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Household composition and maltreatment allegations in the US: Deconstructing the at-risk single mother family

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ABSTRACT

Background: Previous research has demonstrated the association between child maltreatment and household composition, with increased maltreatment risk generally present in single mother households. However, existing research does not fully examine the complexity and configuration of single mother households. In particular, less is known about important variants of single parent family structures, such as grandparents residing in the home, and the extent to which household compositions change across time.
Objective: The present study examines rates of maltreatment allegations across various household compositions in a sample of single biological mother households. Participants and Setting: Youth participants (N = 417) were part of the larger multi-site Longitudinal Studies of Child Abuse and Neglect (LONGSCAN) study.
Methods: Participants completed longitudinal assessments of household composition and maltreatment allegations from ages 4 to 10. Results: The present study illustrates substantial variability in the rate of maltreatment allegations across different types of single mother household compositions. In particular, the presence of non-relatives, especially unrelated males, demonstrated an increased risk for maltreatment allegations in the home. Conversely, single mother homes with two or more adult relatives, especially grandmothers, were at reduced risk for child maltreatment allegations.
Conclusions: This study highlights variability in maltreatment allegations among single mother homes, including how maltreatment allegations vary across different household configurations, across child age periods and across different risk levels.

1. Introduction

The final decades of the 20th Century evidenced significant changes in the composition and structure of families in the United States. In 1960, 88% of all children under age 18 were living with two parents and 8% resided in mother only households (U.S. Census Bureau, 2017). By 1994, only 69% of all children under age 18 were living with two parents and 23% were living with only their mother, nearly tripling the percentage of children living without their father in 1960. From 1994 to 2017, these rates remained stable, with annual rates of 67–71% of children living with both parents and 22–24% of children living with only their mothers.

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Increasing divorce rates, cohabitation, and non-marital child bearing are largely responsible for these rapid and extreme changes in the structure and complexity of the American family (Bianchi & Casper, 2000). In 1960, 1% of single mothers were never married compared with 48% in 2014, and rates of divorce among single mothers have increased from 7% in 1960 to 30% in 2014 (U.S. Census Bureau, 2017). Given these rapid structural changes, researchers have been interested in the causes of these changes (Bumpass & Lu, 2000; Bumpass & Sweet, 1989; Bumpass, Raley, & Sweet, 1995), their economic effects on families (Hanson, McLanahan, & Thomson, 1998; Manning & Brown, 2006; Paxson & Waldfogel, 1999), their consequences for children's' developmental outcomes (Brown, 2004; Kalil, DeLeire, Jayakody, & Chin, 2001; Thomson, Hanson, & McLanahan, 1994) and their role in maltreatment (Amato & Patterson, 2017; Gelles, 1989; Radhakrishna, Bou-Saada, Hunter, Catellier, & Kotch, 2001; Turner, Finkelhor, & Ormrod, 2007).The association of family structure with child maltreatment has been a focus of many studies, nearly all of which examine the "single mother" in some way. Single mother households have been found to be at a higher risk for abusing children than families with two biological parents, particularly in the presence of unrelated males (Daly & Wilson, 1985, 1988; Ditson & Shay, 1984; Maden & Wrench, 1977; Margolin, 1992; Sack, Mason, & Higgins, 1985; Smith, Hanson, & Noble, 1974). Approximately 30 years ago, data from the Second National Family Violence Survey (Gelles, 1989) suggested that rates of very severe maternal violence toward children were substantially greater in single-mother households than dual caretaker households. More recent research with youth involved in child protective service agencies (Van IJzendoorn, Euser, Prinzie, Juffer, & Bakermans-Kranenburg, 2009) and with nationally representative samples of children (Turner et al., 2007; Turner, Finkelhor, Hamby, & Shattuck, 2013) has also concluded that rates of victimization were generally higher for youth from single parent and stepfamilies than for youth from two-parent families. Studies that have explored the relationship between family structure and violence towards children demonstrated that mothers' boyfriends were responsible for considerable abuse (Blaser, 1985; Krugman, 1982; Margolin, 1992) and that this abuse was both different in character and more likely to be lethal (Daly & Wilson, 1988) than abuse by biological fathers. According to Daly and Wilson, "When injuries are attributed to 'child abuse,' the difference between stepparent and genetic parent homes is large and is independent of risk attributable to low socioeconomic status, maternal youth, family size, or personality characteristics of the abusers" (Daly & Wilson, 1988, pg. 520).

