Intimate Partner Violence and Child Behavioral Problems in South Africa

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abstract

BACKGROUND: Research in high-income countries has repeatedly demonstrated that intimate partner violence (IPV) experienced by women negatively affects the health and behavior of children in their care. However, there is little research on the topic in lower- and middle-income countries. The population-based Asenze Study gathered data on children and their caregivers in KwaZulu-Natal, South Africa. This data analysis explores the association of caregiver IPV on child behavior outcomes in children <12 years old and is the first such study in Africa.

METHODS: This population-based study was set in 5 Zulu tribal areas characterized by poverty, food insecurity, unemployment, and a high HIV prevalence. The Asenze Study interviewed caregivers via validated measures of IPV, alcohol use, caregiver mental health difficulties, and child behavior disorders in their preschool children.

RESULTS: Among the 980 caregivers assessed, 37% had experienced IPV from their current partner. Experience of partner violence (any, physical, or sexual) remained strongly associated with overall child behavior problems (odds ratio range: 2.46–3.10) even after age, HIV status, cohabitation with the partner, alcohol use, and posttraumatic stress disorder were accounted for.

CONCLUSIONS: Childhood behavioral difficulties are associated with their caregiver's experience of IPV in this population, even after other expected causes of child behavior difficulties are adjusted for. There is a need to investigate the longer-term impact of caregiver partner violence, particularly sexual IPV, on the health and well-being of vulnerable children in lower- and middle-income countries. Studies should also investigate whether preventing IPV reduces the occurrence of childhood behavior difficulties.

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WHAT'S KNOWN ON THIS SUBJECT: In high-income countries, intimate partner violence (IPV) is a major contributor to ill health in women and children under their care. Unfortunately, in low- and middle-income countries where IPV prevalence is high, a limited number of studies have analyzed this association.

WHAT THIS STUDY ADDS: This is the first population-based study in an African country documenting that caregiver experience of IPV, particularly sexual IPV, has a negative impact on the behavior of young children under their care.

ARTICLE

In high-income countries (HICs) research has shown that childhood behavior disorders such as hyperactivity, conduct disorder, and emotional problems have a negative impact on the children's overall well-being and performance in school.[1–8] Children's behavior difficulties are exacerbated by specific health and social problems experienced by their mothers or primary caregivers.[1–11] These caregiver problems can include depression, posttraumatic stress disorder (PTSD), alcohol abuse, and the experience of intimate partner violence (IPV). IPV, defined as an intimate partner or ex-partner causing physical, sexual, or psychological harm, is a major contributor to poor physical and mental health in women.[9] Examples of IPV include physical aggression, sexual coercion, psychological abuse, and controlling behaviors.[9] IPV not only harms the caregiver but can also harm the children under their care. The negative effects of childhood exposure to caregiver IPV can extend into adolescence and adulthood.[1] These effects can occur directly through experiencing child abuse[10] or witnessing caregiver abuse or indirectly through receiving inappropriate parenting.[1,2,4–8,10,12] Although there are numerous studies in HICs demonstrating these negative associations, during a literature search of PubMed and PsycINFO we identified only 1 study investigating the relationship between caregiver IPV and child behavior problems in an LMIC (Brazil). This Brazilian study found a relationship between increasing severity of maternal IPV and child behavior problems in children 5 to 12 years old.[13] However, there is still an urgent need to better understand the impact of IPV experienced by caregivers of children in LMIC settings where there are different social supports and cultural expectations.

Our study is the first in Africa to examine the association of caregiver's experience of IPV on the behavior of young children under the age of 12.

