father absence leads to high levels of violence, family sociologists and some criminologists have suggested that the presence of other types of adults might together be able to substitute for resident fathers and be able to mitigate some of the negative effects of father absence. For example, Steffensmeier and Harer (1999) identify a relatively

recent shift in the nation's collective conscience, such that the aging cohort of baby boomers exert a moral influence over communities as well as a greater willingness to intervene for the common good. More specifically, Anderson (1990) identifies the presence of "old heads" within a community as powerful agents of socialization and social control for young adults. In fact Anderson even suggests that the old head "acted as surrogate father to those who needed...moral support" (3). Additionally, the presence of these hard-working, family-centered males might bring resources and social capital to localities that would benefit the community as a whole. The female counterpart, sometimes identified as "othermothers" or community mothers, is also integral to a community's efforts to resist violence. These women, often grandmothers responsible for child-care and general supervision over the area, are part of a network of collective control and caregiving (Collins 2000). They are supportive of the family institution and may alleviate some of the stress and strain experienced by single mothers. The presence in communities of these alternatives to resident fathers may mitigate some of the negative effects of father absence, yet until now this has not been empirically examined.

The approach of this dissertation study is unique in that it considers these issues from a macro-perspective, with the community as the unit of analysis. Though macro-level community research has witnessed a revival over the past decade, a focus on gender as an analytical variable has remained virtually absent (but see Steffensmeier and Haynie 2000a, 2000b; Steffensmeier and Streifel 1992; Weisheit 1993). Attention to gender is particularly poignant to the issue of family structure's impact on rates of violence as well

as to the larger debate regarding the universality of macro-structural predictors of violence. Both historically and more recently there has been debate over whether family-related variables are of more consequence to female offending or male offending. Many have argued that females will be more affected by disruptions within the private, familial sphere whereas males are more resistant to these pressures but more subject to economic hardship (Broidy and Agnew 1997; Durkheim 1952; Elliot and Voss 1974; Messner 1985; Parmelee 1918). Others contend that father absence will be more detrimental to male levels of violence due to the lack of positive male role models and the presence of an authority figure (Reiss 1986; Wilson 1987). Yet others claim the effects of non-resident fathers are similar for males and females, arguing for global effects of father absence and macro-structural predictors more generally (McLanahan 1985; Steffensmeier and Haynie 2000).

Thus, there are several gaps in the criminological literature. The current research links together the emergent focus on community-level family structure (and other structural features of place) and the debate regarding the applicability of macro-factors to female offending with the concern among criminologists and family sociologists regarding the importance of family variables for female and male violence. Using data from the Uniform Crime Reports and the 2000 Census aggregated to the county-level, we explore the effects of father absence and alternatives to resident fathers on gender-disaggregated rates of violence across counties. This study also seeks to understand *under what conditions* father absence will have a criminogenic impact on communities.

In addition, we use an HLM longitudinal framework and data from earlier time points (1970-2000) to examine the dynamic relationship between trends in father absence and female and male violent offending. Specifically, we ask: 1) Does father absence affect female and male rates of violence similarly?; 2) Do the effects of father absence persist for both males and females once community social control structures and structural disadvantage are taken into account; and 3) Can alternatives to resident fathers such as older responsible males (e.g., old heads) and care-taking grandmothers mitigate the negative effects of father absence on violence for both males and females? After establishing a firmer understanding of the functioning of father absence and gender-disaggregated violent offending, we examine the dynamic nature of this relationship: To what extent do changes in father absence drive trends in female and male levels of violence?

This research goes beyond previous investigations by a) gender disaggregating violent crime rates and indicator variables, where theoretically appropriate, across metropolitan counties; b) drawing on a comparative approach to evaluate the effects of father absence and other structural variables on both female and male rates of violence; c) disentangling the family disruption-crime link by examining whether economic disadvantage associated with father absence or the lack of supervision attributed to female headed households is problematic; d) investigating whether alternate sources of economic resources, social control, and socialization aside from resident fathers are capable of mitigating female and male violence ; e) employing new analytic methods

(i.e., HLM growth modeling techniques) to examine how female and male violence varies over time and place as a function of father absence.

This chapter begins with a review of prior literature on the general relationship between father absence and crime with specific emphasis on social control and stratification explanations of the deleterious consequences of father absence for communities. Next, the potential role of alternatives to resident fathers (e.g., old heads and grandmothers) in violence prevention is discussed. The chapter concludes with a rationale for expecting (or not expecting) gender differences in the impact of father absence and other guardians on gender-disaggregated rates of violence.

Father Absence and Violent Crime

Concern with family disorganization as a source of delinquency dates back from at least the 19th century (Bellingham 1986). For example W.I. Thomas (1927) emphasized the role of "broken homes" as a pathway to delinquency. A breakdown in the family – the main socializing unit – may lead to inadequate socialization or bonding which might result in norm breaking and law violation. Nye (1958) argued that family structure impacted violence indirectly, via loss of direct parental control but also by decreased parent-child attachments. However, this traditional premise of an individual-level link between family disruption and crime has not received much empirical support. Evidence of an individual-level link between family structure and crime is weak and inconsistent, particularly for the more serious and violent crimes (Cernovich and

Giordano 1987; Ensminger, Kellam, and Rubin 1983; LaFree, Drass, and O'Day 1992; Ross and Sawhill 1975; Shihadeh and Steffensmeier 1994; Wilkinson 1980).

In contrast to individualistic explanations, more current thinking on the relationship between family structure and crime has built on elements of systemic social disorganization theory and has consequently shifted in emphasis to the structural effects of widespread father absence on community levels of violence. Though not hypothesized to be a variable of consequence by Shaw and McKay, recent reformulations and extensions of social disorganization theory have identified father absence as a potent variable affecting community-level variations in violent offending. Indeed, macro-level research consistently finds positive effects of family disruption[1] on rates of violence (Blau and Blau 1982; Huff-Corzine et al 1986; Land, McCall, and Cohen 1990; Messner 1985; Messner and Golden 1992; Messner and Sampson 1991; Ousey 1999; Sampson 1986, 1987; Shihadeh and Steffensmeier 1994; Shihadeh and Flynn 1996; Simpson 1985; Williams 1983; Williams and Flewelling 1988). In order to explain this relationship, two main accounts have developed – one emphasizing the social control mechanisms that are more prevalent where two-parent families predominate, the other emphasizing the economic stratification and disadvantage elements ubiquitous among areas characterized by many single-parent families.

Some scholars suggest the relationship between father absence and crime is due to a community's diminished capacity to exercise informal social controls over its residents

(e.g., Messner and Sampson 1991; Sampson 1987). Where father absence is common, poor supervision of young adults and decreased guardianship over public areas may allow verbal arguments to develop into aggressive acts of violence and criminal activity to flourish (Sampson 1987). Others, however, emphasize the lack of human and social capital in localities where father absence is prevalent (Rose and Clear 1998). These scholars argue that communities suffer a net loss in economic and political power when males are absent. Theorists suggest that economic distress is a precipitator of negative social conditions that undermine legitimacy and weaken social norms restraining the use of violence (Blau and Blau 1982). The milieu effects of deprivation-related frustration extend to all residents within the social context, regardless of their individual economic circumstances or family structure. Though both the social control and stratification explanations of the family disruption-crime link have received some empirical support, the two have yet to be empirically disentangled[2]. Indeed, Sampson (1987, p. 376) emphasizes that the mechanism linking family disruption with elevated levels of violence "await[s] further research." Further, fathers likely perform collective functions in addition to social control and economic provision, including roles as mentors and/or protectors. We first examine how pervasive father absence impacts community-level

[1] In some of these studies, family disruption was operationalized as percent divorced or percent of children under 18 not living with both parents rather than percent female-headed families as operationalized here.
[2] In fact, it is common to link the proportion of female headed households with measures of poverty and other indicators to create a "disadvantage index" (e.g., Land, McCall, and Cohen 1990).

social control and stratification[3]; we then speculate about other contributions that fathers as a group make to communities.

Social Control: Father Absence and Lack of Supervision

Ecological theories of crime have typically been concerned with the impact of social control on crime and, thus, have emphasized differences in the capacity of communities to control violence. It is purported that a high fraction of single-parent families in a community attenuate informal social controls that serve to restrain threatening behaviors and criminal acts. Though the precise mechanisms by which father absence contributes to violent crime have not been tested, systemic social disorganization theorists argue that the control capacity of areas with high family disorganization is weakened via decreased supervision; simply put, there are fewer guardians due to absent fathers and husbands. In addition, localities with many female-headed households are less capable of exerting informal control due to the time constraints on single mothers, who tend to have higher rates of labor force participation (Waite 1981). Limited free time of single working mothers may hinder supervisory behavior, organizational participation, and contact with neighbors[4] (Messner and Sampson, 1991; Sampson 1985,

[3] The framework of communities as "units of stratification" and "units of social control" is drawn from Shihadeh and Steffensmeier 1994).

[4] A good deal of empirical evidence suggests that community levels of family disruption *do not* alter the extensiveness of social networks/social interaction or organizational participation (Sampson and Groves 1989; Bellair 1997; Campbell and Lee 1992). However, though family disorganization does not impact the emergence of ties, it does seem to alter the effectiveness of those ties: "In short, social ties among women in communities with many female-headed households may not involve violence-preventing supervisory behavior to the same extent as ties in other neighborhoods. Women in such contexts...may still lack the resources necessary to extend such networks into the realm of supervision of potential offenders and

1986, 1987; Sampson and Groves 1989) – all of which are theorized to have preventive effects on violence.

Two-parent households provide increased supervision over their own children and property (Cohen and Felson 1979) but, perhaps more importantly, the opportunity for deviant behavior is less where two-parent families are the norm due to the guardianship exercised over the public activities of others within the community (Sampson 1987). Guardianship includes acts such as taking note of and/or questioning strangers, supervising youth activities and peer groups, watching over one another's property, and intervening in local disturbances (Messner and Sampson 1991). More importantly than intervening in actual criminal acts, guardians serve a preventive function by which they are better able to control the activities of peer groups (e.g., "hanging out," truancy, vandalism) that set the context for more serious involvement in violence and gang delinquency by adults (Sampson 1987). In addition, unsupervised peer activity has been demonstrated to contribute to higher levels of deviance and violence (Sampson and Groves 1989).

Thus, the presence of resident fathers serves an important social control function within communities by supervising public activities within the community, supplementing female authority, and intervening into conflicts before they get out of hand. This "community guardianship role" is socially expected of family-centered men more so than women or unattached, single men. However, aside from the absence or

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intervention in violence" (Rountree and Warner 1999: 806-807). As suggested below, either male authority

presence of family centered men, localities differ in their capacities to exert informal social control. Perhaps areas that are rich in community guardians and supervisory structures (e.g., as measured by the presence of available guardians) can overcome deficits in resident fathers. If the primary function of fathers is related to social control, the addition of direct measures of community supervisory structures should erase the effects of father absence on violence. Therefore, we ask: *Controlling for social control mechanisms within the community, does the effect of father absence on female and male violence persist?*

Social Stratification: Father Absence and Lack of Community Resources

A common theme of communities and crime research is the importance of economic hardship for influencing rates of violence. It was empirically documented as early as the turn of the 20th century that crime tends to be concentrated where resource deprivation in concentrated (Shaw and McKay 1942), and more recent empirical work confirms the continued importance of economic marginalization in elevating male and/or total rates of violent crime (Blau and Blau 1982; Land, McCall, and Cohen 1990; Patterson 1991; Williams and Flewelling 1988). Theorists suggest that economic distress is a precipitator of negative social conditions that undermine legitimacy and consequently weaken social control and norms restraining the use of violence (Blau and Blau 1982). The milieu effects of frustration related to feelings of deprivation extend to all residents

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or economic resources may account for these conclusions.

within the social context, regardless of their individual economic position/family structure (Allan and Steffensmeier 1989).

As Wilson (1987; 1993) empirically demonstrates, father-absent households are far more vulnerable to poverty than other family types, with these types of households having poverty rates almost five times that of married-couple families. In addition, non-resident father families are more likely than father-headed families to be persistently poor. Moreover, female-headed households typically have less earning potential than other family forms and less labor force attachment/activity (Wilson 1996: 93-94). Not only is there an association between economic deprivation and family form at the individual level, but female headed households are more likely to be found in areas of concentrated poverty (see Appendix A).[5] This close association between family form and living in circumstances of poverty has continued to plague researchers. A common approach to dealing with the close association between poverty and family disruption has been to create an index of these components (e.g., Land, McCall, and Cohen 1990). Typically, indicators of economic disadvantage (e.g., median income, percent in poverty, inequality) load on the same factor as family form. However, as Figuera-McDonough (1992) points out, on a theoretical level, researchers are confusing an organizational element of communities (family disruption) with a demographic feature of communities (feminization of poverty/resource deprivation).

[5] This being the case, it is also important to note that there is considerable variation in levels of father absence and poverty across counties.

It is important to note that research addressing the impact of residing in a female-headed family indicates that features of the area, such as poverty, may contextualize the negative effects of these types of households. For example, families headed by females are only vulnerable if they lack resources (Hogan and Kitagawa 1985; Cernovich and Giordano 1987; Matsueda and Heimer 1987). These results suggest that it is not (solely) the lack of supervision/control exercised in areas of extensive father absence that allows crime to occur. Rather, the lack of economic resources found in areas with many absent fathers may create contexts conducive to crime, as theorized above.

Men, especially men in families, provide many economic resources to a community. For example, men in families typically provide monetary support, which may allow women's social networks to function more adequately to control crime; the added resources available in two-parent homes allows women to devote more energy to the community networks that have been found to deter crime (Rountree and Warner 1999). Moreover, because men tend to have broader ties than women, males provide extensive linkages to resources external to the community, including those that interact with formal agents of social control and other sources of assistance to the community.

Thus, the absence of family-centered males can have a significant impact on the social capital and availability of financial resources a community can draw upon. This economic disadvantage, in turn, can create contexts that are relatively more conducive to adult criminal violence via the effect of deprivation on frustration that leads to acts of violence and on norms that restrain/control the use of violence. But, because most

research has combined father absence and resource deprivation, it has been difficult to disentangle the relationship between family form and violence[6]. Therefore, this research asks: *Do father absence effects persist after structural disadvantage is taken into account?*

Other (Immeasurable) Functions of Resident Fathers: Socialization, Protection, and Stability

As alluded to earlier, the role of fathers within communities is much more nuanced and involved than mere agents of social control and providers of resources and social capital. Fathers also fill roles involving socialization (e.g., role modeling, developing empathy, teaching gender roles) and protection (e.g., daughters from abuse, sons from violence, and wives from assault). Further, the dual-parent family form is mutually beneficial for adult men and women and provides stability to the community as a whole. All of these factors create conditions that are incompatible with violence when fathers are largely present in the community.

Fathers as agents of socialization act as role models for both boys and girls within the community and offer guidance and instruction in ways that restrain the use of violence. For males, fathers as a group teach boys about male responsibility and how to

[6] There are several studies that examine family form as separate from economic indicators, though none of these studies focused specifically on the relationship between the two. Sampson (1987) finds significant positive effects of female headed households on white and black robbery offending rates, controlling for per capita income and welfare payments as indicators of disadvantage; per capita income generally has null effects. Shihadeh and Steffensmeier (1994) examined the indirect effect of inequality on violent crime. They find that income inequality increases family disruption, which elevates rates of black violence. Lastly, Blau and Golden (1986) find that criminal violence is higher in metropolitan areas where family

be suitably assertive (Popenoe 1996). Further, fathers prevent male peer groups from becoming too dominant a force within communities (Anderson 1990). For females, fathers teach daughters how to trust and relate to males and socialize them to choose "marriageable" partners (i.e., those not involved in violence) (Popenoe 1996).

Crucial for the control of violence, empathy and messages unfavorable to the commission of violence must be disseminated (Gilligan 1982). Developmental psychologists assert that fathers are more important for the development of socially acceptable forms of behavior that do not include violence and aggression (Popenoe 1996). In other words, fathers teach self-control and are models for compassion and empathy, for both males and females, in ways that quell violence. Fathers are important sources of messages unfavorable to interpersonal violence that permeate throughout the community.

Resident fathers impose expectations about gender roles that serve to prevent criminal violence whereas communities that are deficient in resident fathers lack an important source of socialization for young men and women. For males, absent fathers and the lack of male role models lead to greater interpersonal violence and exploitative behavior toward women (Draper and Harpending 1982). Further, in the absence of responsible, mature males, young men develop "hypermasculine" behavior in an attempt to prove what it means to be a man through violent behavior (Popenoe 1996:156). For females, violent behavior is inconsistent with traditional gender expectations that

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disruption (as measured by % divorced/separated) is greater; in addition, these rates are unrelated to an

encourage women to be soft and yielding (Steffensmeier and Allan 1996); to the extent that females are discouraged from violent responses and other "unfeminine" behavior by husbands and fathers, there will be less female violence in the community. Further, where fathers and husbands are largely present, females are more insulated from involvement in the breaking up of fights, surveillance, and street culture in general and its concomitant violence. Also, females from father absent areas are likely to have more relations with males at a younger age with fewer restrictions regarding sexual involvement; this leads to greater involvement in violence because female violence is often a response to provocation from males or a result of co-offending with males (Miller 1986).

Areas with an adequate supply of fathers offer protection to daughters, sons, and wives, with beneficial effects regardless of gender. Daughters and wives are protected from abuse from young males and strangers given the authority of mature, responsible, family-oriented males. Also, as stated above, males are more restrained in their use of violence where family men are available to socialize young males to acceptable thresholds of aggression and violence. Sons are protected from violence via regulation of the dominance of the peer group and the social expectation that fathers will step in to break up fights (Popenoe 1996). Popenoe states "Neighborhoods without fathers are neighborhoods without men able and willing to confront errant youth, chase threatening gangs, and reproach delinquent fathers" (1996:140).

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area's poverty level once other conditions are controlled.

Finally, areas that are plentiful in dual-parent homes enjoy more overall stability, which is beneficial to communities as a whole (Durkheim 1952). Resident fatherhood is a mutually beneficial family form for both adults. It prevents violence via the mutual support offered to men and women in stable relationships that keeps stress and strain at a minimum; provides stakes in conformity by offering strong disincentives to engage in criminal violence; and brings access to broader and more differentiated social networks of relatives and friends that provide social capital and more economic resources as well as offering coping mechanisms and sources of social support. Further, greater father presence assists the community by freeing mothers to participate in community organizations and build linkages and social capital that ultimately act to restrict violence within the community.

Given the important and varied roles that cooperatives of fathers play in terms of community violence prevention, it is vital that we understand the conditions under which father absence is least detrimental. Though some argue that the importance of *biological* fathers cannot be underestimated (e.g., Popenoe, 1996), others suggest that communities can draw on alternative sources of resident fathers – including older responsible males and involved, caregiving grandmothers.

Community Alternatives to Resident Fathers: Male Capital (Old Heads) and Community Caregivers (Grandmothers)

Studies of macro-level links between family form and violent crime typically do not take into account the community's capacity for alternative forms of social control,

social capital, and socialization aside from two-parent families[7]. The proportion of older adult males and/or the share of care-taker grandparents at large in the community are part of a *network of collective control.* These older adults can play vital roles as role models, guardians, or mediators who can have a significant impact on the prohibition of violence. First we discuss the role of male capital – what the presence of a surplus of older men can bring to a community; then we examine the potential impact of grandmothers as community caregivers. Throughout this section, we highlight the importance of gender in both preventing and engaging in acts of violence.

Male Capital and Old Heads

The presence of older, responsible males in an area has been identified as a central aspect of social organization within communities. Anderson (1990) describes members of this *community institution* as hardworking men who aggressively sought out young men in their late teens or early twenties in order to socialize them to fulfill their responsibilities regarding work, family, and the law and to assist them in their transition to responsible adult roles. In addition to preaching an anti-crime and anti-trouble message, old heads acted as guidance counselors, advising young adults and intervening in trouble (1990: 69) – shepherding these young people into productive adulthood. These

[7] Though Messner and Sampson (1991) explore the effects of male presence on violent crime as mediated though family disruption, their intent is not to parcel out alternative guardianship practices in a community. The focus, rather, is on the influence of a shortage of males on family formation processes and the subsequent influence of female headed households on violence. Thus, their measure of sex composition is the number of males per 100 females ages 15-59. They conclude that an area's sex ratio impacts violent crime only through family formation processes, which directly influence violent crime. Hence, there is evidence that the demographic makeup of a community can have a significant impact on its violent crime rate, albeit indirectly.

older men, typically in their fifties or sixties, often "acted as a surrogate father to those who needed attention, care, and moral support" (Anderson 1990:3). They were considered role models within the community as well as authority figures. This highlights the potential importance of their role in communities that lack resident fathers as they perform many of the social functions usually filled by biological fathers. The old head also provides a measure of social capital to a community. He represents an important linkage between the community and larger society, both through his own legitimate employment and also via finding paid employment for young men outside the boundaries of the community (1990:71). The old head's role of surrogate father, role model, authority figure, and provider of social capital and the implications for effective crime control are now discussed in more detail.

Anderson (1990) and Wilson (1987) emphasize the importance of adult male networks within communities in order for effective crime control to take place. They argue that in contexts of widespread family disruption, the effectiveness of informal social control in preventing violence can break down. The authority of women, particularly in the context of single-parent families, may carry less weight when not supported by male authority. In particular, mother-only families are especially vulnerable to the challenge of male peer groups: "In those domestic situations in which there is only one adult...the dwelling may be viewed by young boys, superficially at least, as essentially an unprotected nest...In such a setting, a man, the figure the boys are prepared to respect, is not there to keep them in line" (Anderson 1993: 85). The mere

absence of mature adult males may be detrimental to communities because older men can provide the traditional male authority necessary to supplement the private networks of community women[8].

Indeed, empirical research demonstrates that female ties and informal controls, though important in controlling violence, operate at a diminished capacity in the absence of male networks that serve to augment/supplement female authority (Rose and Clear 1998). Rountree and Warner (1999) find that although the level of neighborhood family disruption does not affect the social ties of men or women, female ties are less effective in controlling violence where males are absent. Conversely, female efforts to exercise informal social control are most effective in communities where female-headed households are minimal. As Anderson and Wilson propose, the physical presence of older males in a community may provide the necessary supervision and guardianship structures necessary to control violence. However, Rountree and Warner are not directly measuring capacity for guardianship; rather they examine social ties (i.e., borrowing from, dining with, and helping a neighbor) that are thought to augment a community's capacity to exercise guardianship through a "*network of collective control*" (Felson 1986: 124; Thrasher 1963; Reiss 1986). In addition, their research suggests that males bring "something" to the table other than their local networks because male ties did not

[8] Even in areas where the adult males also engage in criminal activities and violence themselves, there is no evidence to suggest that they cannot or will not act as shepherds. As Venkatesh's (1997) research demonstrates, adult gang members involved in criminal activities also contributed to the well-being of the community by acting in supervisory capacities over youth and as protectors/escorts. Furthermore, even criminal men can enhance local networks and ties thought to be vital for successful informal social control efforts (Rose and Clear 1998; Rountree and Warner 1999; Wilson 1987).

contribute to diminished levels of violence. One possibility is that males bring monetary resources and other forms of social capital to communities that diminish the incentive/motivation for violence.

Thus, the presence of old heads, particularly in localities with high father absence, are expected to reduce levels of violence via their roles as role models, authority figures, and providers. While Anderson suggests that old heads sometimes perform the same functions for young women in the community as well, the majority of old head-young adult relationships are between males. And, the focus of old heads is clearly on assisting youth in their transition to *manhood* (Anderson 1990:69). Therefore, one might expect that the crime reducing effect of old heads might be greater on male levels of violence[9].

One caveat is that Anderson laments the gradual disappearance of the institution of old heads that used to be so prominent in communities. He argues that, due to the loss of legitimate employment opportunities in many communities, traditional old heads are losing their prestige, authority, and credibility as role models (Anderson 1990:72). Younger, "new" old heads are supplanting the older, responsible men as role models for young men in the community to emulate. These younger men are products of the street gang and indifferent to the law. Rather than gainful employment, they emphasize the value of making a quick buck and material possessions. Further, some of the old heads that used to be pillars of the community are resigning from their roles and may even renounce what they once stood for. One old head that Anderson speaks with implicates

other old heads: "There's a lot o' young men doing the dope thing. They sell it, get high on it...And I'll tell you something, as quiet as it's kept [between you and me]. There are some old heads out here selling that dope" (1990: 73). Thus, there is some reason to suspect that, rather than reducing violence and crime, old heads may not have the same effect they once did and, perhaps, may even be contributing to community violence.

Community Caregivers: Grandmothers

While male capital is hypothesized to have effects mainly on male violence rates, female old heads may have a more universal effect on crime prevention: "If old heads were important for boys, they were also important for girls, in similar ways. The female old heads were seen as mature and wise figures in the community, not only by women and girls, but also by many young men" (Anderson 1990:73). Female old heads, often referred to as othermothers, are an important source of social control and organization for a community (Collins 1986), but they also play a critical role in offering social support and coping mechanisms to (single) parents under stress. Typically, they are grandmothers, usually over the age of 40 (James 1993). These women, through bonds of kinship and networks of friendship, play an important role in communities, giving advice, doling out discipline, and, sometimes, acting as community organizers (Anderson 1990: 73).

Grandmothers are an important source of social sanction and social control within communities. For example, take this statement from a female old head: "When you see

[9] Old heads might impact female levels of violence indirectly via the violence reducing effect on males –

any child out there doing wrong...you corrects him...I don't care what I'm doing, if I see somebody *fighting, arguing,* or whatever...They come through here, *get in a fight*, I get out there and *stop it*" (Anderson 1990:74, my emphasis). In this example, the othermother played a direct role in the prevention of violence. In a more indirect manner, grandmothers act as role models by being upstanding citizens, providing supervision, and offering anti-crime and anti-violence advice. Additionally, via her role as community othermother, these grandmothers collectively organize, making up a core group in the community, in an effort to bring more resources and other forms of social capital to their community (Anderson 1990).

Clearly, these older women play a central role in communities; further, their role may be enhanced where fathers are largely nonexistent, though Collins (2000) argues for the centrality of women despite the absence of husbands and fathers (i.e., an additive rather than an interactive effect). Taking on the role of "extra parent" or "surrogate mother," grandmothers are supportive of the family institution and offer an outlet for overburdened parents. Parents come to rely on grandmothers for emotional support, particularly where violence and incarceration has taken its toll on communities (Hunter 1997). She might act as a third party who strengthens the relationship between parent and child or she might step in to assist strained bloodmothers who lack the preparation or desire for motherhood (Collins 2000:180). Grandmothers serve a critical function in communities, from taking on child-care responsibilities (Stack 1974) to sitting watch on

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much of female violence is in response to male aggression or co-offending with male partners.

porches and intervening when necessary (Anderson 1990:4) to alleviating the stress and strain of women and mothers attempting to fulfill many social roles.

Empirical results at the individual level, though, have been somewhat mixed in terms of the violence-prevention benefits of grandmothers as caretakers[10]. At the individual-level, some researchers have identified distinctly negative effects of co-resident grandparenting (McLanahan and Sandefur 1994; East and Felice 1996; Under and Cooley 1992). For example, McLanahan and Sandefur (1994) linked co-residence with grandparents to an increased risk of dropping out of school – a likely precursor to delinquency and/or violence. Others find that these family forms lead to a greater likelihood of engaging in problem behaviors (Dornbusch et al 1985), such as earlier initiation of substance use (Flewelling and Bauman 1990).

Widespread co-resident grandparenting may be an indicator of social disorganization or reduced social capital. For example, some of the leading causes of multigenerational family formation, including unemployment, incarceration, and substance abuse (Burton 1992; Burnette 1997; Minkler 1999), are indicators of social disorganization. Indeed, Pebley and Rudkin (1999) suggest that grandparents step in when parent(s) are not able to provide supervision and guidance, a lack of informal social control that is typical of socially disorganized areas. The relevance to community-level

[10] We are unaware of *any* research that examines whether areas rich in community caregiving and grandparenting are better able to resist violence, or crime of any type. Therefore, it is necessary to draw on individual-level empirical research to speculate about possible outcomes at the aggregate level. However, we recognize that micro- and macro- level processes likely differ and we understand that outcomes identified at the aggregate-level are not necessarily generalizeable to the individual-level.

violence is that areas where co-resident grandparenting is more prevalent are more likely to have trouble resisting violence due to factors related to social disorganization (Stark 1974). Further, this type of family form is more typically poor and, with time-constraints faced by community members due to serving multiple roles, the building of social capital via community groups and liaisons with outside government officials is compromised. Therefore, widespread co-resident grandparenting may be indicative of particularly acute social disorganization and lack of social capital and, therefore, may not contribute to violence prevention, regardless of level of father absence.

