

RESEARCH ARTICLE

Intergenerational maltreatment in parent–child dyads from Burundi, Africa: Associations among parental depression and connectedness, posttraumatic stress symptoms, and aggression in children

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Abstract

Studies investigating the associations between histories of childhood maltreatment (CM) in parent–child dyads have primarily involved samples from high-income countries; however, CM rates are higher in low- and middle-income countries. The present study aimed to examine the (a) association between maltreatment in parents and maltreatment of their children through risk (i.e., parent depression) and protective (i.e., parent–child connectedness) factors and (b) associations between CM in children with aggression through posttraumatic stress symptoms (PTSS) and peer/sibling victimization. Participants were 227 parent–child dyads from Burundi, Africa, a low-income country. Parents were 18 years of age or older, and children were 12–18 years ($M = 14.76$, $SD = 1.88$, 57.7% female). Among parents, 20.7%–69.5% of participants reported a history of physical and emotional abuse and neglect; among children, the rates of sexual, physical, and emotional abuse ranged from 14.5% to 89.4%. A history of CM in parents was associated with CM in children, $B = 0.19$, $p < .01$, and CM in parents was indirectly associated with CM in children through parent–child connectedness, $\beta = .04$, 95% CI [.01, .10], and parental depression, $\beta = .08$, 95% CI [.03, .15]. In children, maltreatment was positively associated with peer/sibling victimization, and CM was associated with aggression, $\beta = .07$, 95% CI [.04, 0.11], through PTSS but not via peer/sibling victimization. Continued efforts to improve CM-related preventive strategies and the accessibility of prevention services are needed to reduce CM in low-income countries such as Burundi.

Findings from several studies indicate an association between parental histories of CM and exposure to maltreatment experiences in their children. Most research studies examining intergenerational continuity of CM have been based on samples from high-income countries (Anderson et al., 2018; Thornberry et al., 2013; Widom et al., 2015), and only a handful of studies have been conducted using samples from low- and middle-income countries (LMICs) where risk factors for child maltreatment (CM) are disproportionately higher (Berckmoes, *in press*; Crombach & Bambonye, 2015; Lakhdar et al., 2019). Studies focusing on CM in LMICs have suggested higher rates of child abuse and neglect compared with high-income nations, primarily due to ongoing community conflict and violence, a lack of resources for basic sustenance, and deficits in social and mental health services and child protection legislation (Berckmoes et al., 2017; Charak & Koot, 2014; Charak et al., 2017; De Jong et al., 2015). The overall aim of the present study was to examine the associations between parent and child CM histories, identify risk and protective factors, and investigate the accumulating detrimental effect of maltreatment and peer or sibling victimization on mental health among offspring in parent–child dyads from Burundi.

A small but overpopulated country in eastern Central Africa, Burundi was immersed in a civil war that lasted from 1993 to 2002, with an estimated 200,000–500,000 deaths and at least 1,200,000 displaced residents (Hatungimana, 2011; Lemarchand, 2009). Families residing in conflict zones, such as Burundi, are affected by several challenges, including loss and grief, disruption of family relations and social support, parental stress that affects child-rearing practices, and chaos and uncertainty associated with everyday living (De Jong, 2020); all these elements are risk factors for CM. For instance, in a study of children from Burundi, Ventevogel et al. (2014) found that 92% had been displaced, 69% had their house burnt, 60% had experienced the death of a sibling, and 14% and 26%, respectively, had lost their mother and father, potentially due to war violence. The authors observed that these traumatic experiences were, in turn, associated with mental health disorders, such as depression, panic disorder, posttraumatic stress disorder (PTSD), and separation anxiety disorder, in 43% of children (Ventevogel et al., 2014). Thus, instances of CM are influenced by factors at the family level as well as by the broader, contextual country-level factors (Crombach & Bambonye, 2015).

The social learning theory (Bandura, 1977) is a theoretical framework that renders support for the association between the histories of CM in parents and their offspring. Specifically, this theory posits children learn to model behaviors of their caregivers such that maltreated children learn to normalize abusive behavior and use sim-

ilar maladaptive parenting practices (e.g., Marshall et al., 2011). Several protective and risk factors have been shown to either alleviate or increase the likelihood of maltreatment spillover. For instance, developing positive parent–child connectedness has been shown to alleviate the risk of child abuse by a parent with a history of CM (Crombach & Bambonye, 2015; Thornberry et al., 2013).

