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Associations between young children's exposure to household violence and behavioural problems: Evidence from a rural Kenyan sample

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Abstract

Little is known about how young children in low- and middle-income countries (LMICs) experience violence in their homes, and how different types of household violence may affect child development. This study reports on levels of exposure to household violence and associations with child behavioural outcomes in preschool-aged children in western Kenya. A sample of 465 caregivers, whose children ($n = 497$) attended early learning centres supported by an international NGO, were enrolled in the study. Caregivers reported on exposure to intimate partner violence (IPV), household discipline practices, attitudes about gender roles, and child behavioural outcomes. Multivariable analysis showed significant predictive effects of IPV (regression coefficient = 1.35, SE = 0.54, $p = 0.01$) and harsh psychological child discipline (regression coefficient = 0.74, SE = 0.22, $p = 0.001$), but not physical discipline (regression coefficient = 0.42, SE = 0.24, $p = 0.08$), on worse child behavioural problems. These findings indicate that child exposure to violence in different forms is highly prevalent, and associated with poorer outcomes in young children. Community-based programmes focused on parenting and early child development are well-positioned to address household violence in LMIC settings, but must be supported to provide a broader understanding of violence and its immediate and long-term consequences.

Keywords

Household violence; child discipline; psychological discipline; child behavioural outcomes; early child development

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Introduction

Child exposure to household violence¹ is common, and has multiple negative effects on children's cognitive and social development (Finkelhor, Turner, Shattuck, & Hamby, 2015). Evidence from high-income countries (HICs) shows that both exposure to and direct experiences of physical violence at home can contribute to the development of behavioural problems in children (Evans, Davies, & DiLillo, 2008). Children exposed to physical intimate partner violence (IPV) have been found to have higher rates of internalising problems, such as depression and anxiety (Herrenkohl, Sousa, Tajima, Herrenkohl, & Moylan, 2008) and, in children under six, lower verbal functioning than their peers (Ybarra, Wilkens, & Lieberman, 2007). Children exposed to IPV have a greater risk of developing externalising problems (Meltzer, Doos, Vostanis, Ford, & Goodman, 2009), and problems with adaptive functioning extending into adolescence (Moylan et al., 2010). Violence directed at children has also been found to have multiple harmful consequences. The use of corporal punishment, even occasionally, has been found to have short- and long-term effects on youth externalising behaviour (Gershoff et al., 2010; Hecker, Hermenau, Isele, & Elbert, 2014; Lansford, Wager, Bates, Pettit, & Dodge, 2012; Ma, Han, Grogan-Kaylor, Delva, & Castillo, 2012), receptive vocabulary (MacKenzie, Nicklas, Waldfogel, & Brooks-Gunn, 2012), and cognitive difficulties in adolescence (Mills et al., 2011).

In recent years, violence has come to be defined in broader terms, expanding to include psychological, attitudinal, and structural dimensions (Pulerwitz et al., 2015; WHO, 2016). However, while our understanding of the diversity and scope of violence has changed, we have limited evidence about the effects that other forms of violence exposure can have, especially on children. Harsh psychological discipline, which may include threatening or manipulating as a form of disciplinary control, has been found to have multiple negative effects on adult wellbeing in retrospective studies (Spertus, Yehuda, Wong, Halligan, & Seremetis, 2003; Wright, Crawford, & Del Castillo, 2009). Existing studies on more immediate impacts of other types of violence on child functioning examine the effects of harsh emotional or psychological, as well as physical, treatment on child aggression and anxiety (Gershoff et al., 2010) and externalising symptoms (Pinquart, 2017). However, there is a substantial gap in our understanding of the role that these types of violence may play in child development.

In low- and middle-income countries (LMICs), a greater majority of children live in households characterised by vulnerability and poverty. However, little is known about how children in LMICs experience household violence and what effects these experiences have on their development (Colucci & Hassan, 2014). Although findings from low-income communities in HICs may be partially applicable to these contexts, a distinct understanding of household violence in LMICs—where resources, norms, and environments often differ tremendously—is needed. Global estimates of child maltreatment are high, yet data is uneven (Stoltenborgh, Bakermans-Kranenburg, Alink, & van Ijzendoorn, 2015), and practices vary widely by country (Lansford & Deater-Deckard, 2012). A review of sub-

¹We use household violence to refer to any physical or psychological violence occurring in the home, between other household members or experienced directly.

Saharan African contexts showed how children living in high-poverty households, with caregivers² experiencing more overlapping stressors, are at heightened risk for being exposed to violence (Meinck, Cluver, Boyes, & Mhlongo, 2015). One recent Ugandan study found associations between child-reported household violence exposure and adverse mental health symptoms in a sample of children ages 11–14 (Devries et al., 2017). However, few studies have explored these associations with preschool-aged children,³ although this age is critical to child development.

In this paper, we examine a broader set of household violence variables and the effects of exposure to violence on young children's behaviour. We do so in a high-poverty part of Kenya, where there is no existing research on this topic. Our aims were firstly, to gather data about diverse types of violence exposure in rural households with young children ages 4–5, and secondly, to explore associations between exposure and behavioural outcomes.

