PREVALENCE AND ASSOCIATED FACTORS OF INTIMATE PARTNER VIOLENCE AMONG PREGNANT WOMEN ATTENDING KISUMU DISTRICT HOSPITAL, KENYA-2010

Makayoto A. Lyndah, Kamweya A., Mutai J., Omolo J.
Introduction

• Intimate-partner violence (IPV) = Domestic violence (DV) domestic abuse or spouse abuse

• U. N definition
  – Acts (actual/threats) of gender based violence
  – Result in/likely to result in harm or suffering
    • Physical
    • Sexual
    • Psychological
  – Occurring in private or public life
Introduction

• Global public health concern with serious health implications
  – Obstetric: Hemorrhage, abortions and pre-eclampsia
  – Mental health: Anxiety and depressive disorders
  – Pediatrics: preterm and underweight babies
  – Others: HIV

• Declared a public health priority by the 49th World Health Assembly in 1996
Global
(WHO multi-country study, 2005)

• IPV in at least one pregnancy lowest 1% in Japan, and highest 28% in Peru

• IPV is the most common form of violence in women's lives
Introduction

Africa

• Prevalence from range 2%-57%
  – Nigeria: 2.3% (Fawole et al., 2008)
  – Uganda: 57% (Kaye et al., 2006)
  – Tanzania: 12% (WHO study, 2005)

Kenya

• Study at KNH reported 9% prevalence in pregnancy (unpublished-Odula et al., 2003)
Justification

• Limited published data available on
  – Prevalence of IPV during pregnancy
  – Factors associated with IPV during pregnancy

• Interventions
  – Develop strategies and policies to guide new approaches to IPV in antenatal health services
Study objective

• Broad objective
  – Determine prevalence and factors associated with IPV among pregnant women attending antenatal clinic at Kisumu District Hospital (KDH), Kenya

• Specific objectives
  – To determine prevalence of IPV
  – To determine factors associated with IPV
  – Characterize injuries resulting from physical violence
Materials and Methods
• **Study design:** Cross-sectional facility based study

• **Study site:** Kisumu District Hospital

• **Study population:** Pregnant women seeking antenatal care at KDH
Figure 1: Study site
Map of Africa showing Kenya

Map of Kenya showing Kisumu
Sample size calculation:

\[ n = z^2 pq / d^2 \]  
(Cochran, 1977)

\[ n = 1.96^2 * 0.09 * 0.91 / 0.05^2 \]

=139 (minimum sample size)

• Assumptions:
  – p: proportion of DV among pregnant women = 9% 
    (Unpublished- Odula et al., 2003)
  – d: absolute precision(5%)
  – z: 95% confidence level
  – Non- response rate = 10%
• **Sampling:** Systematic random method

• **Inclusion criteria:** All consenting and assenting pregnant women attending antenatal clinic at KDH

• **Exclusion criteria:** Non-consenting and non-assenting
Data collection

• Used pretested, structured questionnaire
• Questionnaires administered face-to-face
• Data included:
  i. Dependent variable: IPV experience
  ii. Independent variables
     ➢ Socio-demographic data
     ➢ Others: HIV status, obstetric history
     ➢ Male partner: age, educational status and alcohol intake
  iii. Injuries sustained following physical violence
Data management and analysis

- Entry, cleaning and analysis in Epi-info version 3.5.1
- Descriptive: means & proportions determined
- Odds ratio used to assess associations
- Chi square used to test statistical significance set at $p < 0.05$
- Multiple logistic regression to determine independent factors
Approval and ethical considerations

• Approved by Scientific Steering (SSC no. 1896) & Ethical Review Committees at KEMRI

• Board of Post graduate studies JKUAT

• Obtain informed written consent

• Ensured confidentiality
Results
• **Participants characteristics**

  – Participants interviewed were 300
  – Response rate: 95%
  – Mean age was 23.7 yrs (± 5 SD)
  – Ages ranged from 14 to 45 yrs
  – Majority were
    • Married (80.7%)
    • Had primary school education (79.7%)
  – Tested for HIV and willing to disclose status (n=285), 18% were HIV+
## Prevalence of different forms of violence during pregnancy

<table>
<thead>
<tr>
<th>Form of violence</th>
<th>Frequency N=300</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall violence in index pregnancy</td>
<td>110</td>
<td>36.7</td>
</tr>
<tr>
<td>Physical violence in index pregnancy</td>
<td>29</td>
<td>9.7</td>
</tr>
<tr>
<td>Sexual violence in index pregnancy</td>
<td>35</td>
<td>11.7</td>
</tr>
<tr>
<td>Psychological violence in index pregnancy</td>
<td>87</td>
<td>29</td>
</tr>
</tbody>
</table>
Intersections between different forms of IPV during pregnancy (n=110)