METHODS

Study Sample

The sample for this analysis was drawn from a larger population-based cohort of preschool children and their primary caregivers (the Asenze cohort). The Asenze cohort resided in KwaZulu-Natal, a periurban South African area. This region was exposed to decades of socioeconomic deprivation as a result of apartheid and suffers from family displacement, poverty, unemployment, and a high HIV prevalence.[14,15] Little peer-reviewed research has been published on family violence in South Africa; however, the current literature suggests that South Africa's child homicide rate is twice the global estimate,[16] and 15% of men reported having raped or attempted to rape a wife or girlfriend in the last 10 years.[17] The Asenze Study focused on health, social, and contextual factors influencing children's developmental outcomes. All children ages 4 to 6 years old and their primary caregivers were eligible to participate in the study.[14,15] Eligible people were invited to participate through door-to-door surveys in an area spanning 5 Zulu tribal areas in KwaZulu-Natal, South Africa (population size = 67 000).[14] Informed consent was obtained from the caregivers for themselves and their eligible child. Participants were read and given a copy of the consent document to minimize the reliance on literacy. After receiving consent, we invited the pair to the Asenze offices for medical and psychological assessments.[14] The study initially identified 1787 eligible children; 1581 children (88% of total population) and 1436 caregivers participated in the clinical assessments.[14,15] The Asenze Study,

including all assessment instruments and procedures, was approved by the Columbia University institutional review board and the Biomedical Research Ethics Committee of the University of KwaZulu-Natal.

Inclusion and Exclusion Criteria

For the current analyses, the following exclusions were made from the original sample of 1581 children and 1436 caregivers: male caregivers excluded because the sample size was too small to examine differences (n = 38), caregivers with missing information on their IPV experience (n = 206), children without a completed behavior assessment (n = 15), and caregivers not currently in a romantic or sexual relationship (n = 346). It was not feasible in this study to analyze the association with past IPV because only women in current relationships were asked about their experiences with IPV. The final sample size was 980 children under the care of 790 women, with some women caring for >1 child.

Procedure

A study driver brought the participating children and caregivers to the clinic, where they were assessed by a team of midlevel professionals. The midlevel professionals were 4 women trained and experienced in administering psychological tests to adults and children. These professionals, fluent in English and in the participants' primary language isiZulu, were particularly experienced in assessing child behavior and development. All instruments were translated from English to isiZulu and then translated carefully from isiZulu back into English to ensure clarity.[18] To avoid any difficulties with literacy, questionnaires were administered to caregivers as an interview in isiZulu. The caregivers were interviewed about their mental health, use of alcohol, experience of partner violence, and child's behavior.[14,15] The children in this study were

<7 years old and cognitively too young to be asked about their experiences with IPV or child abuse. Both children and caregivers were offered HIV testing and appropriate counseling. Women and children with an untreated or newly diagnosed HIV infection were referred to local clinics, and women disclosing IPV exposure were referred to appropriate local services.

Measures

IPV Exposures

Each caregiver was asked whether she lived with her current romantic or sexual partner. A brief series of questions validated in South Africa[11] was used to develop the IPV exposure variables. Participants were asked whether this partner ever physically forced her to have unwanted sex (sexual IPV); pushed, shoved, slapped, or threw items at her (physical IPV); or threatened to harm her (threatening IPV). This study examined the association of caregiver sexual IPV, physical IPV, and the experience of any combination of the 3 (sexual, physical, or threatening IPV = any IPV) on child behavior. It is important to note that the women's experiences of IPV are not limited to sexual or physical IPV; many women experience varying combinations of IPV.

Child Behavior Outcomes

The Strengths and Difficulties Questionnaire (SDQ) was used to assess child behavior difficulties.[19,20] The globally used SDQ has been shown to predict psychiatric disorders in children in many HICs and LMICs, including South Africa.[21–26]

This analysis uses 3 SDQ scales: a total difficulties scale, an internalizing subscale (combining emotional symptoms and peer problems subscales), and an externalizing subscale (combining conduct problems and hyperactivity–inattention subscales).[19,20] The SDQ

total difficulties score as tested in the United Kingdom (Cronbach's α = .68)[20] is the sum of the internalizing (Cronbach's α = .73) and externalizing subscales (Cronbach's α = .78).[19]

