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**Economic and Social Commission for Western Asia (ESCWA)**

## **Estimating costs of marital violence in the Arab region: operational model**



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It would not have been possible without the efforts of several people. The lead author, Nata Duvvury, director of the Centre for Global Women's Studies at the National University of Ireland at Galway (NUI Galway), worked tirelessly to design and complete the study, including research and compiling data. The study benefited from the input of Mehrinaz El Awady, Director of the ESCWA Centre for Women, who reviewed initial drafts, and comments from Manal Benkirane, UN Women regional programme specialist.

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## Executive summary

The economic impact of violence against women (VAW), in particular, marital violence, is unexplored in the Arab region. ESCWA and UN Women are collaborating in this regard, in keeping with international calls to protect women from all forms of violence, and the resolution by the Committee on the Status of Women (CSW) noting the limiting effect of violence on women's economic empowerment.

Part of the first phase of the regional project entitled "Estimating the cost of violence against women", this report elaborates the basic economic model and options to estimate the costs of intimate partner violence (IPV). It comprises five sections. Section one presents an overview of the type of costs that constitute the total economic cost of violence. Section two elaborates approaches to costing, distinguishing between the cost of action and inaction as two distinct approaches, and discusses the factors that need to be considered when deciding the best economic costing model. Section three outlines the costing model for the region and section four discusses putting the model into operation, with specific options for estimating individual and household costs, the annual cost of service provision, business costs and national macro costs. Conclusions and key recommendations are included in section five.

The report focuses on three different entry points for costing marital violence in the region, by establishing the costs for individual women and their households, businesses, and government and other civil society actors in providing services. Any entry point will produce only a partial estimate, but over time, and as information systems become more robust, comprehensive estimates can be produced.

The report concludes, however, that a useful first approximation is the monetary costs incurred by women, such as out-of-pocket expenditure to mitigate the consequences of violence, as well as missed opportunities for paid and unpaid work, productivity loss measured through presenteeism (turning up for work when unwell), and missed education for women and children.

This partial estimate can lead to an estimate of the monetary cost for women and their families, and the cost of inaction at the national level.

To undertake vigorous cost estimation, the report recommends the following:

- Building awareness of the importance of conducting cost studies on all forms of VAW, particularly marital violence;
- Building costing capacity of Arab States;
- Investing in a dedicated survey on intimate partner violence and its economic impact;
- Strengthening capacity of service providers (police, courts, health facilities, non-governmental organizations, shelters) to monitor their financial costs;
- Enhancing capacity of national statistics offices to integrate violence questions into surveys;
- Enhancing capacity to apply gender-responsive budgeting in ministries and departments.

## Introduction

The model for costing marital violence envisioned for Arab states aims to: (a) estimate the annual cost of providing services in selected sectors, such as health, security and social services; (b) develop macro estimates of productivity loss; and (c) estimate the annual cost of marital violence at household level from spending on medical care, legal expenses and foregone income due to missed paid and unpaid work.

The proposed economic model is based on what is feasible in the Arab region given the legal and policy frameworks, lack of robust administrative information systems across sectors responsible for addressing violence against women (VAW), and availability of socioeconomic data.

This report, based on a review of international methodologies, proposes a costing model that fits the region and identifies the data required. The model includes the following costs of marital violence:

- Justice (policing, court proceedings, penal);
- Health (infrastructure, material cost, personnel);
- Social services (hotlines, shelters, information centres);
- Education (special education services);
- Foregone income (lost work time, actual leave time, missed unpaid care work);
- Household cost (out-of-pocket expenditures for services including medicines, transport and therapy).

Building on global research, the study expands understanding of the cost of VAW, and efforts by Arab states to address it, and fulfils commitments towards international obligations.

It is part of a two-phased regional project. Phase I includes two studies. The first, the forthcoming report on the status of Arab women, has been jointly developed by the Economic and Social Commission for Western Asia (ESCWA), the United Nations Entity for Gender Equality and the Empowerment of Women (UN Women) and the Institute for Women's Studies at the Lebanese American University (LAU), and acknowledges that VAW is a continuum, and can take various forms and be perpetrated by multiple actors in locations inside and outside the home. It concludes that physical, emotional and sexual violence by a husband within the marital relationship is the most common form of violence experienced by women in the Arab region (the focus of the study).

A key finding is the importance of estimating the cost of violence as an advocacy tool to address the implications for women. The study recommends that understanding the monetary cost, along with acknowledging the human rights violations, can provide policymakers with a complete picture of the implications for the individual, society and the national economy. To implement this recommendation, a costing model for the region that governments can apply must be developed.

This study, the second of phase I, builds on previous efforts and focuses on marital violence, also known as intimate partner violence.<sup>1</sup> It elaborates a basic economic model and options to estimate the cost of IPV.

Phase II of the project will build the capacities of Arab states to recognize the importance of estimating the cost of VAW as a tool for policy change. It will pilot the economic model in at least one country and support others to use information on the costs of violence for national reform.

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<sup>1</sup> In line with the first study of the regional project, "The status of Arab women report: violence against women – what is at stake" (E/ESCWA/ECW/2017/2), this study will use the terms marital violence and intimate partner violence interchangeably. Intimate partner violence is used in the West to refer to married and non-married couples. In the Arab region and for the purpose of this project, intimate partner violence is used to refer to married or engaged couples.

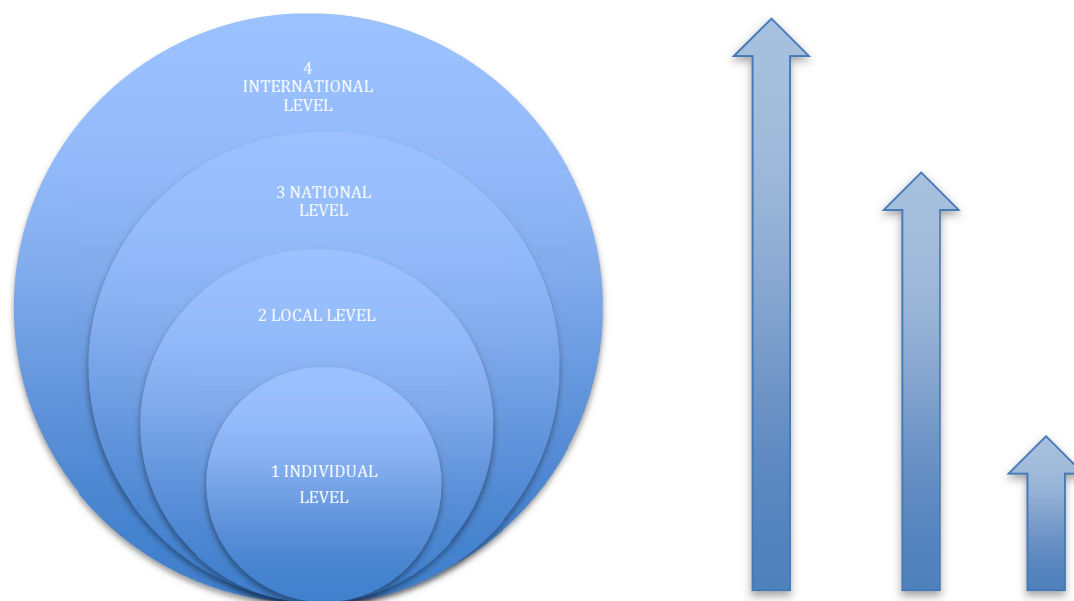
## I. OVERVIEW OF COSTS OF MARITAL VIOLENCE

The economic costs of marital violence essentially comprise direct and indirect costs that can be either easily monetized (tangible) or not (intangible). Costs can be divided as follows:

- **Direct tangible costs** represent the monetary expenditure to mitigate the impacts or prevent marital violence, and can be estimated through measuring goods and services consumed and multiplying by their unit cost. They are incurred by individual women;
- **Direct intangible costs** represent impacts that result from violence but cannot be easily assigned a value. For example, pain, suffering and humiliation experienced by survivors are real but difficult to quantify in monetary terms;
- **Indirect tangible costs** result from violence but rather than incurring direct expenditure, involve loss of potential. For example, foregone income because of missed work represents loss of opportunity to spend on needed/desired services and goods;
- **Indirect intangible costs** result indirectly from marital violence and are not easily assigned monetary value. For example, the next generation's consequent cognitive deficits, substance abuse and mental health problems can be difficult to quantify.<sup>2</sup>

A costing framework needs to acknowledge the burdens incurred at different levels. Whether the cost refers to the cost of inaction (socioeconomic impact that marital violence is producing), or the cost of action (implementing policies to address marital violence plus other direct tangible costs such as out-of-pocket expenses of violence survivors), they will be borne by a range of agents, as outlined in figure 1.