While there appears to be fairly consistent evidence supporting the protective effects of the two biological parent family, the tendency of most studies to focus on married biological parents as the norm against which other family comparisons are made tends to obscure the structural and legal complexity of alternative family structures. There are a handful of exceptions that have examined and compared complex family and household structures and their relationship to child well-being including child maltreatment (e.g., Brown, 2004; Kalil et al., 2001). This body of work suggests that children from families with two married biological parents have better developmental outcomes and are less likely to experience maltreatment than those living with unmarried parents, or in homes with a cohabitating male partner, although many of these studies have not fully examined the full range of household compositions. Among children who do not live with both biological parents, 73% live with their mother, 14% live with their father, 11% live with other relatives and 2% live with non-relatives (U.S. Census Bureau, 2017). However, though children not living with both of their biological parents are most likely to live with their biological mother, the number and type of other adults in their home varies considerably. As such, more research is needed to fully examine the complexity and configuration of households with single biological mothers.

While some of these earlier studies do take an initial step toward considering the complexity of household composition, some important family structures, such as residing with grandparents, have not yet been fully examined. Another major limitation of studies exploring family structure and child maltreatment is the almost exclusive use of cross-sectional data that obscure the dynamic changes that families experience over time. Children at risk for maltreatment and single mothers are particularly likely to experience transitions in their living arrangements. Cohabiting arrangements are particularly likely to dissolve, and following divorce or separation, almost one in three single mother families reside with their grandparents at some point in time prior to transitioning to another form of living arrangement (Jayakody, 1999). Little is known about the effect of these transitions on the likelihood of child victimization. In one of the very few studies to examine family structure changes across time, Radhakrishna et al. (2001) examined maltreatment reports at three time periods: birth to age four, age four to six and age six to eight, and were able to demonstrate that the entry of a father surrogate into the home is predictive of a subsequent report to child protective services. Finally, while some studies utilize large samples, few examine multiple populations that vary in maltreatment risk or history, thus obscuring the possibility that family structure risk profiles may vary by levels of initial risk. Previous studies on child maltreatment tend to identify and recruit families via a specific encounter with the child welfare system, and therefore have not been able to compare across different types of entry into the child welfare system, and across various levels of initial risk for maltreatment.

We attempt to address the above issues in the current paper. First, our study involves a sample of children with the biological mother present, with a focus on those that are absent a biological father. We sought to better understand the full variability underlying the household composition of single biological mothers, with a focus on the number and relation of other adults in the home. This examination of household composition sought to understand the role of adults in the home, and not necessarily family size, or number and type of dependents in the home (e.g., biological children, foster children, stepchildren, grandchildren and other child relatives). Thus, this study can be characterized as a study of single mother families, with a focus on the question, "Who resides with the mother and her children, and does this make a difference in the likelihood of a maltreatment report?" We further hypothesized that rates of allegation would be higher in households with nonrelatives compared to relatives, and that it would be particularly high among households with unrelated males. Second, we examine the size and composition of these families at three time points, addressing both the nature of structural transitions and their effect on the likelihood of a maltreatment report. Finally, this study utilizes data from five different demographically and geographically diverse research sites in the United States. Families at all sites were recruited in the early 1990s because a target child under age 4 was at risk for child abuse and/or neglect; however, the sites

differ in terms of family histories of reported maltreatment. We hypothesized that the rates of maltreatment allegations would be higher among youth from high-risk sites compared to youth from low-risk sites. In addition, we were interested in examining whether types of single mother households varied by risk status.

2. Method

2.1. Participants

Data utilized in the current study were collected as part of the Longitudinal Studies of Child Abuse and Neglect (LONGSCAN), a prospective study of the antecedents and consequences of child maltreatment. LONGSCAN is a consortium of 5 sites regionally distributed across the U.S. and a coordinating center. The 5 sites are located in the Northwest (NW), Southwest (SW), Midwest (MW), Eastern (EA), and Southeast (SE) regions of the United States. All five sites share common protocols for data collection, entry, and management; each obtained Institutional Review Board (IRB) approval for their respective studies and implemented appropriate informed consent procedures. The LONGSCAN studies are conducted in four urban settings and one statewide site that included urban, suburban, and rural communities. Site samples vary by maltreatment status and risk, ranging from children who were maltreated prior to age four to those with substantial risk for maltreatment but not maltreated at the time they entered the LONGSCAN studies (see Runyan et al., 1998).