Methods

Design

This study reports baseline cross-sectional survey data from a longitudinal study of children enrolled in the Community-Led Action for Children (CLAC) programme developed and implemented by Plan International. The study has ethical approval from the Institutional Review Board at Stellenbosch University, South Africa (N15/10/099) and the AMREF Ethics & Scientific Review Committee, Kenya (P220/2016).

Setting

The study took place in three counties in Kenya's Nyanza region: Kisumu, Siaya, and Homa Bay. Nyanza is a high-poverty region bordering Lake Victoria, with between one-third and one-half of its population living below the poverty line (Kenya County Fact Sheets, 2011). Agriculture is the most common occupational category, employing nearly 40% of women and 33% of men (Kenya National Bureau of Statistics, 2015). Violence is high in this region: in the 2014 Demographic Health Survey, 30% of women reported past-year physical IPV (Kenya National Bureau of Statistics, 2015). Contributing to household vulnerability is a high HIV prevalence: these three counties have the highest adult HIV prevalence in Kenya, averaging 22.9% prevalence, compared with 6% nationally (Kenya AIDS Strategic Framework, 2014–15–2018/2019, 2014).

Plan International's CLAC programme—Plan International is a global NGO that designs and implements programmes on child rights, health, and education; it currently operates in 75 countries globally, including 25 in sub-Saharan Africa. The Community-Led Action for Children (CLAC) programme supports community-based early learning and policy advocacy, working through local networks of parents and educators. In Kenya, CLAC partners with government-funded primary schools to support educators and train local parents to facilitate parenting groups open to all parents whose children attend a given

²-We use the term caregivers to denote other family members who may be primary guardians.

³-In our study, pre-school aged children are children under 6.

school. At the study's start in 2015, Plan was supporting 99 early childhood care and development (ECCD) centres across Bondo (Siaya), Homa Bay, and Kisumu.

Sample

To identify the study sample, Plan International staff rated each ECCD centre in CLAC on four indicators, generating an overall score designating low, average, or high quality. Using the full list, we randomly selected ECCD centres from each rating stratum, to ensure that the study recruitment sites represented all possible quality levels, ultimately including 20 centres. One selected centre was subsequently dropped during the baseline, due to security concerns. Centres were stratified across county.

The ECCD centre was the unit of recruitment. A caregiver was eligible for inclusion if they had one or more children attending a selected ECCD centre, and if the child was four or five years old at the time of baseline recruitment. To identify caregivers, full rosters of eligible children were provided to data collectors. If there were more than 35 eligible children, data collectors randomly selected every third name from the roster, repeating until a target of 30 children per school was reached. The caregiver of each child was contacted and invited to participate in a questionnaire-based interview with a data collector.

Procedure

Trained, supervised data collectors from the study region, fluent in Luo and Swahili, conducted all interviews in person using the caregiver's preferred language. The multi-section questionnaire tool was translated using a consensus process from English to Luo and Swahili, and piloted before use in the field. Interviews were arranged at a neutral, private location, such as a church hall or meeting room near the child's ECCD centre.

Data collectors administered an informed consent form to all prospective caregivers, only proceeding with interviews once this process was complete and the participant fully understood the research. Data collectors used tablets to record all responses. Submitted interviews were stored in an encrypted, secure cloud-based database. Electronic data collection via mobile device has been shown to improve data collection efficiency, protect against accidental loss of data, and uphold participant confidentiality (Tomlinson et al., 2009). Completed informed consent forms were securely stored with the on-site supervisor, and later moved to Stellenbosch University.

Measures

All measures were present in the single multi-section questionnaire administered to caregivers by the data collection team.

Socio-demographic measures—We measured household, caregiver, and child socioeconomic status, all through caregiver self-report. Household measures included: number of household members, household assets, income sources, monthly income (Kenyan shillings), and study region. Caregiver variables included: gender, highest education level completed, age (years), marital status (including number of wives in the union), and HIV status. Child measures included: child gender, age (months), and child HIV status.

Caregiver-reported child outcomes—Child behaviour was measured using the caregiver-report Strengths and Difficulties Questionnaire (SDQ) (Goodman, 1997). The 25-question SDQ, designed for children ages 4–17, contains internalising and externalising behaviour subscales. In this paper, we report scores from the Emotional Problems, Conduct Problems, Hyperactivity, and Peer Problems subscales only. The SDQ has been widely validated, and uses a 3-point Likert scale. It has been used in other sub-Saharan African (SSA) countries (Skeen, Macedo, Tomlinson, Hensels, & Sherr, 2016; Skinner, Sharp, Marais, Serekoane, & Lenka, 2014), including Kenya (Vreeman et al., 2015).

Child exposure to household violence—IPV was assessed using five items from the WHO Violence Against Women Multi-Country Study questionnaire (García-Moreno, Jansen, Ellsberg, Heise, & Watts, 2005). Only questions about victimisation were used; we therefore excluded male caregivers from this section. These questions asked whether the caregiver had experienced a given form of physical partner violence in the 12 months prior, and if so, with what frequency (once, a few times, or many times). These questions included a range of physically violent acts, from slapping or pushing, to beating, choking, and threatening with a weapon. These questions have been administered globally, including in Tanzania and Ethiopia.

