

Summary

Case Studies on the Cost of Inaction on VAW and VAC Italy

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1 Methods

To compute the costs of VAW and VAC on health and socio-economic outcomes, we adopt the two-step procedure of Conti et al. (2021), which can be summarized as follows:

1. *Econometric analysis* - we use OLS and logit models to estimate the impact of VAW or VAC on health and socio-economic outcomes, controlling for demographic characteristics.
2. *Cost analysis* - we use the regression results from (1) and best-published evidence on the cost of each outcome.

The cost analysis is performed assuming a societal perspective that includes both the cost for the national health system and for the society, in terms of productivity losses and out-of-pocket costs.¹ Where data allows, we distinguish between short-term and long-term costs: if violence occurred in the year before the interview, we assess short-term costs only (for the year following the violence), while when violence occurred more than a year before the interview, we add such short-term costs to the costs until retirement or death.

Previous works estimated the cost of VAW in Italy to be 16.7 billion Euros (19.9 bil in 2024) (Badalassi et al., 2013), and the cost of VAC to be 13 billion Euros (15.5 bil in 2024) (Terres des Hommes & Cismai, 2013). Our work contributes to this literature by using the latest available data sources and more rigorous econometric modelling to estimate the impact of violence. Our estimates suggest a lifetime cost of VAW of €50,276,903,464.55, equivalent to 2.36% of the Italian GDP in 2024.

2 Results: VAW

2.1 Health and socio-economic outcomes (survey data)

To estimate the impact of VAW, we use data from the ISTAT Violence Against Women Survey, which was carried out in 2014.² Pooling together cases of physical and/or sexual violence, we find that 31.5% of women

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Table 1: VAW: regression estimates and costs for victims

| | ISTAT | |
|--|---------------------|-----------------|
| | Regression estimate | Cost per victim |
| Panel A: Short term costs of VAW in the year after violence^a | | |
| Productivity loss from increased PT work when employed | 0.042** | €926.88 |
| Productivity loss from increased unemployment income | NSS | NSS |
| Cost of insomnia | 0.183*** | €481.69 |
| Cost of depression (NHS) | 0.175*** | €549.51 |
| Cost of depression (prod loss) | 0.175*** | €1,478.90 |
| Cost of headache | 0.108*** | €314.71 |
| Panel B: Costs of VAW from year 2 after violence onwards | | |
| Productivity loss from increased PT work when employed ^c | NSS | NSS |
| Productivity loss from increased unemployment income ^c | 0.003* | €65.04 |
| Cost of insomnia ^d | 0.106*** | €7,637.86 |
| Cost of depression (NHS) ^d | 0.078*** | €6,704.84 |
| Cost of depression (prod loss) ^d | 0.078*** | €18,044.69 |
| Cost of headache ^d | 0.08*** | €6,381.66 |
| Panel C: Lifetime costs of violence^e | | |
| Lifetime productivity loss from increased PT work when employed ^c | 0.042;0 | €926.88 |
| Lifetime productivity loss from increased unemployment income ^c | 0;0.003 | €57.59 |
| Lifetime cost of insomnia ^d | 0.183;0.106 | €7,660.52 |
| Lifetime cost of depression (NHS) ^d | 0.175;0.078 | €6,851.40 |
| Lifetime cost of depression (prod loss) ^d | 0.175;0.078 | €18,439.11 |
| Lifetime cost of headache ^d | 0.108;0.080 | €6,312.83 |
| Panel D: totals | | |
| Total lifetime productivity loss | | €19,423.58 |
| Total lifetime healthcare cost loss | | €32,412.46 |
| Total loss | | €51,836.05 |

Estimates are marginal effects of switching from 0 to 1 in exposure to violence on the probability of various outcomes considered. All logit regressions control for age (5 categories), citizenship, education level (4 categories), geographic area (5 categories) and current and past relationship status (7 dummies). NSS: not statistically significant. Sample size: 24,761 women. * p<0.10, ** p<0.05, *** p<0.001

^a cost only in the following year

^b negative values imply a productivity gain due to increased employment

^c calculated up to retirement age

^d lifetime cost until death

^e two regression estimates are reported for lifetime costs: the first one refers to the year after violence (Panel A), and the second one refers to the estimate from year 2 after violence (Panel B)

interviewed by ISTAT have experienced it, with recent victims³ being 4.5% of the whole sample, while 18% reports having experienced multiple episodes.

Using logistic regression and controlling for demographic characteristics⁴, we estimate the marginal effects of switching from 0 to 1 in exposure to violence on the probability of various productivity (full- and part-time employment, and unemployment benefits) and health (both physical and mental) outcomes. We use a categorical definition of VAW: (i) no VAW, (ii) at least one VAW episode in the 12 months prior to the survey, and (iii) at least one VAW episode more than 12 months prior to the survey. Estimates reported in the table below consider no VAW as the baseline category and show the effects of (ii) and (iii) on the various outcomes. We interpret effects of category (ii) as the short-term effects of VAW on the victim in the year after violence occurs, and effects from category (iii) as the effects of VAW on the victim from year 2 after violence onwards. Adding the discounted costs of the first year after the violence to the costs of violence from the second year onwards we estimate the long-term costs of VAW (lifetime)^{5,6}.

