Epidemiology of Domestic Violence and sexual coercion
Issues covered

1. Magnitude of the problem globally

2. Prevalence and risk factors

3. Health consequences
   • Physical
   • Reproductive and sexual health
   • Birth outcomes/child survival

4. Methodological/ethical research issues
Many forms of violence to women: beginning early....

- selective abortion
- female infanticide
- neglect, malnutrition
- sexual abuse
- child prostitution
- forced early marriage
Continuing throughout the life cycle…

- physical partner abuse
- dowry related violence
- non-consensual sex (within marriage or outside)
- forced prostitution & trafficking
- sexual harassment at work and at school
- violence against women in conflict situations
Domestic (or intimate partner) violence

• Most common form of violence experienced by women
• WHO definition: “the range of sexually, psychologically and physically coercive acts used against adult and adolescent women by current or former male intimate partners.”

• Also female-to-male, female-to-female violence
Prevalence and Risk Factors
Physical assault on women by an intimate male partner: selected population-based studies, 1982-1999

WHO Multi-country Study on Women’s Health and Domestic Violence against Women, 2002.
### Frequency of lifetime and recent male against female domestic violence:
Rakai, Uganda, 2000-01

<table>
<thead>
<tr>
<th>Type of domestic violence</th>
<th>% reported</th>
<th>Ever (n = 4996)a</th>
<th>In last 12 months (n = 5107)a</th>
</tr>
</thead>
<tbody>
<tr>
<td>Verbal abuse</td>
<td>40.1</td>
<td></td>
<td>31.3</td>
</tr>
<tr>
<td>Physical threats or violence</td>
<td>30.4</td>
<td></td>
<td>19.9</td>
</tr>
<tr>
<td>Physical threats</td>
<td>20.1</td>
<td></td>
<td>13.3</td>
</tr>
<tr>
<td>Physical violence</td>
<td>24.8</td>
<td></td>
<td>15.1</td>
</tr>
</tbody>
</table>

Specific types of lifetime and recent male against female domestic violence: Rakai, Uganda, 2000-01

<table>
<thead>
<tr>
<th>Type of domestic violence</th>
<th>Women reporting violence (%)</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Ever</td>
<td>In last 12 months</td>
<td></td>
</tr>
<tr>
<td>Physical threats</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Threatening gestures</td>
<td>13.6</td>
<td>9.6</td>
<td></td>
</tr>
<tr>
<td>Threats with stick or weapon</td>
<td>14.7</td>
<td>8.7</td>
<td></td>
</tr>
<tr>
<td>Physical violence</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pushed, slapped, held down</td>
<td>23.1</td>
<td>14.0</td>
<td></td>
</tr>
<tr>
<td>Punched, beat, kicked</td>
<td>9.0</td>
<td>5.1</td>
<td></td>
</tr>
<tr>
<td>Hit with stick or weapon</td>
<td>6.2</td>
<td>3.3</td>
<td></td>
</tr>
<tr>
<td>Burned or scalded</td>
<td>0.3</td>
<td>0.2</td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td>0.6</td>
<td>0.5</td>
<td></td>
</tr>
<tr>
<td>Either physical threats or violence</td>
<td>30.4</td>
<td>19.9</td>
<td></td>
</tr>
</tbody>
</table>

WHO Multi-country Study on Women’s Health and Domestic Violence against Women, 2002.
Sexual coercion and violence
Sexual victimization by an intimate male partner: selected population-based studies, 1989-2000

Figure 4.1 Prevalence of lifetime physical violence and sexual violence by an intimate partner among ever-partnered women, by site

Figure 4.4 Frequency distribution of types of violence by an intimate partner among ever-abused women, by site

Figure 6.1 Percentage of women reporting forced first experience of sexual intercourse among sexually experienced women, by site and by age at the time of first sexual experience.


