Family structure, victimization, and child mental health in a nationally representative sample[☆]

Heather A. Turner [a],[*], David Finkelhor [a], Sherry L. Hamby [b], Anne Shattuck [a]

[a] Crimes against Children Research Center, University of New Hampshire, Durham, NH 03857, USA
[b] Sewanee, the University of the South, Sewanee, TN 37383, USA

ARTICLE INFO

ABSTRACT

Utilizing the 2008 National Survey of Children's Exposure to Violence (NatSCEV), the current study compares past year rates of 7 forms of child victimization (maltreatment, assault, peer victimization, property crime, witnessing family violence and exposure to community violence) across 3 different family structure types (two biological/adoptive parents, single parent, step/cohabiting family) among a representative sample of 4046 U.S. children ages 2–17. The study also considers whether certain social-contextual risk factors help to explain family structure variations in victimization, and the extent to which victimization exposure accounts for family structure differences in distress symptom levels. Findings showed significantly elevated rates of almost all types of victimization among children in both nontraditional family types, relative to those living with two biological/adoptive parents. Factors associated with increased victimization risk in these families include high parental conflict, drug or alcohol problems, family adversity, and community disorder. A summary measure of children's exposure to multiple forms of victimization was the strongest predictor of distress symptoms.

© 2013 Elsevier Ltd. All rights reserved.

Introduction

Considerable research and policy attention has been focused on how different family structures affect children's development and well-being. Given high rates of divorce and increases in children born to unmarried mothers, 26% of all U.S. children (under 18 years) currently live with a single, unmarried parent (Kreider, 2008, pp. 70–114). Moreover, given high rates of remarriage and unmarried cohabitation, it has been estimated that about a third of children will also spend some time in a cohabiting or stepfamily arrangement (Bumpass, Raley, & Sweet, 1995). At any one time, about 11% of children are living in stepfamilies and another 3% are living in households with one biological parent and an unrelated cohabiting partner (Kreider, 2008).

Past research suggests that residing with a single parent, step-family, or in a household with a parent and cohabiting partner can represent a risk factor for psychopathology and adjustment problems in children and adolescents (Hetherington, Bridges, & Isabella, 1998). Although there are a variety of intervening and moderating conditions that influence whether these family structures are associated with negative child outcomes (Amato, 2010; Hetherington, 2006), research has found that, on average, children from divorced, never married, and remarried or cohabiting families are more likely than children living with both biological parents to have academic problems, externalizing and internalizing disorders, and lower social competency (Amato & Keith, 1991; Cherlin & Furstenberg, 1994; Hetherington et al., 1998). Among the potential sources of risk for children in these nontraditional family structures may be greater exposure to violence, crime and victimization.

Family structure variations in victimization exposure

Earlier studies on family structure and child victimization have typically focused on specific forms of victimization, such as physical maltreatment or sexual abuse rather than address family structure patterns across a full range of victimization types. Nevertheless, there is evidence that exposure to child victimization differs

[*] Corresponding author. Tel.: +1 603 862 3670; fax: +1 603 862 1122.
E-mail addresses: heather.turner@unh.edu (H.A. Turner), david.finkelhor@unh.edu (D. Finkelhor), slhamby@sewanne.edu (S.L. Hamby), anne.shattuck@unh.edu (A. Shattuck).

significantly across family type. Based on a large national survey of 12–17 year-olds, Lauritsen (2003) found that youth in single parent families experienced more stranger and nonstranger victimizations than those in two-parent families, independent of race and socio-economic status. A more recent study by Turner, Finkelhor, and Ormrod (2007) found that, relative to children living with two bio-logical or adoptive parents, children living in single parent and stepfamilies had greater lifetime exposure to several forms of victimization, including sexual assault, child maltreatment, and witnessing family violence. Similarly, a large Dutch study using child protective service data found higher rates of maltreatment in single parent and stepfamilies than in biological two-parent and adoptive families (van IJzendoorn, Euser, Prinzie, Juffer, & Bakermans-Kranenburg, 2009). Research also suggests that the likelihood of multiple child maltreatment recurrence is greater in both single parent and stepparent households (Bae, Solomon, & Gelles, 2007), but particularly when youth are residing with nonrelated adults (Finkelhor & Asdigian, 1996; McRee, 2008; Turner et al., 2007).

In addition to identifying risk factors for specific types of child victimization, such as maltreatment or sexual victimization, it is crucial to specify contexts associated with exposure to multiple forms of victimization. As discussed below, recent research has pointed to the particular significance of multiple victimization exposure in producing negative outcomes in children and adolescents (Finkelhor, Ormrod, & Turner, 2007b; Ford, Elhai, Connor, & Frueh, 2010; Menard & Huizinga, 2001). To the extent that children in single parent and/or stepfamily arrangements are at increased risk for experiencing multiple forms of victimization, the importance of family structure as a risk factor becomes even greater.

Given the large body of literature pointing to the significance of child victimization for the development of psychiatric disorders, physical health problems, and poor social and economic outcomes (Molnar, Buka, & Kessler, 2001; Terr, 1991), specifying family arrangements and related social contexts that may contribute to child victimization remains an important objective.

Family structure, social and contextual risk factors, and victimization

Although past research suggests that youth in single parent and stepfamilies may be at elevated risk for victimization, the extent of risk, the types of victimizations they experience, and the mechanisms that lead to or help to explain increased exposure have not been clearly specified. A variety of social and structural factors has been linked to problematic outcomes for children in single parent and stepfamily households and, as discussed below, may also be associated with increased risk for specific types of victimization and/or cumulative exposure to multiple forms of victimization. We focus on three general conditions or qualities that may be both more common in nontraditional family arrangements and associated with greater exposure to child victimization: 1) adverse neighborhood conditions as indexed by level of community disorder, 2) factors that reflect family stress and instability, including residential moves, living in multiple households, and family adversity, and 3) problems that represent likely markers of family dysfunction, including parental verbal conflict, parent psychological disorder and family drug or alcohol problems.

Community disorder

Youth in nontraditional family structures, especially those in single parent families, may be at elevated risk for victimization that arises from economic-deprivation-related factors, such living in neighborhoods with high levels of community disorder (Kalil & Ryan, 2010; Thomas & Sawhill, 2005). Children in high

community violence contexts (typically inner cities) are more likely both to witness violence and to experience personal victimization outside of the household (Margolin & Gordis, 2000). Because financial difficulties often force single parents to move into more dangerous neighborhoods (McLanahan & Sandefur, 1994; South & Crowder, 1998), this may represent a particularly important risk factor for children in single parent structures.

Residential instability

Frequent changes in residence may also represent an important connection between family structure and victimization risk (Sampson, 1985). Moving households is often accompanied by changing schools, leaving friendship networks, having new peer contacts, and exposure to different neighborhood conditions, which can undermine some factors protective against victimization. Residential mobility is typically higher for single parent families than for two-parent families (Astone & McLanahan, 1991; McLanahan & Sandefur, 1994), but is also likely to be elevated in step and cohabiting families as residential changes often accompany blending and reconfiguring household composition. Children living in these family types often also reside in more than one household, as they adhere to shared custody arrangements or visit non-resident biological parents. Since such arrangements typically mean greater contact with multiple adults (and often children) across households, and possibly across neighborhoods, they have the potential to increase victimization risk (Turner et al., 2007).

Family adversity

Exposure to stress and adversity is higher in nontraditional family structures. Barrett and Turner (2005), for example, found significantly greater exposure to recent negative life events in both single parent and stepfamily households, relative to families with two biological parents. Youth in single parent households also experienced higher levels of chronic stress; that is, ongoing hardships associated with things like finances, job and relationship instability, and everyday discrimination. Parents who experience considerable stress are more likely to engage in harsh and inconsistent parenting (McLoyd, 1990; Turner, 2005) and ultimately are at greater risk for child maltreatment (Rodriguez, 2010; Stith et al., 2009). High levels of adversity likely also index stressful neighborhood contexts associated with elevated community violence (Latkin & Curry, 2003). Because many types of adversity arise directly from economic hardship, family adversity may be a particularly salient victimization risk factor in single parent households.

Parental conflict

Nontraditional family structures may be more likely to experience interpersonal problems. Both single parents and parents in cohabiting relationships tend to have lower relationship quality and more conflict with partners (McLanahan & Beck, 2010). Parents in stepfamilies are also more likely than those in traditional family structure to exhibit interpersonal difficulties, including high parental conflict (Amato, 1993; Booth & Edwards, 1992; Dunn, 2002; O'Connor, Thorpe, Dunn, & Golding, 1999; Pryor & Rodgers, 2001). Because parental verbal conflict is a risk factor and/or corollary of domestic violence (Straus, Gelles, & Steinmetz, 2006) and problematic parenting practices (Krishnakumar & Buehler, 2000; Sturge-Apple, Davies, & Cummings, 2006), children in households with high parental conflict may be especially likely to witness family violence and be exposed to child maltreatment.