On the other hand, some individual-level research identifies positive effects of multigenerational families and grandmothers as caretakers (Aquilino 1996; Entwisle and Alexander 1996; Leadbeater and Bishop 1994; Pope et al 1993). For example, living in a multigenerational family has been found to lead to positive outcomes such as higher educational achievement and attainment or prevention of truancy and/or dropping out (Aquilino 1996; Entwisle and Alexander 1996). DeLeire and Kalil (2002) found that youth living in multigenerational families had outcomes related to delinquency (e.g., substance use) at least as good or better than two-parent families, suggesting that grandmothers can, indeed, overcome individual-level deficits due to absent fathers.

This shared pattern of childrearing may minimize the risks associated with poverty, unemployment, and poor physical or mental health (DeLeire and Kalil 2002). In other words, the presence of invested grandparents in a community may mitigate some of the negative effects of father absence and structural disadvantage on violence. To explain

these positive outcomes, it may be that, rather than selection effects whereby the "worst parents" draw on grandmothers as care-givers, it is actually the "best" parent(s) that choose to have grandmothers play crucial roles in child-rearing. Additionally, collective child-rearing provides a set of economic resources that might lessen negative outcomes. Greater economic stability and multiple sources of income provided by this type of living arrangement may stem violence. Lastly, communities benefit from the additional supervision and attention of grandparents or relatives who provide care. This type of collective caregiving may prove especially beneficial where father absence is high. Though it is unlikely that grandparents can be perfect substitutes for biological fathers, it may be that the benefit of grandmothers is particularly valuable in high father absence localities. Given the demographic characteristics of caregiving grandparents – younger and in better health physically and mentally compared to their counterparts – these types of grandparents can be an important resource to communities in that they not only fill child care functions, but, as Anderson and others suggest, they act as role models, sources of social support, supervisors, disciplinarians, and stress-relievers who have the ability to quell violence.

In summary, the presence of male capital and caregiving grandparents in a community may have a direct negative impact on violence, though there are some reasons to expect the opposite as well. But, controlling for factors related to social disorganization, co-resident grandparenting and male absence should have a direct, negative effect on gender-disaggregated rates of violence. Additionally, if the presence

of community caregivers and old heads can overcome deficits related to father absence, the significance of father absence should disappear. Further, the benefits of othermothering and male old heads are likely to be greater where father absence is more prevalent. In terms of gender differences in violent outcomes, unlike male old heads, the beneficial impact of community grandmothers is expected to be gender-neutral in nature, as both young women and men draw upon the services of grandmothers. The gendered nature of the father absence-violence link is discussed in more depth below.

Gender and the Father Absence-Violence Relationship

Prior to the 1970s, research on female crime gave inordinate attention to family disruption as a source of female criminality (e.g., Cowie, Cowie, and Slater 1968; Elliot and Voss 1974; Stinchcombe 1964; Schwarfman and Clark 1967) based on the assumption that the family would have a more pervasive impact on female behavior than male behavior due to the presumed salience of the private sphere in women's lives. Current individual-level research on gender differences in the effect of father absence on deviance is mixed (McClanahan and Sandefur 1994), with some research suggesting a greater impact on females (especially dropping out of school and early childbirth) and other research pointing to a larger impact on males (particularly for "idleness" and fighting). No research to this point has explored whether there are gender differences, at the aggregate level, in the effect of father absence on male and female rates of violence.[11]

[11] It is important to note that aggregate-level research explores how the context of father absence impacts a community's level of violence while individual-level research explores how one's family type affects an individual's likelihood of violence.

Though macro-level community research has burgeoned over the past decade, a focus on gender as an analytical variable has remained virtually absent (but see Steffensmeier and Haynie 2000a, 2000b; Steffensmeier and Streifel 1992; Weisheit 1993). These studies typically use only male rates or global rates of crime, which are heavily weighted by the much larger male rates of offending (see reviews of results for male and global rates in Messner and Golden 1992; Sampson and Wilson 1995). Though female involvement in violence is considerably less than that of males, a significant minority of females is involved in serious violent offending, with female rates of violence in some counties outpacing male violence rates in other locations. Likewise, in the recent proliferation of literature on the nature and extent of female offending, structural explanations of female crime are lacking as the emphasis has clearly remained on individual-level explanations. Exploratory analyses suggest that considerable variation in levels of female violence exists across ecological contexts (Brewer and Smith 1995; Messner 1985; Steffensmeier and Haynie 2000a; Weisheit 1993), suggesting a need to focus on the causes of female crime in addition to the more heavily researched issue of causes of the gender gap in offending.

A macro-social focus on the etiology of female offending, as compared to male offending, also contributes to the ongoing debate among feminists and criminologists more generally regarding whether the structural correlates of female and male offending will differ (see reviews in Daly and Chesney-Lind 1988; Heidensohn 1996). This debate

is particularly salient regarding the impact of family structure on male and female violence.

Both historically and contemporarily, some scholars have suggested that females will be more affected by disruptions within the private, familial sphere whereas males will be more subject to pressures from the public domain (Broidy and Agnew 1997; Durkheim 1952; Elliot and Voss 1974; Messner 1985; Parmelee 1918). Others contend that father absence may be more detrimental to male levels of violence due to the lack of positive male role models and the presence of an authority figure (Reiss 1986; Wilson 1987). Still others claim the effect of father absence is similar for males and females (McLanahan 1985).

Females More Affected By Pervasive Father Absence

Classical theorists such as Durkheim and Freud maintained that women were less involved in (and therefore less affected by) the collective existence since they were primarily confined to the private, domestic sphere (1971: 252; 299). The implication of the greater saliency of family for women is that schisms within this sphere would be more disruptive in the lives of women than men. While it may no longer be the case that women are restricted to the home, contemporary theorists contend that females are still more affected by what happens within the familial sphere while males are more affected by the public sphere (Broidy and Agnew 1997; Lehmann 1995: 912). For example, Broidy and Agnew (1997) suggest that stressors related to family generate frustration among females that lead to deviant outcomes while economic stresses impact males in a

criminogenic fashion. Though theirs is an individual-level theory, structural strain theory with Broidy and Agnew's added gender component can be applied to communities.

Areas where family disruption is high should create more stress/strain among the women of the community than the men, thus having a disproportionate impact on female crime rates. Women compete for males who can provide resources, effectively eliminating any solidarity among women. This may be played out as female-on-female violence, where competition for the scarce resource of males creates a conflict-ridden environment where there is more female rivalry. In fact, Miller reports: "they [streetwomen] distrust women as a group even more [than men]...There is, of course, a great deal of competition among them for good "men" and they often undercut each other's attempts to sustain relationships with "men"' (Miller 1986:170). Female-on-female attacks are often perpetrated by friends or acquaintances (usually young adults) and motivated by rivalry, defense of sexual reputation, and "ownership" of males (Campbell 1982; Campbell et al 1998). Where marriageable males are scarce, female-male relationships are also more precarious, perhaps involving more violence against women on the part of males. Female violence often occurs within the context of male violence and with provocation from males (Browne 1987). Therefore, availability of men and quality of resources are important in terms of female violence. In communities where father absence is acute, female competition for good partners may take the form of physical aggression against one another. However, some suggest that women adapt to

these conditions by drawing on extended kin and other community resources (Lancaster 1991) rather than males who may be more of a liability than an asset.

Females place a greater importance on the ability to establish and maintain relationships, fulfill family obligations, and to be responsive to the needs of others (Steffensmeier and Allan 1996). Moreover, females are buffered by these social relationships (Almgren et al. 1998; Gilligan 1982). Therefore, it may be especially detrimental to women when family stability and kin networks that provide informal social control and emotional and financial security are undermined (Mannheim 1941; Steffensmeier et al 1980). Pervasive father absence creates a context in which frustrations and anger are aggravated (by resource deprivation, massive constraints on free time, difficulty disciplining children, etc.) and the support networks and coping devices of women are eroded, making violent responses to provocation more likely.

Father absence could also impact females more via lowered self-esteem (Popenoe 1996) and a general distrust of males. The frustration and stress that results from poor self-concept may lead to greater difficulties in dealing with males and other females and heightened conflict with others. The result of this chain is a greater willingness on the part of females to engage in violence. Further, there are few males available to protect daughters and wives from victimization. The link between victimization and female violence was discussed above. Thus, female crime rates in these areas would be disproportionately high.

Additionally, absent husbands and fathers may, to an extent, "free" women to engage in violence. Traditionally, females have been more susceptible to informal social controls, such as parental discipline, surveillance by spouses, and neighborly involvement, while males are more subject to formal controls (Covington 1985; Bottcher 1995). Not only are females more subject to supervision, but some research suggests that females may be more susceptible to social control (Alarid, Burton and Cullen 2000). Since females are subject to greater supervision, this tends to reduce female risk-taking and criminality[12]. However, where supervision is weak and informal social controls are attenuated, as in communities where fathers (and males in general) are largely absent, females would be freed to engage in acts of deviance more so than males (who are already relatively free to deviate, regardless of the familial context) and more than females in areas with low father absence (Steffensmeier and Allan 1996; Giordano et al 1986).

Traditional stereotypes that enforce norms of femininity (e.g., weakness, submissiveness) and typically insulate women from acting violent through the threat of stigmatization may be moderated in areas that are deficient in fathers and husbands (Harris 1977). As Best and Luckenbill (1990) suggest, reluctance on the part of male community leaders to approve of female aggression – even when male aggression might be deemed acceptable – may minimize women's involvement in violence. However, it

[12] An alternative interpretation is that in areas where father absence is high, females are more subject to victimization due to the lack of supervision over both males and females. While this might elevate male levels of violence, victimization is a significant pathway of females into violence as well.

may be the case that if there are other responsible males available to enforce stereotypes of female behavior and to actively support the women in the community (e.g., in breadwinner roles, as disciplinarians, etc.), the effect of father absence on female violence might be lessened.

Males More Affected By Pervasive Father Absence

While there are some reasons to expect the effect of pervasive father absence to be more detrimental for females, other theorists suggest that it is male rates of violence that will be more adversely affected (e.g., Dornbusch et al 1985; Reiss 1986). As Shihadeh and Steffensmeier (1994: 733) suggest "At the aggregate level, the prevalence of [father absence]...may reduce the capacity of their communities and neighborhoods to exert effective control, *particularly over young males.*" This argument is further articulated by Reiss (1986). Where father absence is ubiquitous, there is a deficit of disciplinary figures that can reign in the young males in an area. The authority of women, particularly in contexts where mothers must play many roles, does not seem to carry as much weight when not supported by male authority (Wilson 1987; Anderson 1990; Rountree and Warner 1999). Where authority is weak, the influence of the peer culture and, possibly, the gang takes over. Mother-only families are particularly vulnerable to the challenge of male peer groups. This is consequential since delinquency often takes place in groups of unsupervised peers (Zimring 1981). The delinquent peer subculture has a decidedly masculine character and is primarily a collective solution to male angst (Leonard 1982; Steffensmeier and Haynie 2000). While this is especially consequential for minor acts of

delinquency, this milieu also sets the stage for more serious acts of violence committed by older offenders and senior members of gangs and youth groups. Additionally, female-headed households may be ripe targets for (predominantly) male offenders (Roncek 1981).

In addition to the lack of control exerted over young males by absent fathers, women/wives cannot exert control over absent husbands. Family sociologists and criminologists alike suggest that unattached males are more prone to act in "uncivilized" ways (Popenoe 1996; Warr 1993). As the research of Warr (1993) and others (Laub) suggests, marriage has a preventive effect on violence and crime among men, perhaps via insulation from the peer culture that tends to encourage rather than discourage violent encounters.

While some researchers suggest that absent fathers may be especially detrimental to male violence, they also maintain that other mature and dependable male adults can act as substitutes (Dornbusch et al 1985). The presence of responsible role models and surrogate forms of guardianship might temper the negative effects of peers and offer an alternative for young men in the community to emulate. As "decent families" resist the negative effects of street culture at the individual-level (Anderson 1993), a critical mass of "old heads" may deter the masculine street culture that encourages violence to burgeon in the first place. On the other hand, a large number of older men may reinforce stereotypes of masculinity and encourage aggressive/violent behavior "typical" of males.

No Gender Difference

The premise of aggregate research is that the proportion of father-absent homes alters the crime controlling context for *all* residents, regardless of their individual family situation and, perhaps, regardless of their gender. This position suggests that the "milieu effects" of father absence produces stress and frustration, weakens social bonds, and undermines prescriptions against violence to create criminogenic conditions for both males and females. This position has the underlying assumption that males and females are subject to the same social and cultural influences that affect criminality (i.e., men and women are behaviorally more alike than different). Another reason to expect similarities across gender in the effects of father absence (and other predictors) is that female violence occurs in the context of male violence, so we would expect considerable overlap in predictors of violence for females and males. As discussed previously, female violence is often a response to provocation by males or used in self-defense against abusive males. Further, female involvement in violence and other crime is often linked to criminal male partners. Therefore, the reasons that spur males to violence are also likely to impact females, though possibly to a lesser extent.

Indeed, prior macro-level research generally supports this notion (Steffensmeier and Haynie, 2000; Steffensmeier and Streifel 1992, Weisheit 1993). Most notably, Steffensmeier and Haynie (2000: 428) find that "the structural sources of high levels of female offending resemble closely those influencing male offending." This finding persists across various types of crime and alternative measures of structural disadvantage,

including female-headed households. However, they do find that, for some offenses (namely homicide and robbery), the strength of the effect is greater for males than for females.

Summary

Thus there are competing predictions over the gendered nature of the father absence-violence relationship. In addition, parental supplements, such as old heads and grandparents, may help communities to resist crime in gender-specific ways. In the following chapter we describe the data sources and methodology used to explore these issues. Then, in the next three chapters, we examine the following research questions:

1) Does father absence affect female and male rates of violence similarly?
2) Do the effects of father absence persist for females and males once community social control structures and structural disadvantage are taken into account?
3) Can father alternatives, such as older responsible males and care-giving grandparents mitigate the negative effects of father absence on violence for both males and females?
4) To what extent can changes in father absence account for variability in trends in female and male levels of violence?

Chapter 2:
Methodology

The following chapter describes the sources of data and methodology used to explore the research questions detailed in the previous chapter regarding the effect of father absence and father alternatives on gender-disaggregated rates of violence. First, we discuss counties as the unit of analysis and the sources from which data are drawn. Then we detail how the key concepts discussed above (e.g., father absence, male capital, collective caregiving) are operationalized. Finally, we describe seemingly unrelated regression techniques for cross-sectional models (2000) and hierarchical linear modeling appropriate for repeated measures (1970-2000) that are used to tease out the gendered relationship between father absence and violence.

Data and Measures

Counties as Units of Analysis

Because this dissertation project examines the conditions under which father absence compromises a community's ability to resist male and female violence, this project requires ecological rather than individual-level data. Therefore, the unit of analysis for the following gender-disaggregated analyses of the impact of father absence and family discord on violent crime is the approximately 2000 counties on which violent crime data are available for the first three years of the decade 2000[13]. Much past research has relied on small, truncated samples of only the largest, most urban units of analysis

(e.g., metropolitan areas, large cities, entire states, etc.) rather than representing a broad range of social contexts. Both generalizability and variability are maximized in this analysis of (largely) metropolitan counties, which range in size from 5,000 (Gallatin County, KY) to over 8 million (Los Angeles County, CA).

There are a number of other key advantages to using counties as the unit of analysis. Though counties can be rather large areas, the unit of analysis must be sufficiently large to achieve reliable measures of infrequent violent events – a crucial consideration especially when examining female violence. Even so, many of the counties do not record *any* female (and sometimes male) homicide events over a three-year period. Smaller units of analysis (e.g., blocks, census tracts) would further compromise efforts to establish reliable measures of violent events. In addition, since dimensions of the economic disadvantage indicator taps job opportunities and other features of the local economy, counties are most appropriate because they offer a better approximation of local labor markets than do larger metropolitan areas (McLaughlin et al. 1999).

Measures of Dependent Variables

The dependent variables, adult female and male violent crime rates, are obtained from the Uniform Crime Reporting Program for police agencies in metropolitan areas (Chilton and Weber 2001). Though much research on family structure and violence has concentrated on the impact of father absence on juveniles (e.g., see Shihadeh and Steffensmeir 1994), adult violence rates are utilized in the current research. There are

[13] The number of counties included in analyses varies by type of crime and decade. N's are included in

several reasons for this choice. First, the impact of father absence on a community is hypothesized to be contextual; that is, the effects of father absence are expected to be felt by *all* members of the community regardless of individual family structure. As such, a stricter test of this idea is implemented with the use of adult crime rates. Since father absence is expected to have a general effect, to the extent that this is demonstrated for adults (as well as juveniles), this offers evidence that father absence matters across age-groups and gives an indication of how father absence impacts the community as a whole. Further, implied in the concept of father absence is husband absence – which may affect adult females in different ways than adult males. This possibility is tested through the use of adult violence rates. Related to this, the use of adult violence rates extends prior research that has concentrated mainly on juvenile violence rates. It should be noted, though, that adult violence rates are heavily weighted by young adults who are arrested for the large majority of violent offenses. Future research should contrast the effects of father absence on gender by age disaggregated violence rates[14].

The agency-level crime data has been corrected for incomplete reporting by police agencies (i.e., less than 12 months of data); aggregated to the county level; adjusted for incomplete population coverage (i.e., non-participating or missing police agencies); averaged over a three-year period to avoid annual fluctuations in events as rare as violent crime; and transformed into crime rates using US Census Bureau population

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tables.

figures to yield sex-specific county level arrest rates for those 18 and over[15]. The sex-specific dependent variables are logarithmically transformed to induce homoscedasticity and to counteract the possible floor effect of these right-skewed distributions. Violent crimes included in this analysis are homicide, robbery and felony assault.

The limitations of official data are well known and do not warrant an in depth examination here (e.g., see Biderman and Lynch 1991; Gove et al. 1985; Steffensmeier 1983).[16] Official statistics have a number of advantages over alternative data sources, including their broad geographic scope, wealth of information, and, most importantly, temporal availability. The chief criticism levied against official statistics is that many crimes go unreported and/or unrecorded, so a substantial portion of the total crime volume is potentially missed. However, it is generally believed that many of the offenses recorded in the UCR are reasonable approximations of involvement in criminal offending (e.g., Krivo and Peterson 1996; Steffensmeier 1980). The most reliably measured

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[14] Note that past research has demonstrated that family structure has a larger impact on juvenile than adult violence rates. Whether this holds equally true for females and males has yet to be empirically demonstrated.

[15] A major issue with this data is the confounding of missing data with non-occurrences. In the original data source, police agencies recording zeros for homicide and/or robbery, especially, were intermittently coded using a "." – the same code assigned to missing data. The impact of this is particularly great for the most recent data, which includes a broader range of communities, predominantly areas with smaller population bases and, therefore, a greater likelihood of recording a zero for more serious violent offenses. Further, this lack of inclusion of zero violent arrests is more problematic for calculating female rates of violence, especially serious violence, because of the much lower occurrence among females than males. Appendix B examines an alternative way of handling the missing/zero data that attempts to include counties that record zero violent events. When the main analysis is re-run using a greater number of counties, the substantive results do not change.

[16] One major limitation of the UCR program relevant to this research that does deserve mention is the lack of a gender*race breakdown in arrest data. Analyses broken out by gender *and* race are certainly warranted given the clear racial-ethnic differences in levels and concentration of economic disadvantage and family formation patterns, but that is simply not possible given the current data.

offenses include homicide and robbery while less serious offenses, including larceny-theft and other property crimes, are less accurately enumerated (Biderman and Lynch 1991; Gove et al. 1985; Hindelang 1978; Steffensmeier 1983). The use of serious violent crimes as indicators of offending minimizes the impact of this potential reporting/recording problem. It is possible that this organizational bias might have a disproportionate impact on the enumeration of females since they tend to commit the less serious offenses, even within broad offense categories. However, procedures that correct rates for possible "jurisdictional bias" (by multiplying the arrest rate by the offence/arrest ratio in order to estimate more accurate levels of "offending") yield no substantive differences with regard to gender (Steffensmeier and Haynie 2000) or race (Sampson 1987). Thus, the use of more serious violent offenses seems to minimize the problems inherent in the use of official data.

Measurement of Independent and Control Variables

The data for the independent and control variables are derived from Bureau of Census Summary Tape Files 3 and 4 (STF). These files, derived in part from the "long form" of the census questionnaire, contain sample data weighted to represent the total population for small, geographic units, including counties. Aside from the broad geographic coverage that the Summary Tapes provide, a major advantage of these data source is that one is able to identify a *small* array of variables that are consistently measured across several decades, providing indices of social change necessary for the longitudinal portion of the analysis. These advantages are balanced by the limited detail

provided by the aggregate data tables, including a lack of a gender breakdown for several relevant variables of interest.

The variables chosen are based on theoretical grounds and from previous empirical communities and crime work. The key variables are also described in Table 2.1. The main variable of interest is *father absence.* Conceptually, this variable is intended to tap the absence of family-centered males in an area, including both husbands and fathers. It is measured as the percent of *families* that are female-headed with no male present. This measure differs somewhat from the more typically used "female headed household" measure[17]. The Census defines households and families as somewhat different structures. Households include single persons living alone and groups of unrelated individuals (e.g., roommates) living together in addition to family members who live together. Using female-headed households would include (never married) single women who live alone (i.e., without a child or a male partner) and older widowed women living alone as well as females who live with roommates. In these types of households, adult males were never present. In addition, these types of female-headed households are qualitatively different both in their economics and supervisory structures than female-headed families where a male was once present. Therefore, households do not really tap father absence to the same extent that female-headed families do. "Families," as defined by the Census Bureau, include the (female) householder and at

[17] Conceptually, "father absence," as opposed to "female-headed households" places the focus of community deficiencies on absent males rather than inadequacies on the part of single mothers. We argue

least one other related person living in the same house, including a child or husband. Therefore, this provides a more appropriate measure of father absence (in both the numerator - that is, counting female heads - and the denominator - that is, households where a male was or is present). It should be noted, though, that, in practice, the two measures – female-headed households and female-headed families – are highly correlated[18]. The female headed families measure is superior to percent divorced, another commonly used measure in research on the effects of family structure, because percent of female headed families as a measure of father absence takes into account never married women with children (i.e., out of wedlock births) – a growing phenomenon– as well as divorced couples where children were involved. As Parker and Johns (2002) argue, there has been an overdependence on divorce as a measure of family structure and disruption with inconsistent findings for divorce. Percent of families headed by females is also a more encompassing measure than the percent of out-of-wedlock births because this measure includes both divorced and never married women with children.

In order to tease out the relationship between father absence and crime, a gauge of the presence of *male capital* (ratio of "old head" males ages 45-64 to young adults ages 18-24) is introduced as well as a measure of *community caregivers* (percent of

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that, regardless of the reason for male absence – divorce or separation, incarceration due to stringent criminal justice policies, death, etc. – communities suffer in terms of violent crime.

[18] In her research on the covariance between various measures of family structure and family disruption, Parker and Johns (2002) found that percent of non-married families, percent of children living without both parents, and female-headed households were all highly correlated and overlapped considerably in what they measured. Further, they found that divorce (and the male marriage pool index) was statistically and conceptually different from measures that attempted to tap father absence. So, several of the measures discussed here, aside from percent divorced, would likely yield similar results.

grandparents who reside with and take care of their grandchild). Male capital is a variable that is akin to Anderson's concept of "old heads" – older, responsible males in the community who provide resources and act as role models, disciplinarians, and protectors. The measure of older males is capped at age 64 because it is possible that beyond this age, fewer older males can act in a crime-preventing capacity. Sensitivity testing was performed using various age groups (e.g., 40+, 55-75, etc.) with consistent outcomes with the 45-64 age group. Since older males are expected to mentor young adults, we use 18-24 as the denominator. This age group was chosen since the interest is in adult crime and this "young adult" age group is most prone to offending and, perhaps, most in need of mentoring

Community caregivers, also referred to by the concept "othermothering" or caregiving grandmothers, is represented by the percent of grandparents who live with and care for their non-adult grandchild(ren)[19]. This measure was chosen over the proportion of grandparents who resided with their adult children and non-adult grandchildren but did not provide care because active caregiving should have a greater impact than more passive grandparenting. Furthermore, caregiving grandparents are typically younger and in a better position to actively engage in crime reducing activities such as mentoring, settling disputes, and breaking up fights, for example, whereas co-resident grandparents may be in need of care themselves.

[19] Previous research indicates that the large majority of grandparents who provide live-in childcare are women. Therefore, the concept of othermothering will be largley analagous to co-resident grandparenting even though this measure can include male care-givers (Caputo 2001).

Of primary importance are controls for an area's economic position since both violence and father absence are known to be associated with economic disadvantage. This is achieved through a sex-specific *structural disadvantage index*, which includes standardized measures of female/male joblessness, number of black females/males[20], and family poverty. This index was derived based on previous efforts to identify dimensions of structural disadvantage (e.g., Land et al. 1990; Steffensmeier and Haynie 2000) and in light of the fact that these variables were all highly correlated with each other. This approach avoids some of the problems associated with highly multicollinear data including inflated standard errors. The index is centered (to reduce multicollinearity with father absence) and represents the sum of the standardized z-scores for the three variables such that positive values indicate higher levels of structural disadvantage.

We also examine *supervisory structures* of localities as social control and routine activity theorists argue that the presence of guardians in an area has a direct impact on an area's rate of violence. This concept includes two measures: the proportion of homes with non-adult children that are empty due to all household members working and the share of female headed households that work full-time. These measures tap the share of empty households - a proxy for both opportunity to commit crime and the lack of individuals who might intervene in potentially violent situations, act as mentors, provide

[20] Traditionally, percent black is used in indices of disadvantage. However, the number of black females and males was used instead because this index was less collinear with father absence than an index that used percent black.

guidance, and become involved in local or extra-local community groups that provide social capital to an area.

We also include a number of control variables in all the models. Since the *age structure* of counties varies somewhat, we employ a sex-specific control for percentage of the population that is at a high risk for offending (% aged 18-24). For some variables, gender disaggregation was not applicable or not theoretically justified. A *South* dummy variable controls for regional variation in levels of poverty, family disruption, etc. (Note: the inclusion of West as a dummy control never yielded a significant coefficient and therefore is not included in the presented analysis.) The log of the *population size* controls for variation in the level of urban living across counties; population size varies tremendously across this sample of counties, ranging in magnitude from as small as 5,000 residents to areas with as many as several million inhabitants. Prior research indicates that dense living arrangements can increase crime opportunities through decreased guardianship efforts (Sampson, 1983), so *structural density* is controlled via a measure of the proportion of housing units that have five or more units in the structure. Both original theoretical formulations and more current empirical analyses identify residential mobility as a factor that increases the opportunity for crime though similar mechanisms as structural density (Shaw and McKay 1942); therefore, the percent of persons living in a different county five years ago is employed as a control for *residential instability*. A correlation matrix is provided in Appendix A.

Independent variables are measured for each decade (e.g., 1990) while violence indicators are measured and averaged for the subsequent three years (e.g., 1991, 1992, 1993). While this temporal ordering does not establish causation, it is an effort to preserve the sequence of the expected relationship between family structure and crime. The cross-sectional analyses utilize the most current data available. Independent variables based on Summary Tape Files are from the year 2000 and the dependent variable – sex-specific violence rates – are based on 2000-2002[21].

Statistical Analyses

Cross-Sectional Methodology: 2000

The basic model examines sex-specific UCR violent offending rates as a function of father absence. "Seemingly unrelated regression" techniques (SUR) are used to estimate separate models for females and males. Because it is likely that female and male models share similar unmeasured structural causes of offending because the crime rates of both males and females pertain to the same geographic units, the error terms from the two models will be correlated. In this case, OLS estimates are no longer efficient and cross-model comparisons based on OLS estimation procedures may be erroneous since these tests assume uncorrelated errors across equations (Hargens 1986; Kmenta and Gilbert 1971). SUR techniques are more appropriate than ordinary least squares regression for examining comparative influences across female and male models (i.e., to

[21] For 1970, 1980, and 1990, dependent variables are measured as specified above in the text. However, for 2000, the most recent crime data available is 2002, so 2000, 2001, and 2002 are averaged to create the dependent variables.

test for equality of coefficients) because this procedure takes into account that the two models have not been estimated based on two separate samples of counties (Greene 1997; Zellner 1962). F-tests for equality of coefficients between female and male models estimated from this approach are used to determine if there are any significant differences across sub-groups in the strength of the effects of the independent and control variables.

