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# Gender-based violence, empowerment, and public health: Towards a model of complex interventions in Bihar

- Gender-based violence still affects women's daily lives and their opportunities for work and social mobility in India. This study aims to understand the complex dynamics of gender-based violence (GBV) in Bihar.
- This is a mixed-methods pilot study examining the structural determinants of gender-based violence and empowerment. Through data from multiple sources, the study examines indicators such as education, number of women police officials and judges, political representatives, and self-help groups in the districts.
- The study uses geospatial modelling to map these indicators and identify the prevalence and incidence of mild to adverse health outcomes of GBV across districts in Bihar.
- This brief also analyses policy implications for GBV mitigation strategies.

POLICY BRIEF IND-19022

JULY 2021

This brief is based on research funded by the Bill & Melinda Gates Foundation.
The findings and conclusions contained within are those of the authors and do not necessarily reflect positions or policies of the Bill & Melinda Gates Foundation.

## Overview of the research

Community-based studies show that intimate partner violence (IPV) is highly prevalent in Bihar and is associated with an increased risk of miscarriage, stillbirth, and maternal health complications. In a 2018 study, almost 45% of mothers of children 0–23 months old in Bihar (N = 13,803) reported IPV (Dhar et al, 2018). In the same sample, almost half of the women reported sexual violence, most often accompanied by physical violence. Types of violence associated with IPV and post-natal health practices were found, including unhealthy breastfeeding practices, lack of skin-to-skin care, delayed bathing, and postpartum contraception use, which suggests a complex risk pattern across types of IPV (Boyce et al, 2017).

Epidemiological studies from Patna Medical College Hospital (PMCH) of burn patients showed that females aged 20-39 years from rural areas and low social and economic status were most affected, with more accidental injuries than suicidal and homicidal cases (Choudhary et al, 2019). Studies indicate that young married women are reluctant to report burn injuries due to accidents to avoid any police investigation. Some of the constraints of an effective response to this issue include the lack of probing by medical professionals, which results in poor medico-legal documentation by healthcare providers, no enquiry of domestic violence, and the patient's fear of police reprimand (Bhate-Deosthali and Lingam, 2016).

This study examined:

- Existing measures of women's empowerment in the global context;
- The prevalence and incidence of mild to adverse health outcomes of GBV across sub-units districts in Bihar;
- Geospatial heat maps to identify hot spots of GBV in Bihar;
- District-wise social, cultural, economic, and political determinants of GBV and its relationship with empowerment amongst women;
- The initiation of a formative pilot study of the IRIS/HERA Model of Complex Interventions of GBV in tertiary health care settings;
- The policy implications for gender-based violence mitigation strategies in Bihar.

## Overview of the findings

First, composite indicators were identified to measure the prevalence and incidence of GBV and empowerment (A.C., 2014). The data has been compiled from:

- National Family Health Survey IV (2017).
- National Crimes Records Bureau.
- Data on women judges was based on Vidhi Legal Policy Centre and extracted by data-mining techniques from E-Courts database.
- Data on women representatives on panchayats was extracted, coded, and compiled from State Election Commission of Bihar by the author.
- Data on self-help groups was collected from National Rural Livelihoods Mission.

Second, a field-based intervention based on the WHO Guidelines on domestic violence (World Health Organization, 2013) and Healthcare Responding to Violence and Abuse (HERA) /Identification and Referral to Improve Safety, UK (IRIS) (Feder et al, 2011) was carried out in two Bihar based hospitals. IRIS is a general practice-based domestic violence training, support, and referral programme for primary care staff. It is a targeted intervention for female patients aged 16 and above experiencing current or former domestic violence and abuse (DVA) from a partner, ex-partner, or adult family member. The model rests on one full-time advocate educator working with 25 practices[1]. Evidence shows that the training programme leads to up to six times more women receiving the help they need, and a total of 15,601 referrals of victims were made till 2019 (IRIS, University of Bristol, 2020).

The HERA Model is based on the Identification and Referral to Improve Safety (IRIS), a part of the National Health Service (NHS). Unlike IRIS, HERA Model includes community-based organisations as developing countries might not have universalised National Health systems like the UK. After completing the training, the referrals to specialist units increased seven times. However, standalone training is inadequate without manager support as healthcare providers (HCPs) have competing duties (HERA, 2020).