Experiencing VAW has a total productivity loss of €19,423.58, and a total lifetime healthcare loss of €32,412.26. A breakdown of the coefficients and costs is reported in Table 1.

Table 2: Workplace violence: regression estimates and costs per victim

| | EWCS DATA | |
|--|---------------------|-----------------|
| | Regression estimate | Cost per victim |
| Short-Term Costs of violence in the workplace | | |
| Cost of reduced wage in the year after | -0.254* | €18,955.51 |
| Cost of physical pain | 0.211** | €516.95 |
| Cost of headache | 0.172** | €501.21 |
| Cost of mental health | 0.363*** | €1,857.47 |
| Total cost | | €21,831.141 |
| Long-Term Costs of violence in the workplace | | |
| Lifetime cost of reduced wage ^a | -0.254* | €406,732.13 |
| Cost of physical pain ^b | 0.211** | €12,914.39 |
| Cost of headache ^b | 0.172** | €12,521.13 |
| Cost of mental health ^b | 0.363*** | €46,403.16 |
| Total cost | | €478,570.81 |

^a assuming this will last all life until retirement

^b assuming this will last all life until death

Sample size: 763 (wages) - 1410 (others)

2.2 Hospitalisation (registry data)

We use the Italian hospital discharge data for the period 2004-2016 to estimate the costs of hospital admissions recording violence or abuse as a primary or secondary cause of admission.⁷ We compute the average cost for the NHS using the national tariffs, which are associated with every hospital admission via the DRG (HRG) code.⁸ The total cost over the 12 years has been assessed, and an average cost per admission for the National Health Service has been estimated at €1,692 per woman (inflated to 2024).

2.3 Femicides (data from newspapers)

Data on victims of femicides for the period 2012-2022 have been collected by the non-profit organization ‘Casa delle donne per non subire violenza’.⁹ The cost per victim has been computed in terms of productivity loss for society between the average age at which they are killed (50 years old) and average life expectancy. We assumed that all the women were employed and we used the average wage for that age range. The average discounted lifetime productivity loss due to femicide is €1.3 mil per victim.

2.4 Workplace violence

We use data from the European Working Conditions Survey (EWCS) to identify workplace victims of sexual harassment, physical violence, or bullying within the last 12 months.¹⁰ Prevalence amounts to 2.5% for female respondents in Italy. Using logistic and linear regression models and controlling for demographics and company characteristics¹¹, we estimate the impact of violence in the workplace on wages and health outcomes. We then use the regression coefficients to estimate the impact of workplace violence on physical pain, headache and mental health.¹² Short-term costs are the ones incurred in the year after the episode takes place. Due to data limitations, long-term costs are calculated using the discounted short-term costs until retirement or death. The lifetime impact of violence in the workplace is a productivity loss of €406,732 and a total healthcare cost of €71,839 per woman. A breakdown of the regression coefficients and costs is reported in Table 2.

2.5 Total cost of VAW as % of GDP

Total lifetime costs of VAW as per ISTAT data amount to €51,836.05 per victim, with 4.5% of females in our sample reporting having experienced the last episode 12 months before the interview. This amounts to a total cost of €48,083,219,942.50. Hospitalization costs amount to €2,058,645,026.07, and total femicide costs amount to €135,038,495.97. In total, we estimate a cost of €50,276,903,464.55, equivalent to 2.36% of the Italian GDP in 2024.

3 Results: VAC

3.1 Health and socio-economic outcomes (survey data)

To estimate the impacts of VAC, we use the Survey of Health, Ageing and Retirement in Europe (SHARE).¹³ Following previous work (Conti et al., 2021 and Brugiavini et. al, 2023), we construct a global measure of VAC as physical abuse, neglect, and a poor parental relationship: roughly 50% of our sample has been affected by VAC.

Conditional on demographic¹⁴ and childhood-related controls¹⁵, we estimate the impact of VAC on productivity and health outcomes. We then use the regression estimates to calculate the costs¹⁶. Overall, we estimate that the lifetime economic costs of VAC are €62,238.75 per child. A breakdown of the regression estimates and costs is reported in Table 3.

Table 3: VAC: regression estimates and costs per victim

| | SHARE DATA | |
|---|---------------------|-----------------|
| | Regression estimate | Cost per victim |
| Discounted cost of depression | 0.024** | |
| NHS costs ^a | | €2,877.61 |
| Productivity losses ^b | | €2,749.82 |
| Out of pocket costs ^a | | €345.85 |
| Total cost of depression | | €5,973.29 |
| Discounted cost of smoking | 0.066** | |
| Lifetime direct and indirect costs of smoking ^c | | €4,539.53 |
| Discounted cost of reduced productivity | 0.02** | |
| Lifetime productivity loss from reduced daily activities ^d | | €49,591.97 |
| Disability benefits ^a | | €3,133.96 |

^a from 18 years old to death

^b from average starting working age until retirement (25-67)

^c from 14 years old to death

^d from average starting working age until death

Sample size: 1806-2043

3.2 Hospitalisations (registry data)

Using the same approach as for VAW, we estimate that the average cost per hospital admission associated with VAC is €1,418 per child (inflated to 2024).