**Figure 1. Who is bearing the cost of marital violence?**



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<sup>2</sup> See Tanis Day, Katherine McKenna and Audra Bowlus, “The economic costs of violence against women: an evaluation of the literature”, expert brief compiled in preparation for the in-depth study of the Secretary-General of the United Nations on all forms of violence against women, 2005.

**Table 1. Type of costs by level**

<i>Level</i>	<i>Who is bearing the cost</i>	<i>Direct costs</i>	<i>Indirect costs</i>	<i>Intangible costs</i>
Individual	Survivors of intimate partner violence, perpetrators, other individuals (family members, peers, neighbours)	Out-of-pocket expenses	Income lost (missed working days), education lost (missed schooldays), household work lost	Suffering, pain, premature mortality, negative psychological effects on survivors, their children and others who witness violence, including older members within the household
Local	Community members (schools, workplaces)	Prevention activities, provision of services	Productivity loss, decrease of workforce quality, reduced labour force participation of women	Human capital loss over the long run
National	Government, non-governmental organizations (NGOs)	Prevention activities, provision of services, prosecution	Productivity loss	Human capital loss over the long run, impacting on economic growth, social tension and reduced social cohesion
International	International organizations, NGOs	Prevention activities, provision of services, prosecution		

## II. COSTING APPROACHES AND METHODS

The economic model to estimate the multiple costs of marital violence can adopt two approaches. The first focuses on costing the socioeconomic impact of VAW, which attempts to estimate the cost of inaction, or the cost of the problem. The second approach focuses more narrowly on estimating the costs of implementing policies to prevent and address violence; the emphasis is on the cost of action, or the cost of the solution.

Costing the problem refers to understanding the larger costs of intimate partner violence for individuals, households, communities and nations; costing the solution aims to understand the costs associated with implementing VAW laws and policies, including the provision of services.<sup>3</sup>

<sup>3</sup> UN Women, *The costs of violence: understanding the costs of violence against women and girls and its response – selected findings and lessons learned from Asia and the Pacific* (Bangkok, Regional Office for Asia and Pacific, 2013). Available from [http://asiapacific.unwomen.org/~media/Field%20Office%20ESEAsia/Docs/Publications/2014/1/UNW\\_The\\_Costs\\_of\\_Violence\\_FINAL%20pdf.pdf](http://asiapacific.unwomen.org/~media/Field%20Office%20ESEAsia/Docs/Publications/2014/1/UNW_The_Costs_of_Violence_FINAL%20pdf.pdf).



## A. IMPACT COSTING OR COST OF INACTION

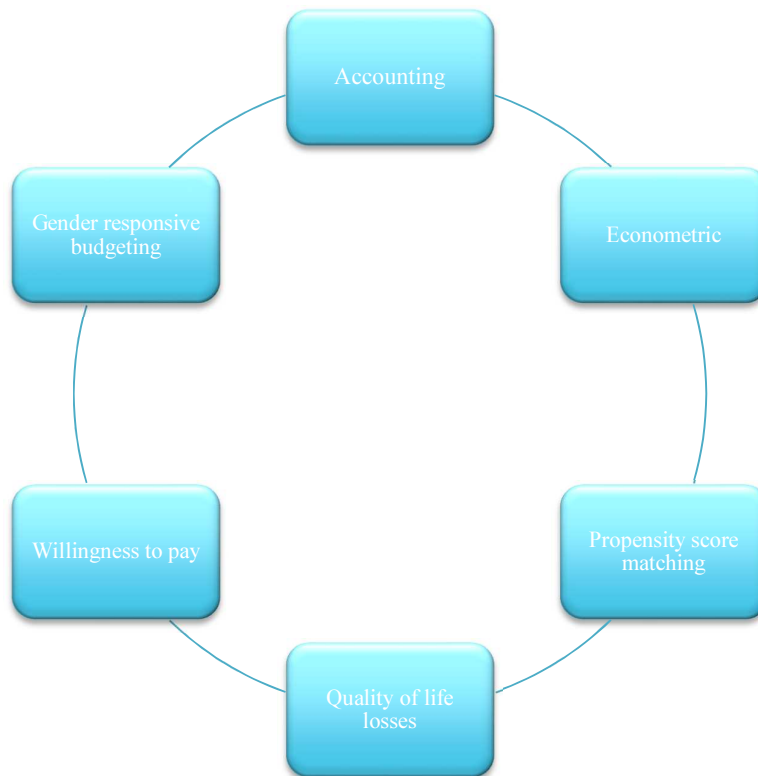
Impact costing estimates the full socioeconomic impact of marital violence in monetary terms. This comprehensive approach assesses the effects of marital violence (multilayered costs) based on the experiences of survivors.

It measures as fully as possible the direct and indirect, tangible and intangible costs of marital violence for survivors, their families, the community and society at large; for example, out-of-pocket expenses (fees for support services, transport or shelter), and the value of missed paid or unpaid work.

Implementing this approach ideally requires national prevalence statistics, plus information on the incidence frequency of marital violence, use of services by survivors, service charges, transport costs and absenteeism, among others. In addition, information on the severity of effects, or how the survivor's life is affected, would ideally be available, along with the identity of the main agents bearing costs and knowledge of public budgets.

To estimate the costs at different levels, a toolbox of methodologies is available. As presented in the forthcoming report on the status of Arab women (the first study of phase I),<sup>4</sup> methodologies range from straightforward accounting to complex econometrics to estimate the impact of violence on key economic indicators such as labour force participation, economic output, productivity and human capital loss.

**Figure 2. Methodologies to estimate costs of marital violence**



<sup>4</sup> ESCWA and UN Women, “Status of Arab women report: violence against women – what is at stake” (E/ESCWA/ECW/2017/2).

A summary of the methodologies is provided in the table below.

**Table 2. Summary description of costing methodologies<sup>5,6,7</sup>**

<i>Methodology</i>	<i>Description</i>
Accounting methodology	Uses unit cost for service or variable of consideration multiplied by total number of people affected. Used for estimating costs of service provision, out-of-pocket expenditures and foregone income due to marital violence, for example.
Econometric methods	Used to estimate the impact of change in experience of intimate partner violence on productivity or labour force participation. Various regression techniques are used to establish tangible and intangible costs, such as loss due to premature mortality.
Propensity score matching (PSM)	Specific econometric method, which is a nonparametric approach (does not assume that variables have normal distribution). Used to establish social and health costs of marital violence.
Willingness to pay	Used to estimate the direct intangible costs of long-term pain and suffering. Based on assumptions about value of life and what one is willing to pay to avoid risk of violence or accept to compensate for physical and mental trauma.
Disability-adjusted life years (DALYs)	Measures the years of life lost due to death, disability and chronic morbidity. Particularly useful to establish the health burden of intimate partner violence relative to other health conditions such as heart conditions or cancer.

