Helpdesk Research Report: Monetary values of the private psychological costs of VAWG
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Query: What monetary values have been placed on the private psychological costs of violence against women and girls, such as fear, depression, disempowerment and low self-esteem?

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1. Overview

Violence against women and girls is not only an important human rights and development issue, but there is increasing evidence that the economic and social costs are considerable. Several studies have calculated the direct costs to the medical, judicial and penal systems, as well as the economic losses incurred by victims. However, few studies have attempted to quantify the private psychological costs of violence, although these are considered to be significantly greater than other costs (WHO, 2004). This report examines what monetary values have been placed on these intangible costs, the methodological approaches used, some of the challenges involved, gaps in the research, and the rationale for measuring these costs.

Costing violence

Studies that have attempted to document the economic costs of violence often distinguish between direct and indirect costs:

- **Direct costs** arise directly from acts of violence and require actual payments by individuals or institutions. They can be further divided into medical and non-medical costs.

- **Indirect costs** are harder to quantify and typically do not factor into budgets. They refer to lost resources and opportunities resulting from violence. Studies tend to focus on the tangible costs such as reduced productivity or output by the victim. Also included in indirect costs are intangible costs such as pain and suffering, and reduced quality of life (WHO/CDC, 2008).

The table below shows the different components involved in direct/indirect costs, using the World Health Organisation’s typology for costing violence.
### Typology for Costing Violence

<table>
<thead>
<tr>
<th>Cost category</th>
<th>Type of cost</th>
<th>Components</th>
</tr>
</thead>
</table>
| Direct costs  | Medical      | Hospital inpatient  
                        Hospital outpatient  
                        Transport/ambulance  
                        Physician  
                        Drugs/laboratory tests  
                        Counselling |
|               | Non-medical  | Policing and imprisonment   
                        Legal services  
                        Foster care  
                        Private security |
| Indirect costs| Tangible     | Lost productivity (earnings and time)  
                        Lost investments in social capital  
                        Life insurance  
                        Indirect protection  
                        Macroeconomic |
|               | Intangible   | Health-related quality of life (pain and suffering, psychological)  
                        Other quality of life (reduced job opportunities, access to schools and public services, participation in community life) |

Source: WHO/CDC (2008)

Violence has been linked to a variety of different health-related quality of life and psychological outcomes, both immediate and long-term. Based on an analysis of the scientific literature, the World Health Organisation (2002) has identified some of the following psychological and behavioural consequences associated with VAWG:

- Alcohol and drug abuse
- Depression and anxiety
- Eating and sleep disorders
- Feelings of shame and guilt
- Phobias and panic disorder
- Physical inactivity
- Poor self-esteem
- Post-traumatic stress disorder
- Psychosomatic disorders
- Smoking
- Suicidal behaviour and self-harm
- Unsafe sexual behaviour

Most cost studies do not calculate these intangible costs because of their subjective nature and the difficulty involved in estimating their value in monetary terms (Envall and Eriksson, 2006). Intangible costs of VAWG are often seen as a "large black box that is rarely deconstructed and rarely estimated" (Duvvury et al, 2004, p.16). Sections 3 and 4 outline some of the few studies which have attempted to cost these intangible, indirect costs of VAW.
Methodological approaches
The most common methods used to estimate the private psychological costs of violence include:

- **Willingness to accept** calculations are based on jury awards to compensate individuals who have been affected by violence. For example, Miller and Cohen (1994) looked at jury awards for 361 rape survivors and found the typical portion designed to compensate the victim for pain, suffering and lost quality of life (ignoring punitive damages) was $81,400. This amount was then applied to the actual distribution of crime victims in the project’s data set to calculate a total quality of life cost in the US (1993) of US$118 billion per year. Walby (2004) used a similar approach in the UK to estimate a figure of almost £14 billion for the ‘human and emotional’ costs of rape and other forms of sexual assault (2001).

