

## 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, as well as identifying 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 the 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 Gross Domestic Product (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.

# The Economic Burden of the Health Consequences of **Violence Against Children in Cambodia** Executive Summary



Introduction

Violence against children exists in every country in the world, cutting across culture, class, education, income and ethnic origin. 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 a few 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 on 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 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. But the systematic review helped to 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 on violence against children 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 provide, for the first time, national estimates that describe 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 the 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 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 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.

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.

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 a 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 of 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, 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 at such a critical level 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.