

LOCAL SCARCITY OF ADULT MEN PREDICTS YOUTH ASSAULT RATES

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Father involvement reduces risky youth behavior at the individual level. We examine the association between the scarcity of adult men and youth violence at the Census Tract level across a small midwestern city experiencing decades of economic adversity and high rates of violence. We calculated the ratio of men to women aged 25–64 years and indicators of concentrated disadvantage across residential Census Tracts with 2000 U.S. Decennial Census data and the average monthly assault rates for those aged 10–24 years between June 2006 and December 2008 with data from the local police department. Adult male scarcity and the proportion of individuals aged 25 years or older who had less than a high school degree were the two unique predictors of youth assault rates, together explaining 69% of the variance. Interventions promoting effective social, material, and protective support from fathers and other adult male role models may ameliorate risk for youth violence. © 2013 Wiley Periodicals, Inc.

INTRODUCTION

Exposure to environmental adversity, stress, residential crowding, and neighborhood violence increase a child's risk for developing antisocial behavior (Brenner, Bauermeister, & Zimmerman, 2011; Coie & Dodge, 1998; Lahey, Miller, Gordon, & Riley, 1999). Youth delinquency and criminal offending are most prevalent within neighborhoods characterized by concentrated disadvantage, high population density, and low organizational participation (Leventhal & Brooks-Gunn, 2000; Morenoff, Sampson & Raudenbush, 2001; Sampson, Raudenbush & Earls, 1997). The association between community poverty and antisocial behavior is strongest for serious violent delinquency and prolonged experiences of poverty (McLoyd et al., 2009). Disadvantaged neighborhoods also create

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more opportunities for youths to form violent peer networks (Haynie, Silver, & Teasdale, 2006).

On the other hand, family cohesiveness and higher social and neighborhood integration predict less youth violence (De Coster, Heimer, & Wittrock, 2006; Kurlycheck, Krohn, Dong, Hall, & Lizotte, 2012). Neighborhoods influence youth directly as well as indirectly through their effects on family processes (Gottfredson, McNeil, & Gottfredson, 1991; Jaffee, Caspi, Moffitt, Polo-Thomas, & Taylor, 2007; Kohen, Leventhal, Dahinten, & McIntosh, 2008). In addition, parenting mediates the effect of low socioeconomic status and residential instability on behavioral problems in youth (Masten & Shaffer, 2007).

Neighborhood disadvantage is associated with single-parent homes and lower marriage rates (Testa, Astone, Krogh, & Neckerman, 1989). Being raised in a single-parent household increases risk for antisocial behavior (Breivik & Olweus, 2006), and parent-child relationship quality may mediate this association risk (Salem, Zimmerman, & Notaro, 1998; Simons, Lin, Gordon, Conger, & Lorenz, 1999). Specifically, parent-child conflict and lack of parental monitoring explains risk from single-parent households on antisocial outcomes (Breivik, Olweus, & Endresen, 2009).

Understanding the role of fathers in child development is important, as one third of U.S. children are living in families without a biological father (Zhang & Fuller, 2011) and over 10% of fathers with children younger than 18 years of age do not live with their children (Kreider & Elliott, 2009). Also, approximately 70% of African American children are born to single-parent mothers (Herbert, 2008). Nonresident fathers are more likely to be ethnic minorities, never married, low socioeconomic status, younger, and are more likely to be substance users (Sorensen & Zibman, 2001).

Fathers may play a distinctively important role in the development of behavioral problems. Altogether, fathers' residence and involvement is associated with positive child outcomes (Lamb, 2004), whereas lack of father involvement increases risk for delinquency (Harris, 2002). Women who grow up in homes without father involvement show earlier sexual activity and a lack of interest or ability to form and/or maintain long-term monogamous relationships (Belsky, Steinberg, & Draper 1991; Chisholm, 1999). Father absence is likely to increase risk for delinquency by increasing economic disadvantage, driving families into poverty, (Cabrera, Tamis-LeMonda, Bradley, Hofferth, & Lamb, 2000), as well as through emotional and psychological distress experienced by mothers (Cabrera et al., 2000).

At the community level, a scarcity of adult men may be an important but largely unrecognized risk factor for a wide range of social issues. Male scarcity is associated with lower likelihood of women being married (Lichter, Kephart, McLaughlin, & Landry, 1992), higher divorce rates, more out-of-wedlock births and single mother households, lower paternal investment in families (Guttentag & Secord, 1983; Trent & South, 1989), and higher rates of teenage pregnancies (Barber, 2000a).