Parental psychopathology and drug/alcohol use

Single parents, cohabiting parents, and parents in stepfamilies are all more likely to report depression, engage in heavy drinking, and use illicit drugs than are married parents (Kalil & Ryan, 2010;

O'Connor, Hawkins, Dunn, Thorpe, & Golding, 1998) either because these problems reduce marital stability or because they are outcomes of associated stressful life conditions (Williams, Frech, & Carlson, 2010). Parental alcohol and drug problems and parent psychological disorder have, in turn, been found to be significant correlates of child maltreatment (Chaffin, Kelleher, & Hollenberg, 1996; Sidebotham & Golding, 2001; Weissman, Feder, & Pillowsky, 2004; Windham et al., 2004).

Family structure, multiple victimization, and distress

Although identifying risk factors for specific types of child victimization, such maltreatment or peer victimization, remains a crucial objective, recent research has also pointed to the particularly significance of multiple victimization (Finkelhor et al., 2007b; Ford et al., 2010; Menard & Huizinga, 2001; Romano, Bell, & Billette, 2011). Studies have demonstrated that children are often exposed to many different forms of victimization in a given period. Finkelhor, Ormrod, and Turner (2007a) found that, among children who had experienced any victimization, 69% had experienced two or more different types and 10% experienced 7 or more types in the last year. Importantly, cumulative exposure across victimization type, or what has been termed "poly-victimization", is associated with especially high levels of distress in children and youth, over and above exposure to chronic or serious individual forms of victimization (Finkelhor et al., 2007b; Turner, Finkelhor, & Ormrod, 2010a). In addition to considering several individual forms of victimization, the current study will address whether children in single parent and/or step/cohabiting households experience more poly-victimization, identify the factors outlined above that may contribute to this type of cumulative risk, and consider the extent to which multiple victimization explains variations in distress across family structure.

In sum, there is reason to suspect that child victimization is higher in nontraditional family structures and may represent a significant risk factor for explaining higher levels of mental health symptoms among children living in these types of families. Family structure variations in victimization exposure may also be mediated by or co-occur with a variety of risky family and neighborhood conditions. It is important to specify how *different* forms of victimization as well as exposure to multiple forms, may vary across family types, which social and contextual factors are most associated with family structure differences in victimization, and the extent to which victimization exposure and related risks are implicated in elevated symptomatology. Such research can help to better identify the source of risk in nontraditional family structures and to inform prevention and intervention efforts targeted at the most at-risk children. Although, as detailed above, some past research has addressed these processes, few studies have utilized nationally representative samples, included children across the entire development spectrum, compared multiple family structures, and assessed a wide range of victimization types and contextual factors in the same study. The current research fills these gaps. Given that family structure is substantially linked to other social statuses such as race and social class (Bramlett & Mosher, 2002) and that such factors may also be associated with variations in child victimization (Turner, Finkelhor, & Ormrod, 2006), we also control for a variety of demographic factors including gender, age, race, socioeconomic status, and number of children in the household.

The specific objectives of this study were to:

1) Examine differences in past year victimization across family structure, comparing three groups of children, namely those who are currently living a) with two biological or adoptive parents, b) with a single parent, and c) in a stepfamily or parent—partner household. Using a nationally representation sample of youth age 2—17, we compared family structure groups on wide range of victimization types (sexual victimization, maltreatment, assault, peer victimization, property crime, witnessing family violence, community violence) as well as exposure to multiple types of victimization (i.e. poly-victimization).

2) Identify social and contextual risk factors that may explain greater victimization among children in nontraditional family structures. Factors considered include demographic variables, factors that potentially reflect family dysfunction (parental verbal conflict, parent psychological disorder, family drug or alcohol problems) family stress and instability factors (level of adversity, moving residence, and sharing residence across 2+ households), and community disorder.

3) Examine the effect of total victimization (exposure to multiple types) on level of distress symptoms and determine whether multiple victimization explains higher levels of symptomatology in nontraditional family structures and helps to explain the effects of other social/contextual factors on distress symptoms.

Methods

Participants

The National Survey of Children's Exposure to Violence (NatSCEV) was designed to obtain incidence and prevalence estimates of a wide range of childhood victimizations. NatSCEV is the largest and most comprehensive survey ever devoted to childhood victimization and the only one that considers experiences across the full developmental spectrum of childhood (Mitchell, Finkelhor, & Wolak, 2005; Wells, Finkelhor, Wolak, & Mitchell, 2004, 2007).

Conducted between January 2008 and May 2008, the survey addressed the experiences of a nationally representative sample of 4549 children age 0—17 years living in the contiguous United States. The current study focused on the sub-sample of 4046 children aged 2—17 years. Sample characteristics are shown in Table 1. Interviews

Table 1
Sample characteristics ($N = 3886$).

Variables	% or mean	SD
Family Structure (%)		
Single parent	23.0	
Parent and step/partner	10.9	
Two biological/adoptive parents	66.1	
Race/Ethnicity (%)		
White	60.2	
Black	14.9	
Other	5.8	
Hispanic, any race	19.0	
Gender (%)		
Male	51.3	
Female	48.7	
Age (mean)	9.5	4.6
Socioeconomic status (mean)	.03	.90
No. of children in household (mean)	2.6	1.3
Parental conflict (mean)	2.8	1.1
Family drug or alcohol problem (%)	6.3	
Mother psych disorder (%)	12.0	
Father psych disorder (%)	8.1	
Family adversity (mean)	.64	.92
Number of moves in past year (mean)	.18	.49
Child live in 2+ households (%)	5.5	
Community disorder (mean)	.9	1.5

Note: All values are weighted.

were conducted over the phone by the employees of an experienced survey research firm.

Telephone interviewing is a cost-effective methodology (McAuliffe, Geller, LaBrie, Paletz, & Fournier, 1998; Weeks, Kulka, Lessler, & Whitmore, 1983) that has been demonstrated to be comparable to in-person interviews in data quality, even for reports of victimization, psychopathology, and other sensitive topics (Acierno, Resnick, Kilpatrick, & Stark-Riemer, 2003; Bajos, Spira, Ducot, & Messiah, 1992; Bermack, 1989; Czaja, 1987; Marin & Marin, 1989; Pruchno & Hayden, 2000). In fact, some evidence suggests that telephone interviews are perceived by respondents as more anonymous, less intimidating, and more private than in-person modes (Acierno et al., 2003; Taylor, 2002) and, as a result, may encourage greater disclosure of victimization events (Acierno et al., 2003).

The primary foundation of the design was a nationwide sampling frame of residential telephone numbers from which a sample of telephone households was drawn by random digit dialing (RDD). This nationally representative cross-section represented 67% of the completed interviews. To ensure that the study included a sizeable proportion of minorities and low-income respondents for more accurate subgroup analyses, there was also an oversampling of U.S. telephone exchanges that had a population of 70% or more of African American, Hispanic, or low-income households. This "oversample" yielded 33% of the completed interviews. Sample weights were applied to adjust for differential probability of selection due to: a) study design, b) demographic variations in nonresponse, and c) variations in within household eligibility.

Procedure

A short interview was conducted with an adult caregiver (usually a parent) in each household to obtain family demographic information. One child was randomly selected from all eligible children living in a household by selecting the child with the most recent birthday. If the selected child was under age 10, the interview was conducted with the caregiver who "is most familiar with the child's daily routine and experiences". The interview protocol included procedures to ensure privacy throughout the interview. Comparison between proxy (i.e. parent) and self (i.e. child) reports with this instrument found no evidence of reporter bias (Finkelhor, Hamby, Ormrod, & Turner, 2005).

Respondents were promised complete confidentiality, and were paid $20 for their participation. The interviews, averaging 45 minutes in length, were conducted in either English or Spanish. Approximately 6% of the interviews with the parents were done in Spanish. Respondents who disclosed a situation of serious threat or ongoing victimization were re-contacted by a clinical member of the research team, trained in telephone crisis counseling, whose responsibility was to stay in contact with the respondent until the situation was appropriately addressed locally. All procedures were authorized by the Institutional Review Board of the University of New Hampshire.

Response rates

The cooperation rate (percentage of contacted respondents who completed the survey) for the RDD portion of this survey was 71% and the response rate (the percentage of all eligible respondents who completed the survey) was 54%. The cooperation and response rates associated with the smaller oversample were somewhat lower at 63% and 43%, respectively. These are good rates by current survey research standards (Babbie, 2007; Keeter, Kennedy, Dimock, Best, & Craighill, 2006), given the steady declines in response rates that have occurred over the last three decades (Atrostic, Bates, Burt, & Silberstein, 2001) and the particular marked drop in recent years (Curtin, Presser, & Singer, 2005; Keeter et al., 2006; Singer, 2006).