In the case of homicide, a number of counties had values of zero for the female and/or male rates. A number of steps have been taken to deal with those counties with values of zero for homicide rates. For the SUR model, a value of 0.1 was assigned to counties that reported no homicides over the three-year period before the natural log of the rates were taken. An alternative analysis was also performed where a constant was added to all cases before the log transformations; substantive results are similar to those reported here. Because the dependent variables are logarithmically transformed, coefficients represent the proportional differences in rates, given a one-unit increase in the explanatory variable (Liao 1994; Osgood 2000) – a far more plausible model than a linear-based model where a given factor would raise the crime rate by a constant. For example, using a linear model, if a one percent increase in father absence led to a 10 per 100,000 population increase in felony assault, this would mean an increase from 5 to 15 per 100,000 in Area A (a 200% increase) and also an increase from 80 to 90 felony assaults per 100,000 in another Area B (a 12.5% increase). The proportional differences interpretation yielded from a logged model would result in a percent increase for both areas. For example, if a one percent increase in father absence led to a 10% increase in

felony assault, Area A's assault rate would increase from 5 to 5.5 and Area B's felony assault rate would be predicted to increase from 80 to 88 per 100,000 – a far more plausible scenario.

To check that the results described here are robust, an over-dispersed Poisson-based regression model was also used since this strategy may be more appropriate when there is a low frequency of events occurring across aggregate units (as is the case with homicide) (Liao 1994) or when population bases are relatively small (e.g., in the case of female versus male comparisons) (Osgood 2000) (See discussion below). Though the log transformation of the dependent variable diminishes the skew of the data, reduces the problem of outliers, and confines crime rate estimates to positive numbers, the logarithmic transformation may not solve the problem of heteroscedasticity. However, since the substantive results do not significantly differ, the benefits of cross-model comparisons allowed by SUR prevailed and those models are presented here (Poisson results available from the author).

Longitudinal Methodology: 1970-2000

A major advance of this project involves the use of longitudinal models to assess how changing family conditions impact trends in levels of violent offending for both females and males covering the 1970s, 1980s, 1990s, and 2000. The analysis utilizes hierarchical linear modeling (HLM) appropriate for repeated observations. Theoretically, the structure of HLM allows for a number of key longitudinal research questions to be addressed that other methodologies cannot undertake. This type of model can estimate

the mean change in rates of violent offending across counties as well as the extent of county-level variation around that mean level of change (Bryk and Raudenbush 1992). More importantly, it enables an assessment of the extent to which changes in gender-specific structural conditions can account for changes in female and male violence over time.

There are two added methodological advantages of HLM. First, HLM allows for more flexible and efficient use of available data with increased accuracy of predictions (Goldstein 1987) than other time-series methods. The majority of counties do not report crime across all four decades. In fact, only about one-quarter of counties have a complete data record with all four observations. In a typical longitudinal data analysis, this "missing data" would be quite problematic. However, HLM makes use of all available cases since the repeated observations are nested within the county rather than being a fixed set for each county as multivariate repeated-measures models (MRM) and structural equation models (SEM) require (Raudenbush and Bryk 2002: 186).[22] Second, it provides the ability to adjust for serially autocorrelated error structures that can occur in repeated measures for the same unit of analysis (i.e., counties). Failure to adjust for autocorrelation would attenuate standard error estimates, making "false positives" of significant relationships between variables more likely. Lastly, current statistical

[22] HLM is able to make use of all data points in the between-counties analysis because these parameters are defined in relation to the within-county parameters. Therefore, the analysis does not require having a particular set of crime rate (Y) observations; rather HLM utilizes the available observations to estimate county coefficients and gauges the precision of these estimates based on the variance in Y, T, and X for the county (Horney et al 1995).

packages (Bryk and Raudenbush 1992) allow for the researcher to select a Poisson distribution, a strategy appropriate when a fairly large number of zero or low-frequency values is found across aggregate units[23] (Osgood 2000; Liao 1994; Steffensmeier and Haynie 2000a). This is often the case with an event as statistically rare as violence (e.g., as compared to fertility, illegal drug use), particularly for females. Thus, HLM allows for more stringent tests of the effects of social change on trends in violence (Goldstein and Woodhouse 2001).

A hierarchical linear model is used to conduct a growth-curve analysis of the impact of changing family structure on within-county trends in female and male violence. In this type of multi-level "growth" model, time (i.e., observations for 1970, 1980, 1990, and 2000) is the level one unit of analysis and all time-varying indicators are included at this level. Therefore, for each county-level record, there will be four observations[24] of the dependent and independent variables – for 1970, 1980, 1990, and 2000 (see Schwartz and Ackerman 2001 for a discussion of the appropriate use of HLM). These observations are nested within counties, the level two unit of analysis. The level two portion of the data set may include time-invariant county information (e.g., region) and, more importantly, county-level means of the time-varying level one indicators. The inclusion of these means at level two ensures that

[23] In this case, counts of violent events are the dependent variable, with the violence counts variably exposed to the population size of the relevant gender group. So, the dependent variable is gender-specific county crime rates.

[24] There will be four observations only where data are complete. One major benefit of HLM over other time-series methods is that it can tolerate these gaps in information. See the discussion in the text for more detail.

the coefficients for level one variables represent within county change[25]. A more in depth description of the mechanics of growth curve analysis follows.

The level one HLM equation represents variability within counties. In other words, this part of the HLM equation characterizes how crime has changed over time and whether changing social conditions within communities (i.e., the time-varying covariates) can account for identified trends in violence.

Eq. 2.1 Level 1 equation (repeated measurements): $Y_{ij} = B_{0,i} + B_{1,i}T_{ij} + B_{2,i}T^2_{ij} + B_{3,i}\mathbf{X}_{ij} + r_{ij}$

Where:

i is the index for counties,

j is the index for wave of data (1970, 1980, 1990, 2000);

T is an interval measure of time (centered so that the mid-point of the study, 1985, equals zero[26]), and

X is a vector of explanatory variables that vary over time. In this application, X represents changing social conditions, such as father absence.

In the above equation, $B_{0,i}$ is the intercept for each county and represents the fitted value of the dependent variable (violent crime rate) when both T and X equal 0[27]. $B_{1,i}$ represents the linear

[25] Typically, coefficients represent pooled estimates of between and within differences in counties over time (Bryk and Raudenbush 1992: 117-123; Horney et al 1995). However, the substantive interest of this analysis is within-county change. An estimate that reflects only change within counties can be obtained by including county means as explanatory variables in the intercept equation for overall county differences. See Horney et al (1995) for a more in depth discussion and derivation of equations that demonstrate this.

[26] Time is centered so that 1970 equals -3; 1980 equals -1; 1985 equals 0; 1990 equals 1; and 2000 equals 3. This procedure makes the coefficients easier to interpret and reduces collinearity.

[27] Most of the variables are grand mean centered. This procedure centers the mean at zero. Therefore, the intercept represents the mean level of a particular violent crime in 1985 (when time equals zero) for the average county (when X's are at their means, which are set to zero).

time trend – the amount that a county's crime rate changes per unit of time (per decade). So, positive values indicate increasing crime while a negative sign indicates a declining crime trend. $B_{2,i}$ represents the acceleration of the growth trajectory, or the curvature of the time trend[28]. $B_{3,i}$ reflects the amount the crime rate varies as a function of the explanatory variables (e.g., father absence). r_{ij} is the unexplained variance for this observation on Y.

In this first part of estimating a growth curve model, repeated measures of data for each county are used to estimate trajectories of violent offending for each county over time. Parameters can take different values for different counties (due to the subscript *i* allowing for different parameters for each individual county). In the second part of the estimation procedure, parameters of the trajectories are treated as outcome variables to be explained by stable differences between counties (Karney and Bradbury 1995:1096). In other words, the county-level parameters from the "fixed effects," within-county portion of the analysis act as dependent variables for the between-county models. This is achieved through a separate equation for each parameter:

Eq 2.2 Level 2 (counties):

$$B_{0,i} = G_{00};$$
$$B_{1,i} = G_{10} + u_{1i};$$
$$B_{2,i} = G_{20};$$
$$B_{3,I} = G_{30};$$

The Gamma (G) parameter reflects average differences across counties, for the mid-point of the study. Because the focus is on within-county change, level two models

[28] Deviance statistics indicated that the growth curve for all crime type*gender combinations to be curvilinear in nature, so time and time-squared terms are both included. Due to limitations in the number of waves of data, higher order terms could not be included, even if they were statistically warranted.

are fairly simple. Perhaps the most important feature of the level 2 equations is the error term, u_{1i}, a county-specific error term that allows for variance across counties in the linear time trend. This error term resolves problems of autocorrelation typical in over-time analyses. An error term on the intercept (B0) would allow for differences in the average rates of crime across counties (i.e., a "random intercepts" model). Allowing the time-squared parameter to be a "random coefficient" (via the addition of an error term) would allow for different accelerations/curvatures across counties. Deviance tests indicated that error terms are also warranted for the intercept and, in some equations, time-squared, but due to the limited number of data waves and, consequently, little statistical power[29], county-specific error terms are limited to the coefficient for time.

However, preliminary visual inspection of the raw trends in violence suggests that curvilinear models are entirely appropriate.

[29] Growth curve models can only accommodate a limited number of random coefficients – usually based on the number of time points minus one (Bryk and Raudenbush 1992). Though there are four separate time points, the number of available random coefficients was exhausted by the adjustment for autocorrelation over time, perhaps because the majority of counties reported fewer than four time points. During initial phases of this research, two alternate models were tested that allowed us more flexibility in the addition of error terms: one in which the dependent variable was untransformed gender-disaggregated rates and another where the dependent variable was log transformed rates. In both of these unconditional models, significance testing uniformly supported a random intercepts model. That is, initial rates of crime significantly varied across counties for all crime types. In addition, a minority of the models required a random coefficient for time-squared as well as time (e.g., female felony assault), though most did not. Ultimately, the statistically more appropriate Poisson model was chosen as preferable to the (untransformed) random intercepts model. A comparison of the accuracy of the three models (untransformed, log transformed, and overdispersed Poisson) was conducted. The Poisson model consistently produces estimates that more closely correspond with the data. The logged models frequently underestimate the true rate of crime, though both models do a comparable job of approximating the shape of the lines. The untransformed models often closely approximate the Poisson estimations, so the more statistically appropriate Poisson models were chosen. The Poisson models are a more conservative test of the proposed relationships due to adjustments made to the standard error terms that determine coefficient significance. In addition, the Poisson models offer the advantage of coefficients that can be interpreted as proportional differences so we can compare across crime types and gender.

The following analysis extends the simple HLM model by making use of an overdispersed, Poisson model[30] with female and male counts of violence variably exposed to sex-specific county population sizes. There are several statistical problems that are encountered in the study of community crime rates that necessitate Poisson HLM models. Since the precision of the estimated crime rate is contingent on the size of the population, the error variance will likely be heterogeneous (since crime rates based on smaller populations carry with them greater potential for error than rate estimates based on larger counties). Further, error distributions are not normally distributed because of the relatively large proportion of the lower-bounded offense rate of zero – particularly for female violent offenses. This censoring may bias OLS regression coefficients because as the size of the population decreases, the offense rate of zero is more likely. Additionally, the lower-bounded feature of crime data creates problems of skewness because the data are constrained in the left tail of the distribution to be tightly packed. Counties with zero incidents are less variable/more constrained than counties with mean violence counts far from zero.

The logarithm function used in Poisson helps to correct problems of skewed data and unequal variation. The logarithmic transformation "squeezes" data at the upperbounds of the distribution and "stretches" data at the lowerbounds of the

[30] A standard Poisson model has the assumption that the variance is equal to the mean count. The overdispersed model has a residual variance parameter that allows for considerably more unexplained variation in counties' true crime rates. The regular Poisson model, which ignores overdispersion, yields smaller standard errors, whereas the overdispersed model is a more stringent test of relationships, yielding more conservative significance tests for coefficients.

distribution. Additionally, the use of a Poisson distribution allows for the violation of the homogeneity of variance assumption present in OLS. Further, zero counts are unproblematic for Poisson as the Poisson distribution represents the probability of observing any discrete number of events, including zero.

There are a few modifications to the basic models detailed above that are required when an overdispersed Poisson variant of HLM is utilized. First, as just mentioned, Poisson regression implicitly uses a log transformation that adjusts for the skewness of the data and prevents the model from producing negative predicted values. So, the within-county (level one) model uses a log-link function (see Equation 2.1). Therefore, a one unit increase in an explanatory variable *multiplies* the expected rate of violence by a factor of *exp(B)* (Gardner et al. 1995). This "proportional differences" (in rates of violence) interpretation is comparable to that of a logarithmically transformed dependent variable (see discussion and example above). Additionally, the within-county model no longer has the error term (r) because the logistic model is inherently probabilistic. There is no change in the between-county models (level two) because the dependent variables for these models are based on the continuous within-county coefficients.

Summary

This chapter detailed the sources of data and the methods that will be used to examine whether and in what ways the father absence-violence relationship is gendered. Data on independent variables including father absence, father alternatives (i.e., male capital and caregiving grandparents), structural disadvantage, supervisory structures, and

other controls are drawn primarily from the 2000 Summary Tape Files from the US Census Bureau. The dependent variables, sex-specific arrest rates for those 18 and over, are derived from unpublished information from the Uniform Crime Reports for 2000-2002. Cross-sectional analyses will be performed with seemingly unrelated regression (SUR) techniques, which allow for a statistically more accurate comparison of female and male models to detect gender differences in the effects of father absence. Longitudinal analyses over the 1970-2000 time period make use of Poisson growth curve models using hierarchical linear modeling (HLM) techniques to determine the extent to which trends in father absence are predictive of within-county trends in violence.

The next chapter examines the main effects of father absence on female and male violent offending. First, we examine whether father absence predicts equally well female and male violent outcomes. Then we examine whether effects of father absence persist once controls for stratification, as measured by structural disadvantage, and social control, as measured by community supervisory structures, are taken into account. Any gender differences in father absence and the effects of stratification and social control are discussed.

Table 2.1 Conceptualization and Operationalization of Key Variables

Variable Name	Conceptualization	Operationalization
Dependent Variable		
Violent Crime Rate*	The extent of violent offenses that occur within a county, adjusted for the sex composition of that county	Sex-Specific County-level arrest rate per 100,000 for Homicide, Robbery, Aggravated Assault
Independent Variables		
Father Absence	The absence of family centered males in a community	% of Families Headed by Females, No Male Present
Male Capital	The presence of alternate (older, responsible) males in the community who exert social control, attract economic resources and social capital, offer protection, and act as role models and agents of socialization	Ratio of the males ages 45-64 to young adults ages 18-24
Collective Caregiving	The presence of women in the community who act as safety nets for the family institution via their roles as guardians, social supports, community organizers, and role models	% of grandparents who live with and care for their non-adult grandchildren
Structural Disadvantage Index*	Economic and social disadvantage of the community as a whole due to lack of employment opportunities, residential segregation, and poverty	Summed z-scores for: % ages 16+ who are Unemployed*; size of Black population*; % of families in Poverty, Per Capita income
Supervisory Structures	The inability of a community to exert social control due to the absence of available guardians to intervene in potentially violent situations coupled with greater opportunity due to empty households	% of empty households due to employment of both adults or the single female head
Control Variables		
Region (South)	A control for regional (systematic) variation in levels of poverty, family disruption, etc.	Dummy variable for county location in the South versus the non-South
County Population	Population size as a reflection of how urban the county is	Logged total county population
Structural Density	Measure of dense living arrangements which may be associated with decreased ability to enforce informal social controls	% of housing units that have 5+ units in the structure
Residential Mobility	Measure of the extent to which people move in and out of the community, a factor related to increased opportunity for violence	% of population that lived in a different county five years ago
Age Structure*	The proportion of the county's population that is most at risk of offending	% ages 18-24

* Denotes a sex-specific variable

Chapter 3
Father Absence and Female and Male Violent Offending

To evaluate the effect of father absence on female and male violent offending and to examine whether this relationship persists once processes of social control and stratification are taken into account, we present results from seemingly unrelated regression models for both females and males. The following results address the central question of whether the relationship between father absence and violence is gendered - that is, whether father absence has similar or different effects on female and male rates of violence. In addition, we explore whether findings regarding significant effects of father absence on female and male violence persist once we control for community indicators of *stratification*, as measured by a structural disadvantage index, and *supervisory structures*, an indicator of the extent of social control as measured by the percent of structurally unavailable guardians due to employment (i.e., the % of empty households). Lastly, we briefly discuss gender differences in the impact of stratification and social control on female and male violent offending.

Main Effects of Father Absence on Female and Male Violence

Table 3.1 presents the results of the SUR models examining the effects of father absence on rates of violence for females and males, with relevant control variables (e.g., region, population size, density, mobility, and age structure), for the offenses of homicide, robbery, and felony assault. Though all models include the control variables, for parsimony, the effects of the control variables on rates of violence are displayed only

in Table 3.1. To further substantiate the consistency of the relationship between father absence and violent offending, data from 1990 are used to supplement the primary analyses that are based on 2000 data. Results for 1990 are displayed in Table 3.2. Comparisons of results from 1990 and 2000 are displayed in Table 3.3. Table 3.4 presents the results of SUR models examining the relationship between father absence and gender-disaggregated violence rates controlling for discrete measures of structural disadvantage and the structural disadvantage index. Table 3.5 portrays results of a SUR model that includes father absence, measures of community supervisory structures (i.e., measures of % of empty homes), as well as the index of structural disadvantage to assess whether father absence remains an important predictor of female and male violence. To compare coefficients between the female and male models, we present F-tests for the equality of coefficients estimated from the SUR procedure for each offense type. Significant differences between female and male models are noted with a hat (^).

Turning to the main effects of father absence on gender-disaggregated violence rates displayed in Table 3.1, we find that father absence has a significant, positive influence on violent offending for both males and females, controlling for other relevant features of the community[31]. Female and male violent offending rates across all three types of violent crime examined are higher in counties with higher levels of father absence. Coefficients are highly significant across gender and violence types.

[31] See Appendix B for alternative analyses that impute "missing" data. The substantive conclusions drawn from this alternative analysis, which includes a substantially greater sample of counties, are the same as those summarized here in Table 3.1 and portions of Table 3.4.

Additionally, a comparison of beta weights within models demonstrates that father absence clearly has the strongest effect on violence for both females and males (with the exception of population size for female homicide and robbery).

To gauge the extent to which father absence "matters" for violent offending, a one percent increase in a community's level of father absence multiplies female violence by between 8 and 11% (depending on violence type); a one percent increase in a community's level of father absence multiplies male violence by between 6 and 13%. So, a community that has "high" father absence (about 20%, 1 SD above the mean) can expect to have a 40-44% higher female violence rate and between 30-85% higher male violence rate than a community with "average" father absence (about 15%).

A comparison across female and male models demonstrates *no consistent sex difference* in the strength of the father absence effect on violence. Though F-tests are significant for the robbery and felony assault models (indicating significant differences between male and female coefficients), for robbery the effect is marginally greater on males, whereas for felony assault the effect is somewhat stronger on females. Thus, we can conclude that no consistent gender differences exist in the effect of father absence on violence rates and that father absence is a strong predictor of violent offending for both males and females.

It is also worthy to mention the effects of other control variables for purposes of comparison to other research on structural conditions and violence. Variables such as location in the South (Region) and residential mobility all have small to moderate

positive effects on violence rates for both males and females. Population size exerts a consistent, positive influence on female rates of violence but a varied pattern for males with two of three violence types exhibiting a significant negative effect of population size. For females especially, larger population bases (i.e., more urban settings) are related to higher rates of homicide, assault, and robbery. Structural density and age structure are largely non-significant.

The only consistent gender difference among the structural conditions is the effect of population size on female violence. The effect of urbanity is somewhat stronger and more consistent for female violence than for male violence. Southern location also tends to have a moderately stronger impact on female rates of violence, at least for homicide and assault. For example, location in the South increases female rates of felony assault by 60% whereas rates of male violence are only 25% higher in the South, on average. Importantly, one can conclude that the effects of the other structural variables (density, mobility, age structure), both in strength and direction, are similar for females and males. This is consistent with other gender-disaggregated research (see Steffensmeier and Haynie 2000). However, unlike Steffensmeier and Haynie (2000), who found somewhat stronger effects of indicators of structural disadvantage and social disorganization on males (for homicide and robbery only), the results here portray marginally stronger effects for females, in the few cases where gender differences exist. Additionally, the general pattern of significant effects across the violent crimes is consistent with other

aggregate research using male or total rates only (e.g., Harer and Steffensmeier 1992; Sampson 1987).

Supplemental Analysis: Cross-Sectional Model Comparisons, 1990 and 2000

In order to substantiate the validity of these results and to examine more fully the nature of the relationship between gender, father absence, and violence, we repeated all regressions using data from 1990. The 1990 results are presented in Table 3.2. This supplemental analysis can reveal whether the relationship between father absence and gender-disaggregated rates of violence has been stable or if father absence has become a more (or less) potent predictor of violent activity as father absence has become a more prevalent family form[32].

The results from 1990 (displayed in Table 3.2) offer strong confirmation of the findings from 2000. Substantively, the results from the 1990 SUR regression exploring the main effects of father absence on violent crime are the same as those from more recent data: Father absence is positively and significantly related to all violence types for both males and females. The lack of consistent gender differences in the strength of the father absence coefficient prevail in 1990 as well as 2000. Father absence is a somewhat stronger predictor of male robbery than female robbery, but a somewhat weaker predictor of male assault as compared to female assault. Though the gender differences are consistent across the decade, they are not systematic, leading us to conclude that father

[32] The longitudinal portion of the analysis cannot address this issue. Rather, the time-series data provides evidence regarding whether *changes* in levels of father absence predict changes in a community's level of violence.

absence does not seem to have differential effects on male and female violence. Thus, the effect of father absence is robust – both across gender and time.

Next we examine whether there is stability or change in the power of father absence to predict female and male violence via a within-gender comparison across the two time points. A visual comparison of the coefficients for the 1990 and 2000 models seems to indicate that father absence had a uniformly stronger effect in 1990 than in 2000 (on the order of approximately 2% for females and ranging from 1% to 4% for males). Also, an assessment of the coefficients of multiple determination (r^2) implies that the explanatory power of the body of indicators used in 1990 is greater than that same set in 2000 as predictors of violence. For example, the proportional reduction in error is twice as great in 1990 as 2000 for the female and male felony assault models (.28 versus .14 and .21 versus .10, respectively). This could be an indication that father absence (and other structural conditions) has become *less* potent as a predictor of violence for both females and males.

We examine whether father absence has become a weaker predictor of father absence from 1990 to 2000 via a within-gender SUR analysis on a sub-set of counties that provide data for both time points. Since the police agencies contributing data vary from year to year and, furthermore, since the sample of counties is not entirely the same, the overall indication of stronger father absence effects in 1990 could be due, in part, to

differences in the types of agencies or counties who reported data for these two time points[33].

In order to assess whether there are "real" within-gender differences in the viability of father absence as a predictor of violence across the 1990 to 2000 time period, we conducted a SUR regression that included only those counties that reported data at both time points. This resulted in considerably smaller sample sizes across crime types. Even so, father absence remained a strong and significant predictor across gender and violence type (see Table 3.3). More importantly, F-test comparisons of the 1990 female model with the 2000 female model and corresponding male model comparisons yielded *no significant differences* from 1990 to 2000, with the exception of male felony assault (father absence had a stronger effect in 1990 than in 2000). In other words, father absence was an equally strong predictor in 2000 as it was in 1990, for both females and males[34]. This lends further credence to the conclusion that negative consequences of father absence prevail across time and gender.

Father Absence and Economic Disadvantage

Though father absence is found to be a strong predictor of violence across time points, it is suggested in the literature that the absence of fathers may simply be a proxy

[33] Note that in 2000, over 1900 counties had nearly complete felony assault data whereas in 1990 only 840 counties could be used in the sample. Important changes in the availability of data are partially responsible for this discrepancy (along with changes in police agency reporting behavior). Beginning in the late 1990s, data for non-metropolitan counties were added to the database. As such, the nature of the sample shifted to include more rural areas. Recall that a control for population size is included in all models.

[34] Also of note, the proportional reduction in error across 1990 and 2000 models was highly similar. For example, the r^2 for female homicide was .32 in 1990 and .28 in 2000. For males, a somewhat larger

for economic disadvantage – a factor that consistently impacts levels of violent offending, for both males and females (McLanahan and Sandefur 1994). Thus, Table 3.4 examines the effect of father absence on gender-disaggregated violence rates controlling for various dimensions of structural disadvantage, including a gender-specific disadvantage index.[35] In other words, parceling out the effect of structural disadvantage on violent crime, what impact does father absence have on female/male offending?

The results are clear and robust: Father absence remains a potent predictor of community violence levels, even after controlling for a range of disadvantage measures (and other community variables). All models show that serious violence rates of both genders are significantly higher in counties with more pervasive father absence, even after controlling for relevant economic features of communities. In no case does father absence cease to be significant as a predictor of serious violence[36]. Furthermore, Beta coefficients indicate that father absence has a stronger influence on community violence

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difference remained in this smaller sample of counties. For example, for homicide, the r^2 in 1990 was .38 compared to .24 in 2000.

[35] Disadvantage has inconsistent effects on violence rates when controlling for family structure. In the female models, disadvantage is predominantly insignificant, but the direction of the effect is positive in two-thirds of the cases. That is, as expected, indicators of disadvantage (particularly unemployment) *tend* to increase female violence rates. For males, disadvantage also has a crime-producing influence on violence and achieves significance in half (6) of the possible twelve violence type-disadvantage indicator combinations. Importantly, the male disadvantage index has a significant, positive effect on violence for two out of three of the violent crimes examined and exerts as strong or stronger an effect on community violence than does father absence. The insignificant results for females may be attributable to problems of collinearity. Though steps were taken to minimize the impact of collinearity on the estimated models, these unexpected null findings are probably the result of some multicollinearity issues between the family structures and economic structures of communities. When we examine models including only the disadvantage measures (and not father absence), the results are significant and in the expected direction for both females and males.

[36] See Appendix B for an alternate analysis that includes a larger sample of counties with imputed data for those counties that do have a record for homicide or robbery but do report data for felony assault. We treat

outcomes than do various measures of structural disadvantage for both females and males[37]. This indicates that *something particular to the family structure of a community, aside from or* ***in addition to*** *the community's economic well-being, is driving female and male violence levels.*

When we turn to gender differences in the effects of father absence, controlling for economic disadvantage (as indicated by a significant F-test), there are no significant differences for homicide between males and females. However, the findings from the main model (Table 3.1) hold: though the size of the father absence effect is fairly similar across offense types in both the female and male models (i.e., in within gender comparisons of coefficients across offense types), the strength of the coefficient is somewhat greater in the felony assault models for females while the coefficient is stronger for males throughout the robbery models. While this might indicate no real gender differences in the magnitude of the father absence effect on various types of violence, it *could* indicate that father absence leads to different *types* of offending for males and females; that is, gender may contextualize the relationship between father absence and various forms of criminal violence. Qualitative research does indicate that much of female aggression takes place in the context of male violence. Without the presence of fathers as protectors and moral compasses, females are more susceptible to both victimization, a noted pathway into female crime, and subject to co-conspiracy with

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these counties as having zero violent arrests for homicide and/or robbery. The conclusions drawn from this alternate analysis do not differ from those drawn above utilizing the smaller sample.

criminal boyfriends. However, this is an empirical question that requires further examination.

It should be noted that, somewhat contrary to expectations, the addition of structural disadvantage to the models has only a modest impact on the father absence coefficients[38]; nor does structural disadvantage make a sizeable contribution to the amount of variation explained. Given that past research has demonstrated the viability of structural disadvantage for explaining differences in crime across communities, it is likely that the collinearity between father absence and economic disadvantage yields little *unique* explanatory power when the two variables are kept distinct[39]. The effect on R-square of adding structural disadvantage to the model is only about a 1% reduction in error across female models. For males, the impact is somewhat more sizeable, improving our ability to estimate homicide by 2% and felony assault by 4% (but robbery by only 1%). This greater impact of structural disadvantage on male models is also reflected in

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[37] The exception to this is that family poverty exerts a stronger effect on male levels of felony assault than does father absence. This also holds true for the disadvantage index for male rates of felony assault.

[38] In terms of the female models, there is virtually no impact of the addition of structural disadvantage on the father absence coefficient. For males, with the addition of structural disadvantage, the impact of father absence is reduced from .08 to .05 for homicide and from .06 to .03 for felony assault. It should also be noted that, despite the more sizeable disadvantage coefficients for males, there is no pattern of significant gender differences across models. Additionally, what this decrease in the size of the father absence coefficient indicates is that the father absence-violence relationship is partially mediated by structural disadvantage.

