

DISCUSSION PAPER SERIES

IZA DP No. 14587

**Exposure to Neighborhood Violence
and Child-Parent Conflict among
a Longitudinal Sample of Dutch
Adolescents**

Jaap Nieuwenhuis
Matt Best
Matt Vogel
Maarten van Ham
Susan Branje
Wim Meeus

JULY 2021

DISCUSSION PAPER SERIES

IZA DP No. 14587

Exposure to Neighborhood Violence and Child-Parent Conflict among a Longitudinal Sample of Dutch Adolescents

Jaap Nieuwenhuis

*University of Groningen
and Zhejiang University*

Matt Best

University of Colorado Denver

Matt Vogel

University at Albany

Maarten van Ham

*Delft University of Technology,
University of St. Andrews and IZA*

Susan Branje

Utrecht University

Wim Meeus

Utrecht University

JULY 2021

Any opinions expressed in this paper are those of the author(s) and not those of IZA. Research published in this series may include views on policy, but IZA takes no institutional policy positions. The IZA research network is committed to the IZA Guiding Principles of Research Integrity.

The IZA Institute of Labor Economics is an independent economic research institute that conducts research in labor economics and offers evidence-based policy advice on labor market issues. Supported by the Deutsche Post Foundation, IZA runs the world's largest network of economists, whose research aims to provide answers to the global labor market challenges of our time. Our key objective is to build bridges between academic research, policymakers and society.

IZA Discussion Papers often represent preliminary work and are circulated to encourage discussion. Citation of such a paper should account for its provisional character. A revised version may be available directly from the author.

ISSN: 2365-9793

IZA – Institute of Labor Economics

Schaumburg-Lippe-Straße 5–9
53113 Bonn, Germany

Phone: +49-228-3894-0
Email: publications@iza.org

www.iza.org

ABSTRACT

Exposure to Neighborhood Violence and Child-Parent Conflict among a Longitudinal Sample of Dutch Adolescents

An extensive body of research has documented the deleterious effects of community violence on adolescent development and behavior. Much of this research focuses on how exposure violence structures social interaction, and, ultimately, how it motivates youth to engage in troublesome behavior. This study builds upon this body of research to demonstrate how exposure to community violence strains relationships between adolescents and their caregivers, resulting in higher levels of interpersonal conflict. Drawing on five waves of longitudinal panel data (n=778; observations=3,458; 55% female), combined with police records of violent crime in Utrecht, the Netherlands, a hybrid tobit regression documents how exposure to local and nearby violence affects child-parent conflict. The results indicate that youth who experience high levels of neighborhood violence report higher levels of conflict with parents than youth with low exposure to neighborhood violence. These results are consistent across different levels of neighborhood aggregation.

JEL Classification: I30, R23

Keywords: adolescent development, child-parent conflict, community violence, longitudinal panel

Corresponding author:

Maarten van Ham
Department of Urbanism
Faculty of Architecture and the Built Environment
Delft University of Technology
P.O. Box 5030
2600 GA Delft
The Netherlands
E-mail: m.vanham@tudelft.nl

Introduction

Of all age categories, youth in the Netherlands are most likely to be a victim of criminal violence (e.g., 3.5% of youth were victim of violent crime in 2017, while this was 2.7% for 25–44 year olds and 1.9% for those aged 45–64; SCP, 2019). When considering other mechanisms of exposure, such as witnessing violence first-hand or experiencing it vicariously through the victimization of close friends and family members, the prevalence of youth exposure to criminal violence is likely much higher. These experiences can strain interpersonal relationships and lead to maladaptive coping strategies. Perhaps not surprisingly, a large body of empirical literature has documented how contextual exposure to violence within the home, school, and the broader community are associated with higher individual levels of both internalizing and externalizing problems, including depression, substance abuse, delinquency, and conduct disorder (Mrug, Loosier & Windle, 2008; Kersten et al., 2017; Vogel & Keith, 2015).

Despite this evidence, the literature on community violence remains incomplete in two key regards. First, most studies treat neighborhoods as islands, thereby ignoring the role of exposure to violence that occurs outside of, but geographically proximate to neighborhoods in which youths reside. Assuming that youth spend time away from their immediate neighborhoods, levels of violence in nearby places – those that adolescents presumably traverse and occasionally spend time – likely influence their development and well-being. Implicitly ignoring the influence of nearby communities downplays the significance of community violence more broadly on youth conduct. And second, much of the research on exposure to community violence focuses on generalized offending scores – capturing whether experiencing some discrete violent incident is associated with a marginal increase in a variety of self-reported criminal conduct in a given timeframe (e.g., Vogel & Keith, 2015). It bears to reason that direct and vicarious experiences with violence would operate on *specific* forms of criminal conduct; especially those directly related to maladaptive coping and strained interpersonal relationships.

The present study attends to these gaps in the empirical literature in several regards. First, detailed, longitudinal self-report data from a large sample of Dutch adolescents with geographically referenced crime and census data are combined. This allows for the examination of granulated spatial and temporal influences of community violence on adolescent behavior. Second, a modeling strategy that allows for the partitioning of the influence of exposure to violence in residential neighborhoods from nearby neighborhoods and to hold constant time-stable endogenous confounders is employed. Finally, the scope of prior research is expanded by focusing on how exposure to violence influences child-parent conflict – an especially salient outcome of violence exposure.