Notes

¹Costs are presented in 2024 prices and inflated and exchanged were necessary, using the standard methods. When lifetime costs are assessed, the costs following the first year are discounted using a 3% discount rate. For the analysis, we use an average age at which the violence occurs (based on each database), and we extrapolate assuming constant effects over time. For productivity loss costs, we assume effects last until retirement age, while for health outcomes, we assume effects last until death (using the average life expectancy in Italy).

²The sample in the ISTAT Violence Against Women Survey is representative of females aged 16-70. The data can be found here: <https://www.istat.it/en/press-release/violence-against-women/>.

³Recent victims are those who encountered the last incident within the 12 months before the interview.

⁴age (5 categories), citizenship, education level (4 categories), geographic area (5 categories) and current and past relationship status (7 dummies)

⁵Using the age categories of victims and the time they report having experienced the last episode, we assume that when the violence is registered in the year before, victims have an average age of 35, while in general, when violence is reported at any time, victims have an average age of 32.

⁶We made the following assumptions to estimate the costs of VAW on health and productivity outcomes: a) the average age at which women start working is 26 years, and that at which they retire is 67 (legal retirement age in Italy) ; b) we assume that part-time salary is 56% of full time; c) we use the Italian salary scale by age group from official sources (<https://www.averagesalariesurvey.com/italy>); d) average life expectancy in the Italian population is 85 years (<https://www.statista.com/statistics/1366972/females-life-expectancy-at-birth-in-italy/>); e) costs incurred after the first year are discounted at a 3% discount rate (Fiorentino et al); f) disability benefits are €467.65 per month over 13 months per year for women older than 18 years of age (€6,079 per year). Source: Istituto Nazionale Previdenza Sociale (INPS), <https://servizi2.inps.it/doc/allegati/mig/doc/pubblicazioni/opuscoli/pdfdisabili.pdf>.

⁷The selection of violence cases is based on a screening of the ICD-9 codes associated with each hospitalization. The set of codes associated with violence or abuse is the same one used in the technical report of ISTAT (2020).

⁸The national tariffs associated with every DRG code are retrieved from the Italian Ministry of Health's website at https://www.salute.gov.it/portale/temi/p2_6.jsp?lingua=italiano&id=3662&area=programmazioneSanitariaLea&menu=vuoto.

⁹The organization collects data on cases of femicides from Italian newspapers and publishes a report every year. Data from the reports have been digitized and then used for the cost estimates. Yearly reports are available at <https://femicidiocasadonne.wordpress.com/ricerche-pubblicazioni/>.

¹⁰The EWCS covers individuals aged 15 and over. We use data from the 5th (2010) and 6th (2015) waves.

¹¹Age, citizenship, education, and whether the company is private or public.

¹²As before, we make the following assumptions: violence occurs at 42 years; the impact on health lasts until death and that on wage until retirement; we use the average national wage by age group and the available evidence on the unit cost per year to treat physical pain, headache and mental health.

¹³The SHARE sample is representative of individuals above 50 years old. In the 7th wave, respondents are asked to report retrospective information on childhood, i.e., before the age of 17.

¹⁴Citizenship, gender, age.

¹⁵Following Brugiavini et al. (2023), we control for citizenship of the parents, whether parents were discriminated, occupation of breadwinner, mother's age at birth, people per room, whether household was very religious.

¹⁶We made the following assumptions: a) the average age at which children are maltreated is 6 years old, but the effects on mental health occur when >18 until death; b) median working age is 25 years and retiring is at 67; c) we use the Italian salary scale by age group and by level of education from official sources; d) average life expectancy in the Italian population is 85; e) costs incurred after the first year up are discounted at a 3% discount rate for the first 30 years, then 2.5% up to 75 years and 2% after 76 years; f) disability benefits are €467.65 per month over 13 months per year for women older than 18 years old (€6,079 per year).

References

- Badalassi et al. (2013). Quanto Costa il Silenzio? Indagine nazionale sui costi economici e social della violenza contro le done. Techincal report by Intervita Onlus, November 2013.

- Brugiavini, A., Buia, R. E., Kovacic, M., & Orso, C. E. (2023). Adverse childhood experiences and unhealthy lifestyles later in life: evidence from SHARE countries. *Review of Economics of the Household*, 21(1), 1-18.
- Conti, G., Pizzo, E., Morris, S., & Melnychuk, M. (2021). The economic costs of child maltreatment in UK. *Health economics*, 30(12), 3087-3105.
- ISTAT (2020). Ricoveri ospedalieri di donne con indicazione di violenza. Italian National Institute of Statistics, Technical report.
- Terres des Hommes & CISMAI (2013). Indagine nazionale sul maltrattamento dei bambini e degli adolescenti in Italia. Autorità Garante per l'Infanzia e l'Adolescenza.