For this study, The IRIS/HERA intervention training for early identification and referrals to support services of victims of DVA was carried out in gynaecology, surgery, orthopaedics and burns and plastic surgery in two Bihar based two tertiary hospitals (N=169). The most significant number of health care providers were in the age group of 30-34 years. Amongst the HCPs, 63.9% and 35.5% were females and males, respectively, of which General MD (8.3%), Specialist MD (57.4%), Staff

1. The advocate educator is a specialist DVA worker who is linked to the practices and based in a local specialist DVA service. They are the main referral point for the National Health Service (NHS) clinicians to refer the DV victims. S/he works closely with the DV victims and provides them a range of support services such as legal aid and housing benefits.

Nurse (27%), Mid-Wives (1.8%), Clinical/Unit Heads (1.2%) undertook the training. The average number of years in the health sector is 17.09 years.

Most HCPs had no systematic training in the early identification of DVA or making referrals to the support services. The initial baseline study shows that HCPs recognise the signs and symptoms of DVA, such as physical injuries, chronic pelvic pain, dyspareunia, irritable bowel syndrome, headaches, depression and anxiety, hypertension, eating disorders, sleep disruptions, general stress, STIs, frequent vague complaints, unkempt appearances, and disability. However, the action is not undertaken without clearly defined referral pathways. 58% do not have any information on DVA care pathways (N=169) and referrals support. 52.1% do not have an awareness of DVA support for women. Only 10.1% HCPs were aware of the one-stop centres (OSCs), and 24.9% knew of the women's police station (Mahila Thana). Only 10.1% knew of women's hostels, and 5.9% knew of shelters.

Our intervention training with healthcare providers in Patna showed improved knowledge of domestic violence and child protection. However, besides the limited availability of information on OSCs, HCPs raised concerns about the quality of care provided to victims and the lack of follow-up reports of cases referred by them, raising concerns about patient safety and HCP reputation and credibility.

## Policy motivation and impact

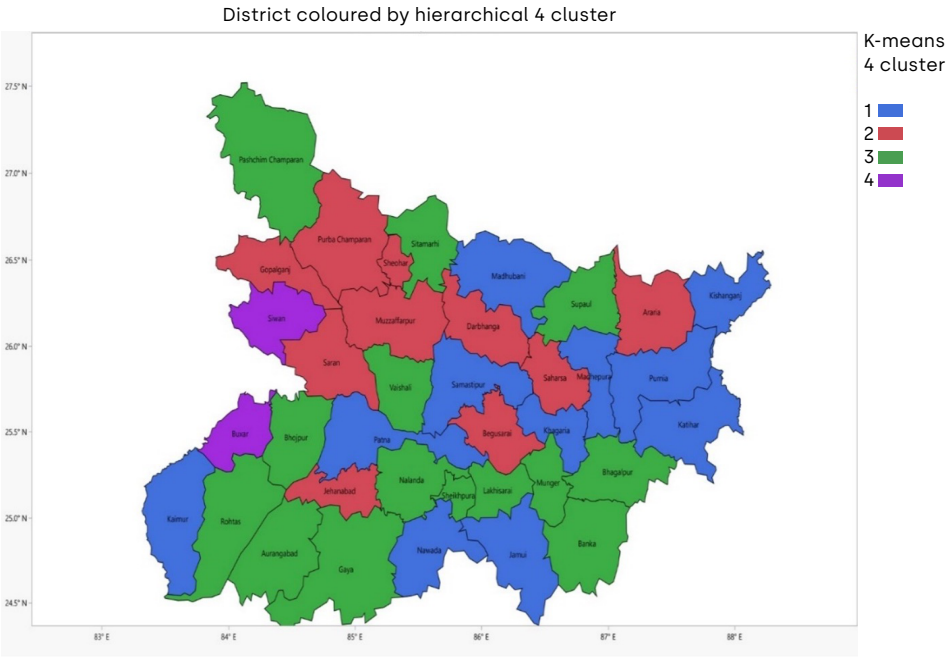
Evidence-based research on gender-based violence and public health interventions are at emerging stages in Bihar. This study systematically undertakes an in-depth analysis of the prevalence and incidence of gender-based violence while measuring the various empowerment factors that mitigate GBV across districts. Some districts perform a lot worse than others and require enhanced policy inputs such as better quality of care from one-stop centres (OSC), police, judiciary, local-self-governments, and self-help groups. IRIS/HERA intervention training with healthcare providers demonstrates a willingness to refer domestic violence cases to the OSC.