Literature Review

The neighborhoods in which children grow up are important for a wide variety of individual outcomes, ranging from educational and occupational outcomes to delinquent behavior and child maltreatment (Dietz, 2002). Exposure to neighborhood violence has a particularly strong influence on individual behavior (Rasmussen, Aber, & Bhana, 2004). Indeed, the link between exposure to neighborhood violence and youth's negative outcomes such as aggression, posttraumatic stress, and social cognition, has been well documented (Fowler et al., 2009; Guerra, Huesmann, & Spindler 2003; Margolin & Gordis 2000). Even when children are not directly victimized such events can still indirectly influence their conduct by leading to changes in their parent's behavior, increased police presence in the neighborhood, or shifts in their peer networks (McCoy, Raver, & Sharkey, 2015).

The elevated levels of stress associated with neighborhood violence can affect both children and parents. For children who reside in areas characterized by high levels of neighborhood

NEIGHBORHOOD VIOLENCE AND CHILD-PARENT CONFLICT

disorder/disadvantage, stress increases aggression and conflict (Attar, Guerra, & Tolan, 1994; Nieuwenhuis et al., 2017; Ross & Mirowsky, 2009). Further, children with increased stress levels may use conflict with their parents as means to mitigate their negative emotions (Agnew, 1992; 2001; Duncan, Duncan, Okut, & Strycker, 2002).

Parents are also susceptible to neighborhood disorder, and when the parental response is poor, then the parent-child relationship can suffer. Parents residing in high-crime areas often express feelings of helplessness and frustration in their inability to protect their children from violence (Ahlin & Antunes, 2017; Osofsky, 2003). Their ability to manage their own stress, trauma, and grief greatly affects outcomes of children who are exposed to violence (Kohen et al., 2008). High levels of life stress are associated with weakened child-parent attachment (Enlow et al., 2014) and parental distress (e.g., PTSD and depression) is a significant contributor to behavior problems and symptoms of distress in children (Aisenberg & Ell, 2005; Linares et al., 2001). For some families, chronic community violence diminishes the ability of mothers and children to form prosocial attachments (Osofsky & Fenichel, 1994). Consequently, in communities saturated with violence and economic disadvantage, not only are parents and their children exposed to higher levels of stress, but, as a result of their own stress, parents are less equipped to steer their children away from problematic behavior. In sum, when neighborhood disorder causes stress in both children and parents, the quality of the parent-child relationship suffers.

The negative influences of community violence can be mitigated through a variety of protective factors. One prominent source of protection is the family (Dearing, 2004; Cuellar et al., 2015; Gorman-Smith, Henry, & Tolan, 2004). Parents adjust their parenting strategies according to the neighborhoods they live in, often becoming more vigilant in monitoring their children's behavior when they perceive the surrounding community to be dangerous (Galster & Santiago, 2006; Nieuwenhuis et al., 2013; Vogel et al., 2020). Moreover, parents from different socioeconomic background respond markedly differently to the local environment (Lareau, 2003). When neighborhoods are particularly stressful for parents because of violence and poverty, levels of depression increase, parental warmth diminishes, and parents may become less supportive (Klebanov et al., 1994; Kohen et al., 2008; Tendulkar et al., 2010). The differential parental responses to neighborhood disorder affects how well adolescents cope with community violence.

Spatial Effects of Exposure to Violence

Despite the wealth of scholarship documenting the deleterious consequences of exposure to community violence, there is surprisingly limited consensus on the appropriate operationalization and measurement of both 'community' and 'exposure'. For instance, there is considerable variation across studies in whether exposure is based on self-reports or official police data (see Eitle and Turner, 2002; Sharkey et al, 2012). There is also a good deal of variation in how narrowly or broadly communities are defined. For instance, Sharkey and colleagues (2012) focused on the influence of homicides that occurred between 1000 and 2500 feet of a child's home. Other studies use much broader aggregations, like census tracts or neighborhood clusters (Eitle and Turner, 2002; Gorman-Smith et al., 2004; Zimmerman and Messner, 2013). In regards to the former, it matters little whether studies rely on official data or parent and child-self report. While not a direct correspondence, both point to the same general conclusion – exposure to community violence, no matter how measured, is detrimental for youth. The issue of neighborhood aggregation is thornier. On the one hand, small areal units likely capture the most salient events for youth -- those that occur in close proximity to their homes (see Sharkey and colleagues, 2012). Such an approach, however, necessarily misses violent events that occur outside of this relatively arbitrary sphere of influence. Larger areal units overcome this limitation. One drawback of relying on broader observation areas is that the likelihood of including non-relevant events increases. In other words, violent crimes occurring within a few feet of

NEIGHBORHOOD VIOLENCE AND CHILD-PARENT CONFLICT

a youths home are likely salient; violent crime three miles away, much less so. It stands to reason that youth will be most affected by the most residentially proximate violent events, and that this effect will display a decay function that diminishes the further away their residence.

