

Concomitant Exposure to Animal Maltreatment and Socioemotional Adjustment among Children Exposed to Intimate Partner Violence: a Mixed Methods Study

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Abstract This study uses a mixed-methods approach to examine how patterns of exposure to animal maltreatment (AM) are related to socioemotional adjustment among children ($N = 291$) recruited from intimate partner violence (IPV) services. First, latent profile analysis (LPA) was used to identify subgroups of children with similar patterns of socioemotional functioning. Next, qualitative data from mothers and children were analyzed to identify thematic patterns in AM exposure among two subgroups of children identified through the LPA: Asymptomatic children and children with Emotional and Behavioral Difficulties (EBD). Seven themes were identified. Overall, EBD children, when compared to Asymptomatic children, were more likely to: a) have been exposed to severe forms of violence against animals, b) have experienced direct victimization by an IPV perpetrator following an effort to protect a pet, and c) express justification and normalization of violence against pets. Implications of our findings for research and clinical practice are discussed.

Keywords Animal maltreatment · Intimate partner violence · Childhood trauma

Introduction

Children's exposure to intimate partner violence (IPV) is a prevalent public health concern in the U.S., with more than 1 in 15 children ages 17 or younger witnessing IPV each year (Hamby et al. 2011). A large body of research has provided evidence that exposure to IPV is associated with higher levels of internalizing (e.g., anxiety, depression; Jouriles and McDonald 2015; Kitzmann et al. 2003) and externalizing (e.g., aggression; Bair-Merritt et al. 2015; Graham-Bermann et al. 2015; Kitzmann et al. 2003) problems in children. Children exposed to IPV are 3 to 9 times more likely to be maltreated and/or exposed to other forms of family violence, relative to non-exposed children (Hamby et al. 2010). These co-occurring forms of violence exposure increase their risk for compromised socioemotional outcomes (Graham-Bermann et al. 2010; Margolin et al. 2009; Renner 2012).

One form of violence that frequently overlaps with IPV is maltreatment of household pets. Research consistently documents that children living in households where IPV occurs witness significantly more animal maltreatment (AM) than children from families where IPV is not present (e.g., Ascione et al. 2007; Volant et al. 2008). For example, Ascione et al. (2007) found that 61.5% of mothers residing at a domestic violence shelter reported that their child(ren) had seen or heard a pet abused in the home; in contrast, the rate of children's exposure to animal abuse in a comparison group of mothers who did not report IPV victimization was only 2.9%. National surveys of pet ownership indicate that approximately 75% of U.S. households with children over the age of six report having a companion animal in the home (American Veterinary Medical Association 2007). Despite the high prevalence of household pets and the notable proportion of children who dually experience IPV and violent maltreatment of animals, few studies have examined the relationship between

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children's exposure to AM and their socioemotional adjustment in the context of IPV.

Animal Maltreatment Exposure, IPV, and Child Wellbeing

Findings from recent qualitative studies (e.g., Collins et al. 2017; McDonald et al. 2015, 2017) suggest that the type of maltreatment that children are exposed to, the motivations they attribute to the violence, and their emotional and behavioral reactions to AM, may have important implications for understanding the link between AM exposure and children's socioemotional adjustment within the context of violent families. In particular, recent studies of pet-owning women and children recruited from community-based IPV services reported that children are often directly exposed to AM perpetrated by a caregiver/parent that is aimed to: (a) coerce and force the compliance of an intimate partner (McDonald et al. 2015, 2017), (b) punish the pet for misbehavior (McDonald et al. 2015, 2017), and/or (c) coerce or punish the child (McDonald et al. 2017). Moreover, these recent studies suggest that a child's emotional and behavioral responses to AM impact how they experience and cope with such events (McDonald et al. 2015, 2016). Across studies utilizing adult and child samples, there is evidence that children experience extreme emotional distress when witnessing traumatic violent incidents involving animals, and tend to cope with the event by directly intervening in violent incidents to protect pets, or, by acting preemptively (e.g., hiding the pet in the closet) to prevent violent incidents against the pet (McDonald et al. 2016, 2017).

A small body of quantitative research provides evidence suggesting that childhood exposure to animal maltreatment, irrespective of exposure to IPV, is associated with psychopathology in childhood (e.g., externalizing and internalizing behavior; McDonald et al. 2016) and adulthood (e.g., anxiety and depression; Girardi and Pozzulo 2015). For example, a study of university undergraduates reported that among participants who reported having medium-level bonds with a pet in childhood, those who witnessed aggression against the animal had significantly higher anxiety and depression scores in adulthood as compared to participants who were not exposed to aggression directed at the pet (Girardi and Pozzulo 2015). A major limitation of previous work in this area, however, is that exposure to AM has been measured in a dichotomous manner, comparing participants with no exposure to those with *any* type of exposure to animal maltreatment. In the context of households affected by family violence, particular types of AM exposure (e.g., threats, mild violence such as hitting, severe violence involving weapons) may have unique impacts on children's socioemotional

adjustment. Moreover, the risk of intervening in violent incidents involving pets may put some children at risk for intentional and/or accidental harm, which could result in increased risk for maladjustment (Jouriles et al. 2014; McDonald et al. 2015). To date, no published research has explored how the severity and/or type of AM to which children are exposed and/or children's emotional and behavioral reactions to such events (e.g., intervening in the incident) relate to patterns of emotional and behavioral adjustment among children exposed to IPV.