Children and their families were recruited for an initial interview when the children were 4 years of age in the early 1990s. Face to face interviews were subsequently planned every two years, through age 18. The current analyses focus on data collected when children were approximately four to ten years of age. Of the 1354 baseline LONGSCAN participants, 1225 (90.5%) completed the age 4 interview. At the age 4-, 6-, and 8-year interviews, caregiver respondents completed the Household Composition measure identifying each person living in the household, along with their age, ethnicity, and relationship (if any) to the target youth. Based on these data, we identified household configurations for the entire LONGSCAN sample, and then identified the sample of youth who consistently lived with a single biological mother. Overall, household composition patterns remained relatively similar across each of the 3 age periods. At age 4 to 6, 53.4% lived with a single biological mother, 18.8% of youth lived with both biological parents, and 24% lived with neither biological parent. This pattern remained relatively similar from age 6 to 8 (55.8%, 14.9%, and 25.6%, respectively) and at age 8 to 10 (53.5%, 16.1%, and 26.6%, respectively). Thus, children residing with their biological mother and without their biological father (e.g., single mother households) made up over half the sample at each age period (53.4%, 55.8% and 53.5% at ages 4, 6 and 8, respectively) and these families are the focus of the present study. As presented in Fig. 1, a total of 417 families consistently continued to be composed of a single biological mother through the age 6 and 8 interviews. These 417 single biological mother households were the focus of subsequent analyses that identified other adults in the home at the beginning of each age period, and their relationship to maltreatment allegations in the following period prior to the next interview.

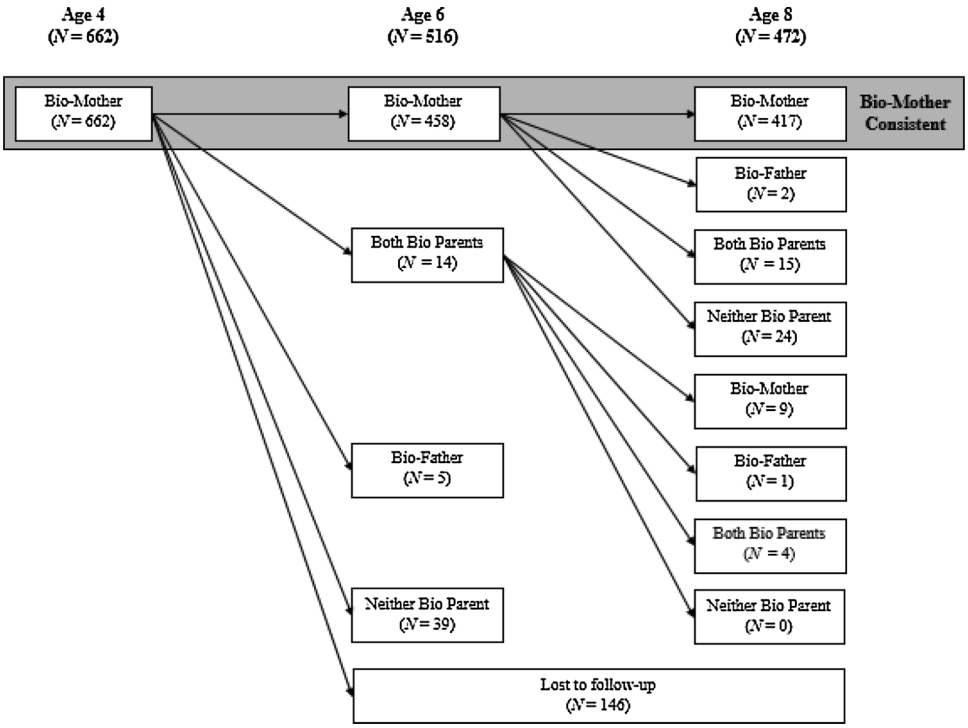

Fig. 1. Sample composition of single bio-mother households.

2.2. Measures

2.2.1. Household composition

As mentioned previously, biological mother respondents completed the same survey of who lived in their household at each of three interviews (i.e., Ages 4, 6, and 8). Respondents were asked to identify all the people who resided in the household, their age, ethnicity, and relationship to the target child. Based on these data, types or categories of single biological mother household were identified. Analyses for the present paper focus on the 3 most common single bio mother household composition types: single bio mother alone, single bio mother with relative(s), and/or single bio mother with non-relative(s), as well as the 3 most common subcategories (with unrelated male(s), female relative(s), and grandmother(s)). Household compositions with low frequencies were not examined separately, including households with: unrelated females, male relatives including grandfathers, and adult siblings where sex is unknown. Although households with both biological parents in the home were not the focus of this study, they are included in several analyses as a comparison group. Other than "single bio mother alone" category, all other households may include one or more other adults. As such, categories of household composition are not entirely mutually exclusive (e.g., households with grandmothers may also include an unrelated male).