The aggregation issue is further confounded by the spatial dynamics of urban crime more generally. Violence tends to cluster together in space and time and high-crime communities are often located nearby other high crime communities. Moreover, crime and other risky behaviors tend to ‘spill-over’ and influence levels of crime and violence in nearby places. Research suggests that the spatial distribution of such neighborhood features has important implications for youth offending (Graif, 2015; Vogel & South, 2016; Vogel et al., 2020). When violence near the home and violence in the surrounding neighborhoods is correlated, studying either one or the other would give an incomplete and potentially erroneous imagine of the situation children and parents face. For example, families can reside in relatively low crime neighborhoods surrounded by areas with proportionately higher levels of violence. Children and parents would need to traverse these areas regularly, for instance, as they commute to school, spend time with peers, or engage in recreational activities. Focusing on levels of violence in an unduly narrow area could misrepresent the true nature of criminal violence within a family’s awareness space. Therefore, studying the dynamic interplay between differentially defined neighborhood delineations would more accurately describe how local violence impacts on families and, specifically, parents-child relationships.

Current Study

The current study examines how exposure to violence in local and extralocal neighborhoods influences parent-child conflict. The term “local” is used to refer to the immediate areas surrounding the respondents’ homes (on average 17 households), and “extralocal” to refer to an area comprising a two-mile radius surrounding the local neighborhood. By combining five years of annual survey data and police reported data on violent crime from the Netherlands, this study is able to longitudinally examine how local and extralocal violence exposure are related to parent-child conflict. As described in greater detail below, the hybrid models capture both within-individual as between-individual responses to levels of violence in local and extralocal neighborhoods. Specifically, the hypotheses are

- (1) Exposure to both local violence and extralocal violence will increase parent-child conflict within families over time
- (2) Exposure to local violence has a greater impact on parent-child conflict than exposure to extralocal violence.
- (3) Exposure to local and extralocal violence interact such that the effect of exposure to local violence is strongest when residential neighborhoods are surrounded by high levels of extralocal violence.

Methods

Data

Data for this study are drawn from two sources: the Conflict and Management of Relationships (Conamore) panel dataset and data from Statistics Netherlands. Conamore (n=778) is a longitudinal study of Dutch adolescents which examines personality and identity, relationships with

NEIGHBORHOOD VIOLENCE AND CHILD-PARENT CONFLICT

parents and peers, and emotional and behavioral states (Meeus et al., 2010). Schools (12) were randomly selected and parents and students both received a letter detailing the focus of the study and information in regard to voluntary participation. Fewer than 1% of selected respondents chose not to participate (Delsing et al., 2008). Participants, aided by research assistants who provided verbal instruction, completed a series of questionnaires in their classrooms. Students absent on testing days were not assessed.

The original Conamore sample included 1,313 respondents and involved two cohorts: 'early-to-middle' adolescents ($n=923$; 70.3% of total sample; mean age at wave 1=12.4) and 'middle-to-late' adolescents ($n=390$; 29.7% of total sample; mean age at wave 1=16.7). The first five annual waves of data were collected between the academic years of 2001-02 and 2005-06. The sixth wave was collected in 2009-10 and included an additional Life History Calendar (LHC) (Caspi et al., 1999) which captured retrospective questions. In the analyses data are used from the first five waves and only utilize the LHC (wave six) to trace adolescents' residential histories. The respective number of respondents for waves 1 through 6 were 1,313, 1,313, 1,293, 1,292, 1,275, and 1,026. Sample attrition in the first five waves was low (7%), however, due to the four-year gap between waves five and six, attrition rates were higher for the LHC sample (20%). Residential information from the LHC was used to link respondents to their respective postal codes, which were then combined with a second dataset from Statistics Netherlands. The Statistics Netherlands data consist of spatially detailed police records by post code. The mean number of households per post code in the Netherlands was 17. Only respondents who did not move during the observation period were selected, in order not to conflate the effect of violence exposure on parent-child conflict with the effect of residential mobility. The analytic sample after list-wise deletion was 778 adolescents, with an average of 4.4 observations per respondent, or 3,458 person-wave observations. To examine whether attrition could affect the outcomes, a number of t-tests and chi²-tests were performed to examine whether the probability of missingness on the dependent variables at wave 1 is associated with conflict with parents. Variables that were missing at random include: extralocal violence ($t(847)=-.08$, $p=.9357$), not living with two parents ($\chi^2(1)=3.63$, $p=.0570$), and female ($\chi^2(1)=.82$, $p=.3665$). Variables that were not missing at random and might affect the outcomes include: local violence ($t(847)=-3.14$, $p=.0017$), neighborhood wealth ($t(892)=2.05$, $p=.0408$), cohort ($\chi^2(1)=50.84$, $df=1$, $p<.0001$), and foreign parents ($\chi^2(1)=14.08$, $df=1$, $p=.0002$).

