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Risk and Protective Factors for Physical and Emotional Abuse Victimisation amongst Vulnerable Children in South Africa

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Little is known about risk and protective factors for emotional and physical child abuse in South Africa. Existing research has focused largely on sexual abuse and relied on recollections of childhood abuse from university and high-school students or data from criminal reports. The objective of this study was to establish risk and protective factors for severe physical and emotional abuse amongst a large cross-sectional community sample of South African youth. Confidential self-report questionnaires were completed by children aged 13–19 (n = 603, 47.9% female) with local interviewers in deprived areas of South Africa. Standardised measures of abuse, hypothesised risk factors and socio-demographic variables were used. Factors associated with severe physical and emotional child abuse were experience of family conflict ($p = 0.003$), unequal food distribution ($p < 0.014$), inconsistent discipline ($p = 0.012$), number of caregiver changes ($p = 0.022$), living with a step-parent ($p = 0.034$), caregiver disability ($p = 0.004$), food insecurity ($p = 0.006$), bullying ($p < 0.001$), acquired immunodeficiency syndrome (AIDS)-related stigma ($p < 0.001$), sexual abuse ($p = 0.003$), school non-attendance ($p = 0.006$) and non-achievement ($p = 0.015$). These identified risk and protective factors at community, school, caregiver and household levels have the potential to affect the risk of abuse for children in South Africa, and may be valuable fields for future intervention efforts.

KEY PRACTITIONER MESSAGES:

- Risk and protective factors for physical and emotional child abuse have not been thoroughly studied in South Africa.
- Risk and protective factors for child abuse in South Africa include poverty, AIDS-related stigma, bullying, school non-attendance and achievement, sexual abuse, caregiver disability, inconsistent discipline, family conflict and living with a step-parent.
- Future research should focus on longitudinal data to establish causality and to examine the relationship between child abuse and caregiver AIDS sickness.

'The objective of this study was to establish risk and protective factors for severe physical and emotional abuse amongst a large cross-sectional sample of South African youth'

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> 'My father thought that I was spending his money on my girlfriend so he started to threaten me and beat me, and he used his gun to hit me on my head' (Boy, 13)

An abundance of research in the developed world focuses on factors associated with physical and emotional abuse of children by their caregivers. Studies, systematic reviews and child protection services primarily use Bronfenbrenner's (1979) Ecological Model of Human Development. This framework places children at the centre of multiple interacting spheres of influence. Closest to the child are relationships with caregivers and family. More distal are the ways in which child and family are influenced by school, community, society and culture. The cumulative and counterbalancing effects of risk and protective factors within and across spheres may lead to or prevent the physical and emotional abuse of children (Belsky, 1980; World Health Organization, 2002). The presence of a number of risk factors, however, should not lead to the automatic assumption of occurrence of child maltreatment (Belsky, 1993).

'South Africa has high rates of child abuse. Prevalence rates as high as 19 percent for physical abuse and 26 per cent for emotional abuse have been measured'

South Africa has high rates of child abuse. Prevalence rates as high as 19 per cent for physical abuse and 26 per cent for emotional abuse (Madu, 2003) have been measured. Physical and emotional abuse were reported by 43 per cent of orphans and vulnerable children (OVC) (Thurman and Kidman, 2011). These rates are substantially higher than in Western community samples, where rates up to 16 per cent for physical abuse and 22 per cent for emotional abuse have been reported (Machado *et al*., 2007; May-Chahal and Cawson, 2005).

Evidence from both the developing and developed worlds shows that exposure to physical and emotional abuse can predict multiple long-term negative outcomes for children. These include suicide, delinquency, substance abuse (McCord, 1983; Brown *et al*., 2009), human immunodeficiency virus (HIV) risk behaviour (Cunningham *et al*., 1994; Cluver *et al*., 2011), depression and personality disorders (Glaser, 2002; Fincham *et al*., 2009).

In high-income countries, risk and protective factors for child abuse have been studied more thoroughly. Systematic reviews found some risk factors to be domestic and community violence, parental mental health problems, parental illness, inconsistent parenting and poverty (Stith *et al*., 2009; Black *et al*., 2001a, 2001b). Few studies examine such factors in the developing world however, and comprehensive searches found no community-based studies in South Africa. In the context of high rates of community violence and child abuse within the country, such studies are vital for policy-making and intervention design. In addition, South Africa is dealing with the legacy of apartheid, alongside the effects of an HIV/acquired immunodeficiency syndrome (AIDS) epidemic. Research is essential for understanding the concomitant risk factors within this context, particularly considering the understudied impacts of HIV on family life. Where studies exist, they focus almost exclusively on sexual abuse. In a comprehensive search, only six studies were found that examined physical and emotional abuse. Two used samples from official records such as case files and court records and undertook

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interviews with social workers (Collings, 1993; Makoae *et al*., 2008). These only included cases reported to state services deemed serious enough for investigation. One study (Madu, 2003) used university students' recollections of childhood abuse. However, retrospective recollection may be subject to recall bias, particularly for abuse in early childhood. In addition, samples of university students exclude the majority of the South African population which has little access to tertiary education. Another study used self-report of abuse amongst high school students (Madu *et al*., 2002). This study might be subject to selection bias as the most vulnerable children are less likely to attend high school (Operario *et al*., 2008). The fifth study investigated participants enrolled in programmes for OVC, thereby sampling only the most vulnerable young people (Thurman and Kidman, 2011). The sixth study surveyed parental attitudes towards corporal punishment in a nationally representative sample of South African parents (Dawes *et al*., 2005). Whilst this study is of great value, evidence suggests that parents are even more likely than children to under-report abusive behaviours towards their offspring (Johnsona *et al*., 2002). In addition, all of the studies used different thresholds regarding the severity of child abuse measured within their samples. They do, however, identify a number of risk factors. Risk factors for physical abuse, for example, included alcohol and substance abuse by caregivers (Makoae *et al*., 2008; Madu *et al*., 2002), poverty, poor parental mental health, single parenting and older parental age (Dawes *et al*., 2005). Domestic violence (Madu *et al*., 2002; Makoae *et al*., 2008), living with a sick caregiver and orphanhood (Thurman and Kidman, 2011) were risk factors for both physical and emotional abuse.