Selecting which cost estimates/methodologies to use is also shaped by regional considerations. Where intimate partner violence is deeply ingrained in social practice, the first step is to establish its impact on women’s capabilities. To encourage policymakers to act, it is essential to show the consequences and associated monetary costs. A first cut of cost estimation could focus on individual and household costs: the direct tangible costs for the individual, indirect tangible costs (absenteeism, unpaid care work, missed school), and direct intangible costs (productivity loss in earning differential as a proxy). Data availability would determine the extent to which econometric approaches can be the primary methodology.

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<sup>5</sup> See the following meta-reviews for more detailed information on the various methodologies Nata Duvvury and Caren Grown with Jennifer Redner, *Intimate Partner Violence Costs of at the Household and Community Levels: An Operational Framework for Developing Countries* (Washington, D.C., International Center for Research on Women, 2004).

<sup>6</sup> Alys Willman, “Valuing the impacts of domestic violence: a review by sector”, in *The Costs of Violence*, Stergios Skaperdas, Rodrigo Soares, Alys Willman and Stephen C. Miller, eds. (Washington, D.C., World Bank, 2009).

<sup>7</sup> Nata Duvvury and others, “Gender equality and development: intimate partner violence – economic costs and implications for growth and development”, Women’s voice, agency, & participation research series, No.3, (Washington, D.C., World Bank, 2013).

## B. COST OF THE SOLUTION OR UNIT COSTING MODEL

Cost of solution refers to unit costing. It calculates the total direct tangible costs of goods or services used (or planned for future use) in addressing marital violence by determining the cost per unit of a related service and multiplying that by the usage rate.

Ideally, unit costing of government services will be known and used by public institutions. However, studies in developing countries have found that governments often lack the tools necessary to track service costs geared towards survivors of violence (as opposed to general health and legal services). In many cases, governments are not the primary service providers, making it more difficult to calculate unit costs. Understanding the extent of unmet demand, through a critical appreciation of which services are available, accessible and affordable, is also crucial.

This approach does not necessarily require national data on marital violence, but does need information on the related services and/or activities, how often they are being used (number of units consumed) and the costs per unit.

Methods for unit costing include the aforementioned accounting approach, and gender-responsive budgeting discussed below. To reiterate, the accounting method focuses on estimating a unit cost for each service and multiplying it by the population affected (prevalence rate). The unit cost is based on the capital, labour and raw material expenditure incurred in providing the service, divided by the number of clients seen. Another option is to derive unit cost based on the time and materials required to address the needs of one woman. Since services such as health or police are available to all, the proportion accessing the service due to violence (known as utilization rate) is also needed. This is a bottom-up method; gender-responsive budgeting (GRB) is often focused at the higher level of ministerial or government budgets.

## C. A GRB APPROACH TO COSTING

GRB is a tool used to mainstream gender in government budgets through all steps of the budget cycle, including planning, executing and reporting. It can identify gaps in services or policies, weaknesses or absence of referral systems, and/or protocols needed to better manage specialized and public and private services that survivors might access. It requires knowledge at different levels of intervention, from the legislature and police, to budgeting and services.<sup>8</sup>

GRB does not aim to establish total monetary costs but to offer a clearer picture of the budget for intimate partner violence-related services. It provides information to make policy implementation more effective and efficient. It considers gaps in laws and policies on VAW, and intimate partner violence where applicable, resources allocated to related services, sources of funding, and whether these resources are adequate.

Required data include what intimate partner violence services are planned/available, current VAW laws and policies, and the budgets of ministries and departments, local bodies, and NGOs and international NGOs (INGOs) involved in the response to intimate partner violence.

## D. DETERMINING THE COSTING FRAMEWORK

The methodology applied depends on the structure of the economy, and the penetration of market relations or exchange economy. The extent to which women are engaged in market production is key. The female participation rate in the region is about 25 per cent compared with a global average of 50 per cent,

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<sup>8</sup> UN Women, *Manual for Costing a Multidisciplinary Package of Response Services for Women and Girls Subjected to Violence*, prepared by UN Women Regional Office for Asia and the Pacific (Bangkok, 2013).

suggesting that most women are not engaged in market activity.<sup>9</sup> Additionally, almost 38 per cent of women workers are in vulnerable employment, which, according to the International Labour Organization (ILO) includes “own-account work” and “contributing family labour”.<sup>10</sup> If labour force participation is low and focused on subsistence or domestic production, which are not explicitly valued, data will likely be extremely limited, narrowing the choice of methodologies. For example, willingness-to-pay methodologies require a developed notion of value of life based on predominance of market-based earnings and a jurisprudence of civil or punitive damages.

A suitable costing exercise requires: (a) clearly defined objectives; (b) the most appropriate level of aggregation; (c) an operational definition of marital violence that captures the experiences of the largest number of women and girls; (d) a mapping of available services and the help-seeking behaviour of survivors of violence to determine the best services; and (e) a mapping and surveying of available data.

### III. COSTING MODEL FOR THE ARAB REGION

#### A. PURPOSE OF THE COSTING MODEL

The appropriate costing model to establish the economic/monetary costs of marital violence is shaped by several factors. These include knowledge of the policy environment and legislative framework addressing VAW. The forthcoming report on the status of Arab women indicates a narrow understanding across the region of the types of behaviours that constitute violence, which is focused on physical violence and/or psychological abuse experienced in the family, and to some extent, sexual violence experienced in the community. Prevalence data on these experiences are limited, with only about one third of countries implementing the Demographic and Health Surveys (DHS) module on domestic violence at least once (Egypt, Jordan, Morocco, the Sudan, Tunisia and Yemen). VAW in the public space or within institutions, such as educational or business, is fragmentary.

Another factor is the depth of the legal and policy environment to provide services that respond to, treat and prevent violence. While most countries have procedures for police to respond to reported violence, reporting by women is low.<sup>11</sup> A further point of entry is the health sector, as a significant proportion of women experiencing physical or sexual violence are injured. However, identifying them is difficult, as violence is often not reported and health professionals do not routinely explore whether violence is an underlying factor. Hence, the lack of legislative and policy frameworks limits the extent of services available to survivors.<sup>12</sup>

Administrative data on the number of women utilizing the services of NGOs and INGOs, with the cost of providing the service per woman. In the absence of specific data, other studies may provide cost estimates of legal support (police, courts, legal aid institutions), medical services (treating injuries, counselling, therapeutic recovery) or social services (temporary and long-term refuge/housing, vocational training, livelihoods programmes). Availability of such data would determine whether an accounting or econometric approaches was applicable.<sup>13</sup>

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<sup>9</sup> UN Women, *Country Gender and Economic Profiles*, prepared by the Spring Forward for Women Programme of European Commission and UN Women for the Southern Mediterranean Region (2016), p. 3.

<sup>10</sup> *Ibid.*, p. 5.

<sup>11</sup> See ESCWA, UN Women, “Status of Arab women report: violence against women – what is at stake” (E/ESCWA/ECW/2017/2, chap. 3).

<sup>12</sup> *Ibid.*, chapters 2 and 3.

<sup>13</sup> Nata Duvvury and others (2013), *op. cit.*

**Table 3. Framework of potential cost estimates**

<i>Data</i>	<i>Methodology</i>	<i>Cost</i>
Utilization data at regional/national level, budget allocations for services Unit costs of services from secondary sources	Accounting Econometric	Direct cost of service provision
Survey on violence: prevalence, injury, health-related outcomes Secondary data on injury impacts on work and earnings	Econometric PSM	Productivity impact Foregone earnings Health costs
Dedicated costing survey: prevalence, incidents, expenditures, missed work, earnings, etc.	Accounting Econometric PSM DALYs	Out-of-pocket expenditures Lost income due to missed work Productivity impact Foregone earnings Impact on school performance Tax revenue lost Administrative costs
Longitudinal data: impacts on children, long-term impact of disability on work and productivity	Econometric PSM DALYs Willingness to pay/accept	Intergeneration impact on children: cost of juvenile crime, human capital of children Pain, suffering and lost quality of life

Overall, the information base in the Arab region on violence against women and girls, particularly marital violence and its consequences, is fragmented and unreliable. Given the gaps in information, robust estimation of economic costs requires that primary data be collected from individual women and services. To estimate costs of providing services, the accounting methodology or econometric approaches would be useful. Rudimentary service provision means that gender-responsive budgeting is unlikely to yield reliable estimates of direct tangible costs.

