Child maltreatment in Vietnam : prevalence, risk factors, and consequences

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Chapter 3

CHANGES IN THE PREVALENCE OF CHILD MALTREATMENT IN VIETNAM OVER 10 YEARS

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ABSTRACT

In the context of the shortage of studies on child maltreatment changes over time in limited resource settings, this paper explores the changes in the prevalence of multiple types of child maltreatment over a period of 10 years in Vietnam and tests the moderating role of some demographic characteristics in these changes. We used data from two prevalence studies conducted in 2004 and in 2014 using similar methodologies. Both studies used self-report questionnaires which were completed by randomly selected students aged 12-17 years from different provinces in Vietnam. We also compared Hanoi subgroups to examine the trend using the most equivalent samples. While the prevalence estimates of sexual abuse and neglect were unchanged over 10 years, the prevalence of physical abuse and emotional abuse declined. The decrease in the prevalence of physical abuse was larger for younger adolescents and boys than for their counterparts. For sexual abuse, older adolescents reported an increase in the prevalence of sexual abuse. In the Hanoi sample comparison, only the prevalence of emotional abuse declined, and this reduction was smaller for younger adolescents than for the older group. Despite the reduction of emotional and physical abuse in the whole sample and emotional abuse in the Hanoi sample, all types of child maltreatment were still highly prevalent in Vietnam. We argue that interventions on all types of child maltreatment should be further implemented. Additional similar studies could be conducted to evaluate the effect of child protection policies on the prevalence of child maltreatment.

Keywords: child maltreatment prevalence; child abuse and neglect prevalence; trends; changes; Vietnam;

INTRODUCTION

Child maltreatment is highly prevalent in Asian countries and has negative consequences for child development (Fang et al., 2015; Tran, Alink, Van Berkel, & Van Ijzendoorn, 2016; Tran, Van Berkel, Van Ijzendoorn, & Alink, 2017). However, there is a gap in our knowledge about whether and how the prevalence of maltreatment in Asian countries changes over time. Research on prevalence changes over time may provide important knowledge that can be used to inform policy makers to help them improve national child protection programs. In this study we investigated the changes in the prevalence of child maltreatment in Vietnam over a period of 10 years.

The possible consequences of child maltreatment on development across the life-span have been well studied. Meta-analytic evidence shows that different types of child maltreatment are associated with a variety of mental and physical health problems such as depression, anxiety, overweight, and extensive hospital visits (Hemmingsson, Johansson, & Reynisdottir, 2014; Hillberg, Hamilton-Giachritsis, & Dixon, 2011; Norman et al., 2012; Wegman & Stetler, 2009). Adults who experienced childhood maltreatment have been found to be more likely involved in delinquency and to maltreat their own children (Berlin, Appleyard, & Dodge, 2011; Mersky & Reynolds, 2007; Thompson, 2006). In addition, adults with a history of child maltreatment have, on average, lower educational levels, lower employment rates, and lower income (Currie & Widom, 2010; De Jong, Alink, Bijleveld, Finkenauer, & Hendriks, 2015). Consistent with studies in both Western and Asian countries, child maltreatment studies in Vietnam showed that child maltreatment is associated with poorer emotional, cognitive, and physical health functioning during childhood and in adolescence (Loan, 2010; Nguyen, 2006; Nguyen, Dunne, & Anh, 2009; Tran et al., 2017).

Because of the negative consequences of child maltreatment for the victims, their families and societies, it is necessary to conduct studies on the prevalence of child maltreatment to estimate the magnitude of the problem. Moreover, conducting prevalence studies periodically to estimate the changes of the different types of maltreatment over time is valuable in evaluating the impact of policy and other changes in the country on the occurrence of child maltreatment. In order to compare estimates at different time points, these periodically conducted studies should use the same methodology. The National Incidence Studies (NIS) (Sedlak et al., 2010) in the United States and the Netherlands Prevalence study of Maltreatment of children and youth (NPM) (Euser et al., 2013) are examples of periodically conducted national prevalence studies. Both the NIS and NPM studies were conducted with Child Protection Services (CPS) agencies and sentinels who are professionals who have frequent contact

with children and are able to provide information on the occurrence of child maltreatment. In addition, there are a number of studies on child maltreatment trends using prevalence data reported by children (Finkelhor, Turner, Ormrod, & Hamby, 2010; Knutson & Selner, 1994). Research also showed that some demographic characteristics are related to the occurrence of child maltreatment. For example, girls are at higher risk of sexual abuse than boys (Black, Heyman, & Smith Slep, 2001; Stoltenborgh, Van Ijzendoorn, Euser, & Bakermans-Kranenburg, 2011), but studies in some countries in Asia such as China and Vietnam have found that the child sexual abuse prevalence among boys were at higher than among girls (Ji, Finkelhor, & Dunne, 2013; Tran et al., 2016). Reviews showed that the risk of emotional abuse increases with age (Black, Smith Slep, & Heyman, 2001). Further, lower socio-economic status appears to be associated with sexual abuse, physical abuse, emotional abuse and neglect (Black, Heyman, et al., 2001; Black, Smith Slep, et al., 2001; Stith et al., 2009). However, to our knowledge, the role of these demographic characteristics in changes in child maltreatment prevalence over time has never been examined.

In Asia, especially in Asian countries with limited resources, there is a paucity of child maltreatment studies. No published studies on the temporal changes of child maltreatment prevalence in Asian countries have been found. Vietnam is no exception to this. Based on a number of studies, child maltreatment seems highly prevalent in Vietnam (Emery, Nguyen, & Kim, 2014; Emery, Trung, & Wu, 2015; Loan, 2010; Nguyen, 2006; Tran et al., 2016; Tran, Dunne, Vo, & Luu, 2015). We recently showed that in Vietnam, the prevalence estimates of most types of child maltreatment including emotional abuse, neglect, physical abuse, and witnessing parental conflict were much higher compared to the Netherlands (Tran et al., 2016). To obtain a more dynamic view on child maltreatment prevalence in Vietnam, we address the temporal changes of child maltreatment prevalence across a 10-year period in this paper. Here, we aim (1) to examine the changes in the prevalence of different types of child maltreatment in Vietnam over 10 years and (2) to explore the moderating roles of gender, age, parental education, and metropolitan level (urban vs rural areas) in the temporal changes in the prevalence of child maltreatment.