'Risk factors for physical abuse in South African studies included, for example, alcohol and substance abuse by caregivers, poverty, poor parental mental health, single parenting and older parental age'

This study, thus, aimed to answer the following question in a large community-based sample in South Africa: What are the risk and protective factors for severe abuse victimisation? Hypothesised risk and protective factors were based on established literature from the developed and developing worlds and included specific HIV/AIDS-related factors suggested by qualitative evidence (Cluver and Gardner, 2007). The study used Bronfenbrenner's Ecological Model as its framework and incorporated hypothesised community, school, household, family, caregiver and health-related factors. It focused on factors which may have the capacity to inform interventions in child protective services.

'What are the risk and protective factors for severe abuse victimisation?'

Methods

Participants

A total of 1025 children were originally recruited in 2005 in highly deprived urban isiXhosa-speaking neighbourhoods of Cape Town for a study exploring psychological distress amongst orphaned children (Cluver *et al*., 2007). Sampling was purposive to include very vulnerable children. Participants were recruited from 18 non-governmental organisations, nine schools and through door-to-door sampling within the community. Additional information regarding sampling and methodology can be found in the original Cluver *et al*. (2007) paper. In 2009, 723 (71%) participants in this highly mobile population aged 13–24 at follow-up were traced and re-interviewed across South Africa. Information regarding abuse was collected in 2009, and this study focused on adolescents aged 13–19 using the follow-up data (n = 603). A period of four years for the

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follow-up was chosen in order to assess the long-term impacts of HIV/AIDS on child mental health (Cluver *et al*., 2012).

Sample Size

Tukey's range test was used to calculate the sample size for the original 2005 study using confidence levels of 95 per cent and standard deviations established in standardisation studies for each of the psychological scales (Child Depression Inventory CDI, Child Post-traumatic Stress Disorder PTSD Checklist, etc.) in the study. Using a multiple sample size calculator recommended by Hsu (1996) for the scale with the highest required sample size (PTSD Checklist), the minimum sample size for each orphan group was calculated to be 115. All of the scales had been validated for populations outside South Africa, therefore the sample size was increased beyond that calculated through multiple comparison computation.

Procedure

'Children completed a confidential, guided 60-minute self-report questionnaire'

Children completed a confidential, guided 60-minute self-report questionnaire, which was translated by two Masters-level researchers and back-translated into IsiXhosa by a psychologist. A team of five isiXhosa-speaking community health and social workers cross-checked translations and back-translations to ensure culturally sensitive content without compromising the measures. Interviewers were all local isiXhosa-speaking social and community health workers who had received intensive training in working with AIDS-affected children. The training was conducted by a child protection and HIV social worker, a psychologist and a professor of social work. All measures were pre-piloted for cultural acceptability and child accessibility. Substantial attempts were made to ensure that children were completely comfortable during the interviews. Children were assured that the information they provided would remain confidential, except where participants requested help or were at risk of significant harm. Informal feedback from the interviewers suggested that children appreciated both the one-on-one attention and the opportunity to discuss their day-to-day lives with researchers who were genuinely interested in them. Children experiencing ongoing physical, sexual or emotional abuse, severe post-traumatic stress or suicide ideation were visited immediately by the project manager to discuss concerns, and to seek consent and further information for referrals to local child protection and counselling services. Ninety-seven referrals were made.

'Children experiencing ongoing physical, sexual or emotional abuse, severe post-traumatic stress or suicide ideation were visited immediately by the project manager to discuss concerns'

Participants received no incentive to participate, although a certificate and refreshments were provided after the interview. Participation was voluntary; all children were informed that they could stop the interview at any point in time and they would receive a certificate and help if needed, independent of completion of the questionnaire. Fully informed consent was sought from the participants and their caregivers. As a consequence of the low literacy in the sampled population group, information and consent sheets were read-out loud in the language of their choice. Ethical approval was granted by Oxford University, the University of Cape Town and the Western Cape Education Department.

DOI: 10.1002/car

Measures

Physical and Emotional Abuse

Physical and emotional abuse in the home were measured with five items from the United Nations Children's Fund UNICEF *Measures for National-Level Monitoring of Orphans and Other Vulnerable Children* (Snider and Dawes, 2006). The scale showed acceptable reliability of $\alpha = 0.70$ in the current sample. In this context of generally high levels of corporal punishment, physical abuse was defined as being hit with an object likely to cause actual or potential harm or being hit so that it hurt on a weekly or monthly basis (World Health Organization, 1999). Emotional abuse was defined as being threatened to be sent away, threatened to invoke ghosts, or threatened to be harmed on a weekly basis. These extreme measures of physical and emotional abuse were used in order to clearly highlight severe physical and emotional abuse rather than harsh parenting. For this study, the two types of abuse were combined and dichotomised to categorise children who were experiencing one or both types of severe physical and emotional abuse ('abused') versus neither.

'Extreme measures of physical and emotional abuse were used in order to clearly highlight severe physical and emotional abuse rather than harsh parenting'

Socio-demographic Characteristics

Gender, Age, formal/informal housing and receipt of social welfare grants were all measured using items from the South African census (Statistics South Africa, 2001).

Caregiver-Level Factors

Positive parenting (e.g. praising the child for doing something well) and inconsistent discipline (e.g. threatening to punish but not following through) were measured using the short version of the Alabama Parenting Questionnaire (Elgar *et al*., 2007). Internal consistency of the full scale was $\alpha = 0.75$. Both subscales showed acceptable reliability ($\alpha = 0.54$–0.81). Exposure to family conflict or violence was measured using two items from the UNICEF *Measures for National-Level Monitoring of Orphans and Other Vulnerable Children* (Snider and Dawes, 2006). This was defined as three or more days of adults shouting at each other and/or one or more days of domestic violence per week. Intra-household discrimination was assessed using an item developed in qualitative pilot work which measured discriminatory food distribution, asking participants whether they receive less, more or an equal amount of food in the household compared with other children.