Alternatively, studies have shown that indicators of psychological challenges, such as parental emotion dysregulation strategies and trauma symptoms, including symptoms of depression, play a role in the transmission of maltreatment (Anderson et al., 2018). For example, in a large sample of mothers receiving welfare in the United States, maternal histories of childhood physical abuse (CPA) and physical neglect were associated with maternal perpetration of physical abuse against their offspring through symptoms of depression (Yang et al., 2018). Similarly, findings from another study showed that maternal exposure to childhood sexual abuse (CSA) and adulthood depression increased the likelihood of maltreatment spillover from parents to their offspring (Leifer et al., 2004). Thus, several factors in parents with histories of CM, including parent–child connectedness and symptoms of depression, likely play a role in the levels of maltreatment their children report.

Maltreatment in childhood is one of the most robust predictors of posttraumatic stress symptoms (PTSS; Catani et al., 2009; Kerig et al., 2016; Lagdon et al., 2021) and aggressive behavior (Charak et al., 2019). The findings of a recent meta-analytic study indicated that exposure to any CM and CSA increased the odds threefold of receiving a diagnosis of CM-related PTSD per criteria in the fourth edition of the *Diagnostic and Statistical Manual of Mental Disorders (DSM-IV)*; Gardner et al., 2019). Similarly, previous research has indicated that exposure to severe forms of emotional maltreatment in infancy and toddlerhood and CPA during the preschool years are predictors of later externalizing behavior and aggression (Manly et al., 2001). However, not all children who are exposed to maltreatment develop PTSS (Day & Kearney, 2016) or display aggressive behavior, suggesting that there are factors that explain why some maltreated children develop PTSS and aggression whereas others do not.

Both within-family (e.g., parent–child, sibling–sibling) and nonfamilial (e.g., peer–peer) subsystems are interactional and constantly influence each other. These interactions can be explained via the spillover hypothesis, which posits that the transference of emotional and behavioral patterns of interaction occurs among various subsystems (Erel & Burman, 1995), and transfer occurs in the same valence such that negative affect or aggression in one subsystem leads to negative affect or aggression in another (e.g., Margolin & Gordis, 2003). In line with this

hypothesis, experiences of CM can create mental representations that reinforce to the child that they should be submissive and accepting of violence, which can, in turn, potentially increase their risk of being a target or perpetrator of further victimization in other settings (i.e., by peers or siblings; Glatz et al., 2019; van Berkel et al., 2018).

Peer and sibling relationships play a prominent role in influencing children's and adolescent's daily experiences and mental health (Tucker et al., 2014). Studies have consistently indicated that sibling and peer victimization are linked to mental health challenges, such as symptoms of PTSS, depression, anxiety, and self-harm (Baldy et al., 2019; Bowes et al., 2014; Tucker et al., 2013). Results from a nationally representative study from the United States indicated that sibling victimization led to mental health problems and delinquent behavior even after controlling for the effect of maltreatment in children and adolescents (van Berkel et al., 2018). Similarly, in a study of 5,058 adolescents from Italy, researchers found that peer bullying or perpetration and victimization at school and via cyberspace were associated with PTSS (Baldy et al., 2019). These findings indicate that experiences of sibling and peer victimization are associated with anger, aggression, and PTSS among children and adolescents. Notably, these studies were primarily conducted in Western and politically stable environments; less is known about the effect of peer and sibling victimization on mental health challenges in politically volatile and underresourced settings, as are found in Burundi.

Anger that can lead to aggression is a symptom of post-traumatic stress. It critically differentiates PTSS from other anxiety disorders, and longitudinal research has indicated that PTSS predicts anger, whereas anger does not predict PTSS (Orth et al., 2008). Exposure to traumatic events, such as CM, and PTSS are associated with an increased risk of aggressive externalizing behavior in adolescents (Ford et al., 2018). Other evidence further suggests that trauma exposure and PTSS can produce biases and social information processing deficits (e.g., hostile attribution) that can lead to aggressive behavior (Dodge et al., 2013; Fite et al., 2008). For instance, in a longitudinal study of 135 children who survived a residential fire, researchers found that PTSS—specifically reexperiencing symptoms—predicted higher levels of aggression (Sullivan et al., 2017). These findings suggest an association between PTSS and aggressive behavior in children and adolescents.