[39] To examine this possibility, we ran models predicting levels of father absence across communities using structural disadvantage and other controls as indicators (not shown). Exponentiated coefficients for structural disadvantage were sizeable (*on the order of a one unit increase in structural disadvantage* corresponding to a 2% increase in father absence), indicating that economic disadvantage and father absence are, indeed, closely related. Note, however, that father absence and structural disadvantage are measured at the same time point. See work by Lichter and McLaughlin (Lichter, McLaughlin, and Ribar 2002; McLaughlin, Gardner, Lichter, 1999) for a more in depth discussion of the impact of economics on family formation processes and a more sophisticated empirical analysis.

significant gender differences in the strength of the coefficient for the structural disadvantage index for felony assault. Similarly, for homicide, the disadvantage index has a stronger direct effect for males than females, though not significantly so.

So, the effect of father absence does persist even after taking into account various dimensions of structural disadvantage as well as the gender-disaggregated disadvantage index. No *new* gender differences emerge in the effects of father absence on violence, even after controlling for indicators of economic disadvantage. Further, the effect of father absence on violence is only partially mediated by structural disadvantage, as the magnitude of the father absence coefficient changed only slightly and remained significant across models. In other words, something else about the family structure of a community, aside from or *in addition to* the community's economic well-being, is driving female and male violence levels.

Father Absence and Supervisory Structures (Empty Households)

As previously mentioned, multivariate results from the examination of dimensions of structural disadvantage indicate that something particular to the family structure of a community, aside from or *in addition to* the community's economic well-being, is driving female and male violence levels. While some scholars have emphasized the impact of economics on the relationship between father absence and violence, others have suggested that the mechanism through which father absence works is an issue of social control rather than stratification. In other words, some contend that the effect of father

absence is mainly a supervision issue, leading us to question whether the effects of father absence persist once factors related to social control are taken into account.

To examine the possibility that the effects of father absence are due to lack of supervision and other deficits due to the lesser availability of guardians, measures of community supervisory structures are introduced to the full model (including disadvantage). Measures of supervision are meant to tap the share of structurally unavailable adults to act as guardians due to full-time employment. The measures used are the percent of homes that are empty due to (1) employment of both parents or (2) of single female heads. Table 3.5 portrays results of a SUR model that includes father absence, the two measures of supervisory structures, as well as the index of economic disadvantage. The results indicate if the effect of father absence persists beyond controls for stratification and social control. In addition, F-tests are used to detect gender differences in effects of father absence and processes of social control (and stratification).

Of primary importance, even with the introduction of measures meant to tap a community's capacity to control violence via supervision of public and private places, father absence remains a consistently significant, positive predictor of female and male violence levels across communities. When the controls for supervision are added, the effect of father absence on violence did not decrease by more than 2% for the majority of gender*offense combinations. The one exception is the reduction in the effect of father absence on female homicide from about 9% per one percent increase in father absence to 5%. (But note that no significant gender differences in father absence emerge for

homicide despite these added controls.) Additionally, there is essentially no change in the amount of variance explained with the inclusion of these supervision variables[40]. What these results suggest is that a small portion of the impact of father absence may be mediated by supervisory factors.

Taken as a whole, this body of findings suggests that the impact of father absence is due to both stratification *and* social control processes; however, these factors do not fully mediate the father absence-violence relationship for either males or females, suggesting that there are other processes related to father absence aside from stratification and social control functions that are criminogenic. Mediating processes that simply cannot be measured by Census indicators, such as the capacity of resident fathers to mentor, protect, and act as moral compasses within communities are likely at work. Future research should concentrate on identifying these social roles of resident fathers and husbands.

Though no new significant gender differences in the impact of father absence on violence emerge with the addition of social control factors, there are some interesting and subtle gender differences in the direct effect of social control factors on gender disaggregated violence rates. The general pattern is that counties with higher levels of empty households (i.e., counties with a relative lack of supervision) have higher levels of violence, controlling for father absence, economic disadvantage, and other relevant

[40] Again, collinearity is a source of concern. Given that these variables exert a significant influence on violence in some cases (as will be discussed in the text), it is likely that there is considerable overlap in the variance explained by father absence and social control processes.

factors. However, there appear to be some gender differences in the impact of empty households on violent outcomes across communities. The proportion of empty households has significant, positive effects on female violence, ranging in size from a 2% to a 6% increase in female violence for every one percent increase in empty households. For males, the proportion of empty households has very limited explanatory power, as the effect sizes are both trivial and non-significant. In addition, F-tests indicate that this different pattern of findings for females and males is significant for robbery and felony assault. In other words, the impact of lack of supervision is significantly greater on female violence than on male violence.

What these gender differences in the effect of supervision suggest is that in areas where females (and males) are not closely observed, females (more so than males) will engage in relatively more violence. These findings are consistent with some previous research on gender-differentiated effects of social control on offending (e.g., see Bottcher 1995; Covington 1985). What the current findings suggest is that in areas where females have more access to males and peer groups, their levels of violence will be greater. In areas that lack supervisory structures to drive off predatory males, females are more susceptible to violent offending because of increased contact with males leading to co-offending or violent responses required in self-defense[41]. A related interpretation deals with the linkage between female victimization and offending. Perhaps in areas where supervision is weak due to fewer available guardians, female victimization is greater.

Research indicates that female violent offending is often a response to both proximate and distal violent victimization.

The findings for the impact of female heads working on gender-disaggregated rates of violence across communities are counter to what social control arguments would expect. Social control explanations would predict that employed female household heads should handicap an area's social control functioning and, consequently, increase violent offending. However, the share of female householders that work is *negatively* related to the incidence of violence in a community. This relationship is significant for females for two of three offenses (robbery, felony assault) and for one offense (felony assault) for males. Substantively, for every one percent increase in an area's employment of female-heads, female robbery and felony assault decrease by a factor of 4% and male felony assault declines by a factor of 2%. Also of note, there are significant gender differences in the strength of the coefficient for both robbery and felony assault (but not homicide), with female violence being more strongly deterred by working female heads.

The negative effect of female heads working is more consistent with an economic argument that predicts that increased economic well-being should decrease crime rather than a supervisory explanation that predicts increased crime due to lack of available guardians[42]. While at first blush this argument does not seem to mesh with the (largely)

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[41] Note, however, that the interaction term pairing empty household with father absence was not significant. The effect of empty households was no greater in areas with high father absence than other areas.

[42] However, following the logic of the victim-offender overlap, this finding could indicate that fewer female targets are available for victimization and, as a result, offending. This interpretation is somewhat consistent with the significant negative effects of the share of female householders working on male felony assault; fewer structurally available female victims (due to work) might lead to a proportional decline in

null findings for the economic disadvantage indicator and female violence, it presents the possibility that the disadvantage index better taps *male* sources of disadvantage (e.g., unemployment as a means to poverty) whereas females may be more susceptible to changes in family structure as a route to poverty, such as divorce and out-of-wedlock childbearing. The proportion of female heads who work acts as a proxy for female (dis)advantage (but not for males). A complementary explanation of these gendered findings is that employment has similar effects on females in terms of crime reduction as it does on males: maintaining a legitimate job leads to routines and inclinations that are incompatible with crime in general, including violence (Warr 1993). The smaller the share of female householders who engage in normative patterns of employment, the larger the potential pool of female offenders. In addition, a substantial share of working female heads may create a critical mass of women who act as role models for other women and girls in the community.

Summary

Father absence has a significant and potent influence on violent offending for both females and males, controlling for relevant features of the community. No *consistent* gender differences in the effect of father absence on violence are identified (though the effect on robbery is somewhat greater for males and the effect on felony assault is somewhat greater for females). Further, results from 1990 corroborate conclusions drawn with more recent (i.e., 2000) data. Father absence remains a potent predictor of

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male assaults. However, if this were the case, we might expect homicide to display similar results, but that

female and male violence, even after controlling for a range of indicators of structural disadvantage and measures meant to tap a community's capacity for social control. Though no gender differences in the effect of father absence emerge, there are significant gender differences in the effect of lack of supervision with stronger direct effects prevailing for females. The other measure of a community's capacity to exert informal social control, percent of female heads working, is probably a better measure of stratification than social control, as a greater share of working female heads is associated with less violence. Taken in their entirety, these findings suggest that the impact of father absence is due to both features of stratification *and* mechanisms of social control; however, other community shortcomings related to father absence remain. The next chapter examines whether alternatives to resident fathers can mitigate some of the negative consequences of father absence. Two concepts are introduced: *Male Capital*, the ratio of older males who purportedly provide the community with social control, economic resources, social capital, protection, and socialization, to young adults, and *Collective Caregiving*, the percent of grandparents – mainly grandmothers – who actively support the family institution via their roles as guardians, social supports, role models, disciplinarians, and community organizers. Next, we explore whether male capital and/or collective caregiving can overcome community deficits in resident fathers.

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is not the case.

Table 3.1 Seemingly Unrelated Regression of Father Absence on Gender Disaggregated Violence Rates (2000)

	PANEL A: FEMALES		
	Homicide	Robbery	Felony Assault
Father Absence	.08 (.28)**	.08 (.21)**^	.10 (.29)**^
Region (South = 1)	.70 (.19)**^	.45 (.10)*	.47 (.12)**^
Population Size	.45 (.35)**^	.82 (.46)**^	.30 (.18)**
Structural Density	-.01 (-.04)	-.01 (-.03)	-.02 (-.07)^
Residential Mobility	.01 (.04)	.03(.09)$^{+}$	.03 (.12)**^
Female Age Structure	-.01 (-.01)	.01 (.02)	-.04 (-.07)
Adjusted R^2	.21	.26	.14
N	460	904	1943
	PANEL B: MALES		
	Homicide	Robbery	Felony Assault
Father Absence	.08 (.27)**	.12 (.36)**^	.06 (.27)**^
Region (South = 1)	.08 (.02)^	.56 (.15)**	.22 (.09)**^
Population Size	-.27 (-.21)*^	.42(.28)**^	-.13 (-.14)**
Structural Density	.02 (.09)	.01 (.03)	.001(.01)^
Residential Mobility	.03(.14)*	.02 (.07)	.02 (.11)**^
Male Age Structure	-.02 (-.02)	-.01 (-.01)	-.04 (-.14)**
Adjusted R^2	.08	.25	.10
N	460	904	1943

** $p < .001$ * $p < .01$ + $p < .05$

^ F-value indicates a significant difference between male and female coefficients. Although identical, the significance of the F-value is reported for both female and male models

Note: Standardized coefficients in parentheses

Table 3.2 Seemingly Unrelated Regression of Father Absence on Gender Disaggregated Violence Rates (1990)

	PANEL A: FEMALES		
	Homicide	Robbery	Felony Assault
Father Absence	.12**	.10**^	.12**^
Region (South = 1)	.63**	.58**	.55**
Population Size	.41**^	.84**^	.37**^
Structural Density	-.03**	-.01	-.02*
Residential Mobility	.04**	.02*	.05**^
Female Age Structure	-.03	-.02	-.00
Adjusted R^2	.26	.38	.28
N	744	804	840
	PANEL B: MALES		
	Homicide	Robbery	Felony Assault
Father Absence	.12**	.13**^	.09**^
Region (South = 1)	.46**	.56**	.40**
Population Size	-.03^	.37**^	.20**^
Structural Density	-.02**	-.01	-.02*
Residential Mobility	-.02**	.02**	.03**^
Male Age Structure	-.05*	-.03	-.01
Adjusted R^2	.28	.43	.21
N	744	804	840

** $p < .001$ * $p < .01$ + $p < .05$

^ F-value indicates a significant difference between male and female coefficients. Although identical, the significance of the F-value is reported for both female and male models

Table 3.3 Comparison of 1990 and 2000 Seemingly Unrelated Regression Results for Effect of Father Absence on Gender Disaggregated Violence Rates

	PANEL A: FEMALES					
	Homicide		Robbery		Felony Assault	
	1990	2000	1990	2000	1990	2000
Father Absence	0.15**	0.12**	0.10**	0.10**	0.11**	0.10**
Region	0.38	0.62*	0.46**	0.46*	0.35**	0.36**
Population Size	0.25*	0.49**	0.65**	0.57**	0.24**	0.22*
Structural Density	-0.02^{+}	-0.01	0.00	0.00	-0.01	-0.01
Residential Mobility	0.04**	0.02	0.02^{+}	0.01	0.03**	0.02**
Female Age Structure	-0.06	0.00	-0.03	0.02	-0.01	-0.02
R^2	.32	.28	.30	.24	.23	.20
	PANEL B: MALES					
	Homicide		Robbery		Felony Assault	
	1990	2000	1990	2000	1990	2000
Father Absence	0.13**	0.12**	0.11**	0.11**	0.08**	0.07**
Region	0.20**	0.34	0.50**	0.40**	0.27*	0.24*
Population Size	-0.09	-0.07	0.35**^	0.20**^	0.17**^	0.06^
Structural Density	-0.01	-0.01	0.01	0.01	-0.01	0.00
Residential Mobility	0.04**	0.02^{+}	0.00	0.00	0.01^{+}	0.01
Male Age Structure	0.04	-0.03	-0.01	0.01	0.00^	-0.03*^
R^2	.47	.24	.48	.32	.17	.15

** $p < .001$ * $p < .01$ + $p < .05$

^ F-value indicates a significant difference between coefficients for 1990 and 2000. Although identical, the significance of the F-value is reported for both female and male models.

NOTE: The sample size is moderately smaller in this table because only counties that contributed data for 1990 as well as 2000 are included in these cross-model comparisons.

Table 3.4 Seemingly Unrelated Regression of Father Absence on Gender Disaggregated Violence Rates Controlling for Discrete Measures and Index of Structural Disadvantage (2000)

	PANEL A: FEMALES		
	Homicide	Robbery	Felony Assault
MODEL 1			
Father Absence	.08 (.25)**	.06 (.16)*^	.09 (.26)**^
Female Unemployment	.07(.04)	.15 (08)$^{+}$^	.08 (.05)$^{+}$
Adjusted R^2	.20	.27	.15
MODEL 2			
Father Absence	.08 (.26)**	.09 (.24)**^	.11 (.30)**^
Female Black Population	1.3^	-5.2 (-.10)*	-4.3 (-.06)*^
Adjusted R^2	.20	.27	.15
MODEL 3			
Father Absence	.11 (.35)**	.08 (.20)**^	.09 (.25)**^
Family Poverty	-.03 (-.10)^	.01 (.02)	.02 (.06)^
Adjusted R^2	.20	.27	.15
MODEL 4			
Father Absence	.09 (.26)**	.08 (.22)**^	.10(.27)**^
F. Disadvantage Index	.02 (.02)	-.01 (-.01)	.02 (.02)^
Adjusted R^2	.21	.27	.15

	PANEL B: MALES		
	Homicide	Robbery	Felony Assault
MODEL 1			
Father Absence	.07 (.24)**	.11 (.33)**^	.04 (.21)**^
Male Unemployment	.07 (.05)	.08 (.05)^	.10 (.14)**
Adjusted R^2	.10	.25	.13
MODEL 2			
Father Absence	.07 (.22)**	.13 (.39)**^	.05 (.26)**^
Male Black Population	6.2 (.17)*^	-5.4 (-.10)*	1.9 (.04)^
Adjusted R^2	.10	.26	.10
MODEL 3			
Father Absence	.07 (.24)*	.11 (.35)**^	.02 (.10)*^
Family Poverty	.01 (.03)^	.01 (.02)	.06 (.26)**^
Adjusted R^2	.08	.25	.13
MODEL 4			
Father Absence	.05 (.16)$^{+}$	.12 (.37)**^	.03 (.13)**^
M. Disadvantage Index	.13 (.15)$^{+}$	-.01 (-.02)	.12 (.21)**^
Adjusted R^2	.10	.26	.14

** $p < .001$ * $p < .01$ + $p < .05$ Note: Standardized coefficients in parentheses

^ F-value indicates a significant difference between male and female coefficients. Although identical, the significance of the F-value is reported for both female and male models

Table 3.5 Seemingly Unrelated Regression of Father Absence on Gender Disaggregated Rates of Violence, Controlling for Dimensions of Social Control

	PANEL A: FEMALES		
	Homicide	Robbery	Felony Assault
Father Absence	.05^{+} (.07)	.06**^ (.02)	.09**^^ (.23)
Female Disadvantage	.08 (.09)	-.02 (-.02)	-.02^ (-.02)
Empty Households	.07* (.20)	.04^{+}^ (.09)	.02^{+}^ (.06)
Female Head Works (%)	-.03 (-.15)	-.04*^ (-.06)	-.04**^ (-.18)
Adjusted R^2	.21	.27	.16
N	460	904	1943
	PANEL B: MALES		
	Homicide	Robbery	Felony Assault
Father Absence	.04 (0.13)	.12**^ (.37)	.02**^ (.12)
Male Disadvantage	.14^{+} (.16)	-.01 (-.02)	.09**^ (.15)
Empty Households	.02 (.08)	.003^ (.01)	-.01^ (-.03)
Female Head Works (%)	-.02 (-.08)	-.003^ (-.01)	-.02*^ (.13)
Adjusted R^2	.09	.25	.14
N	460	904	1943

** $p < .001$ * $p < .01$ + $p < .05$

^ F-value indicates a significant difference between male and female coefficients. Although identical, the significance of the F-value is reported for both female and male models

Note: Standardized coefficients in parentheses

Chapter 4:
Father Absence, Father Alternatives, and Female and Male Violent Offending

This chapter examines the possibility that alternatives to resident fathers, such as old heads and grandmothers, can provide social and cultural capital, function as role models, and/or perform crime-control functions in communities in a way that mitigates the negative effects of father absence. It was argued earlier that a surplus of older males in the community bring unique additional resources to an area, ranging from economic sources to external social ties to internal social control capabilities. However, there is debate over whether these additional males in a community affect female and male violent offending in the same manner. It was also asserted that othermothers could supplement losses due to father absence via their strengthening effect on female-headed families. The beneficial effects of these community caretakers (i.e., co-resident grandmothers) are expected to apply across gender. For both old heads and co-resident grandmothers, the favorable effects are expected to be greater in areas that are more severely deficient in resident fathers. These notions are tested via a SUR analysis of the direct and interactive effects of male capital/old heads and community grandmothers with special attention to father absence.

Male Capital and Female and Male Violent Offending

Recall that male capital is operationalized as the number of "old head" males ages 45-64 to the number of young adults ages 18-24. This measure is meant to tap the relative

size of the cohort of older, responsible, family-centered males in a community compared to its youth cohort. The greater presence of these males is expected to reduce levels of violence via their roles as role models, authority figures, protectors, and providers. Because these men largely focus their energies on assisting youth in their transition to manhood (e.g., See Anderson 1990), the effects of male capital is expected to have a greater crime reducing effect on males, though females will also benefit from the increased resources, social control, and security they collectively bring to localities.

First, we examine mean differences in community social conditions with a greater than average ratio of old heads contrasted with communities that suffer a deficit in male capital. Then we examine how violence rates differ across these community types. Last, we use seemingly unrelated regression techniques to examine whether there is a direct crime-reducing effect of old heads and whether the effect of father absence is contingent upon the level of male capital in a community. We also use F-tests to test for significant gender differences in the effect of old heads on gender-disaggregated rates of violence.

Descriptive Statistics Broken Out By Community Level of Male Capital

Father Absence and Disadvantage

Table 4.1 displays descriptive statistics by level of male capital for counties included in the sample. The sample was partitioned into three categories such that "high male capital" corresponds to a higher than average share of older males whereas "low male capital" communities have a lower than average share of older males present. Note that the mean ratio of older males to young adults is 2.5:1.

Most striking in this table is the extent to which father absence tends to differ across community type. Communities with low male capital levels typically also have the highest levels of father absence. On average, father absence is 6% higher in localities with few old heads compared to other areas. Further, the level of disadvantage is greater in this type of area as well. The disadvantage measure is standardized across the sample (such that the mean = 0 and SD = 1). Therefore, the mean level of disadvantage is considerably greater for both females (mean disadvantage = 1.2) and males (disadvantage = 1.0) in communities with fewer old heads. By contrast, high male capital communities are better off than other community types, on average[43]. It is important to note, though, that there is considerable variation within each community type. For example, in low male capital areas, father absence ranges from 5% (much lower than mean rates in other community types) to 44%.

Violence Rates

Given the differences across community types in social conditions and the association between father absence (and other social conditions) and violence, one might expect mean crime rates to vary widely by community type. This is, in fact, the case (see Table 4.1). Violence rates are higher in low male capital communities while violence rates are typically lowest in high male capital areas (in the absence of controls). For

[43] In terms of the indicators of social disorganization, low male capital areas tend to be somewhat more densely populated than other areas and, not surprisingly, have age structures that are more skewed toward youth. In terms of the other social indicators, there are few differences across locality in mobility and urbanity (population size), though low male capital areas tend to experience somewhat more mobility and tend to be more urban.

example, mean male robbery rates in areas with low male capital are about twice as great as the mean male rates in high male capital areas. This pattern holds for females as well as males. Mean female robbery rates in low male capital areas are roughly twice as great compared to other localities. However, there is much variation across communities in female (and male) levels of offending. Standard deviations in mean levels of violence are sizeable regardless of gender or community type.

In terms of gender differences in violent offending, male violence rates are substantially higher than female rates, on average. For example, male homicide rates are roughly ten times greater, on average, than female homicide rates across community types. Additionally, a comparison of standard deviations for female (and male) violence rates illustrates that, like males, in some communities female violence is quite rare whereas in other communities, female violence is far more prevalent (but still by no means a common occurrence). Given the considerable variability in community violence rates, though, it is likely that in some communities with low male capital, female rates of violence outpace male rates of violence in other communities with high male capital.

Father Absence By Level of Male Capital: Comparison of Gender Disaggregated Violence Rates Across Community Types

To examine whether rates of female and male violence are comparatively less in areas with high male capital, we analyze violence rates of communities partitioned according to level of father absence and male capital. For this bivariate analysis, the sample of counties is categorized according to whether the community has a high or low

level of father absence (+/-1 SD) and whether the community has a high or low level of male capital (+/- 1 SD). This results in four categories: low male capital/low father absence; high male capital/low father absence; low male capital/high father absence; and high male capital/high father absence. Based on the notion that the greater presence of old heads relative to youth should moderate some of the crime-producing effects of father absence, we would expect that communities with high levels of male capital should have lower mean rates of violence for both males and females when compared to comparable communities with lesser levels of male capital (e.g., high father absence/high male capital areas should have lower mean violence rates than high father absence/low male capital communities). Given that father absence does not seem to affect males or females differently, we can also visually assess whether the effect of male capital varies by gender.

Figures 4.1 and 4.2 display mean rates of violence for females and males (respectively) across the four community categories. (*Note that rates of felony assault are divided by a factor of ten* to make the scales more comparable and the figures more readable.) First, we compare differences across communities categorized as "high" in father absence.

For females, robbery rates are substantially greater in communities with low levels of male capital. For males, both homicide and robbery rates are lower in high father absence areas that have a relatively greater cohort of older males (compared to young adults). However, for felony assault, this pattern is reversed such that high male

capital areas actually have *higher* mean levels of both female and male assault than low male capital areas (with high father absence). Clearly, level of male capital has an impact in the expected direction on mean differences in robbery, for both males and females. For homicide, the results are more ambiguous with old heads having an impact on male but not female homicide rates. Results for felony assault are in the opposite direction than predicted – for both females and males.

For low father absence areas, the relationship between male capital and gender-disaggregated violence rates are fairly similar. That is, female homicide and robbery rates and male robbery rates are lower in low father absence areas with higher levels of male capital. There seems to be little effect of old heads on felony assault rates for either females or males.

Thus, a bivariate examination of the data suggests that the presence of a large cohort of old heads *may* dampen female and male violence rates in both high and low father absence areas. However, the effects are more uniform for males in high father absence areas whereas the dampening effects of old heads on violence is more uniform for females in low father absence areas. Felony assault is unaffected (or possibly aggravated) by the presence of old heads. We test these tentative conclusions using a multivariate framework below.

Multivariate Results: Father Absence, Male Capital, and Violence

The multivariate results presented in Chapter 3 indicate that father absence has a significant influence on a community's violence level for both females and males. At issue is whether alternatives to resident fathers influence female and male violence in ways that offset the negative impact of father absence. We test this using a multivariate framework that assesses main and interactive effects of father absence and male capital on gender disaggregated violence. Significant gender differences are assessed using F-tests.

Main Effects

To examine more fully the relationship between father absence and gender-disaggregated violence, we regress father absence, male capital (ratio of old heads to young adults), structural disadvantage, and control variables (Model 1, Table 4.2) on gender disaggregated rates of violence. The top panel displays results for females, the bottom panel for males. These models may indicate that a surplus of older, responsible males, though not necessarily carrying the formal title of father, can take on the roles of this position and help to overcome the community deficit in absent fathers.

The direct effect of male capital on female and male violence suggests that a surplus of older males can mitigate, somewhat, the deleterious effects of father absence on violent offending. Where male capital is high, violent offending is predicted to be less for all types of offending, with the exception of female felony assault. For example, for every one unit increase in the ratio of older males to young adults, female robbery, the

violent offense displaying the largest direct effect of male capital on violence rates, is expected to decline by 26% ($e^{-.30}$) and male robbery is expected to decrease by about 14% ($e^{-.15}$). It should be noted, though, that, the coefficient representing the male capital achieves significance only for female robbery. Also of importance, the detrimental effects of father absence are extremely robust. The coefficient for father absence remains significant and strong across all gender*offense categories. Communities that have a greater amount of father absence also have higher rates of violent offending, controlling for the amount of male capital in the area and other relevant social indicators.

Gender differences in the effect of male capital on violent offending are non-existent, with the exception of felony assault. For homicide and robbery, the effect of male capital is the same for females and males; for felony assault, however, the presence of old heads has a stronger (non-significant negative) effect on males than females (non-significant positive effect). Thus, we can conclude that it is *likely* that increased male capital leads to less violent offending for both males and females.

Interactive Effects

Next, we examine whether the effect of male capital is contingent on the level of father absence in an area. It is possible that the increased presence of alternative role models, guardians, and protectors only makes a difference where resident fathers are largely absent. In areas where fathers and husbands are present, the added presence of older males may be redundant or unnecessary. However, if the effects of old heads are

additive, higher levels of male capital will decrease crime regardless of the presence or absence of resident fathers.

The coefficients for interactive models including father absence, male capital, and father absence*male capital (along with relevant control variables) are displayed in Table 4.2 (Model 2). However, it is more instructive to visually examine the pattern of interaction between father absence and the level of male capital. To more fully examine the differential impact of father absence in high male capital areas versus low male capital areas, we graphed these relationships broken out by violence type and gender. Figures 4.3 through 4.8 illustrate the effect of father absence on gender-disaggregated violence rates across levels of male capital (with control variables set at their means). We distinguished only between high and low father absence areas since this contrast is of most substantive interest[44]. The x-axis charts level of male capital and the y-axis indicates the violence rate per 100,000 females or males. The lines represent mean values for low father absence areas (-1 SD) and high father absence areas (+1 SD).

First, it is important to note that rates of female and male violent offending are almost uniformly greater in high father absence areas, regardless of the level of male capital. For example, at average levels of male capital (i.e., 2.5 older males per young adult), female homicide is predicted to be 0.7 per 100,000 females in high father absence communities compared to 0.3 per 100,000 in low father absence areas. For males,

[44] Note that areas with "average" presence of fathers displayed results more consistent with low father absence areas than high father absence areas. For the most part, though, the line for average father absence fell somewhere in between those for high and low father absence areas.

homicide rates in high father absence areas are predicted ot be 14.4 compared to 9.3 in low father absence areas.

In terms of the interactive effects of male capital and father absence on criminal violence, the effects of male capital do significantly vary across levels of father absence for both males and females and across violent offense types, but in inconsistent ways (based on type of violent offense). For homicide (Figures 4.3 and 4.4), the most reliably measured offense, the relationship is clear. Rates of violence decline as level of male capital increases. However, the impact of male capital is greater in localities with high father absence (i.e., old heads do more to mitigate violence in high father absence contexts). For example, at the lowest level of male capital (-3 SD), homicide rates in high father absence communities compared to low father absence areas are 74% higher for females and 80% greater for males. However, at the highest level of male capital (+3 SD), female homicide rates in high father absence areas are only 63% greater than in low father absence areas; for males, homicide rates are actually 34% *lower* in high father absence areas when male capital is very high. Old heads clearly have a greater impact on homicide where father absence is high. In fact, for males, at greater than average levels of male capital, homicide rates are comparable to or *lower* than those in low father absence areas. The ill effects of father absence on homicide are virtually erased if male capital is sufficiently high. There are *no significant gender differences* in the interaction term for female or male homicide, indicating that old heads are equally successful at quelling female as male homicide.

For robbery (Figures 4.5 and 4.6), the relationship between father absence and male capital is reversed. The increased presence of male capital in high father absence areas seems to actually encourage robbery for both males and females. In low father absence communities, the effect of male capital is more as expected: Male capital significantly reduces female robbery but has little effect on male robbery rates (though tending to decrease robbery as levels of male capital increase). Again, the magnitude of the interaction effect is similar for females and males.