Family-Level Factors

Caregiver changes and the caregiver-child relationship were measured with a Road of Life Tool (Buchanan, 2002). This tool was adapted from a child social work assessment tool 'the River of Life' to a road, as many children in the Cape Flats had no experience of rivers. It comprises a pictorial path (see Figure 1) with a section for every year within the child's life since birth. Children were able to mark events important to them (i.e. school trips, grades failed, or family death) by writing into the appropriate section of the road. A household map was devised for complex extended family structures. This picture-based tool enabled children to draw a blueprint of their house, identifying household members, their relationship to the children, their age, gender, employment, sickness status and sleeping arrangements. It has been used previously with vulnerable children in South Africa (Cluver *et al*., 2007).

DOI: 10.1002/car

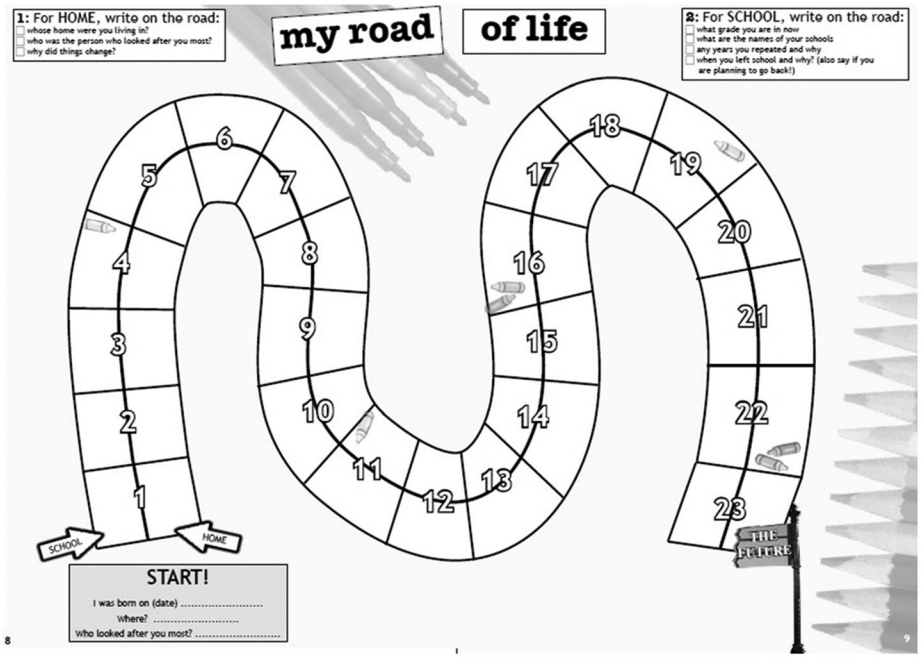

Figure 1. Road of Life Tool.

'Death certificates in South Africa are unreliable sources regarding HIV/AIDS'

'A conservative measure of three or more days without sufficient food per week was used to define extreme poverty'

'Caregiver changes and the caregiver child relationship were measured using the Road of Life Tool'

Health Factors

Death certificates in South Africa are unreliable sources regarding HIV/AIDS, subsequently a Verbal Autopsy Questionnaire was used (Lopman *et al*., 2006). This has been validated in South Africa (Hosegood *et al*., 2004). Determination of AIDS-related death required identification of three or more AIDS-defining illnesses (e.g. HIV-wasting syndrome, Karposi's sarcoma or oral candidiasis). Symptoms were reviewed by two independent medical practitioners when the diagnosis was unclear. AIDS sickness was identified using a similar Verbal Autopsy procedure, including symptoms of AIDS-related and other illnesses common in South Africa (Health Systems Trust, 2006). Confidential sickness report sheets identified chronic illnesses, the extent of disability and the frequency of illness using four scales from the World Health Organization (2003) *International Classification of Functioning, Disability and Health*. Orphanhood was defined using the United Nations definition as loss of one or both parents (UNAIDS, 2004).

Household-Level Factors

Household poverty was measured using two items from the South African National Food Consumption Survey identifying days per week without sufficient food (Labadarios *et al*., 2005). A conservative measure of three or more days without sufficient food per week was used to define extreme poverty (Cluver and Orkin, 2009). Household employment and overcrowding were measured using the household map. A dichotomous variable was created to measure overcrowding using three or more people per room as a cut-off. Child migration was measured using the Road of Life Tool.

School-Level Factors

Educational achievement and school attendance were measured using items developed by the South African Department of Education and the Young Lives

DOI: 10.1002/car

study (Boyden and Dercon, 2008). These included a timetable in which children had to identify which days of the past week they did not attend school, and answer questions such as 'in the past year, how many times did you miss school for more than a week', or 'have you ever repeated any school years?'

Community-Level Factors

Exposure to community violence was measured using four items from the Child Exposure to Community Violence Checklist (Richters *et al*., 1990). Items were adapted to common types of violence in South African townships by Heath and Kaminer (2004), and were pre-piloted and further modified in cooperation with local social workers (Cluver *et al*., 2007). Violence exposure was conservatively assessed as witnessing or having been victim of one of South Africa's four most common community crimes: robbery, assault, stabbings and shootings (South African Police Service, 2010). Bullying was measured using the nine-item standardised Social Health and Assessment Peer Victimization Scale used in prior research with vulnerable children in Cape Town (Ward *et al*., 2007). The scale contains episodes of bullying, such as being called names and sworn at, being punched or kicked, or being made fun of by other children (not at all, once, 2–3 times, 4 or more times). It showed good reliability $\alpha = 0.85$. Bullying victimisation was defined as frequent past-year experience of at least four of the nine types of bullying (Cluver *et al*., 2010). Social support was measured using the standardised Social Support Scale (24 items) (Adolescent Pathways Project, 1992), measuring social support in each child's micro-system of family, peers and school. This scale has previously been used in Cape Town (Van der Merwe and Dawes, 2000). The scale was adapted to replace 'parents' with 'caregiver' and showed a reliability of $\alpha = 0.76$ in this study. Items established the involvement of caregivers, siblings, teachers, best friends, close friends and other people in a child's life (e.g. this person is helpful when I have a problem, I have fun with this person (not at all, sort of, very)). Stigma was measured using three items developed from qualitative data (Cluver and Gardner, 2007) and seven items from the stigma-by-association scale which has recently been validated for use in South Africa and showed a reliability of $\alpha = 0.89$ (Boyes *et al*., 2013). Participants reported the frequency of events such as being teased, gossiped about, or people refusing to touch them because of the illness of a family member (never, sometimes, very often). Child sexual abuse was measured using two items from a previous study of AIDS orphanhood which were devised by social workers in South Africa and dichotomised according to whether children had experienced unwanted physical contact involving sexual organs (Cluver and Gardner, 2007).

