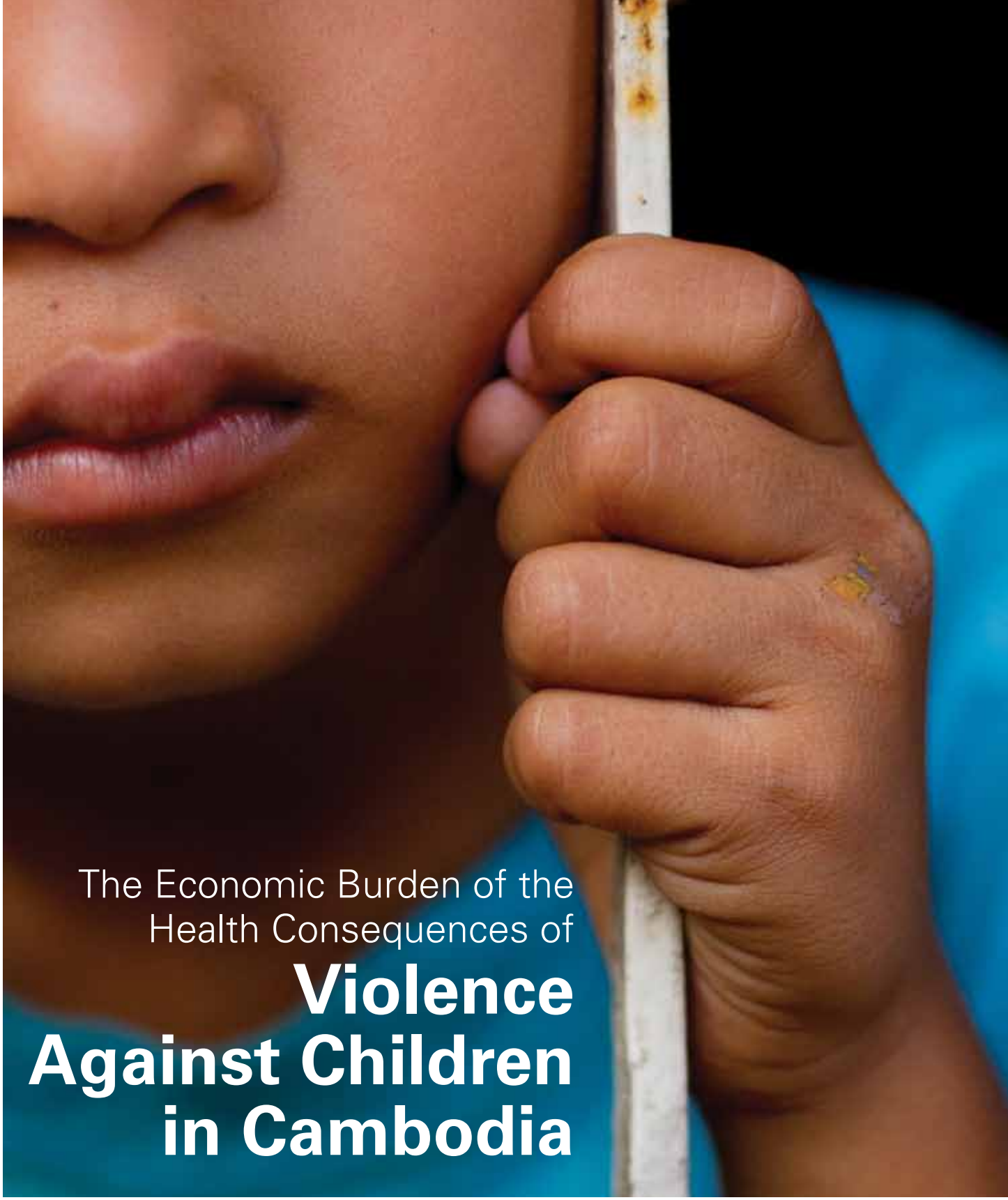

The Economic Burden of the Health Consequences of

Violence Against Children in Cambodia

PROTECT OUR CHILDREN
CAMBODIA

The Economic Burden of the Health Consequences of Violence Against Children in Cambodia

Government Commitment to End Violence Against Children

Ministry of Interior

Ministry of Education Youths, and Sport

Ministry of Health

Ministry of Justice

Ministry of Cult and Religion

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Phnom Penh, October 2014

FOREWORD

Violence against children is a serious human rights, social and public health issue in many parts of the world. Its consequences can be devastating and no country is immune. Violence erodes the strong foundation that children need to lead healthy and productive lives and violates the fundamental rights of children to a safe childhood.

The United Nations Secretary-General's World Report on Violence Against Children (2006) was the first and most comprehensive global study on all forms of violence against children. The aim was to research, report and make recommendations on violence in the multiple settings where children live, such as home and family, in schools, care and justice systems, the workplace and the community. Overarching recommendations from this global study urge governments to improve data collection and information systems in order to identify the most vulnerable children, develop policies and programmes at all levels, and track progress towards the goal of preventing violence against children.

The Cambodian Government ratified the UN Convention on the Rights of the Child in 1992, along with other international declarations related to violence against women and children, thereby recognizing and respecting the fundamental rights of all human beings, including the rights of children. The Kingdom of Cambodia was the first country in East Asia and the Pacific to undertake a national prevalence study on violence against children in partnership, cooperation and with strong commitment from government ministries and institutions represented on the Steering Committee on Violence Against Children. The results of the Violence Against Children Survey 2013 provide, for the first time, national estimates that describe the magnitude and nature of sexual, physical and emotional violence experienced by girls and young women, and boys and young men, in childhood. The report highlights the particular vulnerabilities of boys and girls to sexual violence and the negative health consequences of these experiences on their childhoods and beyond. The information presented in this report is designed to help support efforts in Cambodia to develop and implement effective child-friendly prevention strategies, and to improve service provision for all Cambodians, especially children who experience violence.

Collaboration, coordination and commitment are needed across sectors and entities—health, social welfare, education, justice—and at all levels—national, provincial, district and lower levels. Development partners, civil society, the private sector and individual citizens all have important roles to play. We count on the commitment of our national and international partners, as well as key line ministries and government agencies to achieve our goal to end violence against children.

I would like express my sincere thanks to the Steering Committee on Violence Against Children led by the Ministry of Women's Affairs, with key line ministries and government agencies from social welfare, the police and legal system, education, health, tourism, labour and religion, related national and international agencies and non-governmental organizations, for their review and comments on the report, 'The Economic Burden of the Health Consequences of Violence Against Children in Cambodia'. My special thanks to Dr. Xiangming Fang, the Director of the International Centre for Applied Economics and Policy in the College of Economics and Management at China Agricultural University, who conducted this study. Dr. X. Fang is also the author of the report. I would like to thank staff members of UNICEF Cambodia for their technical support and UNICEF Cambodia for funding the implementation and coordination of the study.

To promote the dissemination of this report and to ensure effective follow up to its recommendations, I hereby commend the contents of 'The Economic Burden of the Health Consequences of Violence Against Children in Cambodia' to a wide national and global audience.