Harsh discipline was ascertained using eight questions from the Parent–Child Conflict Tactics Scale (Straus & Hamby, 1997). Items asked caregivers if any children in the household have been disciplined in certain ways by any adult in the household over a 12-month period, and if these practices were used weekly, monthly, less often, or never. The questions are structured to facilitate caregiver response in a non-stigmatising way, and include questions on harsh physical and psychological punishment. The scale has been used globally, including in SSA (Sherr, Skeen, Hensels, Tomlinson, & Macedo, 2016).

Gender attitudes were assessed regarding household duties, parenting, and relationships using questions from the Gender Equitable Men Scale (GEMS; Pulerwitz & Barker, 2008). GEMS contains items about gender roles and the distribution of responsibilities in the home and relationship. Caregivers indicated agreement on a 3-point Likert scale; higher scores indicate more inequitable attitudes. For this analysis, we selected three relevant GEMS items and combined them for a composite ‘gender attitudes’ measure:

1. a man should have the final word about decisions in his home;
2. a woman should obey her husband in all things; and
3. a woman should tolerate violence in order to keep her family together.

Originally developed and piloted with young Brazilian men, the GEMS has been used in other SSA countries and with women, including in Kenya (Stephenson, Bartel, & Rubardt, 2012).

Data analysis

As child outcomes were the outcome of interest, we initially analysed caregiver-reported data on all children. Some children shared caregivers. For caregivers with multiple children, we randomly selected one child from each caregiver. Each child had an equal chance of

being selected for the analysis, and results were run with different combinations of selected children. Results were similar, and thus we report results for the whole sample. Univariate linear regression models were run with both demographic and violence variables predicting child psychological outcomes. Continuous predictors included IPV, gender attitudes, physical and psychological discipline scores, caregiver age, caregiver education, and size of household. Binary predictors included whether a caregiver was married; if caregiver owned a cell phone, radio, or stove; if caregiver had an earned or other source of income; child HIV status; and caregiver HIV status. The only categorical variable in the analysis was region. Variables significant for predicting SDQ scores were included in the multivariable linear regression analysis along with the violence predictors. Models with IPV analyse only data from children of female caregivers, while all other analyses use data from all children. For the final multivariable analysis, which included IPV, only children of female caregivers were included. All analyses were done in R (R Core Team, 2019).

Results

Sample characteristics

Our sample included 465 caregivers, reporting information about themselves and their children ($n = 497$). There were approximately equal numbers of male (52%) and female children (48%), with slightly more children who were four years of age (54%) than five (46%). There were 32 children who shared a caregiver. Female caregivers comprised 88% of the sample. 24% of caregivers and 1.6% of children were HIV-positive Table 1.

Nearly 40% of female caregivers reported experiencing any IPV, and 30% reported experiencing frequent IPV, responding 'a few times' or 'many times' to any of the five items. Most children were exposed to harsh discipline, and 24.6% exposed to harsh discipline monthly or weekly. While harsh physical discipline exposure was near-universal (88.5%), nearly one-third of children were exposed to harsh psychological discipline (32.6%). Violence variables were not found to be significantly correlated with one another.

In Table 2, all measures of violence were strongly associated with poorer child behavioural outcomes (high SDQ scores). Table 2 shows the univariate regression results for each demographic predictor; only significant demographic predictors were used in the multivariable linear model. The multivariable regression model for SDQ scores is summarised in Table 3. Region was also included in the final model. Only the 438 children of female caregivers were included in this final multivariable model. In the multivariable model, three predictors of child behavioural outcomes were significant: IPV, harsh psychological discipline, and mobile phone ownership. Notably, as both IPV and harsh discipline increased, child behavioural outcomes worsened, controlling for these other covariates.

Discussion

Few studies in SSA countries have analysed the association between exposure to household violence, harsh psychological discipline and child behavioural outcomes (Akande, 2000; Chander et al., 2017; Skeen et al., 2016). In this study, we assessed different types of

caregiver-reported household violence, including caregiver IPV, harsh physical and psychological discipline, and attitudes about gender and violence. We explored associations between these types of violence and child behavioural functioning.

Child exposure to violence in the home was high. Nearly four in ten female caregivers reported recent violent treatment from a current or past partner. Furthermore, harsh child discipline was nearly universal. While fewer children were exposed to frequent harsh discipline, caregivers experiencing IPV were more likely to report that it was frequent. While these rates of IPV reflect those women who had ‘ever’ experienced IPV in Kenya’s, 2014 DHS, they are nearly twice as high as reported past-year rates (Kenya National Bureau of Statistics, 2015). Child discipline data are more closely aligned with existing estimates, although this data does not specifically focus on young children. Other studies have established high rates of harsh physical discipline in Kenyan contexts (Gershoff et al., 2010; Mudany, Nduati, Mboori-Ngacha, & Rutherford, 2013), as well as higher rates of harsh physical than harsh psychological discipline (UNICEF, 2012). Although both types of violence were common in our sample, they were not found to be highly correlated.

Furthermore, lower socioeconomic status, exposure to IPV, and exposure to harsh psychological discipline significantly predicted poorer child outcomes. When caregivers had a lower level of education and households did not own a cell phone, child behavioural outcomes were worse. These findings are consistent with other literature that shows a predictive effect of maternal education on child health and behaviour (Carneiro, Meghir, & Pary, 2013). Furthermore, although only 5% of children lived in households without a cell phone, its effect was significant; it is plausible that mobile phones as assets can approximate socioeconomic status, especially in rural areas (Aker & Mbiti, 2010), and that the minority of children without a household mobile phone may suffer effects of poverty in other dimensions. Further targeted research might investigate more thoroughly causal pathways linking these domains in our context, as disentangling the effects of poverty on child outcomes is complex (Yoshikawa, Aber, & Beardslee, 2012).