We used data from two prevalence studies with similar methodologies: one performed in 2004 (Nguyen, 2006; Nguyen et al., 2009) and one in 2014, the Vietnam Prevalence study on child Maltreatment (VPM-2014) (see also Tran et al., 2016). Both studies used a partly overlapping self-report questionnaire completed by secondary and high school students (aged 12-17 years). Besides comparing the two samples, we compared subgroups of the samples that consist of participants living in Hanoi to gain insight on the child maltreatment trend using the most equivalent samples.

METHOD

PARTICIPANTS

The 2004 study.

The 2004 study (see Nguyen, 2006; Nguyen et al., 2009) was conducted in a purposely-selected urban district and rural district in two province/city of Northern Vietnam, namely Hanoi city and Hai Duong province. In each district, two secondary schools (for children aged 12 to 14 years) and two high schools (for children aged 15 to 17 years) were randomly selected. In these schools, 6 classes per grade were randomly selected. The sample thus consisted of a total of four secondary schools and four high schools. Questionnaires that had more than 10% of questions missing or questionnaires that had all items in any of the scales missing were excluded. The final sample consisted of 2,591 students from 61 classes (Nguyen, 2006; Nguyen et al., 2009). In order for the VPM-2014 sample and 2004 sample to be comparable, students who were 18 years or older were excluded ($n = 12$) in the 2004 study. Therefore, the sample of the 2004 study comprised of 2,579 students, with 47.9% boys, 99.2% Kinh, which is the majority ethnic group of Vietnam, 51.6% from urban areas, and a mean age of 15.0 years ($SD = 1.5$, range 12-17). The sample in the 2004 study was equally distributed among the two provinces.

The 2014 study.

The Vietnam Prevalence study on child maltreatment (VPM-2014; see also Tran et al., 2016; Tran et al., 2017) was conducted in four provinces/city of Northern Vietnam, namely Hanoi city, Nam Dinh, Ha Tinh, and Tuyen Quang. Hanoi, the capital of Vietnam, was selected because of its unique metropolitan characteristics. Regarding the other three provinces, one province was randomly selected from each of the three geographic areas of Northern Vietnam. In each province, two secondary schools and two high schools were randomly selected. Because the sample of Hanoi represents the largest metropolitan population, only schools in urban areas were selected in this province. In each of the other three provinces, one secondary school was selected from a list of schools in urban areas and the other secondary school in rural areas. In addition, for logistical reasons, the two high schools that were nearest to the secondary schools were selected for each province. We excluded schools for blind students, schools with fewer than 40 students per grade, and boarding schools where children live full time. We randomly selected one or two classes per grade from each participating school, depending on the number of students in a class.

The 2014 sample thus consisted of a total of eight secondary schools and eight high schools. In total, 2,360 students of 71 classes participated in the study. Students were excluded when unreliable answers were suspected based on outlying scores (more than 3.29 *SD* above the mean (Tabachnick & Fidell, 2012)) on the Wildman Symptom Checklist, a scale consisting of bogus symptoms, such as "The buzzing in my ears keeps switching from the left to the right" (Merckelbach, Smeets, & Jelicic, 2009; Wildman & Wildman, 1999), or based on a specific pattern in their answers on the maltreatment questionnaire (e.g., all questions answered with the highest possible score; $n = 53$). In addition, students who were 18 years or older were excluded ($n = 2$). Finally, 11-year-old students were excluded ($n = 331$) to make our sample comparable in age distribution with the 2004 sample (Nguyen, 2006; Nguyen et al., 2009). The final sample consisted of 1,851 students (47.3% boys, 57.6% secondary school students). The majority of students were Kinh (81.7%), 17.8% belonged to one of the ethnic minority groups (the other 0.5% had missing values for ethnicity), and 55.4% were from urban areas. The mean age of the students was 14.2 years ($SD = 1.4$, range 12-17).

PROCEDURE

The 2004 study.

After the Provincial Department of Education (DOE) and the school boards approved the implementation of the study in the schools, passive informed consent was obtained from the parents in advance. During a class hour, the students were informed about the study, given a questionnaire, and were told that they could fill in the questionnaire if they wished to do so. The research proposal was approved by the Ethics Committee of Queensland University of Technology and the Ethics Committee of Hanoi School of Public Health, Vietnam.

The 2014 study.

After the Provincial DOE and the school boards approved the implementation of the study in the schools, informed consent was obtained from both the students and their parents. In Nam Dinh, Ha Tinh, and Tuyen Quang, passive informed consent was used. In Hanoi, active consent was obtained which was a requirement of the local DOE. The students filled out a questionnaire during class hours. Students who refused or students whose parents refused participation in the study filled out dummy questionnaires which were not used in our data-analyses, as to avoid making these students a special group in the classroom. Participants filled out questionnaires about child maltreatment, background characteristics, and aspects of their wellbeing. The research proposal was

approved by the Ethics Committee of Institute of Education and Child Studies of Leiden University and the Ethics Committee of Institute of Population, Health and Development of Vietnam.

In this paper, we focus on the child maltreatment questions that were overlapping in both studies.

MEASURE

The 27-item child maltreatment measure was constructed by Nguyen (see Nguyen, 2006) and was based on the Revised Conflict Tactics Scales (Straus, Hamby, Boney-Mccoy, & Sugarman, 1996), the Juvenile Victimization Questionnaire (Hamby, Finkelhor, Ormrod, & Turner, 2001), the Childhood Trauma Questionnaire (Bernstein et al., 2003), and other scales used in Australia (Higgins & Mccabe, 2001), South Africa (Madu & Peltzer, 1999), and China (Chen, Dunne, & Han, 2004). The questionnaire avoided subjective terms, and favored behaviorally specific terms.

The questionnaire consisted of the following scales (see Appendix 3.1): physical abuse (6 items), emotional abuse (7 items), sexual abuse (8 items), physical neglect (3 items), and emotional neglect (4 items). All scales assessed lifetime experiences of maltreatment. The physical and sexual abuse scales asked about abuse by any adult. The emotional abuse scale consisted of questions about the actions induced by parents, caregivers or any other adults in the family. Finally, neglect reflected the behaviors of parents or caregivers only. The Cronbach's alphas of the child maltreatment subscales were adequate in both samples (.63-.85), except for physical neglect in 2014 (α = .51). We nevertheless decided to present comparisons for this latter scale as well which should be interpreted with caution.

Comparisons between 2004 and 2014.