The present study had two aims. First, we used a cross-sectional design to examine the association between CM in parents and subsequent maltreatment in their offspring in parent–child dyads from Burundi, Africa. We hypothesized that (a) a parental history of CM would be associated with exposure to CM in their offspring through symptoms of depression such that higher scores on measures

of depression would be associated with an increased risk of offspring maltreatment (Crombach & Bambonye, 2015) and (b) there would be an association between parental CM and offspring maltreatment via parent–child connectedness such that higher levels of parent–child connectedness would be associated with a lower risk of maltreatment in children of parents with a history of childhood maltreatment (Thornberry et al., 2013). Our second aim was to examine the presence of a spillover effect of victimization and its accumulating detrimental effect on trauma-related symptoms, including PTSS and aggression. We hypothesized that adolescents exposed to CM would have a higher risk of victimization by a peer or a sibling relative to those with no maltreatment history (Tucker et al., 2014), which, in turn, would be associated with an increase in PTSS and aggression (Tucker et al., 2014).

METHOD

Participants

The present study comprised participants from a larger sample of 359 parent–child dyads that were part of a nationwide study examining parental caregiving practices in Burundi. Participants were residents of five of the 17 provinces that existed in Burundi at the time of study enrollment; it should be noted that there are currently 18 provinces. Participants originated from Muyinga in northern Burundi; Bururi and Makamba in southern Burundi; and Bubanza and Cibitoke in western Burundi. All 17 provinces were severely affected by political violence and the civil war. The selection of households was based on information shared by a research team, who randomly selected 2,050 households from the Multiple Indicator Cluster Survey (MICS-3), which was implemented in 2005 by the Burundi National Institute of Statistics and Economics (ISTEEBU). Of these households, 1,350 were original households, and 700 were households that were newly formed between 2005 and 2014 by members of an original 2005 household (cf. Jeusette & Verwimp, 2017). The inclusion criteria for the 359 parent–child dyads were (a) residence in Muyinga, Bururi, Bubanza, Cibitoke, or Makamba; (b) at least one child between 8 and 21 years of age; and (c) an adult parent (either mother or father). For the present study, children between 12 and 18 years of age were included, as the CM question required the index child to be at least 12 years old.

The present study included a final sample of 227 parent–child dyads. All parents were 18 years of age or older (51.1% mothers); we did not inquire about the exact parental age at the time of the study. On average, each household comprised 6.6 members ($SD = 2.27$, range: 2–12), as reported by the parent. The children ranged in age from 12 to 18

years ($M = 14.76$, $SD = 1.88$; 57.7% female). Nearly 19% ($n = 42$) of the dyads were living in the province of Bubanza, 25.6% ($n = 58$) lived in Bururi, 18.5% ($n = 42$) resided in Cibitoke, 16.7% ($n = 38$) lived in Makamba, and 20.7% ($n = 47$) resided in Muyinga.

Procedure

Data were collected by eight male and eight female bilingual (i.e., French–Kirundi) interviewers with a university degree and prior experience in survey methodology in Burundi. These individuals received a half-day additional training session on the methodology and measures used in the present study. The training and interviews took place in March and April 2015, just before political turmoil related to elections in Burundi commenced.

All questionnaires were translated and back-translated by two bilingual French- and Kirundi-speaking psychologists. Notably, French and Kirundi are the two most widely spoken official languages in Burundi. English was only introduced as an official language in 2014 and has little active presence in Burundi (IWACU English News, 2014). Measure translation was further refined by the group of bilingual French-Kirundi interviewers. The two bilingual psychologists who performed the translation and back-translation in Kirundi and French moderated the group of interviewers during this process. The group extensively discussed each Kirundi item until all participants agreed on semantic, concept, and content equivalence among different socioeconomic strata of the society. All measurement items were discussed by this group of bilingual professionals and slightly adapted if the group deemed such changes necessary. The research team secured informed consent from parents and assent from index children, and questionnaires were administered, in person, separately to each parent and their child. The study protocol was in line with the ethical guidelines provided by UNICEF and the University of Amsterdam. The Ministry of Community Development in Burundi also approved the study.

Measures

CM

We used the 25-item Childhood Trauma Questionnaire–Short Form (CTQ-SF; Bernstein et al., 2003) to measure CM histories across five domains, namely, emotional abuse, physical abuse, sexual abuse, emotional neglect, and physical neglect. Each of the five facets of CM comprises five items, which respondents rate on a 5-point Likert scale ranging from 1 (*never true*) to 5 (*very often*

true). Emotional and physical abuse and neglect items describe instances in which the perpetration is by a family member, whereas sexual abuse items include all instances regardless of the respondent's relationship with the perpetrator. The five-factor structure of the CTQ-SF was established in a sample of adolescents from Burundi after dropping one item on molestation (Charak et al., 2017). For the present study, we used the summed score of the 24 items in the five-factor structure proposed by Charak et al. (2017). Notably, due to an administration error, one item each from the Emotional Abuse and Physical Neglect subscales and two items from the Emotional Neglect subscale were not administered in the parent sample. Parents were not asked about sexual abuse, as it is considered taboo to ask adults about sexual behavior, including abuse, in the Burundian context. We elected to use the cutoff scores proposed by the CTQ-SF authors and prorated the cutoff scores for the subscales on which fewer items were administered (see Table 1). In the present sample, Cronbach's alpha for the total score was .87.