Exposure to IPV predicted worse behavioural outcomes in children; child behaviour worsened as IPV frequency increased. These findings align with existing evidence about the IPV’s effects on child psychology and development in both HICs (Evans et al., 2008) and LMICs (Chander et al., 2017; Pengpid & Peltzer, 2013).

Harsh psychological discipline had significant predictive effects on poor child outcomes, which is notable given that less than one-third of children experienced harsh psychological discipline. While some studies exploring psychological abuse and child outcomes in younger children in LMIC exist, they tend to focus on specific contexts of vulnerability, including HIV/AIDS (Meinck et al., 2015), post-conflict (Sim et al., 2014) and refugee settings (Sim, Annan, Puffer, Salhi, & Betancourt, 2014).

Conversely, we found that harsh physical discipline did not significantly predict child behavioural outcomes, although previous research supports this link (Gershoff et al., 2010; Johnsona et al., 2002; Moylan et al., 2010), and although it was more common than psychological discipline in our sample. There are few studies differentiating between and

among types of violence when exploring associations with child outcomes, which may explain in part this surprising finding. A recent systematic review on the effects of emotional abuse and neglect in HICs identified externalising behaviours and social difficulties as adverse outcomes in school-aged children (Maguire et al., 2015). However, research on the effects of harsh psychological discipline or abuse is often combined with, or overshadowed by, studies on physical abuse and/or sexual abuse (Norman et al., 2012), which may produce uneven evidence. A number of studies have found effects from psychological, but not physical, discipline or abuse, although much of the existing research relies on retrospective self-report data with adolescents or adults (Arslan, 2017; Ramiro, Madrid, & Brown, 2010). These retrospective studies have found similar results to ours, with significant effects from emotional but not physical abuse. One study found that adults with emotional, but not physical or sexual abuse history, had greater increases in depressive symptoms under high-stress circumstances (Shapiro & Steinberg, 2013). Another found significant associations between severe emotional abuse and suicidality among a large cross-sectional adult cohort in Brazil, with no similar significant effects of physical abuse (de Araújo & Lara, 2016).

The lack of evidence on young children's experiences of household violence, and concurrent or later impacts on wellbeing, highlight the importance of including and sustaining conversations about multiple types of violence within more routine parenting group and educational settings. Parenting education classes can serve as sites where cross-cutting strategies to integrate violence prevention and early childhood development (ECD) can be piloted (Landers, 2014). Integrated ECD and violence prevention models, known as 'ECD+' interventions, promote holistic approaches to parenting education and child wellbeing and protection (Efevbera, McCoy, Wuermli, & Betancourt, 2017; Tomlinson et al., 2017). They can also serve as sites of engagement around IPV and its harmful effects on individuals and family. Devries et al. (2017) note that IPV interventions can also be effective in reducing child maltreatment, as the two are closely interlinked.

Our results point to specific behaviours and disciplinary methods that must be considered in programmatic settings. These programmes should go beyond discouraging harsh physical punishment; they must specifically address the detrimental effects of both physical and psychological discipline on child development. Deliberately bringing these findings into a parenting intervention setting may strengthen the types of conversations that can take place in a community context, and may invite more critical dialogue from caregivers and programme practitioners alike.

There are also interventions integrating family wellbeing and child mental health with violence prevention and reduction strategies (Jayaratne, Kelaher, & Dunt, 2010), some of which have been implemented recently in LMICs (Chaudhury et al., 2016; Efevbera et al., 2017). These interventions aim to equip parents with strategies and skills for child care in resource-poor settings, reducing the potential for child maltreatment and violence. Pairing interventions with continued community-based education efforts around violence against women and children has the potential to systematically address more deeply entrenched behaviours.

Limitations

Given our study's cross-sectional design, conclusions cannot be tracked over time. Our sample reflects a school-going population, and thus may exclude some of the most marginalised children in these communities who do not attend preschool, reducing the generalisability of these findings. Our reliance on Plan for initial quality ratings had some limitations, including the reliability of quality information and limited variation among the schools. The SDQ was developed for use in HICs; there are limited validated measures of child behaviour and mental health for LMICs (Kariuki, Abubakar, Murray, Stein, & Newton, 2016). Some of our measures have not been validated for use in Kenya in particular. More measures must be developed and adapted to account for cultural and societal relevance. One final limitation is that our data were collected by caregiver report, which allows for a risk of response and/or social desirability bias, especially around sensitive questions about child punishment (Schneider, MacKenzie, Waldfogel, & Brooks-Gunn, 2015).

Conclusion

Children who are exposed to IPV and psychological violence in the household, especially at higher frequencies, experience more behavioural problems than children who are not. Community-led programmes, such as Plan's CLAC intervention, can be conduits for parenting education and behaviour change, and can leverage their position to reach parents and families in novel yet relevant ways.

