International Journal of Psychology
Publication details, including instructions for authors and subscription information:
http://www.tandfonline.com/loi/pijp20

# Child physical abuse and neglect in Kenya, Zambia and the Netherlands: A cross-cultural comparison of prevalence, psychopathological sequelae and mediation by PTSS

Catherine Mbagaya [a], Paul Oburu [a] & Marian J. Bakermans-Kranenburg [b]
[a] Department of Psychology, Maseno University, Maseno, Kenya
[b] Centre for Child and Family Studies, Leiden University, Leiden, The Netherlands
Published online: 18 Apr 2013.

To cite this article: Catherine Mbagaya , Paul Oburu & Marian J. Bakermans-Kranenburg (2013): Child physical abuse and neglect in Kenya, Zambia and the Netherlands: A cross-cultural comparison of prevalence, psychopathological sequelae and mediation by PTSS, International Journal of Psychology, 48:2, 95-107

To link to this article: http://dx.doi.org/10.1080/00207594.2012.691975

*International Journal of Psychology,* 2013
Vol. 48, No. 2, 95–107, http://dx.doi.org/10.1080/00207594.2012.691975



# Child physical abuse and neglect in Kenya, Zambia and the Netherlands: A cross-cultural comparison of prevalence, psychopathological sequelae and mediation by PTSS

**Catherine Mbagaya[1], Paul Oburu[1], and Marian J. Bakermans-Kranenburg[2]**

[1]Department of Psychology, Maseno University, Maseno, Kenya
[2]Centre for Child and Family Studies, Leiden University, Leiden, The Netherlands



This study compared the prevalence of self-reported childhood physical abuse and neglect and the associated psychopathological sequelae among Kenyan, Zambian, and Dutch university students. In addition, we sought to find out the differentiated role of posttraumatic stress symptoms (PTSS) in mediating the associations between childhood maltreatment experiences and psychopathology symptoms. The sample consisted of 862 university students from Kenya ($n = 375$), Zambia ($n = 182$), and The Netherlands ($n = 305$) who completed the Personal and Relationships Profile (PRP). Results showed that physical abuse was highly prevalent in Kenya (59%) and Zambia (40%), and that neglect was even more prevalent than physical abuse in Zambia and The Netherlands at 59%, 54%, and 42% for the Kenyan, Zambian, and Dutch samples respectively. Neglect was associated with psychopathological symptoms in all three samples, whereas physical abuse was associated with psychopathological sequelae in the Kenyan and Zambian samples only. PTSS mediated the association between neglect and psychopathology symptoms in the Dutch sample and between physical abuse and psychopathology symptoms in the Dutch and Kenyan samples. We conclude that physical abuse and neglect are associated with psychopathology symptoms independently of country and cultural context. However, the pathways through which physical abuse and neglect may lead to psychopathological sequelae may be dependent on perceptions of specific parental behavior in different sociocultural contexts.

***Keywords:*** Child physical abuse; Neglect; Psychopathology; PTSS.

Cette étude comparait la prévalence de l'abus physique à l'enfance (APE) et de la négligence auto-rapportés, ainsi que les conséquences psychopathologiques associées chez des étudiants universitaires kényans, zambiens et néerlandais. De plus, nous avons voulu identifier le rôle différencié des symptômes de stress post-traumatique (SSPT) en tant que médiateurs dans les associations entre les expériences de maltraitance à l'enfance et les symptômes psychopathologiques. Les participants étaient 862 étudiants universitaires du Kenya ($n = 375$), du Zambie ($n = 182$) et des Pays-Bas ($n = 305$) qui ont complété le Profil personnel et relationnel (PPR). Les résultats ont montré que l'APE avait une prévalence élevée au Kenya (59%) et au Zambie (40%), et que la négligence avait une prévalence encore plus élevée que l'APE pour les trois échantillons. La négligence était associée aux symptômes psychopathologiques chez les trois échantillons, tandis que l'abus physique était associé avec les conséquences psychopathologiques chez les échantillons kényan et zambien seulement. Les SSPT jouaient un rôle médiateur sur l'association entre la négligence et les symptômes psychopathologiques dans l'échantillon néerlandais et sur l'association entre l'APE et les symptômes psychopathologiques dans les échantillons néerlandais et kényan. Nous concluons que l'APE et la négligence sont associés aux symptômes psychopathologiques indépendamment du pays et du contexte culturel. Cependant, la manière par laquelle l'APE et la négligence peuvent mener à des conséquences psychopathologiques peut dépendre des perceptions du comportement parental spécifique dans les différents contextes socioculturels.

Correspondence should be addressed to Catherine Mbagaya, Department of Psychology, Maseno University, Maseno 40105, Kenya. (E-mail: cmbagaya@gmail.com).

Este estudio comparó la prevalencia del abuso físico infantil (AFI) autoinformado y la negligencia y sus secuelas psicopatológicas asociadas entre estudiantes universitarios keniatas, zambianos y holandeses. Además, hemos buscado averiguar el papel diferenciado de los síntomas de estrés postraumático (SEPT) en la mediación de las asociaciones entre las experiencias de maltrato infantil y los síntomas psicopatológicos. La muestra consistió en 862 estudiantes universitarios procedentes de Kenia ($n = 375$), Zambia ($n = 182$) y los Países Bajos ($n = 305$), quienes completaron el Perfil Personal y Relacional (PPR). Los resultados mostraron que el AFI era altamente prevalente en Kenia (59%) y Zambia (40%), y que la negligencia era aún más prevalente que el AFI en las tres muestras. La negligencia se relacionó con síntomas psicopatológicos en las tres muestras, mientras que el abuso físico solamente se asoció con secuelas psicopatológicas en las muestras de Kenia y Zambia. Los SEPT mediaron la asociación entre la negligencia y los síntomas psicopatológicos en la muestra holandesa y entre el AFI y los síntomas psicopatológicos en las muestras holandesa y keniata. Llegamos a la conclusión de que el AFI y la negligencia están asociados con síntomas psicopatológicos independientemente del contexto nacional y cultural. Sin embargo, las trayectorias por las cuales el AFI y la negligencia llevan a secuelas psicopatológicas podrían ser dependientes de la percepción del comportamiento específico de los padres en diferentes contextos socio-culturales.



The high incidence and prevalence of child physical abuse and neglect in both the developed and developing nations are reason for concern because the experience of abuse and neglect is accompanied by wide-ranging negative mental and physical health consequences for children, adolescents, and adult survivors (Cyr, Euser, Bakermans-Kranenburg, & Van IJzendoorn, 2010; Herrenkohl & Herrenkohl, 2007; Scher, Forde, McQuaid & Stein, 2004). However, the number of child maltreatment studies conducted in developing nations is much smaller than in Western countries (Dunne, 2009), and the current study contributes to narrowing this gap. Furthermore, studies examining child physical abuse are on the decline, whereas studies on neglect and other forms of emotional abuse remain consistently low (Behl, Conyngham, & May, 2003). Yet neglect and physical abuse are the most common forms of child maltreatment (US Department of Health and Human Services [DHSS], 2008; Euser, Van IJzendoorn, Prinzie, & Bakermans-Kranenburg, 2010). Research has also shown that physical abuse and neglect tend to co-occur (Scher et al., 2004). In addition, the psychological consequences of the experience of such multiple types of maltreatment have been found to be more severe than those associated with the experience of only one type of maltreatment (Higgins & McCabe, 2000). It is for these reasons that in the current study, we focus on the prevalence of both physical abuse and (physical and emotional) neglect and on their psychopathological sequelae.