A minimal response would render the process meaningless, as it would result in a gross underestimate of the resources required to fully address the needs of women experiencing violence. It might be better, therefore, to present the cost as the current level of investment in services.

Despite the scarcity of data required for the economic model, indicators related to the Sustainable Development Goals (SDGs) offer an opportunity for Member States to enhance their data collection and meet national goals. For example, in relation to target 5.4, Iraq collected the proportion of time spent on unpaid care, which in 2017 was 24.10 per cent for women, compared with 4.7 per cent for males aged 10 and up.<sup>14</sup> If such data are unavailable, indicators might be used as proxies for missing information.

## B. SPECIFIC COST ESTIMATES

The types of costs at each level of analysis (individual/household, community/third party and national) that could be estimated are presented in table 4.

<sup>14</sup> <http://unstats.un.org/sdgs/indicators/database/?indicator=5.4.1>.



**Table 4. Costs and data requirements by level of analysis**

	<i>Cost category</i>	<i>Type of costs</i>	<i>Data requirements</i>
<b>Individual/household costs</b>			
	Out-of-pocket costs		Actual expenditure on transportation, materials, and all fees paid for each service per each incident of violence
	Medical	Emergency room care Hospitalization Outpatient visits Nursing home care Dental care Mental health care Medication Transportation Ambulance Surgery	
	Criminal justice	Incarceration Court appearances Emergency protection order Temporary restraining order Probation Lawyers' fees Transportation Communication charges	
	Housing and refuge	Hotel Transition homes Shelters Rental housing	
	Legal services	Mediation (informal/formal) Divorce Legal counsel	
	Social services	Counselling Rehabilitation	
	Replacement of property	Property repaired Property replaced	Actual expenditure for property replaced for each incident of violence
	Impact on children	Missed schooling	Number of missed schooldays for each incident Annual school fees paid Annual number of schooldays
	Foregone Income		
	Reduced earned income	Lost days of paid work immediately following incident (for survivor, perpetrator, other adults) Lost days of paid work to access services (for victim, perpetrator, other adults)	Number of days (paid and unpaid) lost per each incident by woman, husband, family members Number of days lost in accessing services per each incident (woman, husband, other family members) Weighted average wage rate for women and men

**Table 4 (continued)**

	<i>Cost category</i>	<i>Type of costs</i>	<i>Data requirements</i>
	Loss of unpaid care and domestic work	Lost days of unpaid care and domestic work immediately following incident for survivors Lost days of domestic work due to accessing services (for victim, other women)	Number of lost days of household work by woman per each incident Number of lost days in order to access services Imputed market wage
	Loss of productivity	Reduced output per reduced labour input (for woman, husband, other adults) in household enterprises	Reduced output per labour input for woman, husband, other adults in household enterprises Number of times an individual comes late/leaves early, lacks focus and duration of time Number of times accidents occur and time duration for inability to work
Community/third party			
	Cost of providing services		Operating budgets of each service Proportion of total cost due to domestic violence Average unit cost based on human resource cost each service (time, salary, training, etc.) and capital costs for each service Proportion of women utilizing the service Median number of days service is accessed
	Medical costs	Emergency room care Hospitalization Outpatient visits Nursing home care Dental care Mental health care Medication Transportation Surgery	
	Criminal justice	Incarceration Prosecutors Emergency protection order Temporary restraining order Probation Counselling Rehabilitation	

**Table 4** (continued)

	<i>Cost category</i>	<i>Type of costs</i>	<i>Data requirements</i>
	Housing and refuge	Transition homes Homeless shelters Hotel vouchers	
	Legal services	Mediation Divorce Legal counsel Emergency protection orders	
	Social services	Counselling Rehabilitation Vocational training programmes Livelihood programmes Subsidies for education Welfare programmes	

**Business**

	Output loss	Reduced output  Productivity loss (presenteeism) Measure of presenteeism that captures lack of concentration/focus, arriving late, leaving early and accidents	Missed workdays by victim, perpetrator, other adults involved in supporting victim Average output/worker/day  Number of days lacking focus, arriving late, leaving early, etc. Average time in minutes and hours affected Number of employees impacted Number of accidents and number of days affected
	Expenditures on direct service provision	Counselling services Legal aid Skills training Advocacy campaigns	Actual expenditure for programmes
	Expenditure for firing, hiring and retraining staff	Firing costs Hiring costs Retraining costs	Expenditure involved in firing multiplied by number of individuals Costs of hiring new staff Training workshops costs

**Table 4** (continued)

	<i>Cost category</i>	<i>Type of costs</i>	<i>Data requirements</i>
National			
	Macro opportunity costs	Aggregate out-of-pocket costs Monetary value of total workdays lost Monetary value of total care workdays lost Output loss for businesses	Unit expenditure by woman/household/incident Workdays lost (paid and unpaid) Prevalence rate Incident rate (number of incidents per victim) Lost output per business/sector
	Productivity loss	Earnings differential for women experiencing violence Reduced labour force participation Intergenerational loss in human capital	Yearly earnings of all women Labour force participation Educational performance of children from households with violence
	Aggregate cost of service provision and other welfare programmes	Aggregate expenditure on services Aggregate welfare programmes to violence survivors Expenditure by businesses for violence-related programmes	Unit cost across sectors Unit cost of prevent programmes Unit cost of welfare/transfer programmes Prevalence rate Utilization rate Incident rate

### C. ECONOMIC COST MODEL FOR THE REGION

The costs described above can be summarized in a model for all direct and indirect tangible (hereafter referred to as financial) costs of marital violence as:

$$FCMV = THC + TCSP + TBC(1)$$

Where FCMV is the financial costs of marital violence, THC is total household cost, TCSP represents community-level costs of service provision, and TBC is the total cost to businesses.

In this simplistic model, there is the risk of double counting, as a household cost is also a business cost, and household expenditure for services may also be counted in the cost of service provision. It is useful to think of the three elements of total cost as entry points for starting cost estimation. Data availability will determine how complete the cost estimation at household, community and business level.

Elements of total cost are presented in equation 1 as equal, another simplistic assumption. The relative weight of household, service provision and business costs may vary depending on the structure of the economy, the degree of market penetration, the culture of help-seeking by survivors, and the depth of response by government and community.

