ORIGINAL ARTICLE



The Use of Children as a Tactic of Intimate Partner Violence and its Impact on Survivors' Mental Health and Well-being Over Time

Cris M. Sullivan 1 · Mackenzie Sprecher 2 · Mayra Guerrero 3 · Aileen Fernandez 4 · Cortney Simmons 4

Accepted: 1 December 2022 / Published online: 14 December 2022 © The Author(s) 2022

Abstract

Purpose This is the first study to longitudinally examine the mental health and well-being impacts on survivors when their abusive partners and ex-partners use their children as an abuse tactic against them.

Methods The sample included two hundred seventy-seven homeless or unstably housed survivors of intimate partner violence (IPV). All were mothers of minor children. Participants were interviewed shortly after seeking services and again at 6-months, 12-months, 18-months, and 24-months. They were asked about abuse they had experienced in the past six months, including the ways children were used as a form of IPV. They were also asked about their current depression, anxiety, and PTSD symptoms, as well as quality of life.

Results Many of the participants reported their abusive partners and ex-partners had used their children as a form of IPV to control or hurt them. Further, after controlling for other forms of abuse, use of the children significantly predicted increased anxiety, PTSD symptoms, and quality of life (but not depression) over time.

Conclusion It is important to recognize the widespread use of children as a common and injurious form of IPV, and its impact on the mental health and well-being of survivors.

Keywords Children · Domestic violence · Coercive control · Mental health · Quality of life

The serious nature of intimate partner violence (IPV) is a well-documented phenomenon with far-reaching consequences (Garcia-Moreno et al., 2006; World Health Organization, 2013). It has been extensively documented that physical, emotional, sexual, and economic abuse increase survivors' depression, anxiety and PTSD (Adams et al., 2008; Ahlfs-Dunn & Huth-Bocks, 2015; Ahmadabadi et al., 2020; Bancroft et al., 2011; Beydoun et al., 2012; Bonomi et al., 2006; Loxton et al., 2013; Nathanson et al., 2012; Rivera et al., 2018) and decrease their quality of life (Adams & Beeble, 2019; Alsaker et al., 2018; Beeble et al., 2009; Zlotnick et al., 2006). Less understood is how frequently abusive partners and ex-partners use survivors' children as

a form of IPV, and whether that specific tactic impacts their mental health over time. The current study examined survivors' experience of IPV across two years after seeking help from domestic violence (DV) agencies and explored whether use of the children impacted survivors' mental health and well-being over and above other forms of abuse over time.

Use of Shared Children as an Abuse Tactic

It is not uncommon for abusive partners and ex-partners to use children they share with survivors as intermediaries of abuse (Clements et al., 2021; Hayes, 2012, 2017; Katz et al., 2020). Strategies can include threatening to harm or kidnap the children if the survivor does not comply with demands (Feresin et al., 2019; Hayes, 2012, 2017), using the children to garner information about the survivors' current movements (Beeble et al., 2007; Hayes, 2012), and either turning the children against the non-abusive parent or convincing them to pressure the survivor to take the abusive ex-partner back (Beeble et al., 2007). By weaponizing children, abusive partners can have continued—and often prolonged—access to their victims. Beeble



Psychology Department, Michigan State University, East Lansing, MI 48824-1116, USA

Wayne State University, Detroit, MI, USA

³ University of Illinois, Chicago, IL, USA

⁴ Yale University, New Haven, CT, USA

and colleagues (2007) were the first to develop a measure of this form of abuse ("Use of Children Scale") and found that 88% of the 156 survivors in their study had experienced it. Using the same scale, Clements and colleagues (2021) also reported the same percentage (88%) with their sample of 299 IPV survivors.

Although there is a rich evidence base regarding children witnessing IPV or being abused themselves within this context (see Carter et al., 2022; Noble-Carr et al., 2020 for recent reviews), the scant research examining the use of children as a tactic of IPV against the survivor has been almost exclusively qualitative (Callaghan et al., 2018; Dragiewicz et al., 2022; Katz et al., 2020), cross-sectional (Clements et al., 2021; Holt, 2017), or included only a small number of items related to use of the children as a specific tactic of abuse (Feresin et al., 2019; Hayes, 2012). While these studies paint a consistent picture of the use of children being commonplace, only Clements and colleagues (2021) examined the relationship of this form of abuse with mothers' mental health. Using a cross-sectional design, they found that use of the children was related to mothers' anxiety and PTSD after controlling for other forms of IPV.

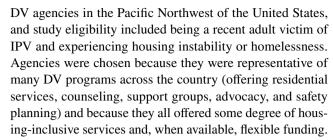
One would expect that the use of children would result in mothers' increased worry about their children's well-being and increase their levels of stress and anxiety. Whether they feel powerless over the abusive partners' manipulation of the children, feel guilty about being unable to protect the children, and/or worry about what they can say in front of the children (in case the abusive partner grills them for information), this is a form of IPV which may have its own direct impact on mothers' mental health. Alternatively, as this form of abuse decreases or ceases, mothers' quality of life (e.g., their level of enjoyment in life) may increase.

The Current Study

Previous studies have demonstrated the pervasiveness of abusive partners' use of the children as an abuse tactic, and qualitative studies have revealed how devastating such actions are to non-abusive parents and their children (Callaghan et al., 2018; Dragiewicz et al., 2022; Katz et al., 2020). The current study is the first to longitudinally test the hypothesis that abusive partners' use of children will predict survivors' depression, anxiety, PTSD symptoms, and quality of life above and beyond other forms of abuse.

Method

Data for this study came from a longitudinal evaluation of the effectiveness of DV support services in assisting homeless and unstably housed IPV survivors with safety and housing. The full sample (N=406) included survivors from five



Agency staff invited clients to hear more about the study shortly after they enrolled in services, and study participants were interviewed five times over two years (baseline, 6-month follow-up, 12-month follow-up, 18-month follow-up, and 24-month follow-up). Interviews were conducted either in person or over the phone, and in either English (88%) or Spanish (12%), according to participant preference. Participants were compensated with \$50 for each interview. The larger study received University Institutional Review Board approval.

Retention over time was quite high, ranging from 98% at 6-months to 97% at 12-months, 94% at 18-months, and 95% at 24-months. Those lost to the study were no different from those retained with regard to demographics, abuse history, mental health, or quality of life at baseline. The current study includes women who were parenting a child under the age of 18 and who completed at least one follow-up interview (n = 277).