Parental depressive symptoms

The Patient Health Questionnaire (PHQ; Kroenke & Spitzer, 2002) is a nine-item instrument that is used to screen for depression as characterized by the *DSM-IV* criteria (American Psychiatric Association [APA], 1994), which remains the same in the *DSM-5* (APA, 2013). Past-month depressive symptom frequency (e.g., “little interest or pleasure in doing things”) was rated on a 4-point Likert scale ranging from 0 (*not at all*) to 3 (*nearly every day*). Responses were summed to provide a PHQ-9 total score, with scores ranging from 0 to 27. Consistent with prior research, we used a cutoff score of 10 to indicate depression (Kroenke et al., 2001). Increases in PHQ-9 depression severity scores are associated with deteriorating functionality in primary care patients, demonstrating adequate construct validity. In the present sample, Cronbach's alpha was .85.

Parent–child connectedness

Connectedness between parents and their offspring was evaluated using 10 items based on a family connectedness scale used previously in Burundi (Jordans et al., 2013). Item examples include “Does your child get along with all adults in the household?”, “Most of the time, do you and your partner show warmth and love towards your child?”, and “Do you and your partner understand your child?” Responses are scored on a 3-point Likert scale ranging from 1 (*not true*) to 3 (*very true or often true*), with responses

TABLE 1 Descriptive statistics of the study variables

Variable	<i>n</i>	%	<i>M</i>	<i>SD</i>
Parents				
Total child maltreatment	223	98.2	30.86	8.62
Emotional abuse (cutoff ≥ 7)	45	27.3	6.70	2.86
Physical abuse (CTQ-SF cutoff ≥ 8) ^a	47	20.7	6.86	3.20
Emotional neglect (cutoff ≥ 6)	60	27.8	8.02	2.57
Physical neglect (cutoff ≥ 7)	155	69.5	9.28	2.87
Depression (PHQ cutoff >10)	40	17.6	6.21	4.98
Connectedness with child	n/a		23.15	4.60
Children				
Total child maltreatment	223	98.2	44.57	10.27
Emotional abuse (CTQ-SF cutoff ≥ 9) ^a	73	32.2	7.97	3.34
Physical abuse (CTQ-SF cutoff ≥ 8) ^a	48	21.1	6.77	2.77
Sexual abuse (cutoff ≥ 5)	33	14.5	5.52	1.74
Emotional neglect (CTQ-SF cutoff ≥ 10) ^a	212	93.4	13.26	3.39
Physical neglect (CTQ-SF cutoff ≥ 8) ^a	203	89.4	11.05	2.93
Victimization by peer or sibling	140	61.7	4.22	2.83
Aggression	188	82.8	5.42	4.46
PTSD (CPSS cutoff ≥ 26) ^b	7	3.1	8.82	6.88
PTSD (CPSS cutoff ≥ 11) ^c	83	36.6		

Note: Sexual abuse in parents was not measured. PTSD = posttraumatic stress disorder; PHQ = Patient Health Questionnaire; CTQ-SF = Childhood Trauma Questionnaire–Short Form; CPSS = Child PTSD Symptom Scale.

^aBased on the original cutoff scores recommended by Bernstein et al. (2003). ^bBased on cutoff scores recommended by Ventevogel et al. (2014), developed using a Burundian sample of children. ^cBased on cutoff scores recommended by Foa et al. (1997) for children from the United States.

summed to create a total score. In the present sample, Cronbach's alpha was .90.

Peer or sibling victimization

Peer and sibling victimization were each gauged using six items that assess physical victimization. Three additional items were used to assess sexual victimization by a peer. For both peer and sibling victimization, the Physical Victimization subscale comprised items inquiring about slapping or throwing things that could hurt, being pushed or shoved, being hit with a fist or object, being kicked or beat up, and being intentionally choked or burned. Similarly, the peer Sexual Victimization subscale comprised items inquiring about sexual intercourse under threat, being physically forced to have sexual intercourse, and any sexual activity that was degrading or humiliating. These items were adapted from the questionnaire used to assess partner abuse in the World Health Organization's 2003 Multi-Country Study on Women's Health and Life Experiences, which was conducted across 15 sites in 10 countries (see Garcia-Moreno et al., 2006). In the present study, participants responded either "yes" (coded as 1) or "no" (coded as 0) to each question, and all 15 items were added to cre-

ate an overall score for victimization either by a peer or a sibling (range: 0–15). Finally, individuals who reported no victimization were coded as 0, and those who reported any victimization (i.e., score of 1–15) were coded as 1.

