A Framework for Global, Regional, and National Estimates of VAW Statistics

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UN JOINT PROGRAMME

➢ Establishment of an inter-agency working group on VAW data and statistics (all co-custodians of SDG target 5.2. WHO, UNWomen, UNICEF, UNODC, UNFPA, UNDP,) and an independent advisory group (TAG)

➢ Global, regional and country VAW prevalence database and estimates

➢ Measurement of violence against older women

➢ Measuring psychological violence in VAW surveys
PREVALENCE DATABASE 2019

- Evolved from the WHO Global Burden of Disease (GBD) 2013 study
- Focuses on intimate partner violence (IPV) and sexual violence from a non-partner (NPSV)
- Population-based studies, either representative at national or sub-national level were included
WHO GLOBAL, REGIONAL AND COUNTRY PREVALENCE DATABASE 2019 (for the VAWDE – IAWG)

- Types of IPV (Physical, sexual, physical and/or sexual, psychological)
- Sexual violence by any perpetrator since age 15, and non-partner sexual violence
- Age-disaggregated data (5 year age groups where available)
- Residence (national; urban; rural; mixed)
- Population sampled
- Perpetrator status
- Type of VAW survey
- Measures of quality:
  - Training of interviewers
  - Acts-based measures of violence
Data availability: 2000-2019

The 2013 GBD Study included 141 studies and covered 85 countries.

In 2019 we are drawing on data from:

- 153 countries with studies measuring IPV (or NPSV), covering 100% of the GBD / SDG regions
- 142 countries with national or subnational data on lifetime and past year physical and/or sexual intimate partner violence
- Greater availability and quality of data: of age- and region dis-aggregated data; and on husband/partner perpetrating violence; specific acts used to measure violence; reporting of interviewer training (although still some gaps)
Data Availability 2005-2018: Ever IPV

- GBD Regions: 21
- Countries: 138
- Studies: 254

- Countries with 1 study: 80 (58%)
- Countries with 2 studies: 29 (21%)
- Countries with 3 studies: 16 (12%)
- Countries with 4 or more studies: 13 (9%)

Studies conducted 2005-2018 (87% of women and girls covered)
Data Availability 2005-2018: Past Year IPV

Studies conducted 2005-2018 (88% of women and girls covered)

#Countries with 1 study: 79 (57%)
#Countries with 2 studies: 31 (22%)
#Countries with 3 studies: 14 (10%)
#Countries with 4 or more studies: 14 (10%)

#GBD Regions: 21
#Countries: 138
#Studies:
What indicators did surveys publish?

Many surveys did not measure or did not publish:

- Both timeframes (ever and past year)
- Both current/most recent partner vs. any partner
- Physical partner violence and sexual partner violence
- Composite indicator for physical and/or sexual IPV
- Age group 15-49 years old not always reported
- Consistent denominators for most IPV indicators

DHS surveys are the only ones publishing all indicators
Limitations with IPV data collection

- Measured using non-acts based questions: ‘Have you ever experienced physical violence from your husband/partner in the last 12 months?’
- Aggregation of all forms of intimate partner violence: ‘Have you ever experienced violence from your husband/partner?’
- Current and/or most recent husband/partner versus any husband/partner
- Population surveyed (all women, ever-partnered, currently partnered)
- Asked about violence experienced from spouse only=husband only versus any intimate (cohabiting) partner
- Lack of or inadequate training of interviewers
- Lack of attention to ethical and safety standards
Which women were asked about IPV?
Who was included in denominators?

Often challenging to answer! May require checking:

1. Partnership history questions (married, cohabited, romantic partners, number of partnerships, etc.)
2. Additional filters specific to violence questions/modules
3. Wording of preambles and items
4. Explanations of indicators construction in text of reports
5. Table/figure labels

➤ Subsample of women and girls asked about IPV is not always the subsample included in IPV indicators denominators
Limitations of reports:

- Poor labeling (no information about denominator, timeframe, or sometimes even type of violence, extrapolation to population)
- Heterogeneous age bands, missing age profile or unclear upper age limit of sample
- Current and/or most recent husband/partner versus any husband/partner
- Population surveyed (all women, ever-partnered, currently partnered)
- Lack of clarity on perpetrator of violence: spouse only; spouse or partner; non-partners perpetrating sexual violence
- Overreliance on figures vs. tables
- Lack of disaggregation (age, partnership, type of IPV, by act)
- Little/no information on ethical and safety measures
- Lack of clarity about methods (weighting, missings, operational definitions)
**Recommendations**