There were some differences between the characteristics of the sample of 2004 and the VPM-2014. In the VPM-2014, there were significantly more Kinh participants (the majority ethnic group in Vietnam; χ^2 = 431.50, p < .01) and participants with highly educated parents (χ^2 = 244.08, p < .01), and participants in 2014 were somewhat younger compared to the 2004 sample (Cohen's d =.56, p < .01). These differences do not seem to reflect the changes in the population of Vietnam over this decade since the percentage of ethnic minorities has not changed considerably and the educational level seems to have increased (Gso, 2006; Gso, 2015). However, the percentage of urban areas did increase during these 10 years, but this level of increase was not as large as in our samples (Gso, 2006; Gso, 2015). Therefore, we controlled for the sample characteristics

in the analyses comparing prevalence estimates between the two years. In addition, to compare samples that were more similar in characteristics we also directly compared the Hanoi samples (both urban) of the 2004 study and the VPM-2014. The gender, ethnicity, and parental education distributions of both Hanoi samples in the 2004 study and the VPM-2014 were equivalent. Participants in the Hanoi sample were somewhat younger in 2014 than in 2004 (Cohen's $d = .46$, $p < .01$). We also controlled for the sample characteristics in the comparisons of the prevalence estimates in the Hanoi samples.

STATISTICAL PROCEDURES

Prevalence estimates were computed as the proportion maltreated students of the total number of participants. Participants were considered to have experienced child maltreatment if they reported any experience of maltreatment, regardless of the frequency of this experience. The child maltreatment prevalence estimates in the 2004 study were not derived from the 2004 published paper (Nguyen et al., 2009), but were calculated from the original data set because the VPM-2014 sample did not include students older than 17 years. The two datasets were merged and logistic regression analyses were conducted with child maltreatment as the outcome variable, study year and control variables as the predictors in Model 1 and with the interactions between study year and sample characteristics as additional predictors to test for possible moderation effects in Model 2. We controlled for age, gender, ethnicity, parental education, and rurality (only in the total sample). A conservative significance level of $p < .01$ was used because of the number of tests (Bland & Altman, 1995).

RESULTS

CORRELATIONS BETWEEN TYPES OF CHILD MALTREATMENT

In both 2004 and 2014, all types of child maltreatment were inter-correlated except emotional abuse and sexual abuse in 2014 (Table 3.1).

Table 3.1 | Correlations between child maltreatment variables

		Sexual abuse	Physical abuse	Emotional abuse	Emotional neglect	Physical neglect
				2014		
Sexual abuse			.22*	.06	.24*	.20*
Physical abuse		.17*		.31*	.27*	.13*
Emotional abuse	**2004**	.06*	.19*		.20*	.03
Emotional neglect		.15*	.21*	.16*		.30*
Physical neglect		.19*	.14*	.06*	.26*	

* $p < .01$

Note. Correlations below the diagonal refer to associations between types of child maltreatment in 2004. Correlations above the diagonal refer to associations between types of child maltreatment in 2014.

CHANGES IN CHILD MALTREATMENT PREVALENCE IN VIETNAM OVER 10 YEARS

Table 3.2 and Figure 3.1 present the changes in child maltreatment prevalence estimates in Vietnam over 10 years using the whole samples. Controlling for sample characteristics, the prevalence of sexual abuse, emotional neglect, and physical neglect in 2014 were not significantly different from those in 2004. The prevalence estimates of physical abuse and emotional abuse in 2014 were significantly lower than in 2004; they changed from 74.2% to 62.2% (physical abuse) and from 94.4% to 81.7% (emotional abuse).

Table 3.2 | *Logistic regression results predicting child maltreatment in the total sample*

Variable	Sexual abuse				Physical abuse				Emotional abuse				Emotional neglect				Physical neglect			
	B	*SE*	*p*	Odds ratio	*B*	*SE*	*p*	Odds ratio	*B*	*SE*	*p*	Odds ratio	*B*	*SE*	*p*	Odds ratio	*B*	*SE*	*p*	Odds ratio
Model 1	*Nagelkerke R^2 = 0.02*				*Nagelkerke R^2 = 0.03*				*Nagelkerke R^2 = 0.15*				*Nagelkerke R^2 = 0.03*				*Nagelkerke R^2 = 0.02*			
Study year	0.03	0.09	.77	1.03	-0.42	0.08	.00	0.65*	-1.02	0.12	.00	0.36*	-0.11	0.07	.14	0.90	-0.20	0.11	.08	0.82
Age	0.09	0.03	.00	1.09*	.011	0.02	.00	1.11*	0.37	0.04	.00	1.45*	0.18	0.02	.00	1.20*	0.00	0.03	.89	1.00
Gender[a]	0.29	0.08	.00	1.33*	0.26	0.07	.00	1.30*	-0.63	0.11	.00	0.53*	-0.23	0.06	.00	0.80*	0.14	0.09	.12	1.15
Major ethnicity [b]	-0.35	0.15	.02	0.71	0.18	0.14	.19	1.19	0.61	0.16	.00	1.84*	0.23	0.13	.09	1.25	-0.44	0.17	.01	0.64
Parental education	-0.05	0.02	.02	0.95	0.01	0.02	.61	1.01	-0.01	0.03	.67	0.99	-0.03	0.02	.08	0.97	-0.09	0.03	.00	0.91*
Rurality [c]	0.18	0.08	.03	1.20	-0.08	0.07	.28	0.92	-0.46	0.12	.00	0.63*	-0.10	0.07	.13	0.90	0.28	0.10	.01	1.32
Model 2[d]	*Nagelkerke R^2 = 0.02*				*Nagelkerke R^2 = 0.04*				*Nagelkerke R^2 = 0.16*				*Nagelkerke R^2 = 0.03*				*Nagelkerke R^2 = 0.02*			
Age x Study year	0.18	0.06	.00	1.20*	0.19	0.05	.00	1.21*	0.03	0.08	0.68	1.03	-0.04	0.05	.37	0.96	0.00	0.07	.95	1.00
Gender x Study year	0.26	0.16	.11	1.29	-0.46	0.14	.00	0.63*	0.37	0.23	0.11	1.44	0.17	0.13	.20	1.18	0.20	0.19	.31	1.22
Major ethnicity x Study year[e]	-0.01	0.55	.99	0.99	0.58	0.58	.32	1.78		-	-	-		0.48	.29	1.66	-0.19	0.66	.77	0.83
Parental education x Study year	-0.06	0.05	.23	0.95	0.01	0.04	.81	1.01	0.04	0.07	0.55	1.04	-0.01	0.04	.81	0.99	-0.02	0.05	.76	0.98
Rurality x Study year	-0.28	0.18	.11	0.76	0.08	0.15	.60	1.08	0.28	0.24	0.25	1.32	0.25	0.14	.07	1.29	-0.11	0.21	.58	0.89

* $p < .01$

[a] 0 = girls, 1 = boys

[b] 0 = Minority, 1 = Kinh

[c] 0 = living in urban area, 1 = living in rural area

[d] All variables in Model 1 were also included in Model 2; statistics for these variables in Model 2 did not differ from those reported in Model 1

[e] The interaction of ethnicity was not included in the logistic regression of emotional abuse because the cell containing students from an ethnic minority who experienced no emotional abuse of the 2004 sample was empty.