- Psychological 54 (49%)
- Physical 6 (5%)
- Sexual and Psychological 14 (13%)
- Sexual and Physical 4 (4%)
- Psychological and Physical 15 (14%)
## Bivariate analysis

<table>
<thead>
<tr>
<th>Variable</th>
<th>Abused (%)</th>
<th>Not Abused (%)</th>
<th>P value</th>
<th>Crude OR (95% CI)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Woman’s age (in years)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>25 and above</td>
<td>50 (45.5)</td>
<td>65 (34.2)</td>
<td>0.07076</td>
<td>1.60 (0.99-2.59)</td>
</tr>
<tr>
<td>Less than 25</td>
<td>60 (54.5)</td>
<td>125 (65.8)</td>
<td>ref</td>
<td>ref</td>
</tr>
<tr>
<td><strong>Marital status</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Single</td>
<td>5 (4.5)</td>
<td>43 (22.6)</td>
<td>ref</td>
<td>ref</td>
</tr>
<tr>
<td>Currently/ever married</td>
<td>105 (95.5)</td>
<td>147 (77.4)</td>
<td>0.000077</td>
<td>6.14 (2.35-16.03)</td>
</tr>
<tr>
<td><strong>Occupation</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>House wife</td>
<td>50 (50.9)</td>
<td>65 (34.2)</td>
<td>0.07076</td>
<td>1.60 (0.99-2.59)</td>
</tr>
<tr>
<td>Others</td>
<td>60 (54.5)</td>
<td>125 (65.8)</td>
<td>ref</td>
<td>ref</td>
</tr>
<tr>
<td><strong>Family structure</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Polygamous</td>
<td>25 (24.3)</td>
<td>17 (11.6)</td>
<td>0.001678</td>
<td>2.99 (1.53-5.84)</td>
</tr>
<tr>
<td>Monogamous</td>
<td>78 (75.7)</td>
<td>130 (88.4)</td>
<td>ref</td>
<td>ref</td>
</tr>
<tr>
<td><strong>No. of people per household</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>≤ 6</td>
<td>97 (88.2)</td>
<td>180 (94.7)</td>
<td>0.067</td>
<td>0.41 (0.16-1.05)</td>
</tr>
<tr>
<td>≥ 7</td>
<td>13 (11.8)</td>
<td>10 (5.3)</td>
<td>ref</td>
<td>ref</td>
</tr>
<tr>
<td><strong>Parity</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Multipara</td>
<td>56 (50.9)</td>
<td>54 (28.4)</td>
<td>0.000163</td>
<td>2.61 (1.6-4.26)</td>
</tr>
<tr>
<td>Others</td>
<td>54 (49.1)</td>
<td>136 (71.6)</td>
<td>ref</td>
<td>ref</td>
</tr>
</tbody>
</table>
## Bivariate analysis

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<thead>
<tr>
<th>Variable</th>
<th>Abused (%)</th>
<th>Not Abused (%)</th>
<th>P value</th>
<th>Crude OR (95% CI)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Witnessed maternal abuse in childhood</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>27 (30.3)</td>
<td>22 (14.1)</td>
<td>0.004</td>
<td>2.65 (1.40-5.02)</td>
</tr>
<tr>
<td>No</td>
<td>62 (69.7)</td>
<td>134 (85.9)</td>
<td>ref</td>
<td>Ref</td>
</tr>
<tr>
<td><strong>Woman HIV status</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Positive</td>
<td>24 (23.1)</td>
<td>27 (14.9)</td>
<td>0.082</td>
<td>1.71 (0.89-3.3)</td>
</tr>
<tr>
<td>Negative</td>
<td>80 (76.9)</td>
<td>154 (85.1)</td>
<td>ref</td>
<td>ref</td>
</tr>
<tr>
<td><strong>Alcohol intake by partner</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>56 (50.9)</td>
<td>64 (33.7)</td>
<td>0.005</td>
<td>2.04 (1.26-3.3)</td>
</tr>
<tr>
<td>No</td>
<td>54 (49.1)</td>
<td>126 (66.3)</td>
<td>ref</td>
<td>ref</td>
</tr>
<tr>
<td><strong>Partner’s education</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tertiary</td>
<td>19 (17.3)</td>
<td>55 (29.1)</td>
<td>0.03</td>
<td>0.5 (0.28-0.91)</td>
</tr>
<tr>
<td>Secondary and below</td>
<td>91 (82.7)</td>
<td>135 (70.9)</td>
<td>ref</td>
<td>ref</td>
</tr>
<tr>
<td><strong>Partner’s age</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>25 and above</td>
<td>93 (87.7)</td>
<td>131 (71.6)</td>
<td>0.003</td>
<td>2.84 (1.4-5.8)</td>
</tr>
<tr>
<td>&lt; 25 years</td>
<td>13 (12.3)</td>
<td>52 (28.4)</td>
<td>ref</td>
<td>ref</td>
</tr>
<tr>
<td><strong>Choice of partner</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Both choosing</td>
<td>82 (74.5)</td>
<td>161 (84.7)</td>
<td>0.044</td>
<td>0.53 (0.29-0.95)</td>
</tr>
<tr>
<td>Third/one party’s</td>
<td>28 (25.5)</td>
<td>29 (15.3)</td>
<td>ref</td>
<td>ref</td>
</tr>
</tbody>
</table>
# Factors independently associated with DV during pregnancy – multivariate analysis