## PREVALENCE

The estimated prevalence of childhood physical abuse and neglect varies remarkably across studies. Such variations are often attributed to differences in operational definitions of what constitutes physical abuse and neglect, methods used (retrospective self-reports versus sentinel approaches; see Stoltenborgh, Van IJzendoorn, Euser, & Bakermans-Kranenburg, 2011), and sampling strategies employed by different studies (students versus adults; male versus female samples [Smith, Ireland, & Thornberry, 2005]). For example, using a sentinel approach in The Netherlands, Euser et al. (2010) found a physical abuse prevalence of 0.6%, whereas self-report measures have been found to yield a prevalence that exceeds 28% (Hussey, Chang, & Kotch, 2006). Similarly, neglect prevalence may be as high as 41.5% when self-report measures are used (Hussey et al., 2006). However, when sentinel approaches are used, the prevalence could be as low as 0.9% (Euser et al., 2010).

In Africa, few studies have examined physical abuse. No studies on neglect were found in the literature. Slonim-Nevo and Mukuka (2007) found a physical abuse prevalence of 27% in a national survey of Zambian adolescents. Madu (2001) reported a similar physical abuse prevalence of 27% among South African high school students. In a nationally representative sample of adults in South Africa, Kaminer, Grimsrund, Myer, Stein, and Williams (2008) found that 12% of the participants had experienced physical abuse. Youssef, Attia, and Kamel (1998) reported that 37.5% of students in Egypt were subjected to physically abusive punishment by their parents.

## PSYCHOPATHOLOGICAL SEQUELAE

The consequences of physical abuse go beyond the physical effects and include emotional and

psychological injury to the individual victim (Kolko, 2002). Research shows that physical abuse is associated with later externalizing behaviour and aggression (Manly, Kim, Rogosch, & Cicchetti, 2001). Adults who report physical abuse are therefore at greater risk for delinquency and adult criminal behaviour (Hildyard & Wolfe, 2002; Maxfield & Widom, 1996). In their review, MacMillan and Munn (2001) observed that physical abuse has consistently been associated with depression. Also, physical abuse is an etiological factor in the development of borderline personality disorder (BPD), since adolescent females with BPD were more likely to have been physically abused than those without BPD (Arntz, 1994; Westen, Ludolph, Misle, Ruffin, & Block, 1990). Further, physical abuse is associated with posttraumatic stress symptoms (PTSS; Briere & Elliott, 2003; Dubner & Motta, 1999; Kolko, 2002; Maker, Kemmelmeer & Peterson, 2001). Among South African adults, this association was significant among male but not for female respondents (Kaminer et al., 2008).

Although many types of neglect leave no physical marks, they may have a devastating impact on the child's development (Erickson & Egeland, 2002). Research has shown that neglect is associated with elevated symptom levels of BPD (Johnson, Cohen, Brown, Smailes, & Bernstein, 1999) and increased risk for subsequent PTSS (Widom, 1999).

## MEDIATION BY PTSS

Research on the significance of PTSS as a mediator of the association between child maltreatment and negative outcomes has focused mainly on child sexual abuse (CSA) and negative psychological outcomes. Often, PTSS has been found to be mediating the link between CSA and psychopathological outcomes (Risser, Hetzel-Riggin, Thomsen, & McCanne, 2006; Sandberg, Matorin, & Lynn, 1999; Soloff, Feske, & Fabio, 2008). To the best of our knowledge, no study has examined the mediating role of PTSS in the association between physical abuse and neglect on one hand and psychopathological sequelae on the other. We hypothesize that physical abuse and neglect may be equally traumatic to children and we examine whether the associated posttraumatic stress symptomatology mediates the association between child maltreatment and psychopathological effects.

## A CROSSCULTURAL COMPARISON

In the present study we use similar methodologies across samples drawn from Kenya, Zambia, and The Netherlands in order to determine cross-cultural similarities and differences in the prevalence of physical abuse and neglect and associated psychopathology symptoms, and we examine the mediation of this association by PTSS. We hypothesize that due to sociocultural factors, prevalence rates for Kenya and Zambia will be similar but significantly higher than the rates reported in The Netherlands. We expect this because of cultural norms associated with the acceptance of physical punishment for children, and prevalent poverty that would make it difficult for parents to attend to their children's physical, emotional and educational needs (Blackstock, Trocmé, & Bennett, 2004). We expect however that the sequelae of physical abuse and neglect will not vary significantly across the different samples, and that PTSS mediates the associations between physical abuse and neglect on one hand and psychopathological symptoms on the other in similar ways in the three samples. This expectation is based on the ''no difference hypothesis'' which proposes that no real differences exist in developmental outcomes among racial and cultural groups (Rowe, Vazsony, & Flannery, 1994). Although members of a given group may undergo culturally specific experiences, these do not alter the associations among developmental variables in different cultural groups. Differences in developmental outcomes may be accounted for by different experiences that children in various cultural groups encounter, or by a third variable on which the groups differ; for example, income levels (Bakermans-Kranenburg, Van IJzendoorn, & Kroonenberg, 2004).

## METHOD

### Procedure and participants

The current study is a retrospective cross-sectional survey in which participants responded to a standard set of questionnaires in Kenya, Zambia, and The Netherlands. Participants were university students; they were informed of the purpose of the study and confidentiality was guaranteed. Participation was voluntary and those who wished not to answer any questions were free to do so. The questionnaires were administered during lecture hours in the respective countries.

The relevant authorities in all the three sites approved of the research protocol. Our sample consisted of 862 participants drawn from university students in Kenya (375; male: $n = 193$, female: $n = 182$), Zambia (182; male: $n = 96$, female: $n = 86$), and The Netherlands ($n = 305$; all female). In all three samples, participants ranged in age from 18 to 40 years.

## Measures

A modified version of the Personal and Relationships Profile (PRP; Straus, Hamby, Boney-McCoy, & Sugarman, 1999) was used. The PRP measures 22 variables associated with family violence, and it includes a scale for social desirability. The respondents indicated on a four-point Likert that ranges from 1 (strongly disagree) to 4 (strongly agree) the extent to which they agreed with the 187 items of the questionnaire. As background variables we collected information on gender, age, and family income.

### *Experiences of childhood physical abuse and neglect*

The Child Physical Abuse scale consisting of two items was drawn from the Violent Socialization scale of the PRP. Respondents indicated the extent to which they agreed with the item content considering their experience of physical violence in their childhood. The items for the study were: "When I was less than 12 years old, I was spanked or hit a lot by my father or mother", and "When I was a teenager I was hit a lot by my mother or father." The reliabilities were for Kenya, $\alpha = .64$ ($N = 375$); Zambia; $\alpha = .59$ ($N = 182$); The Netherlands, $\alpha = .86$ ($N = 305$). The Neglect scale of the PRP consists of eight items measuring the extent to which individuals' emotional and physical needs were unfulfilled in their family of origin during their childhood. The participants responded to items such as "My parents did not comfort me when I was upset." The reliabilities for this scale were as follows: $\alpha = .64$ ($N = 375$) for the Kenyan sample, $\alpha = .59$ ($N = 182$) for the Zambian sample, and $\alpha = .60$ ($N = 300$) for the Dutch sample. A response of "agree" or "strongly agree" on any of the items on the physical abuse or neglect scale was assumed to be indicative of physical abuse or neglect respectively.