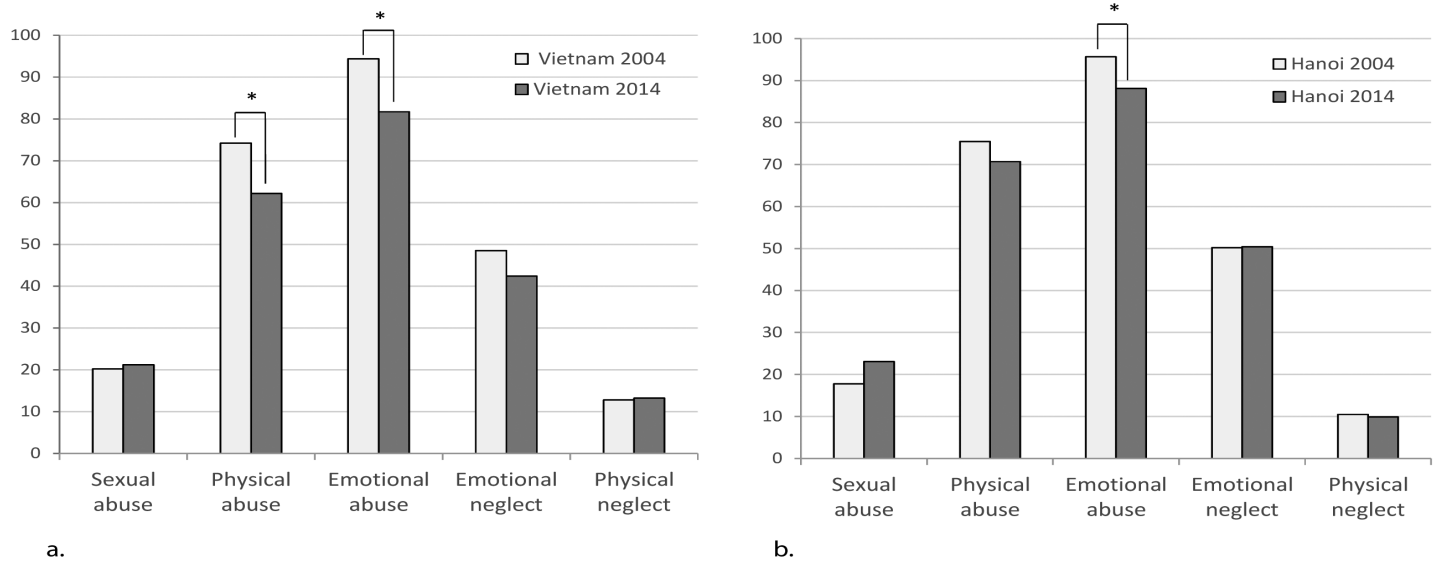

Figure 3.1 | *Comparison of the prevalence of child maltreatment between 2004 and 2014*

Note. a Total sample comparison: 2004 (*N*=2579) and 2014 (*N* = 1831). Physical abuse: reduced by 12.0%. Emotional abuse: reduced by 12.7%.

b. Hanoi sample comparison: 2004 (*n*=1331) and 2014 (*n*=397). Emotional abuse: reduced by 7.6%

* $p < .01$

The results of the comparison using the Hanoi samples were largely convergent with the results of the whole sample comparison. The emotional abuse prevalence in Hanoi in 2014 (95.7%) was lower than in 2004 (88.1%); the prevalence of physical abuse, emotional neglect, and physical neglect were similar over 10 years (Table 3.3 and Figure 3.2). The increasing trend of sexual abuse (from 17.8% to 23.1%) was marginally significant ($p = .014$). Although for physical abuse no significant difference was found between 2004 and 2014 in the Hanoi sample, the decreasing trend was convergent with the result in the total sample.

MODERATION EFFECTS OF GENDER, AGE, PARENTAL EDUCATION, AND RURALITY ON CHILD MALTREATMENT TRENDS

In the total sample, the examination of the moderation effects revealed a significant interaction between age and study year on sexual abuse (Table 3.2). To interpret the moderation of age, we used a median split for child age (Figure 3.3). The prevalence of sexual abuse reported by older children increased from 20.2% to 25.9%, while the prevalence of sexual abuse reported by younger children decreased from 20.1% to 17.5%. For physical abuse, both age and gender significantly moderated trends over time. The decrease in the prevalence of physical abuse over time was smaller for older children (from 74.5% to 69.5%) than for younger children (from 73.8% to 56.4%) (Figure 3.3). The interaction by gender indicated that the decrease in physical abuse was smaller for girls (from 70.2% to 62.9%) than for boys (from 78.6% to 61.6%; Figure 3.3).

In the Hanoi sample, a significant interaction between age and study year was found for emotional abuse (Table 3.3). The decrease in the prevalence of emotional abuse was smaller for younger children (from 93.8% to 89.5%) than for older children (from 97.2% to 86.6%; Figure 3.3d).

Table 3.3 | *Logistic regression results predicting child maltreatment in the Hanoi sample*