- **Disability Adjusted Life Years (DALY):** a time-based measure that combines years of healthy life lost due to premature mortality, pain and suffering. For example, interpersonal violence (including not only the injury burden but also the long-term mental and behavioural consequences) accounted for 840,000 DALYs or 10.2% of all DALYs in South African females in 2000 (Norman et al, 2010). DALYs can then be converted to a monetary figure by assigning a value to a statistical life year (VSL). For example, Access Economics (2004) calculated the total cost of pain, suffering and premature death from domestic violence in Australia was Aus$3.5 billion (2002-3), by multiplying the DALYs lost to violence by $162,561 (the VSL). DALYs can also be useful for comparing the relative burden of death and disability caused by different health problems. Lozano (1999) estimated that rape and family VAW were the third most important cause of DALYs lost in Mexico City - behind diabetes and perinatal conditions, but ahead of auto accidents, congenital anomalies, rheumatoid and osteo-arthritis, cardiovascular disease, stroke and pneumonia (cited in Bott et al, 2005). Using Population Attributable Fractions (PAF), it is also possible to attribute VAWG on selected health outcomes. For example, in a recent South African study (Norman et al, 2010), an estimated 24% of all post-traumatic stress disorder among females could be attributed to child sex abuse, as could 14% of all panic disorders and 9% of all depression. The study also looked at PAFs for inter-personal violence against women and found the highest PAF was for femicides (45%), followed by self-inflicted injuries (36%) and tobacco smoking (23%).

- **Propensity Score Matching (PSM)** is a useful tool for comparing the mean outcomes – such as earnings loss, labour force participation rates or educational outcomes – of those who experience violence and those who have not experienced violence (Duvvury et al, 2004). PSM can be used to pair women who have been victims of violence with a suitable control group - those who have not been victimised, but have similar estimated a-priori probabilities of being victimised. PSM was used on a cross-country basis to estimate the impacts of gender-based violence in Peru, Haiti, and Zambia on women’s health outcomes, use of health services and labour force participation, as well as the impact on children’s health outcomes and educational performance (Morrison and Orlando, 2004). Corso (2008) also used PSM to compare health-related quality of life data of adults who reported childhood maltreatment or abuse with those who did not.

As Sections 2 and 3 will show, a variety of methodological approaches have been used to calculate the monetary value of private psychological costs of VAWG. Morrison and Orlando (2004) have observed that “there is no perfect methodology with which to gauge the costs and impacts of GBV. All methodologies have strengths and weaknesses, and the challenge is to choose the appropriate methodology given both data constraints and the potential consumers of the estimates” (pp.27-28). These large variations in the methodologies used to cost interpersonal violence means that it is
currently not possible to meaningfully compare directly across studies or calculate the global private psychological costs of VAWG (WHO, 2004). Monetising VAWG is also very culture-dependent: "the value of a statistical life cannot be used in an international context unless a new measure is made for each country" (Day et al, 2005, p.33).

Other challenges to costing include:

- **Difficulties establishing the prevalence** of VAWG. Sources available (crime/medical statistics and surveys of crime victims) do not necessarily provide reliable data or record all women and children affected.

- **Violence is not the same on every occasion or experienced in the same way.** As Envall and Eriksson (2006) have noted, psychological violence and intimidation and other types of emotional abuse may be very serious and extensive, but do not typically lead to visits to casualty departments in hospitals or to police reports.

- Most studies are **limited to intimate partner violence** and do not include all forms of violence against women and girls (e.g. Walby, 2004 and 2009; Rivara et al, 2007; Institute for Women of Andalusia, 2003).

- Costings only estimate the direct effects of violence on those who are killed or injured and do **not capture indirect effects** on other individuals (such as increased stress levels or other reductions in the quality of life due to the fear of violence) or on society more broadly (UNODC / World Bank, 2007).

- There is very little evidence about the long-term ‘monetary’ costs to girls affected by violence and the children of women victims – the ‘second generation costs’. Many studies have found that VAW affects the welfare and educational performance of children, both when they are victims themselves and/or being witness to their mother or other female relatives/role models being a victim. Children who witness marital violence are at a higher risk for a whole range of emotional and behavioural problems, including anxiety, depression, poor school performance, low self-esteem, disobedience, nightmares and physical health complaints (WHO, 2002). Violence can also impact upon children’s use of violent conduct in their own relationships. For example, boys who grow up witnessing domestic violence against women are more likely to be future abusers, while girls who witness domestic violence are more likely to be future victims (Morrison and Orlando, 1999).