Demographics

All of the mothers identified as cisgender women, and 86% identified as heterosexual. The majority of participants (66%) identified as being from a minoritized race or ethnicity. Survivors could choose more than one race/ethnicity category: 34% identified as non-Hispanic White, 37% identified as Latinx, 21% as Black, 11% as US Indigenous, 3% as Asian, and < 1% as Middle Eastern. Ages of participants ranged from 19 to 57 with a mean age of 33 years old. Fewer than 10% of participants were still in a relationship with the abusive partner at the time they entered the study; an even lower percentage (6%) were still living with the abusive partner.

Participants were raising between one and seven children. Most were responsible for raising one child under the age of 18 (44%). Twenty-nine percent were responsible for two children, 14% reported raising three children, and 12% reported raising four or more children. See Table 1 for participant demographics.

Measures

In addition to demographic questions, data for the current study included questions about various forms of IPV the participant may have experienced in the past six months, as well as their current levels of depression, anxiety, PTSD symptoms, and quality of life.



Table 1 Sociodemographic characteristics of sample (N = 277)

	N	%
Age [Mean 33.08; SD=7.91]		
Under 21	9	3
21—25	40	14
26—30	78	28
31—40	93	34
41—50	53	19
51+	4	1
Race/Ethnicity (participants could choose n	nore than one)	
Hispanic/Latinx	102	37
Non-Hispanic White only	94	34
Black	57	21
US Indigenous	30	11
Asian	8	3
Middle Eastern	2	<1
Number of Children Parenting		
One	122	44
Two	81	29
Three	40	14
Four—Seven	34	12
Sexual Orientation		
Heterosexual	239	86
LGBQA	38	14
U.S. Citizen	226	82
Primary Language English	223	81
Highest Level of Education		
Less than high school	83	30
High school graduate/GED	64	23
Vocational/training certificate	23	8
Some college	55	20
Associate degree	18	7
Bachelor's degree	23	8
Advanced degree	11	4
In a relationship with abusive partner	23	8
Living with abusive partner	17	6

Independent Variables

Physical violence, emotional abuse, sexual abuse, and stalking were measured with the Composite Abuse Scale (CAS), which was slightly modified for the current study (Hegarty et al., 1999; Loxton et al., 2013). The CAS was modified through the addition of the items "strangle you," "stalk you," "demand sex whether you wanted to or not" and "force sexual activity." Two original items ("hang around outside your house" and "harass you at work") were replaced with the item "repeatedly follow you, phone you, and/or show up at your house/work/other place."

The original response options for the CAS were "daily," "once per week," "once per month," "several times," "only

once," and "never." These were modified to match interviews occurring every six months, resulting in response options ranging from 0-5: 0= "never," 1= "once," 2= "several times or between $2-3 \times in$ the last 6 months," 3= "once a month," 4= "once a week," and 5= "daily." Cronbach's alpha for the full scale was 0.95.

The 7-item Use of the Children Scale (Beeble et al., 2007) measured the frequency with which abusive partners used participants' children against them as a form of manipulation or control. Items measured how often in the past six months the abusive partner had used the children to stay in the mothers' lives, harass, intimidate, track, or frighten them, as well as how often they attempted to turn the children against them or used the children to convince the survivor to resume the relationship. Response options ranged from 0 (never) to 4 (quite often). Cronbach's alpha for the scale was 0.84.

Dependent Variables

Depression was assessed with the Patient Health Questionnaire (PHQ-9; Kroenke et al., 2001). Participants were asked about the frequency of depressive symptoms over the previous two weeks using a 4-point Likert scale ranging from 0 (not at all) to 3 (nearly every day). Sum scores range from 0–27. Higher scores indicate higher depression symptom severity. Cronbach's alpha for the measure was 0.88.

Anxiety was measured by the 7-item Generalized Anxiety Disorder measure (GAD-7; Spitzer et al., 2006). Survivors were asked about the frequency of anxious feelings over the previous two weeks using a 3-point Likert scale ranging from 0 (*not at all*) to 3 (*nearly every day*). Summed scores range from 0–21 with higher scores indicating higher anxiety symptomology. Cronbach's alpha was 0.89.

Post-traumatic stress symptomatology was assessed with the 10-item Trauma Screening Questionnaire (TSQ; Brewin et al., 2002). Questions asked about physical or emotional responses to trauma in the prior week. Responses were 0 (*no*) and 1 (*yes*); a score of 6 or higher indicates the likelihood of experiencing PTSD. Cronbach's alpha was 0.76.

Quality of life was measured by a 9-item scale adapted from the Andrews and Withey (1976) study (Bybee & Sullivan, 2002; Sullivan & Bybee, 1999), and validated with IPV survivors by Jaradat and colleagues (2022). Survivors were asked how satisfied they felt about various parts of their lives over the prior 6-months (e.g., "How do you feel about the way you spend your spare time?"), and responses were recorded on a 7-point scale: 1 = "terrible," 2 = "unhappy," 3 = "mostly dissatisfied," 4 = "mixed – equally satisfied and dissatisfied," 5 = "mostly satisfied," 6 = "happy," and 7 = "extremely happy." Cronbach's alpha was 0.88.



Longitudinal Analysis

Mixed effect models (Gałecki & Burzykowski, 2013) fitted with random intercept and slope were used to assess the impact of the use of children on mothers' mental health outcomes (depression, anxiety, and PTSD) and quality of life, beyond the effect of other forms of abuse. Models consisted of a two-level nested structure with survivors included as a level 2 unit and time as a level 1 unit. Outcome trajectories were modeled over five time points (baseline, 6-months, 12-months, 18-months, and 24-months). A stepwise selection procedure was used to identify covariates to include in the models (Gareth et al., 2013), which consisted of iteratively adding and removing covariates from a predictive model using a combination of a forward and backward selection approach. This process was conducted for each outcome, allowing for parsimonious outcome models to be tested across the five time points. As the larger study involved comparing participants who had received a housing-focused intervention to those receiving services as usual, we controlled for intervention type as well. Continuous values were calculated for use of children as an abuse tactic for each time point and included in the models as a level-2 fixed effect. A composite score of other forms of IPV (physical, emotional, sexual, stalking) was included as a control variable. All analyses were conducted using Rstudio (version 4.0.4) packages *lme4* (version 1.1–28; Bates et al., 2015) and *lmerTest* (version 3.1–3; Kuznetsova et al., 2017). Missing data were handled through restricted maximum-likelihood estimation (REML) (Boedeker, 2017) which allowed for the use of all available data.