1 Japan city, Serbia and Montenegro city, and Thailand city are not represented because of the very low percentages reporting first sex before age 15 years.
Risk factors
Risk factors

• Individual level
  – Education (--)
  – Socioeconomic status (-)
  – Life cycle (age, marital duration, parity) (-)
  – Extended family structure (-)
  – Intergenerational transmission of violence (++)
Risk factors

• Individual level risk behaviors
  – Alcohol/substance abuse (++)
  – HIV risk/risk perceptions (++)
  – Infidelity (perception, no. of partners) (+)

• Women’s status
  – Savings and credit (-) or (+)
  – Women’s autonomy/control of resources (-) or (+)
Risk Factors for Physical Violence: Rakai, Uganda

- Male partner’s consumption of alcohol
- Perception of male partner’s HIV risk

Odds ratio for domestic violence <1 year:

- Never: 1.00
- Sometimes: 1.62***
- Frequently: 4.62***
- Not at all/Unlikely: 1.00
- Somewhat: 1.84***
- Very likely: 3.72***
Risk factors: contextual

• Contextual factors
  – Neighborhood crime, house ownership levels (U.S.) (+)
  – Community-level women’s status (Bangladesh) (-) or (+)
  – Levels of violent crime (India) (+)
  – Norms regarding domestic violence (India) (++)
Figure 2: Attitudes of men and women toward domestic violence: Rakai District, Uganda, 2000-2001

Beating of wife/female partner justified for:

- Refusing sex: Men 16%, Women 28%
- Using contraception: Men 22%, Women 27%
- Neglecting household duties: Men 37%, Women 37%
- Disobeying family mem: Men 42%, Women 50%
- Infidelity: Men 60%, Women 87%
- Any of the above: Men 70%, Women 90%
Health Consequences of Domestic Violence
Domestic violence associated with adverse:

- women’s physical health
- women’s reproductive health
- women’s mental health**
- birth outcomes/child survival
Physical consequences

- Abdominal/thoracic injuries
- Bruises, lacerations, abrasions
- Disability
- Fractures
- Gastrointestinal disorders
- Ocular damage
- Reduced physical functioning
- Death
Injuries resulting from domestic violence in past 12 months: Rakai, Uganda, 2000-01

<table>
<thead>
<tr>
<th>Type of injury</th>
<th>Women reporting injury (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Any injury</td>
<td>44.4</td>
</tr>
<tr>
<td>Physical pain lasting more than one day</td>
<td>39.9</td>
</tr>
<tr>
<td>Sprain, bruise or cut</td>
<td>18.5</td>
</tr>
<tr>
<td>Broken bone</td>
<td>1.4</td>
</tr>
<tr>
<td>Other</td>
<td>8.8</td>
</tr>
<tr>
<td>Required medical attention</td>
<td>21.5</td>
</tr>
</tbody>
</table>

Domestic violence and reproductive health

- Gynecological morbidity/ STIs
- HIV
- Contraceptive use
- Unintended pregnancy
- Abortion
Gynecological morbidity associated with intimate partner violence

- Gynecological disorders
- Infertility
- Pelvic pain
- Sexual dysfunction
Domestic violence and gynecological morbidity

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Pelvic pain</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Physical abuse</td>
<td>48%</td>
<td>21%</td>
</tr>
<tr>
<td>No abuse</td>
<td>21%</td>
<td>21%</td>
</tr>
<tr>
<td>Odds Ratios</td>
<td>2.25*</td>
<td>1.54</td>
</tr>
<tr>
<td>STD history</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Physical abuse</td>
<td>1.54</td>
<td>1.54</td>
</tr>
<tr>
<td>Physical/sexual abuse</td>
<td>2.25*</td>
<td>1.54</td>
</tr>
<tr>
<td>No Abuse</td>
<td>1.00</td>
<td>1.00</td>
</tr>
</tbody>
</table>
Violence and HIV/AIDS

Recent studies in the U.S. and Africa suggest a complex dynamic:

– Violence as a risk factor for HIV
– Violence as a consequence of disclosure of HIV status

• Epidemics overlap in SS Africa
• Many similar risk factors

• Direct link:
  – Coerced sex with infected partner → HIV

• Indirect link
  – Violence limits women’s ability to negotiate safe sex with or by partner (monogamy, condom use, non-risky sexual practices)
  – Women’s early experience with sexual abuse leads to later high risk sexual behavior (~ U.S.-based evidence)
### Associations between physical/sexual violence and HIV risks

<table>
<thead>
<tr>
<th>Coercion Type</th>
<th>Odds Ratio</th>
<th>South Africa</th>
<th>Uganda</th>
</tr>
</thead>
<tbody>
<tr>
<td>Broad violence</td>
<td>1.48</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Limited/no violence</td>
<td>1.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Coercion at first sex</td>
<td>2.10</td>
<td>***</td>
<td></td>
</tr>
<tr>
<td>Coercion not at first sex but subsequently</td>
<td>1.30</td>
<td></td>
<td><strong>p&lt;.01</strong></td>
</tr>
<tr>
<td>No coercion</td>
<td>1.00</td>
<td></td>
<td><strong>p&lt;.01</strong></td>
</tr>
</tbody>
</table>

**p<.01  ***p<.001

Violence and Non-use of Contraception

- Violence or threat of abuse makes birth control negotiation difficult
- Women may be deterred from independent contraceptive behavior
- Barrier methods may not be feasible
Evidence on domestic violence and non-use of contraception

• Several U.S. studies show small but significant differences in current use
• Rakai, Uganda (class reading)
• North India (Stephenson, et al. 2005)
• Qualitative evidence (Ghana, Uganda, Bolivia)
Evidence on domestic violence and non-use of contraception

<table>
<thead>
<tr>
<th>Outcome</th>
<th>Adjusted OR (95% CI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Current use of contraception</td>
<td>0.46 (0.24-0.87)</td>
</tr>
<tr>
<td>Condom use at last sex</td>
<td>0.27 (0.13-0.57)</td>
</tr>
<tr>
<td>Consistent condom use &lt; 6 mos</td>
<td>0.21 (0.08-0.53)</td>
</tr>
</tbody>
</table>

Adjusted for age at first sex, education, religion and current marital status

Source: Koenig MA et al. (2004)
Unintended pregnancy and violence: U.S. and international studies

• Women whose pregnancy was unintended had 2-4 times increased risk of physical violence versus women whose pregnancy was intended
  - both population- and clinic-based studies

• Unintended pregnancy results from partner’s violence through partner’s control of contraception, unprotected forced sex, and/or coercing a woman to have a child
  - qualitative research

Violence and abortion

• Little research: two studies among women seeking abortion services
  – found physical violence related to likelihood of reporting previous pregnancy termination or miscarriage

Domestic Violence and Birth Outcomes

- **Direct effects**
  - Physical trauma
  - Resulting chronic maternal condition

- **Indirect effects**
  - Elevated stress levels
  - Delay in seeking prenatal care
  - Poor nutrition
  - Substance abuse
Violence during pregnancy

US:
• 1%-20% - any time during pregnancy
  - majority of the studies report <10%

Developing countries:
- Significantly higher, poor birth outcomes also much higher (4%-28% in WHO study)
- 10% -18% during most recent pregnancy in India study
• More common than many key risk factors for poor birth outcomes (pre-eclampsia, gestational diabetes, placenta previa)
Domestic violence and pre-natal care

Delay in entering pre-natal care

- Odds ratio for physical violence: <12 months = 1.8
- Odds ratio for no violence: <12 months = 1.0