Although the potential for response bias remains an important consideration, several recent studies have shown no meaningful association between response rates and response bias (Curtin, Presser, & Singer, 2000; Groves, 2006; Keeter, Miller, Kohut, Groves, & Presser, 2000; Merkle & Edelman, 2002). We also conducted our own nonresponses analysis with the current data and found that respondents who refused to participate (or could not be reached), but for whom parent screener information was obtained, were not systematically different from respondents on factors related to victimization risk (details of the nonresponse analyses can be obtained from the authors).

Measurement

Victimization

The survey utilized an enhanced version of the Juvenile Victimization Questionnaire (JVQ), the most comprehensive inventory of childhood victimization available for use in a survey format (Finkelhor, Hamby et al., 2005; Finkelhor, Ormrod, Turner, & Hamby, 2005; Hamby, Finkelhor, Ormrod, & Turner, 2004). The use of simple language and behaviorally specific questions clearly define the types of incidents that children should report. Considerable attention was paid to translating clinical and legal concepts such as "neglect" or "sexual harassment" into language that children could understand. The JVQ was extensively reviewed and tested with victimization specialists, focus groups of parents and children, and cognitive interviews with young children to determine the suitability of its language and content. It has been used in numerous surveys and has shown evidence of good test–retest reliability and construct validity across a wide spectrum of developmental stages (Finkelhor, Hamby et al., 2005).

The JVQ obtains reports on youth victimization covering five general areas of interest: conventional crime, maltreatment, victimization by peer and siblings, sexual victimization, and witnessing and indirect victimization (Finkelhor, Ormrod, Turner, & Hamby, 2005). Follow-up questions for each screener item gathered additional information about each victimization, including whether the event occurred in the past year and perpetrator characteristics. Given our interest in victimization risk association with *current* family structure, we wished to focus on relatively recent victimization exposure. Thus, the analyses focus only on past year victimizations.

Because some kinds of screeners can be considered to be variations of a general class of victimizations, aggregate measures, such as any property crime, any physical assault, and any sexual victimization, can be constructed. For this analysis, any occurrence in the past year of: 1) physical assault (5 specific types); 2) property crime (3 specific types); 3) peer or sibling-perpetrated victimization (6 specific types); 4) maltreatment (4 specific types); 5) sexual victimization (6 specific types); 6) witnessing family violence (4 specific types); and 7) exposure to community violence (7 specific types) were flagged for each child. (The screeners used to identify these aggregate types of victimization are shown in Appendix A in supplementary electronic material). Consistent with earlier research on poly-victimization (Finkelhor et al., 2007a,b; Turner et al., 2006, 2010a), a summary measure was also constructed representing the total number of individual victimization types (out of the 35 specific types) experienced by each child in the past year. The percentage of the total sample exposed to each aggregate type, in addition to the mean number of victimization types to which children were exposed, are displayed in the first column of Table 2.

Distress symptoms

Mental health status was measured with the anger, depression, anxiety, dissociation, and posttraumatic stress scales of two

Table 2
Past year victimization exposure by family structure (N = 3886).

	All families	Two parent (bio or adopted)	Parent and stepparent or partner	Single parent
Percent of sample experiencing:				
Any maltreatment***	10.5	7.1	19.4	16.0
Any physical assault***	20.3	17.1	28.4	25.7
Any peer/sibling victimization	52.7	51.8	57.2	53.2
Any property crime***	27.2	24.4	35.5	31.5
Any witnessing family violence***	10.0	7.4	14.7	15.2
Any exposure to community violence***	28.3	24.9	36.7	34.1
Any sex victimization*	6.5	5.7	8.3	7.9
Mean sum of victimization types	2.3	2.0	2.9	2.7
N	3886	2569	423	894

Note: All values are weighted.
Chi-Square: *p < .05. **p < .01. ***p < .001.

closely related measures: the Trauma Symptoms Checklist for Children (TSCC) (Briere, 1996), which was used for the 10–17 year-old self-report interviews, and the Trauma Symptom Checklist for Young Children (TSCYC), (Briere et al., 2001), used in the caregiver interviews for the 2–9 year-olds. For the purpose of this study, the instruments were shortened for a total of 28 items in the TSCC and 25 items in the TSCYC. For both instruments, respondents were asked to indicate how often they (or their children) have experienced each symptom within the last month. Response options are on a 4-point scale from *1 (not at all) to 4 (very often)*. All item responses for the five scales together were summed to create an aggregate distress symptom score. The TSCC and TSCYC have shown very good reliability and validity in both population-based and clinical samples (Briere, 1996; Briere et al., 2001). In this study, the alpha coefficient was .93 for the TSCC and .86 for the TSCYC. Because the specific items of the two measures differed, a distress symptom score was created for the 2–9 year-olds and a youth distress score for the 10–17 year-olds. A unified distress score for all children 2–17 years of age in the sample was then constructed by merging the standardized distress scores for each age group.

Parental conflict
Parental conflict was measured using two modified items from the Children's Perceptions of Interparental Conflict Scale (CPIC) (Grych & Fincham, 1990): "You often see your parents arguing/My child often sees his/her parents arguing"; and "Your parents get really mad when they argue/My child's parents get really mad when they argue". Respondents chose whether these statements were *not true, a little true,* or *very true*. A summary measure of the two items was constructed with higher scores indicating higher levels of parental conflict.

Family drug or alcohol problem
A single question asked whether a member of the child's family "drank or used drugs so often that it caused problems", and a follow-up question asked if this had occurred in the past year. Respondents who answered yes to both questions were coded 1 for having experienced a past year family drug or alcohol problem ($0 = no\ past\ year\ drug/alc\ problems$).

Parent psychiatric disorder
A question in the parent interview asked whether anyone in the child's family had ever been diagnosed with a psychiatric disorder

and, if the answer was "yes", a follow-up question identified which family member. Two variables were constructed indicating whether the child's mother or father had ever been diagnosed with a psychiatric disorder ($0 = no;\ 1 = yes$).

Family adversity
A summary measure of 8 items was constructed to reflect the level of past year adversity experienced by each child's family. Items included past year experience of a natural disaster; parent job loss; deployment of a parent to a war zone; serious illness or accident involving the child; serious illness or accident involving someone close to the child; and death of someone close to the child.

Residential instability
Two variables tapping residential instability were assessed: "number of moves" was based on one question asking "How many times has your __ year-old moved in the last year?" Responses were recoded so that children who had moved 3 or more times in the past year were grouped together, and the variable used in analysis had possible codes of 0, 1, 2 or 3+. Another variable "lived in 2+ households" was constructed with the following: In the last year, has your __ year-old lived somewhere else besides your household (other than when on vacation with you). Like, with another parent, relative, foster care, or boarding school?" ($0 = no;\ 1 = yes$).

Community disorder
Nine questions asking about past year exposure to neighborhood and school criminal activity and neighborhood decay (Hamby, Finkelhor, Turner, & Holt, 2007) were summed to create a community disorder score, with higher values indicating higher levels of community disorder. Items included witnessing drug sales, witnessing arrests, presence of gangs, presence of gang-related graffiti, witnessing police raid of a neighborhood home, parents' refusal to let child play outside, physical decay in the neighborhood, gangs in school, and knives or guns in school. Given our contention that direct witnessing of violence should be distinguished from other evidence of social and physical disorder, careful attention was paid to ensuring that community disorder items were not confounded with exposure to community violence. The alpha coefficient for this measure is .76.

Demographic measures
Family structure was defined by the current composition of the household. For the purposes of the current research, we constructed three family structure groups: children living with: 1) two biological or adoptive parents (reference group), 2) one biological parent plus a partner (spouse or nonspouse), and 3) single biological or adoptive parent. Children who lived with only nonparent adults, such as foster parents, were dropped from the analyses (n = 200). In order to increase our confidence that current family structure was established prior to assessments of past year victimization, we also dropped all cases where the child had been living with both biological parents within the past year (n = 40). Although we are unable to account for the possibility that single parent households transitioned into step/partner arrangements (or vise versa) in the past year, we can ensure that the formation of a nontraditional family structure preceded our assessment of victimization.

Other demographic measures included: child's gender (*male = 1; female = 0*); age (in *years*); race/ethnicity coded into 4 groups: White non-Hispanic (reference group), Black non-Hispanic, other race non-Hispanic, and Hispanic any race; number of children under 18 living in the household; and socioeconomic status (SES). SES is a composite based on the sum of the standardized household income and standardized parental education (for the parent with the highest education) scores, which was then re-standardized.