Child PTSS

The 17-item Child PTSD Symptom Scale–Part-I (CPSS; Foa et al., 2001) was used to assess symptoms of *DSM-IV* PTSD (APA, 1994). Participants were instructed to rate their symptoms for the past 2 weeks, scoring responses on a scale of 0 (*not at all or only at one time*) to 3 (*5 or more times a week/almost always*), using symptoms related to their most upsetting traumatic event as a reference. The measure's authors established a cutoff score of 11 or higher by inspecting the distribution of total scores for children with high- and low-level PTSD symptoms (Cronbach's $\alpha = .84$ for the total score; Foa et al., 2001). The CPSS has demonstrated moderate test–retest reliability ($\kappa = .55$; Foa et al., 2001). Previously, the CPSS was translated, back-translated, piloted, and validated in Kirundi in a sample of schoolchildren from Burundi, and a cutoff score of 26 demonstrated good sensitivity and specificity (i.e., 71% vs. 83%, respectively; Ventevogel et al., 2014). Notably, the

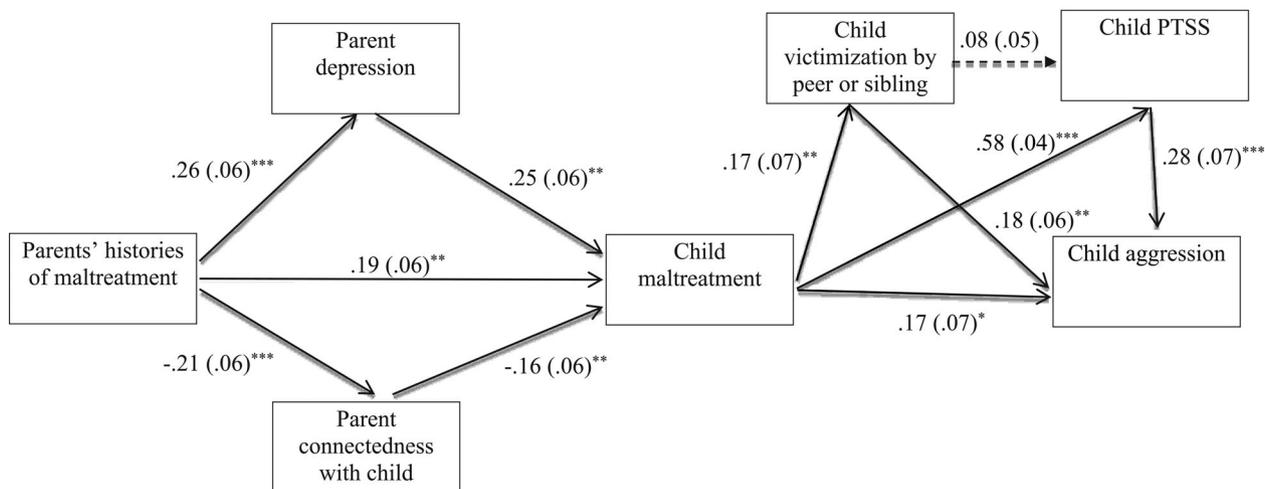


FIGURE 1 Standardized coefficients, with standard errors, of the associations between parent history of childhood maltreatment, child maltreatment, and child posttraumatic stress symptoms (PTSS) and aggression in parent-child dyads from Burundi

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

cutoff score established for Burundian children is much higher than the score of 20 used by Kohrt et al. (2011) in a conflict-affected region of Nepal as well as the score of 11 commonly used in Western countries (e.g., the United States; Foa et al., 1997). In the present study, Cronbach's alpha for the total CPSS score was .87.

Child aggression

We adapted nine items from the Buss-Perry Aggression Questionnaire (Buss & Perry, 1992) to measure aggression during the past 2 weeks. Respondents were asked to report on their difficulty in controlling anger, attacking when being challenged, physically hitting back, being quarrelsome in comparison to others, getting violent to protect themselves, physically hitting back when being bullied, hitting others without reason, threatening acquaintances, and being destructive when angry. Responses were scored on a 5-point Likert scale ranging from 0 (*none of the time*) to 4 (*all of the time*), with responses summed to create a total score. In the present sample, Cronbach's alpha was .82.

