

# Is intimate partner violence a risk factor for HIV infection? A systematic review and meta-analysis

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# Debate about whether VAW responses a core part of HIV programming

- **Several large GBV-HIV initiatives**
  - UNAIDS Pillar for HIV prevention on addressing GBV
  - Large PEPFAR funding in Sub-Saharan Africa
  - UN Stop Rape Campaign
  - Inclusion of violence prevention activities in some sex worker HIV prevention programmes, including AVAHAN
- **However:**
  - Questions about whether interventions to address violence should form a core part of IPV programmes
  - Analysis of DHS data found no association between intimate partner violence (IPV) and HIV (Harling 2010)



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# Aims & methods

## Aims

- Compile existing epidemiological evidence on the association between exposure to intimate partner violence (IPV) and HIV infection

## Methods

- Systematic review
- Searches of Pubmed, Embase, Cinahl, other databases until Dec 1 2010
- > 3,000 abstracts screened
- Inclusion: any population, any definition of IPV, HIV/STI
- Analysis stratified by study quality:
  - Prospective studies
  - High quality cross-sectional studies (biological outcome data, unexposed reference group)



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# Results

- 35 papers, describing 41 datasets with 121,479 participants, reporting 115 estimates included
  - 5 prospective datasets
    - 3 large studies with biological outcomes
      - 2 HIV, 1 STI
  - 3 case-control datasets
  - 35 cross-sectional datasets
    - With biological outcome data AND unexposed reference groups
      - HIV: 12 datasets, 25 estimates
      - STI: 6 datasets, 6 estimates



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# Prospective studies find associations

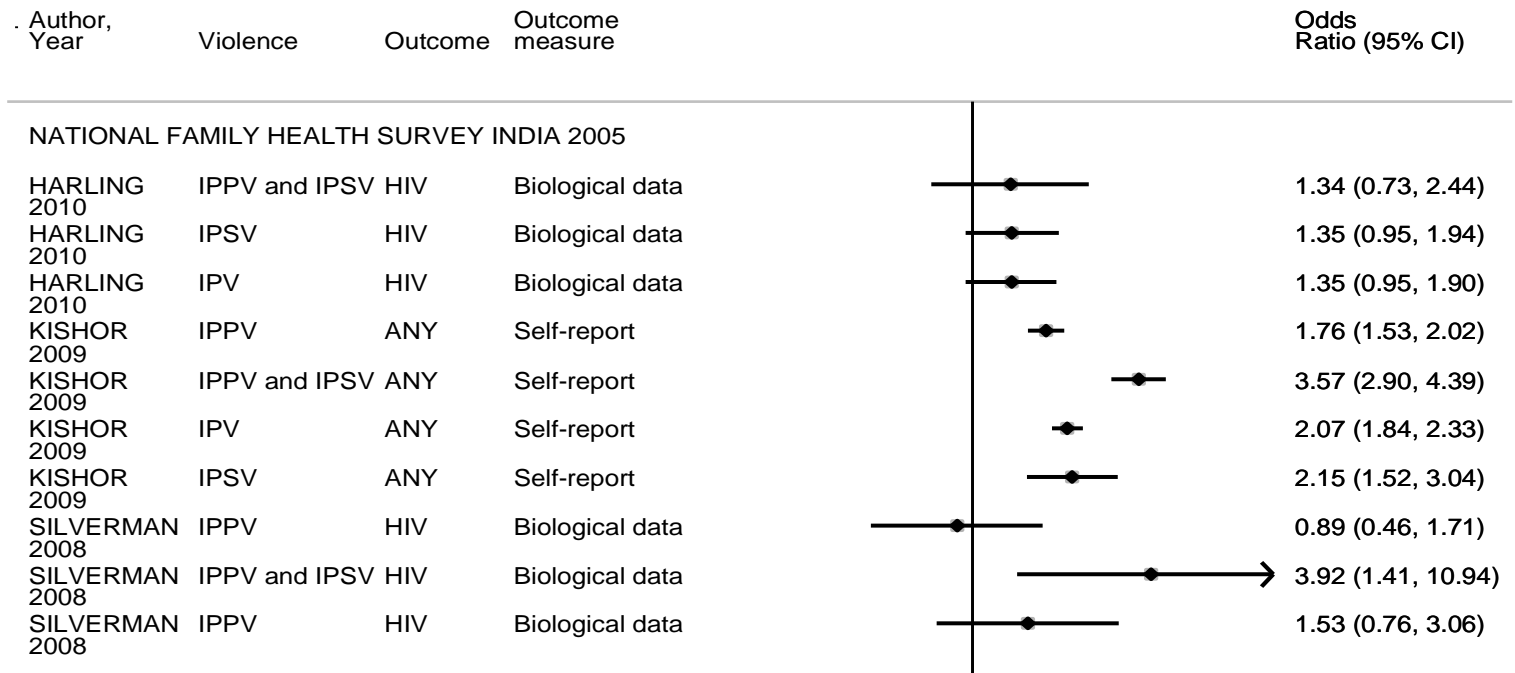
| Study            | Sample  | Intimate partner violence measure   | HIV/STI measure   | Estimate  |
|------------------|---|---|---|---|
| Jewkes et al     | 1099 women, vocational schools in rural Eastern Cape, South Africa, 2002                              | More than one episode of physical and/or sexual violence, WHO   | <b>Incident HIV, biologically confirmed,</b> adjusted for HSV-2 | <b>aIRR=1.51 (1.04-2.21)</b>  |
| Weiss et al      | 1991 non-pregnant women aged 18-45, population registers of primary care centre Goa, India, 2001-2003 | Physical violence, not further defined<br><br>Sexual violence, 'the husband or partner forcing sex against the woman's wishes.' | <b>Incident CT/GC/TV, biologically confirmed</b>                | aOR=1.40 (0.70-3.00)<br><br><b>aOR=3.00 (1.20-7.50)</b>                               |
| Zablotska et al. | 3422 women aged 15-24, population-based Rakai, Uganda, 2001-2003                                      | Sexual violence, "Sexual partner physically forced you to have sex when you did not want to.'                                   | <b>Incident HIV, biologically confirmed</b>                     | 1.6/ 100py in IPSV-, Alcohol-<br>2.2/ 100py in Alcohol+<br><b>2.3/ 100py in IPSV+</b> |