### *Psychopathology: Criminal tendencies, depressive symptoms, and borderline personality symptoms*

The scale for criminal tendencies consists of eight items and measures the extent to which the respondent has committed criminal acts during childhood and adolescence. For example, "Since age 15, I have stolen money from anyone, including family." The reliabilities for this scale were as follows: $\alpha = .76$ ($N = 375$) for the Kenyan sample; $\alpha = .70$ ($N = 182$) for the Zambian sample; and $\alpha = .64$ ($N = 301$) for the Dutch sample.

The Depressive Symptoms scale of the PRP includes nine items that measure disturbances in mood, dysphoric cognitions and somatic disturbances in individuals. For example, "I feel sad quite often." The reliabilities for this scale were as follows: $\alpha = .67$ ($N = 375$) for the Kenyan sample; $\alpha = .62$ ($N = 182$) for the Zambian sample, and $\alpha = .82$ ($N = 305$) for the Dutch sample.

The Borderline Personality Symptoms scale of the PRP consists of nine items that measure personality features derived from the DSM-IV (American Psychiatric Association, 1994). These features include instability, impulsivity, emotional liability, and poor social relationships. Participants responded to items such as, "I have told others that I will kill myself." The reliabilities were as follows: Kenya, $\alpha = .64$ ($N = 375$); Zambia, $\alpha = .67$ ($N = 182$); The Netherlands, $\alpha = .72$ ($N = 305$).

### *Posttraumatic stress symptoms*

The Posttraumatic Stress Symptoms scale of the PRP consists of eight items that measure the extent to which respondents have re-experiencing, hyperarousal, and avoidance symptoms associated with trauma. Participants responded to items such as "Terrible things have happened to me that I remember over and over." The reliabilities were as follows: Kenya, $\alpha = .64$ ($N = 375$); Zambia, $\alpha = .60$ ($N = 182$); The Netherlands, $\alpha = .77$ ($N = 305$).

### *Covariate: Social desirability*

We administered the 13-item scale for Social Desirability that is part of the PRP, measuring the degree to which respondents tend to avoid disclosing socially undesirable behavior. They responded to items such as, "I am always courteous even to people who are disagreeable." The reliability figures for the scale were adequate: Kenya, $\alpha = .61$ ($N = 375$); Zambia, $\alpha = .67$ ($N = 182$); The Netherlands, $\alpha = .73$ ($N = 305$).

## RESULTS

### Prevalence of child physical abuse and neglect

We first examined the prevalence of physical abuse and neglect in the three samples. In the Kenyan sample, 42% (males: 48%; females: 36%) reported physical abuse while 59% (males: 62%; females: 56%) reported neglect. The prevalence of physical abuse in the Zambian sample was 40% (males: 43%; females: 36%) while that of neglect was 54% (males: 54%; females: 53%). Only 3% of the Dutch sample reported physical abuse, while 42% reported neglect. There were significant differences in physical abuse and neglect scores among the three samples, with the Dutch sample showing lower physical abuse and neglect scores than both the Kenyan and Zambian samples, $F(2, 572) = 130.61$, $p < .01$ and $F(2, 572) = 15.89$, $p < .01$, respectively.

In order to determine in which country the reported level of physical abuse and neglect was significantly different from the reference category (country), we first conducted a multinomial logistic regression to predict physical abuse and neglect in Zambia and Kenya with The Netherlands as the reference category. We then conducted a similar analysis with Kenya as the reference category. In both analyses, age, social desirability and depressive symptoms were first entered in the regression as control variables because of their likelihood to influence respondents' answering patterns and response biases. The results showed that the odds of physical abuse were significantly higher in Zambia and Kenya than in The Netherlands (odds = 9.83, 95% CI 5.78–16.72, Wald = 71.01; odds = 13.35, 95% CI. 40–3.56, Wald = 1.21 respectively). In comparing Zambia to Kenya, the chance of being physically abused was lower in Zambia than in Kenya (odds = 0.72, 95% CI 0.56–0.91, Wald = 7.59). There were no differences in the odds of neglect in the three samples of our study.

### Bivariate associations between physical abuse and neglect

The results of the bivariate analyses indicated that the associations between physical abuse and neglect were significant in all three samples (Kenya: $r = .16$, $p < .01$; Zambia: $r = .26$, $p < .01$; Netherlands: $r = .27$, $p < .01$). This implies that the higher the respondents scored on physical abuse, the higher they scored on neglect.

### Multivariate relations between child maltreatment variables and psychopathological symptoms

Hierarchical regression analyses were used to test whether there were significant associations between physical abuse and neglect on one hand and psychopathological symptoms on the other. In all analyses, social desirability was entered at Step 1. At Step 2, background variables (income, gender and age) were entered. At Step 3, PTSS was entered and finally at Step 4, physical abuse and neglect were entered. Table 1 reports the prediction of *criminal tendencies* from physical abuse and neglect, controlling for the covariates. Both physical abuse and neglect were significantly related to criminal tendencies in the Kenyan sample ($\beta = .17$, $p < .01$; $\beta = .20$, $p < .01$, respectively). This means that more experiences of physical abuse or neglect were related to higher scores on criminal tendencies. In the Zambian sample only physical abuse was significantly related to criminal tendencies, $\beta = .23$ ($p < .01$) whereas in the Dutch sample only neglect was a significant predictor of criminal tendencies, $\beta = .23$ ($p < .01$). This suggests that the higher the Zambian students scored on physical abuse, the higher they also scored on criminal tendencies. In the same way, more neglect was related to more criminal tendencies among the Dutch students.

Table 2 reports the prediction of *depressive symptoms* from physical abuse and neglect, again controlling for the covariates mentioned above. Neglect was associated with depressive symptoms in the Kenyan sample ($\beta = .34$, $p < .01$), in the Zambian sample ($\beta = .26$; $p < .01$), and in the Dutch sample ($\beta = .19$; $p < .01$). In all three samples, experiences of neglect went together with depressive symptoms. With regard to the prediction of *borderline personality symptoms* (see Table 3), neglect was a significant predictor in both the Kenyan sample, $\beta = .17$, $p < .01$, and the Zambian sample, $\beta = .22$, $p < .01$. Higher scores on neglect were associated with more borderline personality symptoms. In the Netherlands physical abuse and neglect did not significantly predict borderline personality symptoms.

