# Measurement innovation for sensitive behaviors: Applying direct and social network-based estimation approaches to intimate partner violence in Burkina Faso and the Democratic Republic of the Congo

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## BACKGROUND

**1 in 3 women** self-report experiences of IPV from a male partner over the course of her lifetime (1).

IPV is most often **estimated from population-based surveys** via direct questions about respondents' own IPV experiences (1).

- Population surveys are considered **the most reliable** for their ability to capture nearly all women.
- Despite sampling strengths, they are assumed **to be at risk of underreporting** given sensitivity of IPV.

**There is limited research evaluating whether IPV estimates from direct survey questions in population-based studies are biased, and if so, the extent of the bias.**

**Indirect measurement methods** provide an opportunity to evaluate underreporting from direct questions (2). **One indirect method is the confidante method**, which relies on third-party reporting of the sensitive behaviors of individuals in survey respondents' social networks (3).

**The confidante method** asks respondents if they **have a person in their social network, such as a confidante, with whom they share personal information.** If a person is identified, questions can then capture individual-level data, such as sociodemographic characteristics, in addition to information on the sensitive behavior of interest.

This method allows researchers to estimate sensitive behaviors within the confidante sample and compare estimates to direct reports from respondents.

## OBJECTIVES

**Accurate estimation** of IPV prevalence is important for the design and implementation of violence prevention and response programs. Therefore, this study aimed to:

1. Compare direct assessment with the confidante method to measure past-year IPV in Burkina Faso and the Democratic Republic of the Congo (DRC)
2. Assess the performance of each confidante method assumption

## METHODS

**Study Overview**

Data come from the Performance Monitoring for Action (PMA) project

- We use population-based surveys administered to nationally or sub-nationally representative samples of women in Burkina Faso and Kinshasa and Kongo Central, DRC (2020-2021)

**Samples**

- Respondent samples in each site included partnered women aged 15-49
- For confidante samples, respondents were asked if they had a female confidante or closest female friend aged 15-49 who lived in the country and with whom they share very personal information. If identified, information on the confidante was collected. Only partnered confidantes were included in samples.

| | Kinshasa | Kongo Central | Burkina Faso |
|---|---|---|---|
| Respondent | N=702 | N=688 | N=3047 |
| Confidante | N=304 | N=393 | N=2064 |

## METHODS, cont.

**Measures**

**Confidante assessment:** Respondents were first asked about the IPV experiences of their confidantes
**Direct assessment:** Then, respondents were asked about their own IPV experiences via direct questioning with the same items (*her* changed to *you*).

**Past-year IPV** was measured from 5 items adapted from the CTS-2 (4).

In the last 12 months, has the husband/partner:

1) Insulted her, yelled at her, screamed or made humiliating remarks?
2) Slapped, hit or physically hurt her?
3) Threatened with a weapon or attempted to strangle or kill her?
4) Pressured or insisted on having sex when she did not want to (without physical force)?
5) Physically forced her to have sex when she did not want to?

**An affirmative response to any of these items confirmed past-year IPV.**

IPV was also assessed by sub-type, including **emotional IPV** (item 1), **physical IPV** (items 2-3), **sexual IPV** (items 4-5), and **contact IPV**, including any sexual or physical IPV (items 2-5).

**Analysis—Method Assumptions and Adjustments**

We estimated the prevalence of past-year IPV within the respondent and confidante samples, adjusting for confidante method assumptions (below).

| Confidante Method Assumption | Violation of Assumption | Adjustment for Violation |
|---|---|---|
| Characteristics of the confidante sample resemble the characteristics of the respondent sample, providing a **representative, surrogate sample of the population of interest** | 1) 'Missing' confidantes, which could contribute to selection bias<br>2) Confidantes are significantly different than the representative sample of respondents | 1) Create surrogate confidantes in place of 'missing' confidantes<br>2) Apply respondent characteristics to surrogate confidantes<br>3) Generate and apply post-stratification weights to ensure confidante sample (true and surrogate confidantes) closely matches respondent sample |
| Respondents know about their confidante's experiences of IPV, i.e., there is **no transmission bias** between respondents and their confidantes | 1) Respondents with and without confidantes are significantly different (having a confidante is a pre-condition to sharing)<br>2) Some respondents don't know about their confidante's IPV experiences | Generate and apply a transmission bias factor, which is the inverse probability of respondents sharing their own reported IPV experiences with their confidante |
| Reporting on a confidante's experience of IPV, as opposed to one's own, **reduces social desirability bias** | — | No adjustment-–compare prevalence of past-year IPV among respondents and confidantes and test for significant differences |

**If confidante method assumptions are met and/or appropriate adjustments are made to account for violations of assumptions, resulting estimates are unbiased.**

## RESULTS

**Results by Method Assumption**

1. Respondents and confidantes did not significantly differ by characteristics in DRC sites, but did significantly differ by residence and parity in Burkina Faso, even after adjustments.
2. Respondents with and without confidantes did not significantly differ in Kinshasa. They did differ by parity in Kongo Central and by education, wealth, residence and parity in Burkina Faso. Most respondents who had a confidante and experienced IPV in DRC sites told their confidante about their IPV (92.4% in Kinshasa and 87.0% in Kongo Central, resulting in a transmission bias factor of 1.06 and 1.15 in each site, respectively).
3. Across sites, the prevalence of *any IPV* did not significantly differ between respondents and confidantes after full adjustments. Physical IPV differed by respondents and confidantes in Burkina Faso.

**Prevalence of past-year IPV among partnered female respondents aged 15 to 49 and their partnered female confidantes aged 15 to 49**

| | Kinshasa | | | | Kongo Central | | | | Burkina Faso | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | **Respondent** | **Confidante** | | | **Respondent** | **Confidante** | | | **Respondent** | **Confidante** | |
| | n=702 | n=304* | n=702** | n=702*** | n=688 | n=393* | n=688** | n=688*** | n=3047 | n=2064* | n=3047** |
| **Emotional IPV** | 27.6 | 27.0 | 26.7 | -- | 24.0 | 26.2 | 23.0 | -- | 22.9 | 22.6 | 22.9 |
| **Physical IPV** | 12.5 | 14.9 | 13.2 | -- | 11.9 | 16.7 | 13.8 | -- | 4.5 | 7.5 | **7.3** |
| **Sexual IPV** | 12.1 | 10.0 | 10.3 | -- | 12.2 | 12.5 | 11.3 | -- | 6.4 | 5.3 | 5.8 |
| **Contact IPV** | 20.6 | 19.9 | 19.0 | -- | 18.0 | 23.0 | 19.6 | -- | 9.4 | 10.6 | 10.7 |
| **Any IPV** | 35.3 | 33.0 | **32.3** | 34.4 | 29.7 | 32.7 | 29.4 | 33.7 | 25.7 | 24.1 | 24.5 |

*Unadjusted confidante sample (only confidantes directly reported by respondents); **Partially adjusted confidante (includes surrogate confidantes in place of 'missing' confidantes), post-stratification weights applied; ***Fully adjusted confidante (accounts for transmission bias, only possible in DRC sites) ; **bold indicates p-value less than 0.05 for design-based F-test comparing adjusted confidantes to respondents**

## IMPLICATIONS

1. **The confidante method did not afford advantages over direct assessment** across sites for IPV prevalence – with few exceptions, estimates were statistically comparable and often lower.
2. **Direct IPV assessment implemented under recommended measurement and ethical guidelines remains the best available IPV measurement method for survey research.**

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