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#### Research article

#### The economic burden of child sexual abuse in the United States



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#### ARTICLE INFO

#### ABSTRACT

Keywords: Child sexual abuse Economic burden Cost analysis The present study provides an estimate of the U.S. economic impact of child sexual abuse (CSA). Costs of CSA were measured from the societal perspective and include health care costs, productivity losses, child welfare costs, violence/crime costs, special education costs, and suicide death costs. We separately estimated quality-adjusted life year (QALY) losses. For each category, we used the best available secondary data to develop cost per case estimates. All costs were estimated in U.S. dollars and adjusted to the reference year 2015. Estimating 20 new cases of fatal and 40,387 new substantiated cases of nonfatal CSA that occurred in 2015, the lifetime economic burden of CSA is approximately \$9.3 billion, the lifetime cost for victims of fatal CSA per female and male victim is on average \$1,128,334 and \$1,482,933, respectively, and the average lifetime cost for victims of nonfatal CSA is of \$282,734 per female victim. For male victims of nonfatal CSA, there was insufficient information on productivity losses, contributing to a lower average estimated lifetime cost of \$74,691 per male victim. If we included QALYs, these costs would increase by approximately \$40,000 per victim. With the exception of male productivity losses, all estimates were based on robust, replicable incidence-based costing methods. The availability of accurate, up-to-date estimates should contribute to policy analysis, facilitate comparisons with other public health problems, and support future economic evaluations of CSAspecific policy and practice. In particular, we hope the availability of credible and contemporary estimates will support increased attention to primary prevention of CSA.

#### 1. Introduction

The present study aims to estimate the U.S. economic impact of child sexual abuse (CSA), defined by the World Health Organization (WHO) as the involvement of a child in sexual activity that he or she does not fully comprehend, is unable to give informed consent to, or for which the child is not developmentally prepared and cannot give consent, or that violates the laws or social taboos of society. [CSA] is evidenced by this activity between a child and an adult or another child who by age or development

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<sup>&</sup>lt;sup>1</sup> The findings and conclusions in this report are those of the author and do not necessarily represent the official position of the Centers for Disease Control and Prevention.

is in a relationship of responsibility, trust or power, the activity being intended to gratify or satisfy the needs of the other person (World Health Organization, 1999, p. 15–16).

This definition includes commercial sexual exploitation and use of children in pornographic performance and materials and defines "child" as anyone under the age of 18 years except where the legal age of majority is lower than 18 years. That CSA represents a grave public health problem is indisputable. Estimated lifetime prevalence rates of exposure to CSA by age 18 years are 26.6% for U.S. girls and 5.1% for U.S. boys (Finkelhor, Turner, Shattuck, & Hamby, 2015). International rates of exposure vary markedly but are often higher in low- and middle-income countries. For example, rates of CSA exposure varied from 26%–38% for girls and from 9%–21% for boys in Haiti, Kenya, Swaziland, and Zimbabwe (CDC, 2012).

The effects of CSA exposure extend well beyond the immediate act of harm and include increased risk for development of severe mental, physical, and behavioral health disorders across the lifecourse (Dong, Giles, Felittie, Dube, & Anda, 2004; Molnar, Buka, & Kessler, 2001; Noll, Horowitz, Bonanno, Trickett, & Putnam, 2003; Noll, Zeller, Trickett, & Putnam, 2007; Putnam, 2003). Exposure to CSA is also associated with increased risk for sexually transmitted diseases including HIV (Sommarin, Kilbane, Mercy, Maloney-Kitts, & Ligiero, 2014), as well as self-inflicted injury, substance abuse, and violence (Molnar et al., 2001; Noll et al., 2003, Noll et al., 2007; Putnam, 2003). Moreover, CSA confers considerable risk for subsequent victimization and criminal offending (Ogloff, Cutajar, Mann, & Mullen, 2012). Given these negative outcomes, it is not surprising that CSA also reduces quality of life even after accounting for the effects of more proximal mental and physical health disorders, particularly among women who survived more severe forms of abuse (Dickinson, deGruy, Dickinson, & Candib, 1999).

