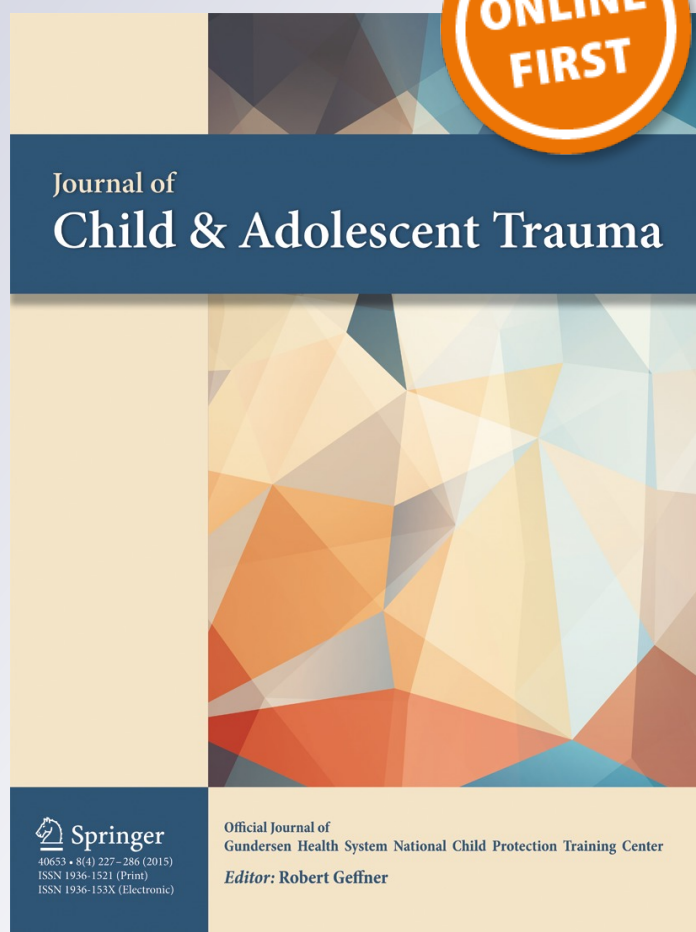# Patterns of Adjustment among Children Exposed to Intimate Partner Violence: a Person-Centered Approach

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ORIGINAL ARTICLE

Patterns of Adjustment among Children Exposed to Intimate Partner Violence: a Person-Centered Approach

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Abstract This study examined profiles of adjustment in an ethnically diverse sample of 291 school-age children recruited from community-based domestic violence services. Using latent profile analysis (LPA), six domains of adjustment were examined: social problems, attention problems, internalizing behavior, externalizing behavior, empathy, and callous/unemotional traits. Results of the LPA provided support for three distinct profiles of socioemotional functioning among children in the sample: Resilient (66 %; $n = 191$), Struggling (28 %; $n = 83$), and Severe Maladjustment (6 %; $n = 17$). Variables that distinguished between the profiles included: children's race/ethnicity, exposure to concomitant animal cruelty, relationship to the abusive partner, and the duration of their maternal caregiver's experience of IPV. Study results lend support to previous research suggesting differential patterns of socioemotional adjustment among children exposed to IPV.

Keywords Domestic violence · Resilience · Adjustment · Animal cruelty · CU traits

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The rate of intimate partner violence (IPV) in the United States is alarmingly high. It is estimated that each year seven million women experience physical, psychological, or sexual abuse by an intimate partner (Black et al. 2011). Families experiencing IPV are more likely than non-violent families to have children present in the home (Bedi and Goddard 2007). Consequently, more than one in 15 children witness IPV each year in the U.S. (Hamby et al. 2011), placing them at risk for compromised physical, behavioral, and mental health and cognitive processing (Howell et al. 2014; Wolfe et al. 2003). Among the host of socioemotional adjustment problems linked with childhood exposure to IPV, internalizing and externalizing behavior problems are the most consistently documented among school-aged children (6–12 years). Research indicates that children who directly witness IPV are 1.9 times more likely to exhibit internalizing problems and 1.5 times more likely to demonstrate externalizing behaviors (Sternberg et al. 2006). Furthermore, it is estimated that between 40 and 60 % of children residing in domestic violence (DV) shelters are in the clinical range of externalizing and internalizing behavioral problems (Grych et al. 2000; Graham-Bermann et al. 2009).

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Risk, Protection, and Heterogeneity of Adjustment Among Children Exposed to IPV

Despite the abundance of literature documenting the deleterious impact of IPV on child outcomes, there is also evidence of resilience among children exposed to IPV, with a notable proportion of children demonstrating adaptive coping and typical functioning despite exposure to high-risk, stressful, and generally adverse family settings (Edleson 2001; Graham-Bermann et al. 2009; Masten 2001). A meta-analytic review conducted by Kitzmann et al. (2003) found that 37 % of children who personally experienced abuse or witnessed abuse demonstrated outcomes that were comparable to or better than children who were not exposed to those forms of violence in the home. Such research findings suggest developmental trajectories of typical or negative socioemotional functioning following IPV exposure are influenced by a multitude of individual and social-contextual factors (Howell 2011). For example, there is evidence to suggest that child characteristics such as age (Fantuzzo et al. 1991; Holden et al. 1998; Sternberg et al. 2006), gender (Cummings et al. 1999; O'Keefe 1994; Sternberg et al. 1998; Yule et al. 2000), ethnicity (Graham-Bermann et al. 2006), and relationship to the abusive partner (biological or not; Edleson et al. 2003), as well as family-level factors such as socioeconomic status (Osofsky 1999), maternal education (Hughes and Luke 1998; Spilsbury et al. 2008), and number of children in the household (Hoffman et al. 1994; Keenan et al. 2007; Trentacosta et al. 2008), influence children's responses to trauma. However, the strength and direction of these effects are generally inconsistent across studies of school-age children exposed to IPV (Howell et al. 2014).

Co-occurring Violence Exposures The co-occurrence of different types of violence exposure (polyvictimization) has been noted as a particularly important risk factor to consider when identifying and characterizing profiles of risk and resilience among children who witness IPV (Graham-Bermann et al. 2006, 2010; Hughes et al. 1989; Kennedy et al. 2010; Margolin et al. 2009). Youth who witness IPV are three to nine times more likely to be maltreated or exposed to other forms of family violence than youth who have not witnessed IPV (Hamby et al. 2010), and there is evidence to suggest that co-occurring maltreatment and other types of violence exposure may exacerbate the potentially negative impact of IPV on child outcomes (Margolin et al. 2009).

Exposure to Animal Maltreatment An emerging area of childhood polyvictimization research concerns children's exposure to IPV and concomitant abuse of their companion animals. Among homes with children over the age of six, 75 % of families report pets in the home (American Veterinary Medical Association 2007). Between one-half and three-fourths of IPV survivors with companion animals report that their pets have also been threatened or harmed by an intimate partner (Flynn 2009). Accordingly, children from IPV-affected families are at significantly increased risk for witnessing violent abuse of companion animals in the home when compared to children in non-violent families (e.g., Ascione et al. 2007; Faver and Strand 2003, 2007; Volant et al. 2008). A recent study of 242 pet-owning mother-child dyads recruited from residential and community-based DV services found that 24 % of children, when asked about their experiences with companion animals in the home, reported experiencing someone threatening to harm or kill their pet and/or seeing or hearing someone hurt or kill their pet in the home (McDonald et al. 2015). Moreover, qualitative findings from this study revealed that children's exposure to animal maltreatment was multifaceted and perceived by children as distinct from their exposure to interparental conflict and violence (McDonald et al. 2015). This study also found that children expressed concern for their pet's safety, and many children preventively and directly intervened to protect their pet from being harmed by their mother's intimate partner and/or other members of the family (i.e., siblings).