'Exposure to community violence was measured using four items from the Child Exposure to Community Violence Checklist'

'Items established the involvement of caregivers, siblings, teachers, best friends, close friends and other people in a child's life'

Analyses

We examined associations between various hypothesised risk and protective factors and reported physical and emotional child abuse. Analyses followed a three-stage procedure: (i) Basic sample characteristics and prevalence rates of physical and emotional child abuse were calculated using descriptive analyses such as means, chi-squared tests, frequencies and independent sample t-tests; (ii) As the outcome variable was dichotomous (abused or not), bivariate logistic regression analyses were used to examine relationships between each hypothesised risk and protective factor and abuse independently, controlling for

DOI: 10.1002/car

socio-demographic factors (age, gender, formal/informal housing and migration). Logistic regression analyses also allowed for the calculation of odds ratios to establish the probability of association between the hypothesised risk factor and abuse; (iii) Subsequently, all significant factors were entered into multivariate logistic regression analysis for each cluster using the Bronfenbrenner framework (i.e. community level, school level, household level, health and family level) in order to identify independent factors. Analyses were conducted using SPSS 18.

'Reported severe physical abuse was 6.8 per cent and severe emotional abuse was 11.9 per cent in this sample'

Results

Sample Characteristics and Prevalence

Participants for this analysis were 13-19-years old (mean age 16.9), 47.9 per cent were female and 97 per cent were of Xhosa ethnic origin (Cluver *et al*., 2007). Reported severe physical abuse was 6.8 per cent and severe emotional abuse was 11.9 per cent in this sample. Fifteen per cent of children were classified as severely physically and/or emotionally abused. There were no gender differences regarding the experience of severe emotional and physical abuse.

Caregiver-Level Risk Factors

Caregiver-level risk factors for abuse were family conflict or violence ($OR = 2.35, p < 0.001$), unequal food distribution amongst children in the household ($OR = 3.62$, $p < 0.001$) and inconsistent discipline ($OR = 2.03$, $p = 0.008$). Importantly, unequal distribution of food might be part of the abuse pattern rather than an independent risk factor for physical and emotional abuse. Positive parenting acted as a protective factor ($OR = 0.62$, $p = 0.048$) (Table 1). When all associated caregiver-level factors were entered simultaneously, family conflict or violence ($OR = 2.11$, $p = 0.003$), inconsistent discipline ($OR = 2.01$, $p = 0.012$) and unequal food distribution ($OR = 2.96$, $p = 0.014$) remained risk factors for physical and emotional child abuse (Table 2).

'Caregiver-level risk factors for abuse were family conflict or violence unequal food distribution amongst children in the household and inconsistent discipline'

Family-Level Risk Factors

Family-level risk factors for abuse were the number of caregiver changes ($OR = 2.41$, $p = 0.019$) a child experienced in his/her life and living with a step-parent ($OR = 4.39$, $p = 0.031$). The age of the primary caregiver was not a factor associated with physical and emotional abuse, neither was living with biological parents, grandparents or in other caring arrangements, but this could be due to the small sample size of some of these subgroups (Table 1). When all associated family-level factors were entered simultaneously, both factors remained associated with physical and emotional child abuse ($OR = 2.38$, $p = 0.022$; $OR = 4.36$, $p = 0.034$) (Table 3).

Health-Related Risk Factors

Health-related risk factors for abuse included having an AIDS-unwell caregiver ($OR = 2.25$, $p = 0.005$), caregiver disability ($OR = 1.18$, $p = 0.025$) and AIDS orphanhood ($OR = 1.95$, $p = 0.004$). A protective factor was living with a healthy caregiver ($OR = -0.56$, $p = 0.012$). Orphanhood by causes other than AIDS, double orphanhood, or living with a chronically sick caregiver not

'A protective factor was living with a healthy caregiver'

DOI: 10.1002/car

Table 1. Summary of regressions of each individual hypothesised risk and protective factor for child abuse

Factors	*B*	*OR* CI (95%)	R^2 (nagelkerke)
Family conflict	0.86***	2.35 (1.47–3.76)	0.04
Unequal food distribution	1.29***	3.62 (3.62-7.99)	0.03
Inconsistent discipline	0.70*	2.03 (1.20-3.41)	0.03
Positive parenting	-0.43*	0.62 (.39-1.00)	0.02
Caregiver changes	0.88*	2.41 (1.16-5.04)	0.02
Living with bio parent and step-parent	1.48*	4.39 (1.15-16.85)	0.02
Age of primary caregiver	0.01	1.01 (.01-1.10)	0.02
Living with biological parents	-0.10	0.91 (.58-1.42)	0.01
Living with step-parents	0.62	1.85 (.19-18.24)	0.01
Living with grandparents	-0.66	0.52 (.25-1.08)	0.02
AIDS-unwell caregiver	0.81**	2.25 (1.28-3.95)	0.03
Caregiver disability	0.17*	1.18 (1.02-1.37)	0.06
AIDS orphanhood	0.67**	1.95 (1.24-3.07)	0.03
Healthy caregiver	-0.59*	0.56 (.35-.88)	0.03
Orphaned by other causes	-0.38	0.68 (.41-1.14)	0.01
Caregiver with other chronic illness	0.00	1.00 (.57-1.74)	0.01
Double orphan	0.081	1.08 (.84-1.40)	0.01
Going to bed hungry	1.23***	3.41 (2.15-5.42)	0.08
Food insecurity	1.13***	3.10 (1.95-4.92)	0.07
Household job	-0.38*	0.68 (.51-91)	0.03
Overcrowding	-0.04	0.96 (.87-1.07)	0.01
School non-attendance	0.89*	2.44 (1.21-4.94)	0.02
School non-achievement	0.53*	1.70 (1. 05-2.73)	0.02
Teacher support	0.06	1.06 (.92-1.23)	0.02
Bullying	1.42***	4.13 (2.52-6.79)	0.11
AIDS-related stigma	0.14*	1.15 (1.10-1.21)	0.09
Sexual abuse	1.65***	5.23 (2.32-11.79)	0.05
Community violence	0.70*	2.09 (1.03-3.92)	0.02
Social support	-0.07	0.92 (.85-1.01)	0.08