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References

- Akande A (2000). Effects of exposure to violence and poverty on young children: The Southern African context. *Early Child Development and Care*, 163(1), 61–78. [10.1080/0300443001630105](https://doi.org/10.1080/0300443001630105)
- Aker JC, & Mbiti IM (2010). Mobile phones and economic development in Africa. *Journal of Economic Perspectives*, 24(3), 207–232. [doi:10.1257/jep.24.3.207](https://doi.org/10.1257/jep.24.3.207)
- Arslan G (2017). Psychological maltreatment, coping strategies, and mental health problems: A brief and effective measure of psychological maltreatment in adolescents. *Child Abuse & Neglect*, 68, 96–106. [10.1016/j.chiabu.2017.03.023](https://doi.org/10.1016/j.chiabu.2017.03.023) [PubMed: 28427000]
- Carneiro P, Meghir C, & Pary M (2013). Maternal education, home environments, and the development of children and adolescents. *Journal of the European Economic Association*, 11(suppl_1), 123–160. [doi:10.1111/j.1542-4774.2012.01096.x](https://doi.org/10.1111/j.1542-4774.2012.01096.x)
- Chander P, Kvalsvig J, Mellins CA, Kauchali S, Arpadi SM, Taylor M, ... Davidson LL (2017). Intimate partner violence and child behavioral problems in South Africa. *Pediatrics*, 139(3), e20161059. [PubMed: 28242862]
- Chaudhury S, Brown FL, Kirk CM, Mukunzi S, Nyirandagijimana B, Mukandanga J, ... Betancourt TS (2016). Exploring the potential of a family-based prevention intervention to reduce alcohol use

and violence within HIV-affected families in Rwanda. *AIDS Care*, 28(sup2), 118–129. doi:10.1080/09540121.2016.1176686 [PubMed: 27392007]

- Colucci E, & Hassan G (2014). Prevention of domestic violence against women and children in low-income and middle-income countries. *Current Opinion in Psychiatry*, 27(5), 350–357. doi:10.1097/ycp.000000000000088 [PubMed: 25033276]
- de Araújo R, & Lara DR (2016). More than words: The association of childhood emotional abuse and suicidal behavior. *European Psychiatry*, 37, 14–21. 10.1016/j.eurpsy.2016.04.002 [PubMed: 27442978]
- Devries KM, Knight L, Child JC, Kyegombe N, Hossain M, Lees S, ... Naker D (2017). Witnessing intimate partner violence and child maltreatment in Ugandan children: A cross-sectional survey. *BMJ Open*, 7(2), e013583. doi:10.1136/bmjopen-2016-013583
- Efevbera Y, McCoy DC, Wuermler AJ, & Betancourt TS (2017). Early childhood development plus violence prevention in low-and middle-income countries: A qualitative study. *Children & Society*, 31(2), 98–109. 10.1111/chso.12169
- Evans SE, Davies C, & DiLillo D (2008). Exposure to domestic violence: A meta-analysis of child and adolescent outcomes. *Aggression and Violent Behavior*, 13(2), 131–140. doi:10.1016/j.avb.2008.02.005
- Finkelhor D, Turner HA, Shattuck A, & Hamby SL (2015). Prevalence of childhood exposure to violence, crime, and abuse: Results from the national survey of children's exposure to violence. *JAMA Pediatrics*, 169(8), 746–754. doi:10.1001/jamapediatrics.2015.0676 [PubMed: 26121291]
- García-Moreno C, Jansen HA, Ellsberg M, Heise L, & Watts C (2005). WHO multi-country study on women's health and domestic violence against women: Initial results on prevalence, health outcomes and women's responses. Geneva: World Health Organization.
- Gershoff ET, Grogan-Kaylor A, Lansford JE, Chang L, Zelli A, Deater-Deckard K, & Dodge KA (2010). Parent discipline practices in an international sample: Associations with child behaviors and moderation by perceived normativeness. *Child Development*, 81(2), 487–502. doi:10.1111/j.1467-8624.2009.01409.x [PubMed: 20438455]
- Goodman R (1997). The Strengths and difficulties questionnaire: A research note. *Journal of Child Psychology and Psychiatry*, 38(5), 581–586. 10.1111/j.1469-7610.1997.tb01545.x [PubMed: 9255702]
- Hecker T, Hermenau K, Isele D, & Elbert T (2014). Corporal punishment and children's externalizing problems: A cross-sectional study of Tanzanian primary school aged children. *Child Abuse & Neglect*, 38(5), 884–892. doi: 10.1016/j.chiabu.2013.11.007 [PubMed: 24360761]
- Herrenkohl TI, Sousa C, Tajima EA, Herrenkohl RC, & Moylan CA (2008). Intersection of child abuse and children's exposure to domestic violence. *Trauma, Violence, & Abuse*, 9(2), 84–99. 10.1177/1524838008314797
- Jayarathne K, Kelaher M, & Dunt D (2010). Child health partnerships: A review of program characteristics, outcomes and their relationship. *BMC Health Services Research*, 10, 172. doi:10.1186/1472-6963-10-172 [PubMed: 20565798]
- Johnsna RM, Kotch JB, Catellier DJ, Winsor JR, Dufort V, Hunter W, & Amaya-Jackson L (2002). Adverse behavioral and emotional outcomes from child abuse and witnessed violence. *Child Maltreatment*, 7(3), 179–186. 10.1177/1077559502007003001 [PubMed: 12139186]
- Kariuki SM, Abubakar A, Murray E, Stein A, & Newton CR (2016). Evaluation of psychometric properties and factorial structure of the pre-school child behaviour checklist at the Kenyan Coast. *Child and Adolescent Psychiatry and Mental Health*, 10(1), 1. 10.1186/s13034-015-0089-9 [PubMed: 26793272]
- Kenya AIDS Strategic Framework 2014-15-2018/2019. (2014). Retrieved from <https://www.undp.org/content/dam/kenya/docs/Democratic20Governance/KENYA20AIDS20STRATEGIC20FRAMEWORK.pdf>.
- Kenya County Fact Sheets. (2011). Retrieved from http://siteresources.worldbank.org/INTAFRICA/Resources/257994-1335471959878/Kenya_County_Fact_Sheets_Dec2011.pdf.
- Kenya National Bureau of Statistics. (2015). Kenya demographic and health survey 2014. MD, USA. Retrieved from Rockville. <http://dhsprogram.com/pubs/pdf/FR308/FR308.pdf>