## 1. Household cost model

Within the household, primary costs to be considered are out-of-pocket expenses, reduced income, loss of household work and lost productivity. This can be written as:

$$THC = \sum_{i=1}^n HCi(2)$$

For each household, the cost equation is:

$$HC = \sum_i \sum_j ps_{ij} + \sum_i \sum_j OPC_{ij} + \sum_i \sum_j wL_{ij} + \sum_i \sum_j w_j^* L_j^* + \sum_i \sum_j w_i \left[ \left( \frac{h_{ij}}{N} \right) L_{ij} \right] + \sum_j w_i^* \left[ \left( \frac{k_j}{A} \right) L_{ij} \right] + \sum_i \sum_j \left( \frac{MD_{ij}}{TD} \right) SF(3)$$

Where  $ps_i$  is the fee for service  $i$  paid by the individual woman after  $j$  incident,  $OPC_i$  is the out-of-pocket payments (for transport, communication, etc.) for accessing each service after incident  $j$  as well any expense for property replacement paid by the  $i^{\text{th}}$  woman,  $L_i$  is the number of days of formal and informal employment lost for household member  $i$  per incident  $j$ ,  $w_i$  is the actual wage rate for household member  $i$ ,

$L_{ij}^*$  is the number of days of household work lost by the household member  $i$  for each incident  $j$ ,  $w_i^*$  is the imputed wage for household work,  $h_{ij}$  is the number of hours actually worked after each incident  $j$  for each household member  $i$ ,  $N$  is total number of hours in a working day,  $k_j$  is the number of hours of household work actually worked after each incident  $j$ ,  $A$  is the total number of hours required for household work,  $MD_{ij}$  is the number of missed schooldays for each incident  $j$  for each child  $i$ ,  $TD$  is the total number of schooldays in the year, and  $SF$  is the total amount of school fees paid for the year.

The first two terms represent the out-of-pocket expenses for the individual woman/household in accessing service  $i$ . The third term represents the days lost of paid and unpaid work for the  $i^{\text{th}}$  individual for the  $j^{\text{th}}$  incident. For unpaid work, the wage will be the imputed market wage. The fourth term represents the loss in days of housework and is valued at the imputed wage of those services in the economy (for example, cooks, laundresses). The fifth term represents the productivity lost, with  $h_{ij}$  representing the numbers of hours spent by the  $i^{\text{th}}$  woman in paid and unpaid work after the  $j^{\text{th}}$  incident divided by the total number of working hours in a day multiplied by the annual number of working days. This would be repeated for all other affected household members. The sixth term represents the value of the loss of household work, with  $k_j$  representing the number of hours spent on housework by a woman after the  $j^{\text{th}}$  incident, divided by the number of hours usually spent on household chores multiplied by the number of days of work lost by the  $i^{\text{th}}$  woman immediately after the  $j^{\text{th}}$  incident, multiplied by the imputed wage rate,  $w_i^*$ . The final term represents the loss to household when children miss school.  $MD_{ij}$  is the number of schooldays missed for each incident.  $TD$  is total schooldays, and  $SF$ , total school fees paid.

## 2. Community service cost model

As noted earlier, the total cost of service provision at community level is the summation of costs across all services:

$$TCSP = \sum_{i=1}^n CSP_i - \sum_{i=1}^n ps_i(4)$$

Where  $CSP_i$  is the cost of service provision for service  $i$  given below, and  $ps_i$  is the fees paid by individual women to the services.

For each service, the cost of provision can be formalized as:

$$CSP = \sum_n \left\{ \frac{wL+rK+p^*}{c} \right\} * MV_i * u_t(5)$$



Where the numerator is the operating budget for a service, including the salary cost (with  $w$  as wage and  $L$  as number of staff) and material cost, such as supplies, training materials ( $p$  is the price and  $RM$  is the amount of material), and  $rK$  is the infrastructure and equipment cost. The denominator is the total number of clients serviced, the ratio represents the unit cost,  $MV_i$  represents the number of survivors of marital violence using the service and  $u_i$  the number of times a service is utilized.

### 3. Business cost model

The total cost to businesses can be expressed as:

$$TBC = \sum_{i=1}^n BC_i(6)$$

The cost to each business can be formalized as:

$$C = \{ \sum_i w_i [L_i - \sum_j (q_{ij} | N) L_{ij}] \} + (wL + rK + p * RM)(7)$$

Where  $q_{ij}$  is the number of hours worked by the  $i^{\text{th}}$  woman after the  $j^{\text{th}}$  incident and  $N$  is the total number of hours of work multiplied by the number of days the  $i^{\text{th}}$  woman had lost after the  $j^{\text{th}}$  incident. Note that this has been subtracted from  $i^{\text{th}}$  woman normal man days ( $L_i$ ) and thus represents output loss for the firm. The second term is the total expenditure incurred by the business for providing support services to survivors of violence.

### 4. National costs

To estimate the aggregate opportunity cost of marital violence by an intimate partner, the following equation can be used:

$$TOPPC = (\sum_i (s = 1))^{\uparrow} n [(TFP * PV * IR * AVOPC) + \sum (TFP * PV * IR * COWDL) + CODL](8)$$

Where TOPPC is total opportunity cost, TFP is total female population, PV is current prevalence rate of intimate partner violence for women,<sup>15</sup> IR is incidence rate or number of separate episodes/incidents per 100 women, AVOPC is average out-of-pocket expenditure incurred per incident for each service,  $s$  is each individual service (health, police, court, informal authorities, shelter), COWDL is cost of workdays lost (paid, unpaid and reproductive work) per incident, and CODL is cost of schooldays missed per incident.

Productivity loss can be estimated using econometric methods, including two-step ordinary least squares (OLS) regression, a standard econometric technique, on earnings. First, an instrumental variable for violence is identified (related to violence but with no correlation to earnings). For this, a logistic regression is done to identify potential variables closely linked to violence. The standard variables are a woman's and partner's education, wealth or socioeconomic status, age, witnessing violence or experiencing violence in childhood, partner's drinking/gambling, gender attitudes and frequency of quarrels. Significant variables for violence are tested against earnings to assess a robust instrument variable for violence. A standard OLS regression equation for earnings based on the standard Mincer equation, including variables such as site (rural/urban), wealth, education, years of employment, occupation, age and instrument variable, can then be tested.<sup>16</sup>

<sup>15</sup> The age range for prevalence can vary depending on source of data. If DHS or WHO studies are used, then the age range is 15-49. But if a dedicated survey is used, the age range can be as broad as 18-60 or 18-64, depending on the working life of women in specific countries.

<sup>16</sup> Andrew Morrison and Maria Beatriz Orlando, "The costs and impacts of gender-based violence in developing countries: methodological considerations and new evidence", Working Paper (Washington, D.C., World Bank, 2004).

#### IV. DATA SOURCES AND OPTIONS FOR COST CALCULATION

To implement the costing framework outlined above, information must be drawn from multiple sources, including the following:

- Primary data from existing statistical surveys, such as the DHS implementing common module on domestic violence, Multi-Cluster Indicator Surveys, Labour Force Surveys, Living Standards Measurement Surveys (only Iraq and Morocco), Time Use Surveys, Iraq Women Integrated Social and Health Survey, census reports, ILO Global Wage Database;
- Budget information from key ministries;
- Project documents of international organizations and NGOs;
- Relevant documentation, reports and statistics to frame the study, including any dedicated prevalence studies as undertaken in some Arab countries.

For sources of information and a detailed description of the information required for cost calculation see table 5 below.