Note for all tables: Outcome variable is reported physical and emotional abuse status controlling for age, gender, formal/informal housing and migration.
***Significant at $p < 0.001$;
**Significant at $p < 0.01$;
*Significant at $p < 0.05$. *OR* = Odds ratio; CI = confidence interval. See text for other abbreviation.

Table 2. Multivariate regressions between all significant caregiver-level factors and child abuse

Caregiver factors	*B*	*OR* CI (95%)	R^2 (nagelkerke)
Family conflict	0.74**	2.11 (1.30-3.42)	0.09
Unequal food distribution	1.08*	2.96 (1.25-7.00)	
Inconsistent parenting	0.70*	2.01 (1.17-3.45)	
Positive parenting	-0.43	0.65 (0.39-1.09)	

Table 3. Multivariate associations between all significant family-level factors and child abuse

Family factors	*B*	*OR* CI (95%)	R^2 (nagelkerke)
Caregiver changes	0.87*	2.38 (1.14-5.00)	0.03
Living with biological parent and step-parent	1.47*	4.36 (1.12-16.92)	

suffering from AIDS were not factors associated with physical and emotional abuse (Table 1). When all associated health factors were entered simultaneously, only caregiver disability remained significant ($OR = 1.10$, $p = 0.004$). This suggests that the relationship between an AIDS-unwell caregiver and physical and emotional abuse might operate via increased caregiver disability (Table 4).

DOI: 10.1002/car

Household-Related Risk Factors

Household-related risk factors for abuse were going to bed hungry more than three nights per week ($OR = 3.41$, $p < 0.001$) and not having enough food in the household on more than three days per week ($OR = 3.10$, $p < 0.001$). Having at least one person in the household in employment acted as a protective factor ($OR = -0.68$, $p = 0.010$). Overcrowding was not associated with the risk for physical and emotional child abuse (Table 1). When all associated household-level factors were entered simultaneously, only going to bed hungry more than three nights per week ($OR = 2.40$, $p = 0.006$) remained associated with physical and emotional abuse (Table 5).

'Only going to bed hungry more than three nights per week remained associated with physical and emotional abuse'

School-Related Risk Factors

School-related risk factors for abuse were school non-attendance ($OR = 2.44$, $p = 0.013$) and school non-achievement ($OR = 1.70$, $p = 0.029$). Teacher support did not act as a protective factor (Table 1). When all associated school-related factors were entered simultaneously, school non-attendance ($OR = 2.76$, $p = 0.006$) and school non-achievement ($OR = 1.82$, $p = 0.015$) both remained associated risk factors for physical and emotional child abuse (Table 6).

Community-Level Risk Factors

Community-level risk factors for physical and emotional abuse were being bullied ($OR = 4.13$, $p < 0.001$), experience of AIDS-related stigma ($OR = 1.15$, $p < 0.006$), community violence ($OR = 2.09$, $p = 0.042$) and sexual abuse ($OR = 5.23$, $p < 0.001$). Social support did not act as a protective factor (Table 1). When all associated community-level factors were entered simultaneously, AIDS-related stigma ($OR = 1.11$, $p < 0.001$), bullying ($OR = 2.74$, $p < 0.001$) and sexual abuse ($OR = 3.28$, $p = 0.003$) remained associated with physical and emotional child abuse (Table 7).

'Social support did not act as a protective factor'

Table 4. Multivariate associations between all significant health factors and child abuse

Health factors	*B*	*OR* CI (95%)	R^2 (nagelkerke)
AIDS-unwell caregiver	0.31	1.37 (1.36-1.38)	0.15
Caregiver disability	0.10**	1.10 (1.10-1.10)	
AIDS orphanhood	0.51	1.66 (1.65-1.67)	
Healthy caregiver	-19.39	0.00 (0.00-8.60)	

Table 5. Multivariate regressions between all significant household-level factors and child abuse

Household factors	*B*	*OR* CI (95%)	R^2 (nagelkerke)
Going to bed hungry	0.87*	2.40 (1.29-3.21)	0.10
Food insecurity	0.54	1.72 (0.92-3.21)	
Household job	-0.12	0.89 (0.66-1.22)	

Table 6. Multivariate associations between all significant school-level factors and child abuse

School factors	*B*	*OR* CI (95%)	R^2 (nagelkerke)
School non-attendance	1.01*	2.76 (1.35-5.65)	0.04
School non-achievement	0.60*	1.82 (1.13-2.93)	

DOI: 10.1002/car

Table 7. Multivariate associations between all significant community-level factors and child abuse

Community factors	*B*	*OR* CI (95%)	R^2 (nagelkerke)
Sexual abuse	1.19**	3.28 (1.36-7.90)	0.17
AIDS-related stigma	0.10***	1.11 (1.05-1.17)	
Community violence	0.41	1.51 (0.74-3.09)	
Bullying	1.01***	2.74 (1.59-4.70)	

Discussion

This is the first published study using child-current self-report rather than adult- or adolescent retrospective self-report to examine linkages between reported physical and emotional abuse and hypothesised risk and protective factors in South Africa. This study adds to the literature of factors for child maltreatment in a highly vulnerable population, using a large sample. Prevalence of severe abuse in this sample was 15 per cent which was lower than in other South African studies (Madu, 2003) and therefore similar to Western samples (May-Chahal and Cawson, 2005). However, this present study focused on severe and consistent abuse and this may account for lower prevalence rates compared to studies including single and less frequent incidents.