Data analysis

We used SPSS (Version 25; IBM Corp, 2017) to assess descriptive statistics and bivariate correlations. We then used Mplus (Version 8; Muthén & Muthén, 2017) to conduct serial mediation analyses to evaluate the four indirect effects operating between parental CM, offspring CM, and offspring aggression (Figure 1). All variables were treated as manifest or observed variables. The magnitude

of the indirect effects was examined using the product of the regression coefficients (Bishop et al., 1975) whereby the coefficient of the indirect effect is divided by its standard error and compared with a critical value using a z test. As recommended by Preacher and Hayes (2008), bias-corrected bootstrapping procedures for confidence intervals with a total of 5,000 bootstrapped samples were used. The use of a bootstrapping method is recommended over the traditional causal steps approach, as the former has higher power while maintaining reasonable control over the Type 1 error rate (MacKinnon et al., 2004). We considered 95% confidence intervals that did not contain zero to be statistically significant. Next, to compare all significant specific indirect effects with each other, we used the "model constraint" option in Mplus, which calculates a Wald test to examine the differences between parameters under consideration (i.e., each pair of statistically significant indirect effects) using bootstrapping ($n = 5,000$ iterations).

RESULTS

Details regarding CM types are provided in Table 1. No missing data were found after receiving consent and assent from the parent and index child, respectively. Based on the four types of CM (i.e., emotional abuse, physical abuse, emotional neglect, and physical neglect), only four participants (1.8%) in the parent sample reported no exposure to maltreatment, 33 (14.5%) had experienced one type of maltreatment, and 101 (44.5%), 57 (25.1%), and 32 (14.1%) parents, respectively, had experienced two, three, and four different types of CM. Using the

TABLE 2 Correlation between the study variables

Variable	PDepress	PConn	CCM	CVictim	CPTSS	Cagg	Child age	Child gender ^a
PCM	0.26***	−0.21***	0.29***	0.04	0.14*	0.05	−0.07	0.07
PDepress	–	−0.11	0.31***	0.03	0.11	−0.04	0.03	−0.03
PConn		–	−0.23***	−0.13	−0.05	−0.05	0.001	0.01
CCM			–	0.17**	0.59***	0.36***	0.10	0.004
CVictim				–	0.18**	0.26***	−0.07	−0.08
CPTSS					–	0.41***	0.23***	0.10
Cagg						–	−0.10	−0.11
Child age							–	0.05
Child gender								–

Note: PCM = parent history of childhood maltreatment; PDepress = parent depression score; PConn = parent connectedness with child; CCM = child maltreatment; CVic = child victimization by peer or sibling; CPTSS = child posttraumatic stress symptom score; CAgg = child aggression score.

^aMale = 1, female = 2.

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

TABLE 3 Indirect effects of parents' maltreatment history on child maltreatment and maltreatment experiences on child aggression in parent–child dyads from Burundi

Variable and indirect effect		Estimate	95% CI	Comparison of indirect effects
Parent maltreatment→ child maltreatment				
M1	Parent maltreatment→parent depression→child maltreatment	.08*	[.03, .15]	M1 = M2
M2	Parent maltreatment→parent connectedness→child maltreatment	.04*	[.01, .10]	
Child maltreatment→aggression in child				
M3	Child maltreatment→ peer/sibling victimization →child aggression	.002	[.000, .006]	M4 > M3
M4	Child maltreatment→ child PTSS →child aggression	.07*	[.04, .11]	

Note: Estimates presented are standardized coefficients. PTSS = posttraumatic stress symptoms.

* $p < .05$.

PHQ-9 cutoff score, 40 (17.6%) parents had levels of depression in the clinical range. In the child sample, only four participants (1.8%) reported no exposure to abuse or neglect, 28 (12.3%) reported exposure to one type of abuse or neglect, and 105 (46.3%), 42 (18.5%), 35 (15.4%), and 13 (5.7%) children, respectively, reported exposure to two, three, four, or five types of CM (i.e., the four types of abuse and neglect measured in the parent sample as well as sexual abuse). Using a CPSS score of 26 as a clinical cutoff, 3.1% of the adolescents had a probable diagnosis of PTSD (Ventevogel et al., 2014). The bivariate correlations indicated significant correlations between parental CM history and parental depression scores, parent–child connectedness (i.e., negative correlation), offspring maltreatment, and offspring PTSS (Table 2). Children's maltreatment scores, peer and/or sibling victimization, PTSS, and aggression were significantly and positively correlated.