Phnom Penh, November 2015

Minister of Women's Affairs

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LIST OF KEY TERMS AND DEFINITIONS[1]

1. Sexual Violence

Sexual violence is defined as including all forms of sexual abuse and sexual exploitation of children. This encompasses a range of offences, including completed non-consensual sex acts (i.e., rape), attempted non-consensual sex acts, abusive sexual contact (i.e., unwanted touching), and non-contact sexual abuse (e.g., threatened sexual violence, exhibitionism, verbal sexual harassment). This also includes the inducement or coercion of a child to engage in any unlawful or psychologically harmful sexual activity; the exploitative use of children in prostitution or other unlawful sexual practices; and the exploitative use of children in pornographic performances and materials. In this survey, questions were posed on four types of sexual abuse and four types of sexual exploitation:

1.1 Sexual Abuse

Sexual abuse is defined as including:

- **Unwanted Sexual Touching:** if anyone, male or female, ever touched the respondent in a sexual way without their permission, but did not try and force the respondent to have sex of any kind
- **Attempted Unwanted Intercourse:** if anyone ever tried to make the respondent have sexual intercourse of any kind without their permission, but did not succeed
- **Physically Forced Intercourse:** if anyone ever physically forced the respondent to have sexual intercourse of any kind regardless of whether the respondent did or did not fight back
- **Pressured Intercourse:** if anyone ever pressured the respondent in a non-physical way, to have sexual intercourse of any kind when they did not want to and sex happened. When someone pressures someone else into sex, it could involve things like threats, harassment, and luring or tricking the other person into having sex.

1.2 Sexual Exploitation

- If anyone ever gave the respondent money, food, gifts, or any favours to have sexual intercourse or perform any other sexual acts with them.

1.3 Non-contact Sexual Violence/Exploitation

- If anyone ever made the respondent upset by speaking to them in a sexual way or writing sexual things about them
- If anyone ever forced the respondent to watch sex photos or sex videos against their will
- If anyone ever forced the respondent to be in a sex photo or video against their will

More sexual violence related definitions:

- Unwanted Completed Sex: a combination of physically forced and pressured sex as defined above.
- Sexual Intercourse for Females: Includes someone penetrating a female's vagina or anus with their penis, hands, fingers, mouth, or other objects, or penetrating her mouth with their penis.
- Sexual Intercourse for Males: Includes someone penetrating a male's anus with their penis, hands, fingers, mouth, or other objects, or penetrating his mouth with their penis; this can also include someone forcing the male's penis into their mouth, vagina, or anus.

1 Definitions from Cambodia's Violence Against Children Survey 2013

2. Physical Violence

Physical acts of violence such as being slapped, pushed, punched, kicked, whipped, or beaten with an object, choked, smothered, tried to drown, burned, scalded intentionally, or injured or threatened with a weapon such as a knife or other weapon. The study looked at physical acts of violence perpetrated by intimate partners, parents or adult relatives or community members, including:

- If someone ever slapped or pushed the respondent (for intimate partners only)
- If someone ever punched, kicked, whipped, or beat the respondent with an object
- If someone ever choked, smothered, tried to drown, or burned the respondent intentionally
- If someone ever used or threatened the respondent with a knife or other weapon

3. Emotional Violence

Emotional violence is defined as a pattern of verbal behaviour over time or an isolated incident that is not developmentally appropriate and supportive and that has a high probability of damaging a child's mental health, or his/her physical, mental, spiritual, moral or social development. Emotional acts of violence such as being told you were not loved, someone wished you had never been born or being ridiculed or put down. In this study, we specifically looked at emotional acts of violence perpetrated by parents or caregivers:

- If someone ever told the respondent that they were not loved, or did not deserve to be loved
- If someone ever said they wished the respondent had never been born or were dead
- If someone ever ridiculed the respondent or put them down (for example said that they were stupid or useless

ACRONYMS

CDC	US Centers for Disease Control and Prevention
CVACS	Cambodia Violence Against Children Survey
DALY	Disability-adjusted Life Year
EAPRO	East Asia and Pacific Regional Office
GBD	Global Burden of Disease
GDP	Gross Domestic Product
IPV	Intimate Partner Violence
OR	Odds Ratio
PAF	Population-attributable Fraction
RR	Relative Risks
STI	Sexually Transmitted Infection
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNICEF	United Nations Children's Fund
WHO	World Health Organization
YLD	Years Lived with Disability
YLL	Years of Life Lost

SUMMARY

Violence against children exists in every country in the world, cutting across culture, class, education, income and ethnic origin. Cambodia is no exception. This study estimates the health and economic burden of violence against children in Cambodia, addressing a significant gap in the current evidence base.

More than half of all Cambodian children reported some form of physical violence prior to age 18 by an intimate partner, parent or adult relative, or community member. Roughly one-quarter of Cambodian children are emotionally abused while growing up: 22 per cent of females and 26 per cent of males aged 13 to 24 reported emotional violence by a parent, caregiver or other adult relative prior to age 18. Some 5 per cent of both females and males aged 13 to 24 reported some form of sexual abuse prior to age 18.

The economic burden of the selected health consequences of violence against children in Cambodia totalled US$168 million in 2013, accounting for 1.10 per cent of the country's Gross Domestic Product (GDP). Productivity losses due to childhood violence in 2013 totalled US$83.3 million, accounting for 0.55 per cent of GDP.

The economic burden of violence against children in Cambodia is substantial, highlighting the importance of investing in prevention and prioritizing violence against children as a key public health concern. The findings of this analysis are key to understanding the consequences of childhood violence; the economic costs incurred by individuals, families and society at large; and ultimately, the need to invest in strengthening the national child protection system.

EXECUTIVE SUMMARY

Violence against children exists in every country in the world, cutting across culture, class, education, income and ethnic origin. Sadly, Cambodia is no exception. Childhood violence can have lifelong adverse health, social and economic consequences for survivors, including behavioural problems and cognitive dysfunction; mental and physical health conditions; increased risk of delinquency, criminal and violent behaviours; disability from physical injury; reduced health-related quality of life, for example through increased risk of chronic diseases; lower levels of educational achievement and impaired capacity of adults to generate income.

Given the high prevalence of violence against children and the many negative short- and long-term consequences, the economic costs of violence against children may be substantial. Few estimates of the total economic burden–the minimum direct and indirect costs–of violence against children exist for international settings. Estimates have been published for some countries, such as the United States and Australia, but are severely lacking in most regions of the world, including the East Asia and Pacific region.

To address this gap, the UNICEF East Asia and Pacific Regional Office (EAPRO) completed a systematic review and analysis of the magnitude and consequences of child maltreatment, based on reliable research studies in the region published between 2000 and 2010. Based on the systematic review, UNICEF EAPRO has finalized a regional costing model to estimate the minimum costs of child maltreatment in the region.