For felony assault (Figures 4.7 and 4.8), a similar pattern as robbery emerges: Increased levels of male capital are associated with greater levels of female and male felony assault in high father absence areas. The presence of old heads has little or no effect on either male or female rates of felony assault in low father absence areas (though there are slight decreases in felony assault at increased levels of male capital). Unlike robbery, for felony assault the interaction term is significantly stronger for females, perhaps indicating that the presence of older males in high father absence communities elevates female felony assault to a greater extent than male felony assault.

Though main effects of male capital suggested that the increased presence of older men reduced criminal violence, the contingent nature of the effect of male capital across levels of father absence on violence is not so clear cut. For the most serious offense, homicide, the increased presence of old heads is associated with lesser violence, though somewhat more so in high father absence areas. However, in the cases of robbery and felony assault, a greater presence of old heads is associated with *higher* levels of

criminal violence in high father absence localities. In low father absence areas, increased male capital decreases violence, though more for homicide than robbery or felony assault. Possible reasons for why the presence of older males might increase rates of robbery and felony assault (but decrease rates of homicide) include differences in reporting to police, differential application of the law, and greater victimization. This is discussed in greater detail in Chapter 7.

In terms of gender differences, the expected greater beneficial impact of old heads on lessening male violence did not materialize. In fact, if anything, old heads had greater violence-reducing effects on female violence (homicide and robbery), but not significantly so. The only significant gender difference to emerge was for felony assault – in both the main and interactive models. In the main effects model, greater male capital is associated with increases in female felony assault, but decreases in male assault (though the coefficients are not significant). In the interaction model, the female coefficient is significantly stronger than the male model coefficient so that the greater presence of old heads increases female felony assault in high father absence communities more so than male felony assault.

Collective Caregiving and Female and Male Violent Offending

In order to tease out further the relationship between father absence, father-alternatives and gender-disaggregated rates of violent offending, we examine the impact that the presence of co-resident grandparents and othermothers have. First, we consider whether the presence of caregiving grandparents and othermothers can compensate for an

area's lack of resident fathers for both male and female violent outcomes. Next we test whether the effect of caregiving grandparents is conditional on an area's level of father absence. As in past analyses, there is a focus on determining whether these relationships hold for both males and females or if the effect of collective caregiving (i.e., co-resident grandparenting) on violent crime is gendered.

Father Absence and Collective Care-giving: Direct Effects of Co-Resident Grandparenting

Table 4.3 displays the results of SUR models for the effect of father absence, "othermothering" – the proportion of grandparents who live with and *care for* their non-adult grandchildren, and structural disadvantage (controls are not displayed) on female (Panel A) and male (Panel B) violent offenses. Even after controlling for the extent of othermothering that occurs in a community context, father absence remains a significant influence on violent offending for both females and males for every offense type. Compared to the basic model (father absence, disadvantage, and controls), the size of the father absence coefficient is somewhat diminished when we control for active grandparenting. For example, for felony assault, the father absence coefficient is reduced from .10 to .08 for females and from .03 to .01 for males. This at least suggests that differences across communities in the extent of othermothering can minimally reduce the direct effect of father absence on violence. For the other gender*offense categories, however, the change in the father absence coefficient is equivalent to one percent or less.

In addition, changes in the effect of father absence are not confined to one sex over the other.

The direct effect of othermothering on community violence is somewhat ambiguous. For three of the six gender by offense groupings, the direct effect of co-resident grandparenting is negative (but non-significant), indicating that the greater the share of grandparents who actively supervise community youth, the lesser the community's violence rate. For example, for every one percent increase in othermothering, the female homicide rate is reduced by 12% ($e^{-.25}$). Though this effect seems sizeable, first, the effect is non-significant and, second, the range of othermothering across communities is somewhat truncated – ranging between 0 and 8%. Therefore, a one percent increase in co-resident grandparenting represents a fairly large-scale change in a community's family structure. By contrast, for the other three gender*offense groupings, the coefficient for co-resident grandparenting is positive. Othermothering has a direct significant positive effect on felony assault for both males and females, a relationship that is not in the expected direction. The presence of active grandparents actually *increases* felony assault comparably for both females (20% per 1% increase) and males (15% per 1% increase). These somewhat unexpected findings indicate that the presence of co-resident grandparents generally is not a deterrent to violence. Co-resident grandparenting may signal problems with the primary caregivers that predispose areas to increased violence rather than an inability on the part of

othermothers to exert control. Or, grandmothers may be more proactive in terms of intervention – calling the police more often and insisting on police involvement.

Father Absence and Collective Care-giving: Interactive Effects of Co-Resident Grandparenting and Father Absence

Since the concern of this analysis deals with whether other caregivers can mitigate some of the deleterious social consequences of father absence, the next logical step is to test whether the impact of grandparenting on violence is conditioned by the family structure of a community. To test this, we entered a multiplicative interaction term derived from the continuously coded father absence and othermothering variables. The results of the interaction are shown in Table 4.3 along with the main direct effects for father absence and othermothering. The models also include controls for economic disadvantage and other factors representing features of social disorganization (not displayed).

The direct effect of coefficients in the interaction model represent "conditional" relationships where the coefficient for grandparenting, for example, represents the effect on gender-disaggregated rates of violence when father absence (and other variables in the model) is equal to zero. Though this is a highly unlikely circumstance (there is one small county in Texas with no father absent homes), a notable minority of counties have no caregiving grandparents (about 20% of counties have a count of less than 1%). The father absence coefficient represents the effect of that variable on violent outcomes where there are no othermothers to lend support to families.

In the complete absence of othermothers (and, importantly, other features representing social disorganization), the effect of father absence on violence is approximately twice as great as in the non-interactive model (where coefficients reflect the "average" relationship between father absence and violence). For every one percent increase in father absence, female homicide increases by 22%, female robbery by 20%, and female felony assault by 21%. Likewise, male violence increases by 13%, 20%, and 11%, respectively. Though this represents an implausible situation, it does highlight that (1) there is considerable variability in the level of father absence across localities and (2) that there are significant deviations from the average in the effect of father absence on violence outcomes given various levels of othermothering and social conditions representing social disorganization.

Further, in this model, the direct effect of othermothering is positive, indicating that the increased presence of co-resident grandparents uniformly escalates violent offending; the coefficient is significant for the majority of gender*offense combinations (except homicide). This clearly indicates that, in general, collective caregiving is not effective in terms of quelling criminal violence (where father absence is minimal/non-existent).

The addition of caregiving grandparents to the area's infrastructure may not benefit communities where two-parent families are the norm and may actually hinder crime control efforts due to ineffective guardianship by grandparents or failed efforts at enforcing their authority. Or, perhaps larger groups of older women increase the pool of

relatively easy targets of violence. However, othermothering may be an effective alternative in areas where single-headed families are prevalent. (This explanation would account for the inconsistent/ambiguous findings in the main effects analysis.) In fact, the interaction term of father absence and othermothering is highly significant and negative across all models, indicating that the effect of othermothering is contingent on the level of father absence in a community. The negative sign means that othermothering leads to significantly lower levels of violent offending than would be expected in communities where father absence is high; where father absence is low, the increased presence of caregiving grandparents elevates levels of violence. This is visually represented in Figures 4.9 through 4.14. There are two lines, one representing low father absence areas (-1 SD) and the other representing high father absence (+1 SD). The x-axis represents level of othermothering (99% of all counties fall between 0 and 5% though the scale ranges to 8%) and the y-axis corresponds to rate of violent offending per 100,000 females or males.

The most striking effects may be seen in the figures for felony assault. For example, in Figure 4.13 for female felony assault, where othermothering is absent the mean level of felony assault is 4.3 per 100,000 females for communities with low father absence, 25.9 on average, and a whopping 190.4 in communities with high father absence. By contrast, in areas with extreme levels of othermothering (i.e., 5%), the relationship reverses itself so that communities with high father absence coupled with high levels of othermothering are predicted to have the *lowest* rate of female felony

assault (94.5 per 100,000), whereas communities with low father absence have the highest level of female felony assault (115.5 per 100,000). So, othermothering can reduce the incidence of female violence by nearly half from about 200 per 100,000 to less than 100 per 100,000. Similarly for male felony assault (Figure 4.14), high levels of othermothering can reduce male felony assault in high father absence areas from 442.7 (where othermothering = 0) to 296.7 (where othermothering = 5). This patterning prevails for homicide (Figures 4.9 and 4.10) and robbery (Figures 4.11 and 4.12) as well.

One puzzling finding is that the increased presence of caregiving grandparents actually increases violent offending in communities where father absence is low[45]. This somewhat strange finding highlights the inimitability of fathers within communities. This somewhat strange finding may be due to the inability of caretaking grandparents to exert authority and dole out discipline when both parents live with their children. Further research is necessary to understand these seemingly anomalous results.

To summarize, othermothers have a clear buffering effect on violent outcomes in the absence of resident fathers. Though othermothering is not a deterrent of violent occurrences in general, when there is a shortage of primary caregivers, othermothers play a vital role in community crime prevention. Furthermore, their effect is not differentiated by gender. That is, othermothering is equally as effective for females and males in terms of community violence when primary caregivers are not present.

[45] The findings regarding average father absence communities are mixed with increases in violence predicted for some offenses with escalating levels of othermothering and essentially no effect of othermothering for other offenses.

Summary

The beneficial influence of collective care-giving on communities with high father absence is clear whereas the consequences of relatively large cohorts of old heads is more ambiguous and nuanced. Whereas co-resident grandparenting is clearly effective in reducing violence across all gender*offense type combinations in high father absence communities, the presence of old heads significantly reduces female and male rates of homicide only. However, in low father absence areas, the increased presence of co-resident grandparents and old heads does not seem to add much to the community's infrastructure or social control mechanisms; in fact, their presence may even detract from institutions of social control.

Few gender differences emerge. Where old heads deter violence, they do so equally well for males and females. However, for felony assault, where the presence of a large cohort of older males is associated with increases in violent offending, the impact is felt somewhat more by females. The effect of collective caregiving does not differ across gender or offense type.

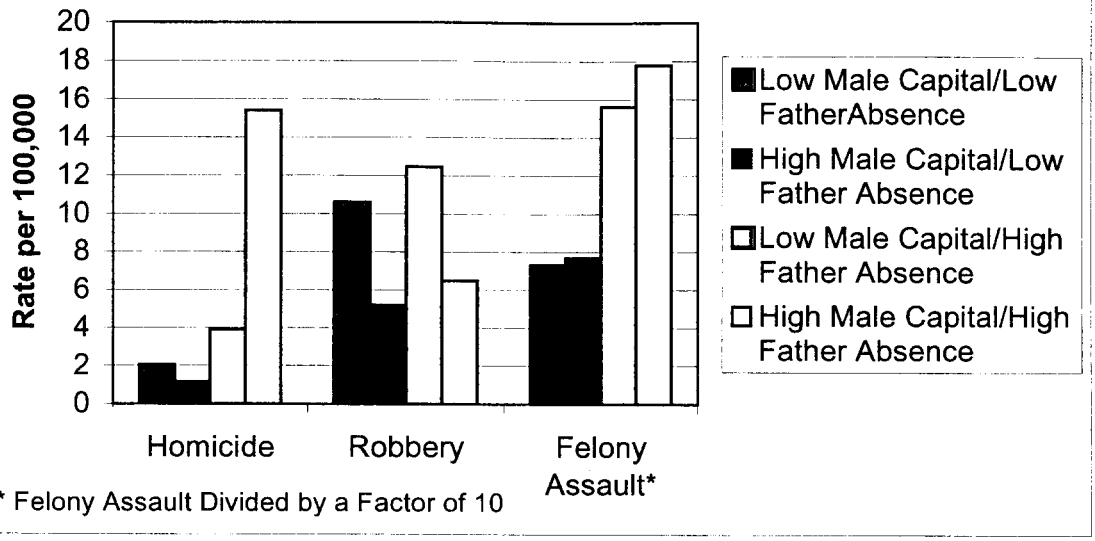
So far, father absence has been demonstrated to be a robust predictor of both female and male violence. Deleterious effects of father absence on violence persist for females and males, even after controlling for indicators of structural disadvantage and community social control mechanisms. Though male capital and collective care-giving can make up for some of the community deficits associated with widespread father absence, father absence continues to exert significant, destructive effects on gender-

disaggregated violence rates. Given the strong and robust nature of the father absence-violence relationship, and taking into account the marked changes in father absence in many communities, it is possible that changes in the family structure of counties may explain rises (or falls) in community violence levels. Since few gender differences emerged in cross-sectional analyses, it is anticipated that changes in father absence should account for within-county changes in violence levels in a similar fashion for females and males. These analyses are presented in the next chapter.

Table 4.1 Descriptive Statistics by Level of Male Capital (Means with Standard Deviations in Parentheses)

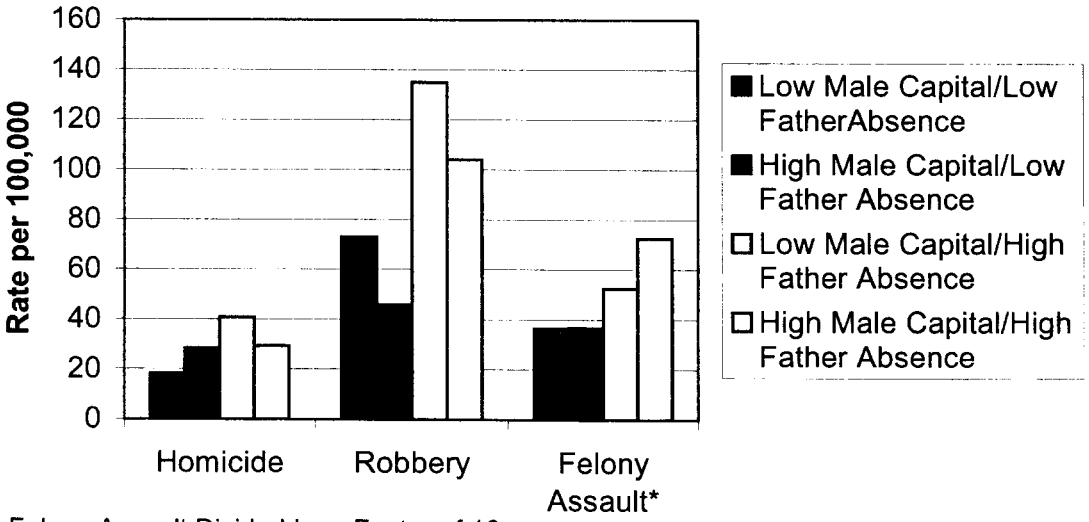
VARIABLE	Total Sample	High Male Capital	Medium Male Capital	Low Male Capital
Female Homicide Rate	2.71 (5.85)	2.27 (6.28)	2.92 (6.85)	2.60 (3.03)
Male Homicide Rate	25.41 (53.18)	30.39 (98.55)	22.95 (38.36)	26.42 (27.78)
Female Robbery Rate	9.17 (14.93)	5.03 (8.61)	8.82 (10.96)	12.44 (22.05)
Male Robbery Rate	78.43 (5.79)	47.41 (51.07)	74.12 (73.37)	105.32 (146.88)
F. Felony Assault Rate	92.82 (115.72)	81.73 (116.27)	96.85 (105.89)	99.20 (132.61)
Male Felony Assault	410.86 (416.71)	397.40 (432.54)	408.41 (375.21)	433.93 (473.60)
Father Absence (%)	15.75 (5.65)	12.67 (3.14)	16.61 (5.48)	18.10 (6.77)
Female Disadvantage	0.00 (2.08)	-0.91(1.27)	0.02 (1.74)	1.17 (2.87)
Male Disadvantage	0.00 (1.99)	-0.71 (1.38)	-0.03 (1.62)	1.02 (2.80)
Empty Households	66.00 (6.00)	68.00 (6.00)	66.00 (6.00)	66.00 (7.00)
Female Head Works	60.95 (9.46)	61.90 (9.66)	59.95 (9.32)	61.80 (9.30)
Region (South = 1)	0.52 (0.49)	0.45 (0.49)	0.58 (0.49)	0.53 (0.49)
County Population	10.70 (1.25)	10.23 (1.14)	10.76 (1.19)	11.25 (1.25)
Structural Density	7.60 (7.19)	5.13 (4.98)	6.99 (5.98)	12.21 (9.54)
Female Age Structure	8.94 (3.76)	6.52 (0.92)	8.36 (0.85)	13.37 (5.65)
Male Age Structure	9.84 (3.73)	7.37 (0.97)	9.25 (0.97)	14.39 (5.37)
Residential Mobility	45.44 (7.31)	43.10 (6.95)	44.47 (6.06)	50.60 (7.72)
N (Felony Assault)	1943	586	917	440

Figure 4.1 Comparison of Mean Rates of Female Violence Across Community Types (Male Capital*Father Absence)



* Felony Assault Divided by a Factor of 10

Figure 4.2 Comparison of Mean Rates of Male Violence Across Community Types (Male Capital*Father Absence)



* Felony Assault Divided by a Factor of 10

Table 4.2 Main (Model 1) and Interactive (Model 2) Effects of Father Absence and Male Capital (with Controls) on Gender-Disaggregated Rates of Violence (Seemingly Unrelated Regression)

PANEL A: FEMALES

	Homicide		Robbery		Felony Assault	
	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2
Father Absence	.08**	0.10^{+}	.08**^	-0.02	.10**^	-0.05
Male Capital	-.14	-0.04	-.30^{+}	-0.82*	.08^	-0.68**^
Female Disadvantage	.01	0.01	-.02	-0.02	.02^	0.04
Father Absence*Male Capital	--	-0.01	--	0.04^{+}	--	0.07**^
Adjusted R^2	.20	.20	.26	.27	.15	.16
N	460		904		1943	

PANEL B: MALES

	Homicide		Robbery		Felony Assault	
	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2
Father Absence	.05^{+}	0.14*	.12**^	-0.01	.03**^	-0.05*
Male Capital	-.09	0.36	-.15	-0.85**	-.07^	-0.44**^
Male Disadvantage	.12^{+}	0.11^{+}	-.02	-0.01	.12**^	0.13**
Father Absence*Male Capital	--	-0.04^{+}	--	0.06**	--	0.03**^
Adjusted R^2	.09	.10	.25	.26	.13	.15
N	460		904		1943	

** $p < .001$ * $p < .01$ + $p < .05$

^ F-value indicates a significant difference between male and female coefficients. Although identical, the significance of the F-value is reported for both female and male models.

Note: Standardized coefficients in parentheses

Figure 4.3 Effect of Male Capital Across Levels of Father Absence: Female Homicide

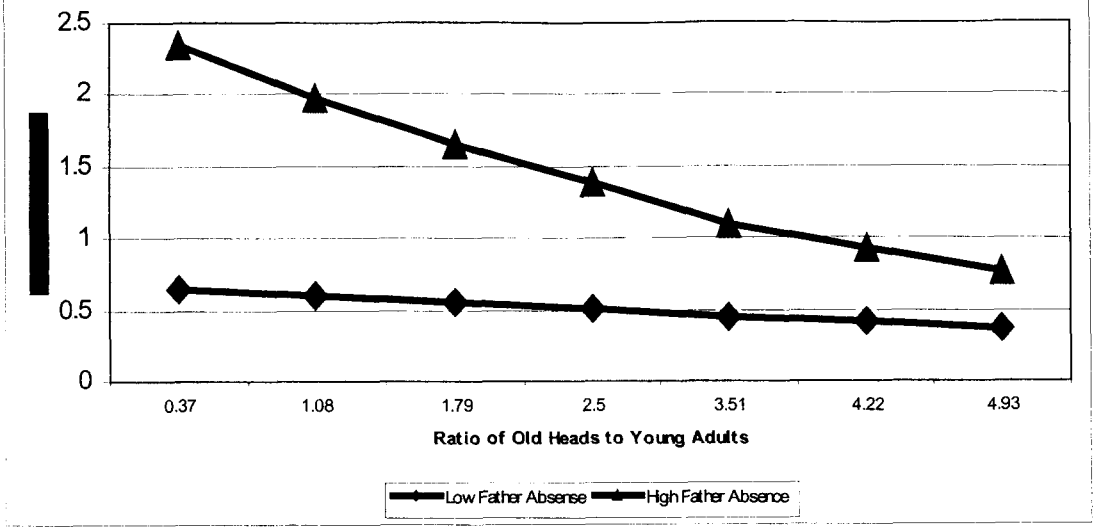
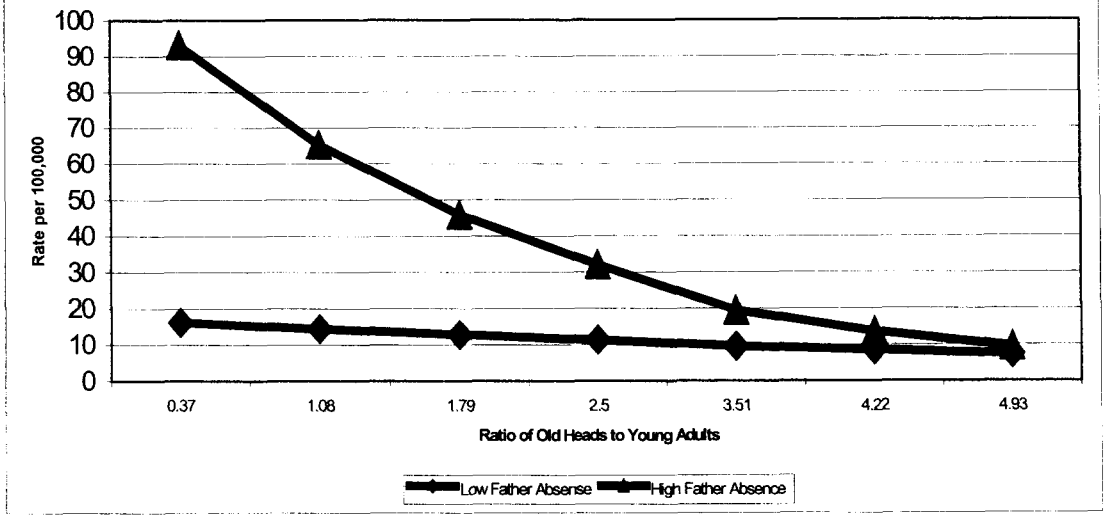
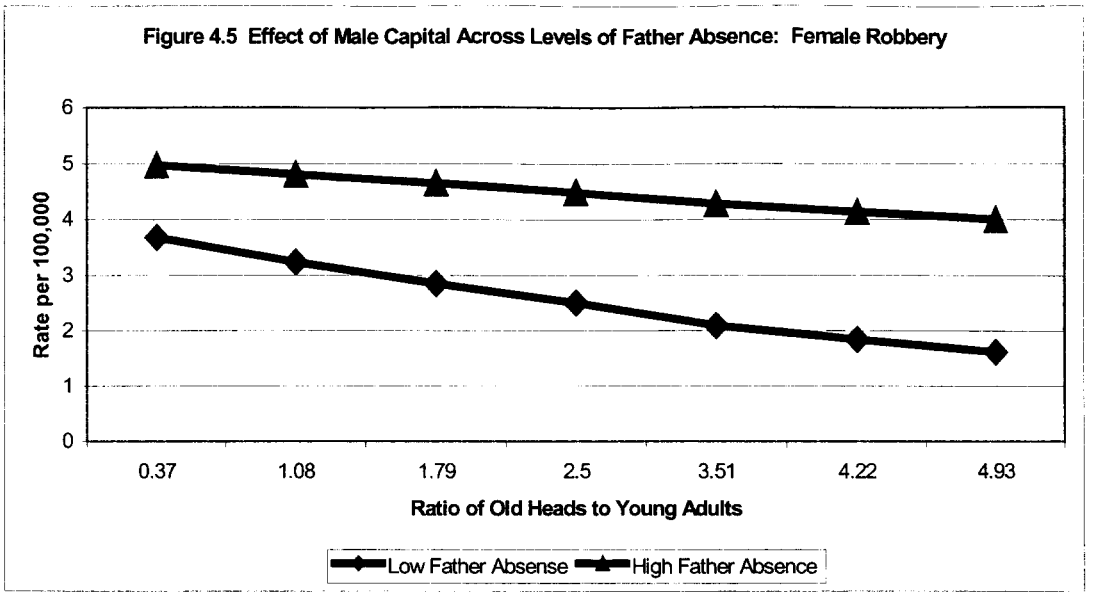


Figure 4.4 Effect of Male Capital Across Levels of Father Absence: Male Homicide





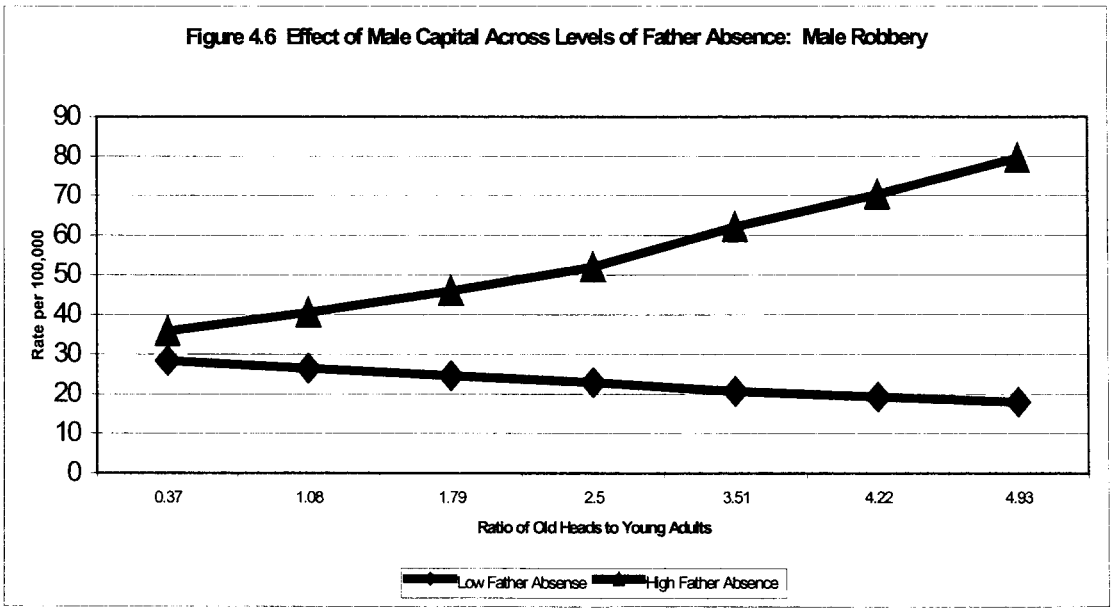


Figure 4.7 Effect of Male Capital Across Levels of Father Absence: Female Felony Assault

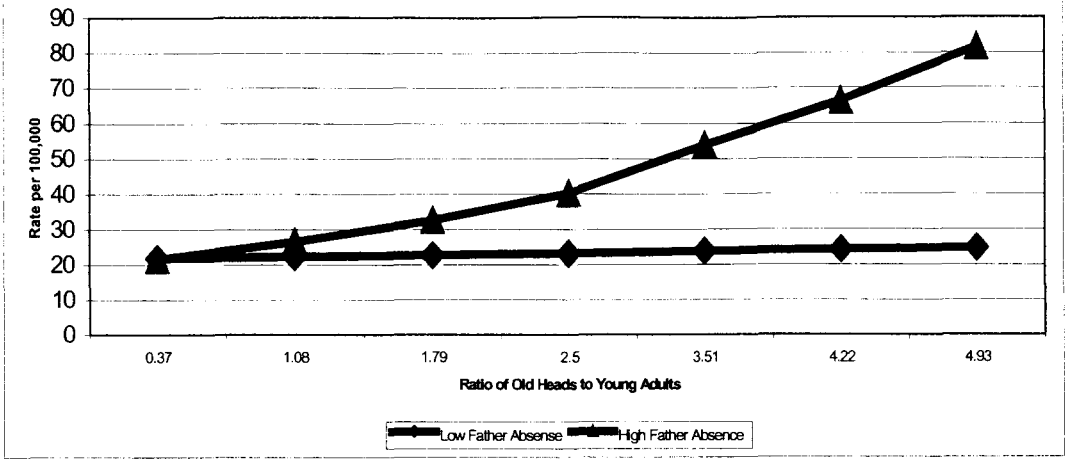


Figure 4.8 Effect of Male Capital on Levels of Father Absence: Male Felony Assault

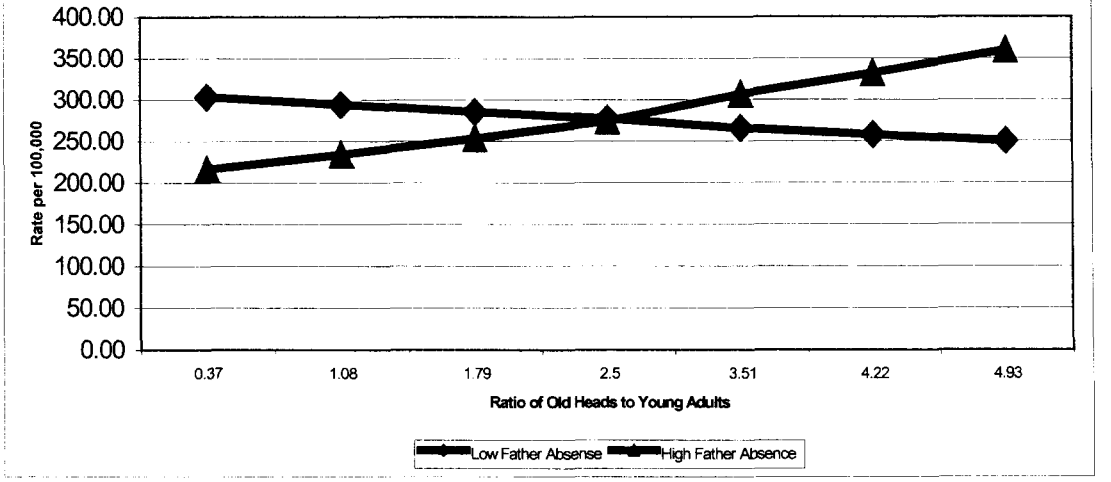


Table 4.3 Main (Model 1) and Interactive (Model 2) Effects of Father Absence and Collective Caregiving with Controls on Gender-Disaggregated Rates of Violence (Seemingly Unrelated Regression)

	Homicide		Robbery		Felony Assault	
	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2
Father Absence	.10**	.20**	.08**	.18**	.08**^	.19**^
Co-Resident Grandparents	-.25	.40	-.03	.75**	.20*	.86**
Female Disadvantage	.06	.04	-.001	-.02	-.01	-.03
Grandparents*Father Absence	--	-.04**	--	-.04**	--	-.04**
Adjusted R^2	.20	.23	.27	.28	.15	.17
N	460		904		1943	

	Homicide		Robbery		Felony Assault	
	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2
Father Absence	.06$^+$	.12*	.11**	.18**	.01$^+$^	.10**^
Co-Resident Grandparents	-.12	.33	.14	.68**	.14**	.67**
Male Disadvantage	.14$^+$	.13$^+$	-.03	-.05	.10**	.09**
Grandparents*Father Absence	--	-.02$^+$	--	-.03**	--	-.03**
Adjusted R^2	.09	.10	.25	.26	.14	.17
N	460		904		1943	

** $p < .001$ * $p < .01$ + $p < .05$

^ F-value indicates a significant difference between male and female coefficients. Although identical, the significance of the F-value is reported for both female and male models.