<table>
<thead>
<tr>
<th>Independent variable</th>
<th>aOR</th>
<th>95% CI</th>
<th>p value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Witnessing maternal abuse in childhood</td>
<td>3.09</td>
<td>1.44-6.64</td>
<td>0.0038</td>
</tr>
<tr>
<td>Polygamy</td>
<td>2.52</td>
<td>1.27-5.01</td>
<td>0.0082</td>
</tr>
<tr>
<td>Multiparity</td>
<td>1.96</td>
<td>1.16-3.31</td>
<td>0.0119</td>
</tr>
<tr>
<td>Partner with tertiary education (higher than high school)</td>
<td>0.38</td>
<td>0.2-0.73</td>
<td>0.0035</td>
</tr>
<tr>
<td>Partner who drank alcohol</td>
<td>2.25</td>
<td>1.31-3.86</td>
<td>0.0033</td>
</tr>
</tbody>
</table>
Injuries resulting from lifetime physical violence (n=78)

- Prevalence among physically-abused women: 94%
- Required medical attention: 33% (n=24), however 25% didn’t go
- Didn’t reveal real cause of injury to HCW: 56%
- Managed as in-patients: 50% (n=9)
- Ranking of injuries
  - 67% mild
  - 21% moderate
  - 12% severe
- Per Vaginal bleeding or lost a pregnancy: 8%
Injuries resulting from lifetime physical violence among pregnant women attending ANC at KDH, 2010 (n=73)
Discussion
• Prevalence of IPV during pregnancy was 37%

• Higher than the 9% reported at KHN (Unpublished-Odula et al., 2003)

• Differences are likely as a result of the
  – Types of violence
  – Differences in populations sampled
  – Points when assessment was administered

• Falls within the range of 2%-57% reported in African countries
• Psychological violence most common, then combination of physical & psychological

• Psychological violence is easier to perpetrate

• Intersections emphasize that different forms of DV don't occur in isolation
• Witnessed maternal abuse during childhood
  – Experienced as "normal" part of life
  – Contribute to low self-esteem & lack of autonomy
    (Durand et al., 2007)

• Partner’s alcohol consumption
  – Associated with household neglect and having multiple sexual partners
    (Weiser et al., 2006)
  – Intentionally taken; "hide" behind it & engage in antisocial behaviors
• Polygamy
  – Neglect of one or more of spouses
  – Result in jealousy and tension and thus fuel DV

• Multiparity
  – May in part demonstrate lack of autonomy in decisions regarding reproduction

• Partners education inversely associated with DV
  – Source of information
  – Change agent for social norms
Injuries resulting from physical violence

• Prevalence of injury among ever physically-abused women: 94%

• Majority sustained soft tissue injuries

  – Similar to New Zealand and WHO study (Fanslow and Robinson, 2011; WHO, 2005)

• 44% of ever-injured & treated revealed real cause of injury

  – Could be due to shame and stigma
Study limitations

• Cross sectional in design, results cannot be used to assume causality
• Misclassification: Deliberate misreporting may affect the accuracy of the self-reported data
• Recall bias
• Selection bias
  – Recruitment point
  – Selective survival
Conclusion

• High prevalence: 4/10 suffered IPV in pregnancy

• Factors associated with IPV in pregnancy:
  – Witnessing maternal abuse in childhood
  – Multiparity
  – Polygamy
  – Partner who took alcohol or had low education

• A third sustained moderate to severe injuries
Recommendations

• Institute public awareness campaigns

• Screening for IPV as integral part of routine ANC

• Health care providers
  – Identification
  – Optimal care
  – Linking survivors with appropriate services
Acknowledgements

- My supervisors
- Ministry of Public Health and Sanitation
- CDC
- JKUAT
- KEMRI
- Kisumu District Hospital staff
- Study participants
Thank you