Four models were run for each study outcome to test the hypothesis that survivors who experience greater use of children as an abuse tactic would exhibit lower well-being over time. First, unconditional models (with no predictors other than time) assessed whether there were changes in the outcomes over time for survivors. Log likelihood tests, Akaike Information Criterion (AIC), and Bayesian Information Criterion (BIC) were compared to determine the best fit between linear and non-linear (i.e., quadratic and cubic) trend for time for each outcome. Second, main effect conditional models assessed whether use of children as an abuse tactic explained variability in survivors' change in wellness outcomes over time. Next, composite abuse scores

were included in the models to determine if the main effects of use of children would remain even after controlling for other forms of abuse. Lastly, models that included two-way interaction terms for use of children and time were tested to determine whether the strength of the association between the use of children and survivor wellbeing varied over time.

Results

Descriptives

While almost all of the study participants reported having experienced the use of their children as an abuse tactic in the six months prior to the baseline interview (92%), fewer participants reported this form of abuse at each timepoint thereafter (66% at 6-months, 61% at 12-months, 53% at 18-months, and 51% at 24-months). Use of the children as an abuse tactic also decreased from a mean of 1.73 at baseline to 0.79 at 24-months (scale range 0-4). Similarly, other forms of abuse (combined physical, emotional, sexual and stalking) decreased from a mean of 1.96 at baseline to 0.29 at 24-months (scale range 0-5). Mental health improved over time, with mean depression scores changing from 12.44 at baseline to 8.08 at 24-months (scale range 0–27), mean anxiety decreasing from 11.88 at baseline to 7.80 at 24-months (scale range 0–21), and PTSD symptomatology decreasing from 6.78 at baseline to 4.61 at 24-months (scale range 0–10). Quality of life similarly improved over time, with mean scores increasing from 4.18 at baseline to 4.90 at 24-months (scale range 1–7; see Table 2).

Impact of Use of Children on Depression Over Time

An unconditional quadratic model fit best when examining depression over time (-2LL=-3,811, df=9, p<0.001). See Table 3 for the unconditional models of all outcomes. On average, depression significantly decreased over two years (β =-0.83, SE=0.09, p<0.001), while the average rate of change slowed for depression over time (β =0.41, SE=0.07, p<0.001). Examining the association between the use of children as an abuse tactic and depression, the results of the

Table 2 Average change in IPV, mental health, and quality of life over time (M, SD)

	Baseline	6-months	12-months	18-months	24-months
Composite abuse (range 0–5)	(1.96, 1.13)	(0.55, 0.72)	(0.41, 0.63)	(0.35, 0.62)	(0.29, 0.50)
Use of children (range 0–4)	(1.73, 1.12)	(1.17, 1.24)	(1.02, 1.23)	(0.90, 1.17)	(0.79, 1.11)
Depression (range 0–27)	(12.44, 6.83)	(9.35, 6.37)	(8.69, 6.59)	(8.01, 6.13)	(8.08, 6.50)
Anxiety (range 0–21)	(11.88, 6.55)	(9.02, 6.30)	(8.43, 6.32)	(7.98, 6.02)	(7.80, 6.33)
PTSD (range 0–10)	(6.78, 2.58)	(5.54, 3.16)	(5.15, 3.20)	(4.88, 3.22)	(4.61, 3.31)
Quality of life (range 1–7)	(4.18, 1.11)	(4.68, 1.26)	(4.81, 1.22)	(4.89, 1.24)	(4.90, 1.22)



conditional model indicated there was a significant main effect of use of children on depression, with those who reported experiencing a greater use of children having higher depression (β =0.08, SE=0.03, p=0.008). However, after accounting for other forms of abuse and relevant covariates, use of children was no longer significantly associated with depression (β =0.01, SE=0.03, p=0.832; Table 4). The interaction between use of children and time was not significant,

Table 3 Unconditional models of change in well-being outcomes over time

Outcome		β	SE	95% CI	<i>p</i> -value
Depression	Linear time	-0.83	0.09	-1.01 – -0.65	< 0.001
	Quadratic time	0.62	0.07	0.44 - 0.80	< 0.001
Anxiety	Linear time	-0.73	0.09	-0.910.56	< 0.001
	Quadratic time	0.55	0.09	0.37 - 0.72	< 0.001
PTSD	Linear time	-0.52	0.10	-0.710.33	< 0.001
	Quadratic time	0.31	0.10	0.12 - 0.50	0.001
Quality of Life	Linear time	0.79	0.09	0.62 - 0.96	< 0.001
	Quadratic time	-0.61	0.08	-0.78 – -0.045	< 0.001

 β =standardized estimate; SE=standard error; CI=confidence interval; *Bold values*, p = <.05

indicating that the strength of the association between the use of children tactic and depression did not vary across time points.

Impact of Use of Children on Anxiety Over Time

An unconditional quadratic model fit best when examining anxiety over time (-2LL=-3,737, df=9, p<0.001). On average, anxiety significantly decreased over two years ($\beta = -0.73$, SE = 0.09, p < 0.001), while the average rate of change slowed for anxiety over time (β =0.55, SE=0.09, p<0.001). Examining the association between the use of children and anxiety, the results of the conditional models indicated there was a significant main effect of use of children on anxiety, with those who reported experiencing a greater use of child as abuse having higher anxiety over time (β =0.14, SE=0.03, p<0.001). The significant association between use of children and anxiety persisted even after accounting for other forms of abuse and relevant covariates ($\beta = 0.07$, SE = 0.03, p = 0.040). The interaction effect of use of children and time was not significant, suggesting that the association between use of children and anxiety did not vary across time points (see Table 5).