Measures

Conflict with parents. The dependent variable 'conflict with parents' was measured using a subset of the Network of Relationship Inventory (Furman & Buhrmester, 1985), and has reported adequate validity (Edens, Cavell & Hughes, 1999). Measured at the individual level as a time varying variable, it explicitly captures non-physical conflicts involving anger, tension, and arguments. Adolescents were asked separately about their father and mother. Conflict with parents was measured as a scale and used six items from the NRI about fathers and mothers: "How much do you and this person get upset with or mad at each other?", "How much do you and this person get on each other's nerves?", "How much do you and this person disagree and quarrel?", "How much do you and this person get annoyed with each other's behavior?", "How much do you and this person argue with each other?", and "How much do you and this person hassle or nag one another?" The five response categories range from "little or not at all" to "more is not possible". Across the five waves and separate scales for mother and father, the Cronbach's alphas range from .87 to .91, expressing strong internal consistency. Adolescent's responses for both father and mother were combined into a single scale to create an average measure for 'conflict with parents' ranging from 0 to 4. When an adolescent did not have two

NEIGHBORHOOD VIOLENCE AND CHILD-PARENT CONFLICT

parents (6 respondents in the sample in wave 1 had no person they would call father), the value of one parent was used to describe ‘conflict with parents’. When adolescents had no persons in their life they called father and mother (9 respondents in wave 1), they were omitted from the analyses. Descriptive statistics for this and other variables can be found in Table 1.

[Table 1 About Here]

Control variables. Three individual-level time-invariant control variables were used: sex, cohort, and parents being of foreign origin. Sex, cohort, and parents’ foreign origin were treated as dummy variables: male=0, female=1, early-to-middle adolescents=0, middle-to-late adolescents=1, and both parents born outside of the Netherlands=0 and both parents being Dutch natives=1 (one parent being foreign born=0.5). One time varying control variable was included: not living with both parents.

Local violent crime. The Life History Calendar (LHC) in Conamore includes six-digit postcodes where the adolescents lived from the age of twelve until the sixth wave of data collection. These postcodes enabled this study to link the survey data to register data available at the postcode level. Six-digit postcodes average 17 households per postcode, and capture mean socioeconomic measures (housing prices) and crime levels in the proximate surroundings of the adolescents’ homes.

‘Local violent crime’ was based on data from the Dutch National Policy Services Agency and Statistics Netherlands. The variable represents the yearly number of registered violent crimes per 1000 persons within a six-digit postcode. The variable was available for all of the five years of data collection and was standardized in the regression models.

Extralocal violent crime. ‘Extralocal violent crime’ is constructed by applying a spatially lagged, distance-weighted measure of violent crime occurrences in “extralocal” (two-mile radius) neighborhoods. First, the distance from the center of each focal postcode to the center of each nearby postcode within a two-mile radius was measured, then the level of crime was weighted by the inverse of the distance of the postcode from the focal postcode, thereby assigning more weight to violence that happens nearby and less to violence that happens further away.

Neighborhood wealth. ‘Neighborhood wealth’ was measured via a scale of average property values within each respective six-digit postcode as captured by Statistics Netherlands in 2004 (2006). Because longitudinal data were not available, this information was imputed over all five waves, and the variable was standardized. This measure has been assessed to be a suitable proxy for neighborhood wealth (Visser, van Dam, & Hooimeijer, 2008).

Analytic Strategy

To test the research questions, hybrid random-effects tobit models were employed. The model is referred to as hybrid because it includes estimators for both within-subject and between-subject effects, therefore all time-varying variables have two estimators (Allison, 2009). The first estimator is calculated as the deviation from person-specific means for each time-varying variable, which creates an estimator equal to those in fixed-effects models (within-individual effect). This model controls for observed and unobserved time-invariant characteristics, as the sum of their change is always zero. This removes any potential bias arising from omitted time-invariant characteristics. The second estimator is calculated as the person-specific mean for each time-varying variable (between-individual effect). The lower and upper limit for the tobit estimator were 0 and 4, respectively, which correspond to the potential extremes on the outcome variable.

Results

Table 1 provides descriptive statistics for the variables included in the analysis. A larger proportion of Conamore survey respondents (at all five waves) were female (55% female and 45% male); and mean ages of respondents at wave 1 were 12.4 years (early-to-middle adolescents) and 16.7 (middle-to-late adolescents). Nine percent of the sample had two parents who were born outside of the Netherlands. The mean level of parental conflict is 0.49, suggesting that on average, respondents reported experiencing little to no conflict with either of their parents. No respondents in the sample reported the highest level of conflict for all six conflict indicators (max=3.83). Instances of reported local violence occurred, on average, at a rate of 0.22 times per 1000 persons; and the maximum rate was 10.3 instances per 1000 persons. Extralocal violence occurred, on average, at a rate of 0.23 per 1000 persons, and the maximum amount of extralocal violence was 1.09 instances per 1000 persons. The mean property value within the sample region is 211,381 euro (compared to 161,000 for the whole province of Utrecht; Statistics Netherlands, 2021), with the respective minimum and maximum being 55,000 and 952,000 euro.

Neighborhood Violence and Child-Parent Conflict

Within-Individual. The within individual component of the analyses (Table 2) reveals that both local violence and extralocal violence are significantly and positively related to child-parent conflict. When the standardized violence variables are substituted with unstandardized mean-centered variables, the findings show that for every one standard deviation increase in local violence in a postcode there is an expected 0.03 increase in the level of conflict with parents experienced (e.g., scores of 0 become 0.3). The higher beta value observed for extralocal violence suggests that for each one standard deviation increase in violent crime (occurring within a 2-mile radius), respondents experience a 0.07 increase in conflict with their parents. A Wald test revealed that the coefficients for local and extralocal violence were not significantly different from each other ($\chi^2(1)=3.12$, $p=.0771$), suggesting that both forms of community violence have similar effects on parent-child conflict. The interaction between local and extralocal violence was not significant.