These recent findings suggest that children's exposure to animal maltreatment is potentially traumatic and may increase IPV-exposed children's risk of behavioral problems due to their efforts to intervene in violent events involving pets (McDonald et al. 2015). Research on the human-animal bond suggests that pets play an important social and emotional role in the lives of children (Kosonen 1996; Melson et al. 1997; McDonald et al. 2015), and when children are asked to identify the most important relationships in their lives, nearly half name pets (which is more prevalent than aunts and uncles, grandfathers, friends, teachers, or neighbors/other adults; Kosonen 1996). However, little is known about psychosocial outcomes among children exposed to concomitant abuse of companion animals in the context of interparental violence experiences. A small body of research supports that children living in families where family violence and animal abuse are present are more likely to engage in externalizing conduct such as delinquent behavior, bullying, and animal cruelty than children from non-violent homes (e.g., Becker et al. 2004; Currie 2006; Henry 2004). To date, the relationship between children's exposure to animal maltreatment and other indicators of adjustment or profiles of adjustment have not been explored among school-age children in IPV-affected families. Yet harm to and/or loss of a pet due to family violence may be especially salient to children exposed to IPV and exacerbate the already heightened risk for compromised resilience in this population (McDonald et al. 2015).

Person-Centered Studies

While a large body of research has examined risk, protection, and adjustment among IPV-exposed children, Graham-Bermann et al. (2009) argued that resilience among children exposed to IPV has yet to be adequately examined. First, the majority of research to date has been variable-centered, examining relationships between exposure to IPV and specific types of adjustment problems among all children in a sample. In addition, distinct patterns of relationships between IPV exposure, associated risk and protective factors, and children's adjustment outcomes have not been identified. Hughes and Luke (1998) argued that variable-centered methodological approaches utilizing group averages may obscure differences in individual children's adjustment and advocate for the importance of identifying groups of children who are similar in their response to IPV using person-centered methodological approaches.

A small number of published studies have employed person-centered techniques (i.e., cluster analysis) to examine heterogeneity in socioemotional adjustment among children exposed to IPV in shelter (i.e., Grych et al. 2000; Hughes and Luke 1998) and community (i.e., Graham-Bermann et al. 2009; Lang and Stover 2008; Spilsbury et al. 2008) samples. Person-centered statistical methods focus on the individual as the unit of analysis in contrast to variable-oriented approaches, which center on variables as the chief unit of analysis (Bergman and Magnusson 1997; Van Horn et al. 2009). By examining relationships at the personal level rather than the variable level, this approach can distinguish a common pattern of characteristics that apply to one subgroup and that distinguish it from another subgroup. Person-centered methodologies fit particularly well with an understanding of the child's position and development within a changing and multifaceted contextual world as proposed by ecological development theories (Copeland-Linder et al. 2010; Whitney et al. 2010).

Parallel to the findings of variable-centered research, studies embracing this methodological standpoint document subgroups of children with resilient (or asymptomatic) functioning comprising between 20 % (Graham-Bermann et al. 2009) and 75 % (Lang and Stover 2008) of their samples. In addition, two to four distinct subgroups of children characterized by patterns of maladjustment have been identified across studies. For example, Grych et al. (2000) noted that approximately 30 % of a sample of children residing in DV shelters developed similar patterns of elevated internalizing and externalizing problems. In the same sample, 21 % of children developed elevated externalizing behaviors only and 18 % were characterized by internalizing problems only. In a community sample, Graham-Bermann et al. (2009) identified two subgroups of children with similar patterns of compromised adjustment and one "struggling" group. Regarding the groups with clinically significant levels of symptoms, 24 % of the sample was characterized by severe adjustment problems, with elevated internalizing and externalizing behaviors and moderate levels of social competence. A smaller group (11 %) was distinguished by severe depressive symptoms, low self-worth, and moderate global competence in the absence of internalizing and externalizing problems. Similar to variable-centered research, social-contextual predictors of resilient and compromised patterns of adjustment have varied across studies.

Advancing Research on Risk and Resilience Among Children Exposed to IPV

A major limitation of previous person-centered studies in this area concerns the range of constructs represented by the indicators of adjustment. Wolfe et al. (2003), Howell et al. (2015), and Graham-Bermann et al. (2009) argued for the importance of incorporating an array of measures in order to identify children who are characterized by profiles of resilient functioning in the face of adversity. Expanding person-centered studies of children's adjustment following IPV exposure to include other domains of functioning is an important step necessary to understand the intervention needs of children with IPV experiences. Research demonstrates that exposure to IPV among school-age children is also associated with attention problems (Bauer et al. 2013; Spilsbury et al. 2007), social problems (Carpenter and Stacks 2009; Evans et al. 2008; Lundy and Grossman 2005; Marks et al. 2001; Reynolds et al. 2001), empathy (Hughes 1988; Graham-Bermann and Levendosky 1997; Maliken and Fainsilber Katz 2012), and callous/unemotional (CU) traits (Frick and White 2008; Shenk et al. 2014; Weiler and Widom 1996). However, these important indicators of psychosocial functioning have not been explored in person-centered research on adjustment profiles in this population.

Current Study

Aim 1—Differentiating Socioemotional Adjustment Patterns

The current study was developed to add to research on the impact of exposure to IPV in childhood using a two-fold process. The first aim of the study was to extend research on patterns of adaptive and maladaptive functioning among children from homes characterized by IPV using a person-centered approach. Given that resilience is a composite of functioning in social, emotional, cognitive, and behavioral domains, latent profile analysis (LPA) was used to investigate patterns of functioning across a diverse array of adjustment indicators (Graham-Bermann et al. 2009).

Specifically, this study builds on prior empirical literature in several ways. First, in contrast to previous person-centered

research in this area, this study examined internalizing and externalizing behaviors in concert with social behaviors, attention problems, empathy, and CU traits. Second, the current study examines a sample of children recruited from women accessing community-based IPV services, including participants from both non-residential and residential services. Third, unlike most of the prior person-centered studies, Latino and multi-ethnic/racial children are well represented in this study's sample. Finally, this study advances methodological approaches in this area by incorporating a model-based approach (LPA) to examine heterogeneity of socioemotional adjustment among children exposed to IPV.

Given that LPA is an exploratory approach, and no prior studies have incorporated such a broad spectrum of indicators of adjustment, no a priori predictions were made regarding the number and type of classes. However, it was anticipated that the sample would be characterized by latent heterogeneity with subgroups of resilient and maladjusted children.