Results indicated that many risk and protective factors were common to both Western and developing worlds' contexts. Risk factors for abuse included inconsistent discipline and family conflict or violence. This is consistent with evidence from high-income countries where inconsistent discipline or lack and knowledge of parenting skills, as well as domestic violence and stress in the parental relationship, were found to be risk factors for physical and emotional abuse (Stith *et al*., 2009).

Being AIDS affected and AIDS orphaned were risk factors of particular relevance in high HIV prevalence contexts such as sub-Saharan Africa. It is especially important to understand what might be driving these AIDS-related factors, since children in families with chronically ill carers or children orphaned by other causes do not appear to be at heightened risk. The association between physical and emotional abuse and living with an AIDS-affected caregiver may operate via caregiver disability and may be explained by co-morbid experience of depression which worsens as health deteriorates (Norton *et al*., 2005). Caregiver depression has been established to be a major risk factor for abuse (Stith *et al*., 2009). HIV + mothers and those suffering from chronic pain report poorer mother-child relationships and more inconsistent parenting (Evans *et al*., 2006; Armistead and Forehand, 1995) which is a risk factor in itself as discussed above. This has been demonstrated also for HIV + fathers (Steele *et al*., 1997). Further research on the impact of caregiver disability and HIV on families could increase the opportunities of prevention, intervention and support for AIDS-affected families and reduce the risk of child abuse amongst this group.

Extreme poverty (food insecurity) was also a risk factor for abuse, corresponding to studies in high-income countries, which suggests that poorer neighbourhoods and families with an income below the poverty line are most at risk for child maltreatment (Freisthler *et al*., 2006). Having moved three times or more between caregivers and living with a step-parent were also risk factors. This supports qualitative evidence – mainly focused on orphans – of higher abuse in families with step-parents in the developing world (Giese *et al*.,

'Poorer neighbourhoods and families with an income below the poverty line are most at risk for child maltreatment'

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2003), and quantitative studies in the developed world (Radhakrishna *et al*., 2001). Being a witness to community crime, bullied, stigmatised or sexually abused were abuse-associated community factors. This corresponds to studies from high-income countries which found that higher levels of physical abuse were associated with higher levels of child-reported violence in the community (Lynch and Cicchetti, 1998) and that children reporting physical and emotional abuse also experienced more bullying (Duncan, 1999). Studies also found sexual abuse to be strongly associated with family dysfunction (Nash *et al*., 1993) and community violence (Malik *et al*., 1997) which are both risk factors for physical and emotional abuse. AIDS-related stigma is common in South Africa. The experience of AIDS-related stigma may put emotional pressure on AIDS-affected families leading to an increased risk for abuse. Further research is needed to establish the causality of this relationship. In addition, AIDS-related stigma might be inflicted within the family by gossiping, maltreating or disowning affected family members (Campbell *et al*., 2005). Stigmatisation could therefore be a form of emotional child abuse or a reason for increased tension within the family. Children might experience this as not being allowed to eat from the same plate as other family members or being subjected to insults aimed at their parents' or own behaviour which led to HIV infection.

'AIDS-related stigma may put emotional pressure on AIDS-affected families leading to an increased risk for abuse'

Importantly, protective factors were also found in this study even if they were no longer significant in the overall models. These were having an employed person in the household, positive parenting and living with a healthy caregiver. This corresponds with evidence from studies in high-income countries where employment and good parental health were found to be protective factors for physical and emotional abuse (Stith *et al*., 2009).

'Employment and good parental health were found to be protective factors for physical and emotional abuse'

Limitations of the Study

This study was subject to a number of limitations: (i) The prevalence of abuse in this sample cannot be generalised across the national population of South Africa, as orphaned and AIDS-orphaned children were over-represented in order to ensure inclusion of the most vulnerable children and to examine HIV-specific risks; (ii) For the majority of hypothesised risk factors, there are no validated scales validated in the developing world. However, all scales had been successfully used before in the Western Cape (Cluver *et al*., 2007) and showed good reliability in this sample; (iii) As a result of low levels of HIV testing in South Africa, this study was not able to identify carers who were HIV + but asymptomatic. Further research could valuably examine impacts of potentially stressful experiences associated with asymptomatic HIV, such as diagnosis and disclosure; (iv) Additionally, it was unclear how many of the children themselves were HIV+, although children stating they were HIV + in the questionnaire were excluded from the analysis. Unawareness of one's HIV status is very common in South African youth since the use of testing and counselling facilities in South Africa is exceptionally low considering the national epidemic (8%) (Peltzer *et al*., 2009); (v) As this was a cross-sectional study, it could not detect whether the children had been subjected to abuse throughout their childhood or whether the abuse was caused by a change in caregiver or family circumstances. In addition, cross-sectional data do not allow for the establishment of causal inferences, although for most of

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the identified factors in this study, causality was very unlikely to be reversible (i.e. parental unemployment, caregiver AIDS, AIDS orphanhood, poverty, etc., are unlikely to be caused by child abuse); (vi) Finally, data were collected through child self-report only and evidence suggests that children routinely under-report their experiences of abuse (Gilbert *et al*., 2009.). However, previous studies have shown that parents are even more likely to under-report abusive behaviour towards their children (Johnsona *et al*., 2002) and therefore child self-report is the most accurate measure of abuse. Future research could valuably identify parental factors such as experience of childhood abuse, parental substance abuse, mental health, perceptions of the child and the child-parent relationship. All of these have previously been identified as potential risk factors for physical and emotional child abuse (Black *et al*., 2001a, 2001b; Stith *et al*., 2009).

‘Evidence suggests that children routinely under-report their experiences of abuse’

Conclusions

The findings of this study have implications for the design of interventions, policy and programming in South Africa. They suggest particularly high-risk groups of children for abuse, such as those orphaned by AIDS or living with AIDS-unwell caregivers, those living in severe poverty and those experiencing multiple moves of caregiver. They also identify potential areas for intervention, including parenting skills, stigma reduction, anti-bullying programmes and poverty alleviation. Rigorous intervention research is required to establish ways in which risk factors for physical and emotional child abuse can be reduced.