Study Background

The current study expands on our recently published research (McDonald et al. 2016) that reported on profiles of socioemotional adjustment among 291 children exposed to IPV. This prior work used latent profile analysis (LPA; Lanza et al. 2003), a model-based, person-centered statistical approach, to identify subgroups of children with similar patterns of functioning across six indicators of children's adjustment (internalizing and externalizing behavior problems, social problems, attention problems, empathy, and callous/unemotional traits). Following identification of the latent profiles, we then utilized multinomial logistic regression (MLR) to examine exposure to AM as a predictor of socioemotional adjustment profile membership alongside other individual- (age, gender), maternal- (education level, duration of IPV), and family-level risk (annual income, number of children in household) and protective factors. Results of this study identified three profiles of children's functioning (see Fig. 1): (1) resilient, (2) struggling, and (3) severe maladjustment. "Resilient" children comprised 66% of the total sample ($n = 191$) and were characterized by asymptomatic patterns of functioning across all measures. Children in the "Struggling" group comprised 28% of the sample ($n = 83$) and were characterized by elevated internalizing and externalizing behavior problems; the majority of children in this group scored above the borderline clinical range for internalizing and externalizing problems, but scored in the normative range across other indicators of adjustment. Children in the "Severely Maladjusted" group comprised the smallest portion of the sample at 6% ($n = 17$), and included children with scores reflecting clinically significant levels of problems across all domains of functioning, with the exception of empathy. Results of the MLR analysis indicated that when controlling for multiple risk and protective factors, including the severity of children's exposure to IPV, children in our sample who were exposed to animal abuse were 3.26 times more likely to be in the struggling group and 5.72 times more likely to be in the severe maladjustment group. These findings indicate that experiences of animal

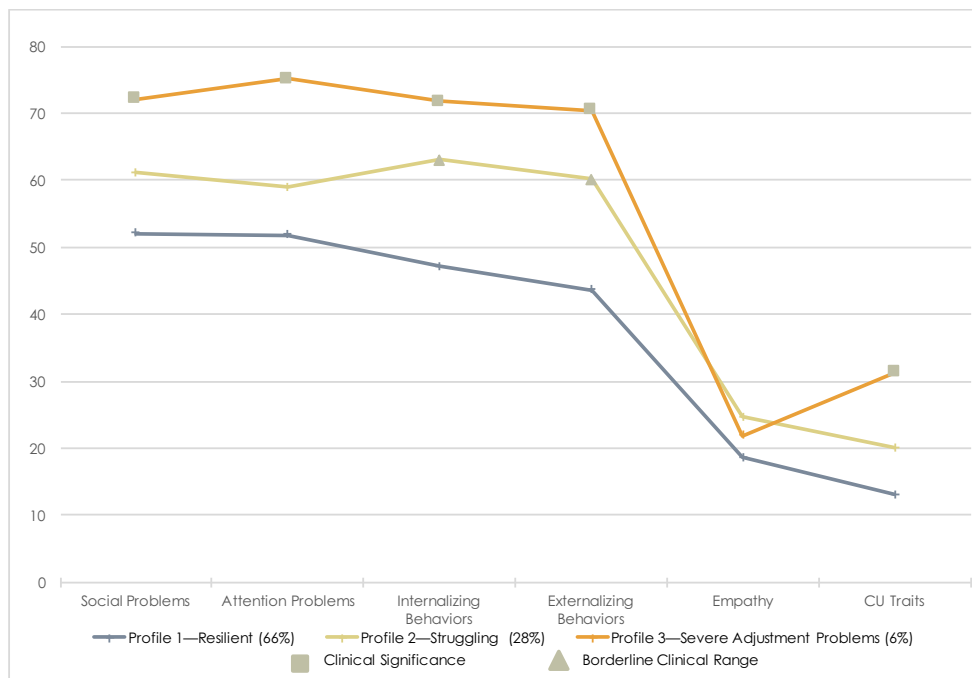


Fig. 1 Conditional Response Means of the 3-Profile Solution for the LPA. Adapted from “Patterns of Adjustment among Children Exposed to Intimate Partner Violence: A Person-Centered Approach” by McDonald et al. (2016), *Journal of Child and Adolescent Trauma*, 9(2), p. 137–152. Copyright 2016 by Springer International Publishing. Adapted with permission. 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)

abuse within households characterized by IPV may impact children’s socioemotional development and wellbeing. These findings also suggest that, while exposure to AM is a predictor of maladjustment, not every child who experiences AM will exhibit problem behaviors; nearly 40% of children in our sample who were exposed to AM demonstrated asymptomatic patterns of functioning.

Current Study The overarching aim of our exploratory study is to expand on the results of the aforementioned LPA study and identify qualitative thematic differences and similarities in AM exposure across the subgroups of resilient and maladjusted children. Specifically, we systematically examine qualitative data from a subset of mothers who reported that their child had been exposed to AM to identify thematic patterns in their accounts of their child’s AM exposure. Given that prior research (e.g., Collins et al. 2017; McDonald et al. 2017) indicates that some caregivers are unaware of the full extent of their child(ren)’s exposure to AM, child self-reports of exposure to AM were simultaneously analyzed alongside maternal transcripts. This approach was employed in order to gain a more holistic and contextualized understanding of

how children are exposed to AM and how this exposure may relate to and influence socioemotional adjustment.

Methods

Sample

The qualitative data analyzed for this study were collected as part of a larger mixed methods phenomenological research study of women and children’s experiences of IPV and AM. Study procedures were approved by the Institutional Review Board at the University of Denver. Women (N = 291) and one of their children (aged 7–12 years) were recruited from 22 community-based domestic violence agencies in a Western state. Women were eligible to participate if they were at least 21 years of age, had at least one child between the ages of 7–12, and had a family pet in the household in the last 12 months. If women had more than one eligible child, they were able to choose which child they wanted to participate in the study. Data from this sample of 291 mother-child dyads were used to identify latent profiles of socioemotional functioning among children in the sample (reviewed in detail in McDonald et al. 2016). Among the total sample of 291 mother-child dyads, 25.8% of mothers endorsed that their

child ($n = 75$ children total) had witnessed a pet hurt or killed in the home. Out of these 75 children, 74 mothers and/or their children provided qualitative data on the nature of the child's exposure to animal abuse. Qualitative transcripts from this subset ($n = 74$) were analyzed for the current study.