Between-Individual. When considering variation between participants, local and extralocal violence are not significantly related to conflict with parents. Neighborhood wealth is not a significant predictor of conflict within the home. Although insignificant, the direction of this relationship is negative, and therefore consistent with the majority of neighborhood literature maintaining that poverty/neighborhood disadvantage is positively associated with conflict within the home (Morrison-Gutman, McLoyd, and Tokoyawa, 2005; Wadsworth and Compas, 2002).

Cohort is significantly positively related to conflict with parents. Consistent with other's findings, this illustrates that older youths are expected to experience higher levels of conflict with their parents than younger youths (Arnett, 1999; Montemayor, 1983). Parents being foreign born is significantly negatively related to conflict within the home, suggesting that youth with non-Dutch native parents experience less frequent and lower levels of conflict with their parents. Finally, adolescents who did not live with both parents had a higher likelihood to have conflict with their parent.

Discussion

This research began with the question of how levels of violence in local and extralocal neighborhoods affect child-parent conflict. Consistent with the first hypothesis, the results

NEIGHBORHOOD VIOLENCE AND CHILD-PARENT CONFLICT

demonstrate that instances of violence within respondent's immediate proximity (local) and surrounding proximities (extralocal) significantly impact conflicts occurring within families for individuals over time. This is an important finding, as family relationship quality acts as a significant mediating factor for subsequent violence as well as an array of deleterious internalizing and externalizing behaviors for youth (Gorman-Smith, Henry, & Tolan, 2004). Although effects of local/extralocal violence were not observed between individuals, repeated measures models yield strong internal validity as data are prone to less noise, therefore, the observed effects are less likely a result of undetected differences (Charness, Gneezy, & Kuhn, 2011). Besides, the fact that within-individual changes in neighborhood violence affect individuals but not between-individual neighborhood violence, suggests that it is not the absolute level of neighborhood violence that matters the most. Changes in violence influence child-parent conflict, but these changes seem to have this effect despite the baseline level of violence in a neighborhood.

While a greater magnitude in the coefficient for extralocal compared to local violence was observed, additional testing showed this difference was not significant. This fails to confirm the second hypothesis. One potential explanation for the potentially larger role of extralocal violence is that studies have found youth who experience chronic or high exposure to violence may become desensitized to acts of violence (Gaylord-Harden, Dickson, & Pierre, 2016) and exhibit fewer externalizing behaviors which may lead to conflict. A second potential justification is spillover effects of violence between neighboring communities. For instance Hipp (2013) found that actual crime is the strongest predictor of perceived crime. Being aware of violence in one's surrounding community can increase externalizing behaviors, regardless of whether a respondent is directly exposed to it (Youngstrom, Weist, & Albus, 2003), which may increase conflict within families. The third hypothesis predicted such an interaction between local and extralocal violence. This did not emerge in the empirical models. Given (1) the refinement of the spatial unit of analysis ($M=17$ homes), and (2) the mean amount of violent crimes in the sample is 0.22 per 1000 persons, diffusion of the effects of neighborhood violence is a far more probable explanation than chronic exposure to violence and desensitization as a result. The important takeaway is that although violence in both immediate and surrounding areas contribute to conflict between youth and parents, contiguous neighborhoods must not be ignored.

The negative relationship between non-Dutch native parents and family conflict suggests youth with foreign born parents experience less conflict with their parents. A similar study examining child-parent relationships between caregivers and adolescents in the Netherlands found non-native Dutch parents to be unrelated to higher levels of child-parent conflict and antagonism (Eichelsheim et al., 2009). A potential explanation for the observed relationship is the notion of the embeddedness of alternative value structures within ethnic minority/immigrant families, specifically in the parent/parents' ability to promote positive socialization goals within their families which benefit family cohesiveness and lessen conflicts (Arends-Tóth & Van de Vijver, 2008). Immigrant families emphasizing family cohesion may be more adept at avoiding conflicts, and in comparison to non-immigrant families, may have higher motivation to set aside disagreements and acknowledge sacrifices parents have made and contributions adolescents make within the family (Kwak, 2003). The higher levels of conflict found in families without both parents present seem to support this notion that family cohesion is beneficial for parent-child relationships.

It is important to acknowledge several limitations of this study. This research faces the constraint of using criminal justice data, which is prone to undercounting the true volume of crime, as many crimes go unreported. Similarly, this study was unfortunately unable to identify a more appropriate proxy for poverty within these data. Neighborhood wealth and parents' foreign origin were used to control for differences in socioeconomic status within the sample; however, this methodological approach could have been more robust by having more comprehensive measures

NEIGHBORHOOD VIOLENCE AND CHILD-PARENT CONFLICT

(such as parents' income or education level). Although the Conamore survey data does not include direct indicators of stress, the extant literature draws reasonable connections to suggest that stress acts as a mechanism between community violence and higher levels of criticism, disagreements, and arguments between adolescents and parents. Additionally, housing price data were not available during all five waves of youth survey data collection and values were thus imputed. Lastly, this study was unable to include measures for self-reported exposure to violence (e.g., various forms of victimization such as violence experienced outside of the home or at school), which might be confounded with the measures of neighborhood violence gleaned from the police reports.