Aim 2—Identifying Potential Social-Contextual Covariates of Adjustment Patterns

The second aim of the study was to replicate and extend research on risk and protective factors associated with profiles of socioemotional functioning among children exposed to IPV. It was hypothesized that children with adaptive patterns of functioning would be distinguished from children with maladjusted patterns by the frequency of their exposure to IPV, with maladjusted patterns of adjustment being related to greater frequency of exposure. Second, it was hypothesized that the duration of IPV and frequency of injury, physical abuse, sexual abuse, and psychological abuse reported by maternal caregivers at the hands of a partner would differentiate profiles of adjustment among children. Lastly, in light of McDonald et al.'s (2015) findings, it was anticipated that children's exposure to animal cruelty in the home would differentiate children with patterns of maladjustment from children with asymptomatic profiles.

The following child-, maternal-, and family-level predictors were also examined in an exploratory manner due to inconsistencies in the literature regarding their impact on profiles of children's functioning: child age, gender, and relationship to the abusive partner (biological child or not); maternal education; interpartner communication; yearly household income; and number of children in the household.

Method

Participant Recruitment and Sample Description

Following Institutional Review Board (IRB) approval, data were collected from women and one of their children

receiving victim advocacy services from 22 DV agencies in a western U.S. state. Women were eligible to participate in the study if: (a) they reported experiencing IPV within the past year; (b) they had at least one child between the ages of 7–12 in the home; and (c) they and their child had at least one pet within the past year. If a woman had more than one eligible child, the participant was able to choose which child she wanted to participate in the study. According to approved IRB protocol, designated staff members from each agency were trained to recruit participants, obtain voluntary consent and assent, and administer standardized surveys to eligible women and children who were not in immediate crisis. Survey administrators scheduled interview appointments with participants in designated confidential spaces and wore a badge indicating their role as an interviewer during recruitment and assessment procedures in order to reinforce boundaries between their roles of advocate and survey administrator. Maternal caregivers were surveyed first. The staff member then met individually with the child to administer four questionnaires. Thirty-three percent of the interviews with maternal caregivers were conducted in Spanish; approximately 30 % of child interviews were conducted in Spanish. After both interviews were completed, the woman and child were compensated $65 and $15, respectively.

Data reflect 291 maternal caregiver-child dyads. Maternal caregivers ranged in age from 21 to 65 years with a mean age of 36.34 ($SD = 7.43$). On average, women reported experiencing IPV for approximately 9 years ($SD = 6.74$). The predominant racial/ethnic identification of the women was Hispanic/Latina (60.5 %), followed by White (26.8 %), African American or Black (3.4 %), American Indian or Alaska Native (1.7 %), Pacific Islander (0.3 %), and Asian (0.3 %); individuals who identified as more than one race comprised approximately 6.6 % of the sample. Approximately 36 % of maternal caregivers did not have a high school diploma, 39 % had a high school diploma, and the remaining 25 % had some college or more. The yearly household income of families in the sample was distributed as follows: <$9K (20.8 %), $10K-$29K (43.1 %), $30K-$49K (27 %), and >$50K (9.1 %). The sample of children was 47 % female and 53 % male, with a mean age of 9.07 ($SD = 1.64$); they were similar to maternal caregivers in terms of racial and ethnic identity (55.3 % Latino or Hispanic, 22 % White, 17.9 % more than one race, 3.4 % African American or Black, 1.0 % American Indian, and 0.3 % Asian). This information was obtained via maternal report on a demographic survey. Seventy-three percent of children were the biological child of the abusive partner.

LPA Indicators of Socioemotional Adjustment

Children's Social Problems, Attention Problems, and Externalizing and Internalizing Behaviors Maternal caregivers completed the Child Behavior Checklist (CBCL 6/18;

Achenbach and Rescorla 2001). The CBCL is a widely used standardized measure of caregivers' reports of children's behavior problems and competencies and has excellent psychometric properties. The measure allows for the calculation of raw and *T* scores that reflect multiple domains of socioemotional functioning. Specifically, the following *T* scores, which are normed for age and gender, were selected: social problems ($\alpha = .77$), attention problems ($\alpha = .82$), internalizing behavior problems ($\alpha = .90$), and externalizing behavior problems ($\alpha = .92$). For the internalizing and externalizing scales, scores from 60 to 63 are considered to be in the "borderline" clinical range. Scores greater or equal to 64 are considered to be clinically significant levels of symptoms. For social and attention problems, the borderline clinical range includes scores between 65 and 69; scores equal to or greater than 70 are considered to reflect clinically significant levels of social and attention problems.

Children's Empathy Maternal caregivers completed the Griffith Empathy Measure (GEM; Dadds et al. 2008), a parent-report measure that assesses children's cognitive and affective empathy. The instrument is comprised of 23 items scored from *strongly disagree* (−4) to *strongly agree* (+4). Previous studies have advocated for the utility of the GEM total score in capturing an overall dimension of empathy among children ages 4 to 18 years (Dadds et al. 2008). Given the high reliability of the total score in the sample ($\alpha = .84$), this variable was selected for the analysis. While there is no range of scores to reflect children with high vs. low levels of empathy, studies have documented mean total scores ranging from 29 to 40 among typically developing school-age children (Dadds et al. 2008; Kohls et al. 2014).

CU Traits Maternal caregivers completed the Inventory of Callous and Unemotional Traits—Caregiver Report Form (ICU; Frick 2004). The ICU is an instrument that measures the presence and intensity of callous-unemotional traits among children (Essau et al. 2006). This 24-item measure is scored on a 4-point scale (ranging from 0 = *not at all true* to 3 = *definitely true*). Total scores greater than or equal to 24 are considered to reflect clinically significant levels of CU traits in school-age children when reported by maternal caregivers; this cut off is predictive of future bullying (Kimonis et al. 2014). Reliability of the total score in the current sample was excellent ($\alpha = .85$).

Covariates

Demographic Information Child-, maternal-, and family-level demographic predictors (i.e., child age, gender, relationship to the abusive partner, maternal education, yearly household income, and number of children in the household) were ascertained from a demographic survey completed by the maternal caregiver. Yearly household income data were restructured so that each one-unit increase in the variable reflects a $10,000 increase in annual income. Maternal education data were also restructured so that every one-unit increase in the variable reflected the successful completion of a grade level beyond elementary school (where grade 6 = 0).

Maternal Relationship Behaviors (IPV and Negotiation) Maternal caregivers completed the Conflict Tactic Scale-Revised (CTS2; Straus et al. 1996). The CTS is a 39-item measure that has been used extensively in research on IPV. Response choices for each item range from 0 (*did not happen*) to 6 (*happened more than 20 times during the past year*). The CTS2 yields five subscale scores. Four subscales examine negative relationship characteristics (i.e., Physical Assault, Injury, Psychological Aggression, Sexual Coercion) that reflect IPV. One subscale (i.e., Negotiation) reflects positive relationship behaviors involving interpartner negotiation, such as the communication of positive affect and actions taken to settle disagreements through discussion. Each subscale was used in the current study. Internal consistencies of the subscales were adequate with alphas ranging from .76 (Psychological Abuse) to .90 (Physical Abuse).