2.2.2. Maltreatment allegations

Each of the LONGSCAN sites systematically reviewed and coded maltreatment narrative reports within Child Protective Services (CPS) records using a modification of the Maltreatment Classification System (MMCS; Barnett, Manly, Cicchetti, & Cicchetti, 1993; English & LONGSCAN Investigators, 1997). Four types of maltreatment allegations are coded by the MMCS: physical abuse, sexual abuse, neglect, and emotional maltreatment. LONGSCAN coders across sites were trained to use the MMCS by experienced coders until they reached 90% agreement with a gold standard coder. A subsequent reliability assessment indicated a good overall agreement on the coding of type with all kappas > .7. The MMCS has been used to code maltreatment data in numerous studies, and is accepted as a reliable classification of maltreatment experiences that are based on CPS records (see Jones et al., 2013). Previous findings (Drake, Jonson-Reid, Way, & Chung, 2003; Hussey et al., 2005; Kohl, Jonson-Reid, & Drake, 2009), suggest that allegations may be a better indicator of actual experience than substantiations. As a result, maltreatment was coded as present or absent for each of the three periods of time (4–5.99, 6–7.99, and 8–9.99) based on whether there were any allegations of abuse or neglect. In addition, the total number of allegations for each time period was calculated. Rates of maltreatment allegations within the sample being examined were consistent with nationally reported trends in maltreatment for each age range (U.S. Department of Health and Human Services, 2016). The present study includes rates of maltreatment allegations across each of the three time periods: ages 4–6, 6–8, and 8–10.

2.2.3. Site risk

As indicated above, the five sites comprising the LONGSCAN sample vary considerably by maltreatment status and risk. More specifically, cases drawn from the SW and NW sites represent youth at highest risk for maltreatment. Youth in the SW site had been removed from their home and placed in foster care before being recruited at age four and youth in the NW site had been reported to Child Protective Services (CPS) prior to age five, and determined to have moderate risk for maltreatment. In contrast, youth from the MW, SE, and EA sites were at comparatively lower risk for maltreatment, including a mixture of youth reported to CPS, identified as failing to thrive, with prenatal drug use, and/or an HIV infected mother (see Runyan et al., 1998, for more details about the overall study design and site-specific recruitment procedures). While we consider all children in the site samples to be "at risk," we created a "low risk" subsample by combining the MW, SE and EA sites (N = 285/417) and a "high risk" subsample by combining the NW and SW sites (N = 132/417). We expected that maltreatment allegations would be higher among these high risk subsamples, and wanted to explore how household composition may be related to risk status and subsequent maltreatment allegations.

3. Results

Primary analyses focused specifically on the youth sample with consistent, single mother households (N = 417). As reported by these biological mothers at age 4, this youth sample (51.1% girls) included 63.5% Black, 20.4% White, 10.3% Multiracial, 4.6% Hispanic, .7% Asian, and .2% other ethnicity youth. Household income and caregiver demographics were obtained at the age 6 interviews. Mothers were 17–46 years of age (M = 28.00, SD = 5.99) and self-reported as 64.5% Black, 26.6% White, 3.4% Hispanic, 3.4% Multiracial, .2% Asian, .2% Native American, and 1.2% other ethnicity. In terms of marital status, 10.8% were married, 66.7% were single and never married, 6.0% were separated, 14.9% were divorced, and 1.2% were widowed. Highest educational attainment for mothers was reported as: 43.2% less than high school, 34.5% high school, 16.6% some college, 4.1% associate's degree and 1.2% bachelor's degree. The median household income level was between $10,000 to $15,000 annually, with 46.9% of mothers reporting less than $10,000 annually and 30.7% reporting more than $15,000 annually.

Primary analyses focused specifically on the sample of consistent, single mother households (N = 417), which were comprised of several different combinations of adults in the home. Table 1 shows the number of adults living in the household across each age period. Regardless of age period, most of these single mother households contained no other adult. The second most common configuration was the "two-adult household" representing the biological mother living with one other adult. Among two-adult households, the most common composition consisted of the biological mother living with an unrelated male and the second most common composition consisted of the biological mother living with a grandmother, though this declined across time. Less common configurations of two-adult households across age periods included biological mothers living with: other female relatives, other male

Table 1
Number of adults in single bio mother households at ages 4, 6 and 8.