While the EAPRO study focused on drawing a regional picture of child maltreatment and its economic burden, it did not provide in-depth information on Cambodia. The systematic review helped screen and analyze a variety of valid academic studies on violence against children. To date, all but one study on violence against children in Cambodia have been based on non-probability or convenience samples. This means they provide important information about specific sub-sets of the population, but the data cannot be used reliably to infer the national prevalence of violence against children. This lack of sufficient and reliable national data contributes to the inability of agencies to make informed programmatic decisions related to the problem.

The 2013 Cambodia Violence Against Children Survey (CVACS) was conducted in response to these concerns. The results of the government-led CVACS provided, for the first time, national estimates that described the magnitude and nature of childhood sexual, physical and emotional violence, and their association with a range of short-term health consequences and health risk behaviours.

Using data from the CVACS, this report estimated population-attributable fractions (PAFs) for various health consequences of violence against children and developed a costing model based on these consequences to estimate the minimum costs of violence against children in Cambodia.

Summary of methods and data

The analysis includes data obtained from the 2013 CVACS, a cross-sectional household survey of 13- to 24-year-old females and males on violence against children. It measures the national prevalence of physical, emotional and sexual abuse against boys and girls, and identifies risk and protective factors and health consequences of violence. A total of 2,560 individuals were invited to participate in the study, with 1,121 females and 1,255 males completing the questionnaire (in total 2,376).

Based on the CVACS data, four steps were used to estimate the minimum costs of violence against children in Cambodia for selected health outcomes:

Step One – Estimate national lifetime prevalence rates by sex and major type of childhood violence (physical violence, emotional violence and sexual abuse prior to age 18).

Step Two – Conduct logistic regressions to estimate the adjusted odds ratios (ORs) for associations between different types of childhood violence and the related health consequences and health risk behaviours. The health outcomes and health risk behaviours examined in this analysis included mental distress, sexually transmitted infections (STIs), self-harm, smoking, problem drinking, intimate partner violence (IPV) perpetration and moderate injuries resulting from interpersonal violence. As the OR is not directly applicable in the common PAF formulas, a simple formula developed by Zhang and Yu (1998) was used for the approximation of ORs to relative risks (RRs).

Step Three – Establish the PAFs for various health consequences and health risk behaviours that are linked to violence against children, based on the two pieces of previously estimated data: the prevalence by major type of violence and the RRs of outcomes, given exposure to violence against children.

Step Four – Develop a costing model to estimate the minimum costs of violence against children following its impact on health outcomes based on the PAFs calculated during step three. All PAFs were multiplied by the appropriate disability-adjusted life year (DALY) measure for specific health outcomes or health risk behaviours to estimate DALYs lost from health outcomes and health risk behaviours attributable to childhood violence. The country-level estimates of DALY data were obtained from the most recent comparable Global Burden of Disease (GBD) estimates. DALY losses were converted into monetary value by assuming that one DALY is equal to the country's per-capita GDP.

In addition to health outcomes and health risk behaviours, the marginal effects of childhood violence on children's educational attainment were examined (whether the respondent obtained some post-secondary education). Combined with data on the annual income difference by educational attainment, the productivity loss due to childhood violence was calculated by multiplying the marginal effects of childhood violence on educational attainment by the income difference with different levels of educational attainment.

Summary of results

More than half of all Cambodian children reported some form of physical violence prior to age 18 by an intimate partner, parent or adult relative, or community member. Roughly one-quarter of Cambodian children were emotionally abused while growing up: 22 per cent of females and 26 per cent of males aged 13 to 24 reported emotional violence by a parent, caregiver or other adult relative prior to age 18. About 5 per cent of both females and males aged 13 to 24 reported some form of sexual abuse prior to age 18.

Gender differences exist in the links between violence against children and health consequences (the PAFs).

Childhood physical violence

- For males, 24.1 per cent of smoking, 13.6 per cent of problem drinking and 59.7 per cent of moderate injuries following interpersonal violence were attributable to childhood physical violence. Childhood physical violence was not significantly associated with self-harm, mental distress, STIs or IPV perpetration.
- In contrast, for females, 37.0 per cent of self-harm, 32.9 per cent of STIs, 11.7 per cent of mental distress, 10.4 per cent of problem drinking, 33.7 per cent of IPV perpetration and 48.2 per cent of moderate injuries following interpersonal violence were attributable to childhood physical violence.

Childhood emotional violence

- Childhood emotional violence contributed to 32.6 per cent of self-harm for females and 13.6 per cent for males.
- 12.3 per cent of STIs were attributable to childhood emotional violence for females, but this link was not significant for males.
- 12.7 per cent of mental distress was attributable to childhood emotional violence for females; for males this was 26.4 per cent.
- 14.4 per cent of IPV perpetration for females and 21.5 per cent of IPV perpetration for males was attributable to childhood emotional violence.
- For females 29.3 per cent, and for males 26.6 per cent, of moderate injuries following interpersonal violence were attributable to childhood emotional violence.

Childhood sexual abuse

- For females, childhood sexual abuse contributed to 5.0 per cent of self-harm, 1.6 per cent of STIs, 1.5 per cent of mental distress and 11.5 per cent of IPV perpetration.
- For males, childhood sexual abuse contributed 8.2 per cent to self-harm and 9.5 per cent to STIs.

When converted into monetary value, the estimated minimum economic value of DALYs that Cambodia lost to these identified health consequences of violence against children in 2013 amounted to US$76.9 million for females and US$90.9 million for males. Overall, the estimated minimum economic loss from the health consequences of violence against children in Cambodia totalled US$168 million in 2013, accounting for 1.10 per cent of the country's GDP. Productivity losses attributable to childhood violence in 2013 totalled US$83.3 million, accounting for 0.55 per cent of the country's GDP.

These are likely minimum estimates. Due to a lack of available data, many serious consequences of violence against children, including higher levels of use of health care, could not be included in the analysis. Other costs that were excluded from this analysis include costs related to the legal and justice system, special education costs and child welfare costs. Some health outcomes from the CVACS (such as suicidal thoughts, illicit drug use and IPV perpetration) had to be excluded from the analysis because no DALY data were available, or the CVACS included too few cases to infer reliable estimates. Others (such as moderate injuries caused by interpersonal violence) were excluded because no non-exposed comparison group was available. The exclusion of these outcomes may significantly underestimate the economic burden of childhood violence.

Concluding remarks

This is the first study to estimate the economic burden of aspects of violence against children in Cambodia. It is clear that violence is common in the lives of many Cambodian children. Childhood violence is strongly associated with poor physical and mental health and health risk behaviours in Cambodia, which is consistent with international research. These adverse consequences of childhood violence affect not only individuals but extend to families, communities and societies. More work is needed in Cambodia on the national child protection system to ensure that every child and young person who has experienced violence has access to the best possible care, and to responses that will help ensure recovery and hold perpetrators accountable.

The analysis of DALYs and economic costs revealed that, in terms of health consequences, violence against children carries a considerable burden in Cambodia. **The economic burden of selected health consequences and health risk behaviours totalled US$168 million in 2013, accounting for 1.10 per cent of the country's GDP. Productivity losses due to childhood violence in 2013 totalled US$83.3 million, accounting for 0.55 per cent of the country's GDP.**

The economic burden of violence against children is so critical that Cambodia must invest in prevention, while prioritizing violence against children as a key public health concern. Investing now would be more cost-effective than not investing. The findings of this analysis are key to understanding the consequences of childhood violence: the economic costs incurred by individuals, families and society at large; and ultimately, the need to invest in strengthening the national child protection system.