- Landers C (2014). Integrating early childhood development and violence prevention; A Landscape analysis: Networks, Campaigns, Movements, and Initiatives. Retrieved from <http://www.cpcnetwork.org/wp-content/uploads/2014/11/ECD-Violence-Prevention-Final-Report-1.pdf>
- Lansford JE, & Deater-Deckard K (2012). Childrearing discipline and violence in developing countries. *Child Development*, 83(1), 62–75. 10.1111/j.1467-8624.2011.01676.x [PubMed: 22277007]
- Lansford JE, Wager LB, Bates JE, Pettit GS, & Dodge KA (2012). Forms of spanking and children's externalizing behaviors. *Family Relations*, 61(2), 224–236. 10.1111/j.1741-3729.2011.00700.x [PubMed: 22544988]
- Ma J, Han Y, Grogan-Kaylor A, Delva J, & Castillo M (2012). Corporal punishment and youth externalizing behavior in Santiago, Chile. *Child Abuse & Neglect*, 36(6), 481–490. 10.1016/j.chiabu.2012.03.006 [PubMed: 22766372]
- MacKenzie MJ, Nicklas E, Waldfogel J, & Brooks-Gunn J (2012). Corporal punishment and child behavioural and cognitive outcomes through 5 years of age: Evidence from a contemporary urban birth cohort study. *Infant and Child Development*, 21(1), 3–33. 10.1002/icd.758 [PubMed: 24839402]
- Maguire S, Williams B, Naughton A, Cowley L, Tempest V, Mann M, ... Kemp A (2015). A systematic review of the emotional, behavioural and cognitive features exhibited by school-aged children experiencing neglect or emotional abuse. *Child: Care, Health And Development*, 41(5), 641–653. 10.1111/cch.12227
- Meinck F, Cluver LD, Boyes ME, & Mhlongo EL (2015). Risk and protective factors for physical and sexual abuse of children and adolescents in Africa: A review and implications for practice. *Trauma, Violence, & Abuse*, 16 (1), 81–107. 10.1177/1524838014523336
- Meltzer H, Doos L, Vostanis P, Ford T, & Goodman R (2009). The mental health of children who witness domestic violence. *Child & Family Social Work*, 14(4), 491–501. doi:10.1111/j.1365-2206.2009.00633.x
- Mills R, Alati R, O'Callaghan M, Najman JM, Williams GM, Bor W, & Strathearn L (2011). Child abuse and neglect and cognitive Function at 14 years of Age: Findings from a Birth cohort. *Pediatrics*, 127(1), 4–10. doi:10.1542/peds.2009-3479 [PubMed: 21135010]
- Moylan CA, Herrenkohl TI, Sousa C, Tajima EA, Herrenkohl RC, & Russo MJ (2010). The effects of child abuse and exposure to domestic violence on adolescent internalizing and externalizing behavior problems. *Journal of Family Violence*, 25(1), 53–63. 10.1007/s10896-009-9269-9 [PubMed: 20495613]
- Mudany MA, Nduati R, Mboori-Ngacha D, & Rutherford GW (2013). Perceptions of child discipline and its contributions to child abuse in a low-income community in Nairobi, Kenya. *Paediatrics and International Child Health*, 33(4), 228–232. 10.1179/2046905513Y.0000000071 [PubMed: 24090542]
- Norman RE, Byambaa M, De R, Butchart A, Scott J, & Vos T (2012). The long-term health consequences of child physical abuse, emotional abuse, and neglect: A systematic review and meta-analysis. *PLoS Medicine*, 9(11), e1001349. 10.1371/journal.pmed.1001349 [PubMed: 23209385]
- Pengpid S, & Peltzer K (2013). Mental health, partner violence and HIV risk among women with protective orders against violent partners in Vhembe district, South Africa. *Asian Journal of Psychiatry*, 6(6), 494–499. 10.1016/j.ajp.2013.06.005 [PubMed: 24309860]
- Pinquart M (2017). Associations of parenting dimensions and styles with externalizing problems of children and adolescents: An updated meta-analysis. *Developmental Psychology*, 53(5), 873. 10.1037/dev0000295 [PubMed: 28459276]
- Pulerwitz J, & Barker G (2008). Measuring attitudes toward gender norms among young men in Brazil: Development and psychometric evaluation of the GEM scale. *Men and Masculinities*, 10(3), 322–338. 10.1177/1097184X06298778
- Pulerwitz J, Hughes L, Mehta M, Kidanu A, Verani F, & Tewolde S (2015). Changing gender norms and reducing intimate partner violence: Results from a quasi-experimental intervention study with young men in Ethiopia. *American Journal Of Public Health*, 105(1), 132–137. 10.2105/AJPH.2014.302214 [PubMed: 25393199]