All SDQ scales (SDQ total, SDQ internalizing, and SDQ externalizing scores) were coded as binary variables: The top 10% of scores were labeled as "High Risk SDQ Score" and the bottom 90% of the population scores were labeled as "Low Risk SDQ Score," aligning with the approach recommended by Robert Goodman, who developed the SDQ.[19,27] Goodman found that children scoring in the top 10% had a higher risk for a psychiatric diagnosis.[19,20]

Covariates

The following covariates were included in the initial analyses: child gender, child HIV status, child relationship with caregiver, caregiver binge drinking, caregiver PTSD, caregiver depression, and a measure of household assets used as a proxy for socioeconomic status. Socioeconomic status was measured by a similar approach used in the Demographic and Health Survey's Wealth Index.[28] Excessive alcohol use, operationalized as binge drinking, was estimated via the Alcohol Use Disorders Identification Test.[29] PTSD and depression were measured via the Client Diagnostic Questionnaire, an instrument that had been validated in the United States, used in populations with a high HIV prevalence,[30] and translated into isiZulu in the Asenze Study.[14,31]

Statistical Analysis

Prevalence rates were calculated for all exposures, outcomes, and covariates. The covariates in the study were evaluated against each of the IPV exposures (ie, any IPV, sexual IPV, and physical IPV) and each of the child behavioral outcomes (ie, SDQ total, SDQ externalizing,

and SDQ internalizing). Using logistic regression, we calculated odds ratios (ORs), 95% confidence intervals (CIs), and *P* values for each of the binary IPV exposures and SDQ outcomes. We adjusted for any covariates associated (*P* ≤ .20) with either an exposure or an outcome in our final logistic regression model by using SAS version 9.3 for Windows (SAS Institute, Inc, Cary, NC).

Because the 3 IPV exposure variables and the 3 SDQ outcome measures overlap, no 2-exposure or outcome variables were included in the same model. PTSD was the most common psychiatric disorder identified in this population; therefore, in the final logistic regression models we adjusted only for PTSD. A total of 9 logistic multivariate regression models were run to test the relationships between the 3 types of partner violence and the 3 child behavior outcomes.

RESULTS

In Table 1, 10.1% of caregivers reported ever experiencing sexual partner violence (sexual IPV), 28.6% reported physical partner violence (physical IPV), and more than one-third (36.7%) reported experiencing any IPV (any IPV). Additionally, 30.1% of the caregivers had any psychiatric disorder, 24% of these caregivers had PTSD, and 13.2% reported binge drinking.

Table 2 displays the univariate associations between the covariates and the 3 IPV exposures. The risk of IPV was significantly associated with both any psychiatric diagnosis and PTSD. The odds of binge drinking were significantly associated with 2 of the 3 IPV exposures: physical IPV and any IPV experience.

Table 3 assesses the univariate relationships between the covariates and the child behavior outcomes. The risk of child behavior disorders was associated with any caregiver

3

TABLE 1 Caregiver and Child Characteristics Including Prevalence of IPV

Variable		N	% of Total Sample
Caregiver experienced any IPV (including sexual, physical, and threatening)	Yes	290	36.7
Caregiver experienced sexual IPV	Yes	93	10.1
Caregiver experienced physical IPV	Yes	229	28.6
Caregiver experienced threats of IPV	Yes	151	15.4
Caregiver reporting fear of current partner	Yes	44	4.5
Child SDQ total score	Top 10%	114	9.6
Child SDQ externalizing scores	Top 10%	117	9.9
Child SDQ internalizing score	Top 10%	97	8.2
Caregiver PTSD (derived from CDQ measure)	Yes	240	24.4
Any psychiatric diagnosis	Yes	295	30.1
Derived from CDQ total scores			
Caregiver binge drinking (score >4)	Yes	129	13.2
Alcohol Use Disorders Identification Test scores (compared with moderate drinking and no drinking)			
Household asset index (highest tertile)		322	33.1
Poorest tertile		345	35.5
Middle tertile		306	31.5
Gender of child	Female	509	51.9
Child's HIV status (negative)		808	82.5
Positive		44	4.5
Unknown		128	13.1
Caregiver's HIV status (negative)		638	65.1
Positive		276	28.2
Unknown		66	6.7
Caregiver currently living with partner	Yes	399	40.7
Child's relationship to the caregiver compared with all others (all relatives)	Mother	718	73.3
Current age of caregiver, y		Mean: 36.74	SD: 62.50
Current age of child, y (batched in 3-mo intervals)		Mean: 4.82	SD: 0.5829
		Total 980	