- **Under-calculation of the ‘ripple effects’** of the private psychological costs of violence, not only on children, but also how fear, the loss of self-esteem, shame, and disempowerment impacts upon women’s isolation, inability to work, lack of participation in regular activities, loss of contact with friends and family members, etc. (WHO, 2011).

**Why include pain and suffering in costing VAWG?**
While there are considerable challenges involved in monetising the pain and suffering involved in VAWG, Day et al (2005) have put forward a strong case why it is important to estimate these costs (albeit with estimates of intangibles presented separately and with caveats):

- **Useful for policy-makers when deciding upon which crimes should have priority in legislation and spending programs.** Including pain and suffering gives a more accurate measure of the
magnitude of the impact of violence on a victim’s life and thus society as a whole. For example, Miller et al (1996) compared the economic costs of rape at $US 7.5 billion per year with the higher costs of larceny (theft of personal property) at $US 9 billion. However, when the pain and suffering of rape were included in the analysis, the measure increased substantially to US $127 billion.

- It validates victims’ experiences and shows that their suffering ‘counts for something’ in society.
- Measuring intangible costs is commonly used in the court system and therefore has credibility (within high-resource countries at least).

The World Health Organisation has argued that VAW is an urgent public health priority, with huge economic costs, including the direct costs to health, legal, police and other services. It notes that in many low-resource settings, although relatively few women may seek help from formal services, the overall costs are substantial because of the high prevalence of violence (Garcia-Moreno and Watts, 2011). Estimating all costs of violence against women (including the intangible psychological costs) can help ensure that VAW is ranked equitably in terms of investment when it comes to resource allocation and priority-setting within country (WHO, 2007).

Sections 2 and 3 overleaf outline what monetary values have been placed on the private psychological costs of violence against women and girls. It categorises these studies into ‘high-resource’ and ‘low-resource’ countries, using the WHO typology. Although there is a growing body of evidence about the economic costs of VAWG, this section only considers those studies which have looked at the private psychological costs.
### 2. Examples of monetary values placed on the private psychological costs of VAW

<table>
<thead>
<tr>
<th>Study</th>
<th>Cost</th>
<th>Methodological approach</th>
<th>Strengths¹</th>
<th>Weaknesses</th>
</tr>
</thead>
<tbody>
<tr>
<td>UK Walby (2004 and 2009)</td>
<td>Over £17 billion in the ‘human and emotional’ costs of rape and other forms of sexual assault (2001) – of this almost £14 billion is for domestic violence against women and £3 billion for domestic violence against men. An updated costing led to a decrease in cost to almost £10 billion (2008) due to: a decrease in the rate of domestic violence in the UK; greater use of public services by victims; and technical adjustments due to inflation and to growth in GDP. The 2008 figures are not disaggregated between men/women.</td>
<td>Based on the ‘Willingness-To-Pay’ (WTP) approach, which places a value on the amount of money which would be considered a reasonable financial sum to compensate the victim for the upset and inconvenience suffered. The amount varied by the type of violence suffered: - £750,640 for a domestic homicide. - £104,300 for ‘choked or strangled’; ‘used a weapon’; rape and assault by penetration; or rape. - £7,640 for ‘kicked, hit with fist’. - £240 for ‘stalking’; non-penetrative sexual assault; ‘threat to kill’; ‘threatened with weapon’; or ‘pushed, held, slapped’.</td>
<td>Very comprehensive and careful. Very robust findings. Combines cost of violence literature with crime literature. Uses methodologies tied to prior research papers by the UK Home Office and expert consultations.</td>
<td>No attributable fractions. Limited to domestic violence and does not include all forms of gender-based violence or VAWG.</td>
</tr>
<tr>
<td>USA Cohen and Miller (1994); Miller et al. (1996)</td>
<td>The average rape was calculated as $81,400 in quality of life damages. As 1.1 million rape victims suffer 1.45 million rape victimizations annually, this is a total quality of life cost in the US (1993) of US$118 billion per year.</td>
<td>The research team analysed jury awards to crime victims, including 361 rape survivors. The study ignored jury awards for punitive damages and concentrated only on the portion of the jury verdict designed to “compensate” the victim for pain, suffering, and lost quality of life. This functional relationship was then applied to the actual distribution of crime victims in the project’s data set.</td>
<td>Provides a comprehensive listing of potential costs. Good data, careful analysis. Includes pain and suffering, and deaths.</td>
<td>Is not able to estimate many costs in its comprehensive list. Details of assumptions and estimates are not shown in the text. Some weak assumptions and rough estimates. No differential analysis.</td>
</tr>
</tbody>
</table>