### Mediation of the association between child abuse and neglect and psychopathological symptomatology by PTSS

In order to examine whether the association between physical abuse and neglect on one hand and psychopathology symptoms on the other

**TABLE 1**
Summary of regression analysis predicting criminal tendencies from childhood physical abuse and neglect with social desirability, income, gender, age, and PTSS as covariates

| | *R* | $R^2$ | $R^2Ch$ | $F_{change}$ | *Df* | *Beta*[1] | *p* |
|---|---|---|---|---|---|---|---|
| *Kenya* | | | | | | | |
| *Step 1* | .40 | .16 | .16 | 69.51 | (1, 373) | | <.01 |
| Social desirability | | | | | | −.29 | <.01 |
| *Step 2* | .49 | .24 | .09 | 13.84 | (3, 370) | | <.01 |
| Income | | | | | | −.04 | .36 |
| Gender | | | | | | −.19 | <.01 |
| Age | | | | | | −.13 | <.01 |
| *Step 3* | .54 | .30 | .05 | 28.17 | (1, 369) | | <.01 |
| PTSS | | | | | | .20 | <.01 |
| *Step 4* | .60 | .36 | .07 | 19.62 | (2, 367) | | <.01 |
| Physical abuse | | | | | | .17 | <.01 |
| Neglect | | | | | | .20 | <.01 |
| *Zambia* | | | | | | | |
| *Step 1* | .40 | .16 | .16 | 33.53 | (1, 180) | | <.01 |
| Social desirability | | | | | | −.29 | <.01 |
| *Step 2* | .47 | .22 | .06 | 4.68 | (3, 177) | | <.01 |
| Income | | | | | | .10 | .15 |
| Gender | | | | | | −.21 | <.01 |
| Age | | | | | | .06 | .40 |
| *Step 3* | .53 | .28 | .06 | 13.90 | (1, 176) | | <.01 |
| PTSS | | | | | | .23 | <.01 |
| *Step 4* | .58 | .34 | .06 | 8.09 | (2, 174) | | <.01 |
| Physical abuse | | | | | | .23 | <.01 |
| Neglect | | | | | | .09 | .19 |
| *Netherlands* | | | | | | | |
| *Step 1* | .35 | .12 | .12 | 41.71 | (1, 303) | | <.01 |
| Social desirability | | | | | | −.30 | <.01 |
| *Step 2* | .36 | .13 | .14 | 1.28 | (3, 301) | | .28 |
| Income | | | | | | .04 | .46 |
| Age | | | | | | .02 | .65 |
| *Step 3* | .39 | .15 | .02 | 7.79 | (1, 300) | | <.01 |
| PTSS | | | | | | .08 | .16 |
| *Step 4* | .44 | .20 | .05 | 8.30 | (2, 298) | | <.01 |
| Physical abuse | | | | | | .03 | .61 |
| Neglect | | | | | | .23 | <.01 |

[1]Beta values are derived from the final block of the regression model.



could in part be explained through PTSS, we conducted mediation analyses following the stepwise procedure proposed by Baron and Kenny (1986). This implies that we only tested for mediation when the following criteria were met: The predictor (child physical abuse or neglect) was significantly associated with both the outcome (psychopathological symptomatology) and the mediator (PTSS), and the mediator (PTSS) was significantly associated with the outcome (psychopathological symptomatology). When these criteria were met a stepwise hierarchical regression analysis was conducted in which the association between physical abuse or neglect and psychopathological symptomatology was investigated, controlling for PTSS. When the prediction of psychopathological symptoms from physical abuse or neglect was no longer significant, we concluded that PTSS fully mediates the association between physical abuse and neglect and later symptomatology. A Sobel test for mediation was performed as a significance test for the indirect effect of physical abuse and neglect on psychopathological symptomatology via PTSS (Baron & Kenny, 1986). Partial mediation occurs if the prediction of psychopathological symptomatology remains significant after controlling for PTSS and the Sobel test is significant too. Table 4 presents the regression coefficients of the mediation models involving physical abuse, neglect, and psychopathological symptoms.

### *Criminal tendencies*

In the model involving physical abuse and criminal tendencies in the Kenyan sample, the

**TABLE 2**
Summary of regression analysis predicting depressive symptoms from childhood physical abuse and neglect with social desirability, income, gender, age, and PTSS as covariates

| | *R* | $R^2$ | $R^2Ch$ | $F_{change}$ | *Df* | *Beta*[1] | *p* |
|---|---|---|---|---|---|---|---|
| *Kenya* | | | | | | | |
| *Step 1* | .25 | .06 | .06 | 25.00 | (1, 373) | | <.01 |
| Social desirability | | | | | | −.12 | .02 |
| *Step 2* | .29 | .08 | .02 | 2.50 | (3, 370) | | |
| Income | | | | | | −.06 | .22 |
| Gender | | | | | | .09 | .05 |
| Age | | | | | | −.05 | .29 |
| *Step 3* | .43 | .18 | .10 | 44.50 | (1, 369) | | <.01 |
| PTSS | | | | | | .29 | <.01 |
| *Step 4* | .56 | .31 | .13 | 34.59 | (2, 367) | | <.01 |
| Physical abuse | | | | | | .07 | .14 |
| Neglect | | | | | | .35 | <.01 |
| *Zambia* | | | | | | | |
| *Step 1* | .33 | .11 | .11 | 22.52 | (1, 180) | | <.01 |
| Social desirability | | | | | | −.21 | <.01 |
| *Step 2* | .39 | .15 | .04 | 2.27 | (3, 177) | | .04 |
| Income | | | | | | −.14 | .05 |
| Gender | | | | | | .11 | .10 |
| Age | | | | | | −.17 | .02 |
| *Step 3* | .48 | .23 | .08 | 17.68 | (1, 176) | | <.01 |
| PTSS | | | | | | .30 | <.01 |
| *Step 4* | .55 | .30 | .08 | 9.35 | (2, 174) | | <.01 |
| Physical abuse | | | | | | .07 | .36 |
| Neglect | | | | | | .26 | <.01 |
| *Netherlands* | | | | | | | |
| *Step 1* | .41 | .17 | .17 | 61.10 | (1, 303) | | <.01 |
| Social desirability | | | | | | −.31 | <.01 |
| *Step 2* | .43 | .19 | .02 | 3.72 | (3, 301) | | .03 |
| Income | | | | | | −.07 | .16 |
| Age | | | | | | .00 | .96 |
| *Step 3* | .57 | .32 | .14 | 62.37 | (1, 300) | | <.01 |
| PTSS | | | | | | .32 | <.01 |
| *Step 4* | .60 | .36 | .04 | 8.25 | (2, 298) | | <.01 |
| Physical abuse | | | | | | .04 | .40 |
| Neglect | | | | | | .19 | <.01 |

[1]Beta values are derived from the final block of the regression model.



associations between physical abuse and PTSS and between PTSS and criminal tendencies were significant ($\beta = .16$; $p < .01$; $\beta = .33$, $p < .01$). The total effect of physical abuse on criminal tendencies was also significant, $\beta = .35$ ($p < .05$). After controlling for PTSS, the weight of the direct effect dropped but remained significant, $\beta = .26$ ($p < .01$). This implies that PTSS partially mediated the association of physical abuse and criminal tendencies in the Kenyan sample, Sobel test $z = 2.85$ ($p < .01$); see Table 4. Similar analyses showed that in the Dutch sample PTSS fully mediated the association of physical abuse and criminal tendencies (Sobel test $z = 2.67$, $p < .01$), and partially mediated the effect of neglect on criminal tendencies (Sobel test $z = 2.24$, $p = .02$). PTSS did not mediate the association between physical abuse and criminal tendencies in the Zambian sample and between neglect and criminal tendencies in the Kenyan and Zambian samples.