CDQ, Client Diagnostic Questionnaire.

psychiatric diagnosis, caregiver PTSD, and caregiver binge drinking.

Table 4 presents the multivariate relationship between IPV exposures and the child behavior outcomes adjusting for covariates statistically associated with exposure or outcome ($P < .20$). In the adjusted models, the point estimates for the 3 outcome variables decreased slightly for all 3 exposure variables (any IPV, sexual IPV, and physical IPV) but remained significantly elevated for the SDQ total scores (OR range 2.04–3.67) and the SDQ internalizing scores (OR range 2.46–3.10). The ORs for the IPV measures associated with externalizing childhood behavior were elevated and were statistically significant before adjustment but lost significance after adjustment for confounders.

The risk of IPV doubled if the caregiver resided with the partner; however, this increase had no significant effect on the child behavior scores and was not a significant interaction term in any of the models.

DISCUSSION

According to searches in PubMed and PsycINFO in October 2015, this is the first peer-reviewed study to investigate the association of IPV experienced by caregivers in an African country on the behavior of young children. This study used a population-based sample with a high response rate (88% of the children in the population) and therefore is likely to represent the population being studied.

Using validated measures, we found an association of caregiver IPV experience with child behavior difficulties even after adjusting for important covariates such as caregiver PTSD and binge drinking.

For instance, adjusting for caregiver PTSD reduced the OR between any IPV and child behavior problems (total SDQ score) from 2.67 to 2.18, but the association remained statistically significant. Additionally, IPV (any, sexual, and physical) had a stronger association with child's internalizing behavior than on his or her externalizing behavior.

We also found that sexual IPV and child behavior problems had a stronger relationship than physical IPV and child behavior problems for all 3 child behavior measures. Exposure to sexual IPV, though less prevalent than physical IPV (10% compared with 29%), had the highest odds for child behavior difficulties in all 3 measures even after we adjusted for covariates: SDQ total scores (OR = 3.67), SDQ internalizing scores (OR = 3.10), and SDQ externalizing scores (OR = 1.88). Our study is the first in either HICs or LMICs to