Impact of Use of Children on PTSD Over Time

An unconditional quadratic model fit best when examining PTSD over time (-2LL=-2,907, df=9, p < 0.001). On average, PTSD significantly decreased over two years

Table 4 Impact of use of children on maternal depression over time

	Main	effects	model		Main o	effects	model—control	ling for	Interac	ction ef	fects model	
Predictor	β	SE	95% CI	p	β	SE	95% CI	p	β	SE	95% CI	p
Linear time	-0.64	0.10	-0.83 – -0.45	< 0.001	-0.42	0.11	-2.99 – -0.94	< 0.001	-0.40	0.75	-0.63 – -0.18	< 0.001
Quadratic time	0.49	0.09	0.30 - 0.67	< 0.001	0.31	0.10	0.08 - 0.40	0.003	0.30	0.11	0.09 - 0.51	0.006
Use of children	0.08	0.03	0.02 - 0.13	0.008	0.01	0.03	-0.31 - 0.39	0.832	0.01	0.27	-0.05 - 0.08	0.725
Physical Health	-0.24	0.04	-0.320.16	< 0.001	-0.24	0.04	-2.041.03	< 0.001	-0.24	0.26	-0.32 – -0.16	< 0.001
Social Support	-0.16	0.04	-0.240.08	< 0.001	-0.16	0.04	-1.420.47	< 0.001	-0.16	0.24	-0.230.08	< 0.001
Financial strain	0.18	0.03	0.13 - 0.23	< 0.001	0.18	0.03	0.77 - 1.39	< 0.001	0.18	0.16	0.13 - 0.23	< 0.001
Reads in English (Y)	-0.09	0.17	-0.42 - 0.25	0.611	-0.06	0.17	-2.66 – 1.80	0.706	-0.06	1.14	-0.39 - 0.27	0.713
Has access to car (Y)	0.12	0.09	-0.05 - 0.30	0.166	0.14	0.09	-0.25 - 2.07	0.123	0.13	0.59	-0.04 - 0.31	0.124
Living w abuser (Y)	0.23	0.16	-0.09 - 0.55	0.166	0.23	0.16	-0.59 - 3.65	0.157	0.23	1.08	-0.09 - 0.54	0.153
Hispanic/Latinx (Y)	-0.05	0.09	-0.24 - 0.13	0.568	-0.07	0.09	-1.70 - 0.74	0.440	-0.07	0.62	-0.25 - 0.11	0.431
Foster care (Y)	0.05	0.11	-0.17 - 0.27	0.638	0.06	0.11	-1.03 – 1.89	0.565	0.07	0.74	-0.15 - 0.28	0.550
Alcohol misuse	0.11	0.03	0.06 - 0.16	< 0.001	0.10	0.03	0.45 - 1.30	< 0.001	0.10	0.22	0.05 - 0.16	< 0.001
US citizen (Y)	0.11	0.15	-0.19 - 0.41	0.465	0.09	0.15	-1.36 - 2.63	0.531	0.10	1.02	-0.20 - 0.39	0.527
SAUvDVHF (SAU)	0.12	0.09	-0.05 - 0.29	0.168	0.11	0.08	-0.41 - 1.84	0.214	0.11	0.57	-0.06 - 0.27	0.205
CAS					0.14	0.03	0.57 - 1.56	< 0.001	0.14	0.25	0.07 - 0.20	< 0.001
Linear time x UoC									-0.13	0.41	-0.33 - 0.08	0.240
Quadratic time x UoC									0.12	0.07	-0.09 – 0.33	0.255

 β =standardized estimate; SE=standard error; CI=confidence interval; UoC=use of children; CAS=composite abuse scale; (): Indicates response to dichotomous variables, "Y"=yes; "SAU"=services as usual; Bold values, p=<0.05



 $(\beta = -0.52, SE = 0.10, p < 0.001)$, while the average rate of change slowed for PTSD over time $(\beta = 0.31, SE = 0.10, p < 0.005)$. Examining the association between the use of children abuse tactic and PTSD, the results of the conditional models indicated there was a significant main effect of use of child tactic on PTSD $(\beta = 0.21, SE = 0.03, p < 0.001)$, with those who reported experiencing a greater use of child as abuse having higher PTSD over time. The association between use of children and PTSD persisted even after accounting for other forms of abuse and relevant covariates $(\beta = 0.14, SE = 0.03, p < 0.001;$ see Table 6). The interaction effect of use of children and time was not significant, suggesting that the association between use of children and PTSD did not vary across time points.

Impact of Use of Children on Quality of Life Over Time

An unconditional quadratic model fit best when examining quality of life over time (-2LL=-1,685, df=9, p<0.001). On average, quality of life significantly increased over two years (β =0.79, SE=0.09, p<0.001), while the average rate of change increased for quality of life over time (β =-0.61, SE=0.08, p<0.001). Examining the association between

the use of children and quality of life, the conditional models indicated that there was a significant main effect of use of children on quality of life (β =-0.13, SE=0.03, p<0.001). The association between use of children and quality of life persisted even after accounting for other forms of abuse and relevant covariates (β =-0.09, SE=0.03, p=0.003). The interaction effect of use of children and time was not significant, suggesting that the association between use of children and quality of life did not differ across time points (Table 7).

Discussion

This is the first study to longitudinally examine whether having one's child used as a tactic of IPV predicts mothers' mental health and well-being. Although this form of IPV did not impact mothers' depression over and above other forms of abuse, it did predict higher anxiety and PTSD over time, as well as lower quality of life.

The reason why use of children predicted anxiety and PTSD, but not depression, may be related to the measures used in the study. For example, to measure anxiety we used the Generalized Anxiety Disorder (GAD) scale, which measures excessive and ongoing generalized worry. It makes sense that increased concern about how children are being