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**Different analyses of same cross-sectional data have different findings**



# Globally cross-sectional findings more mixed (HIV outcome)

## FORM OF IPV CONSIDERED

### PHYSICAL

Physical

| Study                                    | Odds Ratio (95% CI)      | Total number of people in analysis |
|--|--------------------------|------------------------------------|
| DHS ZIMBABWE 2005                        | 1.35 (1.05, 1.73)        | 2287                               |
| NATIONAL FAMILY HEALTH SURVEY INDIA 2005 | 1.53 (0.76, 3.06)        | 28139                              |
| DUNKLE SOUTH AFRICA 2004                 | 1.56 (1.21, 2.03)        | 800                                |
| <b>Subtotal</b>                          | <b>1.45 (1.22, 1.73)</b> |                                    |

### SEXUAL

Sexual

|                          |                          |      |
|--------------------------|--------------------------|------|
| DUNKLE SOUTH AFRICA 2004 | 0.88 (0.51, 1.53)        | 676  |
| DHS ZIMBABWE 2005        | 0.95 (0.66, 1.37)        | 1852 |
| <b>Subtotal</b>          | <b>0.93 (0.68, 1.26)</b> |      |

### PHYSICAL AND/OR SEXUAL

Either

|  |                          |       |
|--|--------------------------|-------|
| DHS HAITI 2005                           | 0.45 (0.23, 0.90)        | 2628  |
| DHS LIBERIA 2006                         | 0.87 (0.56, 1.35)        | 3278  |
| DHS KENYA 2003                           | 0.88 (0.62, 1.25)        | 1756  |
| DHS ZAMBIA 2007                          | 0.91 (0.77, 1.08)        | 3368  |
| DHS RWANDA 2005                          | 0.99 (0.59, 1.67)        | 2476  |
| DHS MALAWI 2004                          | 1.07 (0.81, 1.42)        | 2086  |
| DHS MALI 2006                            | 1.07 (0.51, 2.23)        | 2804  |
| DHS ZIMBABWE 2005                        | 1.11 (0.91, 1.34)        | 3203  |
| DHS DOMINICAN REPUBLIC 2007              | 1.12 (0.67, 1.88)        | 7870  |
| NATIONAL FAMILY HEALTH SURVEY INDIA 2005 | 1.35 (0.95, 1.90)        | 29783 |
| DUNKLE SOUTH AFRICA 2004                 | 1.49 (1.18, 1.89)        | 1336  |
| <b>Subtotal</b>                          | <b>1.05 (0.90, 1.21)</b> |       |

### PHYSICAL AND SEXUAL

Both

|  |                          |       |
|--|--------------------------|-------|
| DHS ZIMBABWE 2005                              | 1.38 (1.03, 1.85)        | 2061  |
| DUNKLE SOUTH AFRICA 2004                       | 1.66 (1.18, 2.32)        | 800   |
| NATIONAL FAMILY HEALTH SURVEY INDIA 2005       | 3.92 (1.41, 10.94)       | 28139 |
| <b>Subtotal</b> (I-squared = 48.9%, p = 0.141) | <b>1.66 (1.17, 2.34)</b> |       |