Number of adults in household	Age 4		Age 6		Age 8	
	N	%	*N*	%	*N*	%
1	188	45.1	206	49.4	188	45.1
2	159	38.1	143	34.3	152	36.5
3	37	8.9	43	10.3	50	12.0
4	23	5.5	15	3.6	20	4.8
5	4	1.0	10	2.4	5	1.2
6	5	1.2	0	0	2	0.5
7	1	0.2	0	0	0	0
Total	417	100.0	417	100.0	417	100.0

relatives, adult siblings where sex is unknown, and grandfathers. On average, paired samples t-tests showed that the number of adults in the home did not change significantly across time from age 4 ($M = 1.84$, $SD = 1.04$) to age 6 ($M = 1.75$, $SD = .95$) to age 8 ($M = 1.82$, $SD = .96$; $ps > .05$). Overall, the correlations between the number of adults in the household and number of allegations were not significant and less than 0.1. However, for households with at least one allegation, there was a significant and negative correlation between the number of adults in the household and the number allegations at age 4 ($r = -.23$, $p < .05$), but not at age 6 or age 8 ($ps > .05$).

Table 2 shows the frequency of household compositions across age period and across risk group. Chi-square analyses compared the proportion of households within low risk and high risk sites. Overall, the proportion of mothers living alone was similar across sites with low and high risk ($ps > .05$), however the presence of other adults in the household showed differential patterns by site risk. Across all age periods, households from high risk sites were more likely to include an unrelated male compared to households from low risk sites ($ps < .05$). Households from high risk sites were also less likely to include a relative, compared to households from low risk sites ($ps < .05$). Generally, youth from high risk sites appeared more likely to reside with an unrelated male than a relative, whereas youth from low risk sites appeared more likely to reside with a relative than an unrelated male. Lastly, the proportion of grandmothers living in the home was consistently higher in low risk compared to high risk sites, across all age periods ($ps < .05$).

Table 3 shows maltreatment allegation rates across household composition types and by age period. There were several notable differences when comparing allegation rates across household composition types. First, at ages 4–6 and 6–8, allegation rates were highest in households where mothers were living with nonrelatives or unrelated males, in particular. Second, allegation rates were consistently lower in households with relatives, especially grandmothers. Households with grandmothers comprised the lowest allegation rate at ages 6–8 and 8–10. Third, group differences in allegation rates seemed most profound when the children were age 6–8. For example, during this age period, the allegation rate was more than double for mothers living with an unrelated male compared to mothers living with a grandmother. By age eight to ten, the size of these group differences were relatively reduced. These differences seem to be driven mostly by age-related changes in the allegation rate among households with unrelated males, where risk was substantially higher at ages 6–8, and reduced by more than half by age 8–10. In contrast, the allegation rate for mothers living alone remained relatively consistent across time.

A series of chi-square analyses further compared allegation rates between households with single bio mothers living alone compared to households with (a) both biological parents, and households with single bio mothers living with (b) any non-relatives, (c) unrelated males in particular, (d) any relatives, (e) female relatives or (f) grandmothers in particular. At age 4–6, there were no significant differences in rates of allegation between single bio mothers living alone and these other household configurations. However, at age 6–8, allegation rates were significantly higher for single bio mothers living alone when compared with households

Table 2
Frequency of household compositions by age period and site risk.

Household composition	Age 4–6			Age 6–8			Age 8–10		
	All sites	Low risk	High risk	All sites	Low risk	High risk	All sites	Low risk	High risk
Total Single Bio Mother Sample	417	285	132*	417	285	132*	417	285	132*
Single Bio Mother alone	188	124	64	206	143	63	188	136	52
Single Bio Mother with one or more other adults [a]:									
Any Non-Relative	113	64	49*	112	59	53*	119	68	51*
Unrelated Male	104	60	44*	108	58	50*	114	67	47*
Any Relative	136	110	26*	113	91	22*	169	121	48
Female Relatives	109	93	16*	80	68	12*	85	65	20*
Grandmother	92	79	13*	73	63	10*	69	55	14*
Both Bio Parents [b]	171	131	40*	141	105	36	146	106	40

* Proportion of sample with corresponding household composition are significantly different between Low Risk and High Risk sites ($p < .05$).
[a] Households include one or more of these adults, regardless of other household members.
[b] Households include both parents, regardless of other household members.

Table 3
Percent with maltreatment allegations by household composition and age period.