### *Depressive symptoms*

The model testing physical abuse, PTSS, and depressive symptoms showed that PTSS partially mediated the association of physical abuse and depressive symptoms in the Kenyan sample, Sobel test $z = 3.42$ ($p < .01$), and fully mediated this association in the Dutch sample (Sobel test $z = 2.98$, $p < .01$). In addition PTSS partially mediated the association between neglect and depressive symptoms (Sobel test $z = 3.23$, $p < .01$) in the Dutch sample. However, PTSS did not mediate the associations between neglect and depressive symptoms in the Zambian sample.

**TABLE 3**
Summary of regression analysis predicting borderline personality symptoms from childhood physical abuse and neglect with social desirability, income, gender, age, and PTSS as covariates

| | *R* | $R^2$ | $R^2Ch$ | $F_{change}$ | *Df* | *Beta*[1] | *p* |
|---|---|---|---|---|---|---|---|
| *Kenya* | | | | | | | |
| *Step 1* | .49 | .24 | .24 | 114.48 | (1, 373) | | <.01 |
| Social desirability | | | | | | −.33 | <.01 |
| *Step 2* | .51 | .26 | .03 | 4.94 | (3, 370) | | <.01 |
| Income | | | | | | −.01 | .75 |
| Gender | | | | | | −.00 | .94 |
| Age | | | | | | −.13 | <.01 |
| *Step 3* | .62 | .38 | .12 | 69.76 | (1, 369) | | <.01 |
| PTSS | | | | | | .35 | <.01 |
| *Step 4* | .64 | .41 | .03 | 9.52 | (2, 367) | | <.01 |
| Physical abuse | | | | | | .05 | .24 |
| Neglect | | | | | | .17 | <.01 |
| *Zambia* | | | | | | | |
| *Step 1* | .38 | .14 | .14 | 29.84 | (1, 180) | | <.01 |
| Social desirability | | | | | | −.24 | <.01 |
| *Step 2* | .40 | .16 | .02 | 1.40 | (3, 177) | | .24 |
| Income | | | | | | −.12 | .07 |
| Gender | | | | | | −.02 | .78 |
| Age | | | | | | −.08 | .25 |
| *Step 3* | .57 | .32 | .16 | 41.84 | (1, 176) | | <.01 |
| PTSS | | | | | | .43 | <.01 |
| *Step 4* | .61 | .37 | .05 | 6.93 | (2, 174) | | <.01 |
| Physical abuse | | | | | | .02 | .74 |
| Neglect | | | | | | .22 | <.01 |
| *Netherlands* | | | | | | | |
| *Step 1* | .46 | .21 | .21 | 80.86 | (1, 303) | | <.01 |
| Social desirability | | | | | | −.34 | <.01 |
| *Step 2* | .46 | .21 | .00 | 0.27 | (3, 301) | | .77 |
| Income | | | | | | −.00 | .97 |
| Age | | | | | | −.07 | .12 |
| *Step 3* | .64 | .41 | .20 | 100.97 | (1, 300) | | <.01 |
| PTSS | | | | | | .42 | <.01 |
| *Step 4* | .65 | .43 | .02 | 3.96 | (2, 298) | | .02 |
| Physical abuse | | | | | | .08 | .11 |
| Neglect | | | | | | .10 | .05 |

[1]Beta values are derived from the final block of the regression model.



### *Borderline personality symptoms*

In the Kenyan sample, PTSS partially mediated the association between physical abuse and borderline personality symptoms, Sobel test $z = 3.35$ ($p < .01$). In the Dutch sample, PTSS fully mediated the association between physical abuse and borderline personality symptoms, Sobel test $z = 2.60$ ($p < .01$), and partially mediated the association between neglect and borderline personality symptoms, Sobel test $z = 3.43$ ($p < .01$). The models involving neglect, PTSS, and borderline personality symptoms in the Kenyan and Zambian samples and between physical abuse, PTSS, and borderline personality symptoms in the Zambian sample did not fulfill the conditions for mediation.

## DISCUSSION

In our crosscultural study, including a Dutch and two African samples, we hypothesized that the prevalence of physical abuse and neglect would be higher in both Kenya and Zambia compared to the prevalence in the Netherlands. Indeed, the physical abuse rate in the Dutch sample was much lower than that in the Kenyan and Zambian samples. The high physical abuse prevalence in the two African countries is consistent with what has previously been observed in Egypt, where a similar proportion of females had been physically maltreated by their parents (Youssef et al., 1998). The high prevalence we found may be attributed to poverty and overwhelming concerns for survival in the Kenyan and Zambian social context that may

**TABLE 4**
PTSS mediating the association between childhood physical abuse and neglect and psychopathological symptoms

| | | Kenya | | | Zambia | | | Netherlands | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | *Regressions* | *B* | *SE* | *β* | *B* | *SE* | *β* | *B* | *SE* | *β* |
| *Criminal Tendencies* | | | | | | | | | | |
| Physical abuse | Physical abuse – PTSS[1] | 0.09 | .03 | .16** | 0.03 | .05 | .05 | 0.26 | .06 | .22** |
| | PTSS – Criminal tendencies[1] | 0.38 | .06 | .33** | 0.27 | .07 | .28** | 0.17 | .05 | .31** |
| | Physical abuse – Criminal tendencies[1] | 0.25 | .03 | .35** | 0.24 | .04 | .38** | 0.12 | .05 | .13* |
| | Physical abuse – Criminal tendencies controlling for PTSS | 0.18 | .03 | .26** | 0.21 | .04 | .34** | 0.07 | .05 | .08 |
| Neglect | Neglect – PTSS[1] | .00 | .06 | .00 | −0.13 | .08 | −.12 | 0.39 | .07 | .29** |
| | PTSS – Criminal tendencies[1] | 0.44 | .05 | .37** | 0.34 | .07 | .34** | 0.12 | .05 | .15** |
| | Neglect – Criminal tendencies[1] | 0.37 | .07 | .27** | 0.17 | .08 | .15* | 0.31 | .06 | .30** |
| | Neglect – Criminal tendencies controlling for PTSS | 0.31 | .06 | .23** | 0.19 | .08 | .17* | 0.26 | .06 | .25** |
| *Depression* | | | | | | | | | | |
| Physical abuse | Physical abuse – PTSS[1] | 0.12 | .03 | .20** | 0.05 | .04 | .09 | 0.19 | .06 | .16** |
| | PTSS – Depressive symptoms[1] | 0.33 | .05 | .36** | 0.32 | .06 | .35** | 0.44 | .05 | .45** |
| | Physical abuse – Depressive symptoms[1] | 0.12 | .03 | .23** | 0.12 | .04 | .22** | 0.21 | .06 | .19** |
| | Physical abuse – Depressive symptoms controlling for PTSS | 0.07 | .03 | .12* | 0.08 | .04 | .16* | 0.09 | .06 | .08 |
| Neglect | Neglect – PTSS[1] | −.07 | .06 | −.06 | −.18 | .08 | −.16* | .25 | .07 | .19** |
| | PTSS – Depressive symptoms[1] | 0.33 | .04 | .36** | 0.36 | .06 | .40** | 0.38 | .05 | .39** |
| | Neglect – Depressive symptoms[1] | 0.38 | .05 | .39** | 0.23 | .07 | .22** | 0.46 | .07 | .36** |
| | Neglect – Depressive symptoms controlling for PTSS | 0.42 | .05 | .35** | 0.25 | .07 | .25** | 0.29 | .07 | .23** |
| *Borderline Personality* | | | | | | | | | | |
| Physical abuse | Physical abuse – PTSS[1] | 0.09 | .03 | .16** | 0.04 | .04 | .06 | 0.16 | .06 | .14** |
| | PTSS – Borderline symptoms[1] | 0.45 | .04 | .50** | 0.43 | .06 | .48** | 0.46 | .04 | .52** |
| | Physical abuse – Borderline symptoms[1] | 0.14 | .03 | .25** | 0.12 | .04 | .22** | 0.22 | .06 | .21** |
| | Physical abuse – Borderline symptoms controlling for PTSS | 0.06 | .03 | .11** | 0.08 | .04 | .14* | 0.09 | .05 | .09 |
| Neglect | Neglect – PTSS[1] | .00 | .05 | .00 | −.19 | .07 | −.17** | 0.26 | .07 | .20** |
| | PTSS – Borderline symptoms[1] | 0.48 | .04 | .51** | 0.46 | .06 | .52** | 0.45 | .05 | .50** |
| | Neglect – Borderline symptoms[1] | 0.23 | .06 | .21** | 0.19 | .08 | .19** | 0.33 | .06 | .28** |
| | Neglect – Borderline symptoms controlling for PTSS | 0.17 | .05 | .15** | 0.13 | .06 | .22** | 0.13 | .06 | .12* |