Participants

Maternal caregivers were, on average, 37 years old ($SD = 7.89$). The majority of mothers identified as White (54.1%), followed by Hispanic (24.3%), Multiracial (14.9%), Black (1.4%), Asian (1.4%), American Indian/Alaska Native (1.4%), and Native Hawaiian/Pacific Islander (1.4%). Women in the sample reported on children between the ages of 7 and 12, (mean age 8.91, $SD = 1.57$). The child sample was gender balanced (49% female), and the racial/ethnic distribution included: 41.9% White, 32.4% multiracial/multiethnic, 20.3% Hispanic, 2.7% African American, 1.4% Asian, and 1.4% Native American or Alaska Native. Seventy-four percent of children were biological children of their caregiver's abusive partner. At the time of data collection, 82% of children in the sample had a sibling/s; 31% had one sibling, 31% had two siblings, and 20% had more than two siblings. The majority of participants had more than one pet; 72% reported having a pet dog in the household, 52% reported having a pet cat, and 31% had a bird or another type of pet (e.g., gerbil, rabbits). Sixty-nine percent reported household incomes under \$30,000 and 29.6% reported household incomes under \$10,000.

Survey Procedures

Designated staff members at 22 domestic violence agencies were trained to screen service recipients for eligibility, review risks and benefits of participation, and obtain consent and assent for participation. The designated staff members were also trained to administer survey materials. Survey administrators met separately with women and children in a private space at the agency where they received services. Surveys were available in English and Spanish; when participants chose to complete the survey in Spanish, a bilingual (Spanish/English) survey administrator facilitated the procedures. In order to promote participants' comfort, confidentiality, and trust, women were offered the option of writing responses to the survey instruments on the forms or having a trained staff member verbally administer the survey to them and record their responses in writing. Regarding child interviews, survey administrators were trained to complete the interview at the child's pace, and the assent procedures involved giving the child time to role-play exercising their right to break from and terminate the interview. In addition, many steps were taken to minimize the burden of collecting data on participating agencies; as such, the trained staff members who served as survey administrators were not required to track which

surveys were administered verbally or in writing. Survey administrators were required to report any adverse events that occurred during the interview; no reports were made. None of the interviews led to new reports to Child Protective Services. Adults and children were compensated \$65.00 and \$15.00, respectively.

Measures

Maternal Reports of Children's Exposure to Animal Maltreatment

The Pet Treatment Survey (Ascione 2011) is a revised version of the Battered Partner Shelter Survey—Pet Maltreatment Assessment (BPSS; Ascione and Weber 1996). The PTS is composed of closed and open-ended questions designed to assess animal care (e.g., veterinary care) and treatment (animal maltreatment) among individuals receiving residential and non-residential domestic violence services. Among the survey questions about AM by an intimate partner, one question asks the participant whether their partner has ever *threatened* to hurt or kill a family pet, a second question asks whether the abusive partner has ever *actually hurt or killed* a family pet. If a participant endorses one of these items, follow-up questions, including whether their child(ren) has ever seen or heard a pet hurt or killed in the home, are asked. Specifically, participants are asked (item 18), "Has your child, who will be completing the questionnaires for this study, ever seen or heard pets hurt or killed in your home?" Per the PTS design, participants who responded affirmatively to this question were also asked to give a detailed account of the event. Only participants who provided qualitative responses to this item were included in the current study, and participants' responses to this question were the primary foci of the analysis. However, given the sequential nature of the interview procedures, participants' qualitative responses to other questions on this survey often provided important contextual information that enhanced the authors' understanding of children's exposure to AM. Thus, all qualitative responses on the PTS were examined. These questions are provided in Table 1. For the purposes of our study, a Spanish language version of the PTS was created using the translation-back-translation procedure (Van de Vijver and Hambleton 1996). Thirty-three percent of participants completed the Spanish language version.

Child Reports of Exposure to Animal Maltreatment

The Children's Observation and Experiences with Animals Survey (COEP; Ascione et al. 2007), which was administered as a semi-structured interview, was used to assess children's self-reports of exposure to AM. This 15-item, semi-structured questionnaire has been used successfully in previous research with 5- to 17-year-old children (Ascione et al. 2007; McDonald et al. 2015). For the purposes of our study, the measure was adapted in the Spanish language using the translation-back-translation procedure (Van de Vijver and

Table 1 Qualitative interview questions on the pet treatment survey (PTS)

Item #	Qualitative Question on PTS
7	Has your partner helped care for your pets? If yes, please describe the type of care provided.
8	Has your partner ever threatened to hurt or kill one of your pets? If yes, please describe the incident(s) in as much detail as possible (when-where-how-why).
11	Has your partner ever actually hurt or killed one of your pets? If yes, please describe the incident(s) in as much detail as you are able (when-where-how-why).
15	Did anyone call the police or humane society (or animal control) to report that the animal was threatened or hurt or killed? If yes, who made the call? Who was called (Police, Humane Society, Animal control?). What was their response?
16	Have you ever hurt or killed one of your pets? If yes, please describe the incident(s) in as much detail as you are able (when-where-how-why).
17	Does your child, who will be completing the questionnaires for this study, help care for your pets? If yes, please describe the type of care given.
18	Has your child, who will be completing the questionnaire for this study, ever seen or heard pets hurt or killed in your home? If yes, please describe the incident(s) in as much detail as you are able (when-where-how-why).
19	Has the child you have chosen to complete the questionnaire ever hurt or killed one of your pets? If yes, please describe the incident(s) in as much detail as you are able (when-where-how-why).
21	Do your other children help care for your pets? If yes, please describe the type of care given.
22	Have any of your other children ever seen or heard pets hurt or killed in your home? If so, please describe the incident(s) in as much detail as you are able (when-where-how-why).
23	Have any of your other children ever hurt or killed one of your pets? Please describe the incident(s) in as much detail as possible (when-where-how-why).
25	(Residential Services): Did concern over your pet’s welfare keep you from coming to this shelter sooner than now? If yes, please explain (Non-residential): Does concern over your pet’s welfare affect your decision making about staying with or leaving your partner? If yes, please explain.
28	Are there any other pet or animal-related issues you would like to describe (e.g., treatment of farm animals, wild animals, strays)? If yes, please describe the incident(s) in as much detail as you are able.