‘Rigorous intervention research is required to establish ways in which risk factors for physical and emotional child abuse can be reduced’

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References

Adolescent Pathways Project. 1992. Social support scale: Psychometric development summary. New York University: New York.

Armistead L, Forehand R. 1995. For whom the Bell tolls: parenting decisions and challenges faced by mothers who are HIV infected. *Clinical Psychology: Science and Practice* **2**: 239–250.

Belsky J. 1980. Child maltreatment: An ecological integration. *American Psychologist* **35**(4): 320–335.

Belsky J. 1993. Etiology of child maltreatment: A developmental Ecological analysis. *Psychological Bulletin* **114**(3): 413–434.

Black D, Heyman R, Smith Slep A. 2001a. Risk factors for child physical abuse. *Aggression and Violent Behavior* **6**(2-3): 121–188.

Black D, Smith Slep A, Heyman R. 2001b. Risk factors for child psychological abuse. *Aggression and Violent Behavior* **6**(2-3): 189–201.

Boyden J, Dercon S. 2008. Young Lives: An International Study of Childhood Poverty. Available: http://www.younglives.org.uk accessed on 1 May 2011.

Boyes M, Mason S, Cluver L. 2013. Validation of a brief stigma-by-association scale for use with HIV/AIDS-affected youth in South Africa. *AIDS Care* **25**(2):215–222.

Bronfenbrenner U. 1979. The Ecology of Human Development: Experiments by Nature and Design. Harvard University Press: Cambridge.

Brown D, Riley L, Butchart A, Meddings D, Kann L, Harvey A. 2009. Exposure to physical and sexual violence and adverse health behaviours in African children: Results from the Global School-based Student Health Study. *Bulletin of the World Health Organization* **87**(6): 447–455.

Buchanan A. 2002. Social work tools for assessment of children. Oxford University: Oxford.

Campbell C, Foulis C, Maimane S, Sibiya Z. 2005. "I Have an Evil Child at My House": Stigma and HIV/AIDS Management in a South African Community. *American Journal of Public Health* **95**(5): 808–815.

Cluver L, Gardner F. 2007. Risk and Protective Factors for psychological well-being of orphaned children in Cape Town: A qualitative study of children's views. *AIDS Care* **19**(3): 318–325.

Cluver L, Orkin M. 2009. Stigma, bullying, poverty and AIDS-orphanhood: Interactions mediating psychological problems for children in South Africa. *Social Science & Medicine* **69**(8): 1186–1193.

Cluver L, Gardner F, Operario D. 2007. Psychological distress amongst AIDS-orphaned children in urban South Africa. *Journal of Child Psychology and Psychiatry* **48**(8): 755–763.

Cluver L, Bowes L, Gardner F. 2010. Risk and protective factors for bullying victimization among AIDS-affected and vulnerable children in South Africa. *Child Abuse & Neglect* **34**(10): 793–803.

Cluver L, Orkin M, Boyes M, Gardner F, Meinck F. 2011. Transactional Sex amongst AIDS-orphaned and AIDS-Affected Adolescents Predicted by Abuse and Extreme Poverty. *Journal of Acquired Immune Deficiency Syndromes* **1**(58): 336–343.

Cluver L, Orkin M, Gardner F, Boyes M. 2012. Persisting mental health problems among AIDS-orphaned children in South Africa. *Journal of Child Psychology and Psychiatry* **53**: 363–370.

Collings S. 1993. Physically and sexually abused children: A comparative analysis of 200 reported cases. *Social Work* **29**: 301–306.

Cunningham R, Stiffman A, Doré P, Earls F. 1994. The association of physical and sexual abuse with HIV risk behaviors in adolescence and young adulthood: Implications for public health. *Child Abuse & Neglect* **18**(3): 233–245.

Dawes A, De Sas Kropiwnicki Z, Kafaar Z, Richter L. 2005. Survey examines South Africa's attitude towards corporal punishment. *Article 19* **1**(2):1–3.

Duncan R. 1999. Maltreatment by Parents and Peers: The relationship between child abuse, bully victimization, and psychological distress. *Child Maltreatment* **4**(1): 45–55.

Elgar FJ, Waschbusch DA, Dadds MR, Sigvaldason N. 2007. Development and Validation of a Short Form of the Alabama Parenting Questionnaire. *Journal of Child and Family Studies* **16**(2): 243–259.

Evans S, Shipton E, Keenan T. 2006. The Relationship Between Maternal Chronic Pain and Child Adjustment: The Role of Parenting as a Mediator. *The Journal of Pain* **7**(4): 236–243.

Fincham D, Altes L, Stein D, Seedat S. 2009. Posttraumatic stress disorder symptoms in adolescents: risk factors versus resilience moderation. *Comprehensive Psychiatry* **50** (3):193–199.

Freisthler B, Merritt D, LaScala E. 2006. Understanding the Ecology of Child Maltreatment: A Review of the Literature and Directions for Future Research. *Child Maltreatment* **11**(3): 263–280.

Giese S, Meintjes H, Croke R, Chamberlain R. 2003. Health and Social Services to Address the Needs of Orphans and Other Vulnerable Children in the Context of HIV/AIDS. Children's Institute of the University of Cape Town: Cape Town.

Gilbert R, Widom CS, Browne K, Fergusson D, Webb E, Janson S. 2009. Burden and consequences of child maltreatment in high-income countries. *The Lancet* **373**(9657): 68–81.

Glaser D. 2002. Emotional abuse and neglect (psychological maltreatment): a conceptual framework. *Child Abuse & Neglect* **26**(6-7): 697–714.

Health Systems Trust. 2006. South African Health Review 2006. Health Systems Trust. Durban

Heath K, Kaminer D. 2004. Types of trauma exposure and severity of PTSD sypmtoms amongst Langa adolescents. Department of Psychology, University of Cape Town: Cape Town.

Hosegood V, Vanneste A, Timaeus I. 2004. Levels and causes of adult mortality in rural South Africa: the impact of AIDS. *AIDS* **18**(4): 663–671.

Hsu J. 1996. Multiple Comparisons: Theory and Methods. Chapman & Hall: Columbus, Ohio.