Dietz et al. (1997): U.S.
Domestic violence and pregnancy outcomes

## Logistic Regression Results for Maternal Care Utilization by Violence Status

<table>
<thead>
<tr>
<th>Service</th>
<th>Crude OR</th>
<th>Crude 95% CI</th>
<th>Adjusted OR</th>
<th>Adjusted 95% CI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Antenatal care</td>
<td>0.48</td>
<td>0.36-0.63</td>
<td>0.66</td>
<td>0.49-0.88</td>
</tr>
<tr>
<td>Tetanus toxoid</td>
<td>0.57</td>
<td>0.44-0.74</td>
<td>0.81</td>
<td>0.63-1.04</td>
</tr>
<tr>
<td>Delivery care</td>
<td>0.49</td>
<td>0.30-0.79</td>
<td>1.05</td>
<td>0.64-1.73</td>
</tr>
<tr>
<td>Postpartum care</td>
<td>0.41</td>
<td>0.26-0.66</td>
<td>0.61</td>
<td>0.37-0.99</td>
</tr>
</tbody>
</table>

Adjusted for: women’s age, parity, women’s education, husband’s education, socio-economic status, caste, gender and wantedness of the index child.
## Hazards Regression Results for Early child Mortality by Violence Status

<table>
<thead>
<tr>
<th></th>
<th>Crude</th>
<th></th>
<th>Adjusted</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>HR</td>
<td>95% CI</td>
<td>HR</td>
<td>95% CI</td>
</tr>
<tr>
<td>Perinatal</td>
<td>2.05</td>
<td><strong>1.20-3.49</strong></td>
<td>2.59</td>
<td><strong>1.48-4.51</strong></td>
</tr>
<tr>
<td>Neonatal</td>
<td><strong>1.91</strong></td>
<td><strong>1.13-3.26</strong></td>
<td><strong>2.37</strong></td>
<td><strong>1.36-4.15</strong></td>
</tr>
<tr>
<td>Post-neonatal</td>
<td>1.03</td>
<td><strong>0.53-2.02</strong></td>
<td>0.997</td>
<td><strong>0.50-1.98</strong></td>
</tr>
<tr>
<td>Child</td>
<td><strong>1.38</strong></td>
<td><strong>0.17-11.54</strong></td>
<td><strong>0.998</strong></td>
<td><strong>0.07-14.37</strong></td>
</tr>
</tbody>
</table>

Adjusted for: women’s age, parity, women’s education, husband’s education, socio-economic status, caste, gender and wantedness of the index child.
Methodological and Ethical Issues in Domestic Violence Research
Methodological issues

- Definition of violence
- Study population
- Facilitating the disclosure of violence
Definition of violence

- Who defines violence: the researcher or the respondent?
- Types and severity of violence included in the questions
- Lifetime vs. recent (<12 mos) experience
- From current partner vs. any male partner? Male partner vs. any family member?
- Inclusion of questions on sexual violence
- Sexual abuse/rape prior to/outside of primary relationship
Defining the study population

- Age range
- Marital status
- Sex of respondent
Male vs. Female Reports of Domestic Violence: Rakai, Uganda 2000-2001

- Physical violence: ever
  - Male: 24.6%
  - Female: 30.4%

- Physical violence: <12 months
  - Male: 18.5%
  - Female: 19.9%

- Coercive sex: Ever
  - Male: 8.1%
  - Female: 24.1%
Factors that affect disclosure of violence

- How questions are phrased
- Number of opportunities to disclose
- Context in which questions asked
- Interviewer characteristics and skill
- Stigma attached to issue (may vary across settings)
Ethical guidelines for violence research (WHO recommendations)

• Measures included to protect safety of respondents and interviewers
  – Total privacy/confidentiality
  – Interview only one member per household
  – Presented as a woman’s health survey
  – Referral mechanisms for services/counseling

• Special training and emotional follow-up for interviewers

• Incorporation into multi-purpose surveys only when ethical/methodological requirements can be met
Interventions to prevent violence
Structural intervention to prevent IPV and HIV in South Africa

Pronyk et al Lancet 2006;368:1973

- Community randomized trial in Limpopo province, South Africa
- Pair-matched communities randomized to either:
  - Structural intervention of microfinance and “learning/action” education (N = 4)
  - Control communities, no intervention for 3 years, then provided with the intervention