TABLE 2 Associations Between IPV Exposures and Covariates

Variable	OR	CI Lower	CI Upper	P
Association with caregiver experience of any IPV (current partner)				
Caregiver PTSD	2.77	1.98	3.88	<.0001****
Caregiver: any psychiatric diagnosis	2.72	1.99	3.73	<.0001****
Caregiver binge drinking	2.02	1.32	3.07	.0011**
Household asset index (reference = highest tertile)				.8242
Poorest tertile	1.10	0.78	1.57	.5901
Middle tertile	1.00	0.70	1.43	.9989
Gender of child (reference = female)	0.95	0.71	1.26	.7028
Child's HIV status (reference = negative)				.7399
Positive	1.31	0.66	2.61	.4406
Unknown	1.00	0.65	1.54	.9818
Caregiver's HIV status (reference = negative)				.3159
Positive	1.15	0.83	1.60	.4129
Unknown	1.49	0.85	2.60	.1607#
Caregiver currently living with the partner	1.94	1.45	2.60	<.0001****
Child's relationship to the caregiver	1.13	0.81	1.57	.4756
Age of caregiver	1.02	1.00	1.03	.0019**
Age of child	1.01	0.79	1.29	.9471
Association with caregiver experience of sexual violence (current partner)				
Caregiver PTSD	3.33	2.06	5.36	<.0001****
Caregiver: any psychiatric diagnosis	3.68	2.32	5.81	<.0001****
Caregiver binge drinking	1.50	0.78	2.89	.2266
Asset index (reference = highest tertile)				.7415
Poorest tertile	1.22	0.71	2.11	.4731
Middle tertile	1.19	0.69	2.07	.5317
Gender of child (reference = female)	1.00	0.64	1.56	.9882
Child's HIV status (reference = negative)				.836
Positive	1.05	0.35	3.16	.9265
Unknown	0.81	0.40	1.64	.56
Caregiver's HIV status (reference = negative)				.3653
Positive	1.42	0.88	2.30	.1564#
Unknown	1.17	0.47	2.93	.7402
Caregiver currently living with the partner	3.25	2.03	5.18	<.0001****
Child's relationship to the caregiver	0.96	0.59	1.57	.871
Age of caregiver	1.04	1.02	1.06	<.0001****
Age of child	1.08	0.74	1.59	.6776
Association with caregiver experience of physical violence (current partner)				
Caregiver PTSD	2.81	1.96	4.02	<.0001****
Any psychiatric diagnosis	2.74	1.96	3.84	<.0001****
Caregiver binge drinking	2.07	1.33	3.24	.0014**
Asset index (reference = highest tertile)				.7727
Poorest tertile	1.15	0.79	1.69	.4728
Middle tertile	1.07	0.73	1.58	.7259
Gender of child (reference = female)	0.96	0.70	1.31	.7746
Child's HIV status (reference = negative)				.5754
Positive	1.30	0.62	2.71	.4846
Unknown	0.83	0.51	1.36	.4676
Caregiver's HIV status (reference = negative)				.3354
Positive	1.16	0.81	1.65	.4244
Unknown	1.51	0.84	2.75	.1716
Caregiver currently living with partner	1.95	1.42	2.68	<.0001****
Child's relationship to the caregiver	1.15	0.80	1.65	.4436
Age of caregiver	1.02	1.00	1.03	.0327*
Age of child	0.93	0.71	1.22	.5872

# $P < .20$.
* $P < .05$.
** $P < .01$.
**** $P < .0001$.

report that caregiver experience of sexual IPV was associated with worse childhood behavior outcomes than caregiver experience of physical IPV. Other studies on caregiver IPV victimization have either combined physical and sexual IPV[13] or reported on physical IPV and child behavior outcomes.[3,12,32,33] Because this study