Children's Exposure to Animal Cruelty Maternal caregivers completed the Pet Treatment Survey (PTS; Ascione 2011), a revised version of the Battered Partner Shelter Survey-Pet Maltreatment Assessment (BPSS; Ascione and Weber 1996). The BPSS, a structured interview used in two separate studies examining animal abuse in the context of IPV (Ascione et al. 2007; Volant et al. 2008), was revised purposefully for the study in order to examine both women who were receiving residential and non-residential services. In addition to asking respondents about past pet ownership history, there are two items that specifically address animal abuse. One question asks whether a woman's partner has ever *threatened* to hurt or kill a family pet, and another question asks whether her partner has ever *actually hurt or killed* a family pet. In cases where either of these items are endorsed, a woman is then asked a series of follow-up questions including whether her child has ever seen or heard a pet hurt or killed in the home. This item from the PTS yields a dichotomous measure of the presence or absence of children's exposure to harm or killing of pets and was used to assess children's exposure to animal cruelty among children in the sample.

Children's Exposure to IPV Children completed the Child Exposure to Domestic Violence Scale (CEDV; Edleson et al. 2008). The CEDV was used to examine the frequency of children's exposure to IPV. The CEDV is a child self-report measure that evaluates the frequency, type, and proximity of children's exposure to IPV. The 10-item subscale Home Exposure was used in the current analysis. The CEDV asks

children about different forms of IPV to which they may have been exposed using a 4-point scale with choices ranging from "*never*" to "*almost always.*" Items are scored from 0 to 3; total scores can range from 0 to 30. For the purposes of our study, a professional translator was hired to translate the English version of the measure into a Spanish language version that was consistent with dialects of Spanish spoken among individuals of Mexican origin; the forward translation–back translation procedure was used for this process (Van de Vijver and Hambleton 1996). The CEDV Home Exposure subscale includes one item about exposure to harm of animals by mothers' partners; this item was eliminated from the calculated total score due to overlap with the PTS item and differential item functioning across the English and Spanish translation. Internal consistency for the 9-item version was adequate ($\alpha = .80$), and Rasch analysis confirmed the appropriateness of the 9-item version as a unidimensional construct. Evidence of construct validity was found for both Spanish and English language versions through correlations with the number of years mothers reported experiencing IPV.

Analysis

Patterns of externalizing behavior, internalizing behavior, attention problems, social problems, empathy, and CU traits were identified through an exploratory approach. Specifically, latent profile analysis (LPA; Lanza et al. 2003), a statistical technique falling under the category of generalized latent variable models, was conducted in Mplus version 7.1 (Muthén and Muthén 1998–2014) to categorize children with similar profiles on the indicators into latent groups.

Model Estimation Several models were fit to the data, specifying one through four profiles. To minimize the influence of skewed variables, a maximum likelihood estimator with robust standard errors was used (Little and Rubin 1987). As recommended by Asparouhov and Muthén (2012), the 1-class model was tested first; then, the number of classes was systematically increased until a stable, best fitting model was achieved and adding additional classes was no longer warranted. The assumption of conditional independence was retained.

Model Selection and Interpretation Specifically, model fit was assessed jointly by examining the following statistics: Lo-Mendell-Rubin Adjusted Likelihood Ratio Test (LMRT; Lo et al. 2001), Bootstrapped Likelihood-Ratio Test (BLRT; Arminger et al. 1999), Bayesian information criterion (BIC; Schwarz 1978), Akaike information criteria (AIC; Akaike 1974), and adjusted BIC. AIC and BIC values are descriptive fit indices; smaller values indicate better model fit. The LMRT and BLRT examine the fit of a target model (e.g., 3-class model) to a comparison model one less class (e.g., 2-class model) than the target. For LMRT and BLRT values, the

associated *p*-value denotes whether the solution with more classes ($p < .05$) or less classes ($p > .05$) is a better fit. Classification certainty was assessed using the entropy index. Entropy values can range from 0 to 1; higher scores represent greater classification accuracy. In addition to fit statistics, the theoretical meaningfulness of the classes was also examined (Nylund et al. 2007). Models with classes representing less than 5 % of the sample were not considered as recommended by Hipp and Bauer (2006).

Examining Predictors of Class Membership

To address the second aim of this study, sets of child-, maternal-, and family-level variables were examined as covariates to the identified latent profiles using Mplus 7.1 in a manner consistent with the modified 3-step procedure (R3STEP multinomial logistic regression) recommended by Vermunt (2010) and Asparouhov and Muthén (2014). Given the exploratory nature of examining relationships between covariates and profiles in this study, and the number of covariates, this approach was most advantageous. This method also addresses two obstacles often experienced in the prediction of latent classes by linking the assigned profile membership to the latent profile by using the classification error probabilities as weights (Asparouhov and Muthén 2013). This results in estimates for the effects of covariates on classes that are minimally biased (Asparouhov and Muthén 2012; Härtwig et al. 2014). Child covariates included: age, gender, relationship to the abusive partner, exposure to animal cruelty, and frequency of exposure to IPV. Maternal covariates included: education level, years experiencing IPV, and frequency of experiencing psychological, physical, and sexual abuse, injury, and negotiation in her last or current relationship. Family level covariates included yearly household income and the number of children currently living in the household.

Results

Fit indices resulting from the latent profile models containing 1, 2, 3, and 4 classes are provided in Table 1. In order to address the potential problem of local maxima, the number of random sets of starting values was increased to 1000, the number of iterations to 20, and the number of final-stage optimizations to 100 (Asparouhov and Muthén 2012). Taken as whole, the AIC, BIC, and BLRT values indicated the 4-profile solution was optimal; however, LMRT suggested the 3-profile solution was a better fit. In addition, the 4-profile solution yielded a spurious class that reflected less than 5 % of the sample. Given the significant LMRT value, higher entropy and precision of classification, and meaningfulness of the profiles resulting from the 3-class solution, this model was deemed optimal in comparison to the 2- and 4-profile

Table 1 Fit indices for latent profile analyses of children's socioemotional functioning

Profile	No. of free parameters	Log-likelihood	AIC	BIC (N-adj)	Adjusted BIC	Entropy	LMRT|BLRT p-value	No. classes with n < 5 % study sample
1	12	−6680.587	13,385.174	13,429.254	13,391.199	N.A.	N.A.	
2	19	−6398.101	12,834.201	12,903.994	12,843.741	0.9	0|0	0
3	**26**	**−6291.148**	**12,634.297**	**12,729.803**	**12,647.352**	**0.92**	**.03|0**	**0**
4	33	−6240.958	12,547.916	12,669.136	12,564.486	0.865	.4|0	1

Final solutions are in bold. *AIC* Akaike information criterion, *BIC* Bayesian information criterion, *N-adj* Sample size-adjusted, *LMRT* Vuong-Lo-Mendell-Rubin test, *BLRT* Bootstrap likelihood ratio test

solutions. Next, the stability of the 3-profile solution was examined by increasing the number of random starts to 5000, the number of iterations to 100, and the number of final-stage optimizations to 500. The solution and fit indices were replicated. Table 2 displays the probabilities of the 3-profile LPA model and demonstrates the excellent degree of fit among the profiles for the children in the sample.