Results

Sample characteristics and descriptive statistics for variables used in our analyses are presented in Table 1.

Family structure variations in child victimization exposure

Table 2 presents family structure differences in past year incidence rates of seven general types of child victimization as well as the total number of victimization domains to which youth were exposed. Every category of victimization except for peer/sibling victimization showed significant differences across family structure type. In all cases, children and youth living in single parent and stepfamily or parent–partner households had significantly higher rates of victimization than those living with two biological or adoptive parents.

Specifically, over 19% of youth in stepfamilies and 16% living with single parents were exposed to some form of maltreatment in the past year, while only 7% of youth living with both biological parents were similarly exposed ($p < .001$). About 28% of youth in stepfamilies and 26% in single parent families were assaulted, in comparison to 17% of those in two biological parent families ($p < .001$). Rates of witnessing family violence were twice as high in both single parent and stepfamily structures (about 15% for both) than in two biological parent families (7.4%) ($p < .001$). Exposure to community violence and property crime were also significantly higher in both nontraditional family structures than in households with two biological parents ($p < .001$). Finally, sexual victimization was significantly different across family type ($p < .01$), with children in both stepfamilies (8.3%) and single parent families (7.9%) having higher rates than those living with two biological parent families (6.5%). Finally, when comparing the number of specific types of victimizations to which children were exposed in the past year, those living with two biological or adoptive parents had significantly fewer exposure types on average (2.0) than did the other family structures (stepfamily = 2.9; single parent = 2.7) ($p < .001$). Although for most types of victimization, children in stepfamilies had somewhat higher rates than those in single parent families, in no case were these pairwise contrasts significant (analyses not shown). For each significant group difference, however, children living with two biological or adoptive parents were significantly less likely to be exposed than children in *both* other family types.

Social and contextual risk factors for victimization: do they explain family structure differences?

The next objective was to identify social and contextual factors that may mediate, co-occur with, or otherwise explain family structure differences in victimization exposure. Tables 3a and 3b present logistic regression analyses predicting each of the victimization types. Because peer/sibling victimization did not significantly differ by family structure, we do not present analyses predicting this form of victimization.

With respect to child maltreatment (see Table 3a), the increased odds of victimization associated with both nontraditional family types were not explained but were substantially reduced when the social and contextual predictors were included in the equation (Model 2). These factors appear to explain more of the risk in stepfamilies than in single parent families. Of particular relevance appears to be family drug and alcohol problems (O.R. = 1.97; $p < .001$), parental conflict (O.R. = 1.56; $p < .001$), and family adversity (O.R. = 1.39; $p < .001$). Community disorder also significantly increased the odds of maltreatment (O.R. = 1.10; $p < .01$).

The greater likelihood of physical assault in stepfamily households was accounted for by the social and contextual predictors. Youth living in single parent families, however, still showed elevated odds of assault with these factors controlled. As was the case with maltreatment, parental conflict, family adversity, and community disorder were significant predictors of assault. In addition, youth whose mother had been diagnosed with a psychological disorder were more likely to have been assaulted (O.R. = 1.59).

Although several factors (SES, parental conflict, drug/alcohol problems, family adversity, community disorder) were related to increased likelihood of property crime, the associations between family structure type and property crime showed little change when these factors were controlled.

As shown in Table 3b, parental conflict, drug and alcohol problems, family adversity, and community disorder also significantly increased the odds of children witnessing family violence, as did residing in two or more households. These factors explained the higher exposure among children in both stepfamilies and single parent households. Similarly, greater exposure to community violence among both nontraditional family types was explained by the other predictors. Race (Blacks had significantly greater exposure), family adversity, community disorder, and mother psychological disorder appeared to be particularly influential.

Finally, the significantly greater odds of sexual victimization among youth living in single parent households were also accounted for by the social and contextual factors. In terms of demographic predictors, girls, older youth, those higher in SES, and youth in the "other race" category were at elevated risk. Mother's psychological disorder, parental conflict, family adversity and community disorder were also significant predictors. Interestingly, once these factors were controlled, youth in stepfamily households had significantly lower odd of sexual victimization than youth in traditional two-parent families. The variance explained (i.e. pseudo R-Square) in victimization across the 6 types ranged from 11% for property crime to 26% for sexual victimization.

Table 4 shows negative binomial regression analyses predicting the total number of victimization types to which children were exposed in the past year. Negative binomial regression was chosen because the dependent variable is a count variable with an over dispersed distribution. In these analyses, we entered the social-contextual variables in blocks (Models 3–5) to assess the relative strength of the three categories of factors (family dysfunction, family stress and instability, and disordered neighborhood conditions) in explaining family structure variations in victimization exposure, with demographic factors controlled.

In Model 1, the total number of victimization types experienced in the past year was regressed on family structure. As expected, relative to children living with two biological/adoptive parents, total victimization was significantly greater for single parent families, and step/cohabiting families. In Model 2, the other socio-demographic factors were added to the equation. Hispanics experienced significantly fewer victimization types than Whites, while males, higher SES children, older youth and those in households with larger numbers of children experienced more victimization. Socio-demographic differences explained only a small part of the elevated victimization in stepfamilies while the coefficient for single parent families increased with these factors controlled. In Model 3, family dysfunction variables were added to the equation, along with the socio-demographic controls. Parental conflict, family drug or alcohol problems, and mother psychological disorder, were each significant predictors of multiple victimization exposure. The significantly greater number of past year victimization exposures in stepfamily households was fully accounted for by these predictors, while the single parent coefficient was reduced by 40% relative to Model 2. In Model 4, family dysfunction variables

Table 3a
Logistic regressions of past year victimization types on family structure, demographics, and social-contextual risk factors ($N = 3886$).

Variables	Maltreatment						Physical assault						Property crime					
	Model 1			Model 2			Model 1			Model 2			Model 1			Model 2		
	B	SE B	O.R.	B	SE B	O.R.	B	SE B	O.R.	B	SE B	O.R.	B	SE B	O.R.	B	SE B	O.R.
Single parent[a]	.92	.12	2.50***	.68	.15	1.97***	.54	.09	1.71***	.31	.12	1.36**	.36	.09	1.44***	.37	.11	1.45***
Parent and stepparent/partner[a]	1.11	.15	3.02***	.59	.17	1.80***	.64	.12	1.91***	.17	.14	1.18	.51	.11	1.67***	.40	.13	1.50**
Black[b]				.05	.17	1.06				.03	.13	1.03				−.19	.12	.83
Other[b]				−.35	.25	.71				−.29	.19	.75				−.14	.17	.87
Hispanic[b]				.01	.16	1.01				−.29	.13	.75*				−.10	.11	.91
Gender (Male = 1)				.02	.11	1.02				.51	.09	1.66***				.08	.08	1.08
Age				.03	.01	1.03*				.02	.01	1.02*				−.06	.01	.94***
Socioeconomic status				.14	.08	1.15				.10	.06	1.10				.21	.05	1.23***
No. of children in household				−.05	.05	.96				.01	.03	1.01				.02	.03	1.02
Parental conflict				.45	.04	1.56***				.25	.04	1.28***				.23	.03	1.26***
Family drug/alc prob				.68	.17	1.97***				.14	.16	1.14				.50	.15	1.66***
Mother psych disorder				.12	.16	1.13				.46	.12	1.59***				.13	.11	1.14
Father psych disorder				.22	.18	1.24				.02	.15	1.02				−.14	.14	.87
Family adversity				.33	.05	1.39***				.11	.04	1.12*				.20	.04	1.22***
Number of moves in past year				.06	.11	1.06				.08	.09	1.08				−.22	.08	.81**
Child lives in 2+ Households				.20	.21	1.22				.34	.17	1.40				.22	.16	1.25
Community disorder				.10	.03	1.10**				.20	.03	1.22***				.22	.03	1.24***
−2 Log Likelihood		2508.2			2202.8			3837.6			3564.8			4492.7			4228.7	
Nagelkerke R-Square		.05			.20			.02			.13			.01			.11	

Note: All values are weighted.

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

[a] Reference category = Two biological/adoptive parents.

[b] Reference category = White, non-Hispanic.

Table 3b
Logistic regressions of past year victimization types on family structure, demographics, and social-contextual risk factors ($N = 3886$).