Hambleton 1996). To further contextualize maternal responses on the PTS, qualitative data from the following three COEP questions were analyzed: 1) Has anyone ever said they would hurt or kill one of your pets but not do it? 2) Have you ever seen or heard one of your pets hurt or killed? and 3) Have you ever protected one of your pets or saved it from being hurt? When children answered affirmatively, the survey administrator asked the child, “Please tell what happened as you remember it.” In addition, the interviewer used “who-when-where-how-why” prompts when responses necessitated clarification. Children were also asked to clarify their relationship to the perpetrator (e.g., friend, sibling, parent, stepparent) of the reported animal-directed threats or harm. While the qualitative analysis of child report data primarily focused on the three questions provided above, on occasion, children provided descriptive responses to questions that were designed to be close ended. These unsolicited descriptions often provided rich, supplementary information about the context and nature of their

exposure to AM in the home; therefore, details provided in these descriptions were also analyzed to supplement the authors’ thematic analysis.

Children’s Socioemotional Adjustment Six dimensions of children’s socioemotional functioning were evaluated in the quantitative LPA analysis to determine socioemotional adjustment class membership: social problems, attention problems, externalizing and internalizing behaviors, empathy, and callous/unemotional (CU) traits. Social problems, attention problems, and internalizing and externalizing behaviors were assessed via maternal report on the Child Behavior Checklist (CBCL 6/18; Achenbach and Rescorla 2001). Specifically, the following *T* scores, which are normed by age and gender, were selected: social problems ($\alpha = .77$), attention problems ($\alpha = .82$), internalizing behavior problems ($\alpha = .90$), and externalizing behavior problems ($\alpha = .92$). Children’s empathy scores were ascertained via maternal report on the Griffith Empathy Measure (GEM; Dadds et al. 2008). The GEM is a

parent-report measure comprised of 23 items that assess children's cognitive and affective empathy. Finally, CU traits were assessed using maternal report on the Inventory of Callous and Unemotional Traits—Caregiver Report Form (ICU; Frick 2004). The ICU is a 24-item instrument that measures the presence and intensity of CU traits among children (Essau et al. 2006). A detailed review of each measure is provided in McDonald et al. (2016).

Analysis

LPA First, latent profile analysis was conducted in Mplus (Version 7.3; Muthén and Muthén 1998–2011) to identify whether there were latent subgroups of children with similar patterns of socioemotional functioning. A detailed explanation of model estimation, selection, and interpretation is provided in McDonald et al. (2016). After arriving at the optimal 3-profile solution, children were assigned to a group based on their most likely class membership (Resilient, Struggling, Severely Maladjusted); then, these data were exported to SPSS for descriptive analysis procedures.

Qualitative Procedures Among children in the “Resilient” adjustment group ($n = 191$), maternal and/or child report qualitative data were available for 27 out of 28 children whose maternal caregiver endorsed that their child had been exposed to animal maltreatment. Qualitative descriptions were available for all children in the Struggling group whose mother endorsed child exposure to animal abuse (40 of 83), as was the case for children in the Severely Maladjusted group whose mother endorsed child exposure to AM (7 out of 17). Given the small number of children in the severely maladjusted group and brevity of some participants' responses, we elected to create *two* comparative groups for the purposes of the overarching study aim and our qualitative analysis procedures: *Asymptomatic Children* vs. *Children with Emotional-Behavioral Difficulties* (EBD). The Asymptomatic group included children who had been classified into the “Resilient” socioemotional profile group ($n = 27$) in our earlier study (McDonald et al. 2016), whereas the EBD group ($n = 47$) included children who had been classed into the “Struggling” ($n = 40$) or “Severely Maladjusted” group ($n = 7$). MaxQDA software (version 11) was used to link quantitative data with participants' qualitative interview transcripts while retaining their comparative group assignment.

Step 1: Template Analysis A two-step analysis strategy was employed. First, template analysis (Brooks and King 2012; King 1998) was used to identify themes and contextual factors pertaining to children's exposure to animal abuse. Template analysis was selected because the approach is well suited for team-based coding approaches using large qualitative data sets (King 1998; Brooks and King 2012). Moreover, the method is

compatible with phenomenologically oriented research designs (King 1998; Brooks and King 2012). During the template analysis coding phase, transcripts from both the Asymptomatic and EBD group were analyzed collectively. The initial template was guided by our research questions, relevant literature, and an initial immersion into the data. For example, the initial template included codes reflecting children's proximity, involvement, and intervention in AM incidents. Using MaxQDA software (version 11), the second and fourth authors independently applied the initial coding template to the same set of 10 randomly selected transcripts. Then, these two coders met to compare their coded segments and assess coding consistency. Through a peer debriefing process (Padgett 2008) that included the first author, the template was adjusted to better capture content in the observed data that the coders believed was meaningful, but had not been captured by the initial template. Code definitions were refined during the peer debriefing process as well. This sequential coding and peer debriefing procedure was repeated for three more cycles until the two coders felt that the template was comprehensive and accurately captured the data. After the final template was established, it was applied to all transcripts by the two coders. This template included 37 codes, which were organized into 4 code families using the MaxQDA software: direct exposure to animal maltreatment, child perpetration of animal maltreatment, child emotional expressions, and family violence. Next, ten transcripts were selected at random and Krippendorff's alpha (KALPHA) was computed using the Coding Analysis Toolkit (CAT; Lu and Shulman 2008) to assess reliability of coders' application of the final coding scheme. Reliability ranged from satisfactory (KALPHA = .63) to excellent/perfect (KALPHA = 1), with an overall KALPHA of .83.

Step 2: Integrating Quantitative and Qualitative Data

After applying the final coding template to all transcripts, the first two authors assessed the codes for commonalities, differences, and thematic patterns (Boyatzis 1998; Glaser and Strauss 1967). Then, differences in patterns within and across the comparative groups (Asymptomatic and EBD) were identified. During this phase, the transcripts for the Asymptomatic and EBD children were examined separately and then compared. Final themes were identified by the first two authors, then confirmed and refined by consensus of the research team.