The overall conditional response means for each class are available in Table 3 and illustrated in Fig. 1. Profile 1 comprised 66 % of the total sample ($n = 191$) and was characterized by children with resilient patterns of functioning across all measures. This asymptomatic group, labeled "Resilient," was comprised of children functioning without clinically significant levels of internalizing or externalizing behavior issues, attention problems, or social problems. On average, children in this group scored below the normed mean for all CBCL domains. In addition, children in this group demonstrated low levels of CU traits. Profile 1 was also characterized by empathy scores slightly below levels previously reported in studies of typically developing school-age children. It is important to note that children in this group, on average, had the lowest empathy scores of all the classes at 18.61; however, there was great variability within the group on this score ($SD = 27.02$).

Children in the 2nd class comprised 28 % of the sample ($n = 83$) and were characterized by elevated, but not clinically significant, internalizing and externalizing behavior problems. In addition, children with this pattern of functioning demonstrated normative empathy and CU traits scores, and no evidence of social and attention problems. This group was termed

"Struggling" given that the majority of children in this group scored above the borderline clinical range or above (>60) for internalizing (69 %) and externalizing (52 %) problems.

Children in Profile 3 represented the smallest portion of the sample at 6 % ($n = 17$). This group was labeled "Severe Problems" as it was comprised primarily of children with scores reflecting clinically significant levels of problems across all CBCL domains. For each CBCL domain, the percentage of children with clinically significant levels of functioning within this class was as follows: internalizing behavior problems (88 %), externalizing behavior problems (82 %), attention problems (77 %), and social problems (59 %). In addition to being characterized by high scores on the CBCL indicators, children in this group had the highest levels of CU traits, with a conditional response mean of 31.31 ($SD = 6.61$), which is above the recently established clinical cut off reported by Kimonis et al. (2014).

Multinomial Logistic Regression to Examine Profile Covariates

After the best-fitting solution was found and classes were interpreted, multinomial logistic regression analysis (MLRA) was conducted to examine social-contextual covariates that characterized membership in the LPA class solution. Correlations among the predictors and variables used in the LPA are provided in Table 4. The multinomial logistic model parameters with Profile 1 as the reference group are presented in Table 5. Based on the reference group of Profile 1, two variables were significantly statistically associated with group membership in Profile 2 ("Struggling"). Compared to Profile 1 ("Resilient"), membership in Profile 2 ("Struggling") was predicted by having been exposed to animal cruelty (odds ratio [OR] = 3.22; $p = 0.002$). Children in this group were also less likely to be Latino (OR = 0.22; $p = 0.005$) compared to the "Resilient" group.

Three variables predicted membership in Profile 3 ("Severe Problems"), compared to Profile 1 ("Resilient"): exposure to animal cruelty (OR = 5.72; $p = 0.02$), being the biological child of the abusive partner (OR = 0.13; $p = 0.03$), and the duration of their maternal caregiver's experience of IPV

Table 2 Average latent class probabilities for most likely latent profile membership (row) by latent profile (column)

	Latent profile		
	Profile 1—Resilient	Profile 2—Struggling	Profile 3—Severe Adjustment Problems
Profile 1	97 %	3 %	0 %
Profile 2	5 %	95 %	1 %
Profile 3	0 %	4 %	96 %

Table 3   Overall sample means (SD) and socioemotional profile conditional response means (SD) for the 3-profile solution

	n	Social problems	Attention problems	Internalizing behaviors	Externalizing behaviors	Empathy	CU Traits
Sample	291	55.86 (7.11)	55.28 (6.92)	53.22 (12.30)	50.00 (12.20)	20.55 (26.64)	16.04 (6.62)
3 class solution							
Profile 1—Resilient (66 %)	191	52.03 (2.9)	51.83 (2.58)	47.12 (9.40)	43.57 (8.50)	18.61 (27.02)	13.06 (6.27)
Profile 2—Struggling (28 %)	83	61.12 (5.54)	58.99 (4.45)	63.08 (7.71)	60.23 (7.83)	24.59 (26.55)	20.01 (7.62)
Profile 3—Severe Adjustment Problems (6 %)	17	72.13 (7.42)	75.16 (6.80)	71.73 (7.82)	70.40 (6.59)	21.85 (19.77)	31.31 (6.61)

(OR = 6.89; p = 0.009). Finally, only one variable predicted group membership in Profile 3 compared to Profile 2 (this change in the reference group is shown in Table 3). Specifically, children characterized by the severe profile of maladjustment were more likely to be identified by maternal caregivers as multi-ethnic/racial (OR = 7.01, p = .05, confidence interval = 1.02–48.20) compared to children in the struggling group. None of the other variables were significantly associated with class membership.

Discussion

Patterns of Adjustment

Building on prior person-centered research employing cluster analysis, this present study is the first to our knowledge to use LPA to identify patterns of socioemotional functioning, and predictors of those patterns, in a sample of children of women accessing IPV services. This study is also the first to utilize measures of attention problems, social problems, empathy, and CU traits in concert with internalizing and externalizing behaviors and to explore the relationship of children's concomitant exposure to animal cruelty on patterns of children's functioning.

Three distinct profiles of socioemotional functioning were identified through LPA, reflecting both resilience and negative adjustment among children exposed to IPV. Children who had similar patterns of asymptomatic functioning, demonstrating positive adjustment in the face of a violent family environment, comprised the largest proportion of the sample (66 %). This finding is consistent with prior person-centered studies in this area. Both Lang and Stover (2008) and Spilsbury et al. (2008) reported on ethnically diverse community-based samples and found asymptomatic profiles encompassing 75 % and
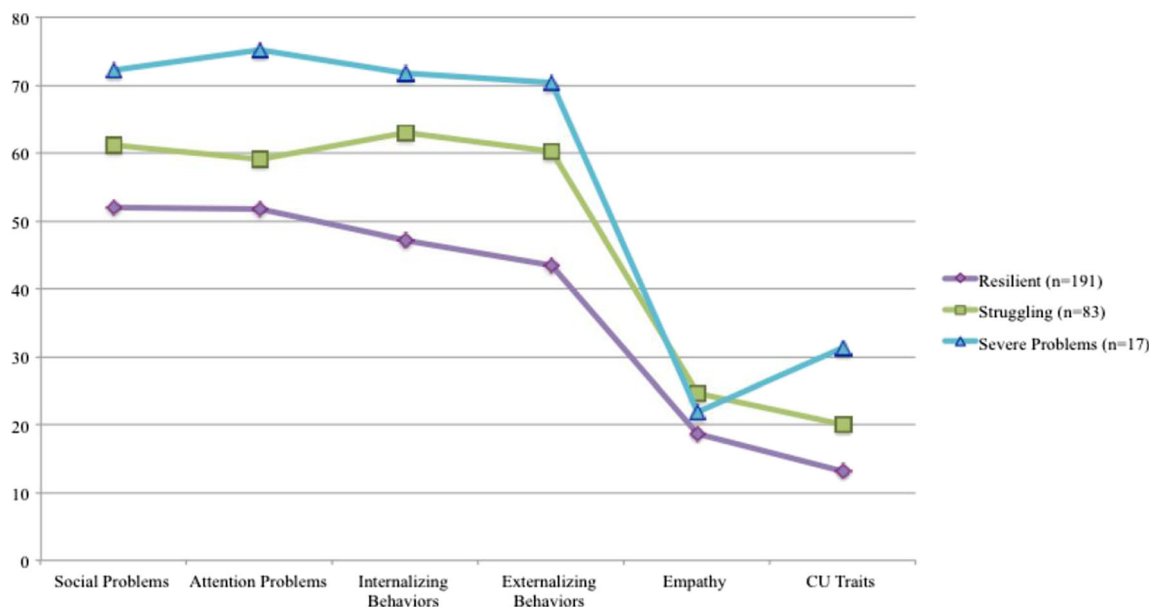