Variables	Witness family violence						Exposure to community violence						Sexual victimization					
	Model 1			Model 2			Model 1			Model 2			Model 1			Model 2		
	B	SE B	O.R.	B	SE B	O.R.	B	SE B	O.R.	B	SE B	O.R.	B	SE B	O.R.	B	SE B	O.R.
Single parent[a]	.80	.12	2.24***	.28	.16	1.32	.44	.08	1.56***	.00	.11	1.00	.35	.15	1.43*	.02	.20	1.02
Parent and stepparent/partner[a]	.72	.16	2.05***	−.12	.20	.88	.54	.11	1.72***	−.17	.13	.85	.40	.20	1.49*	−.54	.24	.58*
Black[b]				−.17	.18	.84				.60	.12	1.82***				−.03	.22	.97
Other[b]				−.28	.26	.76				−.04	.18	.96				.56	.26	1.74*
Hispanic[b]				−.28	.18	.76				−.02	.11	.98				−.04	.21	.96
Gender (Male = 1)				−.16	.12	.85				.22	.08	1.25**				−.52	.15	.59***
Age				−.03	.01	.97*				.13	.01	1.13***				.19	.02	1.20***
Socioeconomic status				−.10	.08	.90				.01	.05	1.01				.24	.10	1.27*
No. of children in household				.03	.05	1.03				−.04	.03	.96				.03	.06	1.03
Parental conflict				.62	.05	1.86***				.09	.04	1.09*				.28	.05	1.33***
Family drug/alc prob				1.02	.17	2.77***				.21	.16	1.23				.23	.22	1.26
Mother psych disorder				.29	.16	1.33				.27	.12	1.31*				.49	.20	1.63*
Father psych disorder				−.19	.21	.82				−.02	.15	.98				−.11	.25	.90
Family adversity				.21	.06	1.24***				.24	.04	1.27***				.19	.06	1.21**
Number of moves in past year				.03	.11	1.03				.05	.08	1.05				−.07	.16	.94
Child lives in 2+ Households				.70	.21	2.02***				.17	.18	1.18				−.05	.30	.96
Community disorder				.17	.04	1.18***				.34	.03	1.40***				.31	.04	1.36***
−2 Log Likelihood		2446.8			2014.5			4562.5			3887.9			1859.6			1461.3	
Nagelkerke R-Square		.03			.25			.02			.24			.01			.26	

Note: All values are weighted.
*$p < .05$. **$p < .01$. ***$p < .001$.
[a] Reference category = Two biological/adoptive parents.
[b] Reference category = White, non-Hispanic.

were removed and the family stress and instability factors were entered. Each of the three variables, namely family adversity, number of moves in the past year, and child lives in more than one household, had significant positive effects on exposure to victimization. However, the coefficient for single parent family structure was reduced only slightly, and the stepfamily coefficient, while reduced by almost one-third, remained a significant predictor of victimization. In Model 5, the stress/instability variables were removed and community disorder was entered into the equation. Community disorder is significantly and positively associated with total number of victimization types, independent of sociodemographic factors. However, again, the family structure coefficients remain significant.

Finally, in Model 6 all social-contextual factors are entered simultaneously. Except for father's psychological disorder and number of residential moves, all socio-contextual factors are significant independent predictors of the total number of past year victimization types and all the same demographic factors that were significant in Model 2 remained significant. Although the full set of predictors explained over half of the elevated victimization in single parent families, the coefficient was still significant. In contrast, there was no difference in victimization exposure among youth living in stepfamily or parent–partner households and those living with two biological or adoptive parents when all demographic and social-contextual factors were controlled.

Given the possibility that findings could be influenced by "reporter effects", we also conducted the above analyses (Tables 3a, 3b and 4) separately on the 2–9 year-old (proxy reports) and the 10–17 year-old (self-reports) sub-samples (analyses not shown). Patterns were quite similar across the two groups. The few differences that emerged were small and likely reflect developmental variations. For example, community disorder had a stronger effect on many victimization types among the adolescents than in the younger sample. This is to be expected since the older youth will have more direct exposure to community conditions than younger children. In contrast, mother disorder was less strongly related to several types of victimization among the adolescents relative to the younger sub-sample. Again, this could reflect developmental differences whereby younger children, who are more confined to home contexts and more tightly supervised, are more affected by problematic parent characteristics.

Explaining family structure differences in distress symptoms

Table 5 presents a hierarchical ordinary least squares regression analysis predicting level of distress symptomatology. Model 1 shows the family structure coefficients alone with no other variables included. As expected, children in both nontraditional family types had significantly higher levels of symptomatology than did children living with two biological/adoptive parents. In Model 2, other demographic factors were entered into the equation. The Hispanic and Black race coefficients were significant, indicating that Hispanic and Black youth reported significantly lower levels of symptoms than did White youth. Interestingly, the inclusion of demographic factors did not substantially alter the family structure coefficients. Thus, family type variations in race and socioeconomic status did not explain any of the association between family structure and distress symptoms.

In Model 3, all of the social and contextual factors were added to the equation as potential predictors of symptomatology. These risk factors explained most of the difference in symptom levels across family structure. The coefficient for single parent families was reduced to nonsignificance and the magnitude of the step/cohabiting family coefficient, although still statistically significant ($p < .01$), was reduced by two-thirds. The most influential risk factor was parental conflict ($\beta = .27$; $p < .001$), followed by community disorder ($\beta = .15$; $p < .001$), family adversity ($\beta = .10$; $p < .001$), family drug/alcohol problems ($\beta = .07$; $p < .001$), and mother psychological disorder ($\beta = .06$; $p < .001$). Although unrelated to most form of victimization (see previous tables), residential mobility (number of moves in the past year) had a significant independent effect on symptom levels ($p < .001$). Living in more than one household was also positively related to symptoms levels ($p < .05$).

In the final model, the summary measure of multiple victimization exposure was added to the equation. Although, multiple

Table 4
Negative binomial regression of total number of past year victimization types on family structure, demographics, and social-contextual risk factors ($N = 3886$).

	Total number of victimization types																	
	Model 1			Model 2			Model 3			Model 4			Model 5			Model 6		
	B	SE B	IRR	B	SE B	IRR	B	SE B	IRR	B	SE B	IRR	B	SE B	IRR	B	SE B	IRR
Single parent[a]	.33	.04	1.39***	.37	.05	1.44***	.22	.05	1.25***	.29	.05	1.34***	.29	.05	1.34***	.15	.05	1.17**
Parent and stepparent/partner[a]	.39	.06	1.47***	.32	.06	1.37***	.09	.06	1.10	.22	.06	1.24***	.20	.06	1.23***	.00	.06	1.00
Black[b]				.06	.05	1.06	.13	.05	1.14*	.04	.05	1.04	−.09	.05	.92	−.01	.05	.99
Other[b]				−.09	.08	.91	−.15	.08	.86*	−.11	.08	.90	−.20	.08	.82**	−.24	.07	.79**
Hispanic[b]				−.24	.05	.79***	−.13	.05	.88**	−.24	.05	.79***	−.32	.05	.73***	−.21	.05	.82***
Gender (Male = 1)				.14	.04	1.45***	.20	.04	1.22***	.14	.04	1.15***	.11	.04	1.12**	.17	.03	1.19***
Age				.03	.00	1.03***	.02	.00	1.02***	.03	.00	1.03***	.01	.00	1.01	.00	.00	1.13
Socioeconomic status				.05	.02	1.05*	.08	.02	1.08***	.07	.02	1.07**	.10	.02	1.11***	.12	.02	1.15***
No. of children in household				.05	.02	1.05**	.04	.01	1.04**	.05	.01	1.05**	.06	.01	1.07***	.05	.01	1.06***
Parental conflict							.23	.02	1.26***							.19	.01	1.21***
Family drug/alc prob							.55	.07	1.73***							.33	.06	1.39***
Mother psych disorder							.27	.05	1.31***							.23	.05	1.26***
Father psych disorder							.06	.06	1.07							.05	.06	1.05
Family adversity										.23	.02	1.26***				.14	.02	1.15***
Number of moves in past year										.09	.04	1.09*				.05	.03	1.05
Child lives in 2+ Households										.24	.08	1.27**				.17	.07	1.18*
Community disorder													.22	.01	1.25***	.16	.01	1.18***
LR χ²			80.8***						617.2***			374.84***			557.09***			937.48***
Log Likelihood			−7759.0						−7440.5			−7570.80			−7484.50			−7275.49

Notes: All values are weighted. B = Estimated negative binomial regression coefficient. SE B = Standard error of B. IRR = incident rate ratio.

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

[a] Reference category = Two biological/adoptive parents.

[b] Reference category = White, non-Hispanic.

Table 5
OLS regression of distress symptoms on family structure, demographics, social-contextual risk factors, and total number of past year victimization types.