- Ramiro LS, Madrid BJ, & Brown DW (2010). Adverse childhood experiences (ACE) and health-risk behaviors among adults in a developing country setting. *Child Abuse & Neglect*, 34(11), 842–855. 10.1016/j.chiabu.2010.02.012 [PubMed: 20888640]
- Schneider W, MacKenzie M, Waldfoegel J, & Brooks-Gunn J (2015). Parent and child reporting of corporal punishment: New evidence from the fragile families and child wellbeing study. *Child Indicators Research*, 8(2), 347–358. 10.1007/s12187-014-9258-2 [PubMed: 28386302]
- Shapero BG, & Steinberg L (2013). Emotional reactivity and exposure to household stress in childhood predict psychological problems in adolescence. *Journal Of Youth And Adolescence*, 42(10), 1573–1582. 10.1007/s10964-013-9954-0 [PubMed: 23625181]
- Sherr L, Skeen S, Hensels IS, Tomlinson M, & Macedo A (2016). The effects of caregiver and household HIV on child development: A community-based longitudinal study of young children. *Child: Care, Health And Development*, 42(6), 890–899. 10.1111/cch.12387
- Sim A, Annan J, Puffer E, Salhi C, & Betancourt T (2014). Building happy families. Impact evaluation of a parenting and family skills intervention for migrant and displaced Burmese families in Thailand. New York, NY: International Rescue Committee.
- Sim A, Puffer E, Green E, Chase R, Zayzay J, Garcia-Rolland E, & Boone L (2014). Parents make the difference: Findings from a randomized impact evaluation of a parenting program in rural Liberia. New York: International Rescue Committee.
- Skeen S, Macedo A, Tomlinson M, Hensels I, & Sherr L (2016). Exposure to violence and psychological wellbeing over time in children affected by HIV/AIDS in South Africa and Malawi. *AIDS Care*, 28(sup1), 16–25. 10.1080/09540121.2016.1146219 [PubMed: 27002770]
- Skinner D, Sharp C, Marais L, Serekoane M, & Lenka M (2014). Assessing the value of and contextual and cultural acceptability of the Strength and difficulties questionnaire (SDQ) in evaluating mental health problems in HIV/AIDS affected children. *International Journal of Mental Health*, 43(4), 76–89. 10.1080/00207411.2015.1009314 [PubMed: 27087701]
- Spertus IL, Yehuda R, Wong CM, Halligan S, & Seremetis SV (2003). Childhood emotional abuse and neglect as predictors of psychological and physical symptoms in women presenting to a primary care practice. *Child Abuse & Neglect*, 27(11), 1247–1258. 10.1016/j.chiabu.2003.05.001 [PubMed: 14637300]
- Stephenson R, Bartel D, & Rubardt M (2012). Constructs of power and equity and their association with contra-ceptive use among men and women in rural Ethiopia and Kenya. *Global Public Health*, 7(6), 618–634. 10.1080/17441692.2012.672581 [PubMed: 22568536]
- Stoltenborgh M, Bakermans-Kranenburg MJ, Alink LRA, & van Ijzendoorn MH (2015). The prevalence of child maltreatment across the Globe: Review of a Series of Meta-analyses. *Child Abuse Review*, 24(1), 37–50. doi:10.1002/car.2353
- Straus MA, & Hamby SL (1997). Measuring physical & psychological maltreatment of children with the conflict tactics scales.
- Team, R. Core. (2019). R: A language and environment for statistical computing. Vienna, Austria: R Foundation for Statistical Computing.
- Tomlinson M, Jordans M, MacMillan H, Betancourt T, Hunt X, & Mikton C (2017). Research priority setting for integrated early child development and violence prevention (ECD+) in low and middle income countries: An expert opinion exercise. *Child Abuse & Neglect*, 72, 131–139. 10.1016/j.chiabu.2017.07.021 [PubMed: 28802211]
- Tomlinson M, Solomon W, Singh Y, Doherty T, Chopra M, Ijumba P, ... Jackson D (2009). The use of mobile phones as a data collection tool: A report from a household survey in South Africa. *BMC Medical Informatics and Decision Making*, 9(1), 51. 10.1186/1472-6947-9-51 [PubMed: 20030813]
- UNICEF. (2012). Violence against children in Kenya: Findings from a 2010 National Survey. Summary Report on the Prevalence of Sexual, Physical and Emotional Violence, Context of Sexual Violence, and Health and Behavioral Consequences of Violence Experienced in Childhood.
- Vreeman RC, Scanlon ML, Marete I, Mwangi A, Inui TS, McAteer CI, & Nyandiko WM (2015). Characteristics of HIV-infected adolescents enrolled in a disclosure intervention trial in western Kenya. *AIDS Care*, 27(sup1), 6–17. doi:10.1080/09540121.2015.1026307