The data generated as part of this analysis will be used to advance the awareness of policy makers on the lifetime economic impacts of childhood violence and make recommendations on budget allocations and investment in prevention.

Section 1: Introduction

1. INTRODUCTION

Violence against children exists in every country in the world, cutting across culture, class, education, income and ethnic origin (Gilbert et al., 2009; Krug et al., 2002; Pinheiro, 2006). Sadly, Cambodia is no exception.

Childhood violence can have lifelong adverse health, social and economic consequences for survivors, including behavioural problems and cognitive dysfunction; mental and physical health conditions; increased risk of delinquency, criminal and violent behaviours; disability from physical injury; reduced health-related quality of life, for example, through increased risk of chronic diseases; lower levels of education and impaired capacity of adults to generate income (Corso et al., 2008; Fang et al., 2012; Gilbert et al., 2009). Given the high prevalence and many negative short- and long-term consequences, the economic cost of violence against children is substantial. Estimating the economic burden of child maltreatment is important for several reasons, including: increasing awareness on the current severity of child maltreatment, assisting policy makers and government officials to prioritize funding and develop preventative services, placing the problem in the context of other public health concerns, and providing data for economic evaluations of interventions to reduce or prevent violence against children.

Although the prevalence and consequences of violence against children are well understood, few estimates of the total economic burden–the minimum direct and indirect costs–of violence against children exist in international settings. Estimates have been published for some countries, such as the United States (Fang et al., 2012) and Australia (Taylor et al., 2008), but are severely lacking in most regions of the world, including the East Asia and Pacific region.

To address this gap, UNICEF EAPRO carried out a systematic review and analysis of the magnitude and consequences of child maltreatment, based on available reliable research studies in the region published between 2000 and 2010. Based on the systematic review, UNICEF EAPRO finalized a regional costing model to estimate the minimum costs of child maltreatment in the region (Fang et al., 2015).

While the EAPRO study focused on drawing a regional picture of child maltreatment and its economic burden, it did not provide in-depth information on Cambodia. The systematic review helped screen and analyze a variety of valid academic studies on violence against children. To date, the only nationally representative sample survey was the Cambodia National Youth Risk Behavioural Survey in 2004, based on a sample of 9,388 adolescents aged 11 to 18, both in and out of school (Ministry of Education, Youth and Sport, UNICEF and UNESCO, 2004). However, that study only provided data on the prevalence of sexual abuse and witnessing domestic violence. It is not possible to tell whether the data were weighted and how 'nationally representative' was defined. All other studies are based on non-probability or convenience samples. This means they provide important information about specific sub-sets of the population, for example children in concentrated areas or young people with a defining relevant characteristic, such as living on the streets, but the data cannot be used reliably to infer the national prevalence of violence against children in Cambodia.

Although past studies have raised awareness and resulted in action about the problem, they have had limited ability to estimate the national magnitude of violence against children. First, most have been conducted with adults or special populations, and recent surveys have not focused on children or adolescents, thus preventing independent estimates of the scale of the problem affecting children nationwide. Second, the studies were conducted in different regions in Cambodia and often used different definitions and measurements of sexual violence experienced during childhood. This made it difficult to generalize the findings of a single study across all of Cambodia or to combine the studies for an overall picture (national estimate). Finally, while some of these past studies of violence raised awareness in general, the majority neglected violence against boys. The combination of these factors makes it difficult (based on current data) to establish national estimates on the extent of violence against children. Agencies cannot make informed programmatic decisions related to the problem, due to this lack of sufficient and reliable data.

In response to these concerns, the Government conducted the CVACS in 2013. The results provided, for the first time, national estimates that describe the magnitude and nature of sexual, physical and emotional violence experienced by girls and young women, and boys and young men in Cambodia (Ministry of Women's Affairs, UNICEF Cambodia, & US Centers for Disease Control and Prevention (CDC), 2014). As evidenced worldwide, exposure to violence as a child has been associated with a range of short-term health consequences, including moderate mental distress, STIs, self-harm and suicidal ideation. The findings highlighted the emotional impact of all types of violence experienced by children, which often seems to go unrecognized. They were consistent with decades of research in neurobiological, behavioural and social sciences that conclusively indicate that childhood exposure to violence can impact the development of the brain and cause subsequent vulnerability to a broad range of mental and physical health problems, ranging from the short-term consequences identified in the study to long-term health conditions such as cardiovascular disease and diabetes, but also adult aggression, violence and criminality (Fang et al., 2012; Felitti et al., 1998; Shonkoff & Phillips, 2000; Shonkoff et al., 2012).

Reducing the prevalence of violence against children in Cambodia is therefore likely to reduce the incidence and cost of future mental and physical health problems in the population. Violence against children in the long run will affect any future family members of the victims, their participation and performance in the labour market, and their social development as a whole.

In the absence of an effective and resourced national child protection system, the findings and recommendations from CVACS will be used to improve and enhance interventions to identify and prevent violence against children and to ensure access to services for the health- and protection-related consequences. Information on the costs of violence against children in Cambodia will be crucial to developing a child protection system in terms of the design, enforcement and effective allocation of funding to operate the system. Additional evidence and information on the economic burden of violence against children in Cambodia and its budget implications are needed for planning, coordinating and investing in violence prevention.

This analysis estimated PAFs[2] for various health consequences of violence against children and developed a costing model to estimate the minimum costs of violence against children in Cambodia.

2 The PAF is an epidemiologic concept widely used to attribute the proportion of morbidity or mortality to a risk factor (e.g., childhood physical abuse). The PAF provides an indication of what the percentage reduction in the incidence rate of a health outcome could be in a given population if the exposure to the risk factor (e.g., childhood physical abuse) were eliminated altogether.

Section 2: Methodology

2. METHODOLOGY

The analysis included data obtained from the 2013 CVACS, a cross-sectional household survey of 13- to 24-year-old females and males on violence against children. It measured the national prevalence of physical, emotional and sexual abuse against boys and girls, as well as identifying risk and protective factors and health consequences of violence.

The national household survey used a four-stage cluster sample survey design and was conducted between December 2012 and March 2013. A total of 2,560 individuals were invited to participate in the study, with 1,121 females and 1,255 males completing the questionnaire (total 2,376). This produced individual response rates of 93.7 per cent for females and 92.1 per cent for males. Details regarding sampling methods and interviewing techniques are described elsewhere (Ministry of Women's Affairs, UNICEF Cambodia, & US CDC, 2014).

With the nationally representative data from CVACS, four steps were used to estimate the minimum costs of violence against children in Cambodia for selected health outcomes:

1. Estimate the national prevalence of violence against children.
2. Conduct regression analyses to estimate violence against children - outcome relationships.
3. Establish PAFs for various health outcomes and effects that are linked to violence against children.
4. Develop a costing model to estimate the minimum costs of violence against children for various health outcomes based on the PAFs calculated during step three.