Figure 4.9 Effect of Collective Caregiving Across Levels of Father Absence: Female Homicide

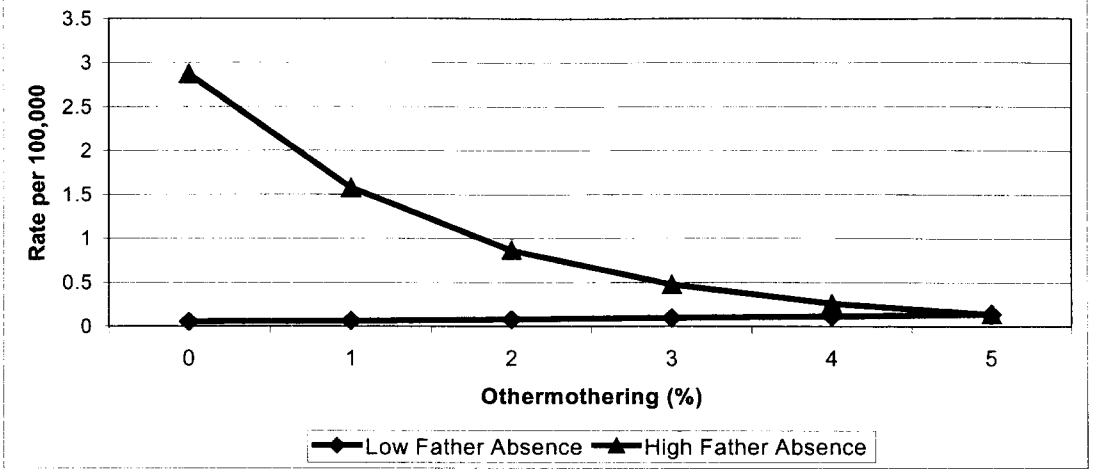


Figure 4.10 Effect of Collective Caregiving Across Levels of Father Absence: Male Homicide

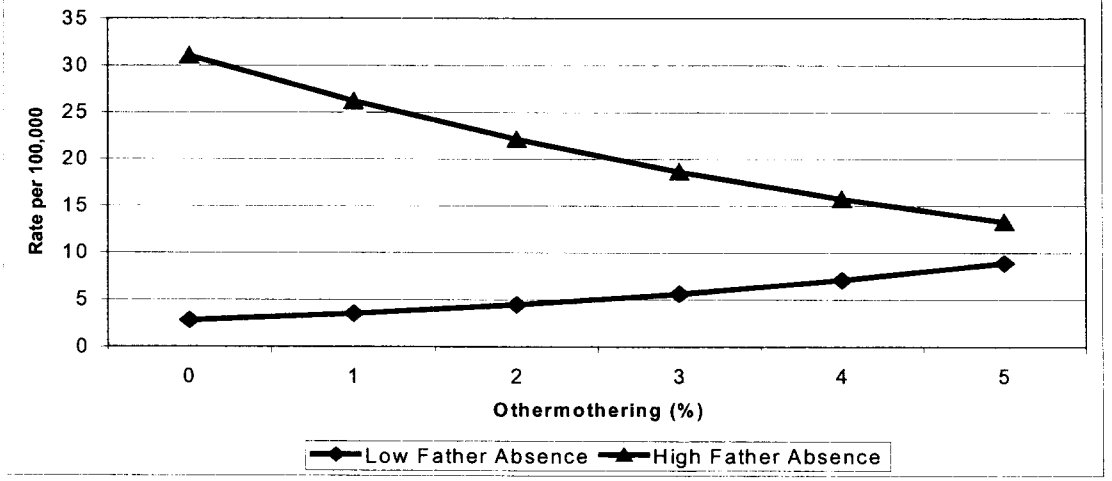


Figure 4.11 Effect of Collective Caregiving Across Levels of Father Absence: Female Robbery

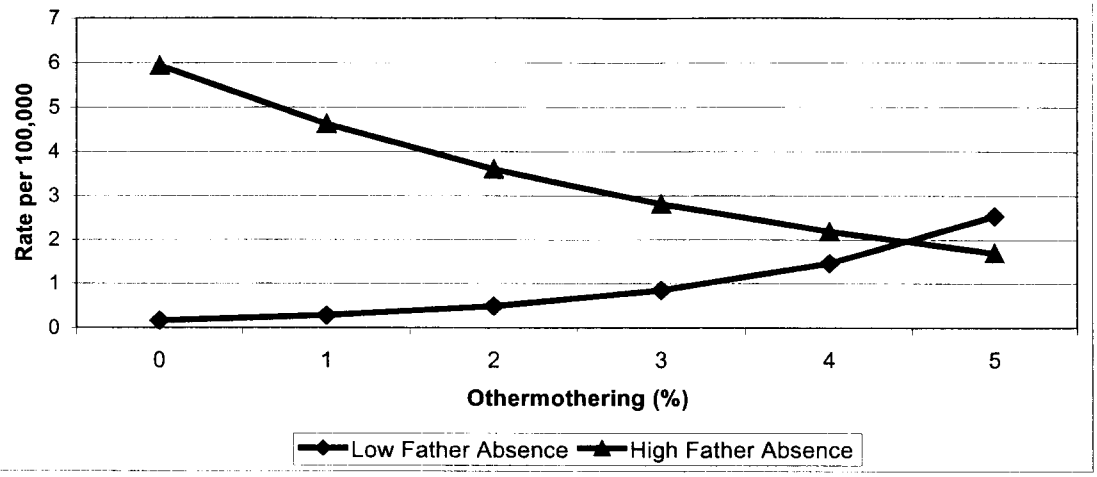


Figure 4.12 Effect of Collective Caregiving Across Levels of Father Absence: Male Robbery

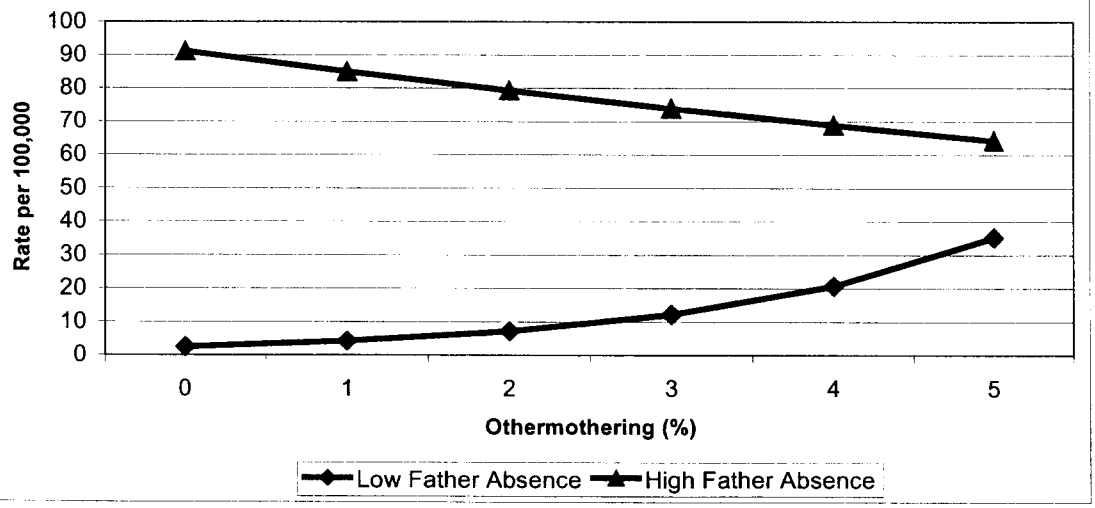


Figure 4.13 Effect of Collective Caregiving Aross Levels of Father Absence: Female Felony Assault

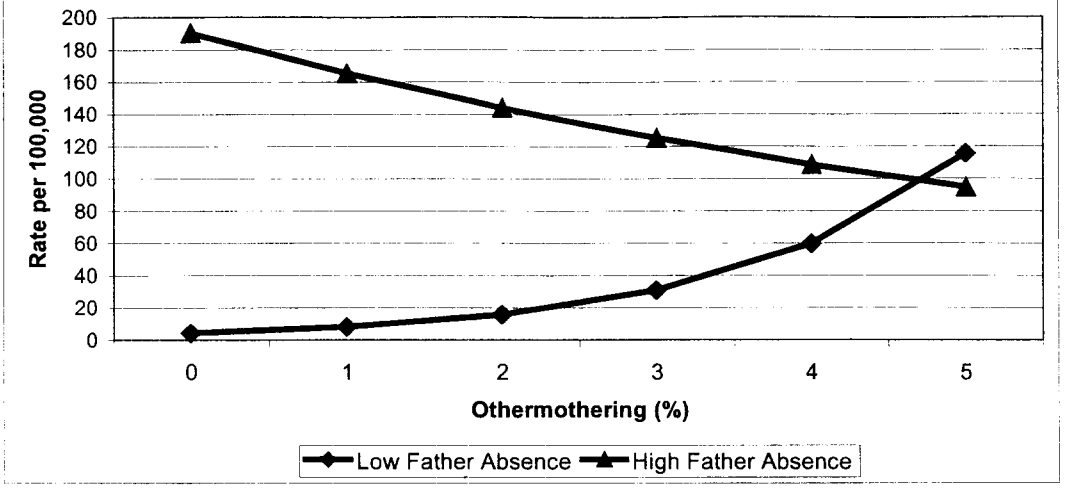
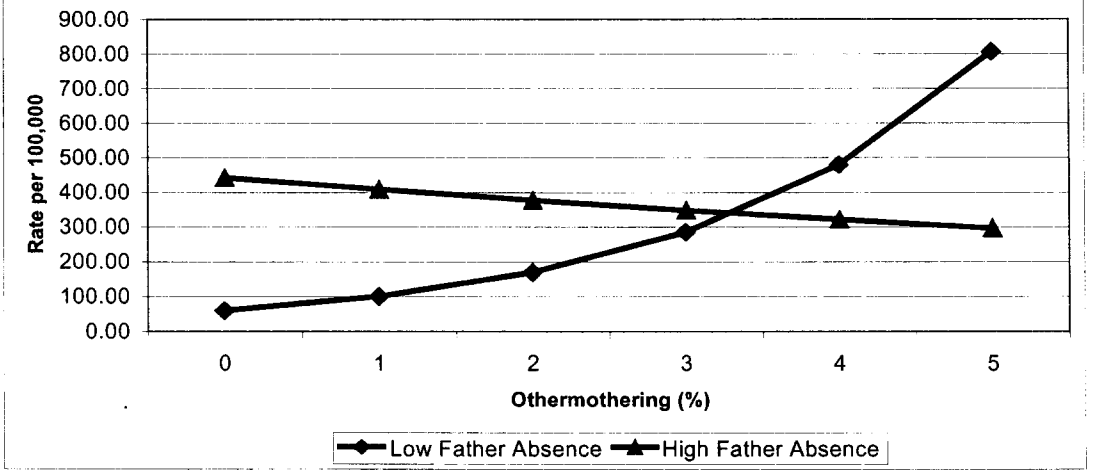


Figure 4.14 Effect of Collective Caregiving Across Levels of Father Absence: Male Felony Assault



Chapter 5
The Effect of Changes in Family Structure on Variability in Trends in Violent Crime

Father absence has proven to be a strong predictor of violent offending, with robust results for at least 1990 and 2000. Further, the effect of father absence on gender disaggregated violence persists for both females and males despite taking into account a number of community features related to father absence such as economic deprivation and the extent of social control. Though a large cohort of older males and collective caregiving by grandparents within the community can mitigate some of the negative effects of father absence (particularly for homicide), the direct effect of father absence remains for both males and females. The robustness of the father absence-violence relationship is a matter of concern, especially given the national trend toward increasing father absence. Therefore, the question arises: To what extent do changes in father absence explain *variability in trends* across counties in female and male levels of violence? Can changes in father absence explain why the rise (or decline) in violence rates is greater in some counties than others?

This chapter first describes trends in female and male offending from 1970-2000 in order to detect general patterns in violence and whether they vary by gender; we also examine the extent of variability across counties in trends in violence. Then, we explore trends in father absence across communities. Growth curve analyses, including indicators of change in father absence and other relevant controls, are then presented to

help tease out the relationship between trends in father absence and gender-disaggregated violence. These longitudinal analyses directly test the manner in which changes in a community's level of father absence are related to that community's trajectory of violent offending for females and males (controlling for change in other social indicators). Though few gender differences in the impact of father absence on violent offending have been identified thus far, this possibility is examined to further substantiate conclusions drawn from the cross-sectional analyses. Note, though, that these longitudinal models examine whether *change* in the independent variable, father absence, is related to *change* in gender-disaggregated violence rates, so despite the fact that cross-sectional analyses demonstrate a strong (static) relationship between father absence and violence, analyses of change may indicate the two trends are unrelated. The "average" between-county relationship between father absence and gender-disaggregated violence rates estimated from the HLM procedure are also used for comparison to the cross-sectional SUR models estimated in Chapter 3.

To summarize, this chapter will explore (1) What are the general patterns in violence trends for females and males? Do they differ by gender? (2) Is there variability across counties in trends in violence for both females and males? (3) In what manner and to what extent can changes in father absence account for variability in female and male violence trends across communities? Are the effects of trends in father absence and the proportion of variance explained by changes in father absence similar for females and males?

Trends and Variability in Female and Male Violent Offending

Trends in Violent Offending

Unconditional growth curves were fitted for each gender*violence combination using four waves of data in order to describe general patterns of violence trends summarized across counties. These unconditional Poisson models include time variables only in order to depict raw trends in female and male violent offending. These models include both a linear time variable (T) as well as a quadratic term (T^2). Curvilinear models (i.e., inclusion of a Time-Squared variable) were estimated because a visual examination of the raw data revealed patterns of violence that were non-linear and further statistical tests indicated that a polynomial term was warranted by the data. Also of note, the relationship between time and violence is allowed to vary across counties with the addition of an error term on the linear time component[46]. This error term also accounts for autocorrelation among the data points within each county – a typical stumbling block in longitudinal analyses.

The unconditional models describe mean levels and growth rates in violence and offer a baseline for evaluating subsequent models that include predictors of change. Table 5.1 displays the coefficients and variance components for the raw time trends for

[46] The general practice in modeling intra-unit change is to introduce random effects to allow for differences across counties in their initial level of violence as well as differences in their trajectories of change (if necessitated by the data). Statistically significant error terms (random effects) indicate substantive differences in starting values or trends over time among counties. Unfortunately, this analysis does not allow enough power to include more than one random effect. Therefore, only the relationship between time and violence is allowed to vary across counties.

each of the violent offenses under examination[47]. The top panel of the table describes county-level trends for females and the bottom panel summarizes trends for males. Given the coding scheme of time, the coefficients represent mean levels of violence (intercept) and instantaneous time trends for the mid-point of the study period (1985). That is, the intercept represents the average crime rate across counties in 1985. The time coefficient represents the linear time trend (i.e., the mean rate of change) while the time-squared coefficient represents the mean curvature of the line.

Though the coefficients have limited utility given that they are only a snapshot of larger patterns, it is useful to briefly describe their meaning before turning to a visual representation of the broader trends because the coefficients do give an indication of the direction and shape of the trends at the mid-point of the period under examination. For example, the average female felony assault rate (at the average time point) is estimated to be 27.46 per 100,000 females ($e^{-8.2}$) but is estimated to be increasing at an average rate of 14% per 10-year period ($e^{.13}$). The quadratic time coefficient is positive, but small, indicating that the shape of the female felony assault trend is curving upward at a minimal acceleration. Similarly, male rates of felony assault are estimated to be increasing at an average rate of 11%, though initial mean rates of felony assault are markedly higher for males, estimated at 184 per 100,000 and the curve is an inverted U-shape – that is accelerating downward. Felony assault is the only violence type

[47] Recall that the Poisson models offer less flexibility in terms of random effects; therefore, only one random component per model is included despite indications based on the untransformed regressions that random components are also required for the intercept and, in some cases, the quadratic time variable.

characterized by a positive linear time trend; homicide and robbery have negative time coefficients for both males and females, indicating the average trend is towards decreasing violence since 1985.

Turning our attention momentarily to gender differences in trends in violence, we can compare coefficients across models since the coefficients represent proportional differences[48]. Thus, we can characterize female homicide patterns as trending downward at a faster rate than male homicide trends, on average, since the linear rate of change for females is a decline of 15% on average per decade compared to male declines of 5% per decade ($z = -3.05$ $p < .001$). Similarly, female robbery declined at a rate of 1% per year (10% over 10 years) versus male rates, which declined an average of 2% per *decade*. Female rates declined by a significantly greater margin than male rates ($z = 18.44$ $p < .001$) Female felony assaults are increasing at a marginally greater rate than male felony assault rates, ($z = 1.34$ $p = .09$). However, caution must be exercised in these interpretations because the time parameter represents *average change*; that is, it is based on the mean level for counties at the mean point in the overall time frame. So, though the actual pattern of male robbery included marked increases up through 1980, moderate declines throughout the 1980s with more substantial declines beginning in 1990, the average time trend is downward. These patterns are better discerned in graphical representations of the violence trends.

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[48] Significant gender differences are tested using the following formula: [b(male) – b(female)]/square root of ($SE^2_{male} + SE^2_{female}$)

The statistically described coefficients are displayed in a more intuitively appealing form in Figures 5.1-5.3. These figures display estimated changes over 1970-2000 in the level of gender-disaggregated violence averaged across counties. Though these graphs do not address within-county change in violence, they do indicate variability in violence rates across time. It also highlights the necessity of examining females and males separately. Though it would be a mischaracterization to assert that the violence trends are divergent by gender, these figures demonstrate some subtle differences in female and male trends in violence.

Briefly, homicide rates have steadily declined for both males and females since at least 1980 (Figure 5.1). Additionally, female and male rates have been declining in roughly equal proportion for the past two decades. Trends in female and male robbery are estimated to be somewhat different over the course of the study period (Figure 5.2). Male rates of robbery rose steadily through the 1970s and peaked around 1980. The average community experienced gradual reductions in male robbery beginning in 1980, followed by a more rapid drop through the present. For females, the trend has been substantially flatter than the robbery trend for males. Female robbery rates declined in the 1970s (when male rates were rapidly increasing), but have recently begun to rebound. After 1990, female robbery rates began to slowly increase. However, the predicted female robbery rate in 2000 (10.1) is just over half of the mean female robbery rate in 1970 (18.4). Given that the male robbery rate has continued to decline, the female *share* of robbers has increased since 1990 even though female rates of offending have declined.

Perhaps the most interesting trend is that for felony assault (Figure 5.3). Male rates are estimated as more than doubling from 1970 to 1990, followed by a steady rate of offending through 2000. Meanwhile, increases in female rates of arrest for felony assault were much more gradual until beginning in the 1990s when female rates increased at a more rapid rate than they had in the past. For example, over the twenty years beginning in 1970, female felony assaults increased on average by 15 per 100,000 females. However, from 1990 to 2000 alone, female felony assault rates increased at a rate of 17 per 100,000 females. Additionally, the female share of arrests for felony assault has grown since 1990 as communities experienced female gains accompanied by stability among male rates, on average. Females are estimated to make up almost 16% of all felony assault arrests in 2000 whereas in the past (i.e., 1980, 1990), females accounted for approximately 10% of felony assault arrests[49].

These general patterns characterize overall trends in violence for males and females from 1970-2000. To summarize, homicide and robbery rates are, on average, declining for both males and females, with female rates declining at a faster rate than males. For felony assault, rates were on the rise for both females and males, though a closer inspection of the trends indicates somewhat different patterns for males and females (with male increases occurring largely from 1970 until 1990 and female rates rising steadily but more accentuated since 1990). However, it is likely that there is

[49] This is calculated using the formula for the female percent of arrest (FP/A) that has been used is past trend analyses (see Steffensmeier and Harer 1999 for a more detailed description of this measure). The formula is [female rate/(male rate + female rate)*100].

considerable variation across communities in trends in violence, with some counties experiencing a rise in violence and other experiencing a decline. To ensure that that is variability in violence rates across counties, we examine this possibility next. Then we assess the extent to which changes in father absence can explain why some communities experienced rises in violence.

Variability in Trends in Violence

Table 5.2 displays the variance components for random-intercepts, random-coefficients models. Note that these models were estimated based on untransformed data (i.e. raw crime rates), which allowed for the most flexibility in specifying the error structure[50]. A significant variance component indicates that there is considerable variability across counties in the particular component. For example, a significant variance component for the intercept (constant) indicates that there is significant unevenness in mean levels of violence among counties. Every model requires a randomly varying intercept term ($p < .001$), indicating substantial diversity in mean levels of violence for both males and females, regardless of crime type. There is relatively more variability across communities in mean levels of felony assault than homicide, but this is expected given the relative rarity of homicide virtually everywhere. Furthermore, there is greater variability across counties in male models than female models. This is not unusual, given the smaller range of violence rates for females than males.

[50] Though Poisson was used to estimate the models for purposes of interpretation of coefficients, the untransformed models were found to closely approximate the Poisson estimates, as displayed in the figures

Of primary importance is whether the growth rate (i.e., trends) in violence vary significantly across communities. Every model (except for male robbery) statistically required a random coefficient for the linear component of time, indicating that counties varied substantially in rates of change in violence. Additionally, many of the models supported a random coefficient for the time-squared variable, indicating significant variation across counties in the shape of the trend line (e.g., for female robbery and felony assault and for male homicide and robbery). Though there is substantial variability in community violence "growth rates," deviation from the mean is less for linear rates of change than it is for mean rates of violence (as characterized by the size of the random effects for time and the intercept, respectively), implying that the greatest diversity is in initial (mean) rates of crime rather than in the trajectories of crime. Even so, there is substantial variability in rates of growth. Crime counts change at substantively different rates across counties, for both males and females.

Overall, one can conclude that counties differ tremendously in the scope of violence they experience; additionally patterns of change were highly diverse among the communities in this sample. Next we examine the shape and extent of variability in trends in father absence across communities. We first describe the overall trend in father absence and then we assess the extent to which communities differ in their trajectories of father absence over 1970-2000.

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described in the preceding section. The untransformed models are used to illustrate the extent of variability

Trends and Variability in Father Absence

Table 5.3 and Figure 5.4 summarize the mean trajectory for the growth in father absence over time. Table 5.3 displays fixed and random effects from a hierarchical linear model predicting the percent of father absence using time and time-squared components. Figure 5.4 depicts the predicted and actual trend in the mean percent of father absent families from 1970-2000 across communities. This unconditional model produces fairly accurate estimations of mean levels of father absence compared to observed measures.

As can be seen from Figure 5.4, father absence has been on the rise since at least 1970. Though the increase in father absence has progressed in a fairly linear fashion (rate = 1.05; acceleration = -.07), the coefficient representing the instantaneous curvature (acceleration) is negative (see Table 5.3). This indicates that the shape of the trend is concave downward, with greater change earlier and deceleration later.

Communities vary significantly in their trajectories of father absence, however. Variance components for mean levels of father absence are substantial and significant (21.32, $p < .0001$) indicating real differences across communities in their mean level of father absence. Further, the random effects for time and time-squared are both significant suggesting that growth rates of father absence vary significantly across communities.

So, there is considerable variability in community trends in both female and male violence as well as trends in father absence. The remainder of the chapter assesses the extent to which changes in father absence can explain why the rise in female and male

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across counties in their trends in violence because this was not possible using Poisson models.

violence in some communities and not others. We present results from overdispersed Poisson growth curve models to statistically measure the effect of father absence on female and male violence trends controlling for measures of trends in dimensions of social disorganization.

Multivariate Results: Predicting Trends in Violence with Trends in Father Absence

Of primary interest is whether the identified changes in the extent of father absence can account for *within-county changes* in violent offending on the part of females and males. Table 5.4 reports parameters of the within- and between-county effects of father absence and control variables meant to tap effects of features of social disorganization on changes in female and male community violence rates. Panel A displays the coefficients for females while Panel B displays the coefficients for males. The top half of each panel includes the parameters for level one, representing the effect of father absence (and other social conditions) on *within*-community change in female or male rates of violence. The bottom half of each panel contains the parameters for level two. The parameters at level two represent relationships of the between-county variables to the intercept. These coefficients reflect factors that significantly predict differences *between* communities in mean gender-disaggregated crime rates over the study period (i.e., at time zero – 1985).

Within-County Analysis

Turning to the results of primary interest of whether trends in father absence are related to trends in violence, the top panel of Table 5.4 displays the within-county

parameters representing the scope of within-county change in violence rates per one percent increase in father absence (and other relevant control variables). As described for the null models, the intercept represents the mean crime level for the sample of counties at the mean time-point of the study; the time variable is the mean linear rate of growth (at the mid-point) and the time-squared variable is the mean acceleration or curvature of the time trend. Since the pattern of findings for the time parameters (and the intercept) do not differ from the null models described in depth above, we now turn to the results for father absence.

Changes in father absence are related to changes in homicide trends for both females and males. There are no significant gender differences in the strength of the effect of changes in father absence on trends in violence. A county that experienced a 2% increase in father absence (roughly the mean increase from 1990 to 2000) will experience a 10% increase in both female and male homicide over this time frame, according to this model. A somewhat smaller increase is also predicted for robbery, though father absence fails to achieve significance for females. An average-level increase in father absence is predicted to increase female and male robbery on the order of 4% and 6%, respectively, over a ten-year period. A county that experienced a somewhat greater change in father absence, say 6% (roughly 3 SD above average for 1990 to 2000), would have a homicide rate 30% higher, a female robbery rate 12% greater, and a male robbery rate 18% larger compared to ten years earlier. However, though significantly related to homicide (for females and males) and robbery (for males),

changes in father absence are unrelated to changes in felony assault for either females or males[51].