*$p < .05$. **$p < .01$. [1]Controlling for the third variable in the model.



have diminished parents' abilities to provide warm, responsive parenting, hence contributing to an increase in the use of harsh punishment (Dodge, Pettit, & Bates, 1994) that could escalate into abuse (see also Gracia & Herrero, 2008a, 2008b).

In addition, the general breakdown of the traditional communal childcare systems in Africa (Lalor, 2008) has increased the likelihood of physical abuse in Kenya and Zambia. The social structures that protected children from physical abuse such as communal child-rearing practices and collective responsibility for children's welfare have been weakened, and the possibility that a caregiver–child conflict could escalate into abuse has simultaneously increased (Korbin, 1991). Besides, in collectivist societies such as in Zambia and Kenya, emphasis on conformity to cultural norms and wider acceptance of authoritarian parenting styles that seek to attain child compliance and obedience to parental authority through the use of force exposes children to physical forms of abuse (Oburu & Palmerus, 2003). The prevalence of physical abuse in The Netherlands was lower than has previously been observed among adolescents in The Netherlands (Lamers-Winkelman, Slot, Bijl, & Vijlbrief, 2007) and in other Western samples (Briere & Elliott, 2003; Springer, Sheridan, Kuo, & Carnes, 2007). This difference may be attributed to methodological variations and sample dissimilarities. Lamers-Winkelman et al. (2007) used self-report data from adolescents in high school (age range 11–18 years; $M = 14$ years) to determine both lifetime prevalence and one-year prevalence of child maltreatment. It should be noted however that The Netherlands has one of the lowest incidences of physical abuse in Europe (Euser et al., 2010).

The high prevalence of neglect across the three samples may be indicative of the fact that neglect is the most prevalent form of child maltreatment across cultures (Glaser, 2005). Although this finding is consistent with what has been reported elsewhere (Hussey et al., 2006), we had not expected the Dutch sample to report prevalence rates that exceeded 40% of the participants. One explanation for this is that we used a composite score of all forms of neglect which included supervisory neglect, emotional neglect, physical

neglect, and educational neglect. We speculate that we would have obtained different findings for the three samples if we had measured the different forms of neglect separately in all three samples. Nevertheless, our findings do show that a significant proportion of the students in our study considered themselves as neglected during their childhood in one way or another.

We had hypothesized that the sequelae of physical abuse and neglect would not vary significantly across the three samples. Our results showed that neglect was more prominent than physical abuse in the prediction of the various psychopathological symptoms in all three samples. Neglect was significantly associated with all psychopathological symptoms in the Kenyan sample. In the Zambian sample, it accounted for higher scores on scales for depression symptoms and borderline personality symptoms. Among the Dutch respondents, neglect was associated with higher scores on criminal tendencies, depression symptoms, and borderline personality symptoms. The prominence of neglect in the prediction of psychopathological sequelae is consistent with findings in the literature that although neglect may leave no physical marks, it has a devastating effect on the developing child (Erickson & Egeland, 2002). Smith et al. (2005) found that of all maltreatment types, neglect was most often associated with negative outcomes. We submit that the prominence of neglect in predicting psychopathological symptoms is likely due to its subtle nature which increases the likelihood that it is sustained, resulting in more profound effects on the victims. In addition, the context in which emotional neglect occurs may give rise to negative self-associations, which in turn might lead to further psychopathology such as depression (Van Harmelen et al., 2010). Thus, neglect should not be neglected, either in research or in clinical practice and policy.

In our study, the psychopathological sequelae of physical abuse were limited to criminal tendencies in both the Kenyan and Zambian samples. Within the framework of social learning theory (Bandura, 1986) we submit that violent socialization in families characterized by physical abuse may be responsible for the internalization of vices such as the propensity to harm others as would be observed in criminal tendencies. This may have accounted for the elevated levels of criminal tendencies among Kenyan and Zambian students with a history of physical abuse.

We chose PTSS as a potential mediator of the association between physical abuse and neglect on one hand and psychopathological symptoms on the other because PTSS has been shown to develop after traumatic events and subsequently affect psychological and social functioning (Molnar, Buka, & Kessler, 2001). It is remarkable that the mediation of the association between physical abuse and psychopathological sequelae by PTSS in the Kenyan and the Dutch samples was in the same direction. This implies that even in cultures that endorse physical discipline such as Kenya, physical abuse is a potentially traumatic event distinct from physical discipline. As a result, the trauma symptoms associated with physical abuse fully or partially account for the subsequent psychopathological symptoms. It should also be noted that PTSS did not fully mediate all associations between physical abuse and the psychopathological sequelae examined in the Kenyan sample. A substantial part of this association remains to be accounted for. This calls for further examination of potential mediators of the association between physical abuse and psychopathological sequelae. While it is not clear why PTSS did not mediate the association between physical abuse and any of the negative outcomes that we examined in Zambia, we should conclude that other emotional consequences of physical abuse could account for this association in the Zambian sample. More research is needed to clarify what mechanism is at play in the Zambian case.