TABLE 3 Associations Between IPV Exposures and Covariates With SDQ Outcomes

Variable	OR	CI Lower	CI Upper	P
Association between SDQ total scores (low-risk SDQ score 0–29; high-risk SDQ score ≥30)				
Caregiver PTSD	2.27	1.45	3.54	.0003***
Any psychiatric diagnosis	2.57	1.66	3.96	<.0001
Caregiver binge drinking	2.136	1.261	3.618	.0047**
Household asset index (reference = highest tertile)				.9658
Poorest tertile	1.07	0.63	1.80	.8038
Middle tertile	1.06	0.62	1.82	.8386
Gender of child (reference = female)	1.26	0.82	1.94	.2951
Child's HIV status (reference = negative)				.6161
Positive	1.57	0.64	3.83	.3251
Unknown	1.03	0.54	1.95	.9372
Caregiver's HIV status (reference = negative)				.5986
Positive	1.09	0.68	1.75	.7276
Unknown	0.62	0.22	1.77	.3726
Caregiver currently living with partner	1.08	0.70	1.67	.7309
Child's relationship to the caregiver	1.18	0.71	1.95	.521
Age of caregiver	1.00	1.00	1.00	.4242
Age of child	0.719	0.494	1.047	.0827#
Association between SDQ externalizing scores (low-risk SDQ score 0–14; high-risk SDQ score 15–20)				
Caregiver PTSD	1.74	1.11	2.73	.0155*
Any psychiatric diagnosis	1.80	1.17	2.77	.0079**
Caregiver binge drinking	1.63	0.94	2.826	.0818#
Household asset index (reference = highest tertile)				.6674
Poorest tertile	0.81	0.49	1.35	.4161
Middle tertile	0.83	0.49	1.39	.4739
Gender of child (reference = female)	1.55	1.01	2.38	.0448*
Child's HIV status (reference = negative)				.8017
Positive	1.24	0.47	3.23	.6668
Unknown	1.18	0.65	2.16	.5853
Caregiver's HIV status (reference = negative)				.985
Positive	1.01	0.63	1.62	.9758
Unknown	0.93	0.39	2.24	.8696
Caregiver currently living with partner	0.79	0.51	1.23	.3047
Child's relationship to the caregiver	1.02	0.63	1.66	.923
Age of caregiver	0.98	0.96	1.01	.081#
Age of child	0.82	0.57	1.19	.2927
Association between SDQ internalizing scores (low-risk SDQ score 0–12; high-risk SDQ score 13–20)				
Caregiver PTSD	2.70	1.69	4.32	<.0001
Any psychiatric diagnosis	3.08	1.93	4.90	<.0001
Caregiver binge drinking	1.618	0.892	2.935	.1133#
Household asset index (reference = highest tertile)				.8461
Poorest tertile	1.09	0.62	1.91	.7614
Middle tertile	0.92	0.51	1.67	.7846
Gender of child (reference = female	0.85	0.53	1.35	.4861
Child's HIV status (reference = negative)				.1498#
Positive	2.32	0.99	5.42	.0523#
Unknown	1.15	0.59	2.25	.6806
Caregiver's HIV status (reference = negative)				.8316
Positive	1.15	0.69	1.91	.6034
Unknown	1.20	0.49	2.92	.6847
Caregiver currently living with partner	1.24	0.78	1.97	.3603
Child's relationship to the caregiver	1.36	0.78	2.38	.2765
Age of caregiver	1.00	1.00	1.00	.352
Age of child	0.775	0.52	1.156	.2097

# $P < .20$.
* $P < .05$.
** $P < .01$.
*** $P < .001$.

CHANDER et al

TABLE 4 Univariate and Multivariate Associations Between Current Caregiver Partner Violence and SDQ Scores Adjusted for Important Covariates

Variable	Univariate Values			Multivariate Values		
	OR	CI Lower	CI Upper	OR	CI Lower	CI Upper
Association between IPV and SDQ total scores (low-risk SDQ score 0–29; high-risk SDQ score 30–42)				Adjusted[a]		
Current any partner violence	2.67****	1.67	4.29	2.18****	1.32	3.60
Current sexual violence	4.04****	2.34	6.98	3.67****	1.91	7.07
Current physical violence	2.15**	1.33	3.46	2.04***	1.19	3.49
Association between IPV and SDQ external scores (low-risk SDQ score 0–14; high-risk SDQ score 15–20)				Adjusted[b]		
Current any partner violence	1.61*	1.01	2.55	1.47**	0.90	2.39
Current sexual violence	1.78	0.96	3.29	1.88	0.93	3.79
Current physical violence	1.70*	1.06	2.72	1.59*	0.95	2.66
Association between IPV and SDQ internal scores (low-risk SDQ score 0–12; high-risk SDQ score 13–20)				Adjusted[c]		
Current any partner violence	2.97****	1.79	4.94	2.46****	1.44	4.21
Current sexual violence	3.51****	1.96	6.30	3.10****	1.51	6.35
Current physical violence	2.58***	1.56	4.27	2.46****	1.40	4.34

[a] Adjusted by PTSD, binge drinking, age of child, living with a partner, age of caregiver.
[b] Adjusted by PTSD, binge drinking, gender of child, age of caregiver, living with a partner.
[c] Adjusted by PTSD, binge drinking, child's HIV status, living with a partner, age of caregiver.
* $P < .05$.
** $P < .01$.
*** $P < .001$.
**** $P < .0001$.

was conducted in a particularly vulnerable population, more studies are needed to confirm this finding in other populations and to investigate the possible mechanisms underlying the association.