Variable	Sexual abuse				Physical abuse				Emotional abuse				Emotional neglect				Physical neglect			
	B	*SE*	*p*	Odds ratio	*B*	*SE*	*p*	Odds ratio	*B*	*SE*	*p*	Odds ratio	*B*	*SE*	*p*	Odds ratio	*B*	*SE*	*p*	Odds ratio
Model 1	*Nagelkerke R^2 = 0.02*				*Nagelkerke R^2 = 0.01*				*Nagelkerke R^2 = 0.09*				*Nagelkerke R^2 = 0.04*				*Nagelkerke R^2 = 0.01*			
Study year	0.38	0.15	.01	1.46	-0.27	0.14	.05	0.76	-1.14	0.22	.00	0.32*	0.08	0.13	.54	1.08	0.04	0.20	.85	1.04
Age	0.08	0.04	.06	1.08	0.02	0.04	.67	1.02	0.09	0.07	.21	1.10	0.18	0.03	.00	1.20*	0.05	0.05	.38	1.05
Gender [a]	-0.03	0.13	.84	0.97	0.28	0.11	.02	1.32	-0.79	0.22	.00	0.45*	-0.37	0.10	.00	0.69*	-0.01	0.16	.94	0.99
Parental education	-0.10	0.04	.01	0.91	-0.04	0.04	.26	0.96	-0.18	0.07	.01	0.83	-0.05	0.03	.14	0.95	0.01	0.05	.91	1.01
Model 2 [b]	*Nagelkerke R^2 = 0.02*				*Nagelkerke R^2 = 0.02*				*Nagelkerke R^2 = 0.10*				*Nagelkerke R^2 = 0.04*				*Nagelkerke R^2 = 0.003*			
Age x Study year	0.10	0.12	.41	1.10	0.23	0.10	.03	1.25	-0.51	.16	.00	0.60*	-0.13	0.10	.16	0.87	0.13	0.15	.40	1.14
Gender x Study year	0.38	0.31	.22	1.46	-0.46	0.28	.10	0.63	0.11	.46	.81	1.12	-0.30	0.25	.23	0.74	0.12	0.40	.77	1.13
Parental education x Study year	-0.14	0.09	.10	0.87	0.01	0.08	.88	1.01	-0.19	.16	.25	0.83	-0.12	0.07	.12	0.89	-0.06	0.12	.63	0.95

* $p < .01$

[a] 0 = girls, 1 = boys

[b] All variables in Model 1 were also included in Model 2; statistics for these variables in Model 2 did not differ from those reported in Model 1

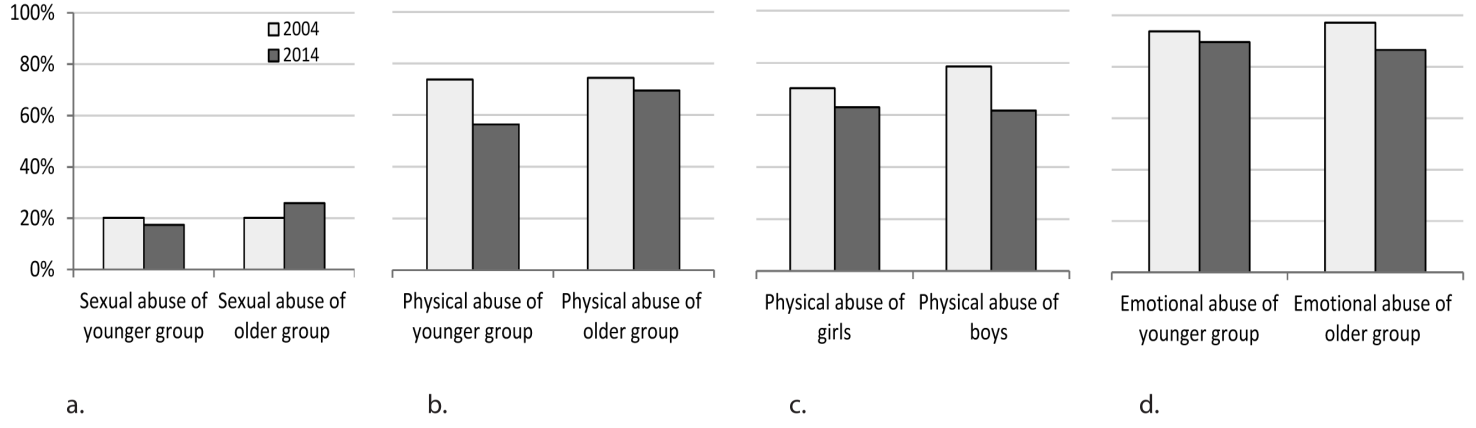

Figure 3.2 | *Moderation of age and gender in child maltreatment changes*

Note. a, b, c: Moderation of age and gender in the total sample comparison
d: Moderation of age in the Hanoi sample comparison

DISCUSSION

In general, although prevalence estimates are still considerably high, the prevalence of child maltreatment in Vietnam declined from 2004 to 2014. Specifically, we found evidence for lower prevalence estimates of physical abuse and emotional abuse in 2014 than in 2004. When we narrowed in on the urban area of Hanoi, we found a similar downward trend of physical abuse and emotional abuse, although this trend was only significant for emotional abuse.

Most periodically conducted studies on the prevalence of child maltreatment have been conducted in the USA. Statistics from Child Protective Services and victim self-reports show a downward trend of physical and sexual abuse from 1990 to 2014 (Finkelhor, Saito, & Jones, 2016). Some of the hypothetical explanations that were generated for the decline in the US may also be helpful in understanding the declines in Vietnam (Finkelhor, 2008). For example the increase in economic prosperity, cultural changes, and changing norms and practice concerning parenting (Finkelhor, 2008) may also have played a role in Vietnam, although there is a lack of empirical evidence on the causal link between these factors and the decreasing trends in child maltreatment. First, Vietnam has gone through an impressive increase in economic prosperity. Since the *Doi Moi* policy in 1986, the Vietnamese economy shifted from a centrally-planned to a market-oriented economy and has made impressive achievements (Molisa & Unicef, 2013; Wb, 2016). Vietnam changed from one of the poorest countries in the world in the 1990s into a lower-middle-income country since 2010, and the gross domestic product per capital has grown among the world fastest since 2000 (Wb, 2016). The overall economic prosperity can promote a positive living attitude and lower social-economic stress which in turn may affect parenting positively. Indeed, there is a wide range of scientific evidence about the negative association between poverty and child maltreatment (Cancian, Slack, & Yang, 2010; Sedlak & Broadhurst, 1996; Sedlak et al., 2010).

Second, the open economy in combination with the exponential growth of information technology in Vietnam (Wb, 2016) increased the accessibility of information for the public and intensified the cultural exchange with Western culture. In turn, these processes may have challenged traditional norms concerning, for example, the necessity of using harsh discipline when raising children. Moreover, the efforts of the Vietnamese government and NGOs, such as UNICEF, in improving the child protection system, child protection legislation and policies, and their funding of public campaigns to increase awareness of child protection and children's rights may also have resulted in changing norms and practices (Molisa & Unicef, 2010; Unicef, 2010; Vng, 2008).

Overall, the declining trend of emotional abuse and physical abuse in the whole sample and emotional abuse in the Hanoi sample was consistent across different age groups, genders, social status groups. Only a few differences in the size of the changes over time between subgroups were found. The reduction of physical abuse was larger for younger adolescents and boys than for older adolescents and girls, respectively. In contrast, the reduction of emotional abuse was larger for older adolescents than for younger adolescents. At this point, it would be too speculative to try to find explanations for these differences in the size of the decline. However, it is clear that extra steps should be taken to reduce these types of maltreatment in specific groups by increasing efforts to reach families with older adolescents and girls in preventing physical abuse and families with younger adolescents in the prevention of emotional abuse.