Table 5 Impact of use of children on maternal anxiety over time

	Main	effects	model			effects l abuse	model—control	lling for	Intera	Interaction effects model		
Predictor	β	SE	95% CI	p	β	SE	95% CI	p	β	SE	95% CI	p
Linear time	-0.54	0.09	-0.720.35	< 0.001	-0.28	0.11	-0.49 – -0.07	0.009	-0.27	0.11	-0.49 – -0.05	0.014
Quadratic time	0.41	0.09	0.23 - 0.60	< 0.001	0.21	0.10	0.01 - 0.41	0.038	0.07	0.03	0.01 - 0.13	0.033
Use of children	0.14	0.03	0.08 - 0.19	< 0.001	0.07	0.03	0.00 - 0.13	0.040	0.20	0.10	-0.00 - 0.41	0.052
Physical Health	-0.25	0.04	-0.340.17	< 0.001	0.16	0.03	0.09 - 0.22	< 0.001	0.15	0.03	0.09 - 0.22	< 0.001
Financial strain	0.20	0.03	0.15 - 0.25	< 0.001	-0.26	0.04	-0.340.18	< 0.001	-0.26	0.04	-0.340.17	< 0.001
Reads in English (Y)	-0.12	0.18	-0.47 - 0.22	0.482	0.20	0.03	0.15 - 0.25	< 0.001	0.20	0.03	0.15 - 0.25	< 0.001
Has access to car (Y)	0.07	0.09	-0.11 - 0.25	0.436	-0.11	0.17	-0.45 - 0.24	0.540	-0.11	0.17	-0.45 - 0.24	0.541
Living with abuser (Y)	0.38	0.17	0.05 - 0.71	0.023	0.08	0.09	-0.10 - 0.26	0.367	0.08	0.09	-0.10 - 0.26	0.370
Hispanic/Latinx (Y)	-0.15	0.10	-0.35 - 0.06	0.156	0.38	0.17	0.06 - 0.71	0.022	0.38	0.17	0.06 - 0.71	0.021
Economic abuse— restriction of finances	0.05	0.04	-0.04 – 0.13	0.286	-0.16	0.10	-0.36 – 0.04	0.125	-0.16	0.10	-0.36 – 0.04	0.121
Rural/Urban (R)	0.10	0.09	-0.09 - 0.28	0.301	0.02	0.04	-0.06 - 0.11	0.560	0.02	0.04	-0.06 - 0.11	0.580
Alcohol misuse	0.07	0.03	0.02 - 0.12	0.007	0.07	0.09	-0.11 - 0.25	0.443	0.07	0.09	-0.11 - 0.25	0.434
US citizen (Y)	0.07	0.16	-0.24 - 0.38	0.668	0.06	0.03	0.01 - 0.11	0.013	0.06	0.03	0.01 - 0.11	0.013
SAUvDVHF (SAU)	-0.02	0.09	-0.20 - 0.16	0.806	0.05	0.16	-0.26 - 0.35	0.767	0.05	0.16	-0.26 - 0.35	0.767
CAS						0.09	-0.20 - 0.15	0.760	-0.03	0.09	-0.20 - 0.15	0.774
Linear time x UoC									-0.09	0.10	-0.29 - 0.11	0.398
Quadratic time x UoC									0.08	0.10	-0.12 – 0.28	0.420

 β =standardized estimate; SE=standard error; CI=confidence interval; UoC=Use of Children; CAS=composite abuse scale (): Indicates response to dichotomous variables, "Y"=yes, "R"=Rural, "SAU"=services as usual;

Bold values, p = < 0.05



Table 6 Impact of use of children on maternal PTSD over time

	Main	effects	model		Main o	effects	model—control	lling for	Interaction effects model			
Predictor	β	SE	95% CI	p	β	SE	95% CI	p	β	SE	95% CI	p
Linear time	-0.35	0.10	-0.55 – -0.16	< 0.001	-0.14	0.11	-0.35 - 0.08	0.212	-0.18	0.11	-0.41 - 0.04	0.104
Quadratic time	0.23	0.10	0.04 - 0.42	0.019	0.05	0.10	-0.15 - 0.26	0.606	0.15	0.03	0.08 - 0.21	< 0.001
Use of Children	0.21	0.03	0.15 - 0.26	< 0.001	0.14	0.03	0.08 - 0.20	< 0.001	0.10	0.11	-0.11 - 0.31	0.350
Physical Health	-0.14	0.04	-0.230.05	0.002	0.14	0.03	0.08 - 0.20	< 0.001	0.14	0.03	0.08 - 0.21	< 0.001
Economic abuse— restriction of finances	0.05	0.04	-0.03 – 0.14	0.214	-0.14	0.04	-0.23 – -0.05	0.001	-0.14	0.04	-0.23 – -0.05	0.001
Financial strain	0.15	0.03	0.10 - 0.20	< 0.001	0.03	0.04	-0.05 - 0.12	0.471	0.04	0.04	-0.05 - 0.12	0.381
Household income	0.01	0.04	-0.08 - 0.09	0.899	0.15	0.03	0.10 - 0.20	< 0.001	0.15	0.03	0.10 - 0.20	< 0.001
Drug misuse	0.12	0.03	0.07 - 0.17	< 0.001	0.00	0.04	-0.08 - 0.08	0.985	0.00	0.04	-0.08 - 0.08	0.988
Physical disability (Y)	0.18	0.10	-0.01 - 0.37	0.062	0.10	0.03	0.05 - 0.15	< 0.001	0.10	0.03	0.05 - 0.15	< 0.001
SAUvDVHF (SAU)	-0.02	0.09	-0.20 - 0.15	0.787	0.18	0.09	-0.00 - 0.37	0.051	0.18	0.09	-0.00 - 0.37	0.053
CAS					-0.04	0.09	-0.21 - 0.14	0.665	-0.04	0.09	-0.22 - 0.13	0.635
Linear time x UoC									0.06	0.11	-0.15 - 0.27	0.582
Quadratic time x UoC									-0.01	0.11	-0.22 - 0.19	0.887

 β =standardized estimate; SE=standard error; CI=confidence interval; UoC=Use of Children; CAS=composite abuse scale (): Indicates response to dichotomous variables, "Y"=yes, "SAU"=services as usual; Bold values, p=<0.05

used to coerce or harm them may increase mothers' overall worry. Similarly, as this form of IPV could be traumatic for mothers, increased PTSD is understandable. The PHQ-9, on the other hand, measures Major Depressive Disorder, focusing on the extent to which someone is experiencing overwhelming feelings of sadness or a lack of interest and pleasure in activities. It is plausible that, while use of the children as a control tactic may increase mothers' worry, anxiety, and PTSD, it does not –over and above other forms of abuse – diminish their pleasure in activities or lead to more sadness. However, this is conjecture at this point; more studies are needed to better understand this type of IPV and how it impacts both non-abusive parents and their children.

The findings also support the importance of conducting longitudinal studies to study change in this phenomenon and its impacts over time. The vast majority of the mothers had experienced having their children used as an abuse tactic at baseline, which aligns with prior cross-sectional studies with IPV survivors in crisis (Beeble et al., 2007; Clements et al., 2021). However, the longitudinal nature of this study allowed us to note that the use of their children decreased over time (from 92% when they approached services for help, to 51% at 24-month followup). It is both heartening to see such a reduction over two years and concerning to note that over half of the sample were still having their children used against them even two years after contacting a DV agency for help. Given the relationship between this form of abuse and mothers' mental health and well-being, these results are a clarion call to recognize, address and prevent the use of children as an abuse tactic.