Results

Themes in Asymptomatic Children's Exposure to Animal Maltreatment

Theme 1: Exposure to Mild Violence against Animals ($n = 18, 67\%$) A theme in asymptomatic children's exposure to AM was exposure to mild aggression and violence

against animals (e.g., grab, push, shove, slap, spank, kick, throw object at; Raviv et al. 2001). Many children in this subgroup were exposed to their mother's abusive partner using physical punishment to discipline a pet for misbehavior. For example, one mother described her 8-year-old child's exposure to physical punishment of his dog as she recounted, "[Child] witnessed [his] dad hurt a dog that was aggressive during feeding." Children's descriptions of their exposure also supported this theme, and some children spoke about exposure to their pets' physical punishment that occurred when their maternal caregiver was not present. A 7-year-old girl disclosed, "He [mother's partner] spanked my puppy's butt when my mom was at work."

In addition to describing physical punishment of animals, women and children represented in this theme also discussed child exposure to mild violence against animals which they attributed to the perpetrator's general dislike of animals and/or negative emotional state (e.g., being angry). For example, one 10-year-old girl reported, "[My] step dad was mean and kicked my dog. He does not like small dogs. It [animal harm] happened in my house."

Theme 2: Threats of Mild and Severe Violence against Pets ($n = 12$; 44%) While asymptomatic children were exposed to relatively mild forms of violence against animals, they were subject to witnessing threats of both mild and severe forms of violence against pets. Moreover, women and children described these threats as coercive efforts to control their behavior. Pertaining to coercive control of maternal caregivers, one 8-year-old boy said, "My dad would say that he was going to burn him [pet bird] with a lighter if my mom left." A 10-year-old boy disclosed that, "Mi papá siempre dice que va a lastimar el perro muy fuerte so no hago caso o obedesco./ My dad always says that he will hurt the dog very badly if I do not listen or obey."

Similar to the motives women and children attributed to IPV perpetrators' mild violence against animals, participants also described threats of violence against animals that they perceived to stem from the perpetrators' general dislike of animals or specific species/breeds. For example, an 11-year-old girl stated, "My dad doesn't like cats, so he threatened to hurt it. He would tell the cat to go away." A 7-year-old boy shared, "My dad always said that he is going to run my cat over with the car. Because he hates pets." Also consistent with Theme 1, some women and children alluded to the IPV perpetrator's negative emotional state when describing threats against animals. One mother noted, "When he [IPV perpetrator/partner] gets mad, he will say he is going to 'take him for a ride'." Similarly, a 9-year-old boy said, "My dad, when he is mad, he says he is going to throw the birds away."

Theme 3: Actions and Strategies to Prevent Animal Maltreatment Incidents ($n = 5$; 19%)

An additional theme across transcripts, albeit less prevalent among this group, was that several children reported that they engaged in preventative strategies to protect their pets from harm, when the animal wasn't in immediate danger. Furthermore, several children reported using behavioral and emotional cues to determine when to implement their safety strategies. A 7-year-old girl described, "When my dad is mad I lock him [pet] in the room, so he [dad] don't have access to him." A 9-year-old boy disclosed that, "When I see my dad mad I will put the birds in a box under my bed so that if he throws the cage they're not in there." One child, age 10, described a collaborative strategy enacted with his mother to keep their animal safe, "Cada vez que veo a mi papá enojado o de malas, escondo mi perro y lo atranco en una jaula que mi mamá tiene escondido en el closet para que no lo encuentre./ Whenever I see my dad angry or behaving bad, I hide my dog by putting him in a cage that my mom has hidden in the closet so he can't find it."

Themes in EBD Children's Exposure to Animal Maltreatment

Theme 4: Exposure to Severe Violence against Animals ($n = 38$; 81%) Exposure to severe forms of violence (e.g., knife, gun, shooting, killing, physical injury; Raviv et al. 2001) was the most prevalent theme across maternal and EBD children's accounts of AM exposure. These incidents were often described in the context of IPV episodes and/or women's attempts to leave the abusive partner and resulted in severe injury to the pet. Notably, four women reported that their child(ren) had witnessed the death of an animal at the hands of their partner. An 8-year-old boy said that his dog "... got hurt because dad kept kicking, and kicking my dog- he didn't kill any pets until we got to shelter. When we went by there, my bird was gone." The use of household objects as weapons, pellet guns, and firearms were often alluded to during descriptions of such incidents. For example, a 12-year-old girl said, "I heard it [harm to the animal], and it was my dad. He shot her with a BB gun." When discussing her daughter's exposure to animal maltreatment, one mother stated, "She has seen her dog kicked, beaten, and choked many, many times. He chokes him with the leash. He has held him up high with the leash so he can't breathe." Many children were subject to witnessing incidents of animal traumatic injury. When discussing injury to a dog by her mother's partner, an 11-year-old girl said, "[Animal] came home with 1/3 her forehead split open". Similarly, a 9-year-old girl disclosed, "My dad one time grabbed another cat and threw her into the sun room and my mom had to lie to the vet when the cat got surgery." One mother talked about the proximity of her 9-year-old

daughter's exposure to severe animal abuse as well as her age at the time of exposure, stating, "*She was in the room- a foot from him- during a lot of the abuse. She was a toddler when most of it was happening.*"

Theme 5: Threats of Severe Violence against Pets ($n = 14$; 30%) Consistent with Asymptomatic children's experiences, EBD children were also subject to IPV perpetrators' threats of violence against animals; however, the majority of threats among this subset involved severe violence and occurred in the context of households where AM was used as a tactic of coercive control and/or retaliation to influence child and/or mothers' behavior. A 7-year-old boy said, "*En la casa siempre que va a quemar mi perro./ At home, always, [he threatens] that he will fry my dog.*" An 11-year-old boy stated, "*My dad threatened to hurt them, kill them, and get rid of them. Last time was 2 or 3 days before we came to shelter.*" A mother described, "Every time when he gets mad, he says that as he bought it [the mouse] and pays for everything that he is going to cook and eat it if we [mother and child] do not listen."