In the whole sample comparison, the only type of maltreatment for which we found an *increase* over time was sexual abuse, but only in the group of older adolescents. A possible explanation for this increasing trend could be a change in reporter bias over time. Because of the economic, social, and information technology development, the taboo on reporting sexual abuse may have reduced over time. As a result, older adolescents who have more access to information and have probably had at least some sex education may be less hesitant to report their sexual abuse experiences than before. In addition, the development of information technology allows individuals easy access to information on sex, including pornography. The current high levels of sexual abuse can also be explained by the culture of sexual conservatism, which has existed in Vietnam for thousands of years and has resulted in limited education about sex at school and hesitation of parents and teachers to talk about sex with children. Sex education at schools currently focuses on physiological differences between genders and prevention of negative consequences of unprotected sex. Although this information is useful, it may not help children to develop a healthy attitude towards sex. An unhealthy attitude towards sex, together with the availability of pornography, can put people at risk of child sexual abuse perpetration. Perhaps older adolescents are more likely to be victims of this, but the exact mechanisms still have to be investigated.

The unchanged prevalence of physical and emotional neglect over 10 years could indicate that these types of child maltreatment were not affected by the described changes in the Vietnamese society. However, results on physical neglect in the current study have to be interpreted with caution because of the low reliability of this subscale. Interestingly, the studies on child maltreatment trends in the United States also found that while other types of child victimization had reduced from 1990 to 2005, neglect

did not change (Finkelhor, 2008). The mechanisms to intervene in child neglect may be different from those for other types of child maltreatment. More studies on neglect may clarify this concern (see also Stoltenborgh, Bakermans-Kranenburg, & Van Ijzendoorn, 2013).

This study is among the first to make an effort to explore the temporal changes in the prevalence of child maltreatment in a limited resource country. However, some limitations should be mentioned. First, the 2004 study purposely selected one province and one city, while the VPM-2014 study purposely selected one province and randomly selected three other provinces in Northern Vietnam. These different sampling strategies may limit the generalization of the findings. Relatedly, some characteristics of the two samples were somewhat different and were not related to changes in the general population over time. We did control for these differences in the analyses, but this also meant that we were unable to identify whether general population changes in educational levels, ethnicity, and rurality were related to changes in maltreatment prevalence estimates. Finally, the finding on the changes of physical neglect should be interpreted with caution given the low reliability of this scale.

In conclusion, there seems to be a decreasing trend of physical abuse and emotional abuse and a stable prevalence of emotional and physical neglect in Vietnam over 10 years. These trends are confirmed by the compatible changes in most groups based on age, gender, ethnicity ,and parent education. The prevalence estimates of all types of child maltreatment in 2014 including the ones that decreased over a decade were still very high. This indicates that further interventions on child maltreatment are indeed necessary in Vietnam. Extra attention should be paid to physical abuse among girls, physical abuse and sexual abuse among older adolescents and emotional abuse among younger adolescents. Further improvement in policy, economy, and health care services could create positive effects on child maltreatment. More direct interventions on child maltreatment should be conducted. In the context of common harsh discipline and power disparity between children and adults in Vietnam, positive parenting programs could be beneficial in reducing physical and emotional abuse, and emotional neglect. Programs teaching parents positive parenting skills at a distance via telephone such as *Strongest Families* might be promising in limited-resource contexts such as Vietnam (Mcgrath et al., 2011). Considering the possible increasing trend of child sexual abuse, the Ministry of Education should accelerate the initiated revision of school sex education programs to include sexual abuse prevention as well. Although evidence concerning the effectiveness of these programs on reducing child sexual abuse is still rare and inconclusive (Finkelhor, Asdigian, & Dziuba-Leatherman, 1995; Gibson & Leitenberg, 2000), school based child sexual abuse programs were proven to increase

knowledge about prevention concepts (Berrick & Barth, 1992), proper reactions in simulated scenarios (Fergusson & Mullen, 1999), and the likelihood to report real-life sexual abuse situations (Finkelhor et al., 1995). Focusing on possible perpetrators in addition to possible victims may increase the effectiveness of efforts to prevent sexual abuse. By including child sexual abuse programs in a comprehensive and positive sexual education program that also focuses on friendships and romantic relationships (Schutte et al., 2014; Weaver, Smith, & Kippax, 2005), victimization as well as future perpetration may be prevented. In addition, activities to improve child protection and children's rights should be maintained and strengthened, and the child protection system, which is still rudimental in Vietnam (Molisa & Unicef, 2010), should be improved. Last but not least, this study showed that in countries with limited resources, studies on temporal changes in child maltreatment are possible and informative. It would be valuable if more similar studies could be conducted in the larger Asian region to inform policy makers, and evaluate the effect of similar or different national child protection policies on changes in the prevalence of child maltreatment.

REFERENCES

Berlin, L. J., Appleyard, K., & Dodge, K. A. (2011). Intergenerational continuity in child maltreatment: mediating mechanisms and implications for prevention. *Child Devevelopment, 82,* 162-176. doi: 10.1111/j.1467-8624.2010.01547.x

Bernstein, D., Stein, J., Newcomb, M., Walker, E., Pogge, D., Ahluvalia, T., ... Desmond, D. (2003). Development and validation of a brief screening version of the Childhood Trauma Questionnaire. *Child Abuse & Neglect, 27,* 169 - 190. doi: 10.1016/S0145-2134(02)00541-0

Berrick, J. D., & Barth, R. P. (1992). *Child sexual abuse prevention: Research review and recommendations.* Paper presented at the Social Work Research and Abstracts.

Black, D. A., Heyman, R. E., & Smith Slep, A. M. (2001). Risk factors for child sexual abuse. *Aggression and Violent Behavior, 6,* 203-229. doi: http://doi.org/10.1016/S1359-1789(00)00023-9

Black, D. A., Smith Slep, A. M., & Heyman, R. E. (2001). Risk factors for child psychological abuse. *Aggression and Violent Behavior, 6,* 189-201. doi: http://doi.org/10.1016/S1359-1789(00)00022-7

Bland, J. M., & Altman, D. G. (1995). Multiple significance tests: the Bonferroni method. *BMJ, 310, 170.*

Cancian, M., Slack, K. S., & Yang, M. Y. (2010). *The effect of family income on risk of child maltreatment:* Institute for Research on Poverty, University of Wisconsin-Madison Madison, WI.