	Model 1		Model 2		Model 3		Model 4	
	β	B(SE)	β	B(SE)	β	B(SE)	β	B(SE)
Single parent[a]	.09	.22***(.04)	.10	.22***(.04)	.03	.06(.04)	.01	.02(.04)
Parent and stepparent/partner[a]	.13	.41***(.05)	.12	.39***(.05)	.04	.13*(.05)	.04	.13**(.05)
Black[b]			−.05	−.13*(.05)	−.05	−.14**(.05)	−.05	−.14***(.04)
Other[b]			−.01	−.02(.07)	−.03	−.12(.06)	−.01	−.06(.06)
Hispanic[b]			−.06	−.16***(.04)	−.05	−.12**(.04)	−.02	−.06(.04)
Gender (Male = 1)			.01	.02(.04)	.02	.04(.03)	.00	−.01(.03)
Age			.02	.00(.00)	−.07	−.02***(.00)	−.07	−.02***(.00)
Socioeconomic status			−.03	−.03(.02)	.01	.01(.02)	−.02	−.03(.02)
No. of children in household			.03	.02(.01)	.03	.02(.01)	.01	.01(.01)
Parental conflict					.28	.25***(.01)	.19	.17***(.01)
Family drug/alc prob					.07	.27***(.06)	.02	.08(.06)
Mother psych disorder					.06	.19***(.05)	.04	.11*(.04)
Father psych disorder					.04	.14*(.06)	.03	.12*(.05)
Family adversity					.10	.11***(.02)	.05	.06***(.02)
Number of moves in past year					.05	.10**(.03)	.05	.09**(.03)
Child lives in 2+ Households					.04	.16*(.07)	.02	.09(.06)
Community disorder					.14	.09***(.01)	.03	.02*(.01)
Number of victimization types							.39	.15***(.01)
Adjusted R-Square		.020		.023		.185		.293

Note: All values are weighted.
*p < .05. **p < .01. ***p < .001.
[a] Reference category = Two biological/adoptive parents.
[b] Reference category = White, non-Hispanic.

victimization did not further explain associations between family structure and symptomatology, it had by far the strongest independent effect on symptom levels ($\beta = .39$; $p < .001$). Moreover, exposure to multiple forms of victimization appears to account for some of the associations between the other risk factors and symptomatology. Specifically, the number of different victimization types to which children were exposed explained the elevated symptom levels associated with both family drug/alcohol problems and community disorder. Parental conflict, mother psychological disorder, family adversity, and residential mobility remain significant predictors with victimization controlled. With demographic, contextual risk factors, and victimization exposure controlled, children in stepfamily and cohabiting households still experienced elevated levels of symptomatology relative to children living with two biological parents ($p < .01$). The final model explained over 29% of the variance in child symptom levels.

Discussion

This study found higher rates of victimization among children in single parent families, and step or cohabiting families relative to those living with two biological or adoptive parents. Elevated exposure existed for almost every type of victimization, including maltreatment, physical assault, property crime, witnessing family violence, exposure to community violence and sexual victimization, highlighting the wide range and breadth of child victimization risk associated with these nontraditional family structures. The two types that largely involve parent figures as perpetrators, child maltreatment and witnessing family violence, had especially high rates relative to families with two biological parents. The general pattern of family structure differences in rates of child victimization was relatively consistent across the different victimization types, with step or cohabiting families having the highest rate followed by single parent families. However, in no case did single parent and stepfamilies differ significantly in victimization rates. Therefore, it appears that the most important distinction is between families with two biological or adoptive parents and families without this arrangement.

It is important to note that exposure to multiple forms of victimization was also significantly elevated in both nontraditional

family structures. Past research has clearly demonstrated the particularly powerful effects of "poly-victimization" (Finkelhor et al., 2007b; Menard & Huizinga, 2001), showing that exposure to multiple *different* forms of victimization is more damaging to mental health of children and adolescents than repeat victimizations of the same type (Finkelhor et al., 2007b; Turner et al., 2010a). Exposure to many different forms of victimizations likely reflects significant adversity across multiple contexts of children's lives. These youth may experience victimization by peers at school, by family members at home, and by a variety of individuals within their neighborhoods and communities. For such children, victimization can represent more of a life condition than a set of events. Thus, higher levels of "poly-victimization" among children living with single parents and in stepfamilies or cohabiting parent arrangements may contribute to the negative child outcomes sometimes evident in these family structures. As will be discussed below, the present study confirmed the powerful mental health effects of multiple victimization.

The social and contextual factors related to increased odds of victimization were relatively consistent across the different types. For every type of victimization, high parental conflict, family adversity, and community disorder were significant predictors, suggesting that these factors are associated with broad and generalized risk to children's safety. In addition, children whose parents or other family members had alcohol or drug problems had almost 3 times odds of witnessing family violence, almost double the odds being maltreated, and 1.7 greater odds of experiencing property crime. Although the magnitude of effects was generally less strong, children whose mother had been diagnosed with a psychological disorder were also significantly more likely to have been exposed to community violence, been assaulted, and to have experienced sexual victimization in the past year. With the exception of property crime, these predictors also explained much of the elevated victimization risk among children living in nontraditional family structures. This suggests that it may not be family structure per se that creates risk, but rather a constellation of characteristics and conditions that are more commonly found in single parent and step/cohabiting families.

All the social-contextual risk factors outlined above were also significantly related to the summary measure of number of

victimization types. However, the extent to which they helped to explain elevated victimization in single parent and stepfamilies differed by family type. Moreover, the three categories of predictors (family dysfunction, family stress and instability, and disordered community conditions) were differentially influential in explaining total victimization exposure. All three categories of social-contextual factors were more influential in explaining elevated victimization in stepfamily and parent–partner households than in explaining victimization in single parent families. Of the three domains, the most important were the family dysfunction factors. When this set of variables, which includes parental conflict, family drug/alcohol problems, and mother psychological disorder, was included in the model, the association between total victimization and stepfamily households was no longer significant and the regression coefficient for single parent families was reduced substantially. Although the family stress/instability variables and community disorder further reduced the family structure coefficients, children and youth in single parent households remained higher in total victimization than those living with two biological/adoptive parts, when all the predictors were controlled.

The particular significance of "family dysfunction" factors in helping to account for higher levels of victimization among children in single parent and especially stepfamily suggests that problematic parent behaviors and characteristics may be important mechanisms increasing risk in these families. The finding that indices of poor parent functioning are particularly influential in explaining elevated victimization in step and parent–partner households appears consistent with some earlier research showing strong links between markers of parental dysfunction and victimization in stepfamilies (Turner et al., 2007). Although individuals with pre-existing problems of this kind may be more likely to divorce and re-marry or to cohabit with unmarried partners, these family types may also experience uniquely difficult family conditions. Disagreements about family roles and expectations, lack of support from relatives, and unresolved conflicts from previous relationships, for example, may be more common in stepfamily and parent–partner arrangements, and contribute to parental behavioral and emotional problems in these families.

This research also confirmed results from earlier studies showing elevated levels of distress symptoms among children in single parent families and step/cohabiting families, relative to youth living with both biological parents. Family structure differences in child symptom levels were not in any way accounted for by demographic variations across family types. In contrast, the set of social and contextual risk factors considered in our analyses explained much of the elevated symptomatology among children in nontraditional family structures. With the social and contextual factors controlled, the coefficient for single parent families was no longer significant and the coefficient for step and cohabiting families, although still significant, was reduced by two-thirds. These factors, in turn, appear to be associated with greater risk of exposure to multiple forms of victimization, which was by far the most potent predictor of trauma symptoms. In other words, family drug and alcohol problems, disordered neighborhoods, family adversity, parental conflict, and multiple residences appear to be detrimental for child mental health, in large part, because they are associated with exposure to multiple forms of victimization.

Limitations

There are several limitations of this study that should be acknowledged. First, we were unable to fully determine that current family structure preceded all past year victimizations. Given

that we excluded respondents who transitioned out of a biological two-parent family within the past year, we *were* able to establish that none of the past year victimizations experienced by children residing in single parent or step/cohabiting families occurred while living with two biological parents. However, we were not able to account for potential transitions within the past year from single parent to step/cohabiting family structures or vice versa. Therefore, although we are confident that the formation of a nontraditional family structure preceded our assessment of victimization, it is possible that some victimization exposures may have occurred while occupying a different nontraditional family type.

Second, the cross-sectional design of the survey does not allow us to determine with certainty the causal order of some of the associations of interest. For example, it is possible that past year parental conflict and drug/alcohol problems could represent ongoing issues that were contributors to, rather than outcomes of, the child's current family structure. Also, while there is ample evidence of the negative impact of victimization on child mental health, some studies have also demonstrated increased risk of victimization exposure among children with existing mental health problems (Turner, Finkelhor, & Ormrod, 2010b). It is also not possible to establish the temporal order of past year victimization and many of the social/contextual factors of interest. Future research would benefit from employing longitudinal designs to help disentangle the cause and effect of these factors and child victimization.