Limitations

Results should be considered in light of study limitations. It is possible, for example, that mothers' mental health may have been at least partially impacted by factors not measured in the current study (e.g., whether participants were receiving therapy). Participants in this study were also all unstably housed IPV survivors who had sought services. The extent to which their experience of having their children weaponized against them is similar to IPV survivors who do not seek services, or who are more financially stable or stably housed, is unknown. Further, while somewhat racially diverse (e.g., over one quarter identifying as Latinx and 21% identifying as Black), the sample was comprised of a majority of cisgender, heterosexual survivors. All respondents were mothers as well, and it is unknown whether the findings can be generalized to fathers and nonbinary parents. These limits to generalizability speak to the need for many more studies focused on the use of children as an abuse tactic, and how it impacts both parents and their children.

Interviews were only conducted with mothers and focused on the impact of this abuse on mothers, but there is also more to be understood about the child's experience with this type of abuse. It is well known that being privy to an abusive family dynamic has a negative impact on child development (Buckley et al., 2007; Feresin et al., 2019; Katz et al., 2020;



Table 7 Impact of use of children on maternal quality of life over time

	Main ef	Main effects mod	lel		Main ef	fects mod	Main effects model—controlling for CAS	r CAS	Interact	Interaction effects model	s model	
Predictor	β	SE	95% CI	d	β	SE	95% CI	d	β	SE	95% CI	р
Linear time	0.28	0.09	0.10 - 0.46	0.002	0.16	0.10	-0.04 – 0.31	0.122	0.19	0.10	-0.02 – 0.39	0.070
Quadratic time	-0.25	0.09	-0.420.08	0.004	-0.15	0.09	-0.05 - 0.01	0.121	-0.09	0.03	-0.150.03	0.002
Use of Children	-0.13	0.03	-0.180.08	< 0.001	-0.09	0.03	-0.150.03	0.003	-0.18	0.10	-0.37 - 0.01	0.064
Social support	0.28	0.04	0.20 - 0.36	< 0.001	-0.09	0.03	-0.210.05	0.002	-0.10	0.03	-0.160.04	0.001
Financial strain	-0.21	0.02	-0.260.17	< 0.001	0.28	0.04	0.22 - 0.39	< 0.001	0.28	0.04	0.20 - 0.36	< 0.001
Physical health	0.12	0.04	0.05 - 0.20	0.002	-0.21	0.02	-0.280.18	< 0.001	-0.21	0.02	-0.260.16	< 0.001
Economic abuse - restriction of finances	0.07	0.05	-0.03 - 0.18	0.172	0.13	0.04	0.06 - 0.24	0.002	0.13	0.04	0.05 - 0.21	0.002
Economic abuse—financial exploitation	-0.04	0.05	-0.14 - 0.06	0.445	0.08	0.05	-0.02 - 0.17	0.136	0.08	0.05	-0.03 - 0.18	0.151
Housing instability	-0.14	0.03	-0.200.09	< 0.001	-0.03	0.05	-0.17 - 0.09	0.530	-0.04	0.05	-0.14 - 0.07	0.505
Relationship w abuser (N)	0.33	0.14	0.05 - 0.60	0.020	-0.13	0.03	-0.100.04	< 0.001	-0.13	0.03	-0.180.07	< 0.001
Has access to car (Y)	-0.13	0.09	-0.29 - 0.04	0.141	0.31	0.14	0.04 - 0.72	0.027	0.31	0.14	0.03 - 0.59	0.028
Reads in English (Y)	0.48	0.19	0.10 - 0.86	0.014	-0.13	0.08	-0.36 - 0.05	0.141	-0.13	0.08	-0.29 - 0.04	0.140
Primary language not English (Y)	-0.28	0.16	-0.60 - 0.04	0.084	0.49	0.19	0.13 - 1.07	0.012	0.48	0.19	0.10 - 0.86	0.013
Alcohol misuse	-0.14	0.02	-0.190.09	< 0.001	-0.30	0.16	-0.77 - 0.02	0.063	-0.30	0.16	-0.62 - 0.02	0.067
SAUvDVHF (SAU)	-0.14	0.08	-0.31 - 0.02	0.093	-0.14	0.02	-0.280.14	< 0.001	-0.14	0.02	-0.180.09	< 0.001
CAS					-0.14	0.08	-0.38 - 0.03	0.093	-0.14	0.08	-0.30 - 0.03	0.105
Linear time x UoC									-0.01	0.09	-0.20 - 0.17	0.900
Quadratic time x UoC									-0.02	0.09	-0.20 - 0.16	0.825

 β =standardized estimate; SE=standard error; CI=confidence interval; UoC=Use of Children; CAS=composite abuse scale; (): Indicates response to dichotomous variables, "Y"=yes, "SAU"=services as usual; Bold values, p=<0.05



Saunders, 2003), but there are few examples in the literature of the child's struggle with abusive partners' manipulation of them. While this study examined the mental health impacts on mothers, future research should include the impacts on the children as well.

Implications for Practice and Research

Findings from this study have implications for both practice and research. It is important for family court judges, mediators, prosecutors, and service providers to recognize that, over and above other forms of IPV, the use of children as an abuse tactic increases mothers' anxiety and PTSD while decreasing their quality of life. This suggests that protecting women from such abuse could lead to higher quality of life and lower levels of psychopathology. These outcomes would be beneficial not just to the non-abusive parent (who may, as a result, be better able to engage with others, work, complete daily functions and enjoy life) but to their children as well. Living with a parent who is less anxious and who is experiencing greater life satisfaction should directly and positively impact children's well-being and should be a goal of court personnel and social services alike.

The current findings can also be used by practitioners and advocates to influence how they do their work. For example, the study results indicate that asking about the use of the children as an abuse tactic is important in safety planning with survivors. Practitioners could also modify their legal advocacy services to best help navigate this form of IPV. Parenting-specific services should also be considered to better aid in traversing the complexities of custody and co-parenting.

As scant research has examined the use of children as an IPV tactic, and even fewer studies have examined its impact on maternal mental health and well-being, many more studies are needed to understand how and how often use of the children occurs, and how it impacts both non-abusive parents and their children. Future research would especially benefit from focusing on use of the children within the context of custody arrangements. Previous research has reported escalating malicious behavior from abusive partners and ex-partner when family court is involved (Beeble et al., 2007; Elizabeth, 2017; Feresin et al., 2019). Understanding more about the complexities of this particular form of IPV and how it impacts survivors and their children could further assist courts and other systems in protecting children and non-abusive parents over time.