- Disaggregate by age 15-49 even if older women are interviewed
- Measure and report BOTH current/most recent and any partner in life
- Clarify definition of romantic partners
- Address scientific and other implications of data on IPV against men
  - Engage in discussion of measures
  - How to interpret and position findings (some report prevalence with impact).
- Find strategies to improve quality of ‘unique’ dedicated surveys
- Reports need improvement! Above all, more clarity and detail.
- Ensure data is used for policy and programming
Estimates and country consultation process
Multilevel Bayesian Modelling Framework

Data pre-processing

- Sample size available?
  - Yes: Impute and/or distribute overall sample size to missing age-group sample sizes using world population standard weights
  - No: Date of study imputed as mid-point of start and end year of data collection

- Effective sample size available?
  - Yes: Impute effective sample size based on design effect
  - No: Keep estimates from aggregated age group for crosswalk

- Missing end year?
  - Yes: Impute with study publication year
  - No: Keep "optimal set" of estimates from each survey

Covariate modeling
- Exact matching used to estimate effect of covariates.
- Separate analyses for:
  - Lifetime IPV
  - Past year IPV
  - Lifetime NPSV

Bayesian multilevel model
- (levels: study, national, regional, global) for:
  - Lifetime IPV
  - Past year IPV
  - Lifetime NPSV

Analyses

- Odds ratios adjustments:
  - Definition (i.e., severity): IPV type (i.e., physical IPV only); Population surveyed (i.e., all women); Reference partners for IPV (i.e., current or most recent); Geographical strata (i.e., rural); Question type (i.e., act-specifics); Recall period (i.e., past year).

- Age interval > 5 years?
  - Yes: Age-standardization
  - No: Country age-specific VAW estimates

Post-processing

- National prevalence estimates
- Population weighting
- Regional prevalence estimates (weighted sum of national)
- Global prevalence estimates (weighted sum of national)

WPP standard population data
- Inclusion of uncertainty in crosswalk (multiple imputation)
- Ever had sex data
- WPP data

Adjustment factors for crosswalk vary as function of VAW outcomes.
- Not included for NPSV.
- Countries without data not reported.
- Countries without data assigned regional prevalence.
Meta-Regression Multilevel Model

- Multilevel models are useful to pool estimates from different sources.
  - Estimates are nested within studies, nested in countries, nested in regions, and globally.

- Advantage of the proposed approach relies on random effects that help “borrow strength” across units.

- Theoretically possible to fit the proposed model in a frequentist framework but much more robust to do so using Bayes (and better uncertainty propagation).
Covariates Adjustments

Ever IPV
- Severe violence
- Sexual violence only
- Physical violence only
- Denominator is currently partnered
- Denominator is all women
- Act-specific questions
- Perpetrator is current or most recent spouse only (vs. any)
- Rural/urban (vs. mixed/national)

Past Year IPV
- Severe violence
- Sexual violence only
- Physical violence only
- Denominator is currently partnered
- Denominator is all women
- Act-specific questions
- Perpetrator is current or most recent spouse only (vs. any)
- Rural/urban (vs. mixed/national)
Limitations

- VAW statistics are based on self-reports and associated with significant stigma (underreporting).
- Necessity to adjust some of the surveys.
  - But robust estimation of adjustment factors.
  - Most observations belong to “optimal set”.
- Some populous countries do not have observations.
  - But >87% of the global population of women and girls is represented for IPV estimates
Strengths

Model has some useful features:

- Ability to pool both nationally representative and subnational studies.
- Account for heterogeneous age groups and age trends.
- Accommodate differences in surveyed populations.
- Adjust for differences in survey instruments.
- Efficient propagation of uncertainty to model outputs.

Posterior predictive checks, in-sample comparisons, and out-of-sample predictions provide reassuring results.
Country Consultation Process

- Contacting Regional Offices and appointment of country focal points: December 2019

- Preparation and circulation of country profiles [Data sources used; covariates adjustment; age-disaggregated national estimates]: January 2020

- Technical document outlining the methodology and modelling framework used shared with countries: January 2020

- Feedback and agreement from countries: April 2020

- Publication of final estimates: June 2020