Step One: Estimate national prevalence of violence against children

Using the data from CVACS, lifetime prevalence rates by sex and major type of childhood violence were estimated (physical violence, emotional violence and sexual abuse prior to age18). Childhood sexual abuse was defined as including the following four forms of sexual abuse: unwanted sexual touching; attempted unwanted intercourse; physically forced intercourse; and pressured intercourse. Childhood physical violence was measured by asking respondents if an intimate partner, parent or adult relative or community member had slapped, pushed or hit them with a fist, kicked, whipped or beaten them with an object, choked, smothered, tried to drown them, burned, used or threatened to use a gun, knife or other weapon. Childhood emotional violence was measured by asking respondents about such actions as being told that they were not loved, or did not deserve to be loved, someone saying that they wished the respondent had never been born or was dead, or being ridiculed or put down. Emotional violence by friends, peers or other community members, including teachers, was excluded from the prevalence estimate.

Step Two: Estimate violence against children – outcome relationships

Logistic regressions were used to estimate the adjusted ORs for association between different types of childhood violence and related health outcomes. Several socio-demographic factors that have documented associations in literature on violence against children were included to control for potential confounders (Brown et al., 1998; Oliver et al., 2006). These socio-demographic factors included age, age squared, family wealth, household size, family structure (living with both biological parents or not), age cohort (13 to 17 years old vs. 18 to 24 years old), the respondent's marital status and witnessing violence in the home or community.

Outcome relationship between childhood violence and health outcomes and health risk behaviours

The health outcomes and health risk behaviours examined in this analysis included mental distress, STIs, self-harm, smoking, problem drinking, perpetration of IPV and moderate injuries resulting from interpersonal violence. Mental distress in the past 30 days was measured using the Kessler Psychological Distress Scale (K6), which consists of six questions that assess a person's general emotional state during a defined period of time. Each response is given a possible score between 0 (none of the time) and 4 (all of the time) and summed up for a total possible score between 0 and 24. A score of 5 or above indicates mental distress.

The CVACS included too few cases of illicit drug use, attempted suicide and pregnancies resulting from unwanted completed sex to infer reliable estimates. Some other health outcomes and health risk behaviours (such as suicidal thoughts and multiple sexual partners) were excluded from the analysis because DALY data were not available for these outcomes. As the OR is not directly applicable in common PAF formulas, a simple formula developed by Zhang and Yu (1998)[3] was used for the approximation of ORs to relative risks (RR). RR is the ratio of the probability of an event occurring (e.g., developing lung cancer) in an exposed group (e.g., smokers) to the probability of the event occurring in a comparison, non-exposed group (e.g., non-smokers). For example, the RR of cancer associated with smoking equal to 2 means that smokers would be twice as likely as non-smokers to develop lung cancer. The ORs from the logistic regressions and the corresponding approximate RRs are presented in Appendix E.

Outcome relationships between childhood violence and educational attainment

In addition to the above health outcomes, this study also examined the impact of violence against children on educational attainment. A powerful case was made by the World Bank (2005) for the expansion of secondary education in developing countries on the grounds of growth, poverty reduction, equity and social cohesion, particularly for countries like Cambodia that have achieved high levels of primary education coverage but still have low secondary enrolments. Thus, the educational outcome in this study was defined as whether the respondent obtained some post-secondary education.

Outcome relationships and poly-victimization

It is important to account for poly-victimization when estimating the burden of violence against children. Poly-victimization, also known as complex trauma, describes the experience of multiple victimizations of different types. First, not only socio-demographic factors but also other forms of violence against children were controlled when analyzing the relationships between each type of violence against children and health outcomes. Second, to assess the interactions between different types of violence against children, the variables 'physical violence x emotional violence', 'physical violence x sexual abuse' and 'emotional violence x sexual abuse' were added to each logistic regression model. No significant interactions between different types of violence against children were found for most of the regression models. Therefore, the effects of different types of violence against children were assumed additive, and only results of regression models including main effects are presented.

Given that the regressions were conducted separately for males and females, and many variables (including other forms of childhood violence) were included as control variables, we chose the significance level equal to 0.10 for physical violence and emotional violence. The prevalence rate of sexual abuse was relatively low, at about 5 per cent. Since the variance tends to be larger for low prevalence variables, the significance level was set at 0.20 for sexual abuse. Only those ORs or RRs that met the significance levels were used to calculate PAFs.

Step Three: Calculate population-attributable fractions (PAFs)

To estimate the proportion of health consequences (e.g., self-harm) attributable to a risk factor (e.g., sexual abuse), a standard epidemiologic formula was used to calculate PAFs for males and females, by type of childhood violence (physical violence, emotional violence and sexual abuse):

$$PAF = \frac{P_e\,(RR) - 1}{(P_e\,(RR) - 1 + 1)}$$

where P_e is the prevalence of a specific type of childhood violence (e.g., sexual abuse) in the population and RR is the relative risk of a given outcome/disease (e.g., self-harm) associated with that specific type of childhood violence.

This PAF formula used two pieces of previously estimated data: the prevalence by major type of violence and the RRs of outcomes, given exposure to violence against children. PAFs are scaled from 0.0-1.0, representing an estimated share from 0 per cent to 100 per cent responsible for the outcome. In this example, a PAF of 0.20 would suggest that 20 per cent of self-harm is attributable to exposure to childhood sexual abuse.

3 RR = OR / [(1-P0) + (P0xOR)] where P0 indicates the incidence of the outcomes of interest in the non-exposed group.

Step Four: Develop the costing model

For translation into public health policy and communication to stakeholders, it is important to convert the childhood violence-induced losses into dollar terms. This would enable the economic benefits that would be observed in the absence of childhood violence to be assessed. Following the work of the World Health Organization (WHO) (2001) and Brown (2008), two steps were used to estimate the economic costs of violence against children:

- Estimate the DALYs lost from death, diseases and health risk behaviours attributable to violence against children for each type of violence and for each gender and sub-region group; and
- Convert the DALY losses into a monetary value for each of the sub-groups, assuming one DALY is equal to the country's per-capita GDP.

The non-fatal burden on health from childhood violence is substantial. DALYs formally capture this by adding together morbidity and mortality. Morbidity is defined in terms of years lived with 'disability' (YLD)—reduced health—and mortality in terms of years of life lost (YLL) relative to the expected life span. One DALY represents the loss of one year of equivalent full health. DALYs are widely used in international health comparisons and therefore represent a common metric for calculating burden. Although several other summary measures of population health exist, such as quality-adjusted life years (QALY), the most widely available measures for international studies are DALYs.