- **Endpoints:**
  - Intimate partner violence past 12 months
  - Unprotected sex with a non-spouse past 12 months
  - HIV incidence
Exposure groups

- **Cohort 1**: Women who applied for a loan in intervention villages, age and sex matched with controls from control villages (n = 860). Follow up 2 years
- **Cohort 2**: Woman aged 15-35 co-resident with a loan acceptor in intervention arm compared with co-resident with a control arm subject (n = 1835). Follow up 2 yrs
- **Cohort 3**: 14-35 year old randomly selected men and women in intervention arm, compared similarly selected with control arm residents (n = 3881). Follow up 3 years
Interventions

• Poverty focused microfinance
  – Field workers identify poorest households, form groups of 5 and offer microfinance loans, repaid over 10-20 weeks
  – Meet every 2 weeks for business assessment, 10 session “life, gender and HIV” training program
  – Community mobilization with leaders
Effects in cohort 1. Matched loan applicants vs controls

<table>
<thead>
<tr>
<th>Selected outcomes</th>
<th>Intervent %</th>
<th>Control %</th>
<th>Adj RR (955CI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Household assets &gt; 2000 rand</td>
<td>58</td>
<td>49</td>
<td>1.15 (1.04-1.28)</td>
</tr>
<tr>
<td>Communication about sexual matters</td>
<td>86</td>
<td>55</td>
<td>1.58 (1.21-2.07)</td>
</tr>
<tr>
<td>Intimate partner violence &lt; 12 months</td>
<td>6</td>
<td>12</td>
<td>0.45 (0.23-0.91)</td>
</tr>
</tbody>
</table>

Are women who accept loans self-selected for greater autonomy, or does loan acceptance increase a woman’s status and deter violence?
Effects in cohort 2. Matched co-resident women in intervention vs controls

<table>
<thead>
<tr>
<th>Selected outcomes</th>
<th>Intervent %</th>
<th>Control %</th>
<th>Adj RR (955CI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Communication about sexual matters</td>
<td>66</td>
<td>50</td>
<td>1.32 (0.90-1.95)</td>
</tr>
<tr>
<td>&gt; 1 sexual partner past 12 mths</td>
<td>18</td>
<td>16</td>
<td>1.16 (0.85-3.32)</td>
</tr>
<tr>
<td>Unprotected sex with non-spousal partner</td>
<td>48</td>
<td>48</td>
<td>1.02 (0.85-1.23)</td>
</tr>
</tbody>
</table>

Household loan acceptance does not affect behaviors in co-residents.
Effects in cohort 3. Matched males and females in intervention vs controls

<table>
<thead>
<tr>
<th>Selected outcomes</th>
<th>Intervent %</th>
<th>Control %</th>
<th>Adj RR (955CI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>&gt; 1 sexual partner past 12 mths</td>
<td>15</td>
<td>19</td>
<td>0.64 (0.19-2.16)</td>
</tr>
<tr>
<td>Unprotected sex with non-spousal partner</td>
<td>43</td>
<td>48</td>
<td>0.89 (0.66-1.19)</td>
</tr>
<tr>
<td>HIV incidence</td>
<td>11</td>
<td>11</td>
<td>1.06 (0.66-1.69)</td>
</tr>
</tbody>
</table>

Intervention did not affect population-level behaviors
Or HIV incidence
Authors conclusions

• Combined microfinance and training interventions can reduce intimate-partner violence in program participants

• Social and economic development interventions have the potential to alter risk environments for HIV and intimate partner violence
Caveats

• This was a community randomized trial analyzed as an individual-level trial

• The main effects in loan applicants vs controls is an “as-treated”, not intent-to-treat analysis (i.e., selected on most compliant intervention arm participants.)

• No “spill over” effects to household co-residents

• No impact on HIV incidence