Third, like much of the research on victimization and other types of stress exposure, it is possible for findings to be influenced by "present state bias" whereby parents or youth who are currently distressed are more likely to remember or are more motivated or willing to report exposure to negative events and conditions. Such bias could potentially inflate associations between distress symptoms, victimization, and many of the contextual factors.

Finally, we lack details concerning the particular caregivers involved in family-perpetrated victimizations. Children in nontraditional family structures often have multiple caregiving figures, each of which can be a potential source of risk. For example, child maltreatment in a single mother family could be perpetrated by the biological mother with whom the child lives, the biological father with whom he/she visits regularly, the biological father's wife or girlfriend, or the biological mother's boyfriend who occasionally sleeps at the house. The current study cannot tease out these complicated risk situations or distinguish between all potential caregiver perpetrators. As a result, it is important not to make assumptions about the specific individuals associated with victimization risk in these different family structures. Future survey research on this issue should attempt to better specify the network of adults in each child's life and obtain more detailed data on perpetrators.

Implications

This research demonstrates the link between family structure and victimization risk for children, and the importance of victimization exposure as a primary determinant of child mental health. Victimization risk associated with single parent and step/cohabiting families appears to be broad and generalized rather than attached to particular forms of victimization. Thus efforts to reduce risk in these families could have wide reaching benefits. Findings also show, however, that such risk is not straightforward, but complicated and multifaceted. Elevated child victimization in these families is largely a function of problematic parent characteristics, stressful family experiences, and disordered neighborhood contexts. Reducing victimization exposure in these families will also require multiple strategies. Evaluating and supporting families at

points of transition could prove particularly effective, such as when families break-up, are reconstituted with new household members, or when children are born to unmarried mothers. Each of these could represent opportunities to target family interaction patterns, parent mental and behavioral health, parenting practices, and community dangers.

Appendix A. Supplementary data

Supplementary data related to this article can be found at http://dx.doi.org/10.1016/j.socscimed.2013.02.034.

References

Acierno, R., Resnick, H., Kilpatrick, D. G., & Stark-Riemer, W. (2003). Assessing elder victimization — demonstration of a methodology. *Social Psychiatry and Psychiatric Epidemiology, 38*(11), 644—653.

Amato, P. R. (1993). Children's adjustment to divorce: theories, hypotheses, and empirical support. *Journal of Marriage and the Family, 55*, 23—38.

Amato, P. R. (2010). Research on divorce: continuing trends and new developments. *Journal of Marriage and the Family, 72*, 650—666.

Amato, P. R., & Keith, B. (1991). Parental divorce and the well-being of children: a meta-analysis. *Psychological Bulletin, 110*, 26—46.

Astone, N. M., & McLanahan, S. (1991). Family structure, parenting practices and high school completion. *American Sociological Review, 56*, 309—320.

Atrostic, B. K., Bates, N., Burt, G., & Silberstein, A. (2001). Nonresponse in U.S. government household surveys: consistent measures, recent trends, and new insights. *Journal of Official Statistics, 17*(2), 209—226.

Babbie, E. (2007). *The practice of social research.* Belmont: CA: Wadsworth.

Bae, H. O., Solomon, P. L., & Gelles, R. J. (2007). Abuse type and substantiation status varying by recurrence. *Child & Youth Services Review, 29*, 856—869.

Bajos, N., Spira, A., Ducot, B., & Messiah, A. (1992). Analysis of sexual behavior in France (ACSF): a comparison between two modes of investigation: telephone survey and face-to-face survey. *AIDS, 6*(3), 315—323.

Barrett, A. E., & Turner, R. J. (2005). Family structure and mental health: the mediating effects of socioeconomic status, family process, and social stress. *Journal of Health and Social Behavior, 46*(2), 156—169.

Bermack, E. (1989). Effects of telephone & face-to-face communication on rated extent of self-disclosure by female college students. *Psychological Reports, 65*(1), 259—267.

Booth, A., & Edwards, J. N. (1992). Starting over: why remarriages are more unstable. *Journal of Family Issues, 13*, 179—194.

Bramlett, M. D., & Mosher, W. D. (2002). *Cohabitation, marriage, divorce, and remarriage in the United States.* In *Vital and health statistics, Series 23*: Washington, DC: US Government Printing Office.

Briere, J. (1996). *Trauma symptoms checklist for children (TSCC): Professional manual.* Odessa, FL: Psychological Assessment Resources.

Briere, J., Johnson, K., Bissada, A., Damon, L., Crouch, J., Gil, E., et al. (2001). The Trauma Symptom Checklist for Young Children (TSCYC): reliability and association with abuse exposure in a multi-site study. *Child Abuse & Neglect, 25*, 1001—1014.

Bumpass, L. L., Raley, R. K., & Sweet, J. A. (1995). The changing character of stepfamilies: implications of cohabitation and nonmarital childbearing. *Demography, 32*(3), 425—436.

Chaffin, M., Kelleher, K., & Hollenberg, J. (1996). Onset of physical abuse and neglect: psychiatric, substance abuse, and social risk factors from prospective community data. *Child Abuse & Neglect, 20*(3), 191—203.

Cherlin, A. J., & Furstenberg, F. F. (1994). Stepfamilies in the United States: a reconsideration. In J. Blake, & J. Hagan (Eds.), *Annual review of sociology* (pp. 359—381). Palo Alto, CA: Annual Reviews.

Curtin, R., Presser, S., & Singer, E. (2000). The effects of response rate changes on the index of consumer sentiment. *Public Opinion Quarterly, 64*, 413—428.

Curtin, R., Presser, S., & Singer, E. (2005). Changes in telephone survey nonresponse over the past quarter century. *Public Opinion Quarterly, 69*, 87—98.

Czaja, R. (1987). Asking sensitive behavioral questions in telephone interviews. *International Quarterly of Community Health Education, 8*(1), 23—32.

Dunn, J. (2002). The adjustment of children in stepfamilies: lessons from community studies. *Child and Adolescent Mental Health, 7*, 154—161.

Finkelhor, D., & Asdigian, N. L. (1996). Risk factors for youth victimization: beyond a lifestyles theoretical approach. *Violence & Victims, 11*(1), 3—20.

Finkelhor, D., Hamby, S. L., Ormrod, R. K., & Turner, H. A. (2005). The JVQ: reliability, validity, and national norms. *Child Abuse & Neglect, 29*(4), 383—412.

Finkelhor, D., Ormrod, R. K., & Turner, H. A. (2007a). Poly-victimization and trauma in a national longitudinal cohort. *Development and Psychopathology, 19*(1), 149—166.

Finkelhor, D., Ormrod, R. K., & Turner, H. A. (2007b). Poly-victimization: a neglected component in child victimization trauma. *Child Abuse & Neglect, 31*, 7—26.

Finkelhor, D., Ormrod, R. K., Turner, H. A., & Hamby, S. L. (2005). Measuring poly-victimization using the JVQ. *Child Abuse & Neglect, 29*(11), 1297—1312.

Finkelhor, D., Ormrod, R. K., Turner, H. A., & Hamby, S. L. (2005). The victimization of children and youth: a comprehensive, national survey. *Child Maltreatment, 10*(1), 5—25.

Ford, J. D., Elhai, J. D., Connor, D. F., & Frueh, B. C. (2010). Poly-victimization and risk of posttraumatic, depressive, and substance use disorders and involvement in delinquency in a national sample of adolescents. *Journal of Adolescent Health, 46*(6), 545—552.

Groves, R. M. (2006). Nonresponse rates and nonresponse bias in household surveys. *Public Opinion Quarterly, 70*, 646—675.

Grych, J. H., & Fincham, F. D. (1990). Marital conflict and children's adjustment: a cognitive contextual framework. *Psychological Bulletin, 108*, 267—290.

Hamby, S. L., Finkelhor, D., Ormrod, R. K., & Turner, H. A. (2004). *The Juvenile Victimization Questionnaire (JVQ): Administration and scoring manual.* Durham, NH: Crimes Against Children Research Center.

Hamby, S. L., Finkelhor, D., Turner, H. A., & Holt, M. A. (2007). *The community disorder questionnaire.* Durham, NH: Crimes against Children Research Center.

Hetherington, E. M. (2006). The influence of conflict, marital problem solving and parenting on children's adjustment in nondivorced, divorced, and remarried families. In A. Clarke-Stewart, & J. Dunn (Eds.), *Families count: Effect on child and adolescent development* (pp. 203—237). New York: Cambridge University Press.

Hetherington, E. M., Bridges, M., & Isabella, G. M. (1998). What matters? What does not? Five perspectives on the association between marital transitions and children's adjustment. *American Psychologist, 53*, 167—184.

van IJzendoorn, M. H., Euser, E. M., Prinzie, P., Juffer, P., & Bakermans-Kranenburg, M. J. (2009). Elevated risk of child maltreatment in families with stepparent but not with adoptive parents. *Child Maltreatment, 14*(4), 369—375.