However, the absence of OSCs within healthcare settings is a severe barrier to referrals. None of the OSCs in Bihar are in healthcare settings, which is a concern for women with acute injuries such as stab wounds or burns who might not have access to helplines or are unable to visit the centres. Healthcare providers (HCPs) identify signs and symptoms but may not refer as their knowledge of OSCs is poor, which also raises concerns about the quality of care and follow-ups provided to vulnerable victims. Establishing OSCs within health settings and leveraging the women's self-help groups movement in Bihar and health response could potentially mitigate the adverse social and economic consequences. As evident from the data, districts with self-help groups report domestic violence and abuse.

The main aim of this study is to strengthen the evidence-based response to GBV in Bihar. Bihar has high levels of GBV overall, but this study has identified more vulnerable districts where women have reported extreme forms of violence. In addition, it identifies women's representation, self-help groups, and one-stop centres as protective factors.

| Key research areas | Summary of key findings |
|---|---|
| Review existing measures of women's empowerment in the global context. | Empowerment is a culture-specific construct, but emerging evidence on intra-household decision making, access to mass media (radio), access to paid work and insurance, and help-seeking behaviour linked to pregnancy or severity of violence (such as burns or fractures etc.) are emerging as essential empowerment indicators. |
| Utilise geospatial modelling to compare districts in Bihar on the prevalence and incidence of mild to severe forms of GBV. | Using hierarchical and K-Means Cluster analysis, we identify high-prevalence districts as Gaya, Kaimur, Buxar, Bhojpur, Jehanabad, Patna, Vaishali, Sheikhpura, Lakhisarai, Jamui, Bhagalpur, Munger, Araria and Sitamarhi. Also, cluster-4 districts report very violent DV such as severe burns etc. These include Nawada, Katihar, Purnia, Madhepura, Saharsa, Khagaria, Samastipur, and Madhubani. |
| Develop an empowerment index and analyse the available micro-data sets from Demographic Health Surveys (NFHS IV) and supplement it with data from the National Crimes Records Bureau (NCRB) Ministry of Law and Justice, Department of Home Affairs, and Ministry of Rural Development. | Using Factor Analysis and K-Means Cluster analysis, we find that cluster-3 districts should be examined for issues regarding female empowerment and severe domestic violence. These districts are Kaimur, Buxar, Patna, Nalanda, Sheikhpura, Nawada, Lakhisarai, Jamui, Banka, Munger, Bhagalpurm and Sitamarhi. |
| Initiate a formative pilot study of the IRIS/ HERA Model of Complex Interventions of GBV in tertiary health care settings. | Our baseline study shows an overall willingness from healthcare providers to refer victims of domestic violence and abuse to support services. However, current knowledge of support services is poor, and healthcare providers are reluctant in the absence of follow-ups from support services. |
| Analyse policy implications for gender-based violence mitigation strategies in Bihar. | IRIS/HERA is an effective intervention model for a health response to GBV. However, there are several barriers, such as lack of one-stop centres in hospital settings and a lack of clarity in care pathways available to women. In addition, if these micro-level interventions are linked to self-help groups, they will have a pivotal role in women's empowerment. |

**Figure 1: Cluster-2 (red) and Cluster-3 (green) represent districts with the most positive prevalence and incidence of violence statistics. Cluster-4 (purple) includes worse-off districts reporting severe forms of violence.**




## Policy recommendations

1. **Establishing one-stop centres within healthcare settings.** Although the OSC model is gaining momentum across India, few of these are rigorously tested, and there's no robust evidence to show their efficacy in reducing GBV and generating better social and economic outcomes. One-stop centres within healthcare settings can become model centres for India. The rigorous adaptation and application of the IRIS/HERA model within the Patna Medical College Hospital (PMCH) and the Gardeniere Hospital could demonstrate good practices in the health sector response to GBV in India.

2. **Understanding the violence dynamics in Bihar.** The public health approach is based on rigorous measurement of prevalence and incidence of GBV through community and healthcare settings surveys. Although the National Family Health Survey IV does provide evidence on GBV, the reporting on mild to severe forms of violence is poor. Therefore, an evidence base should be further sharpened to understand the violence dynamics in Bihar.

3. **Involving local stakeholders.** The IRIS/HERA model depends on clinical leads and advocate educators. Within the two hospitals included in this study, there should be clinical leads who serve as referral points for other healthcare providers and refer the cases to one-stop centres. However, this requires support from the Department of Health and Women Development Cooperation.

4. **Strengthening inter-sectoral collaboration.** GBV affects all women, including those belonging to self-help groups, and undermines their economic and social contributions to society. It is essential to leverage Bihar's self-help group movement and link it with GBV mitigation efforts.

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