For the mediation model, the goodness-of-fit indices fit the data well, with a comparative fit index value of 1.00,

Tucker–Lewis index value of 1.04, and root mean square error of approximation .01, 90% CI [.00, .05], $\chi^2(9, N = 227) = 5.50, p = .790$. Figure 1 depicts the serial mediation model including pathways that reached a statistically significant level (i.e., $p < .05$). In the present model, all pathways were significant except for the association between children's victimization by peers or siblings and children's PTSS (Figure 1). Four indirect effects are presented in Table 3, and three of the indirect effects were significant (Table 3). In support of our first hypotheses, we found two indirect effects of parents' maltreatment on CM through parents' depression score and parent–child connectedness to be significant: Parent maltreatment was significantly associated with offspring maltreatment via parental depression, and parent maltreatment was also significantly associated with offspring maltreatment via parent–child connectedness. A comparison of these two indirect effects indicated no difference in the strength of the effects—that is, the indirect effects of parents' maltreatment history on offspring maltreatment through parental depression and parent–child

connectedness were similar in strength, although with opposite valence. Specifically, symptoms of depression in parents were associated with an increased risk of offspring maltreatment, and parent–child connectedness alleviated the risk of maltreatment in children of parents with a history of CM.

In support of our hypothesis, the association between CM and peer or sibling victimization was significant and positive. Although the association between peer or sibling victimization and aggression was significant, the association between peer or sibling victimization and PTSS was nonsignificant (Figure 1). And, our hypothesis that there would be an indirect effect of CM on aggression through peer or sibling victimization was not supported (see Table 3). Thus, the association between CM and aggression was stronger in magnitude through PTSS than through peer or sibling victimization.

DISCUSSION

The nation of Burundi has faced many cycles of political violence and armed conflicts, which have led to poverty, corruption, and ethnic divisions (Berckmoes 2014, 2015). The brunt of the burden of such wars and conflicts largely falls on families, as they face several challenges, including economic loss, the disruption of family relations, and a breakdown of the social fabric that includes public health and education and welfare services (De Jong, 2020). Using a cross-sectional design, the present findings demonstrated significant indirect effects of parents' CM histories on maltreatment of their offspring or child via parental symptoms of depression and parent–child connectedness in parent–child dyads from Burundi. The results demonstrate support of the spillover hypothesis as we observed positive associations between child CM exposure and child exposure to peer or sibling victimization. Notably, only PTSS and not peer or sibling victimization was significantly and positively associated with aggressive behavior. Thus, only through PTSS did CM have an indirect effect on aggressive behavior.

The present findings support our first hypothesis, as depression emerged as a risk factor and parent–child connectedness as a protective factor in the associations between parental maltreatment history and maltreatment in their child. Our findings are in line with those reported in studies from Burundi and other regions that have demonstrated a link between parental and offspring maltreatment experiences (Crombach & Bambonye, 2015; Morelli et al., 2021; Negriff et al., 2020). The present research also adds to the extant literature by highlighting the roles of depression and parent–child connectedness, which can facilitate clinical interventions. The findings

suggest that there are opportunities to break the cycle of maltreatment, even in conflict-affected regions and politically volatile environments, by considering parents' CM history in identifying at-risk families and children in need of preventative interventions (Assink et al., 2018). Findings from two qualitative studies from Burundi suggest that corporal discipline and emotional abuse are largely viewed as acceptable practices there and often seen as a sign of care and concern for the well-being of the child (Berckmoes et al., 2017; Hendriks et al., 2020). As victims of CM, parents may be unaware of ways to apply adequate and effective parenting techniques for improving parent–child connectedness or attachment patterns.

When examining the associations between offspring maltreatment and PTSS and aggression, there was support for the spillover hypothesis such that exposure to CM was associated with exposure to peer or sibling victimization; this supported part of our second hypothesis. This finding is the first to demonstrate this association among Burundian youth and is in line with a growing body of research studies indicating an association between CM and sibling victimization, although most of these studies have been conducted in developed nations (Tucker et al., 2014). However, there was no significant indirect effect of CM on PTSS and aggression via peer or sibling victimization, which did not support part of our second hypothesis. Notably, we found that offspring CM had an indirect effect on aggression through PTSS. This, again, is in line with existing studies that suggest that trauma-related symptoms are associated with deficits in social information processing (Kerig & Becker, 2010), which, in turn, can lead to aggressive and externalizing behavior in children and adolescents (Calvete & Orue, 2011; Ford et al., 2018; McLaughlin & Lambert, 2017). In one prior qualitative study on Burundian children, researchers found that although children could be submissive and accepting of violence from elders to prevent further violence, they did engage in externalizing behavior, such as stealing, damaging materials, exhibiting jealousy, and harming peers due to poverty and animosity related to ethnic conflicts (Hendriks et al., 2020). Thus, on one hand, children might be vulnerable to violent acts, but they can also demonstrate aggression in the context of social hierarchies and the structural factors of poverty, ethnic divisions, and gender, which render some individuals more powerful than others. The present findings warrant replication in a longitudinally designed study, as PTSS and aggression can be both a consequence of and risk factor for maltreatment in children (Rodriguez et al., 2019). Notably, the findings from a recent longitudinal study examining intergenerational transmission of maltreatment demonstrated that maltreatment in children was prospectively associated with mental health outcomes, including PTSS, depression, and externalizing problems in

adolescence (Negriff et al., 2020); however, the study did not consider mental health outcomes as potential risk factors related to CM.