**Table 5. Sources of information for a costing framework**

<i>Sources of information</i>	<i>Indicators measured</i>
Multi-Cluster Indicator Survey	Attitudes towards wife-beating
DHS UN Women Global Database on Violence <a href="http://evaw-global-database.unwomen.org/en/countries">http://evaw-global-database.unwomen.org/en/countries</a>	Prevalence and frequency of spousal violence, women aged 15-49 Injuries Health outcomes (women, children) Reproductive outcomes Mental health status Help-seeking Employment status Socioeconomic status
Labour Force Surveys, census reports and ILO Global Wage Database	Labour force participation Sectoral distribution of employment Occupational distribution Wages/salaries
National Crimes Surveys UNODC <a href="https://www.unodc.org/gsh/en/data.html">https://www.unodc.org/gsh/en/data.html</a>	Homicides Number of women killed by intimate partner or family member Age profile, education, work status
Living Standards Measurement Surveys	Incidence of poverty Household expenditure on health, education, food, etc. Asset

**Table 5** (*continued*)

<i>Sources of information</i>	<i>Indicators measured</i>
Time Use Surveys	<p>Time spent in formal-sector work</p> <p>Time spent on primary economic production for household, non-primary production and other work for income</p> <p>Time spent on unpaid domestic services for household use</p> <p>Time spent on unpaid care work for household members</p>
Primary survey of individual women focused on marital violence	<p>Prevalence of marital violence of ever married women (could also include engaged women)</p> <p>Frequency of violent behaviours</p> <p>Number of incidents of violence</p> <p>Help-seeking for incidents</p> <p>Out-of-pocket expenditures incurred due to violence</p> <p>Missed days of economic work (formal and informal sector): woman, husband, other family members</p> <p>Missed days of household domestic work and unpaid care work: woman, husband, other family members</p> <p>Missed days of schooling: children, women</p> <p>Exit out of labour market</p> <p>Exit out of education</p>
Recurrent budgets	<p>Health ministry</p> <p>Interior ministry</p> <p>Justice ministry</p> <p>Education ministry (primary and higher education)</p> <p>Tourism ministry</p> <p>Culture ministry</p> <p>Religious affairs ministry</p> <p>Solidarity and social justice ministry</p> <p>National Council for Women</p> <p>National Council of Human Rights</p> <p>Youth ministry</p> <p>Media</p> <p>Other key ministries with a role in preventing or addressing violence against women</p>
VAW-related project documents of international organizations working in specific countries	International cooperation ministry
VAW-related project documents of main NGO	Relevant NGOs in the country
Interviews with service providers and key agents in the government (VAW focal points, finance unit in the institution)	To be decided depending on the methodology chosen

To estimate the direct and indirect tangible costs of marital violence for individual women and households, detailed and specific data are required. We see from the above table that the DHS provides useful information to explore the health consequences of violence (in Iraq, the Woman Integrated Social and Health Survey is the equivalent of the DHS). However, these surveys neither explore the economic impacts of marital violence – in particular, the impact on individual women’s economic and domestic work – nor capture the out-of-pocket expenses incurred by women/households. While it may be possible to estimate the impact on productivity (and therefore, economic output) using DHS data, the economic impacts of violence on non-formal work would not be captured. This estimation would require data that provide sex-disaggregated information on productivity by health status. In the absence of such developed databases, a specific survey might be required on the experiences of violence and costs incurred by women and households. Information captured in such a targeted questionnaire is given below in table 6:

**Table 6. Information sought in targeted questionnaire**

<i>Type of violence</i>	
Marital violence (intimate partner violence)	Physical violence Sexual violence Psychological violence Economic violence Controlling behaviours
<i>Prevalence</i>	
Marital violence	Lifetime In the past 12 months
<i>Indirect costs</i>	
Missed days of remunerated work	Due to intimate partner violence Due to violence in public spaces
Missed days of non-remunerated work (household work)	Due to intimate partner violence Due to violence in public spaces
Missed days in education	Due to intimate partner violence Due to violence in public spaces
Missed days in children’s education	Due to intimate partner violence Due to violence in public spaces
<i>Direct costs</i>	
Access to services (number of services accessed in a year)	Health
	Transport
	Shelter
	Counselling
	Police – protection
	Legal aid – lawyer
Out-of-pocket expenses: Personal expenses to access services	Health
	Transport
	Shelter
	Counselling
	Police – protection
	Legal aid – lawyer
	Rehabilitation
Children’s schooling	
<i>Help-seeking behaviour</i>	

## A. COST CALCULATION USING INFORMATION COLLECTED IN WOMEN'S SURVEY

The formulas to calculate direct and indirect costs of intimate partner violence among married or engaged women, using the information collected in the questionnaire, are provided below.

### 1. *Intimate partner violence/marital violence*

IPV = psychological or physical or sexual or economic violence = 1

Lifetime prevalence (IPV > 0 in a lifetime)

Current prevalence (IPV > 0 in the past 12 months)

#### (a) Direct tangible costs

Out-of-pocket expenditures from individuals due to marital violence:

$$TOPC = \sum_i \sum_s \sum_t C_{ist}(S_s)(9)$$

Where TOPC is total out-of-pocket costs borne by women and their families,  $i$  is number of women experiencing violence,  $s$  is types of services,  $t$  is number of incidents reported in the survey,  $C_{ist}$  is cost to individual women  $i$  of service  $s$  at time  $t$ , and  $S_s$  is service  $s$ .

#### (b) Indirect costs

Opportunity cost: cost of workdays lost due to intimate partner violence. In this category, we include loss of personal income due to missed workdays, and loss of household work:

$$COWDL = \sum_i \sum_j \{W_{ij} [\sum_t L_{ijt}] + \sum_t W_{ij}^* [\sum_t L_{ijt}^*]\}(10)$$

Where  $j$  is woman respondent,  $i$  is household, COWDL is cost of workdays lost,  $W_{ij}$  is market wage rate of member  $j$  in household  $i$ ,  $L_{ijt}$  is days lost from market work after incident  $t$ ,  $W_{ij}^*$  is imputed wage rate of member  $j$  in household  $i$  for non-market work, and  $L_{ijt}^*$  is days lost from non-market work after incident  $t$ .

The average wage rate, as reported by the individual woman missing work, is used to calculate the income loss due to absence. This rate is also imputed to estimate the value of non-remunerated household work. An alternative method to impute the value of this work is to use the wage or salary of specialists performing equivalent work (chefs, teacher, child minder, etc.)

Opportunity cost: schooldays lost. This formula can be used for calculating:

- Schooldays lost by children due to intimate partner violence;
- Schooldays lost by women experiencing marital violence.

Cost of children's lost schooldays:

$$CODL = \sum_i HH (\sum_j c_j [\sum_t LS_{jt}]) (11)$$

Where CODL is cost of schooldays,  $C_j$  is total cost of one schoolday for child  $j$  in  $HH_i$  (can include fees, books, transport and other fees) and  $LS_{jt}$  is days lost from school by child  $j$  in  $HH_i$  after incident  $t$ .



Cost of women's lost schooldays:

$$CODL = \sum_i \sum_j \{C_{ij} [\sum_t LS_{ijt}]\} \quad (12)$$

Where CODL is cost of schooldays,  $C_{ij}$  is total cost of one schoolday for woman  $j$  in  $HH_i$  and  $LS_{ijt}$  is days lost from school by girl or woman  $j$  in  $HH_i$  after incident  $t$ .

## B. DIRECT COSTS CALCULATION AT THE COMMUNITY LEVEL

There are four options when estimating direct costs at community level, depending on the depth and quality of available data. The following chart summarizes the advantages and disadvantages of each option.<sup>17</sup>

	<i>Advantages</i>	<i>Disadvantages</i>
<p>Option 1</p> <p>Calculate total governmental cost of preventing and addressing VAW using national strategy or national action plan as basis, if available</p>	<p>Budgetary information more accurate and accessible: national action plans (NAP) will include details that every ministry and concerned institution will dedicate to prevent and address VAW</p> <p>Comprehensive: estimate based on identifying all programmes and activities undertaken by government agencies</p>	<p>Timing: costing study would have to be undertaken to align with budgetary year. Data points must be over several years to obtain budget estimates and actual expenditures on services and programmes</p> <p>Incomplete: does not consider services by NGOs and INGOs outside government budgets. May lead to significant underestimates if government services are minimal</p>
<p>Option 2</p> <p>Estimate total governmental cost of preventing and addressing VAW</p>	<p>Easiest cost calculation: calculating direct costs will be easier and faster. It will not be necessary to do budget estimations</p>	<p>Challenges analysing the information: specifically, calculating direct costs in each institution. Currently, budget information in each ministry does not track committed resources for preventing and addressing VAW</p> <p>Time consuming: the research team will face difficulties in collecting budget information. It will be necessary to do interviews with gender focal points and finance associated in each institution to collect the required data</p>

<sup>17</sup> Nata Duvvury and Marga Ozonas, "Options for costing study in Egypt" (unpublished, 2014).