Fig. 1 Conditional response means of the 3-profile solution. *Note.* For the internalizing and externalizing scales, scores from 60 to 63 are considered to be in the borderline clinical range. Scores greater or equal to 64 are considered to be clinically significant levels of symptoms. For social and attention problems, the borderline clinical range includes scores between 65 and 69; scores equal to or greater than 70 are considered to reflect clinically significant levels of social problems. For CU traits, scores above 24 are considered clinically significant. There is no established cut-off for the empathy measure (GEM)

Table 4 Correlations among LPA indicators and covariates

Correlations	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
1. Social problems T-score	–	.690**	.714**	.652**	0.07	.308**	0.00	-0.02	.191**	0.01	-0.02	0.04	-0.07	0.05	.132*	-.223**	-0.01
2. Attention problems T-score		–	.612**	.646**	0.05	.318**	-0.04	-0.08	.200**	-0.01	-0.03	0.04	-0.07	0.09	0.03	-.222**	0.03
3. Internalizing problems T-score			–	.648**	.189**	.134*	-0.07	0.01	.279**	0.03	0.00	-0.04	0.01	0.06	0.01	-.208**	0.01
4. Externalizing problems T-score				–	0.03	.350**	-0.05	-0.05	.248**	0.06	-0.05	-0.02	-0.06	0.11	0.01	-.280**	0.10
5. GEM total					–	-.265**	0.04	-.152*	.282**	-.141*	-.128*	-0.06	0.02	-0.01	0.03	-.183**	0.07
6. ICU total						–	-.133*	0.02	-0.10	-0.11	-0.08	-0.09	-0.11	-0.10	0.09	-0.03	0.11
7. Child age in years							–	0.04	0.03	-0.08	-0.08	0.03	-0.09	0.02	.197**	-0.03	0.04
8. CEDV total								–	-0.08	.128*	0.09	0.09	0.05	0.02	0.01	0.12	-.164**
9. Maternal education level									–	-0.08	-.118*	-0.06	-0.01	0.03	-0.01	-.132*	0.01
10. CTS psychological										–	.423**	.484**	.292**	.385**	0.04	0.07	-.116*
11. CTS physical											–	.212**	.201**	0.09	0.00	0.06	0.03
12. CTS injury												–	.225**	.214**	0.00	0.02	-0.06
13. CTS sexual													–	0.09	-0.03	0.06	-0.03
14. CTS negotiation														–	-0.01	-0.07	0.00
15. Years experiencing IPV															–	-0.01	0.11
16. Yearly household income																–	-.233**
17. Number of children																	–

** Correlation is significant at the 0.01 level (2-tailed); * Correlation is significant at the 0.05 level (2-tailed). A Bonferroni correction of α = .05 for 136 comparisons is $p = .0004$. *CTS* Conflict tactic scale, *GEM* Griffith empathy measure, *ICU* Inventory of callous/unemotional traits

Table 5 Multinomial logistic regression coefficients for the LPA solution

Variable	Model 1: struggling—profile 2 vs. resilient—profile 1				Model 2: severe problems—profile 3 vs. resilient—profile 1				Model 3: severe problems—profile 3 vs. struggling—profile 2			
	B	*SE*	OR	95 % CI	*B*	*SE*	OR	95 % CI	*B*	*SE*	OR	95 % CI
Child level factors												
Age (10–12 years) [a]	−0.21	0.11	0.81[+]	[0.66–1.01]	0.01	0.23	1.01	[0.65–1.57]	0.21	0.23	1.20	[0.79–1.93]
Gender (female)	0.35	0.34	1.42	[0.74–2.75]	−0.56	0.73	0.57	[0.14–2.38]	−0.92	0.74	0.40	[0.10–1.69]
Race/ethnicity [b]												
Multi-ethnic/racial	−0.48	0.50	0.65	[0.23–1.65]	1.47	1.00	4.35	[0.64–30.83]	**1.95**	**0.98**	**7.01***	**[1.02–48.20]**
Latino	**−1.50**	**0.51**	**0.22**[**]	**[0.08–0.61]**	.23	1.25	1.27	[0.01–14.52]	1.74	1.26	5.67	
Other	−0.04	0.77	1.04	[0.23–4.29]	1.43	1.51	4.19	[0.23–80.33]	1.46	1.48	4.37	[0.24–80.08]
Biological child of partner	−0.60	0.38	0.55	[0.26–1.16]	**−2.05**	**0.80**	**0.13**[**]	**[0.03–0.61]**	−1.45	0.80	0.24	[0.05–1.13]
Exposure to animal cruelty	**1.18**	**0.39**	**3.26**[**]	**[1.52–7.00]**	1.74	0.87	5.72[*]	**[1.05–31.25]**	0.56	0.86	1.76	[0.32–9.54]
Frequency of Exposure to IPV	−0.02	0.03	0.98	[0.91–1.04]	0.03	0.07	1.04	[0.90–1.19]	0.63	0.07	1.06	[0.93–1.21]
Maternal level factors												
Education	0.06	0.07	1.06	[0.92–1.21]	0.07	0.17	1.08	[0.77–1.50]	0.02	0.17	1.02	[0.73–1.42]
Years experiencing IPV	0.00	0.03	1.00	[0.95–1.06]	**0.08**	**0.04**	**1.09**[*]	**[1.00–1.18]**	0.08	0.04	1.08	[1.00–1.17]
Psychological IPV	0.01	0.01	1.01	[0.99–1.04]	0.00	0.03	1.00	[0.93–1.07]	−0.02	0.03	0.99	[0.92–1.05]
Physical IPV	−0.01	0.01	0.99	[0.97–1.01]	−0.03	0.04	0.97	[0.89–1.05]	−0.02	0.04	0.98	[0.90–1.06]
Injurious IPV	−0.03	0.03	0.97	[0.92–1.02]	0.02	0.02	1.02	[0.99–1.05]	0.05	0.03	1.05	[0.99–1.12]
Sexual IPV	0.00	0.01	1.00	[0.99–1.02]	−0.10	0.08	0.91	[0.78–1.06]	−0.10	0.08	0.90	[0.78–1.05]
Negotiation	0.01	0.01	1.01	[0.99–1.03]	0.01	0.01	1.01	[0.99–1.04]	0.01	0.01	1.00	[0.99–1.03]
Family level factors												
Yearly household income	−0.09	0.09	0.92	[0.77–1.09]	−0.16	0.20	0.85	[0.58–1.26]	−0.07	0.20	0.93	[0.63–1.38]
Number of children	−0.02	0.13	0.98	[0.76–1.27]	−0.05	0.28	0.95	[0.55–1.63]	−0.03	0.28	0.97	[0.56–1.67]

OR Odds ratio, *CI* Confidence interval; *$p < 0.05$; ** $p < 0.01$; *** $p < 0.001$; + $p < .10$; a = 7 to 9 years is the reference group; b = White is the reference group; bold font indicates statistical significance

69 % of their samples, respectively. Graham-Bermann et al. (2009) also reported that 65 % of their sample was comprised of children who lacked obvious psychopathology. However, it is important to note that 69 % of children lacking psychopathology in Graham-Bermann's study were simultaneously characterized by low social competence and self-worth (45 % of the total sample). These constructs were absent from the current analysis and may be important indicators that assist in discriminating between patterns of resilience vs. compromised adjustment.