Barber (2000b, 2009) documented an association between violent crime rates and the scarcity of men across nations and explained this relationship through male competition for female sexual partners. When the population includes relatively more women than men, women have more difficulty in marrying (Kruger, Fitzgerald, & Peterson, 2010; Lichter et al., 1992) and are more likely to be sexually active outside marriage (Schmitt, 2005). Men are more likely to compete directly with each other for sex partners, thus increasing levels of male violence. When women are scarce, they are better able to secure male commitment and thus men compete for marriage partners rather than sex partners (Guttentag & Secord, 1983).

Several inter-related mechanisms may explain why adult male scarcity could affect youth risk taking and violence. These include the diminished likelihood of men serving as a role model, providing social support and skill building, and material support for his family. These roles relate to core aspects of concentrated disadvantage (Xue, Leventhal, Brooks-Gunn, & Earls, 2005), including family income, the likelihood of being on public assistance, and the proportion of families comprising a single parent and child. We predict that adult male scarcity will substantially predict the local rate of youth assaults, even when considering other sociodemographic risk factors associated with concentrated disadvantage.

METHOD

The study setting is Flint, Michigan, an industrial city whose economy and population has followed the manufacturing capacity of the city's largest employer, the General Motors Corporation (GM). In 1970, GM employed an estimated 80,000 workers at Flint area automotive plants. By 2000, GM and affiliated industries employed less than 16,000 area workers. As manufacturing jobs left the area, Flint's population declined 36.5% from 196,940 in 1970 to 124,943 in 2000 (U.S. Census, 2001). Recently, Flint has consistently ranked as one of the most dangerous city in the United States based on Federal Bureau of Investigation crime statistics (Morgan, Morgan, & Boba, 2011).

We geocoded assault arrests with all currently available years of geographically identified crime incidents documented by the Flint Police Department. These arrests occurred between June 2006 and December 2008. We calculated average monthly assault rates for those aged 10–24 years in each Census Tracts in the City of Flint. We calculated sociodemographic predictor variables used in scales of “concentrated disadvantage” and “concentrated poverty” (Sampson et al., 1997; Xue et al., 2005) across 38 residential Census Tracts in the City of Flint with 2000 U.S. Decennial Census data (U.S. Census Bureau, 2001). These included the ratio of men to women aged 25–64 years and concentrated disadvantage, as follows: percent of households with annual family income below the poverty level (\$15,000); percent of households on public assistance; percent of households with a single parent and a child (or children) younger than 18 years of age; percent unemployed; and percent of those over 25 with less than a high school degree; and proportion that is Black. We excluded three Census Tracts with small residential populations representing an airport, a brownfield, and the central business district with a substantial number of incarcerated and other institutionalized individuals. We examined zero-order correlations and the scatterplot of the youth assault rate by the sex ratio. We conducted a hierarchical linear regression, force entering sociodemographic predictors of violence in the first step and allowing the ratio of adult men to women to enter in the second step if it accounted for significant additional variance.

RESULTS

We found substantial variation in all relevant variables across Census Tracts. (See Table 1.) Components of concentrated disadvantage had high inter-item reliability (Cronbach $\alpha = .858$). Adult male scarcity predicted aspects of concentrated disadvantage related to family structure and financial status. (See Table 2.) These included the proportion of households with low family income, the proportion of households on public assistance, and the

Table 1. Census Tract descriptives (N = 38)

| Variable | M | SD |
|---|-------|-------|
| 1. Percent of households with family income < \$15k (FI) | 25.90 | 13.78 |
| 2. Percent of households on public assistance (PA) | 12.16 | 6.69 |
| 3. Percent of households with a single parent and child <18 years old (SP) | 34.94 | 15.03 |
| 4. Percent unemployed (U) | 7.63 | 3.24 |
| 5. Percent of those over 25 with less than a high school degree (HS) | 27.25 | 9.67 |
| 6. Proportion Black (B) | 0.56 | 0.37 |
| 7. Ratio of adult men to women in 2000 aged 25–64 years (M:W) | 0.87 | 0.09 |
| 8. Monthly youth assault rate in 2004–2006 aged 10–24 years (times 1000) (AR) | 11.27 | 4.65 |

Note. FI = Family Income; PA = Public Assistance; SP = Single Parent; U = Unemployed; HS = less than High School; B = Black; M:W = Men to Women; AR = Assault Rate.