Theme 6: Normalizing and Justifying Animal Maltreatment ($n = 15$; 32%) Another pattern among EBD children's accounts of exposure to AM was their normalization and justification of AM behaviors. For, example, a 7-year-old boy said, "*She [pet] sometimes does bad stuff so we don't treat her that good.*" An 8-year-old girl stated, "*My dad hurt my cat because she latched onto my leg and he tried to pull her off and then she latched onto him and he flung her into the cabinet and she passed out.*" Several children represented in this theme described their own involvement, as well as siblings' involvement, in animal maltreatment. In fact, some children normalized harm to animals as a typical pattern of behavior engaged in by all members of the household. For example, a 10-year-old girl said, "*I'd hear 'bad girl' and dad smacks her head like this [acts out animal maltreatment]. That's pretty normal cause that's what we [the family] do when the cat gets in trouble.*" This generalized normalization of AM in the household was also supported in several mothers' accounts. One mother described how her husband normalized and justified AM around her sons and how that might impact their view of animal maltreatment. She said, "*My husband plays it off [animal abuse] as funny- funny, fun and entertaining. The boys might think it's fun too. They might be upset like me. My husband throws the cats and will say "what? They land on their feet." So I don't know if he really doesn't think it will or if he does it to hurt them.*"

Theme 7: Emotional Responses Leading to Child Intervention and/or Child Direct Victimization ($n = 8$; 17%) In contrast to the Asymptomatic group, both maternal and child accounts of exposure to AM among EBD children

suggest that children's emotional responses to threats and violence against animals led to their involvement in such incidents which, in some cases, also led to victimization of the child. One mother described how her 11-year-old son intervened in his father's abuse of a pet dog, stating that, "*Hace 8 meses a visto a su papa cuando llego a casa y lo avento la piso en la casa cuando el nino llego y saco al perro afuera y comenzo a llorar. / Eight months ago, he [son] saw his dad coming home and throwing the dog on the floor in the house, so he came by and took the dog outside and began to cry.*" Another mother stated that, "*Si mi hija siempre miraba cuando mi esposo le pegaba. Ella corria y agarraba el perro y lo abrazaba y lloraba con el./ Yes, my daughter always watched when my husband was beating the dog. She would run up and grab the dog and hug him and cry with him.*" The mother of an 11-year-old girl reported that her husband was "going to shoot one of her [daughter's] dogs for killing a chicken and she [daughter] let the dog loose so he could run free." Children also reported taking steps to protect pets in immediate danger of being harmed. A 9-year-old girl stated, "*Cuando mi papá trata de maltratar a mi perro yo lo protejo. Me lo llevo del cuarto y llevo a mi perro a donde el duerme para que mi papá no le pegue./ When my dad tries to mistreat my dog, I protect him. I take my dog out of the room to the spot where he sleeps so that my dad would not kick him.*" In a few cases ($n = 4$), mothers and children described the same, salient incident in which children were victimized by abusive partners due to their efforts to protect animals. A mother of an 8-year-old boy said, "[...] *my abuser shooting the dogs in the butt. My son would try to stop him, then my abuser would choke my son for interfering.*" Her son reported, "*My dad was going to shoot BB guns at him. Then I tried to stop him and he grabbed my throat. [...] I would protect my pets from my dad by tackling my dad to the ground.*"

Discussion

Through a mixed methods design, the current study examined the relationship between AM exposure and socioemotional adjustment among children exposed to IPV. We aimed to identify differences in asymptomatic and maladjusted children's AM experiences and explore whether specific patterns of exposure may relate to child functioning. Specifically, we expanded on previously published work (McDonald et al. 2016) that identified asymptomatic and maladjusted profiles of adjustment among children exposed to IPV. This prior study identified that concomitant AM exposure, while prevalent among some asymptomatic children, was associated with increased odds of children being characterized as having borderline and clinical levels of behavior problems across multiple indicators of adjustment. This relationship was evident when accounting for the severity of children's exposure to

IPV, severity of maternal IPV experiences, and other co-occurring sociodemographic risk factors (i.e. income, education). Using the subgroups identified in the prior LPA study, the current study identified and compared qualitative thematic pattern differences in AM exposure between asymptomatic children and those with patterns of emotional and/or behavioral difficulties. Three themes emerged from caregiver and child reports of Asymptomatic children's exposure to animal maltreatment: direct exposure to mild animal-targeted violence (Theme 1), threats to animals ranging in severity from mild to severe (Theme 2), and children engaging in successful strategies to prevent AM (Theme 3). In contrast, the accounts of EBD children and their caregivers indicated that AM exposure in this group primarily involved direct exposure to severe animal-targeted violence (Theme 4) and threats to animals that involved descriptions of severe violence (Theme 5). Notably, child accounts of their exposure suggested that children in this group normalized and/or justified the mistreatment of animals by multiple household members (Theme 6). Moreover, EBD children engaged in actions to intervene in animal maltreatment, often resulting in direct victimization of the child (Theme 7). The thematic findings that emerged suggest that AM exposure patterns relate to patterns of child adjustment and support prior evidence (Girardi and Pozzulo 2015; McDonald et al. 2015, 2016, 2017) that AM exposure is a category of violence exposure that holds independent significance in children's development and should be considered in future studies of polyvictimization.

Notable distinctions between the subgroups of children emerge when contrasting themes 1 and 2 with themes 4 and 5. Our findings indicate that Asymptomatic-classified children were exposed to less severe animal-directed violence and threats than were EBD-classified children. Accounts of animal violence reflected in theme 1 include reports by Asymptomatic children and their mothers of mild animal-directed violence (e.g., 'spanked') whereas reports by EBD children and their mothers reflected in theme 4 speak to severe animal-directed violence including acts resulting in traumatic injury to or death of the animal. Such distinctions parallel findings in prior IPV literature that severity of witnessed violence is associated with the severity of child maladjustment (Jouriles et al. 2008; Kitzmann et al. 2003). Likewise, the severity of psychological abuse, one tactic of which is verbal threats, is associated with deleterious outcomes among IPV surviving women (Renner 2009) and children who are direct targets of psychological maltreatment (Spinazzola et al. 2014). The threats of AM experienced by EBD children, reflected in theme 5, were consistently more severe than the threats experienced by Asymptomatic children. Thus, exposure to more uniformly severe threats of and violence toward animals emerged as a feature of AM exposure among the EBD group. Prior studies report that severity and frequency of IPV-exposure corresponds to increased maladaptation in

children (Graham-Bermann et al. 2009; Grych et al. 2000; Spilsbury et al. 2008). The current study extends such literature by suggesting that AM severity, both physical and psychological, may likewise relate to maladjustment in IPV-exposed children.