NOTE: Weights are from random effects analysis

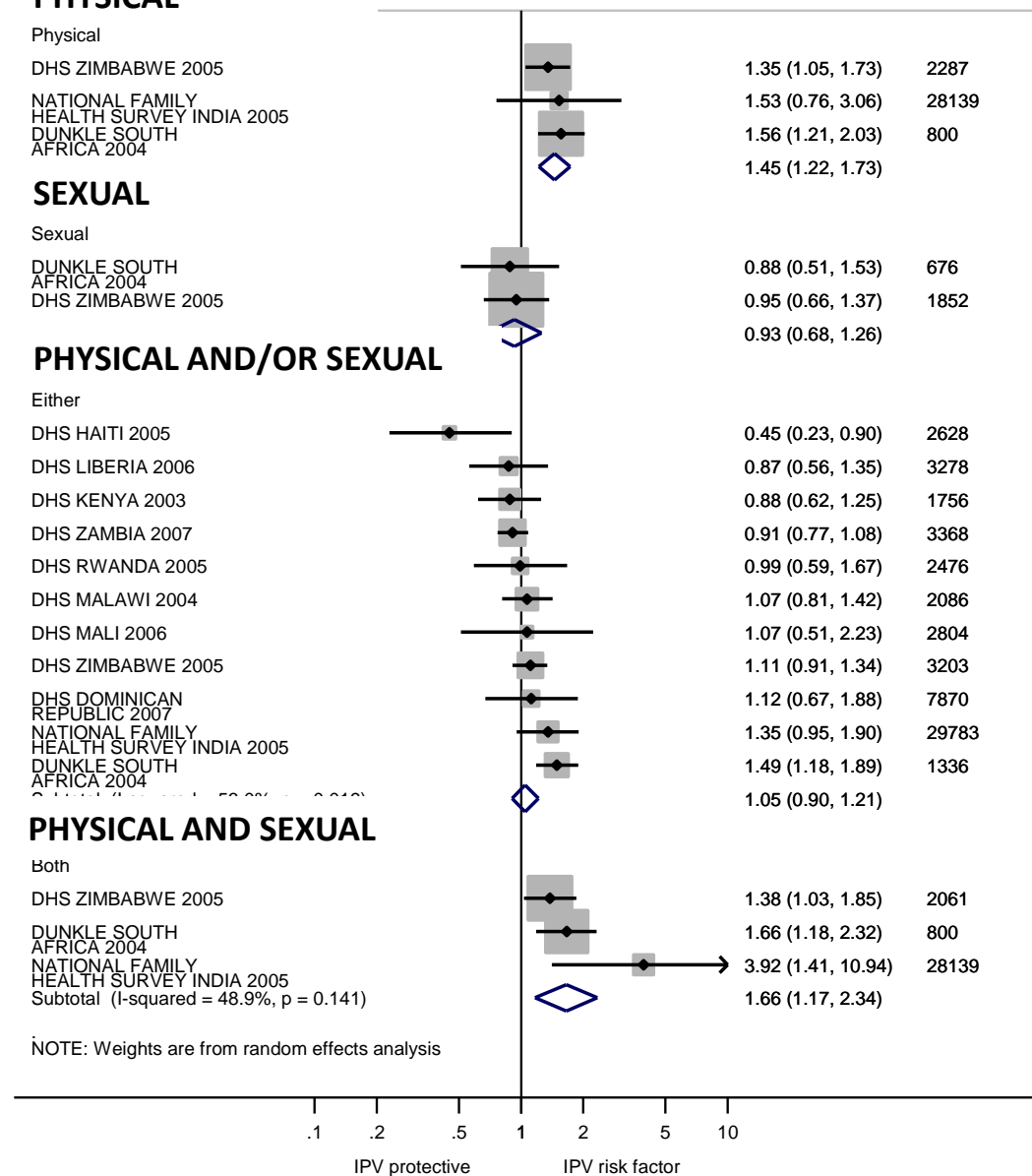


Figure: Cross-sectional studies. Pooled OR, biological data only, HIV outcome, where reference group is no physical or sexual violence

# Growing evidence globally that have a clustering of risk behaviours

- Men who are abusive to their partners are also more likely to have:
  - Concurrent sexual partners
  - A sexually transmitted infection
  - Problematic use of alcohol
  - Refuse to use a condom
- Clustering of risk linked to common underlying risk factors