What can account for the null findings for felony assault? Recall that homicide and robbery are far more accurately depicted by arrest rates than felony assault. The null findings here could be because of the imprecision of measurement or the more ecologically diffuse nature of assault. For example, Steffensmeier and Schwartz (2002) find that assault rates, as measured by victimization and self-report studies, do not display an increase over time whereas official statistics show marked increases in arrests for felony assault. They present evidence that suggests it is greater societal intolerance and policing of minor violence that has increased the arrest rates, particularly for females. This has considerable consequences for identifying trends in violence. Though national UCR statistics display rising levels of violence, other sources of data disagree. Perhaps the greater "noise" associated with measuring felony assault precludes statistically significant relationships between changes in father absence and variability in assault trends. Additionally, because arrests for assault are more diffuse throughout the population (i.e., since minor forms of violence are being prosecuted, arrests for assault span community types), the association of felony assault with father absence, and other indicators of social disorganization and disadvantage, is much weaker.

[51] Incidentally, in preliminary models that utilize an untransformed dependent variable (as described earlier in the section on variability in trends), father absence was significant across offense types and gender. For example, for female felony assault, a 1% increase in father absence was associated with an increase of almost 3 felony assaults per 100,000 females over a 10 year period. For males, changes in father absence significantly predicted male felony assault as well with an estimated increase of almost 11 assaults per

Father absence is among the strongest positive predictors of changes in violence over time as compared to trends in other social conditions entered into the model as controls[52]. The results from the within-county portion of this model are highly corroborative with cross-sectional results. Father absence (and changes in father absence) is a substantively significant predictor of violence and variability in trends in violence across communities. No consistent gender differences in the impact of father absence or trends in father absence emerge. Next we specify how well trends in father absence account for variability in crime trends across communities by examining the amount of additional variation explained by the addition of father absence to the model.

Variance Explained by Father Absence

Though a shift in father absence (and several other social conditions) is associated with changes in violence patterns, to what extent does knowing the degree of change in father absence improve the ability to predict the movement in female and male violence rates? In multi-level modeling terms, how much does adding father absence (and/or a set of control variables) account for the observed variance of violence rates within-counties? By comparing the total amount of variance in violence rates within-counties (i.e., the

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100,000 males, on average. The Poisson models offer more conservative assessments of statistical significance.

[52] For females, rising disadvantage, and size of the young adult cohort (18-24) are negatively associated with the growth in female violence. The relationship between trends in female violence and mobility are ambiguous, displaying significant positive and negative coefficients. Trends in population size and density are unrelated to changes in female violence. For males, rises in mobility tend to have a small negative effect on trends in male violence whereas increasing size of the young adult cohort is associated with slightly increasing trends in violence. Both of these effect sizes are minimal, though significant for two of the three violent offenses. Changes in population size, disadvantage, and density are unrelated to male violence.

variance in a null model, that is, time effects only) with the variance in models with control variables and father absence, we can gauge the proportion reduction in variance (i.e., the "variance explained" by father absence and/or controls) (Raudenbush and Bryk 2000: 79). This is a measure of how well the independent variable(s) explain the outcome variable of gender-disaggregated violent crime rates. While this measure would be roughly equivalent to R^2 in ordinary least squares regression, the meaning is somewhat different in the hierarchical Poisson framework. Recall that overdispersed Poisson models incorporate an adjustment for overdispersion in order to better estimate standard errors and significance tests. This correction is grouped with the level-one (within-county) unexplained variance (see Osgood 2000 for a more detailed description of the mechanics of this adjustment). Therefore, this measure of explained variance does not really correspond to R^2. Rather the results should be interpreted as the amount of overdispersion explained by a given variable or set of variables.

Table 5.5 displays the amount of level one variance in the null model (time components only), the control model (time components and several measures of time-varying social conditions), and a full model (time, controls, and father absence) for females (Panel A) and males (Panel B)[53]. Also included is a measure of the percent of variance explained by each additional set of variables and by father absence only. This measure is calculated with the following formula (Kreft and deLeeuw 1998; Raudenbush and Bryk 2002:79): [(unrestricted error – restricted error) / unrestricted error].

[53] Note that female homicide is not included because no random effects could be included in this model.

First, the addition of control variables (e.g., mobility, density, etc.) to the null model reduces overdispersion by between 36.5% and 52.5%. This indicates that the control variables chosen do a reasonably good job of explaining variation in crime rates within counties over time. The proportion of variance explained is roughly equivalent for males and females. The next row of the table assesses the total variance explained by the full model – including controls and father absence as predictors of change within communities in violent offending. The total variance in within-county violence trajectories explained by the full model ranges from about 63% for felony assault (for both females and males) to between 78% and 89% for robbery (for females and males, respectively). This set of predictors reduces the amount of overdispersion in the data (level one) by a considerable amount.

The last row of each panel assesses the proportion of variance explained by the addition of father absence to the "controls" model. This measure quantifies the unique contribution of changes in father absence to community-specific trends in violence. Father absence appears to be a very potent variable for robbery. Almost 66% for females and 80% for males of the remaining variability in robbery rates was accounted for by father absence. For felony assault, about 23% of the remaining variability was explained by father absence for both males and females.

Thus, father absence (along with other social conditions included in the model) go a long way in explaining variability in crime trends. Trends in father absence accounted for a good proportion of total variability in the level one model. Additionally, father

absence and the other controls perform equally well in female and male models, indicating that father absence is as good a predictor of trends in male violence as it is for females. These findings from longitudinal models mesh well with cross-sectional findings that father absence is a potent predictor of both female and male violence. Though it would be imprudent to oversimplify complex patterns of changes in violence by asserting that one factor alone could drive large-scale changes in violence trends, father absence appears to be an important trend to track if one were interested in trends in both female and male offending.

Multivariate Results: Father Absence as a Predictor of Between-County Differences in Gender-Disaggregated Rates of Violent Offending

Though the between-county analysis is not the focus here, it is informative to assess whether father absence is found to be associated with higher levels of violence within the HLM framework. It is important to keep in mind that the coefficients for the between-county analysis represent *cross-sectional* effects of father absence (and other social conditions) on gender-disaggregated rates of violence at the mean point of the dissertation project's time frame. Refer back to Table 5.4 for between-county effects of father absence and control variables on gender-disaggregated rates of violence.

First, father absence is a strong and significant indicator of differences across communities in levels of violence for both females and males. Additionally, the effect of father absence is highly similar for both males and females. Father absence exerts one of the strongest effects on community differences in violence across gender and violence

types[54]. For robbery and felony assault, a one percent difference across communities in father absence is associated with a 7-8% difference in these violent outcomes. The effect is somewhat less on homicide, with a one percent difference in father absence linked to only a 2% difference across communities in both male and female homicide rates. These results are highly similar to the cross-sectional analyses presented above using seemingly unrelated regression techniques for 1990 and 2000. Recall that the father absence coefficients ranged from 6-12% across male and female violence models for 2000 (see Table 3.4, Model 4).

This further corroborates the conclusion that *the negative social consequences of father absence prevail across time and gender*. The between-county analysis is generally consistent with prior research and cross-sectional analyses presented earlier. Father absence continues to be a key variable, with a significant ability to predict differences across communities in violence for both females and males.

Summary

In this chapter, we described overall trends in violence (homicide, robbery, and felony assault) from 1970-2000 for females and males using unconditional growth curve models. Homicide and robbery rates are on the decline for both females and males, but felony assault is trending upward, particularly for females. We also examined the extent of variability across counties in trends in gender-disaggregated violence rates. It was

[54] Relatively greater levels of gender-specific structural disadvantage are associated with higher violence rates for both males and females, particularly for homicide. Further, disadvantage has a comparably strong

concluded that there is substantial diversity in the trends in female and male violence across communities, with some areas experiencing a rise and others a decline in female and male violence. There is greater variation in male trends in violence than female trends. Trends in father absence were also explored. Though the percent of families without resident fathers is increasing overall, there is considerable variation across communities in trends in father absence as well.

Via multivariate longitudinal models (using HLM), we determined that changes in father absence are significantly associated with trends in female and male violence for homicide and (male) robbery, but not for felony assault. It was argued that arrest rates for felony assault is not as good an indicator of violence as homicide and robbery, which are more accurately measured. Increases in father absence are related to rising trends in violence for both females and males. Trends in father absence are *not* more strongly related to female or male trends in violence. Further, in an examination of amount of variance (i.e., overdispersion) explained, changes in father absence were assessed as strongly related to trends in both female and male violence. Lastly, based on the between-county portion of the analysis, the longitudinal findings are complementary with and underscore conclusions drawn from cross-sectional analyses.

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effect on differences across communities in violence levels. More mobility is also associated with more violent offending for both females and males whereas greater density is related to somewhat less violence.

Table 5.1 Coefficients and Variance Components for Trends in Female and Male Violent Crime: Unconditional Overdispersed Poisson HLM Models, 1970-2000

Panel A: Females

Variable	Coefficient	SE	Exp(B)	Coefficient	SE	Exp(B)	Coefficient	SE	Exp(B)
Within County Effects	Homicide			Robbery			Felony Assault		
Intercept	-11.3	.16	1.23	-10.5	.21	2.75	-8.2	.15	27.46
Time	-.16	.03		-.10	.01		.13	.01	
Time Squared	.01	.01		.04	.01		.02	.01	
Between County Effects (Level Two)									
Mean Time	.13	.07		-.33	.06		-.22	.06	
Mean Time Squared	.16	.05		.30	.04		.11	.04	
Random Effect	*Variance*	*SD*		*Variance*	*SD*		*Variance*	*SD*	
Time (U_1)	--	--		.01134	.11		.01136	.11	
Level-1 (r)	--	--		52.1	7.2		116.58	10.8	

Panel B: Males

Variable	Coefficient	SE	Exp(B)	Coefficient	SE	Exp(B)	Coefficient	SE	Exp(B)
Within County Effects	Homicide			Robbery			Felony Assault		
Intercept	-9.3	.14	9.14	-8.1	.14	30.4	-6.3	.15	183.6
Time	-.05	.02		-.02	.01		.10	.02	
Time Squared	-.014	.01		-.04	.00		-.03	.01	
Between County Effects (Level Two)									
Mean Time	.09	.05		-.36	.05		-.18	.06	
Mean Time Squared	.18	.04		.31	.05		.12	.04	
Random Effect	*Variance*	*SD*		*Variance*	*SD*		*Variance*	*SD*	
Time (U1)	.00870	.09		.00018	.013		.01124	.11	
Level-1 (r)	54.52	7.4		669.10	25.9		535.05	23.1	

Figure 5.1 Trends in Female and Male Homicide, 1970-2000
(Unconditional Overdispersed Poisson Hierarchical Linear Models)

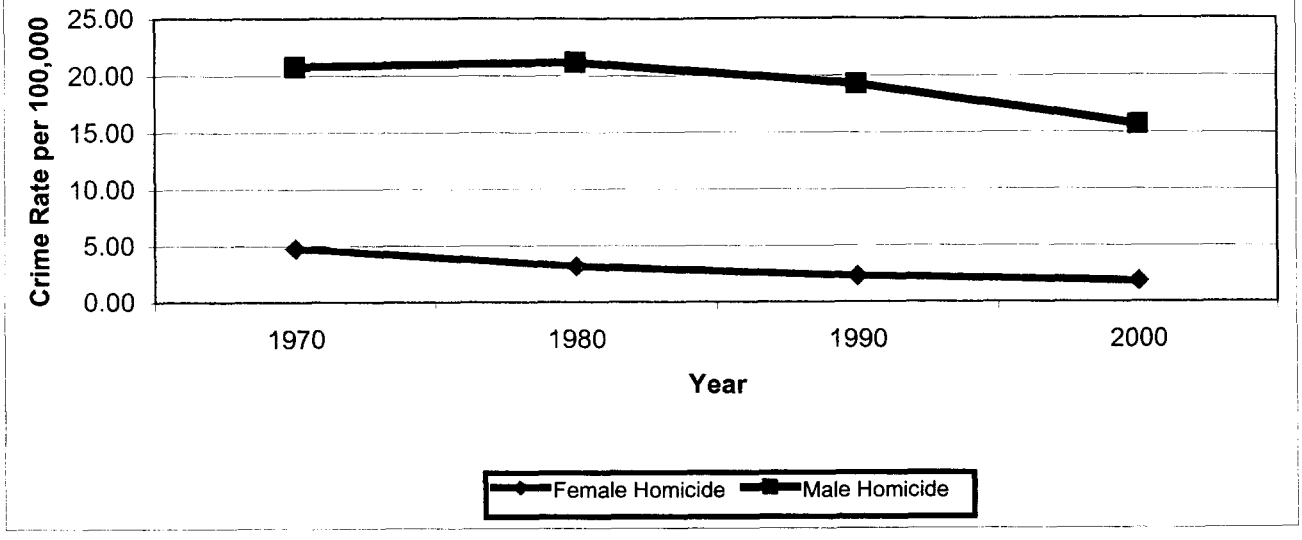

Figure 5.2 Trends in Female and Male Robbery, 1970-2000
(Unconditional Overdispersed Poisson Hierarchical Linear Models)

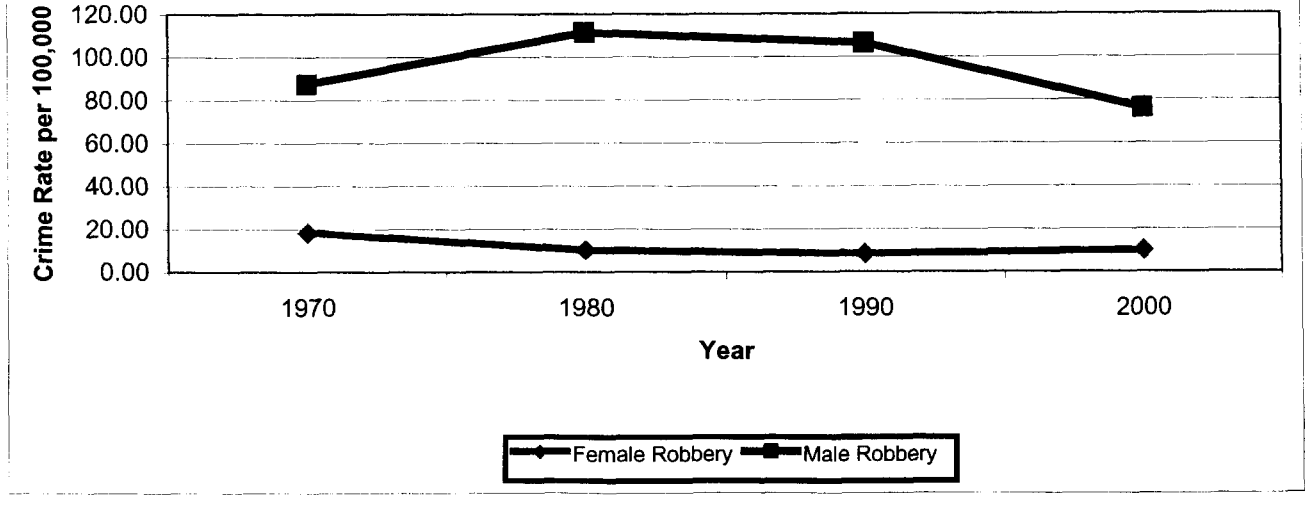

Figure 5.3 Trends in Female and Male Aggravated Assault, 1970-2000 (Unconditional Overdispersed Poisson Hierarchical Linear Models)

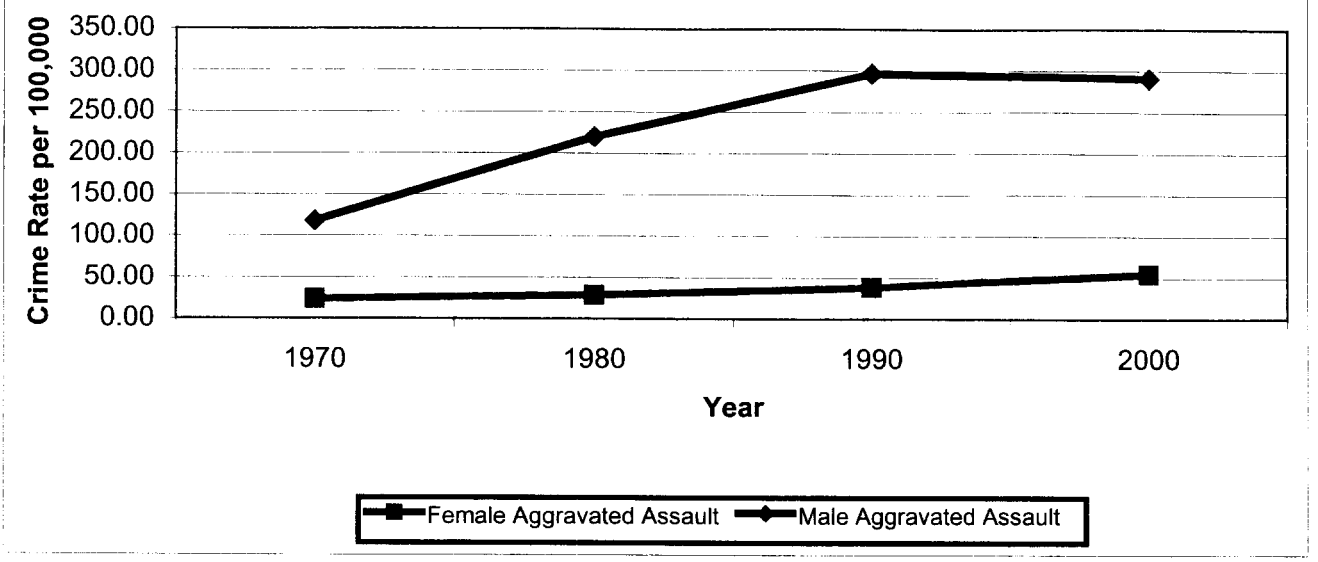

Table 5.2 Variance Components for Random Intercept, Random Coefficients Models for Trends in Female and Male Violent Crime: Unconditional Untransformed HLM Models, 1970-2000

	PANEL A: FEMALES								
	Homicide			Robbery			Felony Assault		
	Variance	Std Dev	P-value	Variance	Std Dev	P-value	Variance	Std Dev	P-value
Mean Level (Intercept)	4.1	2.0	.000	80.7	9.0	.000	2327.3	48.2	.000
Growth Rate (Time)	5.6	2.4	.000	4.6	2.2	.000	225.8	15.0	.000
Acceleration ($Time^{2)}$	n/a	n/a	n/a	0.8	0.9	.000	17.6	4.2	.000
Level-1 (r)	14.2	3.8		45.6	6.8		906.9	30.1	
	PANEL B: MALES								
	Variance	Std Dev	P-value	Variance	Std Dev	P-value	Variance	Std Dev	P-value
Mean Level (Intercept)	439.9	21.0	.000	12513.4	111.8	.000	57366.1	239.5	.000
Growth Rate (Time)	68.3	8.3	.000	9.5	3.1	.127	2233.8	47.3	.000
Acceleration ($Time^{2)}$	18.4	4.3	.000	12.5	3.5	.000	n/a	n/a	n/a
Level-1 (r)	69.7	8.3		1338.2	36.6		32687.5	180.8	

Table 5.3 Coefficients (Fixed Effects) and Variance Components (Random Effects) for Trends in Father Absence: HLM Models, 1970-2000

Fixed Effects	Coefficient	Standard Error	P-value
Within-County Effects			
Intercept	11.74	0.32	.000
Growth Rate (Time)	1.05	0.02	.000
Acceleration ($Time^2$)	-.07	0.01	.000
Between-County Effects			
Mean Time	-0.54	0.12	.000
Mean Time Squared	0.33	0.07	.000
Random Effects	Variance Component	Standard Deviation	P-value
Intercept (U0)	21.32	4.62	.000
Growth Rate (Time) (U1)	0.303	0.55	.000
Acceleration ($Time^2$) (U2)	0.010	0.10	.000
Level 1 (r)	0.63	0.79	
Deviance Statistic	19725.43		

Mean for Time = 1.88 Time Squared = 7.01

Figure 5.4 Trends in Father Absence, 1970-2000

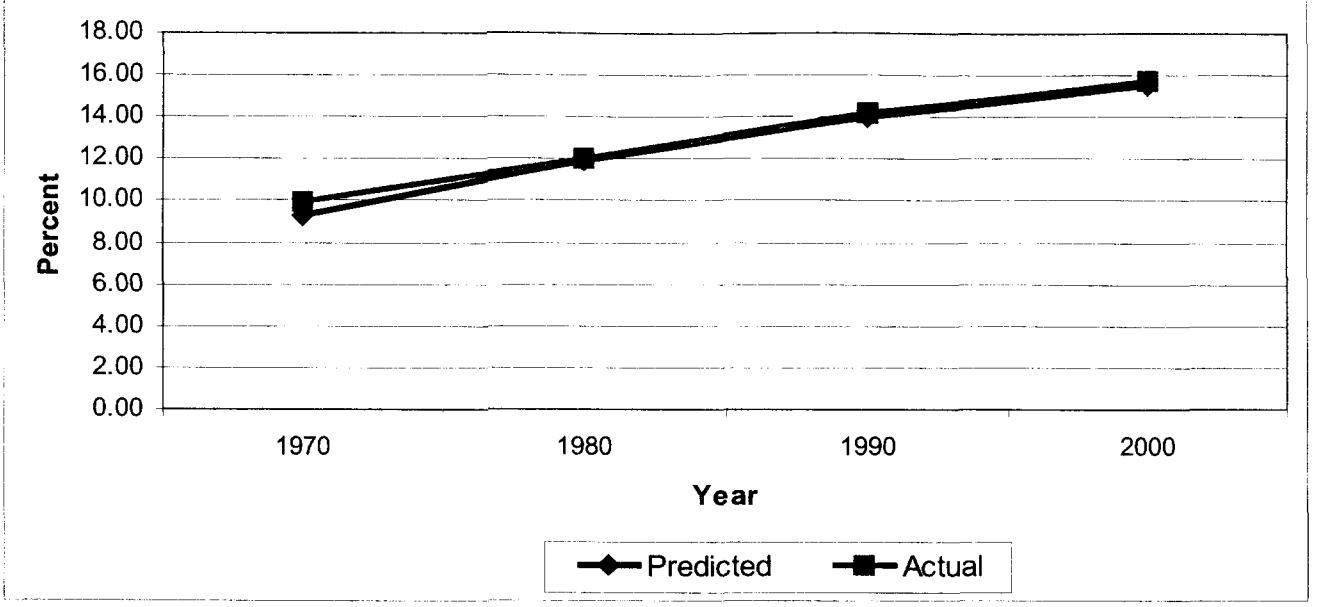

Table 5.4 Overdispersed Poisson HLM Results for Within- and Between-County Effects of Father Absence and Control Variables on Female and Male Violent Violence Rates, 1970-2000

	PANEL A: FEMALES								
Variable	Coefficient	SE	Exp(B)	Coefficient	SE	Exp(B)	Coefficient	SE	Exp(B)
Within-County Effects	Homicide			Robbery			Felony Assault		
Intercept	-8.81**	.13	.0002	-14.04**	.23	.000	-8.93**	1.42	.0001
Father Absence	**.05****	**.01**	**1.05**	**.02**	**.01**	**1.02**	**.01**	**.01**	**1.01**
Mobility	.004**	.001	1.01	-.005*	.002	1.00	-.01**	.002	.99
Age Structure	-.03^{+}	.01	0.97	-.07**	.02	.93	.02	.02	1.02
Time	-.22**	.01	.80	-.17**	.03	.84	.14**	.03	1.15
Time Squared	.02**	.002	1.02	.02**	.01	1.02	.01*	.004	1.01
Population Size	-.25**	.07	.78	.19	.14	1.21	.05	.13	1.05
Disadvantage	-.01*	.003	.99	-.02**	.01	.98	-.03**	.01	.97
Density	-.09**	.03	.91	-.02	.05	.98	-.02	.05	.98
Between-County Effects (Level Two)									
Mean Father Absence	.02*	.01	1.02	.08**	.01	1.08	.07**	.01	1.07
Mean Mobility	.02**	.002	1.02	.02**	.002	1.02	.04**	.002	1.04
Mean Age Structure	-.03^{+}	.01	.97	.03	.02	1.03	-.09**	.02	.91
Mean Population Size	.01	.07	1.01	.06	.14	1.06	-.07	.13	.93
Mean Disadvantage	.13**	.004	1.14	.02**	.01	1.02	.05**	.01	1.05
Mean Time	-.09**	.02	.91	-.19**	.04	.83	-.11*	.04	.90
Mean Time Squared	.15**	.01	1.16	.24**	.02	1.27	.08**	.02	1.08
Mean Density	-.38**	.05	.68	-1.08**	.08	.34	-.43**	.07	.65
Random Effect	*Variance*	*SD*		*Variance*	*SD*		*Variance*	*SD*	
Time	--	--		.00787	.09		.01685	.13	
Level-1	--	--		11.42	3.38		42.93	6.55	

** .001 * .01 + .05

Table 5.4 (Cont'd) Overdispersed Poisson HLM Results for Within- and Between-County Effects of Father Absence and Control Variables on Female and Male Violent Violence Rates, 1970-2000

PANEL B: MALES									
Variable	Coefficient	SE	Exp(B)	Coefficient	SE	Exp(B)	Coefficient	SE	Exp(B)
Within-County Effects	Homicide			Robbery			Felony Assault		
Intercept	-7.23**	.62	.001	-11.6**	.22	.000	-7.59**	1.42	.001
Father Absence	**.05**$^{+}$	**.03**	**1.05**	**.03***	**.01**	**1.03**	**-.01**	**.01**	**.99**
Mobility	.003	.002	1.003	-.003*	.002	1.00	-.01*	.001	.99
Age Structure	-.01	.02	.99	.02^{+}	.01	1.02	.04**	.01	1.04
Time	-.10**	.03	.91	-.06*	.11	.94	.15**	.03	1.16
Time Squared	-.005	.01	1.00	-.03**	.01	.97	-.04**	.004	.96
Population Size	-.27	.18	.76	.17	.04	1.19	.11	.13	1.12
Disadvantage	.0001	.01	1.001	-.01	.02	.99	-.02**	.01	.98
Density	-.03	.03	.97	-.10	.08	.90	.03	.04	1.03
Between-County Effects – Level Two									
Mean Father Absence	.02	.03	1.02	.07**	.01	1.07	.08**	.01	1.08
Mean Mobility	.02*	.01	1.02	.02**	.001	1.02	.04**	.002	1.04
Mean Age Structure	-.02	.02	.98	-.04*	.01	.96	-.08**	.01	.92
Mean Population Size	.07	.17	1.07	.07	.02	1.07	-.10	.13	.91
Mean Disadvantage	.12**	.03	1.13	.01^{+}	.004	1.01	.05**	.01	1.05
Mean Time	-.12	.09	.89	-.28**	.11	.76	-.07^{+}	.03	.93
Mean Time Squared	.15*	.07	1.16	.25**	.004	1.28	.08**	.02	1.08
Mean Density	-.76*	.39	.47	-1.37**	.06	.25	-.54**	.06	.58
Random Effect	*Variance*	*SD*		*Variance*	*SD*		*Variance*		
Time	.0002	.01		.001	.03		.01857	.13627	
Level-1	138.2	11.76		77.24	8.79		196.11	14.00	

** .001 * .01 + .05

Table 5.5 Variance Components and Percent of Overdispersion Explained in Variability in Community Female and Male Violence Rates by Addition of Father Absence and Control Variables, Overdispersed Poisson HLM Models: 1970-2000

	PANEL A: FEMALES			
	Robbery		Felony Assault	
	Variance	Explained Variance (%)	Variance	Explained Variance (%)
Null Model	52.1	--	116.6	--
Controls[a]	33.1	36.5	55.8	52.1
Father Absence + Controls[b]	11.4	78.1	42.9	63.2
Father Absence Only[c]	11.4	65.6	42.9	23.1
	PANEL B: MALES			
	Robbery		Felony Assault	
	Variance	Explained Variance (%)	Variance	Explained Variance (%)
Null Model	669.1	--	535.1	--
Controls[a]	381.5	43.0	254.3	52.5
Father Absence + Controls[b]	77.2	88.5	196.1	63.3
Father Absence Only[c]	77.2	79.8	196.1	22.9

Calculated with the following formula: [(unrestricted error – restricted error) / unrestricted error] (Kreft and deLeeuw 1998; Raudenbush and Bryk 2002:79)

a. (Null model – Control Model) / Null Model
b. (Null model – Full Model) / Null Model
c. (Control Model – Full Model) / Control Model

Chapter 6
Discussion and Conclusion

Discussion

The primary objective of this research was to examine the conditions under which father absence is most and least problematic for communities in terms of serious violence perpetrated by adult females and males. Further, this research aimed to determine whether the effects of father absence were similar for females and males under various social conditions and whether those effects have persisted over time (i.e., 1970-2000). First, we examined the extent to which father absence was problematic for communities due to the deficit in social control, the lack of economic resources, and "residual" community deficiencies related to socialization, protection, and stability; special attention was paid to gender differences and similarities. Then, this research introduced the concepts of male capital and collective caregiving to examine whether older responsible men and/or caregiving grandmothers could mitigate community levels of female and male violence associated with father absence. Lastly, we considered whether trends in father absence were associated with variability in community trends in gender-disaggregated rates of violence.