In addition to identifying the type and severity of AM children witnessed, the themes also shed light on circumstantial factors participants identified as leading to animal maltreatment. Among the responses pertaining to Asymptomatic children, (themes 1 and 2), both mild violence and threats were seen as resulting from pet discipline and from the perpetrator's general dislike of animals or negative emotional state. Additionally, threats to animals were identified within this group as tactics of coercive control to instruct children of consequences if perpetrator demands were not met (e.g., "if I do not listen or obey"). Generally, Asymptomatic children seemed to appraise the circumstances leading to AM as having been caused by animal misbehaviors or by perpetrators' inherent traits. The EBD children, in contrast, not only identified AM as pet punishment meted out by the IPV perpetrator, but also described normalized maltreatment of animals engaged in by multiple household members including themselves (e.g., 'we don't treat her that good'). Although multiple family members of EBD children participated in normalized AM (theme 6), the IPV-perpetrating family member was solely identified as the perpetrator of the severe threats and severe violence to animals (themes 4 and 5), with the threats being described predominantly as a tactic of coercive control or retaliation against the child and/or mother (e.g., 'he says he'll cook it [pet] if we do not listen'). Thus, the EBD children's appraisals as to the cause of AM were that it was normative in relation to animal misbehavior, which is in contrast to the asymptomatic children. However, EBD children's appraisals that IPV perpetrators engaged in threats of AM to enforce compliance with their demands constitutes one similarity between EBD children and asymptomatic children. Interestingly, EBD children's descriptions of severe violence did not include the same contextual information pertaining to perpetrator motivation. Instead, these accounts tended to be characterized by more detailed descriptions of the resulting harm to the animal.

These findings are interesting to consider in light of the cognitive-contextual framework (Grych and Fincham 1990), which posits that adjustment to IPV exposure is mediated by a child's conflict appraisals of threat and responsibility during the event (Mueller et al. 2015). This framework suggests that if children construe a violent act as normative or acceptable, they may experience less associated distress; moreover, low levels of distress may decrease the likelihood that a child will intervene in the incident (Fosco et al. 2007). At the same time, researchers drawing from the cognitive-contextual framework also hypothesize that high-empathy children may be more likely to intervene in witnessed violence (Fosco et al. 2007).

Both EBD and Asymptomatic children took actions on behalf of animals; however the timing of the reported actions differed by group. While the cognitive-contextual framework is often used to consider a child's behavioral and emotional response within an acute act of inter-parental conflict or a physical act of IPV, the Asymptomatic children in this study engaged in actions and strategies to prevent AM *before* such violence was occurring, in particular, by preemptively removing animals from proximity to the perpetrator before an anticipated episode of animal maltreatment. This theme of preemptive actions among children clustered in the Asymptomatic class is interesting to consider in light of Jouriles et al.'s (2014) finding that intervention by a child in an IPV incident was positively associated with internalizing and externalizing behaviors. It may be that, in the lives of children, AM exposure is unique from IPV in that preemptive protective actions can be taken, and that such preemptive actions are deemed by the child to be successful. Mueller et al. (2015) suggest that, "If children's involvement helps to de-escalate conflicts, or functions to change the nature of conflicts in other ways, it might reinforce children's sense of control over the conflict" (p. 1049), which is significant given that internal locus of control is considered a protective factor (Alvord and Grados 2005). As EBD children's interventions in AM were often unsuccessful, the negative impact of AM exposure on child outcomes may be moderated by feelings of responsibility for AM, such that the relationship between AM and psychopathology is stronger for children with high levels of perceived responsibility.

EBD children evidenced two distinct responses to animal maltreatment: (1) a seemingly non-arousal response to normalized/justified maltreatment actions (theme 6) and a high-arousal response of physical intervention (theme 7). Some children normalized violence against animals and not only observed, but, in some circumstances, also participated in maltreatment of animals (theme 6). A smaller number of EBD children became involved in AM by physically intervening (e.g., 'let the dog loose,' 'tackling my dad to the ground') when the child felt the animal needed protection. Mueller et al. (2015) suggest that "children who intervene may perceive the threat as more immediate" (p.1043), which may result in greater dysregulation. This may help to explain the finding that the group of children reporting the most severe AM was the group that physically intervened during acts of maltreatment, frequently while displaying emotional distress, particularly crying. Themes regarding EBD children's exposure and response to AM suggest a co-occurrence of normalized and empathetic responses to animal maltreatment, which may reflect children's dynamic appraisals and intervention choices. Alternatively, Asymptomatic children may have self-regulation skills and executive functioning capabilities that allow them to act proactively and strategically to prevent harm to the animal and themselves.

In addition to the difference in the timing of Asymptomatic and EBD-children's animal protection strategies, another primary distinction between the themes of the two groups is in the animal-maltreatment perpetrator's response to the child's strategy. The themes that emerged among the Asymptomatic group did not involve any retaliation towards children for their protective actions on behalf of animals. EBD children's interventions, on the other hand, sometimes led to direct victimization of the intervening child (e.g., 'I tried to stop him and he grabbed my throat') and compromised their safety.

The current study suggests that the AM experiences of the most significantly maladjusted IPV-witnessing children include multidirectional and, occasionally, child-directed violence. That EBD children's physical interventions in AM sometimes led to the child becoming a target of violence also calls in to question whether, and to what extent, there are differences in offender traits between the Asymptomatic and EBD groups, such as level of dysregulation, reactivity, or empathy, and whether differences in child traits (e.g., level of impulsivity, attachment to animal companions, or internal locus of control) contribute to the child's direct targeting. Our findings lend support to conceptualizing animal abuse as a tactic used by IPV perpetrators against child and adult victims, as well as exposure to animal abuse as a form of child abuse. Given that the majority of U.S. households contain pets, there is a need to attend to exposure to maltreatment of family pets in polyvictimization research on adverse childhood experiences.