	<i>Advantages</i>	<i>Disadvantages</i>
<p>Option 3</p> <p>Estimate total direct costs through a national survey of all facilities providing services (prevention, provision, prosecution)</p>	<p>Reliable: as unit cost for each facility is derived from actual costs incurred, it will be a more accurate reflection of the burden on facilities</p> <p>Provides information on service gaps: a survey will provide information on gaps in the types of services and data information systems</p> <p>Comprehensive: includes all facilities and not just government providers so that costs of NGO and INGOs can be included</p>	<p>Incomplete information: no systematic culture of recording cases of VAW in institutions.<sup>18</sup> Only few service providers, such as shelters, keep the records of victims accessing the service, so information may be rough estimates</p> <p>Preventative activities may be missed: this approach would track the resources involved in providing services, but preventive activities will be outside the scope of analysis</p> <p>Underestimates: as many women tend not to seek help, costs could be underestimated. Utilization rate derived from the survey could be an underestimate and lead to an underestimated aggregate direct cost</p>
<p>Option 4</p> <p>Estimate direct costs using secondary data on unit costs. For example, health costs can be derived using DHS data on injury and unit costs of treatments by type of injury</p>	<p>No additional costs for data collection: analysis can be done if access to health data costs is available. The only cost would be the time spent on analysis</p> <p>Reliable: estimate would be rigorous as unit costs may more accurately reflect full economic costs involved in providing services</p>	<p>Availability of unit costs: not all services may have detailed unit costs. For example, law enforcement or judiciary</p>

Cost calculation using budget information (see table 7, below): options 1 and 2 are based on a top-down proportional approach (derived from an annual budget). The first requires more detailed information about programmes and activities, while the second tracks a total amount, without disaggregating the information by activities. These options can also be applied to calculating the costs of NGOs and INGOs.

<sup>18</sup> In a Viet Nam survey, police, courts, health facilities and Women's Union had limited data on service provision costs, making estimates virtually impossible. See Nata Duvvury, Patricia Carney and Nguyen Huu Minh, *Estimating the costs of domestic violence against women in Viet Nam* (Hanoi, UN Women, 2012).

**Table 7. Cost calculations using budget information**

<i>Direct tangible costs</i>	
Governments	<p>Total government direct tangible cost (TG-DTC)</p> <p>Option 1  <math>TG-DTC = \sum_i \text{annual expenditure } i (P1 + P2 + P3)</math></p> <p>Option 2  <math>TG-DTC = \sum_i \text{annual budget } i (\text{activities oriented to prevent and address VAW})</math></p> <p>i = key ministry or governmental institution with a role in preventing and addressing VAW            P1 = activities to prevent violence against women and girls            P2 = provision of services for victims of violence and perpetrators            P3 = prosecution</p> <p><i>Source:</i> National budgets, NAP and interviews</p>
NGOs/INGOs	<p>Total NGO direct tangible cost (TNGO-DTC)</p> <p>Option 1  <math>TNGO-DTC = \sum_i \text{budget } i (P1 + P2 + P3) + \sum OPE</math></p> <p>Option 2  <math>TNGO-DTC = \sum_i \text{budget } i (PRODOC) + \sum OPE</math></p> <p>i = NGO            P1 = activities to prevent violence against women and girls            P2 = provision of services for victims of violence and perpetrators            P3 = prosecution            OPE = out-of-pocket expenses of service providers (TBC)            PRODOC = project document (budget)</p> <p><i>Source:</i> PRODOC and interviews</p>

1. *Option 1*

Identifying resources oriented to prevent violence, and others oriented to services and prosecution, will help obtain a baseline that can be used to assess (through a monitoring and evaluation tool) the future effectiveness of policies and interventions to prevent VAW.

For this option, detailed information about programmes, activities and interventions of governmental institutions is required.

2. *Option 2*

This formula is appropriate if budget information about programmes and activities is unclear. It estimates the total amount each government institution dedicates annually to address VAW. In many cases, it will be necessary to estimate the proportion of salaries and operating costs, such as transport and materials.

This method is based on estimation and assumption, and requires interviews with key agents in institutions, such as a VAW focal point, and someone with knowledge of the institution's finances. The result will approximate the resources each institution is dedicating.

### 3. Highlights

With both options, it is necessary to identify the financing source; that is, the recurrent budget (national resources), or a development budget (funds from donors). As this methodology tracks funds from donors, it is important to avoid double accountability.

While gender-responsive budgeting is not complicated, applying it in countries is often difficult; not all government budgets are organized as performance budgets, constructed along programme lines. In Egypt, which undertook a costing study in 2015, researchers were unable to develop any meaningful estimate of budgetary allocations to violence programmes across ministries and departments.<sup>19</sup> There was little awareness among ministerial staff of gender-responsive budgeting as a tool, responsibility for specific tasks in the national strategy on violence was not clear to government stakeholders, and budgets were often presented as functions rather than programmes. This meant it was difficult to discern the proportion of various cost line items, such as staff salaries, allocated to violence-related activities. The study focused only on extrapolating costs at the household level to derive national macro costs.

#### C. ESTIMATING COSTS THROUGH BUSINESS SURVEY

Another option, particularly in an economy where women's participation in the formal economy is high, is to survey employees to estimate the loss of economic output for the business sector. This can be similar to the individual woman's survey, with additional questions on presenteeism alongside standard ones on absenteeism. For business, presenteeism (arriving late, leaving early, lack of focus, difficulty in completing tasks, reduced productivity and accidents) is a recognized problem affecting the output and reputation of firms. A survey would provide details on the impact of marital violence on presenteeism.

Economic impacts of marital violence can be gleaned from female and male employees, on victim and perpetrator. The survey can also capture so-called bystander effects: the time colleagues spend assisting a survivor and the mental health effects on bystanders resulting from others' presenteeism.<sup>20</sup>

The indirect cost of absenteeism and presenteeism can be estimated using the following equation:

$$COWDL = \sum_i \sum_j \sum_k \left\{ W_j \left[ \sum_t L_{ijt} \right] + W_k \left[ \sum_k L_{ikt} \right] \right\} + \sum_i \sum_j \sum_k \left\{ W_j \left[ \sum_t (q_j/N) \right] + W_k \left[ \sum_t q_k/N \right] \right\} \\ + \sum_i \sum_{fc} \sum_{mc} \left\{ W_{fc} \left[ \sum_t (q_{fc}/N) \right] + W_{mc} \left[ \sum_t q_{mc}/N \right] \right\} \quad (13)$$

Where  $W_j$  is the wage of  $j$ th woman,  $W_k$  is the wage of the  $k$ th man,  $W_{fc}$  is the wage of female colleague and  $W_{mc}$  the wage of male colleague.  $L_{ijt}$  and  $L_{ikt}$  represent the days lost by women and men employees due to marital violence,  $q_j$  and  $q_k$  represent the hours lost due to presenteeism by women and men employees due to marital violence after incident  $t$ , and  $q_{fc}$  and  $q_{mc}$  represent the hours lost due to presenteeism of colleagues assisting survivors of marital violence after incident  $t$ .

<sup>19</sup> National Council for Women and UNFPA, *The Egypt economic cost of gender-based violence survey (ECGBVS) 2015* (Cairo, UNFPA, 2016).

<sup>20</sup> See Aristides Alfredo Vara Horna, "Violence against women and its financial consequences for businesses in Peru", Executive summary, English edition (Lima, Peru, Deutsche Gesellschaft für Internationale Zusammenarbeit and University of San Martin de Porres, 2013). Available from [http://www.learningtoendabuse.ca/sites/default/files/The%20Impacts%20of%20Violence%20against%20Women\\_Financial%20Consequences\\_Peru\\_1.pdf](http://www.learningtoendabuse.ca/sites/default/files/The%20Impacts%20of%20Violence%20against%20Women_Financial%20Consequences_Peru_1.pdf).