Kalil, A., & Ryan, R. M. (2010). Mothers' economic conditions and sources of support in fragile families. *The Future of Children, 20*(2), 39—61.

Keeter, S., Kennedy, C., Dimock, M., Best, J., & Craighill, P. (2006). Gauging the impact of growing nonresponse on estimates from a national RDD telephone survey. *Public Opinion Quarterly, 70*, 759—779.

Keeter, S., Miller, C., Kohut, A., Groves, R. M., & Presser, S. (2000). Consequences of reducing nonresponse in a national telephone survey. *Public Opinion Quarterly, 64*, 125—148.

Kreider, R. M. (2008). *Living arrangements of children: 2004.* Current population reports. Washington, DC: US Census Bureau.

Krishnakumar, A., & Buehler, C. (2000). Interparental conflict and parenting behaviors: a meta-analytic review. *Family Relations, 49*(1), 25—44.

Latkin, C. A., & Curry, A. D. (2003). Stressful neighborhoods and depression: a prospective study of the impact of neighborhood disorder. *Journal of Health and Social Behavior, 44*(1), 34—44.

Lauritsen, J. L. (2003). *How families and communities influence youth victimization.* Washington, DC: Office of Juvenile Justice and Delinquency Prevention.

McAuliffe, W. E., Geller, S., LaBrie, R., Paletz, S., & Fournier, E. (1998). Are telephone surveys suitable for studying substance abuse? Cost, administration, coverage and response rate issues. *Journal of Drug Issues, 28*(2), 455—481.

McLanahan, S., & Beck, A. N. (2010). Parental relationships in fragile families. *The Future of Children, 20*(2), 17—37.

McLanahan, S., & Sandefur, G. (1994). *Growing up with a single parent: What hurts, what helps.* Cambridge, MA: Harvard University Press.

McLoyd, V. C. (1990). The impact of economic hardship on Black families and children: psychological distress, parenting, and socio-emotional development. *Child Development, 61*(2), 311—347.

McRee, N. (2008). Child abuse in blended households: reports from runaway and homeless youth. *Child Abuse & Neglect, 32*(4), 449—453.

Margolin, G., & Gordis, E. B. (2000). The effects of family and community violence on children. *Annual Review of Psychology, 51*, 445—479.

Marin, G., & Marin, B. (1989). A comparison of three interviewing approaches for studying sensitive topics with Hispanics. *Hispanic Journal of Behavioral Sciences, 11*(4), 330—340.

Menard, S., & Huizinga, D. (2001). Repeat victimization in a high-risk neighborhood sample of adolescents. *Youth & Society, 32*(4), 447—472.

Merkle, D., & Edelman, M. (2002). Nonresponse in exit polls: a comprehensive analysis. In R. M. Groves, D. A. Dillman, J. L. Eltinge, & R. J. A. Little (Eds.), *Survey nonresponse* (pp. 343—358). New York: Wiley.

Mitchell, K. J., Finkelhor, D., & Wolak, J. (2005). The Internet and family and acquaintance sexual abuse. *Child Maltreatment, 10*(1), 49—60.

Molnar, B. E., Buka, S. L., & Kessler, R. C. (2001). Child sexual abuse and subsequent psychopathology: results from the National Comorbidity Survey. *American Journal of Public Health, 91*(5), 753—760.

O'Connor, T. G., Hawkins, N., Dunn, J., Thorpe, K., & Golding, J. (1998). Family type and depression in pregnancy: factors mediating risk in a community sample. *Journal of Marriage and the Family, 60*(3), 757—770.

O'Connor, T. G., Thorpe, K., Dunn, J., & Golding, J. (1999). Parental divorce and adjustment in adulthood: findings from a community sample. *Journal of Child Psychology and Psychiatry, 40*, 777—789.

Pruchno, R. A., & Hayden, J. M. (2000). Interview modality: effects on costs and data quality in a sample of older women. *Journal of Aging and Health, 12*(1), 3—24.

Pryor, J., & Rodgers, B. (2001). *Children in changing families: Life after parental separation.* Oxford, UK: Blackwell Publishers.

Rodriguez, C. M. (2010). Personal contextual characteristics and cognitions: predicting child abuse potential and disciplinary style. *Journal of Interpersonal Violence, 25*(2), 315—335.

Romano, E., Bell, T., & Billette, J. M. (2011). Prevalence and correlates of multiple victimization in a nation-wide adolescent sample. *Child Abuse & Neglect, 35*(7), 468–479.

Sampson, R. J. (1985). Neighborhood and crime: structural determinants of personal victimization. *Journal of Research in Crime and Delinquency, 27*, 110–139.

Sidebotham, P., & Golding, J. (2001). Child maltreatment in the "children of the nineties" a longitudinal study of parental risk factors. *Child Abuse & Neglect, 25*(9), 177–200.

Singer, E. (2006). Introduction: nonresponse bias in household surveys. *Public Opinion Quarterly, 70*, 637–645.

South, S. J., & Crowder, K. D. (1998). Avenues and barriers to residential mobility among single mothers. *Journal of Marriage and the Family, 60*(4), 866–888.

Stith, S. M., Liu, T., Davies, L. C., Boykin, E. L., Alder, M. C., Harris, J. M., et al. (2009). Risk factors in child maltreatment: a meta-analytic review of the literature. *Aggression and Violent Behavior, 14*(1), 13–29.

Straus, M. A., Gelles, R. J., & Steinmetz, S. K. (2006). *Behind closed doors: Violence in the American family*. New York: Doubleday/Anchor Books. (Re-issued Transaction Publications, 2006 with a new forward by Richard J. Gelles and Murray A. Straus).

Sturge-Apple, M. L., Davies, P. T., & Cummings, E. M. (2006). Impact of hostility and withdrawal in interparental conflict on parental emotional unavailability and children's adjustment difficulties. *Child Development, 77*, 1623–1641.

Taylor, A. (2002). I'll call you back on my mobile: a critique of the telephone interview with adolescent boys. *Westminster Studies in Education, 25*(1), 19–34.

Terr, L. C. (1991). Childhood traumas: an outline and overview. *American Journal of Psychiatry, 148*(1), 10–20.

Thomas, A., & Sawhill, I. (2005). For love and money? The impact of family structure on family income. *The Future of Children, 15*(2), 57–74.

Turner, H. A. (2005). Corporal punishment and the stress process. In M. Donnelly, & M. A. Straus (Eds.), *Corporal punishment of children in theoretical perspective* (pp. 255–276). New Haven: Yale University Press.

Turner, H. A., Finkelhor, D., & Ormrod, R. K. (2006). The effect of lifetime victimization on the mental health of children and adolescents. *Social Science & Medicine, 62*(1), 13–27.

Turner, H. A., Finkelhor, D., & Ormrod, R. K. (2007). Family structure variations in patterns and predictors of child victimization. *American Journal of Orthopsychiatry, 77*(2), 282–295.

Turner, H. A., Finkelhor, D., & Ormrod, R. (2010a). Poly-victimization in a national sample of children & youth. *American Journal of Preventive Medicine, 38*(3), 323–330.

Turner, H. A., Finkelhor, D., & Ormrod, R. K. (2010b). Child mental health problems as risk factors for victimization. *Child Maltreatment, 15*(2), 132–143.

Weeks, M. F., Kulka, R. A., Lessler, J. T., & Whitmore, R. W. (1983). Personal versus telephone surveys from collecting household health data at the local level. *American Journal of Public Health, 73*(12), 1389–1394.

Weissman, M. M., Feder, A., & Pillowsky, D. J. (2004). Depressed mothers coming to primary care: maternal reports of problems with their children. *Journal of Affective Disorders, 78*(2), 93–100.

Wells, M., Finkelhor, D., Wolak, J., & Mitchell, K. J. (2004). Law enforcement challenges in Internet child pornography crimes. *Sex Offender Law Report, 5*(4), 41–42, 49.

Wells, M., Finkelhor, D., Wolak, J., & Mitchell, K. J. (2007). Defining child pornography: law enforcement dilemmas in investigations of Internet child pornography possession. *Police Practice & Research: An International Journal, 8*(3), 269–282.

Williams, K., Frech, A., & Carlson, D. L. (2010). Marital status and mental health. In T. L. Scheid, & T. N. Brown (Eds.), *A handbook for the study of mental health: Social contexts, theories, and systems* (pp. 306–320). New York: Cambridge University Press.

Windham, A. M., Rosenberg, L., Fuddy, L., McFarlane, E., Sia, C., & Duggan, A. K. (2004). Risk of mother-reported child abuse in the first 3 years of life. *Child Abuse & Neglect, 28*(6), 645–667.