

Chapter 6

Approaches to Estimate
Direct Cost ('Full Coverage'
Case)

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The total number of women aged between 18 and 64 in Seychelles in 2016 was 31,103 (National Bureau of Statistics 2016). According to the baseline survey (Gender Links 2016), two prevalence rates were reported as:

- *Prevalence rate for physical violence – 22%*
- *Prevalence rate for sexual violence – 8%*

Using these statistics, the number of women who experienced violence for 2016 (or in any typical year) in Seychelles was established as 6,843 ($31,103 \times 0.22$). Similarly, the total number of women who experienced sexual violence was determined as 2,488 ($31,103 \times 0.08$). Thus, the estimated number of VAW survivors in 2016 in Seychelles was 9,331 ($6,843 + 2,488$).

This number constitutes the main element of scenario generation under the ‘full coverage’ (or macro) case. All other parameters and the unit costs used in the typical case are retained for full coverage case estimation. Therefore, it may be argued that full coverage estimates are only influenced by the number of survivors estimated from the female population aged between 18 and 64.

The costs of two major cost drivers found in the typical case – healthcare services and learning time lost (education) are kept unchanged under the full coverage case since they have been based on supposedly ‘full coverage’ data (i.e. healthcare: total number of visits to medical institutions in 2016; learning time lost: actual primary and secondary school budget for 2016). Analogously, specialised services (i.e. 24-hour telephone hotline) has also been considered to derive from ‘full coverage’ data. Thus, costs of law enforcement; social services; personal cost and income loss are re-estimated under the full coverage case.

6.1 Law enforcement and the judiciary

Data and parameters generated for the ‘full coverage’ case record a number of differences compared to the typical case. These are:

- *Number of VAW-related registrations is 2,893 compared to 609 in the typical case*
- *Number of protection orders is now increased to 1,513 rather than 262*

Table 6.1 Data and parameters used in law enforcement and the judiciary cost estimation due to VAW ('full coverage' case)

Data and parameters	Value	Source
<i>Data:</i>		
Number of registrations	2,893 (=9,331×0.31)	Derived using FGD shares for women who sought help (0.31) and full coverage case survivors
Number of protection orders	1,513 (=2,893×0.5234)	Derived using Family Tribunal share for protection orders (0.5234=262/501)
Number of probation cases	791 (= 2,893×0.2734)	Derived using Family Tribunal share for probation cases (0.2734=137/501)
Number of evictions	335 (= 2,893×0.1157)	Derived using Family Tribunal share for evictions (0.1157=58/501)
Number of persons sent to prison	52 (= 791×0.066)	Derived using Family Tribunal share for persons sent to prison out of probation or arrest (0.066=9/137)
Number of sexual offences	2,488	Full coverage case estimate
<i>Unit Costs:</i>		
Hourly wage of a police officer	63	Derived (typical case)
Hourly wage of a judge	415	Derived (typical case)
Hourly wage of a medical officer	90	Derived (typical case)
Hourly wage of Family Tribunal personnel	40	Derived (typical case)
Daily cost of detention	585	Probation (typical case)
Hourly cost of service call (patrol)	130	Assumed (typical case)

- *Number of probation cases, which was 137, has now increased to 791*
- *Number of evictions is simulated at 335 in place of 58 in the typical case*
- *Number of persons sent to prison is now increased to 52 rather than 9*

The following generalised specification is used to estimate the cost of law enforcement and the judiciary for each category:

$$\text{Law Enforcement and Judiciary Cost}_i = (\text{Data}_i \times \text{Days}_i) \times \text{Unit Cost}_i$$

Where, $i = 1 \dots 7$ (1=service call, 2=registration, 3=protection, 4=probation, 5=eviction, 6=sexual offences and 7=prison). The specifications and estimated costs are provided in Table 6.2.

Table 6.2 Estimated cost of law enforcement and the judiciary due to VAW (SCR) ('full coverage' case)

Category	Data	Days	Unit cost (SCR)	Total cost (SCR)
Cost of service calls by police	2,893		$193 = 130 + (1 \times 63)$	556,821
Registration and administration cost of cases	2,893		$1,041 = (2 \times 63) + (8 \times 40) + (2 \times 90) + (1 \times 415)$	3,008,282
Protection orders	1,513		$861 = (2 \times 63) + (8 \times 40) + (1 \times 415)$	1,300,910
Probation cases/arrests	791	30	$1,625 = 1,040 + 585$	38,560,503
Evictions	335	1	1,625	544,163
Sexual offences	2,488		$1,653 = (7 \times 63) + (8 \times 40) + (2 \times 150) + (1 \times 415)$	4,111,817
Long-term detention (prison)	52	365	585	11,095,292
Total cost				59,177,788

6.2 Social services

Data and parameters to estimate the cost of social services under the full coverage case are provided in the Table 6.3. This provides an update of the data and parameter sets used for the typical case, with only one exception – the number of women who sought assistance is now 2,893 instead of the 156 used in the typical case.

The following generalised specification is used to estimate the cost of social services for each category:

$$\text{Social Services Cost}_i = (\text{Data}_i \times \text{Days}_i) \times \text{Unit Cost}_i$$

Table 6.3 Data and parameters used in social services cost estimation due to VAW ('full coverage' case)

Data and parameters	Value	Source
<i>Data:</i>		
Number of compiled cases	2,893	Full coverage case estimate
Number of self-referral cases	4,151	Derived ($2,893 \times 1.435^*$)
<i>Parameters:</i>		
Percentage of emotionally disturbed cases	0.6	FGD and baseline survey (typical case)
<i>Unit cost:</i>		
Hourly wage of a social worker	40	Derived (typical case)
Note: * according to Family Support Unit (FSU) data, self-referral cases were 1.4 times higher than the case compiled for the Family Tribunal.		