Many scholars have called for interventions designed to provide counseling/treatment for adolescents directly exposed to violence (e.g., Bailey & Whittle, 2004). The findings, however, reveal that a broader recognition of the effects of community violence are necessary, and that efforts to curb effects of exposure to violence should be expanded to include children living close to areas with high saturations of violence. This research contributes to a growing literature on community violence and family conflict by drawing connections between spatial dynamics of violence and resulting implications for interpersonal family dynamics. To the authors' knowledge, no other studies address this relationship from a spatially refined perspective. The used approach demonstrates the benefits of examining spatial effects in a direct, substantive manner, and allows us to conclude that violence in one area is not only related to violence in neighboring areas, but that both influence conflicts experienced within families. The linkages uncovered here allow for a deeper understanding of relationships between community violence and adolescent-parent conflict and reinforce the observation that neighborhood effects research must consider spatial dynamics.

Acknowledgements

We are grateful to Gerard Marlet for providing the data on crime.

Funding

This research was specifically funded by the European Research Council under the European Union's Seventh Framework Programme (FP/2007-2013) / ERC Grant Agreement n. 615159 (ERC Consolidator Grant DEPRIVEDHOODS, Socio-spatial inequality, deprived neighbourhoods, and neighbourhood effects).

Data Sharing Declaration

The data that support the findings of this study are available from the Conamore team and Statistics Netherlands, but restrictions apply to the availability of these data.

Conflict of Interests

The authors report no conflict of interests.

Ethical Approval

NEIGHBORHOOD VIOLENCE AND CHILD-PARENT CONFLICT

Treatment of participants was in accordance with the ethical standards of the APA and this study was reviewed and approved by the ethical-medical committee of University Medical Centre Utrecht, the Netherlands.

Informed Consent

For participation in the present study, written informed consent was obtained from adolescents and their parents, and also from all the participating schools.

References

- Agnew, R. (1992). Foundation for a general strain theory of crime and delinquency. *Criminology*, *30*, 47-88.
- Agnew, R. (2001). Building on the foundation of general strain theory: Specifying the types of strain most likely to lead to crime and delinquency. *Journal of Research in Crime and Delinquency*, *38*(4), 319-361.
- Ahlin, E. M., & Antunes, M. J. L. (2017). Levels of guardianship in protecting youth against exposure to violence in the community. *Youth Violence and Juvenile Justice*, *15*, 62-83.
- Aisenberg, E., & Ell, K. (2005). Contextualizing community violence and its effects: An ecological model of child-parent interdependent coping. *Journal of Interpersonal Violence*, *20*(7), 855-871.
- Allison, P. D. (2009). *Fixed Effects Regression Models*. Thousand Oaks, CA: Sage.
- Arends-Tóth, J., & Van de Vijver, F. J. R. (2008). Family relationships among immigrants and majority members in the Netherlands: The role of acculturation. *Applied Psychology*, *57*(3), 466-487.
- Arnett, J. J. (1999). Adolescent storm and stress, reconsidered. *American Psychologist*, *54*(5), 317.
- Attar, B. K., Guerra, N. G., & Tolan, P. H. (1994). Neighborhood disadvantage, stressful life events and adjustments in urban elementary-school children. *Journal of Clinical Child Psychology*, *23*(4), 391-400.
- Bailey, S., & Whittle, N. (2004). Young people: Victims of violence. *Current Opinion in Psychiatry*, *17*(4), 263-268.
- Caspi, A., Moffitt, T.E., Thornton, A., Freedman, D., Amell, J.W., Harrington, H., et al., (1996). The life history calendar: A research and clinical assessment method for collecting retrospective event-history data. *International Journal of Methods in Psychiatric Research*, *6*, 101-114.
- Charness, G., Gneezy, U., & Kuhn, M. A. (2012). Experimental methods: Between-subject and within-subject design. *Journal of Economic Behavior & Organization*, *81*(1), 1-8.
- Cuellar, J., Jones, D. J., & Sterrett, E. (2015). Examining parenting in the neighborhood context: A review. *Journal of Child and Family Studies*, *24*, 195-219.
- Dearing, E. (2004). The developmental implications of restrictive and supportive parenting across neighborhoods and ethnicities: Exceptions are the rule. *Journal of Applied Developmental Psychology*, *25*(5), 555-575.
- Dietz, R. D. (2002). The estimation of neighborhood effects in the social sciences: An interdisciplinary approach. *Social Science Research*, *31*(4), 539-575.
- Duncan, T. E., Duncan, S. C., Okut, H., Strycker, L. A., & Hix-Small, H. (2003). A multilevel contextual model of neighborhood collective efficacy. *American Journal of Community Psychology*, *32*(3-4), 245-252.