Conclusion

This study, being the first to longitudinally examine the impact of use of the children on mental health and wellbeing, has provided valuable insight into the pervasiveness

of this form of IPV. It has also demonstrated the serious mental health impacts that abusive partners' and ex-partners' use of children can have on mothers who have experienced IPV. The use of children as a form of manipulation and control can have devastating consequences for both non-abusive parents and children, and far more studies are needed to fully understand – and ideally prevent – this phenomenon.

Acknowledgements This research was supported by a subcontract from the Washington State Coalition Against Domestic Violence, who received funding through a contract with the U.S. Department of Health and Human Services' Office of the Assistant Secretary for Planning and Evaluation (ASPE) in partnership with the Department of Justice's Office for Victims of Crime [contract #HHSP233201600070C], and by a grant from the Washington State Coalition Against Domestic Violence, who received funding from The Bill & Melinda Gates Foundation [#OPP1117416]. Points of view do not necessarily represent the position or policies of the funders.

Declarations

Conflict of Interest The authors declare that they have no conflict of interest.

Open Access This article is licensed under a Creative Commons Attribution 4.0 International License, which permits use, sharing, adaptation, distribution and reproduction in any medium or format, as long as you give appropriate credit to the original author(s) and the source, provide a link to the Creative Commons licence, and indicate if changes were made. The images or other third party material in this article are included in the article's Creative Commons licence, unless indicated otherwise in a credit line to the material. If material is not included in the article's Creative Commons licence and your intended use is not permitted by statutory regulation or exceeds the permitted use, you will need to obtain permission directly from the copyright holder. To view a copy of this licence, visit http://creativecommons.org/licenses/by/4.0/.

References

Adams, A. E., & Beeble, M. L. (2019). Intimate partner violence and psychological well-being: Examining the effect of economic abuse on women's quality of life. *Psychology of Violence*, 9, 517–525. https://doi.org/10.1037/vio0000174

Adams, A. E., Sullivan, C. M., Bybee, D., & Greeson, M. (2008). Development of the scale of economic abuse. *Violence Against Women*, 14, 563–588. https://doi.org/10.1177/1077801208315529

Ahlfs-Dunn, S. M., & Huth-Bocks, A. C. (2015). Intimate partner violence involving children and the parenting role: Associations with maternal outcomes. *Journal of Family Violence*, 31, 387–399. https://doi.org/10.1007/s10896-015-9791-x

Ahmadabadi, Z., Najman, J. M., Williams, G. M., Clavarino, A. M., d'Abbs, P., & Tran, N. (2020). Intimate partner violence and subsequent depression and anxiety disorders. *Social Psychiatry and Psychiatric Epidemiology*, 55, 611–620. https://doi.org/10.1007/ s00127-019-01828-1

Alsaker, K., Moen, B. E., Morken, T., & Baste, V. (2018). Intimate partner violence associated with low quality of life-a cross-sectional study. *BMC Women's Health*, 18, 1–7. https://doi.org/10.1186/s12905-018-0638-5

Andrews, F., & Withey, S. (1976). Social indicators of well-being: Americans' perceptions of life quality. Plenum Press.



- Bancroft, L., Silverman, J. G., & Ritchie, D. (2011). The batterer as parent: Addressing the impact of domestic violence on family dynamics. SAGE Publications.
- Bates, D., Maechler, M., Bolker, B., & Walker, S. (2015). Fitting linear mixed-effects models using lme4. *Journal of Statistical Software*, 67, 1–48. https://doi.org/10.18637/jss.v067.i01
- Beeble, M., Bybee, D., & Sullivan, C. M. (2007). Abusive men's use of children to control their partners and ex-partners. *European Psychologist*, 12, 54–61. https://doi.org/10.1027/1016-9040.12.1.54
- Beeble, M. L., Bybee, D., Sullivan, C. M., & Adams, A. E. (2009). Main, mediating, and moderating effects of social support on the well-being of survivors of intimate partner violence across 2 years. *Journal of Consulting and Clinical Psychology*, 77, 718– 729. https://doi.org/10.1037/a0016140
- Beydoun, H. A., Beydoun, M. A., Kaufman, J. S., Lo, B., & Zonderman, A. B. (2012). Intimate partner violence against adult women and its association with major depressive disorder, depressive symptoms and postpartum depression: A systematic review and meta-analysis. Social Science & Medicine, 75, 959–975. https://doi.org/10.1016/j.socscimed.2012.04.025
- Boedeker, P. (2017). Hierarchical linear modeling with maximum likelihood, restricted maximum likelihood, and fully Bayesian estimation. *Practical Assessment, Research, and Evaluation*, 22, 1–19. https://doi.org/10.7275/5vvy-8613
- Bonomi, A. E., Thompson, R. S., Anderson, M., Reid, R. J., Carrell, D., Dimer, J. A., & Rivara, F. P. (2006). Intimate partner violence and women's physical, mental, and social functioning. *American Journal of Preventive Medicine*, 30, 458–466. https://doi.org/10.1016/j.amepre.2006.01.015
- Brewin, C. R., Rose, S., Andrews, B., Green, J., Tata, P., McEvedy, C., Turner, S., & Foa, E. B. (2002). Brief screening instrument for post-traumatic stress disorder. *The British Journal of Psychiatry*, 181, 158–162. https://doi.org/10.1192/bjp.181.2.158
- Buckley, H., Holt, S., & Whelan, S. (2007). Listen to me! Children's experiences of domestic violence. Child Abuse Review: Journal of the British Association for the Study and Prevention of Child Abuse and Neglect, 16(5), 296–310. https://doi.org/10.1002/car.995
- Bybee, D. I., & Sullivan, C. M. (2002). The process through which a strengths-based intervention resulted in positive change for battered women over time. *American Journal of Community Psychology*, 30, 103–132. https://doi.org/10.1023/A:10143 76202459
- Callaghan, J. E., Alexander, J. H., Sixsmith, J., & Fellin, L. C. (2018). Beyond "witnessing": Children's experiences of coercive control in domestic violence and abuse. *Journal of Interpersonal Violence*, 33, 1551–1581. https://doi.org/10.1177/0886260515618946
- Carter, B., Paranjothy, S., Davies, A., & Kemp, A. (2022). Mediators and effect modifiers of the causal pathway between child exposure to domestic violence and internalizing behaviors among children and adolescents: A systematic literature review. *Trauma*, *Violence*, & *Abuse*, 23, 594–604. https://doi.org/10.1177/15248 38020965964
- Clements, K. A. V., Sprecher, M., Modica, S., Terrones, M., Gregory, K., & Sullivan, C. M. (2021). The use of children as a form of intimate partner violence and its relation to survivors' mental health. *Journal of Family Violence*. Online First. https://doi.org/10.1007/s10896-021-00330-0
- Dragiewicz, M., Woodlock, D., Salter, M., & Harris, B. (2022). "What's mum's password?": Australian mothers' perceptions of children's involvement in technology-facilitated coercive control. *Journal of Family Violence*, 37, 137–149. https://doi.org/10.1007/ s10896-021-00283-4
- Elizabeth, V. (2017). Custody stalking: A mechanism of coercively controlling mothers following separation. *Feminist Legal Studies*, 25, 185–201. https://doi.org/10.1007/s10691-017-9349-9