DALYs lost from death, health outcomes and health risk behaviours attributable to childhood violence

To estimate DALYs lost from health outcomes and health risk behaviours attributable to childhood violence, PAFs that represent the contribution of childhood violence (e.g., sexual abuse) to health outcomes or health risk behaviours were multiplied by the appropriate DALY measure for specific health outcomes or health risk behaviours. The country-level estimates of cause-specific DALY data were obtained from WHO GBD estimates for 2000-2012 (WHO, 2014). WHO also published DALY estimates of the impact of 24 major risk factors (e.g., tobacco use), although it is important to mention that these estimates apportion the burden from several of the 135 causes to a given risk factor (WHO, 2009). Given the possible co-morbidity between childhood violence and other health outcomes, DALY data was only used for those aged 15+ to estimate disease-induced DALY losses. This was to avoid the possibility of diseases preceding the occurrence of childhood violence.

Data on violence-related deaths among children aged 0-14 in Cambodia were available by gender from the GBD estimates for 2000-2012 (WHO, 2014). These data were used to approximate fatal cases of violence against children. The DALYs and violence-related death data were not available for the year 2013. Thus, DALYs lost from deaths, physical and mental health outcomes and health risk behaviours attributable to childhood violence were estimated using the most recent comparable GBD estimates for the year 2012.

Each individual PAF (e.g., 'self-harm' or 'smoking') was matched with the closest possible cause category (WHO, 2014) or risk factor (WHO, 2009) from the GBD project. Data was used from both sources. To avoid double counting, the contribution of the cause categories to DALY loss under a given risk factor was removed, if PAFs for these cause categories were available separately. PAFs for the selected health and behavioural outcomes (mental distress, STIs, self-harm, smoking and problem drinking) were matched to definitions of 'neuropsychiatric conditions', 'sexually transmitted diseases excluding HIV', 'self-inflicted injuries', 'tobacco use' and 'alcohol use' from the GBD estimates (WHO, 2014; WHO, 2009). Details on the matching process can be found elsewhere (Fang et al., 2015). Some PAFs (IPV perpetration and moderate injuries resulting from interpersonal violence) were eventually excluded, as there were no corresponding GBD cause or risk factor categories. Some of these exclusions may underestimate the burden, making this a conservative approach.

A method employed by WHO (2001) and Brown (2008) was used to convert the DALY losses into a monetary value. This method assumes that one DALY is equal to the country's per-capita GDP. In other words, it is assumed that one year lost due to either disability or mortality (one year lived with disability or one year of life lost) is one year lost from the productive capacity of a country's economy and can therefore, on average, be approximated by the per capita GDP– the 'human capital' approach to valuing DALYs. However, some argue that this may over-count costs, as productivity may not be lost completely from disability. Others have argued it may under-count costs, as the value of quality of life is not reflected in GDP.

Data on population, 2013 GDP, and 2013 GDP per capita for Cambodia were obtained from the National Institute of Statistics of the Ministry of Planning, Cambodia. After merging the DALY loss, GDP and GDP per capita into a single database by health outcome and type of childhood violence, the economic value of DALYs lost due to each type of childhood violence from a specific health outcome or health risk behaviour was calculated by multiplying the estimated DALY loss in 2013 by the 2013 GDP per capita. In addition, the value of DALYs lost as a percentage of total GDP in 2013 was calculated for each type of childhood violence.

DALYs lost from productivity losses attributable to childhood violence

As well as health outcomes and health risk behaviours, the marginal effects of childhood violence on children's educational attainment were examined (whether the respondent obtained some post-secondary education). For example, a marginal effect of -0.06 for physical violence on the obtainment of some post-secondary education indicates that experiencing childhood physical violence decreases a child's likelihood of obtaining post-secondary education by 6 per cent. Combined with the data on the annual income difference by educational attainment (for example, the income difference between people who obtained primary or lower education and those who obtained some secondary or higher education), the productivity loss due to childhood violence was calculated by multiplying the marginal effects of childhood violence on educational attainment by the income difference with different levels of educational attainment. Lall and Sakellariou (2010) evaluated education premiums in Cambodia over the past decade using data from the 1997, 2003-2004 and 2007 Socio-economic Surveys of Households. They found that workers with primary or lower education in 2007, on average, earned 36.6 per cent less than those with secondary or higher education. In 2013, the average income in Cambodia was about US$800 per year. Based on these findings, the annual income difference between workers with primary or lower education and those with secondary or higher education would be about US$293.

Section 3: Results

3. RESULTS

Table 1 (Appendix A) presents the prevalence estimates by sex for physical violence, emotional violence and sexual abuse prior to age 18. More than half of all Cambodian children reported some form of physical violence prior to age 18 by an intimate partner, parent or adult relative, or community member. Roughly one-quarter of Cambodian children are emotionally abused while growing up: 22 per cent of females and 26 per cent of males aged 13 to 24 reported emotional violence by a parent, caregiver or other adult relative prior to age 18. About 5 per cent of both females and males aged 13 to 24 reported some form of sexual abuse prior to age 18.

Table 2 (Appendix B) presents the PAFs for health consequences associated with each type of childhood violence by sex. Gender differences exist in the links between childhood violence and health consequences. For males, 24.1 per cent of smoking, 13.6 per cent of problem drinking and 59.7 per cent of moderate injuries following interpersonal violence were attributable to childhood physical violence. Childhood physical violence was not significantly associated with self-harm, mental distress, STIs and IPV perpetration. In contrast, for females, 37.0 per cent of self-harm, 32.9 per cent of STIs, 11.7 per cent of mental distress, 10.4 per cent of problem drinking, 33.7 per cent of IPV perpetration and 48.2 per cent of moderate injuries following interpersonal violence were attributable to childhood physical violence.

Childhood emotional violence contributed to 32.6 per cent of self-harm for females and 13.6 per cent for males. STIs were attributable to emotional violence for females (12.3 per cent), but this link was not significant for males. Mental distress was attributable to emotional violence for females and males (12.7 per cent and 26.4 per cent respectively). For females, 14.4 per cent of IPV perpetration and 29.3 per cent of moderate injuries following interpersonal violence were attributable to childhood emotional violence. For males, this was 21.5 per cent for IPV perpetration and 26.6 per cent for moderate injuries following interpersonal violence.

Childhood sexual abuse contributed to 5.0 per cent of self-harm, 1.6 per cent of STIs, 1.5 per cent of mental distress and 11.5 per cent of IPV perpetration for females. For males, childhood sexual abuse contributed 8.2 per cent to self-harm and 9.5 per cent to STIs.

Table 3 (Appendix C) presents the number of DALYs lost from violence-related deaths, selected health outcomes and risk behaviours that could be matched to GBD DALY categories. In 2013, an estimated 54 female children and 61 male children died in Cambodia as a result of violence or neglect, causing 4,604 DALYs lost for females and 5,283 DALYs lost for males. Although only a limited number of health outcomes could be considered, for females an estimated 33,092 DALYs lost were attributable to childhood physical violence, 32,049 DALYs lost were attributable to childhood emotional violence and 4,073 DALYs lost were attributable to childhood sexual abuse. For males, these numbers were 17,828 for childhood physical violence, 59,724 for childhood emotional violence and 4,447 for childhood sexual abuse. Combining the DALYs lost from violence-related deaths with those from health outcomes and health risk behaviours, the total number of DALYs Cambodia lost to violence against children in 2013 was 73,818 for females and 87,282 for males.