NEIGHBORHOOD VIOLENCE AND CHILD-PARENT CONFLICT

- Eichelsheim, V. I., Buist, K. L., Deković, M., Wissink, I. B., Frijns, T., Van Lier, P. A., Koot, H.M., & Meeus, W. H. (2010). Associations among the parent–adolescent relationship, aggression and delinquency in different ethnic groups: a replication across two Dutch samples. *Social Psychiatry and Psychiatric Epidemiology*, *45*(3), 293-300.
- Edens, J. F., Cavell, T. A. & Hughes, J. N. (1999). The self-systems of aggressive children: a cluster-analytic investigation. *Journal of Child Psychology and Psychiatry*, *40*, 441-453.
- Enlow, M. B., Egeland, B., Carlson, E., Blood, E., & Wright, R. J. (2014). Mother-infant attachment and the intergenerational transmission of posttraumatic stress disorder. *Development and Psychopathology*, *26*(1), 41-65.
- Eitle, D., & Turner, R. J. (2002). Exposure to community violence and young adult crime: The effects of witnessing violence, traumatic victimization, and other stressful life events. *Journal of Research in Crime and Delinquency*, *39*(2), 214–237.
- Fowler, P. J., Tompsett, C. J., Braciszewski, J. M., Jacques-Tiura, A. J., & Baltes, B. B. (2009). Community violence: A meta-analysis on the effect of exposure and mental health outcomes of children and adolescents. *Development and Psychopathology*, *21*(1), 227-259.
- Furman, W., & Buhrmester, D. (1985). Children's perceptions of the personal relationship in their social networks. *Developmental Psychology*, *21*(6), 1016-1024.
- Galster, G. C. & Santiago, A. M. (2006). What's the 'hood got to do with it? Parental perceptions about how neighborhood mechanisms affect their children. *Journal of Urban Affairs*, *28*, 201-226.
- Gaylord-Harden, N. K., Dickson, D., & Pierre, C. (2016). Profiles of community violence exposure among African American youth: An examination of desensitization to violence using latent class analysis. *Journal of Interpersonal Violence*, *31*(11), 2077-2101.
- Gorman-Smith, D., Henry, D. B., & Tolan, P. H. (2004). Exposure to community violence and violence perpetration: The protective effects of family functioning. *Journal of Clinical Child and Adolescent Psychology*, *33*(3), 439-449.
- Gorman-Smith, D., & Tolan, P. (1998). The role of exposure to community violence and developmental problems among inner-city youth. *Development and Psychopathology*, *10*(1), 101-116.
- Graif, C. (2015). Delinquency and gender moderation in the moving to opportunity intervention: The role of extended neighborhoods. *Criminology*, *53*, 366-398.
- Guerra, N. G., Rowell Huesmann, L., & Spindler, A. (2003). Community violence exposure, social cognition, and aggression among urban elementary school children. *Child Development*, *74*(5), 1561-1576.
- Harrison, A. O., Wilson, M. N., Pine, C. J., Chan, S. Q., & Buriel, R. (1990). Family ecologies of ethnic minority children. *Child Development*, *61*(2), 347-362.
- Hipp, J. R. (2013). Assessing crime as a problem: The relationship between residents' perception of crime and official crime rates over 25 years. *Crime & Delinquency*, *59*(4), 616-648.
- Kersten, L., Vriends, N., Steppan, M., Raschle, N. M., Praetzelich, M., Oldenhof, H., ... & Martinelli, A. (2017). Community violence exposure and conduct problems in children and adolescents with conduct disorder and healthy controls. *Frontiers in Behavioral Neuroscience*, *11*, 219.
- Klebanov, P. K., Brooks-Gunn, J., & Duncan, G. J. (1994). Does neighborhood and family poverty affect mothers' parenting, mental health, and social support? *Journal of Marriage and Family*, *56*, 441-455.
- Kohen, D. E., Leventhal, T., Dahinten, V. S., & McIntosh, C.N. (2008). Neighborhood disadvantage: pathways of effects for young children. *Child Development*, *79*(1), 156-69.