Household composition	Age 4–6	Age 6–8	Age 8–10
Total Single Bio Mother Sample	18.2%	21.6%	15.8%
Single Bio Mother alone	19.1%	21.4%	19.7%
Single Bio Mother with one or more other adults [a]:			
Any Non-Relative	20.4%	28.6%	13.4%
Unrelated Male	21.2%	27.8%	12.3%
Any Relative	15.4%	15.0%	10.7% *
Female Relative	14.7%	16.3%	11.8%
Grandmother	15.2%	13.7%	10.1%
Both Bio Parents [b]	14.0%	9.2%*	12.3%

* Allegation rates are significantly different than households with Single Bio Mother alone ($p < .05$).
[a] Households include one or more of these adults, regardless of other household members.
[b] Households include both parents, regardless of other household members.

with both biological parents. At age 8–10, allegation rates were also significantly higher for single bio mothers living alone when compared with single bio mothers living with relatives. In both of these cases, allegation rates were nearly double for households with single bio mothers living alone.

Table 4 includes allegation rates by household composition, by age period, and by site risk. A series of chi-square analyses demonstrated that allegation rates were significantly higher in the high risk compared to low risk sites, with only two exceptions. At age 8 to 10, allegation rates were not significantly different between low and high risk households where single bio mothers lived with female relatives or where they lived with grandmothers. The discrepancy in allegation rates between high risk and low risk sites also showed a slight increase across age periods, increasing from an approximate 3-fold difference at age 4–6 to an approximate 4-fold difference by age 8–10. The greatest variability in low versus high risk sites was observed in households with both biological parents during the 4–6-year old period, where the allegation rate was nearly 40 times higher in households from high-risk sites compared to those from low-risk sites. There is also substantial variability in the 8- to 10-year old period, where the effect of living with unrelated males was further magnified in high risk sites (more than 8 times higher) and where the effect of living with female relatives was reduced.

Table 4 also illustrates different patterns of allegation rates across different types of household composition types. A second set of chi-square analyses further compared allegation rates between households with single bio mothers compared to 5 other household composition types. Three significant differences emerged for households from low risk sites. At ages 4 to 6 and at age 6 to 8, households with both biological parents had a significantly lower allegation rate than households where single bio mothers lived alone. At age 8–10, households where single bio mothers lived with relative(s) had a significantly lower allegation rate than when single bio mothers lived alone. Two significant differences emerged within households from high-risk sites. Specifically, at age 8 to 10, allegation rates were significantly higher for single mothers living alone compared to living with any relative or living with a grandmother. The 8 to 10 year period also showed the greatest variability in allegation rates across household composition types. For example, allegation rates from high risk sites where mothers lived alone were nearly six times higher than those who lived with grandmothers. In contrast, allegation rates showed little variability across household composition types during the youngest age period, where rates in low risk sites ranged from approximately 11% to 13% and where rates in high risk sites ranged from approximately 32% to 39%. Overall, children were most at risk for maltreatment when they were from high risk households with both biological parents during the age 4 to 6 period, or households where single mothers lived alone during the 6–8 or 8–10 year period

Table 4
Percent with maltreatment allegations by household composition, age period and site risk.

Household composition	Age 4–6		Age 6–8		Age 8–10	
	Low risk	High risk	Low risk	High risk	Low risk	High risk
Total Single Bio Mother Sample	11.2%	33.3%*,a	11.2%	43.9%*,a	7.7%	33.3%*,a
Single Bio Mother alone	11.3%	34.4%a	9.1%	49.2%a	11.0%	42.3%a
Single Bio Mother with one or more other adults[b]:						
Any Non-Relative	12.5%	30.6%a	18.6%	39.6%a	2.9%*	27.5%a
Unrelated Male	13.3%	31.8%a	19.0%	38.0%a	3.0%	25.5%a
Any Relative	10.9%	34.6%a	9.9%	36.4%a	5.8%	22.9%*,a
Female Relative	10.8%	37.5%a	11.8%	41.7%a	9.2%	20.0%
Grandmother	11.4%	38.5%a	9.5%	40.0%a	10.9%	7.1%*
Both Bio Parents[c]	1.5%*	55.0%a	2.9%*	27.8%a	5.7%	30.0%a

* Allegation rates are significantly different than households with Single Bio Mother alone ($p < .05$).
[a] Allegation rates are significantly different between Low Risk and High Risk sites, within each type of household composition ($p < .05$).
[b] Households include one or more of these adults, regardless of other household members.
[c] Households include both parents, regardless of other household members.

(nearly half of these youth had a maltreatment allegations). Among high risk sites, households with grandmothers showed a substantial amount of variability across time, dropping from a nearly 40% allegation rate at ages 4–6 and 6–8 to an allegation rate under 10% by age 8–10.