Limitations and Suggestions for Future Research

A significant limitation of the current study rests on the generalizability of the underlying participant pool. The prior LPA study (see McDonald et al. 2016 for detailed description of study limitations) that informed the qualitative analysis groups relied on cross-sectional data, and did not find severity of child exposure IPV, or maternal reports of IPV, to be significantly associated with children's membership in the Asymptomatic or EBD groups. This result does not align with the findings of other studies looking at child adjustment in the context of IPV (Graham-Bermann et al. 2006; Howell 2011). Furthermore, as our participants were selected through convenience sampling in one Western state, and our sample includes a higher rate of Latinos than most other studies investigating IPV, it is uncertain how our findings generalize to the broader U.S. population. Additionally, due to the small number of children in the severely maladjusted group and brevity of child responses, this study combined children with borderline clinical levels of socioemotional functioning with maladjusted children. It is likely that there are thematic distinctions to be made between children who are struggling and those who are

severely maladjusted. Thus, this study is limited by our dichotomization of asymptomatic and symptomatic children. Finally, participants were not audio recorded, thus limiting our access to emotional content in the data.

Future research that seeks to identify the contribution of AM as a specific aspect of family violence affecting child development ought to consider longitudinal designs and inquire as to the chronicity, proximity, and additional contextual factors of children's exposure to AM. A notable limitation of our prior LPA study (McDonald et al. 2016), which informed the behavior problem groups used in the current study, is that we were unable to control for co-occurring child maltreatment and/or examine the relationship between children's exposure to coercive control and their profile membership. It is possible that the strength of the relationship between AM exposure and maladjustment in our earlier LPA study is due to the degree of shared variance between AM exposure, coercive control, and child maltreatment, constructs which often overlapped in our qualitative findings. This may also help to explain the non-significant relationship between child exposure to IPV and patterns of adjustment in our prior study. Future research is needed to tease apart the unique and additive impacts of these constructs on child outcomes.

Further, an inquiry as to what anticipatory signals of an impending AM incident children detect could help discern what distinguishes households where preemptive animal protection strategies are successful versus households where animal protection interventions occur during acute incidents of animal maltreatment. Longitudinal studies are also needed to assess future outcomes for children who are initially asymptomatic following AM exposure as compared to those with borderline and clinical levels of emotional and behavioral difficulties. For example, it is possible that children who are asymptomatic in the face of co-occurring IPV and AM may be suppressing the experience and, as a result, may exhibit social-emotional-behavioral problems later in life. In this same vein, it is feasible that the children who exhibit emotional-behavioral difficulties simultaneous to the IPV and AM exposure come to the attention of mental health workers immediately or at the point of crisis, and are able to work through the experiences and show fewer problems later in life. Such research could support/endorse a need for preemptive interventions with all children who experience co-occurring IPV and AM, not just those whose emotional-behavioral difficulties bring them to the attention of mental health providers.

It is important to note that the current study examined thematic patterns across all children with emotional and behavioral problems. However, the results of the LPA that informed the formation of our comparative qualitative groups suggested that a small portion of the sample was characterized by severe maladjustment, including CU traits. CU traits are considered early affective features of psychopathy in youth (Shenk et al. 2014), and there is substantial evidence of the stability of these

traits across the lifespan (Lynam et al. 2007a, b). It is important that future research distinguishes between maladjusted children with and without the presentation of CU behaviors and examines the developmental mechanisms through which early childhood AM exposure may influence the development or manifestation of these traits across the lifespan.

To further identify the process mechanisms that influence children's responses to AM, future research should employ mixed methods to incorporate deeper accounts of children's direct experiences with AM in the context of households where IPV is present. Future studies that expand on the lived experiences of children who witness IPV and related AM should attend to Mueller et al.'s (2015) identification of a significant gap in the literature, regarding "whether appraisals and involvement interact in predicting children's adjustment problems" (p.1043). Studies that include qualitative interviews with children may uncover adjustment outcome differences for children who gain a sense of agency when they view their protective intervention as successful and/or intentional, as compared to children who feel doubly wounded if they appraise their intervention as a failure to protect their pet and/or themselves (DeBoard-Lucas and Grych 2011; Mueller et al. 2015).

Practice Implications

The findings of this study have several implications for child and family mental health practitioners. First, questions about animals should be integrated into assessment and intake procedures as reports of animal abuse may help alert professionals to other family issues such as IPV and child abuse in the home. In addition, clinicians should explore the extent to which children have been exposed to and participated in injury to family pets in order to gain a holistic perspective of child wellbeing. Programs designed to promote positive adjustment and problem-focused coping strategies among children exposed to IPV should consider AM as an additional way in which violence takes place in the family system (McDonald et al. 2017). While a child's attempts to protect their pet, particularly when faced with the risk of becoming the target of violence by the perpetrator, is a great risk, it also represents a great strength of the child and their capacity for attachment with their pet. Mental health counselors can cautiously honor this strength to build a child's self-esteem, while also being careful not to suggest that the child *should* take this risk. Practitioners can also build from a child's attachment to their pet to foster positive attachments with safe adults, which tend to be damaged in homes where IPV occurs. Given that many children normalized and justified animal-directed violence, our findings also suggest the need for humane education interventions for children and families who experience co-occurring IPV and animal maltreatment. Such programs may help youth reject positive attitudes and beliefs about violence

or deviant behavior that are modeled in the family system, and reduce the risk of future violence perpetration. Practitioners can team up with 4-H organizations, humane societies, pet adoption organizations and, when appropriate, employ animal-assisted therapy, as long as it is deemed safe for the child, family, and the therapy animal.

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Compliance with Ethical Standards

Conflict of Interests On behalf of all authors, the corresponding author states that there is no conflict of interest.

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