¹ Strengths and weaknesses of studies in ‘high-resource’ countries, based on analysis by Day et al (2005).
<table>
<thead>
<tr>
<th>Country</th>
<th>Study Description</th>
<th>Strengths</th>
<th>Limitations</th>
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</thead>
<tbody>
<tr>
<td>Australia</td>
<td>The cost of pain, suffering and premature death from domestic violence was Aus$3.5 billion in 2002-03. Depression was the largest contributor to the burden (30% of the total), followed by anxiety disorders (23%), suicide and self-inflicted injuries (12%) and then other causes: substance abuse (of tobacco, alcohol and drugs) leading to secondary illness and injury.</td>
<td>The study uses a prevalence approach to capture all annual costs of domestic violence and its consequences. It allocated costs to seven categories, one of which was pain, suffering and premature mortality. The burden of suffering and premature death associated with domestic violence were calculated using the non-financial Disability Adjusted Life Year (DALY) approach to measure the years of life lost due to premature mortality and years of healthy life lost through pain and suffering. DALYs are then converted to a dollar figure by assigning a value to a statistical life year (VSL) - $162,561.</td>
<td>Very comprehensive discussion and analysis. Good data. Addresses efficiency costs of transfer costs appropriately. Good application of economic theory. Provides recommendations on wording of questions for future survey design.</td>
</tr>
<tr>
<td>Spain – Andalusia</td>
<td>The costs associated to physical and mental health of women were valued at 371 million Euro every year (16% of the total annual cost for Andalusian society of 2.4 billion Euro).</td>
<td>Uses itinerary or critical path for service use. A survey of 300 female victims of intimate partner violence looked at six theoretical ‘itineraries’ – social, health, judicial, psychological, economic independence or employment, and educational - that provide six different but complementary perspectives on the paths followed by the victims during the violent relationship. Costs for each area were estimated by a specialist from that area, using secondary sources.</td>
<td>Each area has been estimated by a specialist from that area.</td>
</tr>
<tr>
<td>Institute for Women of</td>
<td>Only includes low-income women who leave the abusive situation. Sample of 300 not statistically representative. Looks at partner and ex-partner violence only.</td>
<td>Based on economic concepts rather than social divisions. Not clear how some numbers are generated. Analysis not always shown.</td>
<td></td>
</tr>
<tr>
<td>Low-resource countries</td>
<td>Study</td>
<td>Cost</td>
<td>Methodological approach</td>
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</table>
| **Chile and Nicaragua** Morrison and Orlando (1999) | Cost to the economy of domestic violence:  
**Chile** - $1.56 billion (more than 2% of 1996 GDP)  
**Nicaragua** - $29.5 million (about 1.6% of 1996 GDP) | Sample surveys of more than 300 women in each country were conducted to gather data on the prevalence of domestic violence and impact on employment, wages, use of health services, and children's educational attainment. | One of the first studies in 'low-resource' countries to place a monetary value on the economic and social costs of domestic violence. | Does not include all costs, for example costs of providing counselling. Only looks at women who work. |
| **South Africa** Norman et al (2010) | Interpersonal violence (including not only the injury burden but also the long-term mental and behavioural consequences) accounted for **840,000 DALYs** or 10.2% of all DALYs in females in 2000. | Using a DALY approach, this study calculated the impact of interpersonal violence and child sex abuse on the health of South African men and women. The contribution of various risk factors were also quantified using the population attributable fraction (PAF). | One of the only studies to look at VAW beyond 'intimate' violence by partners and ex-partners. Looks at the impact of child sex abuse. The PAF is important for attributing VAW on selected health outcomes. | The value of a DALY was not calculated; therefore it was not possible to play an overall monetary cost. Data limitations restricted the scope of the study. |
| **Philippines** Yap (1998) | Estimated **P6 billion annual expenses** incurred by women victims of VAW for medical, psychological and crisis intervention. | Yap used a sample accounting of the expenses incurred by two cases at the Project HAVEN for medical, psychological and crisis intervention alone. Yap calculated the average monthly expense at P 6,083.30. Using the world average of 20% of the total Filipino women - 7.2 M women – and multiplying this by P 6,083.30 per victim per month, the monthly cost was calculated to be P437.976 M. In one year, this works out as P6 B to treat victims of VAW. | Attempts to place a monetary value on psychological treatment. | Not rigorous – based on a sample cost of two women at Project HAVEN. |
### Examples of monetary values placed on the private psychological costs of child abuse / maltreatment