NEIGHBORHOOD VIOLENCE AND CHILD-PARENT CONFLICT

- Kwak, K. (2003). Adolescents and their parents: A review of intergenerational family relations for immigrant and non-immigrant families. *Human Development*, 46(2-3), 115-136.
- Lareau, A. (2003). *Unequal childhoods*. Berkeley: University of California Press.
- Linares, L. O., Heeren, T., Bronfman, E., Zuckerman, B., Augustyn, M., & Tronick, E. (2001). A mediational model for the impact of exposure to community violence on early child behavior problems. *Child Development*, 72(2), 639-652.
- Margolin, G., & Gordis, E. B. (2000). The effects of family and community violence on children. *Annual Review of Psychology*, 51(1), 445-479.
- McCoy, D. C., Raver, C. C., & Sharkey, P. (2015). Children's cognitive performance and selective attention following recent community violence. *Journal of Health and Social Behavior*, 56(1), 19-36.
- Meeus, W.H.J., Akse, J., Branje, S.J.T., ter Bogt, T.F.M., Crommelin, P.M., Delsing, M.J.M.H., et al., (2010). *Codebook of the research project CONflict And Management Of Relationships (CONAMORE)*. Unpublished manuscript, Utrecht University, the Netherlands.
- Montemayor, R. (1983). Parents and adolescents in conflict: All families some of the time and some families most of the time. *The Journal of Early Adolescence*, 3(1-2), 83-103.
- Morrison-Gutman, L., McLoyd, V.C., & Tokoyawa, T. (2005). Financial strain, neighbourhood stress, parenting behaviors, and adolescent adjustment in urban African American families. *Journal of Research on Adolescence*, 15(4), 425-499.
- Mrug, S., Loosier, P. S., & Windle, M. (2008). Violence exposure across multiple contexts: Individual and joint effects on adjustment. *American Journal of Orthopsychiatry*, 78(1), 70-84.
- Nieuwenhuis, J., Hooimeijer, P., van Dorselaer, S., & Vollebergh, W. (2013). Neighbourhood effects on school achievement: The mediating effect of parenting and problematic behaviour? *Environment and Planning A*, 45(9), 2135-2153.
- Nieuwenhuis, J., van Ham, M., Yu, R., Branje, S., Meeus, W., & Hooimeijer, P. (2017). Being poorer than the rest of the neighborhood: Relative deprivation and problem behavior of youth. *Journal of Youth and Adolescence*, 46, 1891-1904.
- Osofsky, J. D., & Fenichel, E. (1994). Caring for infants and toddlers in violent environments: Hurt, healing, and hope. *Zero to Three*, 13(3), 1-44.
- Osofsky, J. D. (2003). Prevalence of children's exposure to domestic violence and child maltreatment: Implications for prevention and intervention. *Clinical Child and Family Psychology Review*, 6(3), 161-170.
- Rasmussen, A., Aber, M. S., & Bhana, A. (2004). Adolescent coping and neighborhood violence: Perceptions, exposure, and urban youths' efforts to deal with danger. *American Journal of Community Psychology*, 33(1-2), 61-75.
- Ross, C. E., & Mirowsky, J. (2009). Neighborhood disorder, subjective alienation, and distress. *Journal of Health and Social Behavior*, 50(1), 49-64.
- SCP (2019). *De Sociale Staat van Nederland 2019*. The Hague, Sociaal Cultureel Planbureau.
- Sharkey, P. T., Tirado-Strayer, N., Papachristos, A. V., & Raver, C. C. (2012). The effect of local violence on children's attention and impulse control. *American Journal of Public Health*, 102(12), 2287-2293.
- Statistics Netherlands (2006). *Kerncijfers Postcodegebieden, 2004 [Key figures for postcode areas, 2004]*. The Hague: Statistics Netherlands.
- Statistics Netherlands (2021). *Waarde onroerende zaken van woningen en niet-woningen [Property value of dwellings and nondwellings]*. StatLine, <https://opendata.cbs.nl/statline/#/CBS/nl/dataset/37610/table>.

NEIGHBORHOOD VIOLENCE AND CHILD-PARENT CONFLICT

- Tendulkar, S.A., Buka, S., Dunn, E. C., Subramanian, S. V., & Koenen, K. C. (2010). A multilevel investigation of neighborhood effects on parental warmth. *Journal of Community Psychology, 38*(5), 557–573.
- Visser, P., van Dam, F., & Hooimeijer, P. (2008). Residential environment and spatial variation in house prices in the Netherlands. *Tijdschrift voor Economische en Sociale Geografie, 99*, 348-360.
- Vogel, M., & South, S. J. (2016). Spatial dimensions of the effect of neighborhood disadvantage on delinquency. *Criminology, 54*(3), 434-458.
- Vogel, M., & Keith, S. (2015). Vicarious peer victimization and adolescent violence: Unpacking the effects of social learning, general strain, and peer group selection. *Deviant Behavior, 36*(10), 834-852.
- Vogel, M., Hoeben, E. M., & Bernasco, W. (2020). Nearby neighbourhood influences on adolescent offending. *The British Journal of Criminology*.
- Wadsworth, M. E., & Compas, B. E. (2002). Coping with family conflict and economic strain: The adolescent perspective. *Journal of Research on Adolescence, 12*(2), 243-274.
- Zimmerman, G. M., & Messner, S. F. (2013). Individual, family background, and contextual explanations of racial and ethnic disparities in youths' exposure to violence. *American journal of public health, 103*(3), 435-442.

NEIGHBORHOOD VIOLENCE AND CHILD-PARENT CONFLICT

Tables

Table I. Descriptive statistics. Conamore, 2001-2010; Statistics Netherlands.

Variables	N	Mean	Standard Deviation	Minimum	Maximum
<u>Time Varying</u>					
Conflict with parents	3,458	.50	.49	0	3.83
Local violence	3,458	-.02	.92	-.32	13.32
Extralocal violence	3,458	-.03	.98	-1.57	5.77
Not living with both parents	3,458	.16	.36	0	1
<u>Time Invariant</u>					
Neighborhood wealth	778	.12	1.07	-1.25	6.63
Parents foreign	778	.10	.30	0	1
Female	778	.55	.50	0	1
Cohort	778	.20	.40	0	1

NEIGHBORHOOD VIOLENCE AND CHILD-PARENT CONFLICT

Table II. Hybrid tobit regression predicting conflict with parents

Variables	Beta (S.E.)
<u>Within-Individual Estimators</u>	
Local violence	.03 (.01)*
Extralocal violence	.07 (.02)**
Local extralocal interaction	-.01 (.01)
Not living with both parents	-.07 (.04)
<u>Between-Individual Estimators</u>	
Local violence	.04 (.03)
Extralocal violence	.01 (.02)
Local extralocal interaction	-.11 (.45)
Neighborhood wealth	-.00 (.01)
Not living with both parents	.15 (.05)**
Female	.03 (.03)
Cohort	.07 (.04)
Parents foreign	-.15 (.06)*
Intercept	.40 (.03)***
Wald chi ²	43.15 (12)***

* p < 0.05, ** p < 0.01, *** p < 0.001

N=3,458