Johnsona R, Kotch J, Catellier D, Winsor J, Dufort V, Hunter W, Amaya-Jackson L. 2002. Adverse Behavioural and Emotional Outcomes from Child Abuse and Witnessed Violence. *Child Maltreatment* **7**(3): 179–186.

Labadarios D, Steyn NP, Maunder E, MacIntyre U, Gericke G, Swart R, Huskisson J, Dannhauser A, Vorster HH, Nesmvuni AE, Nel JH. 2005. The National food consumption survey (NFCS): South Africa, 1999. *Public Health Nutrition* **8**(5): 533–543.

Lopman B, Barnabas R, Boerma J, Chawira G, Gaitskell K, Harrop T, Mason P, Donnelly C, Garnett G, Nyamukapa C, Gregson S. 2006. Creating and validating an algorithm to measure AIDS mortality in the adult population using verbal autopsy. *PLoS Medicine* **3**(8): e312.

Lynch M, Cicchetti D. 1998. An ecological-transactional analysis of children and contexts: The longitudinal interplay among child maltreatment, community violence, and children's symptomatology. *Development and Psychopathology* **10**(2): 235–257.

Machado C, Gonçalves M, Matos M, Dias A. 2007. Child and partner abuse: Self-reported prevalence and attitudes in the north of Portugal. *Child Abuse & Neglect* **31**(6): 657–670.

Madu S. 2003. The relationship between parental physical availability and child sexual, physical and emotional abuse: A study among a sample of university students in South Africa. *Scandinavian Journal of Psychology* **44**(4): 311–318.

Madu S, Idemudia S, Jegede A. 2002. Perceived Parental DIsorders as Risk Factors for Child Sexual, Physical and Emotional abuse among High School Students in the Mpumalanga Province, South Africa. *Journal of Social Sciences* **6**(2): 103–112.

Makoae M, Dawes A, Loeffel J, Ward C. 2008. Children's Court Inquiries in the Western Cape. Human and Social Research Council: Cape Town.

Malik S, Sorenson S, Aneshensel C. 1997. Community and dating violence among adolescents: Perpetration and victimization. *The Journal of adolescent health: official publication of the Society for Adolescent Medicine* **21** (5): 291–302.

May-Chahal C, Cawson P. 2005. Measuring child maltreatment in the United Kingdom: A study of the prevalence of child abuse and neglect. *Child Abuse & Neglect* **29**(9): 969–984.

McCord J. 1983. A forty year perspective on effects of child abuse and neglect. *Child Abuse & Neglect* **7**(3): 265–270.

Nash M, Hulsey T, Sexton C, Harralson T, Lambert W. 1993. Long-term sequelae of childhood sexual abuse: Perceived family environment, psychopathology, and dissociation. *Journal of Consulting and Clinical Psychology* **61**(2): 276–283.

Norton T, Manne S, Rubin S, Hernandez E, Carlson J, Bergman C, Rosenblum N. 2005. Ovarian Cancer Patients' Psychological Distress: The Role of Physical Impairment, Perceived Unsupportive Family and Friend Behaviors, Perceived Control, and Self-Esteem. *Health Psychology* **24**(2): 143–152.

Operario D, Cluver L, Rees H, MacPhail C, Pettifor A. 2008. Orphanhood and Completion of Compulsory School Education Among Young People in South Africa: Findings From a National Representative Survey. *Journal of Research on Adolescence* **18**(1): 173–186.

Peltzer K, Matseke G, Mzolo T, Majaja M. 2009. Determinants of knowledge of HIV status in South Africa: results from a population-based HIV survey. *BMC Public Health* **9**(1): 174.

Radhakrishna A, Bou-Saada I, Hunger W, Catellier D, Kotch J. 2001. Are father surrogates a risk factor for child maltreatment? *Child Maltreatment* **6**(4): 281–289.

Richters J, Martinez P, Valla J. 1990. Levonn: A cartoon-based interview for assessing children's distress symptoms. National Institute of Mental Health: Washington, DC.

Snider L, Dawes A. 2006. Psychosocial Vulnerability and Resilience Measures For National-Level Monitoring of Orphans and Other Vulnerable Children: Recommendations for Revision of the UNICEF Psychological Indicator. UNICEF: Cape Town.

South African Police Service. 2010. Annual Report 2009/2010. South African Police Service: Pretoria.

Statistics South Africa. 2001. Census 2001: Household Questionnaire. Statistics SA: Pretoria.

Steele R, Forehand R, Armistead L. 1997. The Role of Family Processes and Coping Strategies in the Relationship Between Parental Chronic Illness and Childhood Internalizing Problems. *Journal of Abnormal Child Psychology* **25**(2): 83–94.

Stith S, Liu T, Davies C, Boykin E, Alder M, Harris J, Som A, McPherson M, Dees J. 2009. Risk factors in child maltreatment: A meta-analytic review of the literature. *Aggression and Violent Behaviour* **14**(1): 13–29.

Thurman T, Kidman R. 2011. Child maltreatment at home: Prevalence among orphans and vulnerable children in KwaZulu-Natal, South Africa. Tulane University School of Public Health and Tropical Medicine. Tulane, LA.

DOI: 10.1002/car

UNAIDS. 2004. Children on the Brink 2004: A joint report of new orphan estimates and a framework for action. UN: New York.

Van der Merwe A, Dawes A. 2000. Prosocial and antisocial tendencies in children exposed to community violence. *Journal of Child and Adolescent Mental Health* **12**: 19–37.

Ward C, Martin E, Theron C, Distiller G. 2007. Factors affecting resilience in children exposed to violence. *South African Journal of Psychology* **37**(1): 165–187.

World Health Organization. 1999. Report of the Consultation on Child Abuse Prevention. WHO: Geneva.

World Health Organization. 2002. World Report on Violence and Health: Chapter 3 Child abuse and neglect by parents and other caregivers. WHO: Geneva.

World Health Organization. 2003. ICF Checklist Version 2.1a, Clinician Form for International Classification of Functioning, Disability and Health. WHO: Geneva.

DOI: 10.1002/car