4. Discussion

We sought to better understand the dynamic patterns that comprise the single mother household, and compare maltreatment allegations across these categories. Findings from this study illustrate variability in household configurations over time. It is clear that homes with single mothers actually represent a diverse group of household configurations, with various other adults in the home. This variation in household configurations also corresponded with substantial variability in risk for maltreatment allegations. Most profound, it appears that single mothers living alone, or with non-relatives represent a relative risk for maltreatment in the home. Conversely, households with adult relatives, especially grandmothers, appear to serve as a potential protective factor for child maltreatment.

The present study found that maltreatment allegations in single biological mother homes were linked to the composition of *types* of other adults in the home, and not simply correlated with the *number* of adults in the home. The study also found that the majority of single mothers actually live with one or more other adults in the home. In particular, it was common (˜25–40%) for single mothers to live with adult relatives, with some variation across time. Approximately 25% of single mothers in the sample lived with unrelated males, and this rate remained relatively stable across time. As such, this study not only challenges the notion that males are absent, but it also provides some insight as to who is present.

There is a need for the field to move away from comparisons between two-parent and single-parent homes and instead focus on household composition. Previous studies have focused primarily on comparing single mother households to households with two biological parents, and these studies have identified a link between maltreatment risk and the presence of unrelated males in the home (e.g., Daly & Wilson, 1988; Margolin, 1992). Our findings replicate and extend this work in a few important ways. First, we were able to identify and compare a variety of different household configurations within single mother homes. Second, we were able to examine maltreatment allegations longitudinally across multiple time points. Lastly, we were able to compare families from both low risk and high risk backgrounds.

Our findings demonstrate that the presence of nonrelatives, especially unrelated males, in the home may be linked to substantial increase in the rate of maltreatment allegations. Assessing the risk these non-relatives may confer to children is a complex task, likely to be influenced by both direct and indirect effects. There is previous research demonstrating that non-relatives, and unrelated males in particular, are often direct perpetrators of maltreatment (e.g., Daly & Wilson, 1985; Margolin, 1992). Previous research in this area has utilized parental investment theory to describe how potential evolutionary and biological mechanisms may explain why adult males are more likely to abuse non-biological children (Daly & Wilson, 1983). In general, adults may be less likely to invest social, emotional, and financial resources in nonbiological children compared to biological children (Hofferth & Anderson, 2003; Zvoch, 1999). Others have suggested that when adult males are placed in a stepfather or nonbiological parenting role, they may have less experience with children, and this lack of experience of developmental norms and child safety may incur more frequent injury or neglect (Nepomnyaschy & Donnelly, 2015).

The presence of an unrelated male living in the home may also be indirectly related to an increased likelihood of maltreatment, by increasing known *maternal* risk factors for maltreatment, including domestic violence and substance use (e.g., McCloskey, 2017). Compared to other types of adults entering the home, it may also be more likely that the introduction of a romantic partner in the home brings unique emotional changes and stressors to the mother, including those which may decrease child supervision (Nepomnyaschy & Donnelly, 2015). Lastly, it could also be the case that the presence of an unrelated male in the home may simply be a marker of broader economic and residential instability, a known risk factor for maltreatment.

Ideally, child welfare services provided to families should be balanced to support positive adult involvement, while at the same time protecting children from negative adult influences. This may be particularly important in situations where involvement with child welfare services is already considered high risk (e.g., in cases where children were removed from the home and subsequently reunified). Prior research suggests that caseworkers report feeling less capable in their work with males (Duggan et al., 2004) and indeed, work is needed to better engage males and non-relatives in child welfare services.

The allegation rates in households with unrelated *females* were also elevated, though this household composition was relatively rare (ns = 2–14), and thus must be interpreted with caution. Future research may consider further examination of this composition, especially to better understand if and how it may differ from non-relatives who are male. Although this was a relatively infrequent occurrence in our sample (less than 4% at any given time), the rates of maltreatment allegations were elevated, especially when the youth were older. As such, future studies may need to oversample this subpopulation to better understand how maltreatment patterns in households with unrelated females compare to households with unrelated males. It is likely that the preponderance of research supporting the link between unrelated males and maltreatment is in part affected by the base rate of mothers living with non-relatives that are more likely to be male than female. However, the fact that unrelated females also showed increased risk for maltreatment allegations may further support parental investment theory, and suggest that the absence of a biological relationship may pose a particular threat to children.