Table 4 (Appendix D) presents the aggregate economic burden of violence against children by combining the economic value of DALYs lost from violence-related deaths of children with the economic value of DALYs lost from health outcomes and health risk behaviours, and adding the economic value of DALY loss across different types of childhood violence. The details on this process can be found elsewhere (Fang et al., 2015). When converted into monetary value, the estimated minimum economic value of DALYs that Cambodia lost to the selected health consequences of violence against children in 2013 amounted to US$76.9 million for females and US$90.9 million for males. Overall, the estimated minimum economic loss from the health consequences of violence against children in Cambodia totalled US$168 million in 2013, accounting for 1.10 per cent of the country's GDP.

Regarding the impact of violence against children on educational attainment, the marginal effect of childhood physical violence on whether the respondent obtained post-secondary education was not significant for males. However, the marginal effect was significant for females (-5.8 per cent). This indicates that experiencing childhood physical violence decreases a female child's likelihood of obtaining post-secondary education by 5.8 per cent. Given that the annual income difference between workers with primary or lower education and those with secondary or higher education is about US$293, the productivity loss per female victim of childhood physical violence in 2013 was US$17. In 2013, the Cambodian female population aged 15 to 64 was about 4.9 million. Thus, in 2013, the total productivity loss attributable to childhood physical violence was US$83.3 million, accounting for 0.55 per cent of Cambodia's GDP.

Section 4: Discussion and Concluding Remarks

4. DISCUSSION AND CONCLUDING REMARKS

This is the first study to estimate the economic burden of aspects of violence against children in Cambodia. It is clear that violence is common in the lives of many Cambodian children. More than half of all Cambodian children experience some form of physical violence prior to age 18, and roughly one-quarter of Cambodian children are emotionally abused by a parent, caregiver or adult relative while growing up. About 5 per cent of Cambodian children reported some form of sexual abuse prior to age 18.

The associations of childhood violence with poor physical and mental health and health risk behaviours are substantial in Cambodia and consistent with international research. The adverse consequences of childhood violence affect not only individuals but by extension, families, communities and societies. More work is needed on the national child protection system in Cambodia to ensure that every child and young person who has experienced violence has access to the best possible care and support, and that perpetrators are held accountable for their actions.

The analysis of DALYs and economic costs has estimated that violence against children carries a considerable burden in Cambodia. The economic burden of the selected health consequences of violence against children totalled US$168 million in 2013, accounting for 1.10 per cent of the country's GDP. Productivity losses due to violence against children in 2013 totalled US$83.3 million, accounting for 0.55 per cent of the country's GDP.

As with any research study, there were several limitations that should be noted. The PAF-based approach is widely used in public health and epidemiologic literature and is recognized as a valid approach for estimating attributable burdens. However, PAFs may be sensitive to small changes in underlying parameters (prevalence and RR), and the implications can be significant when multiplied by an aggregate outcome. In some cases, small differences in one factor can have a large impact on the final results.

Although the prevalence of different types of childhood violence and the ORs associated with related health outcomes were carefully estimated based on the CVACS data, the results rest squarely on the quality of the CVACS data. The prevalence estimates of the CVACS may be underestimated, as the estimates are based on self-reported incidents of childhood violence. Prior research on inhibited disclosure in the Asian context shows that socially desirable response patterns are influenced by normative concerns, and the reluctance of victims to talk about their experience may explain a pattern of disclosure that is affected by levels of stigma (Finkelhor et al., 2013). Attitudes towards children, openness in discussing sexual experiences, and sexual double standards for females and males not only promote sexual abuse but also inhibit victims from reporting it when it occurs. (Finkelhor et al., 2013) The relatively low prevalence of childhood sexual abuse among children in Cambodia could be due to a lack of readiness of adolescents and young people in Cambodia to report their sexual abuse experiences. This is particularly true for school-aged children who may be likely to under-report sexual assaults for fear of family shame, taboos about sex and sexual violence, and a lack of support from social services. Due to the relatively low prevalence of childhood sexual violence, the significance level was set at 0.20 for sexual abuse. This may introduce an additional source of bias to the estimates presented.

PAFs of health outcomes were matched as close as possible to the most appropriate burden measures from the GBD project. However, not all available childhood violence consequence studies had matching GBD outcomes, and for those that did, some were limited by the definitions and levels of aggregation used in the GBD categories.

The aggregate costs of violence against children were calculated by adding the PAFs and the economic value of DALY loss across different types of childhood violence. However, many health outcomes or risk behaviours are caused by multiple risk factors, and individual risk factors may interact in their impact on overall risk of disease or risk behaviour. As a result, PAFs for individual risk factors often overlap and add up to more than 100 per cent, which may lead to overestimation of the economic burden.

The end result of this report is an estimate of the burden of violence against children in Cambodia in terms of cost (dollars). If costs per outcome were available at the same level as the PAFs, no multiplication by DALYs would have been carried out. Since these data were not available, the PAFs serve as a proxy for a dollars-to-DALY conversion. Following WHO (2001) and Brown (2008), it was assumed that the economic value of one DALY is equal to the value of one year of the country's GDP. Although this human capital approach is common and has precedent, the value of children's time is less clear. It is likely that many are not fully active in the labour market and producing a full GDP per capita. Their lives are valued the same, but a strict 'cost to labour market' human capital approach may not include or value their time in the same way during childhood years.

The adjusted ORs for associations between the different types of childhood violence and the related health outcomes were estimated based on the CVACS data, which came from a cross-sectional survey. Because cross-sectional studies offer a snapshot of a single moment in time and do not consider what happens before or after the snapshot is taken, they may not provide definite information about cause-and-effect relationships. Thus, the ORs from the cross-sectional studies could overestimate the real causal relationships.

While it is essential to minimize overestimation, there are many sources of underestimation. Due to data being unavailable, many serious consequences of violence against children, including higher levels of healthcare utilization, could not be included in the analysis. Other costs that were excluded from this analysis include costs related to the legal and justice system, special education costs and child welfare costs. Some outcomes from the CVACS (such as suicidal ideation, illicit drug use and IPV perpetration) were excluded from this analysis because no DALY data were available or the CVACS included too few cases to infer reliable estimates. Others (such as moderate injuries caused by interpersonal violence) were excluded because no non-exposed comparison group was available. The exclusion of these outcomes may significantly underestimate the economic burden of childhood violence.

The present study approximated fatal cases of childhood violence by only including violence-related deaths among children aged 0 to 14 years, as data on violence-related deaths for WHO member states were only available for the 0 to 14 year age group. Because of this, violence-related deaths for 15- to 18-year-olds were not included for the estimation of DALYs lost from fatal cases of childhood violence. Suicide deaths among children were excluded from the estimation, but other studies have shown that some suicide deaths can be linked directly to violence against children. Thus, the total incidence of fatal cases of childhood violence, as well as the economic burden of violence against children, may be underestimated.