- WHO. (2016). INSPIRE: Seven strategies for ending violence against children. Geneva: World Health Organization.
- Wright MOD, Crawford E, & Del Castillo D (2009). Childhood emotional maltreatment and later psychological distress among college students: The mediating role of maladaptive schemas. *Child Abuse & Neglect*, 33(1), 59–68. 10.1016/j.chiabu.2008.12.007 [PubMed: 19167067]
- Ybarra GJ, Wilkens SL, & Lieberman AF (2007). The influence of domestic violence on preschooler behavior and functioning. *Journal of Family Violence*, 22(1), 33–42. doi:10.1007/s10896-006-9054-y
- Yoshikawa H, Aber JL, & Beardslee WR (2012). The effects of poverty on the mental, emotional, and behavioral health of children and youth: Implications for prevention. *American Psychologist*, 67(4), 272–284. doi:10.1037/a0028015

Table 1.

Children and caregiver demographic information.

	N	%
Caregiver characteristics (N = 465)		
Caregiver Education		
No School	53	11%
Grades 1–6	106	23%
Grades 7–8	208	45%
Grades 9 and above	98	21%
Caregiver Gender		
Male	55	12%
Female	410	88%
Caregiver Marital Status		
Married	428	92%
Not Married	37	8%
Caregiver HIV Status		
Positive	105	23%
Negative	339	73%
Not available	21	5%
Female caregivers experiencing any IPV	162 (n = 410)	40%
Female caregivers experiencing frequent IPV	125 (n = 410)	30%
Child Characteristics (N = 497)		
Child Gender		
Male	258	52%
Female	239	48%
Child's Age (months)		
48–59	268	53.9%
60–72	229	46.1%
Child HIV Status		
Positive	8	1.6%
Negative	396	79.7%
Not available	93	18.7%
Exposed to any harsh discipline		
Harsh physical discipline	440	88.5%
Harsh psychological discipline	162	32.6%
Exposed to any harsh discipline frequently (monthly or weekly)		
Frequent harsh physical discipline	108	21.7%
Frequent harsh psychological discipline	38	7.7%
Household Characteristics (N = 465)		
Household Members Count		
0–5	265	53.3%
6+	232	46.7%

	N	%
Household Monthly Income		
0–2000 Kenyan shillings	291	58.6%
2001+ Kenyan shillings	159	32.0%
Not Available	47	9.5%
Household Assets Prevalence		
Cell Phone	474	95.4%
Radio	338	68.0%
Bicycle	169	34.0%
Stove	133	26.8%
Internet Via Phone	114	22.9%
Television	55	11.1%
Region	161	35%
Homa Bay	178	38%
Kisumu	126	27%
Bondo	161	35%

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Table 2.

Demographic and violence univariate regression, SDQ as outcome.

Variable	Coefficient	Std. Error	95% CI for Regression Coefficient	<i>p</i> -value
<i>N</i> = 438 children with female caregiver				
Any IPV	1.77	0.55	(1.22, 2.32)	0.001
<i>N</i> = 497 children				
Gender attitudes	-0.24	0.11	(-0.35, -0.13)	0.03
Harsh physical discipline	0.90	0.22	(0.68, 1.12)	0.00
Harsh psychological discipline	1.03	0.20	(0.83, 1.23)	0.00
Caregiver age	-0.02	0.02	(-0.04, 0)	0.46
Caregiver education	-0.32	0.09	(-0.41, -0.23)	0.00
Marital status	0.23	0.94	(-0.71, 1.17)	0.81
Number of household members	-0.04	0.13	(-0.17, 0.09)	0.74
Cell phone ownership	-2.87	1.19	(-4.06, -1.68)	0.02
Radio ownership	0.18	0.54	(-0.36, 0.72)	0.74
Stove ownership	-0.86	0.57	(-1.43, -0.29)	0.13
Household earned income	-1.77	1.10	(-2.87, -0.67)	0.11
Household other income source	0.71	1.52	(-0.81, 2.23)	0.64
Child HIV-positive	-1.54	1.98	(-3.52, 0.44)	0.44
Caregiver HIV-positive	0.62	0.61	(0.01, 1.23)	0.30
Region (Bondo is reference region) F-statistic: 2.192 on 2 and 494 DF, <i>p</i> -value: 0.11				
Homa Bay	0.61	0.59	(0.02, 1.20)	0.30
Kisumu	1.34	0.64	(0.7, 1.98)	0.04

Table 3.

Multivariable regression, with SDQ as outcome (female caregivers only).

Predictor	Coefficient	Standard Error	95% CI for Regression Coefficient	<i>p</i> -Value
Any IPV	1.35	0.54	(0.81, 1.89)	0.01
Harsh physical discipline	0.42	0.24	(0.18, 0.66)	0.08
Harsh psychological discipline	0.74	0.22	(0.52, 0.96)	0.001
Gender attitudes	-0.13	0.19	(-0.32, 0.06)	0.49
Caregiver education	-0.17	0.10	(-0.27, -0.07)	0.09
Cell phone ownership	-2.66	1.25	(-3.91, -1.41)	0.03
Region (Bondo is reference category) F-value = 1.45 on 2 and 429 df, <i>p</i> -value = 0.235				
Homa Bay	-0.20	0.61	(-0.81, 0.41)	0.74
Kisumu	0.86	0.67	(0.19, 1.53)	0.20

N = 438 children with female caregiver.