Findings also suggest that the presence of a grandmother in the home may provide a positive influence on child welfare. Grandmothers may serve as a protective factor by providing financial, social, and emotional support to both child and mother, as well as contributing their parenting and childcare experience. In fact, when children, parent(s) and grandparent(s) co-reside, they are twice as likely to do so in the home of the grandparent than the parent (Lofqui, 2012). In the United States, over 4.8 million children

(approximately 7%) live in the home of their grandparents (U.S. Department of Health and Human Services, 2016). It could also be the case that when grandmothers co-reside, it serves as a marker for a better parented mother, especially if a mother's relationship with her own mother is still intact. In fact, previous research suggests that grandmothers may provide higher quality parenting compared to both mothers (Barnett, 2008) and foster caregivers (Dolan, Casanueva, Smith, & Bradley, 2009). Compared to other types of cohabitation, co-residing grandmothers may have a more direct and positive impact on developmental outcomes (e.g., Kalil et al., 2001). For example, there is research demonstrating that presence of a grandmother in the home is linked to lower rates of child injuries (Bishai et al., 2008). Pittman and Boswell (2007) also found that youth with a co-residing grandmother reported fewer depressive symptoms over time, when compared to their peers. In contrast to the findings on co-residing grandmothers, research with custodial grandmothers tends to be more variable, but is largely confounded by the fact that in many of these cases, children were placed with grandmothers when parents were absent due to substance use or imprisonment (e.g., Ghuman, Weist, & Shafer, 1999). Findings here contribute to the literature by suggesting that co-residing grandmothers provide protection against allegations of child maltreatment. Future research should examine the underlying mechanism in order to better understand this protective relation.

Although the focus of the present study was to examine various types of configurations within single mother homes, we also compared allegation rates to households with both biological parents. Overall, households with both biological parents showed a lower allegation rate compared to households where single bio mothers lived alone. In particular, during the 6 to 8 year period, the allegation rate for homes with both bio parents was less than half the rate than households where single mothers lived alone. These data parallel findings from earlier research, which also suggests that rates of child victimization are higher among single parent versus two parent households (e.g., Turner et al., 2013, 2007).

Findings from the present study also highlight interesting differences across time and across levels of initial risk. When children were younger, rates of maltreatment allegations were similar in households where mothers lived alone compared to living with other adults. However, as children got older, rates of maltreatment allegations increased in households where mothers lived alone, especially those from high risk sites. These findings highlight specific differences across time and across levels of initial risk, and highlight the importance of examining complex and dynamic aspects of household composition and the link to maltreatment.

4.1. Limitations

It should also be noted that maltreatment allegations are not the same as maltreatment occurrences or substantiations. Maltreatment allegations may not be an accurate reflection of children's maltreatment experience (e.g., Chaffin & Bard, 2006), and may under or overestimate actual occurrences of maltreatment. In fact, household composition may further confound this relation; perhaps the number and type of adults in the home relates not only to actual maltreatment instances but also to reporting of maltreatment instances to child welfare agencies. Similarly, conflict between adults in the home may affect both actual child maltreatment instances, as well as reports of maltreatment to child welfare agencies. Future research is needed to better understand the direction (and magnitude) of this effect. For example, a grandmother residing in the home could be more, or less, likely to report abuse to child welfare services, given that it involves her own daughter and grandchild. It could also be the case that households with unrelated males show elevated allegations, in part, because estranged biological fathers may be more likely to make allegations of maltreatment after a new romantic partner moves in with the mother and child.

Future research is needed to better understand and differentiate the relationship between adults in the home and maltreatment occurrences, allegations, and substantiations. Moreover, further research is also needed to better understand the type of maltreatment alleged in these different living situations. In particular, the number and type of adults in the home may have different effects on child abuse compared to neglect. Perhaps, for example, a larger adult to child ratio in the home relates to lower neglect rates, purely because of the presence of adults in the home. Similarly, it would also be important to identify and examine the alleged perpetrator in reports of maltreatment. The present study does not specify if allegations of maltreatment are associated with the mother and/or with other members of the household. Moving forward, it would also be important to untangle the interaction between household composition and the time of report on maltreatment type(s). Although the present study sought to deconstruct the single mother household, we found that even within the single mother homes, household composition was varied. Due to low cell sizes, we were not able to examine all possible combinations of household members (e.g., households where single bio mothers lived with an unrelated male as well as a grandmother). Future studies may need to oversample specific types of households in order to better understand child maltreatment in these homes. Lastly, future work in this area would also benefit from the inclusion of other measures of the quality of parenting, supervision and monitoring, and child safety.

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