Chen, J., Dunne, M. P., & Han, P. (2004). Child sexual abuse in China: a study of adolescents in four provinces. *Child Abuse & Neglect,* 28, 1171-1186. doi: 10.1016/j.chiabu.2004.07.003

Currie, J., & Widom, C. S. (2010). Long-term consequences of child abuse and neglect on adult economic well-being. *Child Maltreatment, 15,* 111-120. doi: 10.1177/1077559509355316

De Jong, R., Alink, L., Bijleveld, C., Finkenauer, C., & Hendriks, J. (2015). Transition to adulthood of child sexual abuse victims. *Aggression and Violent Behavior, 24,* 175-187. doi: http://dx.doi.org/10.1016/j.avb.2015.04.012

Emery, C. R., Nguyen, H. T., & Kim, J. (2014). Understanding child maltreatment in Hanoi: intimate partner violence, low self-control, and social and child care support. *Journal of Interpersonal Violence, 29,* 1228-1257. doi: 10.1177/0886260513506276

Emery, C. R., Trung, H. N., & Wu, S. (2015). Neighborhood informal social control and child maltreatment: A comparison of protective and punitive approaches. *Child Abuse & Neglect, 41,* 158-169. doi: 10.1016/j.chiabu.2013.05.002

Euser, S., Alink, L. R., Pannebakker, F., Vogels, T., Bakermans-Kranenburg, M. J., & Van, I. M. H. (2013). The prevalence of child maltreatment in the Netherlands across a 5-year period. *Child Abuse & Neglect, 37,* 841-851. doi: 10.1016/j.chiabu.2013.07.004

Fang, X., Fry, D. A., Brown, D. S., Mercy, J. A., Dunne, M. P., Butchart, A. R., ... Swales, D. M. (2015). The burden of child maltreatment in the East Asia and Pacific region. *Child Abuse & Neglect, 42,* 146-162. doi: 10.1016/j.chiabu.2015.02.012

Fergusson, D. M., & Mullen, P. E. (1999). *Childhood sexual abuse: An evidence based perspective* (Vol. 40): Sage Publications Thousand Oaks, CA:.

Finkelhor, D. (2008). *Childhood victimization: Violence, crime, and abuse in the lives of young people:* Oxford University Press.

Finkelhor, D., Asdigian, N., & Dziuba-Leatherman, J. (1995). The effectiveness of victimization prevention instruction: an evaluation of children's responses to actual threats and assaults. *Child Abuse & Neglect, 19,* 141-153. doi: unavailable

Finkelhor, D., Asdigian, N., & Dziuba-Leatherman, J. (1995). Victimization prevention programs for children: a follow-up. *American Journal of Public Health, 85,* 1684-1689. doi: 10.2105/AJPH.85.12.1684

Finkelhor, D., Saito, K., & Jones, L. (2016). Updated trends in child maltreatment, 2014 (pp. 1-4): Crimes Against Children Research Center.

Finkelhor, D., Turner, H., Ormrod, R., & Hamby, S. L. (2010). Trends in childhood violence and abuse exposure: evidence from 2 national surveys. *Archives of Pediatrics and Adolescent Medicine 164,* 238-242. doi: 10.1001/archpediatrics.2009.283

Gibson, L. E., & Leitenberg, H. (2000). Child sexual abuse prevention programs: do they decrease the occurrence of child sexual abuse? *Child Abuse & Neglect, 24,* 1115-1125. doi: http://doi.org/10.1016/S0145-2134(00)00179-4

Gso. (2006). Vietnam Population and Housing Census 2006 (pp. 36). Hanoi: GSO.

Gso. (2015). Vietnam Population and Housing Census 2014 (pp. 36). Hanoi: GSO.

Hamby, S. L., Finkelhor, D., Ormrod, R. K., & Turner, H. A. (2001). The juvenile victimization questionnaire (JVQ): Administration and scoring manual. *Durham, NH: Crimes Against Children Research Center.*

Hemmingsson, E., Johansson, K., & Reynisdottir, S. (2014). Effects of childhood abuse on adult obesity: a systematic review and meta-analysis. *Obesity Reviews, 15,* 882-893. doi: 10.1111/obr.12216

Higgins, D. J., & Mccabe, M. P. (2001). The development of the comprehensive child maltreatment scale. *Journal of Family Studies, 7,* 7-28. doi: http://dx.doi.org/10.5172/jfs.7.1.7

Hillberg, T., Hamilton-Giachritsis, C., & Dixon, L. (2011). Review of meta-analyses on the association between child sexual abuse and adult mental health difficulties: a systematic approach. *Trauma Violence Abuse, 12,* 38-49. doi: 10.1177/1524838010386812

Ji, K., Finkelhor, D., & Dunne, M. (2013). Child sexual abuse in China: a meta-analysis of 27 studies. *Child Abuse & Neglect, 37,* 613-622. doi: 10.1016/j.chiabu.2013.03.008

Knutson, J. F., & Selner, M. B. (1994). Punitive childhood experiences reported by young adults over a 10-year period. *Child Abuse & Neglect, 18,* 155-166. doi: 10.1016/0145-2134(94)90117-1

Loan, K. X. (2010). *Adverse childhood experiences: prevalence and affects on mental health and risk behaviours of adolescents in Ho Chi Minh city, Vietnam.* Queensland: Queensland University of Technology.

Madu, S. N., & Peltzer, K. (1999). Child Abuse among High School Students in the Northern Province of South Africa 1998. *South African Data Archive, Pretoria.*

Mcgrath, P. J., Lingley-Pottie, P., Thurston, C., Maclean, C., Cunningham, C., Waschbusch, D. A., ... Chaplin, W. (2011). Telephone-based mental health interventions for child disruptive behavior or anxiety disorders: randomized trials and overall analysis. *Journal of American Academy of Child and Adolescent Psychiatry, 50,* 1162-1172. doi: 10.1016/j.jaac.2011.07.013

Merckelbach, H., Smeets, T., & Jelicic, M. (2009). Experimental simulation: Type of malingering scenario makes a difference. *Journal of Forensic Psychiatry & Psychology, 20,* 378-386. doi: 10.1080/14789940802456686

Mersky, J. P., & Reynolds, A. J. (2007). Child maltreatment and violent delinquency: disentangling main effects and subgroup effects. *Child Maltreatment, 12,* 246-258. doi: 12/3/246 [pii]10.1177/1077559507301842

Molisa, & Unicef. (2010). Analysis of the Child and Family Welfare and Protection Services System in Vietnam.

Molisa, & Unicef. (2013). Manual on Local Annual and Five Year Development Planning with New Approach.