The relationships found in this study were strong, but there were several limitations. The cross-sectional nature of the data will not allow us to examine temporal relationships between exposures and outcomes. Although child behavior problems may have existed before the caregiver experience of IPV, they are unlikely to cause an increase in the IPV experienced by the caregiver, particularly sexual IPV. Furthermore, behavior problems may be related to other IPV-associated factors unmeasured in our study.

We also cannot distinguish whether the child is directly experiencing abuse, witnessing IPV inflicted on the caregiver, or indirectly experiencing inappropriate parenting from the victimized caregiver. In studies in HICs, IPV experienced by abused caregivers can lead to inappropriate and harsh parenting.[7,12,33] Additionally, domestic violence

impact measures are generally difficult to isolate from other traumatic incidents in a child's life (eg, child abuse).[4] Studies in HICs show a correlation between physical child abuse and the IPV experienced by their mothers.[1] Future studies should include questions on the child's own experience of violence. In HICs, even in instances where children are not direct victims of violence, simply witnessing IPV has detrimental effects on the child's concurrent behavior, emotional well-being, and future achievements.[1–3,5,12] Some even argue that living with an abused caregiver alone is a form of child abuse with detrimental effects on the child's emotional and physical well-being.[7] Additional studies in HICs show that the long-term impact on children exposed to caregiver IPV either directly (through experiencing abuse or witnessing caregiver abuse) or indirectly (through receiving inappropriate parenting) can lead to suicide attempts, higher prevalence of substance use, aggression, and an elevated likelihood of risky sexual behavior.[2,4,10] Longitudinal studies in LMICs are needed to determine and

differentiate the long-term impact on children either experiencing violence from the caregiver or witnessing IPV.

Furthermore, the association of partner violence with child behavior difficulties could be underestimated in this study because caregivers not currently in an IPV relationship were not interviewed about IPV experiences in previous relationships. In addition, there might be unmeasured confounding due to variables not considered in this analysis (eg, number of children in a household, caregiver education, marital status, employment, and physical health). This population was extremely vulnerable, with a high degree of poverty and low educational levels. However, we were able to test a degree of poverty by using the Wealth Index and found no significant effect. Furthermore, the number of current partners per caregiver was not determined because this study evaluated the association of IPV only from those identified as the respondent's current partner.

CONCLUSIONS

This study, the first in Africa, provides significant evidence of the negative effects of caregiver IPV exposure on behavioral difficulties in young children in a South African population. Additionally, this is the first study to identify a stronger association between caregiver experience of sexual IPV and higher risk for child psychiatric problems than caregiver experience of physical IPV. It adds evidence to support the need for interventions to reduce the prevalence of IPV, given that exposure to IPV was associated with a significantly higher odds of child behavior problems even after adjustment for some of the other known risks (eg, PTSD, binge drinking). It is urgent to replicate these findings in other LMIC settings, plan long-term follow-up to better understand the impact of caregiver exposure to partner violence on the child's physical and mental health in late childhood and adolescence, and explore effective interventions to prevent or ameliorate the adverse effects found.

ABBREVIATIONS

CI: confidence interval
HICs: high-income countries
IPV: intimate partner violence
LMICs: low- and middle-income countries
OR: odds ratio
PTSD: posttraumatic stress disorder
SDQ: Strengths and Difficulties Questionnaire

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