Data to address these objectives were collected from the FBI's Uniform Crime Reporting Program for Police Agencies in Metropolitan Areas (UCR) and were aggregated to the county-level. These counts were converted into gender-disaggregated rates using population information from the U.S. Census Bureau's Intercensial Counts

program. Independent variables gauging county-level indicators of father absence, community alternatives to resident fathers, and gender-disaggregated features of social disorganization were drawn from the 2000 Summary Files (SF). Data from 1970, 1980, and 1990 were also gathered from the UCR and Summary Tape Files (STF) to perform an additional longitudinal analysis on the effects of changes in father absence on trends in female and male violence within counties. Seemingly unrelated regression techniques (SUR) and F-tests for differences in coefficients were used in cross-sectional models to determine if there were substantive relationships between father absence and various measures of gender-disaggregated violence and if there were statistically significant gender differences in the effects of father absence. Hierarchical linear modeling techniques appropriate for repeated measures were used to examine trends in father absence and violence.

There were several key findings of this research. Father absence had strong and significant effects on variation in female and male violence rates across ecological contexts. Further, the effects of father absence are largely similar in magnitude for females and males. Both cross-sectional seemingly unrelated regression models from 1990 and 2000 as well as longitudinal growth curve models estimated using hierarchical linear modeling support these conclusions.

Father absence as a predictor of violence is extremely robust for both female and male violence. Even after controlling for factors related to the deleterious consequences of father absence – structural disadvantage and community social control mechanisms–

the association between father absence and female and male offending remained. Though these two factors likely mediate *some* of the effect of father absence on violence, other processes that are not as amenable to measurement using Census indicators, such as the capacity of resident fathers to mentor, protect, and act as moral compasses within communities, are likely at work.

Though the absence of resident fathers continues to exert direct effects on female and male violence, the presence of male capital and collective caregiving within communities can mitigate *some* of the violence producing effects of father absence. It is likely that the increased presence of a relatively large cohort of older males has a direct violence-reducing effect on both female and male violence, though results were not definitive. Old heads were found to be more effective in curbing homicide in localities that acutely lacked resident fathers, though they did little to stem robbery or felony assault and may even work to increase these types of violent offending by females and males. Results did not vary by gender. Though collective caregiving by resident grandparents was not found to be an effective alternative to resident fathers on average, in high father absence areas, the increased presence of these caregivers was significantly associated with reduced rates of violence across gender and violence type. Thus, the presence of grandmothers has a clear buffering effect where father absence is particularly acute for both females and males. However, it should be noted that although male capital and collective care-giving made up for some of the community deficits associated with

widespread father absence, father absence continued to exert significant, violence producing effects on gender-disaggregated violence rates.

Consistent with the robust nature of the cross-sectional father absence-violence relationship for both females and males, longitudinal models suggest changes in father absence are significantly related to variability in trends in homicide and robbery, but not felony assault. Further, trends in father absence explained a substantial proportion of variance (i.e., overdispersion) in trends in violence. Few significant gender differences emerged in the relationship between changes in father absence and trends in violence.

Though this dissertation project represents a considerable advance in the field's knowledge of the relationship between family structure and gender-disaggregated rates of violence across ecological contexts, several questions emerge and there are a number of caveats of the current study to be attended to by future research. The main questions that will now be addressed include: Why might we expect such similarities across gender in the effect of father absence on violence across ecological contexts? In what ways and why might older adults benefit communities in terms of violent crime? In light of the mixed findings regarding male capital, why might older males be detrimental to community violence control efforts? Related to these issues, are there gender differences in the ability of older adults to suppress violence within communities? In reviewing and exploring the nature of findings from this research, a number of caveats and directions for future research will be recurrent throughout the discussion. They include: the paucity of official statistics as measures of both violence and independent variables; the failure of

this research to explore linkages between micro- and macro- factors associated with the family structure-violence relationship; and the inability of this research to address issues of race and ethnicity.

First, a major finding of this project is that structural sources of violent offending related to family structure of an area are highly similar for females and males. Though historical and contemporary theorizing suggests both that (a) family-related variables should be of more consequence to *female* violence but also (b) structural conditions exert a greater influence on *males*, there are many reasons to expect that structural determinants of violence will be similar across gender. First, it has been empirically demonstrated that male rates are strongly predictive of female rates of violence and the two tend to co-vary across time, place, and sub-populations (Steffensmeier and Allan, 1988; Steffensmeier and Schwartz 2003; Boritch and Hagan 1990). This indicates that similar social and legal forces influence both females and males. Second, much female violence occurs in the context of male violence (Daly 1994). Female violence is often related to the behavior of males – either via co-offending with males as accomplices in male-initiated violence (e.g., robbery) or in response to male instigated violence such as domestic abuse and assault (e.g., homicide, felony assault) (Bailey and Peterson 1995; Steffensmeier 1993; Steffensmeier and Haynie 2000). Therefore, the causes of male violence are both directly and indirectly related to female violence. Lastly, "milieu effects" of negative social conditions, such as father absence, create contexts that are more conducive to violence for everyone exposed to these conditions. Heightened father

absence creates an anomic climate whereby norms and prescriptions against violence are weakened, community capacities for social control are compromised, and negative economic conditions abound. Both females and males within this context experience these conditions. Therefore, the fact that few gender differences were found in the effects of father absence on violence are not surprising, even in light of other macro-social research that suggests somewhat stronger effects on male rates of violence (e.g., Steffensmeier and Haynie 2000;).

However, an important caveat is that even though macro-social forces may affect groups of women and men in a similar fashion, the underlying mechanisms may differ substantially by gender. For example, research on pathways into offending suggests that mechanisms for entry into violence may differ for females and males. For females, significant enticements into violence (and crime more generally) often come from romantic partners and male friends; however, males often become involved in crime with kin and extended kin (Miller 1986). Pervasive father absence may operate to implicitly allow female entrance into violence due to lack of protection and supervision from "predatory" older males with whom she may become involved in violent occurrences. For males, father absence may elevate violence by allowing for undue influence from peer groups and extended kin networks[55]. However, note that measures of social control mechanisms (e.g., community supervisory abilities) exerted a stronger influence on females than males.

Anomie-related stress literature [e.g., general strain theory (Broidy and Agnew 1997)] suggests that females and male may respond to different stressors. For example, for adult males, economic stress (via structural disadvantage) creates malaise over lack of financial capital and competition over scarce job opportunities, generating high levels of male-on-male frustration and aggression leading to high rates of male-on-male aggression. Supporting this, indicators of structural disadvantage often had a significant effect on male violence rates and sometimes exerted a stronger influence on male than female violence. Adult females may experience considerable stress related to role strain, particularly in high father absence areas where they are forced to wear many different hats, both in positions of paid employment and during work at the "second shift" – parenting. Further, there is likely to be competition over the scarce resource of marriageable men – males that can financially and emotionally contribute to family life[56]. This competition over males (particularly "good" ones) eliminates female solidarity and encourages rivalry among females, leading to elevated levels of female-on-female aggression (e.g., Campbell, Muncer, and Bibel 1998).

Thus, though father absence acts to create contexts amenable to violence across gender, the pathways and mediating mechanisms may differ for females and males. Further qualitative and contextual research should examine mediating mechanisms of the

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[55] This explanation might also account for some of the findings that a large cohort of older males (and male kin) within high father absence communities act to *elevate* levels of robbery and felony assault.

[56] This shortage of males may cause women to turn to their family of origin for social (and economic) support; to the extent that an area lacks collective caregiving resources (and other social supports), women are more prone to violence. Supporting this, the presence of a large group of co-resident grandparents reduces female (and male) violence *in high father absence areas.*

father absence-violence relationship, examining both *similarities* and differences in the etiology of violence. This highlights some of the limits of Census data as a primary indicator of social conditions. Though these data are broad in coverage and scope, the survey nature of this source has difficulty tapping these mediating mechanisms. This necessitates the use of other sources of data to get at these indirect concepts, currently unavailable at the national level (and/or longitudinally). Further, this anomie-strain perspective supports examining other forms of "deviance" including drug use and suicide as proponents argue that stress manifests itself differently for females than males.

Another major conclusion that requires closer examination is the finding that a large cohort of older adults within the community *sometimes* has a beneficial effect on female and male violence rates. What do older adults offer to the community? Differences in the relative size of birth cohorts within a community can have a tremendous impact on the amount of violence and crime in an area, so the ratio of older adults to younger adults is a vital indicator to examine. Easterlin (1978; 1987) and others (e.g., Steffensmeier and Harer 1999) suggest that a large cohort of an age group can overload a community's institutions of controls. For example, where older, responsible adults are lacking, community members grow up with fewer authority figures per resident/youth. This swamping of institutions of social control can lead to increased violence rates via weak socialization and low social control (Easterlin 1978; O'Brien 1989; Steffensmeier, Streifel, and Shihadeh 1992). By the same token, if the large cohort is mature adults, who have largely "aged-out" of violence, rather than young adults, who

are most prone to violent behavior, institutions of social control can be flooded in a positive way, with *more* authority figures and role models per young adult. Further, these large, middle-aged (or older) cohorts can produce changes in the "collective conscience"[57] of a community (Durkheim 1956; Steffensmeier and Harer 1999), such that more residents are willing to intercede in acts of violence and adhere to principles of non-violence.

"Old heads" and "othermothers" supplement an area's social control and socialization functioning via playing a number of roles within the community that directly or indirectly channels young adult, especially, and adult behavior into appropriate channels. A few of the positions they occupy include: volunteers in community organizations (e.g., Neighborhood Watch, neighborhood/tenants groups, etc.); coaches and leaders of youth organizations and religious groups within the community; and small business owners that provide local jobs and financial resources. Aside from their formal roles in these vital institutions, older people also are involved in many informal roles that have the effect of assuaging violence. These functions include, but are not limited to: offering social and emotional support to allow families, be they single- or dual-parent, to function more effectively by playing complementary roles and acting as disciplinarians and watch-dogs in the community at-large.

[57] The term "collective conscience" was used by Durkheim to refer to a community's collective social order, including common faith, moral unity, and common assumptions about the world around them. Community members needed to subscribe to this collective conscience in order to encourage social order; without a collective conscience, communities would be reduced to a group of antagonistic, self-serving individuals (see also Steffensmeier and Harer 1999:272).

However, some of the findings from this research indicate that large groups of older men within communities do *not* benefit the area in terms of violence prevention. In fact, in high father absent areas, relatively larger cohorts of older men seem to *encourage* robbery and felony assault. (Recall, though, that male capital did have a negative effect on homicide in high father absence areas.) Why might there be this association between the presence of older males and higher rates of some types of violence?

The reporting of violence and/or the application of law may be higher in areas with a large presence of older males. It is possible that these older men look for reinforcement from formal agencies (i.e., the police) given the lack of resident fathers as the first line of defense, whereas in low male capital (high father absence) areas, few residents call on the police for help, possibly due to cynicism over the effectiveness of punishment and the notion of "equal" application of the law. In addition, perhaps external resources and ties to agencies of formal social control, furnished by the greater presence of old heads, leads to relatively more arrests by the police. Rather than police models emphasizing "containment" (i.e., keeping minor incivilities contained in one area by overlooking the more minor types of offenses), older males may require a "zero tolerance" approach to policing and have the resources to back their preferred approach – including ties to police agencies via their positions in community groups as well as financial capital. This interpretation takes official statistics such as the Uniform Crime Reports as problematic and suggests that citizen and police behavior regarding the enforcement of norms against violence accounts for some of the relationship between the

presence of older males and higher levels of robbery and felony assault. (Official homicide statistics are not as subject to these biases because of the high probability of discovery or reporting of the violent crime in conjunction with the high clearance rate for homicide.) This highlights a major limitation of this research and underscores the point that other sources of data are required, aside from official statistics such as those furnished by the UCR or the STF[58].

However, if the differences in rates of female and male violence across types of communities are *real*, that is, not an artifact of differential reporting or enforcement, this suggests that older males may directly contribute to female and male violence. The greater presence of older males may encourage female violence (against males) because these non-kin may not be protectors, as speculated earlier, but exploiters of largely unprotected women. Additionally, these older men may live in families and households with female heads, though on an informal and intermittent basis. Given the axiom that female violence often occurs in the context of male violence, increased exposure and association with older, experienced men may be criminogenic for women and provide increased opportunity for female involvement in domestic problems and disagreements.

[58] Furthermore, this limitation is probably related to null findings for felony assault in the longitudinal models. Comparisons of the UCR and the National Crime Victimization Survey (NCVS) – an alternative source of national-level crime data in which respondents who were victimized are asked to report on demographic characteristics of the offender(s) – (e.g., see Steffensmeier and Schwartz 2002) demonstrate that while the UCR depicts marked increases in felony assault, especially over the past 10 years and particularly for women, the NCVS (and several other data sources) shows little or no such increase. Arrest policies have considerable influence on measurement of felony assault and this "noise" substantially impacts the ability to achieve significant results in ecological studies. Arrest for assault is diffusely distributed across the population and therefore is not as dependent on social conditions, including father

Further, the intermittent nature of male presence may provide grounds for arguments and fights or be indications of these troubles.

As Anderson (1990) suggests, the male heads in the community may have become involved in violence themselves (particularly through drug trade) and a critical mass of these older, experienced criminals may create contexts conducive to learning techniques and definitions favorable to violence. This learning process may be particularly relevant to males, given the social organization of the criminal underworld – much like the upper-world, networks and favorable positions are often passed from men to men in a process of homosocial reproduction (Steffensmeier and Terry 1986). Further, the presence of a large cadre of males may encourage, rather than discourage, a hyper-masculine subculture. In this type of context, violence is positively valued as a means of distinction and self-preservation. Females must survive in this environment as well, so they adopt violent strategies as a means of self-protection; their other choice is to align themselves with a male who will offer protection (in the absence of resident fathers).

A logical extension of the research presented here is to examine whether the institution of old heads was more effective in the past, prior to the dominance of the drug trade and its attendant violence. This can be achieved by methods similar to those used to examine whether father absence was a stronger predictor in the 1990s than 2000 (i.e., using seemingly unrelated regression techniques and F-tests for within gender comparisons of coefficients of interest). In addition, longitudinal models that test

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absence. Future research should examine whether father absence can predict variability in community

whether changes in the relative size of the institution of old heads in communities are related to variability in trends in female and male violence are also warranted. Further, one could cross-sectionally contrast the effect of old heads in high father absence areas where drugs are rampant and areas where the presence of drugs is more infrequent.

The finding that grandmothers are effective *across* (high father absence) contexts (with regard to gender and violence type) along with the conclusion that old heads are only effective arbitrators of homicide (in high father absent contexts) implies that there may be gender differences in the effectiveness of supervisors, role models, etc. Whereas research on the effectiveness of female networks on violence in the absence of males suggests that female ties are diminished in power in the absence of males (e.g., Rose and Clear 1998), the findings here do not support this idea. Female networks of collective control are shown to be effective in father absent areas in diminishing violence. Grandmothers are clearly important members of communities.

The importance of grandmothers and extended kin in African-American communities and families cannot be overlooked. This accentuates one of the major shortcomings of this research – the failure to disaggregate findings by gender*race/ethnicity. It is well-known that race and family structure are highly related. Further, criminologists have long acknowledged the much higher rates of violence by African-Americans than other racial groups. Given these relationships, it is likely that the effect of family disruption may vary by race*gender (see Parker and Johns 2002, and

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levels of assault using unofficial measures.

Shihadeh and Steffensmeier 1994 for a more in depth discussion of the relationship between race/ethnicity, family form, and violence). Others agree that structural sources of offending for black and white females may differ (Baskin et al 1993; Steffensmeier and Haynie 2000). In addition, the effects of old heads and grandmothers on violence may vary across race*gender groups, particularly given the very different roles played by grandmothers in white and black communities (Collins 2000). Developments in alternative sources of nationwide data are becoming available that diaggregate by gender and race-ethnicity. For example, the National Incident Based Reporting System (NIBRS), though not currently representative of the nation as a whole, is increasingly being implemented and may be quite valuable as a data source in the coming decade.

The findings from this research suggest that solutions to violence for both females and males can be applied at the community-level. Of note, the marked similarities in factors driving community violence levels for both females and males suggests that prescriptions against violence are, to some extent, gender neutral. Female and male violence are entwined so measures taken to reduce male violence are also likely to reduce female violence, and vice versa. By the same token, there were also some gender differences identified and it was suggested that the mechanisms underlying female and male violence might differ. As such, gender-specific policies that identify what it means to be "female" or "male" are complementary to more global violence-reducing policies.

Regarding the finding that the presence of fathers strengthens community abilities to resist violence, the policy implications are to make men more "marriageable" as

partners. This would require that there be sufficient job opportunities at the requisite skill-level of residents. In addition, stringent incarceration policies that remove males from the community may have negative consequences for communities in at least two respects. First, the large-scale removal of young males from a community tips the sex ratio in an area such that the competition over males is intensified. Research on family formation processes suggests that marriage is less likely where males are scarce. Further, the competition over marriageable partners is hypothesized to aggravate stress among women in a way that fosters female violence. Second, the imprisonment of males, especially for non-violent (e.g., drug) offenses stigmatizes a substantial portion of males in some communities such that the ability to secure viable employment in the legitimate sector is severely handicapped. Not only does this reduce the "marriageability" of males in these types of areas, but the economic deprivation associated with unemployment also exacerbates the likelihood of male (as well as female) violence. The findings from this research also suggest that extended kin networks, primarily grandmothers, can alleviate some of the violence-producing qualities of high father absence areas. Governmental support to co-resident grandparents, including health care as well as transfer payments, that recognizes the importance of these networks is warranted. Also of note, the findings regarding the similarity of underlying factors that produce violence for females and males suggests that community solutions

There are also some micro-level policy implications as well. The results from this research suggest that, though the economics and supervisory capacity of an area are

important, there are other immeasurable qualities that fathers offer to communities, such as mentorship. As such, Big Brother/Sister programs and other programs that create opportunities for mentorship may work to reduce violence. Supervision and guardianship of communities is also important, so programs that engage youth in after-school activities and young adults in activities such as work or legitimate leisure pursuits (e.g., the arts, sports, etc.) might aid mother-only families in the ability to supervise young adults as well as offer opportunities to create networks of collective control.

Conclusions

This dissertation project demonstrates the importance of father absence for female and male rates of crime across communities. Communities are found to be complex structures with institutional and normative dimensions that are (partially) rooted in the family structure of that area. Further, this project provides a strong foundation for future research on family structure, gender, and community violence. This project goes beyond prior research in several respects, including examining alternatives to resident fathers, using advanced statistical procedures to examine gender-disaggregated violence rates, and employing a comparative perspective to examine the importance of macro-structural sources of violence for both females and males.

Fathers in families are irreplaceable for both males and females in terms of impeding violent crime in communities. Fathers in families fulfill many roles within the community including enforcing community norms and supervision (i.e., social control functions); in addition, they provide important economic resources and social capital.

However, there are several immeasurable benefits that fathers afford communities, including filling roles associated with socialization and protection as well as providing stability to the family structures of communities. Though alternatives to resident fathers, particularly grandmothers, can buffer some of the deficits due to father absence, the influence of fathers on community resistance to violence is robust.

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Appendix A: Correlation Matrix

	F Hom	M Hom	F Robb	M Robb	F Asslt	M Asslt	Fath Abs	Male Cap	Col.l Care	F. Disad	Male Disad	Empt HH	F. Hd Work	South	Cnty Pop	Dens.	Mob.	F. Age	M. Age
F. Hom		.24**	--	--	--	--	.33**	-.24**	.12+	.25**	.23**	-.01	-.06	.14+	.28**	.23**	.13*	.13+	.12+
M. Hom			--	--	--	--	.25**	-.13*	.21**	.25**	.23**	-.05	-.15**	.13*	-.08	.04	.05	.10+	.11
F. Robbery				.47**	--	--	.22**	-.23**	.02	.17**	.17**	-.04	.02	.02	.44**	.31**	.22**	.14**	.12**
M. Robbery					--	--	.40**	-.26**	.22*	.29**	.26**	-.07+	-.10*	.16**	.26**	.23**	.13**	.14**	.11**
Female Assault						.52**	.32**	-.13**	-.25**	.24**	.21**	-.14**	-.20**	.20**	.18**	.08**	.08**	.03	.04
Male Assault							.25**	.01	.31**	.28**	.27**	-.21**	-.28**	.20**	-.10**	-.06*	-.02	-.06+	-.06*
Father Absence								-.38**	.65**	.70**	.62**	.21**	-.50**	.38**	.12**	.12**	-.08**	.18**	.18**
Male Capital									-.23**	-.34**	-.27**	.08**	.04	-.11**	-.32**	-.33**	-.29**	-.72**	-.74**
Collect Care										.62**	.54**	-.47**	-.61**	.53**	-.21**	-.28**	-.12**	.01	.02
Female Disadv											.93**	-.46**	-.57**	.28**	.07+	.06*	-.02	.22**	.22**
Male Disadv												-.43**	-.52**	.16**	.08**	.09**	.05	.20**	.19**
Empty HH													.60**	-.36**	-.02	.16**	.001	.02	.01
F Head Works														-.47**	.23**	.34**	.42**	.08**	.06+
South															-.36**	-.47**	-.06*	.02	.03
County Pop																.62**	.35**	.17**	.15**
Struct. Density																	.50**	.39**	.35**
Resid. Mobility																		.40**	.38**
F. Age Struct.																			.94**

Appendix B: Alternative Method for Imputing Missing/Zero Data

The main source of data is official arrest statistics based on the Uniform Crime Reporting Program. These data provide yearly information on the number of arrests reported to the Federal Bureau of Investigation's UCR program by police agencies in (largely) metropolitan areas (Chilton and Weber 2000). Because ORI codes for police agencies are provided in the source data, the county in which the agency operates can be identified. This allows the data to be (a) aggregated to the county level and (b) linked to census data via FIPS codes. Though these data are particularly well suited to this analysis since they provide gender breakdowns in violent arrests for moderately small geographic areas (over an extended period of time), there are some limitations of this source that must be handled.

Since the UCR program is voluntary, some agencies may not report arrest data. A cross-comparison between the Law Enforcement Agency Identifiers Crosswalk, derived from the Directory of Law Enforcement Agencies census, and the UCR agency-level data suggests that missing agencies tend to be located in small areas under 10,000 in population; this missing data problem is particularly acute in areas under 2,500 in population. Crime rate estimates may be biased upwards after the data are corrected (see description below) due to the exclusion of these small areas that generally have low crime rates. Additionally, if some counties contain relatively more small towns than others, the effect of missing agencies is not constant across the units of analysis. Since many of the counties are located in metropolitan areas (i.e., more populous areas), the number of small towns is minimized, limiting this biasing effect.

The bias problems are amplified, though, if there is considerable variability in population coverage from year to year. Artifactual changes in the longitudinal data may be introduced

based on variation in agencies used to compute crime rates. If reporting practices interact with spatial characteristics (e.g., poverty, social disorganization) or with trends over time, the reliability of the data is negatively affected. At minimum, though, the variability in coverage is a source of random error that will diminish data reliability[59].

To adjust for (1) breaches in reporting (i.e., incomplete reporting by agencies) and (2) cross-county differences and over-time changes in population coverage (i.e., "missing" agencies or changes in the agencies that report), the data are adjusted and weighted according to its completeness. These methods are now described in detail.

Beginning at the agency-level, complete (12-month) reporting is used without correction. Reported figures for 3-11 months are increased by a weight of (12/number of months reporting) [60]. For example, an agency that reports 3 months of data, the sum of arrests for the three months is multiplied by 4 (12/3) to produce an adjusted yearly estimate of arrests for that agency. Recall that the dependent variable is averaged across three years of data, so this process is repeated for all three years where data are contributed. Where 1-2 months of data are reported, the agency record is examined to determine if the agency reported the entire year's arrests in one particular month (e.g., December). If this was determined to be the case (based on comparisons to agency data from other years and/or based on a face-validity examination of the number of violent arrests reported compared to the population base of the agency), the data were treated as if it

[59] Change over time in agency reporting appears to have impacted rural areas more than other types of areas. There were major increases in UCR participation of small town police during the 1970s when LEAA funding was used to motivate cooperation with the FBI program, but as funding declined in the late 1970s, rural participation declined again. Since the counties included are mainly in metropolitan areas, which contain urban and suburban areas, coverage changes are less likely over time.

[60] This method has the implicit assumption that levels of crime do not fluctuate on a monthly basis. To the extent that this assumption is false, agencies that report in "high crime months" will have inflated arrest rates while agencies that report only during "low crime months" will have under-estimated crime rates.

were reported in full (i.e., 12-month reporting). If this was not the case, the data were not used. After the data are aggregated to the county level, the figures are further corrected for missing agencies (including those that do not submit usable data). The crime counts are increased based on a comparison of the county population that is covered by contributing police agencies (as reported in the UCR) to the total county population (as reported by the Bureau of the Census). Gender-disaggregated violence rates are then computed as described in the text.

A major issue with this data that is not dealt with in the data cleaning described above is the confounding of missing data with non-occurrences. In the original data source, police agencies recording zeros for homicide and/or robbery were intermittently coded using a "." – the same code assigned to missing data. The impact of this is particularly great for the most recently reported data (i.e., those years used in the "2000" tabulations). The most current data incorporate a broader range of communities, including areas with smaller population bases and, therefore, a greater likelihood of recording a zero for more serious violent offenses. Aside from the change in sample composition, this practice of confounding missing data with zero data is particularly acute in the most recent data. As such, the sample size is limited for 2000, particularly for homicide but also for robbery. Note the comparatively smaller sample sizes for homicide and robbery in 2000 (e.g., as compared to 1990). Further, this lack of inclusion of zero violent arrests is more problematic for female rates of violence, especially serious violence, because of the much lower occurrence among females than males.

Two approaches have been used to overcome this issue. In the main analyses, those counties that recorded arrests for homicide or robbery as "missing" (as signified by a '.' in the

data) were not included. An alternate approach, the results of which are described below, was also undertaken to determine if the results summarized in the text were valid. Zero counts for homicide and/or robbery were imputed for those counties that reported felony assault (but not the other two violent offenses). Since homicide and robbery are the most reliably reported offenses, it was assumed that if the county had statistics reported for felony assault, the "missing data" recorded for homicide and robbery were most likely zeros rather than truly missing. We re-ran the main analyses – regressing father absence, structural disadvantage and control variables on gender-disaggregated rates of violence with the considerably larger sample of counties. The results are summarized below.

Table B displays results for the seemingly unrelated regression of father absence (Model 1) and structural disadvantage (Model 2) on gender disaggregated rates of violence. Results for females are displayed in the top panel and males in the bottom panel. The results are substantively the same as those based on the smaller sample: Father absence is significantly and positively associated with both homicide and robbery, even after controlling for structural disadvantage. Further, the strength of the relationship between father absence and violence is greater when the more inclusive sample is used, as demonstrated by the larger coefficients for father absence compared to Table 3.1 and Table 3.4 (Model 4). In terms of gender differences, father absence emerges as a somewhat stronger predictor of male homicide than female homicide – a significant finding that did not show up in the smaller sample of counties. As in the analysis discussed in Chapter 3, father absence remains a significantly stronger predictor of robbery for males than females.

Therefore, this alternate analysis lends credence to the conclusions drawn in the text – father absence has a significant and potent influence on violent offending for both females and males, controlling for relevant features of the community. However, the balance of evidence regarding gender differences in the effects of father absence now weighs more heavily toward father absence having a somewhat stronger effect on male rates of violence – a finding more consistent with other macro-level research (e.g., Steffensmeier and Haynie 2000).

Table B. Seemingly Unrelated Regression of Father Absence On Gender-Disaggregated Violence Rates (2000) with Imputed Data for Missing Values

Panel A: Females		
	Homicide	Robbery
Model 1		
Father Absence	.06**^	.12**^
R^2	.25	.43
Model 2		
Father Absence	.05**^	.14**^
F. Structural Disadvantage	.03	-.08^{+}^
R^2	.25	.43

Panel B: Males		
	Homicide	Robbery
Model 1		
Father Absence	.10**^	.19**^
R^2	.26	.43
Model 2		
Father Absence	.10**^	.24**^
F. Structural Disadvantage	-.02	-.20**^
R^2	.26	.44
N[a]	1428	1433

a. Includes all counties with population totals greater than 20,000

** $p < .001$ * $p < .01$ + $p < .05$

^ F-value indicates a significant difference between female and male coefficients. Although identical, the significance of the F-value is reported for both female and male models.

Note: Control variables are included in all models.