PTSS did not mediate the association between neglect and any of the psychopathological sequelae in the Kenyan and Zambian samples, yet it did significantly mediate this association among the Dutch students. This points to cultural specificity in the mechanism through which neglect in childhood leads to later psychopathological symptoms. We speculate that what can be considered neglectful experiences may have different meanings to the Kenyan and Zambian students on one hand and the Dutch students on the other. In Kenya and Zambia, where rampant poverty may be the norm, the failure to provide adequate meals, sufficient clothing, and necessary supervisory and emotional needs for children may not be a traumatic experience in and of itself as it would among samples living in developed economies. Since more than half of the population in both Zambia and Kenya live on less than $1 per day (United Nations Development Programme (UNDP), 2009), for children the lack of adequate physical, emotional, and supervisory needs could thus be the norm rather than the exception. This impoverished situation contrasts sharply with The Netherlands, which ranks sixth globally on the Human Development Index (UNDP, 2009). Therefore, neglectful experiences for children growing up in

The Netherlands may imply psychological failure by parents to attend to the needs of their children, whereas in Kenya and Zambia, neglect may imply financial inability to provide for the needs of the children. Deater-Deckard and Dodge (1997) observed that indeed ethnic and cultural group variations exist in the way children view their parents' behaviour. This differential perception of neglect hinged on cultural underpinnings may have influenced the obtained developmental outcomes across the three cultural groups in our study.

A number of studies that have examined ethnic differences in developmental outcomes suggest that apart from children's perceptions of parental behaviour, differences in child development across cultures may also be accounted for by demographic risk factors such as socioeconomic status (Belsky, 1993; Gershoff, 2002). For example, Amato and Keith (1991) found that divorce had more negative consequences for White children than it had for Black children, because the latter experienced stressful familial processes alongside other life events and chronic negative conditions. The experience of an overwhelming array of stressors may decrease the specific psychological effects of certain family stressors. In a similar vein, neglectful experiences may not be as traumatic to children living in developing countries in Africa as they are for children in developed Western countries. Bakermans-Kranenburg et al. (2004) found that although children of African-American mothers were less secure than children of European-American mothers, this difference was fully accounted for by socioeconomic status. Lower income influenced maternal sensitivity negatively, which in turn influenced attachment insecurity. We therefore propose that the lack of mediation through PTSS of the association between neglect and psychopathological symptoms in the African samples may be accounted for by socioeconomic status (SES). This is a testable hypothesis for future research, although it is not easy to measure SES in a culturally sensitive way.

Despite the innovative nature of our cross-cultural study which focused on a "neglected" area of focus, the findings of our study should be viewed in the light of the following limitations. First, we used student samples that may not be representative of the cultural populations from which they were drawn. Also, gender distributions in the three samples differed and although we controlled for gender in various ways, this may have limited effective comparisons. In addition, we used a cross-sectional design which limits our ability to draw inferences regarding the causal relationships between child maltreatment, mechanisms such as PTSS, and subsequent psychopathological sequelae. We used retrospective and self-report measures of child maltreatment and psychopathology symptoms and the veracity of these reports cannot be ascertained. We tried however to control for response and memory biases in various ways, for example through covarying social desirability and depressive symptoms. To counter these limitations, we recommend longitudinal studies on the effects of child maltreatment. In addition, African researchers should collect incidence data from professionals who work with children in addition to using self-report measures. Lastly, future research may focus on evidence-based intervention methods aiming at the attenuation of the effects of child maltreatment, which are also necessary to establish causality.

In conclusion, the findings of the current study add to our understanding of the association between physical abuse and neglect on one hand and psychopathological sequelae on the other, and the mediating role of PTSS in this association. Our study showed convergences as well as divergences between two African cultures and a Western European country, and thus adds to our scant crosscultural knowledge of child physical abuse and neglect, and its dire consequences for the children.

## REFERENCES


Amato, P. R., & Keith, B. (1991). Parental divorce and adult well-being: A meta-analysis. *Journal of Marriage and the Family, 53*, 43–58.

American Psychiatric Association (1994). *Diagnostic and statistical manual of mental disorders, Fourth edition (DSM-IV)*. Washington, DC: APA.

Arntz, A. (1994). Treatment of borderline personality disorder: A challenge for cognitive behavioral therapy. *Behaviour, Research and Therapy, 32*, 419–430.

Bakermans-Kranenburg, M. J., Van IJzendoorn, M. H., & Kroonenberg, P. M. (2004). Differences in attachment security between African-American and white children: Ethnicity or socio-economic status? *Infant Behavior & Development, 27*, 417–433.

Bandura, A. (1986). *Social foundations of thought and action: A social cognitive theory*. Englewood Cliffs, NJ: Prentice Hall.

Baron, R. M., & Kenny, D. A. (1986). The moderator–mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology, 51*, 1173–1182.

Behl, L. E., Conyngham, H. A., & May, P. F. (2003). Trends in child malreatment. *Child Abuse & Neglect, 27*, 215–229.

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

Blackstock, C., Trocmé, N., & Bennett, M. (2004). Child maltreatment investigations among Aboriginal and Non-Aboriginal families in Canada. *Violence against Women, 10*, 901–916.

Briere, J., & Elliott, D. M. (2003). Prevalence and psychological sequelae of self reported childhood physical and sexual abuse in a general population sample of men and women. *Child Abuse & Neglect, 27*, 1205–1222.

Cyr, C., Euser, E. M., Bakermans-Kranenburg, M. J., & Van IJzendoorn, M. H. (2010). Attachment securiy and disorganization in maltreating and high-risk families: A series of meta-analyses. *Development and Psychopathology, 22*, 87–108.

Deater-Deckard, K., & Dodge, K. A. (1997). Externalizing behavior problems and discipline revisted: Nonlinear effects and variation by culture, context, and gender. *Psychological Inquiry, 8*, 161–175.

Dodge, K. A., Pettit, G. S., & Bates, J. E. (1994). Socialization mediators of the relation between socioeconomic status and child conduct. *Child Development, 65*, 649–665.

Dubner, A. E., & Motta, R. W. (1999). Sexually and physically abused foster children and PTSD. *Journal of Consulting and Clinical Psychology, 67*, 367–373.

Dunne, M. (2009). Main themes and missing elements in psychological research into child maltreatment in Africa. *Journal of Psychology in Africa, 19*, 131–136.

Erickson, M. F., & Egeland, B. (2002). Child neglect. In J. E. B. Myers, L. Berliner, J. Briere, C. T. Hendrix, C. Jenny, & T. A. Reid (Eds.), *The APSAC handbook on child maltreatment* (pp. 3–20). Thousand Oaks, CA: Sage.

Euser, E. M., Van IJzendoorn, M. H., Prinzie, P., & Bakermans-Kranenburg, M. J. (2010). Prevalence of child maltreatment in the Netherlands. *Child Maltreatment, 15*, 5–17.

Gershoff, E. T. (2002). Corporal punishment by parents and associated child behaviors and experiences: A meta-analytic and theoretical review. *Psychological Bulletin, 128*, 539–579.

Glaser, D. (2005). Child maltreatment. *Psychiatry, 4*, 53–57.

Gracia, E., & Herrero, J. (2008a). Beliefs in the necessity of corporal punishment of children and public perceptions of child physical abuse as a social problem. *Child Abuse & Neglect, 32*, 1058–1062.