<table>
<thead>
<tr>
<th>High-resource countries</th>
<th>Study</th>
<th>Cost</th>
<th>Methodological approach</th>
<th>Strengths</th>
<th>Weaknesses</th>
</tr>
</thead>
<tbody>
<tr>
<td>USA</td>
<td>Corso et al (2008)</td>
<td>Adults who self-reported any form of childhood maltreatment had a yearly loss of 0.03 Quality Adjusted Life Years (QALYs), or 11 days per year. Translated over a typical lifespan of an individual (aged 75 years, for example), these data suggest that persons who experienced childhood maltreatment have a marginal decrease in at least 2 years of undiscounted quality-adjusted life expectancy, compared with persons who did not.</td>
<td>Using data from a study of adults who reported adverse childhood experiences and current health status, adults who reported childhood maltreatment (n = 2812) were matched with a control group who reported no childhood maltreatment (n = 3356). <strong>Propensity score methods</strong> were used to compare the two groups and their health-related quality-of-life data.</td>
<td>Important first step for developing the benefits measure for use in economic evaluations. Use of a composite measure, such as the QALY, allows policy-makers to consider effects of interventions on length of life and quality of life simultaneously.</td>
<td>The retrospective nature of the self-report data raises some concerns about reliability. Unrepresentative sample group. Types of maltreatment were defined by a limited number of survey questions.</td>
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<table>
<thead>
<tr>
<th>Low-resource countries</th>
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<th>Strengths</th>
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</tr>
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<tbody>
<tr>
<td>Haiti, Peru and Zambia</td>
<td>Morrison and Orlando (2004)</td>
<td>Children of women who suffer physical violence by intimate partners are more likely to suffer poor health outcomes, such as: diarrhea (6.7 percentage points more likely in Peru), anaemia (19.2 percentage points more likely in Haiti), and be shorter in height (Peru). Women who suffer physical violence are more likely to use violence to discipline their children (Peru), leading to an inter-generational transmission of violence.</td>
<td><strong>Propensity score matching</strong> used to generate comparable, cross-country estimates of some of the impacts of GBV in Haiti, Peru and Zambia. Data used came from National Demographic and Health Surveys (DHS) which collect information at the individual and household level, including information about domestic violence.</td>
<td>First time PSM has been used on a cross-country basis to estimate the impacts of GBV. Using DHS means a large sample size and comparable data on VAWG and outcomes such as health status of women and their children.</td>
<td>No costs calculated. DHS tends to underestimate VAW, when compared to stand-alone violence surveys.</td>
</tr>
</tbody>
</table>
4. Sources


https://www.ncjrs.gov/pdffiles/victcost.pdf


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http://www.lancs.ac.uk/fass/sociology/papers/walby-costdomesticviolence.pdf

Walby, S., 2009, ‘The Cost of Domestic Violence’ (Updated)


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http://www.who.int/mediacentre/factsheets/fs239/en/
http://whqlibdoc.who.int/publications/2008/9789241596367_eng.pdf

Websites visited

Experts consulted
- Professor Sylvia Walby, UNESCO Chair in Gender Research & Professor of Sociology
- Dr. Alexander Butchart, Coordinator, Violence Prevention, WHO
- Dr. Phaedro Corso, Departmental Head, Health Policy and Management, University of Georgia

About Helpdesk research reports: Helpdesk reports are based on 2 days of desk-based research. They are designed to provide a brief overview of the key issues, and a summary of some of the best literature available. Experts are contacted during the course of the research, and those able to provide input within the short time-frame are acknowledged.