Nguyen, H. T. (2006). *Child maltreatment in Vietnam: prevalence and associated mental and physical health problems.* Queensland: Queensland University of Technology.

Nguyen, H. T., Dunne, M. P., & Anh, L. V. (2009). Multiple types of child maltreatment and adolescent mental health in Viet Nam. *Bulletin of the World Health Organization, 88,* 22-30. doi: 10.2471/BLT.08.060061

Norman, R. E., Byambaa, M., De, R., Butchart, A., Scott, J., & Vos, T. (2012). The long-term health consequences of child physical abuse, emotional abuse, and neglect: a systematic review and meta-analysis. *PLoS Medicine, 9,* e1001349. doi: 10.1371/journal.pmed.1001349

Schutte, L., Meertens, R. M., Mevissen, F. E., Schaalma, H., Meijer, S., & Kok, G. (2014). Long Live Love. The implementation of a school-based sex-education program in The Netherlands. *Health education research, 29,* 583-597. doi: 10.1093/her/cyu021

Sedlak, A. J., & Broadhurst, D. D. (1996). The national incidence study of child abuse and neglect. *Washington, DC:* US Department of Health and Human Services, 8730763.

Sedlak, A. J., Mettenburg, J., Basena, M., Peta, I., Mcpherson, K., & Greene, A. (2010). Fourth national incidence study of child abuse and neglect (NIS-4). *Washington, DC:* US Department of Health and Human Services. Retrieved on July, 9, 2010.

Stith, S. M., Liu, T., Davies, L. C., Boykin, E. L., Alder, M. C., Harris, J. M., ... Dees, J. E. M. E. G. (2009). Risk factors in child maltreatment: A meta-analytic review of the literature. *Aggression and Violent Behavior, 14,* 13-29. doi: http://dx.doi.org/10.1016/j.avb.2006.03.006

Stoltenborgh, M., Bakermans-Kranenburg, M. J., & Van Ijzendoorn, M. H. (2013). The neglect of child neglect: a meta-analytic review of the prevalence of neglect. *Social Psychiatry & Psychiatric Epidemiology, 48,* 345-355. doi: 10.1007/s00127-012-0549-y

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. doi: 10.1177/1077559511403920

Straus, M. A., Hamby, S. L., Boney-Mccoy, S., & Sugarman, D. B. (1996). The revised conflict tactics scales (CTS2) development and preliminary psychometric data. *Journal of family issues, 17,* 283-316. doi: 10.1177/019251396017003001

Tabachnick, B. G., & Fidell, L. S. (2012). *Using multivariate statistics* (6th ed.): Pearson.

Thompson, R. (2006). Exploring the link between maternal history of childhood victimization and child risk of maltreatment. *Journal of Trauma Practice, 5,* 57-72. doi: 10.1300/J189v05n02_04

Tran, N. K., Alink, L. R., Van Berkel, S. R., & Van Ijzendoorn, M. H. (2016). Child Maltreatment in Vietnam: Prevalence and Cross-Cultural Comparison. *Journal of Aggression, Maltreatment & Trauma, 26,* 1-20. doi: http://dx.doi.org/10.1080/10926771.2016.1250851

Tran, N. K., Van Berkel, S. R., Van Ijzendoorn, M. H., & Alink, L. R. A. (2017). The association between child maltreatment and emotional, cognitive, and physical health functioning in Vietnam. *BMC Public Health, 17,* 332. doi: 10.1186/s12889-017-4258-z

Tran, Q. A., Dunne, M. P., Vo, T. V., & Luu, N. H. (2015). Adverse Childhood Experiences and the Health of University Students in Eight Provinces of Vietnam. *Asia-Pacific Journal of Public Health, 27,* 26s-32s. doi: 10.1177/1010539515589812

Unicef. (2010). Report of Children Situation in Vietnam 2010. Hanoi.

Vng. (2008). The third and fourth country report on Viet Nam's implementation of the United Nations convention of the rights of the child in the 2002-2007 period. Hanoi.

Wb. (2016). Vietnam 2035: toward prosperity, creativity, equity, and democracy - overview

Weaver, H., Smith, G., & Kippax, S. (2005). School-based sex education policies and indicators of sexual health among young people: a comparison of the Netherlands, France, Australia and the United States. *Sex Education, 5,* 171-188. doi: 10.1080/14681810500038889

Wegman, H. L., & Stetler, C. (2009). A meta-analytic review of the effects of childhood abuse on medical outcomes in adulthood. *Psychosomatics Medicine, 71,* 805-812. doi: 10.1097/PSY.0b013e3181bb2b46

Wildman, R. W., & Wildman, R. W. (1999). The detection of malingering. *Psychological reports, 84,* 386-388. doi: 10.2466/pr0.1999.84.2.386

APPENDIX 3.1. CHILD MALTREATMENT ITEMS (NGUYEN, 2006)

Type of CM	Items
Sexual abuse	When you were growing up, did any adult ever do any of the following acts to you, while you didn't want it? (1) Spoke to you in an obscene way or talk to you in sexual way (2) Exposed their private parts to you (3) Made you see sexual scenes on video, or porn magazines/ photos (4) Touched or fondled your private parts (5) Made you touch or fondle their private parts (6) Tried to have sexual intercourse with you but was unsuccessful (7) Did someone have sexual intercourse with you? (8) Did someone do other things to you in a sexual way?
Physical abuse	When you grew up, did any adult ever do something like (1) pushing, grabbing, or shoving you, throwing something at you? (2) locking you up in a small place? (3) tying you up or chaining you with something? (4) spanking you with something? (5) kicking or hitting you with a fist or other objects, or beating you up? (6) choking you, or burning or scalding you?
Emotional abuse	When children grow up, their parents/ guardians or adults in their family may have treated them in some ways as in the incidents below. Did any of these incidents happen to you? (1) Yell at you (2) Insult you (3) Try to make you feel guilty (4) Embarrass you in front of others (5) Make you feel like you were a bad person (6) Wish you were never born (7) When you grew up, did any adult in your family threaten to hurt or kill you?
Emotional neglect	When you were growing up, did your parents/ guardians do the following things to you? (1) Didn't make you feel important (2) Didn't care about you (3) Were not close to you (4) Were not sources of strength to you
Physical neglect	Sometimes, parents or caretakers do not take care of children properly. Please answer the following questions about your life. When you grew up, have any of the following things happened to you? (1) You did not get enough food to eat (2) You had to wear dirty or torn clothes, or clothes that were not warm enough (3) You were not taken care of when you were sick