Since the data used for this analysis came from a household survey, the experiences of children living outside of family care (e.g., street children, children living in orphanages) were not included. These children are likely to be at higher risk of victimization, so the results from a household sample are likely conservative estimates of true prevalence. Some forms of violence, such as neglect, were excluded. Childhood emotional violence in the CVACS only relates to perpetration by parents, caregivers or other adult relatives; emotional violence perpetrated by friends or peers, or other community members including teachers was excluded from the prevalence estimate. Prevalence estimates of physical violence, emotional violence and sexual abuse may be underestimated as they are based on self-reported incidents of violence.

Despite its limitations, this study adds important new results to gauge the economic burden of violence against children and to address the lack of scientific knowledge in Cambodia. The findings following this analysis are key to understanding the consequences of childhood violence; the economic costs incurred by individuals, families and society at large; and ultimately, the need to invest in strengthening the national child protection system.

The economic burden of violence against children in Cambodia is substantial. The data generated as part of this analysis will help raise the awareness of policy makers on the lifetime economic impacts of childhood violence, guiding budget allocation and investment.

APPENDIX A

Table 1: The prevalence of violence against children experienced prior to age 18, as reported by 13 to 24 year olds

	Females (N=1121)		Males (N=1249)	
	%	95% CI	%	95% CI
Childhood Physical Violence	56.4	52.0 - 60.8	56.0	52.3 - 59.7
Childhood Emotional Violence	21.5	18.5 - 24.6	26.1	22.9 - 29.3
Childhood Sexual Abuse	5.2	3.5 - 6.9	5.4	3.8 - 7.0

APPENDIX B

Table 2: Population attributable fractions for health outcomes associated with violence against children by sex							
	Health Outcome						
	Smoking	Problem Drinking	Self-harm	STIs	Mental Distress	IPV Perpetration	Moderate Injuries following interpersonal violence
Females							
Childhood Physical Violence	-	10.4%	37%	32.9%	11.7%	33.7%	48.2%
Childhood Emotional Violence	-	-	32.6%	12.3%	12.7%	14.4%	29.3%
Childhood Sexual Abuse	-	-	5.0%	1.6%	1.5%	11.5%	-
Males							
Childhood Physical Violence	24.1%	13.6%	-	-	-	-	59.7%
Childhood Emotional Violence	-	-	13.6%	-	26.4%	21.5%	26.6%
Childhood Sexual Abuse	-	-	8.2%	9.5%	-	-	-

APPENDIX C

Table 3: Estimates of DALYs lost because of violence against children								
	# of deaths due to violence against children	DALYs lost to deaths	DALYs lost to health consequences					TOTAL
			Smoking	Problem Drinking	Self-harm	STIs	Mental Distress	
Females								
Childhood Physical Violence			-	939	9045	1409	21699	33092
Childhood Emotional Violence			-	-	7969	527	23553	32049
Childhood Sexual Abuse			-	-	1222	69	278	4073
TOTAL	**54**	**4604**	**-**	**939**	**18236**	**2005**	**48034**	**73818**
Males								
Childhood Physical Violence			11766	6062	-	-	-	17828
Childhood Emotional Violence			-	-	6539	-	53185	59724
Childhood Sexual Abuse			-	-	3943	504	-	4447
TOTAL	**64**	**5283**	**11766**	**6062**	**10482**	**504**	**53185**	**87282**

APPENDIX D

Table 4: Estimated economic value of DALYs lost to violence against children in 2013 as a percentage of gross domestic product (GDP)

	Economic value of DALYs lost from deaths (US$)	Economic value of DALYs lost from health outcomes (US$)					Aggregate Costs	
		Smoking	Problem Drinking	Self-harm	STIs	Mental Distress	US$	% GDP
Females								
Childhood Physical Violence	-	-	978469	9423390	1468382	22606867	34477107	0.23%
Childhood Emotional Violence	-	-	-	8302770	548969	24539077	33390817	0.22%
Childhood Sexual Abuse	-	-	-	1273431	71411	2898316	4243158	0.03%
TOTAL	**4796602**	**-**	**978469**	**18999591**	**2088762**	**50044260**	**76907685**	**0.50%**
Males								
Childhood Physical Violence	-	12258454	6315364	-	-	-	18573818	0.12%
Childhood Emotional Violence	-	-	-	6812760	-	55410493	62223253	0.41%
Childhood Sexual Abuse	-	-	-	4107693	525171	-	4632864	0.03%
TOTAL	**5504400**	**12258454**	**6315364**	**10920453**	**525171**	**55410493**	**90934335**	**0.60%**
National								
Childhood Physical Violence	-	12258454	12258454	9423390	1468382	22606867	53050925	0.35%
Childhood Emotional Violence	-	-	-	15115530	548969	79949571	95614070	0.63%
Childhood Sexual Abuse	-	-	-	5381124	596582	2898316	8876022	0.06%
TOTAL	**10301002**	**12258454**	**12258454**	**29920044**	**2613933**	**105454754**	**167842019**	**1.10%**

APPENDIX E

Table 5: Odds Ratios and Relative Risks

	Health Outcome													
	Smoking		Problem Drinking		Self-harm		STIs		Mental Distress		IPV Perpetration		Moderate Injuries following interpersonal violence	
	OR (95% CI)	RR	OR (95% CI)	RR	OR (95% CI)	RR	OR (95% CI)	RR	OR (95% CI)	RR	OR (95% CI)	RR	OR (95% CI)	RR
Females														
Childhood Physical Violence	-	-	1.5*** (1.10 - 2.05)	1.20	2.13*** (1.17 - 3.87)	2.04	2.39*** (1.66 - 3.45)	-	1.41*** (1.03 - 1.93)	1.23	2.06*** (1.20 - 3.56)	1.90	3.09*** (1.23 - 7.75)	3.00
Childhood Emotional Violence	-	-	-	-	3.64*** (1.88 - 7.06)	3.25	2.17*** (1.52 - 3.11)	-	2.77*** (1.89 -4.07)	1.66	1.95*** (1.06 - 3.60)	1.78	4.44*** (2.15 - 9.18)	4.11
Childhood Sexual Abuse	-	-	-	-	2.16* (0.72 - 6.55)	2.01	1.53* (0.79 - 2.96)	-	1.64* (0.79 -3.43)	1.30	5.00*** (1.78 - 14.04)	3.49	-	-
Males														
Childhood Physical Violence	1.75*** (1.24 - 2.48)	1.57	1.86*** (1.35 - 2.57)	1.28	-	-	-	-	-	-	-	-	7.72*** (1.86 - 32.06)	7.57
Childhood Emotional Violence	-	-	-	-	1.65** (0.92 - 2.95)	1.61	-	-	3.97*** (2.72 - 5.80)	2.38	2.14*** (1.16 - 3.94)	2.05	3.16*** (1.38 - 7.25)	3.09
Childhood Sexual Abuse	-	-	-	-	2.87*** (1.27 - 6.49)	2.65	3.45*** (1.76 - 6.76)	2.93	-	-	-	-	-	-

*** p<0.05; ** p<0.10; * p<0.20

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