The present study should be considered with the following limitations in mind. First, the current findings may not be generalizable to the whole population of Burundi, as this study was based on households from five out of the 17 provinces of Burundi that existed at the time the study began. Notably, all provinces in Burundi have been affected by the civil war and political violence; however, we did not directly investigate the effect of the conflict. Second, this study was initially designed as a longitudinal study. However, data collection was interrupted due to the eruption of political violence; this led us to adopt the present cross-sectional design. The causality of maltreatment types that lead to depression, PTSS, and aggression is an assumption based on the theory of traumatic stress. Thus, parameters investigated in the present study were associations gauged cross-sectionally. Additionally, the present study was limited regarding information on demographic factors in the parent sample, including age, educational attainment, socioeconomic status, family structure, and household density, which are variables that have been identified as risk factors for childhood abuse and neglect (Charak & Koot, 2014). Third, we assessed CM using a self-report questionnaire (i.e., the CTQ-SF), which may have introduced the possibility of response bias resulting from the inability of an individual to recall victimization experiences (Widom & Morris, 1997). Notably, the self-report maltreatment questionnaire used in the present study (i.e., the CTQ-SF) contains mostly behavior-specific items, which tend to reduce response bias. Additionally, in the parent sample, emotional abuse and neglect were assessed using fewer items than proposed by the CTQ-SF authors (Bernstein et al., 2003), and we did not inquire about sexual abuse among parents. This could have led to underreporting of parental maltreatment. Fourth, we did not assess the maltreatment histories of other household members. Finally, the correlations between the study variable were low to moderate in strength, which can reduce the power needed to reject the null hypothesis.

It is clear from prior studies that there is an enormous scarcity of mental health professionals in regions affected by armed conflicts, such as in Burundi (De Jong, 2011, 2020). Our findings have potential clinical implications in that children exposed to maltreatment, who are at risk of aggression and more severe PTSS, should be provided with evidence-based cognitive behavioral therapy (CBT), such as trauma-focused CBT, that have been found to effectively reduce PTSS, depression, and anxiety in children and youth exposed to traumatic experiences in randomized control trials carried out in some LMICs (e.g., Zambia; Murray et al., 2015). There is also research that supports the

prevention of CM and reduction of behavioral problems in Burundian children via brief interventions comprising psychoeducation for parents (Jordans et al., 2013). Additionally, the Problem Management Plus (PM+) program (Dawson et al., 2015), a brief, transdiagnostic, nonspecialist helper-delivered psychological intervention, has been found to reduce symptoms of depression, anxiety, and post-traumatic stress in violence-affected communities such as Kenya (Bryant et al., 2017); randomized control trials of PM+ should also be conducted in the Burundian context. Authors of prior studies have also proposed multisectoral collaborations to alleviate issues of economic crisis, establish equitable opportunities for education, build safety nets for the most vulnerable, ensure legal and women's rights for appropriate governance, and support the upkeep of human rights (De Jong et al., 2015). It is also important that resources be directed toward making health care services accessible to survivors of CM, while simultaneously developing CM preventative strategies and culturally sensitive clinical interventions. Future researchers should investigate the role of these previously proposed interventions in curbing CM and posttraumatic stress and other mental health challenges in parents and children from Burundi.

In conclusion, this was the first study of which we are aware to investigate the role of parental depression and parent-child connectedness as factors that impact the association between parental history of CM and offspring maltreatment in parent-child dyad from Burundi. Although depression in parents was shown to strengthen the association between parental CM history and offspring CM, parent-child connectedness was shown to weaken the association. Exposure to CM also emerged as a risk factor for peer or sibling victimization (i.e., spillover hypothesis), but PTSS increased the association between maltreatment and aggression in children.

OPEN PRACTICES STATEMENT

Neither of the studies reported in this article was formally preregistered. Neither the data nor the materials have been made available on a permanent third-party archive; requests for the data or materials can be sent via email to the lead author at charakruby@gmail.com.

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