Table 6.4 Estimated cost of social services due to VAW under the full coverage case (SCR)

Category	Data	Days	Parameter	Unit cost (SCR)	Total cost (SCR)
Cost of case completion for Family Tribunal	2,893	5		160 = 4 × 40	2,314,063
Cost of self-referral cases	4,151			60 = 1.5 × 40	249,051
Counselling services	2,893	5	0.6	80 = 2 × 40	694,219
Total cost					3,257,333

Where, $i = 1 \dots 3$ (1 = case compilation for Family Tribunal, 2 = self-referral cases, and 3 = counselling services). The specifications and estimated costs are provided in Table 6.4.

6.3 Personal cost

Data and parameters to estimate personal cost under the full coverage case are provided in Table 6.5. It is an update of the data and parameter sets used for the typical case, with only one exception – the number of women who sought assistance is now 2,893 persons instead of the 609 used in the typical case.

The following generalised specification is used to estimate personal cost of physical and sexual violence for three types of losses:

$$Personal\ Cost_i = (Data_i \times Parameters_i) \times Unit\ Cost_i$$

Where, $i = 1 \dots 3$ (1 = personal property losses, 2 = personal income losses, and 3 = personal expenses incurred). The specifications and estimated costs are provided in the Table 6.6.

Table 6.5 Data and parameters used in personal cost estimation due to VAW ('full coverage' case)

Data and parameters	Value	Source
<i>Data:</i>		
Number of women who sought help	2,893	Best-case estimate
<i>Parameters:</i>		
% survivors who reported loss of property due to violence	0.200	FGD (typical case)
% survivors who reported loss of income due to violence	0.170	FGD (typical case)
% survivors who reported coping costs due to violence	0.200	FGD (typical case)
<i>Unit cost:</i>		
Average value property lost (SCR)	15,000	FGD (typical case)
Average income loss (other than employment income) [SCR]	15,000	FGD (typical case)
Average value personal expense incurred (without medical expenses) [SCR]	27,000	FGD (typical case)

Table 6.6 Estimated personal cost of VAW under the full coverage case (SCR)

Category	Data	Parameters	Unit cost (SCR)	Cost (SCR)
Loss of personal property	2,893	0.20	15,000	8,677,737
Loss of personal income	2,893	0.17	15,000	7,376,076
Personal expenses incurred	2,893	0.20	27,000	15,619,927
Total personal cost				31,673,740

6.4 Income loss

Data and parameters to estimate income loss under the full coverage case are given in Table 6.7. This is an update of the data and parameter sets used for the typical case, with two exceptions:

- *Number of deaths due to VAW is 12 persons instead of one in the typical case*

Table 6.7 Data and parameters used in income loss estimation due to VAW (full coverage case)

Data and parameters	Value	Source
<i>Data:</i>		
Number of deaths due to VAW	$12 = (374 \times 0.05 \times 0.62)$	Derived using official female deaths of 374; proportion of female deaths due to VAW assumed 5%* and female employment ratio of 62%
Number of survivors	9,331	Full coverage case estimate
<i>Parameters:</i>		
Employment rate among working age women (%)	0.62	Labour Force Survey
Median days incapable of household work	32	FGD (typical case)
Average hours incapable of household work	5	FGD (typical case)
<i>Unit costs:</i>		
GDP per employed person in per year – 2016 (SCR)	304,288	Derived (typical case)
GDP per employed person per data – 2016 (SCR)	1,207	Derived (typical case)

Note: * This assumption seems reasonable considering estimates reported in Stöckl et al. (2013) for intimate partner violence. Some of the relevant rates are: female homicides: 9 per cent; IP female homicides: 7 per cent; and child homicides: 5 per cent. Citing the United Nations Office on Drugs and Crime, the USNEWS (2016) argued that 'women face an especially high risk of violence from those closest to them. Between 2005 and 2012, up to 55 per cent of all female homicide victims were killed by intimate partners or family members. The same is true for less than 20 per cent of male homicide victims'.

Table 6.8 Estimated personal income loss due to VAW under the full coverage case (SCR)

Category	Data	Parameters			Unit cost (SCR)	Cost (SCR)
		Employment rate	Days	Hours		
Irreversible (deaths)	12				304,289	3,651,456
Total irreversible income loss						3,651,456
Reversible						
a. employment income loss	9,331	0.62	8		1,207	55,884,259
b. household income loss	9,331		32	05	1,207	180,271,803
Total reversible income loss						236,156,062
Total income loss						239,807,518

- *Number of VAW survivors is 9,331 persons instead of 609 in the typical case*

The following generalised specification has been used to estimate income loss under the irreversible and reversible categories:

Irreversible (death)

$$\text{Income Loss} = \text{Data (death)} \times \text{Unit Cost (GDP per employed person)}$$

Reversible (disorder)

- Income loss from employment = [Data (number of survivors) × Parameters (female employment rate)] × Unit cost (GDP per employed person per year)*
- Income loss from household activities = [Data (number of survivors) × Parameter 1 (median incapacity days) × Parameter 2 (average incapacity hours)] × Unit cost (GDP per employed person per year)*

References

- Gender Links (2016), 'Gender Based Violence: National Baseline Study in Seychelles', Johannesburg, South Africa, December.
- National Bureau of Statistics (2017), 'Quarterly Unemployment Statistics', September 2017, Mahe, Seychelles.
- Stöckl, H, K Devries, A Rotstein, N Abrahams, J Campbell, C Watts and C Garcia Moreno (2013), 'The global prevalence of intimate partner homicide: a systematic review', *The Lancet* 382, 859–65.
- USNEWS (2016), <https://www.usnews.com/news/best-countries/articles/2016-10-20/violence-against-women-in-5-charts>