The other two profiles identified in the current study were characterized by patterns of maladjustment: a small group (6 %) with clinically significant levels of impairment across all CBCL domains and high levels of CU traits, and a moderately sized group (28 %) with borderline clinical levels of internalizing and externalizing behavior symptoms. In contrast to Spilsbury et al. (2008) and Grych et al. (2000), the current sample was not comprised of subgroups of children with profiles marked only by internalizing or externalizing behaviors. Both the moderate ("Struggling") and severe problems profiles reflected co-occurring internalizing and externalizing problems. This finding is important given that

research has demonstrated children with this comorbidity have a higher degree of psychopathology and negative outcomes later in life (Basten et al. 2013).

It is important to note that when interpreting the profiles, all indicators of adjustment incorporated in the LPA were important in distinguishing differences between the profiles, except for the empathy construct. While the utility of the GEM total score has been demonstrated (Dadds et al. 2008), an abundance of literature documents that cognitive and affective empathy are distinct constructs with unique correlates. Incorporating both affective and cognitive empathy scores as independent indicators may have helped to further distinguish latent patterns of functioning in the LPA. Unfortunately, the subscales did not demonstrate adequate reliability or unidimensionality in the current sample; therefore, the total score was used.

Social-Contextual Covariates of Adjustment Patterns
Conducting MLRA with the LPA solution, our findings suggest that risk and protective factors influence heterogeneity of socioemotional adjustment among children experiencing IPV. However, the hypothesis that the frequency of maternal and

child IPV experiences would distinguish between the classes was not supported. The length of time maternal caregivers reported experiencing IPV was, on the one hand, significantly associated with membership in the severe problems group compared to the resilient group. This is consistent with Spilsbury and colleagues' (2008) and Hughes and Luke's (1998) findings and suggests that children's lifetime exposure to IPV is important in distinguishing those at risk for severe maladjustment. In addition, the length of time women have been victimized may also influence child development by compromising protective factors such as maternal mental health, effective parenting, and reducing access to social support, which were not assessed in the current study (Graham-Bermann et al. 2009).

Being the biological child of the abusive partner significantly reduced children's risk of being characterized by a profile of severe socioemotional maladjustment in the model comparing Profile 3 to Profile 1. This finding differs from Grych et al.'s (2000) and Lang and Stover's (2008) results; the authors reported no associations between the child's relationship with the abusive partner and socioemotional functioning patterns. Variable-centered research, on the other hand, demonstrates that children are more likely to intervene in incidents of IPV if they are not the biological child of the abusive partner (Edleson et al. 2003). Furthermore, the presence of non-biological children among at-risk families is a risk factor for child maltreatment (Salisbury et al. 2009). Therefore, the association between this variable and children's socioemotional adjustment is not surprising.

Consistent with Graham-Bermann et al.'s (2009) findings, child age, child gender, and maternal education did not distinguish between patterns of functioning. Yearly household income was also not significantly related to profiles of functioning, which is consistent with prior research examining children in clinical (Grych et al. 2000) and community (Graham-Bermann et al. 2009) samples. This finding may reflect that the majority of participants across samples were low income with little variability in socioeconomic status. Similarly, the number of children in the household was unrelated to patterns of socioemotional functioning. This was surprising given that prior research has suggested that children's cognitive and social growth is significantly lower in larger families, especially among Spanish-speaking Latinos (Guerrero et al. 2013). Finally, interpartner negotiation (communication and positive affect when resolving conflicts), as reported by women on the CTS2, was not related to profile membership. This finding is inconsistent with Graham-Bermann and colleagues' study, which showed that family problem solving, including communication and affective responsiveness, distinguished between children with severe impairment and those with resilient profiles.

Notably, Lang and Stover (2008) and Graham-Bermann et al. (2009) found that ethnicity was not related to profile membership; however, the majority of participants in their studies were African American or White, respectively. In contrast, findings of the current study suggest that when comparing children in the struggling profile to children in the resilient profile, Latino children, compared to non-Latino White peers, were significantly less likely to exhibit profiles characterized by borderline clinical levels of internalizing and externalizing problems (Profile 2). This finding is not surprising given that 48 % of women in the sample were of Mexican heritage. Prior studies demonstrate that development in socioemotional and cognitive domains may unfold independently for Latino children of Mexican heritage (Guerrero et al. 2013). Specifically, research has provided evidence of robust socioemotional skills among Latino children in early childhood. Parallel to this study's results, research demonstrates that children from Latino families, especially immigrant families, tend to excel in socioemotional and behavioral domains at levels better than their White European American counterparts, even when faced with cumulative risks such as low socioeconomic status and low maternal education (Ansari and Winsler 2012: Crosnoe 2006; De Feyter and Winsler 2009). In contrast, risk factors such as low maternal education and household income put Latino children at greater risk for compromised cognitive and communicative functioning than children of non-Latina White women. Incorporating a broader array of cognitive indicators of adjustment may assist in distinguishing resilient and compromised patterns of functioning among Latino children exposed to IPV and help differentiate factors that predict positive and negative outcomes.

In addition, results of the MLRA indicated that multiracial/ethnic children, compared to their non-Latino White counterparts, were seven times more likely to be in the severe problems group than the struggling group. However, it is also important to note the large confidence interval for this estimate. An interval this wide signifies that it was difficult for the MLRA to calculate a precise odds ratio, most likely due to the small number of children in the maladjusted profiles. At the same time, this finding is consistent with evidence demonstrating higher levels of problem behaviors among multiracial adolescents in non-clinical samples, even when controlling for socioeconomic status (e.g., Choi et al. 2006). Scholars such as Cooney and Radina (2000) and Gibbs and Moskowitz-Sweet (1991) argue that the ambiguous racial status of multiracial youth may influence peer acceptance, leading to higher levels of psychosocial problems and behavioral issues (Choi et al. 2006). Moreover, prior research has shown that multiracial youth become aware of racial and ethnic discrimination at an earlier age than mono-racial/ethnic youth, and that the relationship between perceived racial discrimination and the likelihood of several problem behaviors is strongest for multiracial youth (Brown 1990; Choi et al. 2006). The current study was unable to account for these experiences; however, it is likely that reduced peer acceptance and perceived

discrimination may exacerbate the negative impact of IPV on child development and contribute to the increased likelihood of multiracial/ethnic children in this study being characterized by a severe profile of maladjustment in contrast to their White peers.