Table 2. Zero-Order Correlations Among Variables (N = 38)

| | 1. FI | 2. PA | 3. SP | 4. U | 5. HS | 6. B | 7. M:W |
|--------|---------|---------|---------|---------|---------|----------|----------|
| 2. PA | .874*** | | | | | | |
| 3. SP | .921*** | .854*** | | | | | |
| 4. U | .584*** | .768*** | .567*** | | | | |
| 5. HS | .785*** | .732*** | .689*** | .616*** | | | |
| 6. B | .432** | .563*** | .489** | .532*** | .402* | | |
| 7. M:W | -.428** | -.358* | -.476** | -.074 | -.150 | -.525*** | |
| 8. AR | .688*** | .565*** | .703*** | .244 | .602*** | .304 | -.564*** |

Note. FI = Family Income; PA = Public Assistance; SP = Single Parent; U = Unemployed; HS = less than High School; B = Black; M:W = Men to Women; AR = Assault Rate.

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

Table 3. Results of Regression Predicting Monthly Youth Assault Rate (N = 38)

| | B | SE | Beta | t | p |
|----------|-------|------|-------|-------|------|
| Constant | 24.20 | 7.07 | | 3.423 | .002 |
| 1. FI | -.057 | .117 | -.169 | 0.49 | .631 |
| 2. PA | 0.05 | 0.21 | .067 | 0.23 | .821 |
| 3. SP | 0.14 | 0.09 | .440 | 1.55 | .131 |
| 4. U | -0.28 | 0.27 | -.196 | 1.05 | .304 |
| 5. HS | 0.25 | .09 | .519 | 2.79 | .009 |
| 6. B | -2.71 | 1.93 | -.218 | 1.40 | .171 |
| 7. M:W | 22.92 | 7.64 | -.454 | 3.00 | .005 |

Note. SE = standard deviation; FI = Family Income; PA = Public Assistance; SP = Single Parent; U = Unemployed; HS = less than High School; B = Black; M:W = Men to Women; AR = Assault Rate. Assault rate was multiplied by 1,000 to provide simplified prediction coefficients.

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

proportion of households with a single parent and child. Adult male scarcity was also associated with youth assault rates, sharing 36% variance. This relationship appeared to be consistent across Census Tracts and not driven by outliers. Adult male scarcity explained additional unique variance beyond sociodemographic predictors, and combined with the proportion of individuals who had less than a high school degree explained 69% of the variance in youth assault rates (See Table 3).

DISCUSSION

Our results demonstrate the importance of adult male scarcity in predicting youth violence, adding to the growing literature on the vital role that adult men, especially fathers, play for positive youth development. We recognize several likely causes of male scarcity. Economic out-migration has shaped substantially the sociodemographics of Flint in the past four decades. One study found that men are 45% more likely to lose their jobs involuntarily than women are because of the differences in types of jobs and industries favored by women and men (Black, Tseng, & Wilkins, 2010). Men have higher rates of death than women from both behavior causes such as accidents and violence and behaviorally-mediated internal causes such as cardiovascular disease, and these morality differences are larger among those with lower educational and income levels (Kruger & Nesse, 2006). High rates of incarceration also remove men from communities, and a demographically representative countywide health survey in 2007 found that 49% of Blacks and 20% of Whites had a relative or friend in prison within the last 5 years (Kruger & De Loney, 2009).

Our analyses focused on sociodemographic variables, and thus we do not determine which psychological factors mediate the relationship between adult male scarcity and youth violence. These may include mechanisms within families as well as the broader social context. Fathers and other adult male family members may provide financial resources, exemplify a positive role model, be a resource for social support and monitoring of children, and contribute to household stability. Protective effects may diminish where these men are scarce. We may also find similar parallel mechanisms to these at the social level. In this sample, male scarcity was associated with the proportion of families with low income, on public assistance, and having a single parent with a child or children. These factors may be associated with a lack of social control, crime, and other features of neighborhood disorganization.

Interventions promoting social and material support from fathers and other adult male role models may ameliorate risk factors for youth violence. In one program strengthening relationships between nonresident African American fathers and their sons, improved parenting by fathers led to sons perceiving greater father involvement in their lives, which in turn was associated with sons' intentions to avoid violence and a reduction in their aggressive behaviors (Caldwell et al., in press). Thus, we identify not only a novel risk factor for youth violence but also a means for youth violence reduction. Increasing the involvement of fathers in their children's lives may be a fruitful approach for promoting healthy communities.

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