The prevalence of CSA, the serious sequelae associated such abuse, and the fact that it is preventable has earned CSA a berth among the 24 risk factors identified by the WHO as substantively contributing to the global burden of disease (Mathers, Stevens, & Mascarenhas, 2009). In the U.S., CSA ranks 12th among preventable risk factors and accounts for 0.7% of the U.S. burden of disease (U.S. Burden of Disease Collaborators, 2013). Several studies have quantified the burden of child maltreatment in terms of potential economic impact (Fang et al., 2015a, Fang, Fry, & Brown, 2015b; Fang, Brown, Florence, & Mercy, 2012). Most notably, Fang et al. (2012)) used an incidence-based approach and conservative assumptions to estimate the total economic burden of all types of child abuse and neglect in the United States to be \$124 billion in 2008 or \$210,012 per case in 2010 dollars. This study did not distinguish costs by different types of abuse or neglect, and had a series of limitations discussed by the authors, including the exclusion of health-related quality of life.

To our knowledge, just three studies have estimated the economic burden specific to CSA. In a U.S.-based white paper, Miller, Cohen, and Wiersema, 1996) estimated victim-related tangible costs (i.e., productivity losses, medical care, police/fire services, social/victim services, and property loss/damage) and intangible costs (i.e., quality of life) associated with 20 types of criminal victimization including CSA. The cost attributed to each CSA victim (\$125,000) was higher than that attributed to child physical abuse victims (\$77,000) or child emotional abuse victims (\$30,000) and CSA had the highest monetized losses per victimization/victim type, except for murder. Annual losses due to CSA were estimated as \$23 billion. Limitations of the study include its age (20 years out of date), exclusion of some costs not borne directly by victims, exclusion of known impacts (e.g., education), and limited methodological detail. A Canadian study by Hankivsky and Draker (2003) is, to our knowledge, the only peer-reviewed study of the economic burden of CSA. They utilized a prevalence-based method to estimate the impact of CSA in fiscal year 1998. Cost categories included mental and physical health, social and public services, justice, education/employment, mortality, and work loss. Annual losses were estimated as approximately CAN\$3.70 billion, although methods detail is limited. The most recent study is a white paper by Saied-Tessier (2014), which also utilized a prevalence-based method for estimating the cost of CSA in the UK for fiscal year 2013. Tangible cost categories included health, criminal justice, services for children, and lost productivity to society; intangible, quality-of-life costs were estimated separately. Results varied markedly for low and central estimates of tangible (£1.6 billion vs. £3.2 billion) and especially of intangible (£0.9 vs. £38 billion) costs.

Addressing the scientific and policy gaps with an updated, rigorous estimate of the economic burden of CSA in the United States is critical for drawing attention to the need for more robust CSA prevention efforts in the U.S. (Letourneau, Eaton, Bass, Berlin, & Moore, 2014). Moreover, as noted by Corso and Fertig (2010) and others (e.g., Byford, Torgerson, & Raftery, 2000), credible, contemporary "cost of illness" estimates can be used to help shape public health policy by (1) identifying the costliest sequelae of a specific public health problem, (2) providing a basis for comparing the economic impact of different public health problems, and (3), providing the basis for evaluating the cost effectiveness of prevention and treatment interventions—all of which are relevant data for policymakers who plan and prioritize funding and resources (Byford et al., 2000). More generally, estimates of economic impact help draw additional attention to a given public health problem, in part by demonstrating the depth of impact on the individual and society and hence the potential salience of effective prevention efforts, even to those who do not believe they are directly impacted by the problem (Byford et al., 2000; Corso & Fertig, 2010; Hankivsky & Draker, 2003). Therefore, the present study aims to provide an accurate and up-to-date estimate of the U.S. economic impact of CSA.

#### 2. Methods

#### 2.1. General overview

This study measured costs of CSA from the societal perspective. All costs were estimated in U.S. dollars and adjusted to the reference year 2015 using the gross domestic product (GDP) deflator (available from https://fred.stlouisfed.org/series/GDPDEF/). Future costs associated with CSA accumulating over time were discounted at 3% to reflect their present value, as suggested by Sanders and colleagues (Sanders et al., 2016).

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