Finally, an important contribution of this study concerns the predictive power of concomitant exposure to animal cruelty on children's patterns of adjustment. Results of the MLRA supported the hypothesis that exposure to animal cruelty would distinguish between resilient and maladjusted profiles and suggest that incorporating assessments of children's exposure to animal cruelty in intake procedures may help identify children with the greatest risk of psychological maladjustment. Children exposed to animal cruelty were 3.26 times more likely to be in the struggling group and 5.72 times more likely to be in the severe problems group compared to the reference group of resilient children. These estimates must be interpreted with caution due to the large confidence interval. Specifically, only 15 % of children in the resilient group had been exposed to animal cruelty in contrast to 48 % of the struggling group and 41 % of the severe problems group. In an attempt to explain the link between exposure to animal cruelty and children's compromised patterns of functioning, we draw on empirical evidence that suggests that youth often turn to pets as confidantes (Katcher and Beck 1986, 1987) and rely on animals as a way of managing stress (Melson et al. 1997). Furthermore, youth often list companion animals as important social relationships in their lives (Kosonen 1996). Therefore, exposure to animal abuse may be particularly traumatic to children living in IPV-affected households (Melson 2003; Yorke 2010). Furthermore, children with a strong emotional bond to their pet may be more likely to verbally or physically engage in IPV-related incidents involving animals (Melson 2003), consequently increasing their potential risk of physical injury and subsequent adjustment problems.

Limitations

While this study is characterized by many methodological strengths, our findings should be considered tentative in light of several limitations. First, the number of covariates in the regression analyses may have resulted in artifactual significance findings by chance alone, and replication with an independent sample, which is beyond the scope of this study, is needed to confirm or rule out our results. As previously noted, the very small number of children in the clinical sub-group ($n = 17$) also contributes to large confidence intervals and potentially unstable estimates of variables differentiating that sub-group from the other sub-groups. In addition, all data, with the exception of children's IPV exposure, were provided by maternal report. This increases the potential that significant associations may be an artifact of the respondents' expectancies that adjustment problems would be interrelated and

associated with exposure to extreme acts of violence in the home, such as animal cruelty.

Given that our study collected data from a convenience sample drawn from IPV advocacy recipients, we note that our sample does not reflect the full population of women experiencing IPV; thus, null results for the associations between the IPV variables and child adjustment profiles may reflect reduced variability in scores due to our sampling approach. In addition, inclusion criteria for the larger study included having had a pet in the home during the previous year. Therefore, our findings concerning the effect of exposure to animal cruelty on child outcomes is only applicable to pet-owning families impacted by IPV and not representative of all women and children currently accessing IPV services. Recruitment materials for the larger study described the research project as a study to understand the role of pets in families, and women who elected to participate were able to select which one of their eligible children participated in the study. As a result, participants may have been more likely to choose a child with strong attachments to a pet or with a history of negative interactions with animals, possibly inflating the association of animal cruelty exposure with adjustment problems and the representation of children in the borderline clinical and clinical profiles. Though the sample size was adequate for the analytical approach, a larger sample, including child-caregiver dyads with and without pets in the home and with proportional representation of races and ethnicities, may have helped to distinguish adjustment profiles and social-contextual predictors of profile membership that were not identified in the current investigation.

Another limitation of the current study is that the predictive power of exposure to animal cruelty may be explained by the co-occurrence of child maltreatment, sibling violence, and/or exposure to maltreatment of a sibling, which frequently overlap within households characterized by animal maltreatment (DeViney et al. 1983; Khan and Cooke 2008). The focus of the overarching study that guided our data collection was centered on understanding children's exposure to animal abuse and subsequent treatment of animals. Unfortunately, co-occurring violence exposures such as child maltreatment could not be included in the survey battery due to considerations related to survey length, participant burden, and response quality. In addition, due to the vulnerable state of the participants who were coping with traumatic events, we did not collect information on additional violence exposures in order to minimize risk and stress.

Implications & Future Directions

Practice In light of these limitations, findings from the current investigation should be interpreted accordingly and viewed primarily as an initial demonstration of the value of the statistically sophisticated methodology for examining profiles of

adjustment rather than individual outcomes. While the results of this study require rigorous further replication, our findings support previous literature indicating that animal-directed violence, ethnicity, duration of maternal IPV experience, and a child's relationship with the abusive partner (biological child or not) are variables worthy of consideration as potential foci for clinical assessment. Consistent with Spilsbury and colleagues' (2008) recommendations, we suggest that assessment procedures for children exposed to IPV need to be broad enough to evaluate a range of behavioral, emotional, social, and cognitive problems or adjustment profiles potentially present among children exposed to family violence.

This approach to child assessment is particularly applicable to community-based IPV services and their ability to provide efficient services that are targeted to children's unique needs. In order to effectively assess the needs of families and refer children and caregivers to appropriate resources in their community, it is important for domestic violence and child welfare service professionals to screen for patterns of adjustment and factors that are associated with profiles of maladjustment, particularly those marked by CU traits. Children with high levels of CU traits are generally resistant to traditional intervention methods; the impact of intervention programs that rely on educative techniques such as teaching caregivers effective parenting skills are likely to be ineffective among this subset of severely maladjusted children (Frick and White 2008). To date, evidence-based interventions for children exposed to IPV have primarily been evaluated by examining the impact of one-size-fits-all program components on specific outcomes such as children's internalizing and externalizing behavior (Graham-Bermann et al. 2007, 2015). Examining the impact of current evidence-based interventions on profiles of socioemotional functioning is an important next step in family violence intervention practice and research.

Research We recommend that future research explore culturally-centered conceptualizations of resilience and incorporate a broader array of measures when assessing profiles of risk and resilience among children exposed to IPV. Measures of cognitive and communicative functioning have been relatively absent from research in this area and may be especially important indicators of adjustment for children in Latino families, which comprise the second largest and second fastest growing ethnic group in the United States (Ansari and Winsler 2012; Crosnoe 2006; De Feyter and Winsler 2009; Ennis et al. 2011). Given the historic demographic shift that is occurring in the U.S, the integration of culturally sensitive measures of resilience and adaptive functioning in family violence research can also help researchers translate empirical knowledge into culturally responsive service initiatives.

In addition, few empirical studies have attempted to model a holistic understanding of both risk and protective factors working together within the lived experience of children (Vučina and Živčić-Bećirević 2007). Research on patterns of children's socioemotional development would benefit from incorporating person-centered methodologies to explore how risk and protective factors cluster together to influence children's resilience in the face of violent family environments. It is likely that risk and protective elements within the individual's experience cluster together and form distinct and identifiably different patterns that impact children's adjustment profiles. In this vein, future research would benefit from embracing polyvictimization models to explore the impact of exposure to animal cruelty on child outcomes in the context of other co-occurring violence exposures using a person-centered approach.

Longitudinal research incorporating younger samples is also needed to examine stability/instability of socioemotional profiles over time following IPV exposure. Using a model-based person-centered methodology like latent transition analysis, factors that influence stability or change in patterns of socioemotional functioning over time could be explored and identified. Distinguishing protective factors that help children maintain positive functioning across multiple indicators of resilience through adolescence and adulthood has important implications for IPV intervention and prevention efforts. As previously discussed by Spilsbury and colleagues (2008), understanding the full range of symptomatology of younger children exposed to IPV and the preservation or change in psychopathology over time are essential to the development and implementation of successful evidence-based interventions. Furthermore, identifying factors that predict children who transition from positive to negative profiles of adjustment over time, or the reverse scenario, can help clinical and community interventions tailor often-limited resources to children at greater risk for negative outcomes.

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