The direct costs incurred by businesses providing programmes for support services or transfers to access other services can be estimated as:

$$BDC = \{(wL + rK + p * RM)\} + \sum_i \overline{TC}_i * N_j(14)$$

Where BDC is business direct costs, wL represents staff cost, p \* RM represents the material costs, K represents the capital investment for infrastructure and equipment, r is the discount rate, TC<sub>i</sub> is the average transfer made to access service i, and N<sub>j</sub> represents the number of women accessing services within the business or transfer payments.

#### D. ESTIMATING THE NATIONAL OR MACRO COSTS OF MARITAL VIOLENCE

Three ways to calculate the total costs of marital violence are proposed below.

<i>Total costs</i>
(1) Direct tangible costs (Σ expenditure by individuals + Σ expenditure by governments + Σ expenditure by NGOs + Σ expenditure by international organizations + Σ expenditure by businesses) + macro estimate of output loss + macro estimate of productivity loss
(2) Σ direct costs + Σ indirect costs (aggregation based on the costing equations given above)
(3) Σ direct cost + Σ multipliers of different production sectors

In the three cost calculations, it is necessary to include the results of the previous sections:

- Survey information;
- Budget information;
- Information from international organizations and NGOs;
- Business survey information estimating output loss.

An alternative to simple aggregation of costs at different levels is an analysis to estimate the multiplier effect of violence throughout the economy (total cost 3 in the above box). A method proposed by Raghavendra, Duvvury and Ashe (2017)<sup>21</sup> explores the effects of marital violence on different sectors of the economy; the output loss in each sector and the multiplier effect due to the intermediate demand across sectors. It estimates not only the loss due to violence in a particular sector, but the indirect effect on other sectors that use the outputs. For example, the method allows an estimation of the direct output loss in the agriculture sector due to missed workdays, and the resulting losses in other sectors that use agricultural products.

For this analysis, information is required on the unit costs of missed work by women and men, along with a social accounting matrix (SAM). SAM is a representation of a macroeconomic system that incorporates a considerable level of information about the transfers, transactions and relationships between macro- and meso-level economic categories or accounts.<sup>22</sup> In the absence of SAM, it may be possible to use the input-output tables that show the interaction between all producing sectors but may not include the labour input in each subsector.

<sup>21</sup> Srinivas Raghavendra, Nata Duvvury and Sinead Ashe, “Macroeconomic loss due to violence against women: the case of Viet Nam”, in *Feminist Economics* (forthcoming).

<sup>22</sup> Graham Pyatt and Jeffery I. Round, eds, *Social Accounting Matrices: A Basis For Planning* (Washington, D.C., World Bank, 1985).

## V. CONCLUSION AND RECOMMENDATIONS

Undertaking a costing study on marital violence in the Arab region is feasible despite the fragmentary nature of information and data systems (for steps, see figure 3). This report has laid out a range of options for estimating these costs. Depending on the purpose of the exercise and availability of information, different types of costs can be estimated. The general economic model presented in section III provides a framework for a comprehensive estimate across individual/household, community and government.

Figure 3. Steps for undertaking a costing study





Given the fragmentary nature of data on the prevalence of violence, its direct and indirect economic impacts and the use of services by survivors, a useful entry point for the cost estimation is to focus on out-of-pocket expenditure by women survivors to mitigate the consequences of violence, and on the opportunity cost in missed paid and unpaid work, productivity loss as measured through presenteeism, and the missed education of children and women. This would produce a partial estimate but could lead to a fuller estimate of the monetary cost of marital violence for a woman and her family. A nationally representative survey can be extrapolated to provide an aggregate estimate of costs to the national economy. By providing estimates at the level of individual women, families can better understand how marital violence undermines the economic sustainability of households. Such estimates also provide insights for policymakers on how marital violence can impede anti-poverty and other social welfare programmes. These estimates will not include the longer-term costs of pain and suffering, which require detailed data currently unavailable in much of the region.

Annual costs to government, civil society and donors in providing services is another entry point to raise awareness of resources required for a comprehensive response to marital violence. In the absence of systematic data on the economic cost of providing services, the options are to undertake a representative survey of service providers across sectors responsible for addressing violence, or adopt a gender-responsive approach to estimate costs by summarizing budgetary allocations. There are caveats when assessing the efficacy of such estimates. Estimating the financial costs of providing services could risk reaching the conclusion that responding to violence is too expensive. Any estimate should, therefore, be framed relative to an estimate of the cost of inaction – to individual women and society at large – through foregone income and productivity loss. Allocations to services should be presented as an investment; the annual cost of service provision, in itself, is not a compelling evidence for advocacy without some estimate of the cost of inaction.

Yet another entry point is to focus analysis at the business level to estimate macro costs that include multiplier effects across sectors. The costs of marital violence can be included by surveying male as well as female employees. Estimating the direct and indirect output loss for the entire economy would demonstrate that loss due to marital violence is embedded in the system. A business-level approach would not, however, explain the consequences and hidden costs of violence to a woman and her family.

Producing comprehensive estimates of costs is complex and requires multiple perspectives, of individual women and families who bear hidden costs, stakeholders providing services, businesses whose bottom line is affected and governments whose efforts to ensure citizen well-being may be put at risk. The costing model put into operation depends on whose perspective provides the most appropriate entry point and the degree of data available. Costing studies should not be a one-time effort but undertaken periodically to assess progress in addressing and reducing violence.

In summary, the costing model outlined in this report is suitable for the region, where rigorous data on the full range of impacts and costs are still being developed. The model focuses on establishing the opportunity cost of marital violence: spending on services by individuals and government, and foregone income and loss of productivity, which all contribute to national economic losses. However, the cost of the solution – government spending on services – is, in effect, an investment, not a financial cost; services and programmes to prevent violence produce a return rather than drain government resources. The rigour of estimates provided by the model depends on the depth of data.

This is a theoretical model drawing on lessons from international studies and adapted for the region. It needs to be piloted in one country, and tweaked for replication in others. To undertake costing work in the region, the capacity of Member States to better understand the benefits and practicalities must be developed.

The report recommends the following:

**Build awareness of the importance of costing studies on VAW, and marital violence in particular**



Costing studies require significant cooperation by multiple stakeholders to provide the required data. It is critical that civil society and government have ownership of the study to ensure that evidence is effectively used to raise investments in policies and programmes.

#### **Develop a capacity-building programme on costing for Member States**

Member State governments need to better understand the advantages of costing work and the specific requirements of such studies. Capacity-building should elaborate the lessons learned from other countries, and the benefits and steps involved.

#### **Invest in a survey on marital violence and its economic impacts**

Any country contemplating a costing study should invest in a dedicated survey for a robust estimation of costs at the individual and household levels.

#### **Strengthen capacity of service providers – police, courts, health facilities, NGOs, shelters – to monitor financial costs of service provision**

Service provider data systems in the region are weak in recording marital violence cases, and reporting on indicators of quality, efficiency and cost of service provision. Collecting data regularly is key to establishing a benchmark for service use and associated costs and trends. This information can be fed into economic evaluations for cost-effective scale-up.

#### **Enhance capacity of national statistics offices to integrate violence questions into surveys**

Regular collection of data on violence would be enhanced if specific questions were integrated into surveys. National statistical offices should receive training on violence research and to develop a short module to integrate it into data collection.

#### **Enhance capacity to apply gender-responsive budgeting in ministries and departments**

Gender-responsive budgeting is a useful tool to discern priorities of governments, ministries and departments across programmes. It requires officials, finance and budget staff, and programme implementers to have the knowledge to apply the methodology.