- Feresin, M., Bastiani, F., Beltramini, L., & Romito, P. (2019). The involvement of children in postseparation intimate partner violence in Italy: A strategy to maintain coercive control? *Affilia*, 34, 481–497. https://doi.org/10.1177/0886109919857672
- Gałecki, A., & Burzykowski, T. (2013). Linear mixed-effects model. In *Linear mixed-effects models using R* (pp. 245–273). Springer.
- Garcia-Moreno, C., Jansen, H. A., Ellsberg, M., Heise, L., & Watts, C. H. (2006). Prevalence of intimate partner violence: Findings from the WHO multi-country study on women's health and domestic violence. *The Lancet*, 368, 1260–1269. https://doi.org/10.1016/S0140-6736(06)69523-8
- Gareth, J., Daniela, W., Trevor, H., & Robert, T. (2013). An introduction to statistical learning: With applications in R. Springer.
- Hayes, B. E. (2012). Abusive men's indirect control of their partner during the process of separation. *Journal of Family Violence*, 27, 333–344. https://doi.org/10.1007/s10896-012-9428-2
- Hayes, B. E. (2017). Indirect abuse involving children during the separation process. *Journal of Interpersonal Violence*, 32, 2975–2999. https://doi.org/10.1177/0886260515596533
- Hegarty, K., Sheehan, M., & Schonfeld, C. (1999). A multidimensional definition of partner abuse: Development and preliminary validation of the Composite Abuse Scale. *Journal of Family Violence*, 14, 399–415. https://doi.org/10.1023/A:1022834215681
- Holt, S. (2017). Domestic violence and the paradox of post-separation mothering. *British Journal of Social Work*, 47, 2049–2067. https://doi.org/10.1093/bjsw/bcw162
- Jaradat, D., Ford-Gilboe, M., Berman, H., & Wong, C. (2022). Structural and construct validity of the Quality of Life Scale among Canadian women with histories of intimate partner violence. Women's Health, 18, 1–11. https://doi.org/10.1177/17455057221125574
- Katz, E., Nikupeteri, A., & Laitinen, M. (2020). When coercive control continues to harm children: Post-separation fathering, stalking and domestic violence. *Child Abuse Review*, 29, 310–324. https://doi. org/10.1002/car.2611
- Kroenke, K., Spitzer, R. L., & Williams, J. B. (2001). The PHQ-9: Validity of a brief depression severity measure. *Journal of General Internal Medicine*, 16, 606–613. https://doi.org/10.1046/j. 1525-1497.2001.016009606.x
- Kuznetsova, A., Brockhoff, P. B., & Christensen, R. H. B. (2017). ImerTest Package: Tests in linear mixed effects models. *Journal of Statistical Software*, 82, 1–26. https://doi.org/10.18637/jss.v082.i13
- Loxton, D., Powers, J., Fitzgerald, D., Forder, P., Anderson, A., Taft, A., & Hegarty, K. (2013). The Community Composite Abuse Scale: Reliability and validity of a measure of intimate partner violence in a community survey from the ALSWH. *Journal of Women's Health, Issues & Care*, 2, 2–7. https://doi.org/10.4172/2325-9795.1000115
- Nathanson, A. M., Shorey, R. C., Tirone, V., & Rhatigan, D. L. (2012). The prevalence of mental health disorders in a community sample of female victims of intimate partner violence. *Partner Abuse*, *3*, 59–75. https://doi.org/10.1891/1946-6560.3.1.59
- Noble-Carr, D., Moore, T., & McArthur, M. (2020). Children's experiences and needs in relation to domestic and family violence: Findings from a meta-synthesis. *Child & Family Social Work*, 25, 182–191. https://doi.org/10.1111/cfs.12645
- Rivera, E. A., Sullivan, C. M., Zeoli, A. M., & Bybee, D. (2018). A longitudinal examination of mothers' depression and PTSD symptoms as impacted by partner-abusive men's harm to their children. *Journal of Interpersonal Violence*, 33, 2779–2801. https://doi.org/ 10.1177/0886260516629391
- Saunders, B. E. (2003). Understanding children exposed to violence: Toward an integration of overlapping fields. *Journal of Interpersonal Violence*, 18, 356–376. https://doi.org/10.1177/0886260502250840



- Spitzer, R. L., Kroenke, K., Williams, J. B., & Löwe, B. (2006). A brief measure for assessing Generalized Anxiety Disorder: The GAD-7. Archives of Internal Medicine, 166, 1092–1097. https://doi.org/ 10.1001/archinte.166.10.1092
- Sullivan, C. M., & Bybee, D. I. (1999). Reducing violence using community-based advocacy for women with abusive partners. *Journal of Consulting and Clinical Psychology*, 67, 43–53. https://doi.org/10.1037/0022-006X.67.1.43
- World Health Organization. (2013). Global and regional estimates of violence against women: prevalence and health effects of intimate partner violence and non-partner sexual violence. World Health Organization.
- Zlotnick, C., Johnson, D. M., & Kohn, R. (2006). Intimate partner violence and long-term psychosocial functioning in a national sample of American women. *Journal of Interpersonal Violence*, 21, 262–275. https://doi.org/10.1177/0886260505282564

Publisher's Note Springer Nature remains neutral with regard to jurisdictional claims in published maps and institutional affiliations.