Gracia, E., & Herrero, J. (2008b). Is it considered violence? The acceptability of physical punishment of children in Europe. *Journal of Marriage and Family, 70*, 210–217.

Herrenkohl, T. I., & Herrenkohl, R. C. (2007). Examining the overlap and prediction of child maltreatment, stressors, and socioeconmic status: A longitudinal analysis of youth outcomes. *Journal of Family Violence, 22*, 553–562.

Higgins, D. J., & McCabe, M. P. (2000). Multi-type maltreatment and the long-term adjustment of adults. *Child Abuse Review, 9*, 6–18.

Hildyard, K. L., & Wolfe, D. A. (2002). Child neglect: Developmental issues and outcomes. *Child Abuse & Neglect, 26*, 679–695.

Hussey, J. M., Chang, J. J., & Kotch, J. B. (2006). Child maltreatment in the United States: Prevalence, risk factors and adolescent health consequences. *Pediatrics, 118*, 933–942.

Johnson, J. G., Cohen, P., Brown, J., Smailes, E. M., & Bernstein, D. P. (1999). Child maltreatment increases the risk of peronality disorders in early adulthood. *Archives of General Psychiatry, 56*, 600–606.

Kaminer, D., Grimsrund, A., Myer, L., Stein, D. J., & Williams, D. R. (2008). Risk for post-traumatic stress disorder associated with different forms of interpersonal violence in South Africa. *Social Science & Medicine, 67*, 1589–1595.

Kolko, D. J. (2002). Child physical abuse. In J. E. B. Myers, L. Berliner, J. Briere, C. T. Hendrix, C. Jenny, & T. A. Reid (Eds.), *The APSAC handbook on child maltreatment* (pp. 21–54). Thousand Oaks, CA: Sage.

Korbin, J. (1991). Cross-cultural perspectives and research directions for the 21st century. *Child Abuse & Neglect, 15*, 67–77.

Lalor, K. (2008). Child abuse and HIV transmission in sub-Saharan Africa. *Child Abuse Review, 17*, 94–107.

Lamers-Winkelman, F., Slot, N. W., Bijl, B., & Vijlbrief, A. C. (2007). *Asking pupils about abuse: The results of a national study on the prevalence of child abuse conducted in secondary education (in Dutch)*. Duivendrecht: The Netherlands: PI Research.

MacMillan, H. L., & Munn, C. (2001). The sequelae of child maltreatment. *Current Opinion in Psychiatry, 14*, 325–331.

Madu, S. N. (2001). Prevalence of child psychological, physical, emotional, and ritualistic abuse among high school students in Mpumalanga Province, South Africa. *Psychological Reports, 89*, 431–444.

Maker, A. H., Kemmelmeer, M., & Peterson, C. (2001). Child sexual abuse, peer sexual abuse, and assault in adulthood. *Journal of Traumatic Stress, 14*, 351–368.

Manly, J. T., Kim, J. E., Rogosch, K. A., & Cicchetti, D. (2001). Dimensions of child maltreatment and children's adjustment: Contributions of developmental timing and subtype. *Development and Psychopathology, 13*, 759–782.

Maxfield, M. G., & Widom, C. S. (1996). The cycle of violence: Revisited six years later. *Archives of Pediatric & Adolescent Medicine, 150*, 390–395.

Molnar, B. E., Buka, S. L., & Kessler, R. C. (2001). Child sexual abuse and subsequent psychopathology. *American Journal of Public Health, 91*, 753–760.

Oburu, P. O., & Palmerus, K. (2003). Parenting stress and self-reported discipline strategies of Kenyan caregiving grandmothers. *International Journal of Behavioral Development, 27*, 505–512.

Risser, H. J., Hetzel-Higgin, M. D., Thomsen, C. J., & McCanne, T. R. (2006). PTSD as a mediator of sexual revictimization: The role of re-experiencing, avoidance, and arousal symptoms. *Journal of Traumatic Stress, 19*, 687–698.

Rowe, D. C., Vazsony, A. T., & Flannery, D. J. (1994). No more than skin-deep: Ethnic and racial similarity in developmental process. *Psychological Review, 101*, 396–413.

Sandberg, D. A., Matorin, A. I., & Lynn, S. J. (1999). Dissociation, posttraumatic symptomatology, and sexual revictimization: A prospective examination of mediator and moderator effects. *Journal of Traumatic Stress, 12*, 127–138.

Scher, C. D., Forde, D. R., McQuaid, J. R., & Stein, M. B. (2004). Prevalence and demographic correlates of childhood maltreatment in an adult community sample. *Child Abuse & Neglect, 28*, 167–180.

Slonim-Nevo, V., & Mukuka, L. (2007). Child abuse and AIDS-related knowledge, attitudes and behavior among adolescents in Zambia. *Child Abuse & Neglect, 31*, 143–159.

Smith, C. A., Ireland, T. O., & Thornberry, T. P. (2005). Adolescent maltreatment and its impact on young antisocial behavior. *Child Abuse & Neglect, 29*, 1099–1119.

Soloff, P. H., Feske, U., & Fabio, A. (2008). Mediators of the relationship between childhood sexual abuse and suicidal behavior in borderline personality disorder. *Journal of Personality Disorders, 22*, 221–231.

Springer, K. W., Sheridan, J., Kuo, D., & Carnes, M. (2007). Long-term physical and mental health consequences of childhood physical abuse: Results from a large population-based sample of men and women. *Child Abuse & Neglect, 31*, 517–530.

Stoltenborgh, M., Van IJzendoorn, M. H., Euser, E. M., & Bakermans-Kranenburg, M. J. (2011). A global perspective on child sexual abuse: Meta-analysis of prevalence around the world. *Child Maltreatment, 16*, 79–101.

Straus, M. A., Hamby, S. L., Boney-McCoy, S., & Sugarman, D. B. (1999). *The Personal and Relationships Profile*. Retrieved March 31, 2012 from http://pubpages.unh.edu/~mas2.

United Nations Development Programme (UNDP). (2009). *Human Development Index 2009*. Retrieved March 31, 2012 from www.hdr.undp.org/en/statistics.

US Department of Health and Human Services [DHSS]. (2008). Administration for children and families: Child Maltreatment 2008. Retrieved from http://www.acf.hhs.gov/programs/cb/pubs/cm08/

Van Harmelen, A., De Jong, P. J., Glashouwer, K. A., Spinhoven, P., Penninx, B. W. J. H., & Elzinga, B. M. (2010). Child abuse and negative explicit and auomatic self-associations: The cognitive scars of emotional maltreatment. *Behaviour Research and Therapy, 48*, 486–494.

Westen, D., Ludolph, P., Misle, B., Ruffin, S., & Block, J. (1990). Physical and sexual abuse in adolescent girls with borderline personalitty disorder. *American Journal of Orthopsychiatry, 60*, 55–66.

Widom, C. (1999). Posttraumatic stress disorder in abused and neglected children grown up. *American Journal of Psychiatry, 156*, 1223–1229.

Youssef, R. M., Attia, M. S., & Kamel, M. I. (1998). Children experiencing violence 1: Parental use of corporal punishment. *Child Abuse & Neglect, 22*, 959–973.