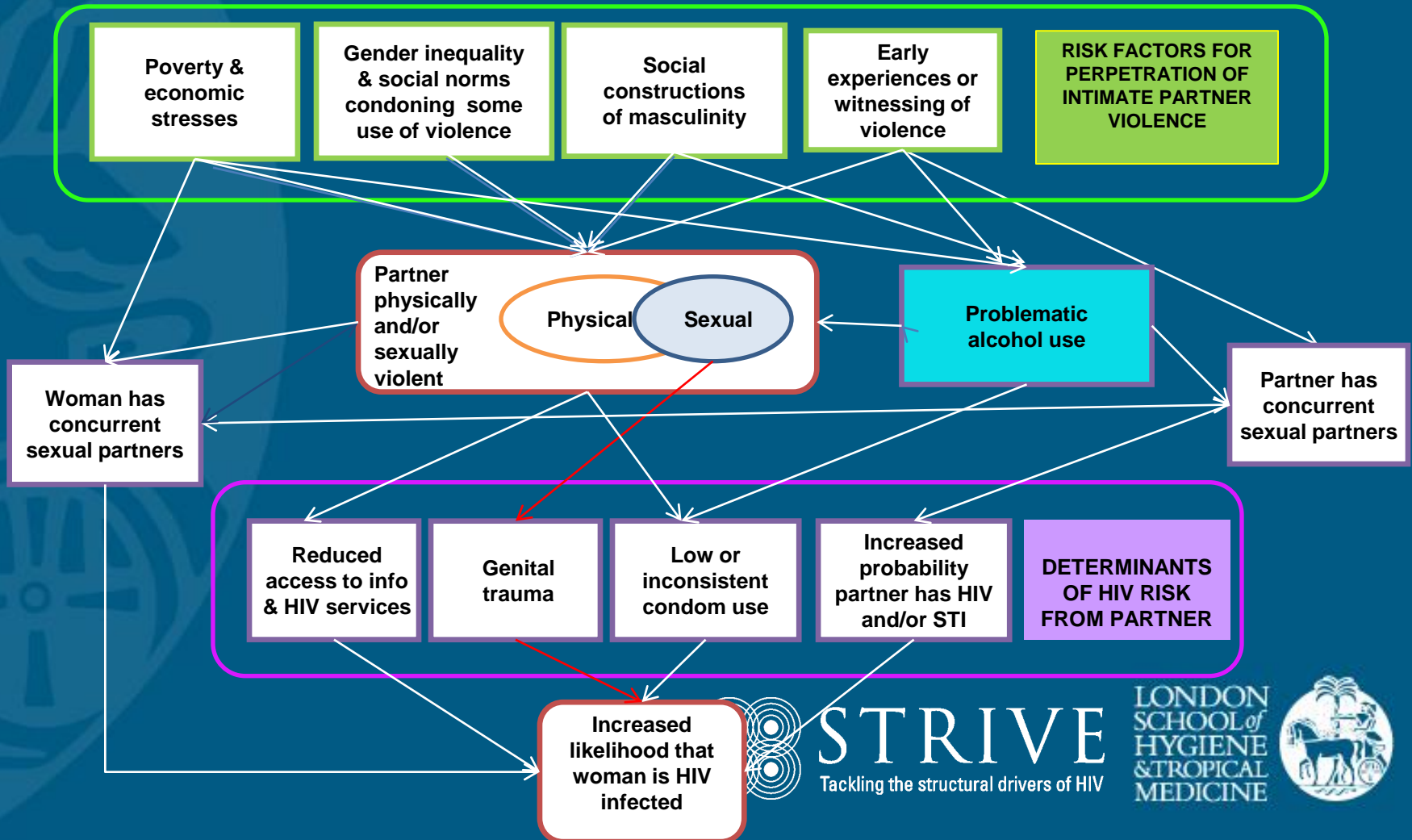
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# Potential pathways of association between IPV & women's risk of HIV



# Conclusions

- Violence is both a cause and consequence of HIV infection
- Prospective studies show an association between physical and/or sexual IPV and incident HIV in South Africa
- Prospective data also find association between sexual IPV & HIV in Uganda and sexual violence & STI in India
- Cross-sectional data analysis find less consistent findings
  - Many methodological factors make interpretation of existing evidence difficult
  - Consistent association between more severe IPV and HIV risk
- Unclear how generalisable findings are across different epidemic settings
- Pathways between IPV & HIV complex – need to be better understood to inform effective programmes



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# 3 priorities to improve evidence base...

## 1. Identify opportunities to collect additional evidence from longitudinal studies

- Take advantage of opportunities within ongoing intervention trials with HIV outcomes

## 2. Make best use of DHS & other population data collection

- Ensure that DHS collects data on violence exposure from all partners
- Re-analysis of DHS to address methodological issues

## 3. Integrate questions on violence in HIV intervention research

- Provide deeper understanding of how violence and the fear of violence may undermine effectiveness of proven HIV interventions



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**Copies of presentation at  
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