



# A multi-country mixed method evaluation of the HERA (Healthcare Responding to Domestic Violence and Abuse) intervention: A comparative analysis

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## ABSTRACT

**Background:** Domestic violence (DV) against women has adverse health consequences and demands a comprehensive healthcare response. Interventions adapted from high-income countries encounter implementation challenges in low-and-middle-income countries, due to diverse socio-cultural, political and economic contexts. This study explored HERA (Healthcare Responding to Violence and Abuse) implementation, that aimed to strengthen the healthcare response to DV in Brazil, Nepal, the occupied Palestinian territory (oPt), and Sri Lanka. **Methods:** Parallel mixed method study (2019 – 2022). Quantitative data included the Provider Intervention Measure (PIM), training attendance records and DV documentation before and after the intervention. Qualitative data included semi-structured interviews with providers and DV survivors, field notes and stakeholder meetings. Data were integrated at the level of interpretation and reporting using a narrative approach, drawing on theories of Complex Adaptive Systems and sensemaking.

**Results:** HERA enhanced healthcare provider readiness to address DV and fostered a women-centred approach. The interaction between HERA and the diverse contexts impacted the reciprocal relationship between sense-making and sensegiving within health systems, leading to adaptive behaviours among providers and women. This included mediation practices, negotiating DV documentation, modified roles, and containment of DV cases within the clinic. Normative gender roles, normalised DV attitudes, biomedical sensemaking frameworks, community violence, austerity policies, scarce resources, and weak leadership and management support affected implementation success.

**Conclusion:** It is important to consider the interplay between context and intervention goals during development, implementation and evaluation of health system responses to DV. Managers require specific intervention components to support organisational change. Culturally appropriate support for women should acknowledge limitations to their agency.

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## Background

Violence against women (VAW) is a major human rights violation, deeply rooted in gender inequalities. It affects one in three women globally, with higher rates in low-and-middle-income countries (LMIC). Domestic violence (DV) is the most common form of VAW, encompassing various forms of abuse inflicted by intimate partners and family members (Sardinha et al., 2022). In the countries included in this study, DV is a significant concern, with prevalences of 29 % in the occupied Palestinian territories (oPt), 27 % in Nepal (Ne), 24 % in Sri Lanka (SL), and 23 % in Brazil (Br) (World Health Organization, 2021).

The adverse impact of DV on women's health (World Health Organization, 2021) underscores the health system's crucial role in addressing the immediate health needs of survivors and facilitating their journey towards safety (Sagot, 2005). Although DV is a recognised public health problem, health services encounter multiple challenges in addressing it, due to individual healthcare provider level and structural barriers (García-Moreno et al., 2015).

Whilst there are a few promising interventions from LMICs that reduce re-exposure to some forms of VAW and improve some health outcomes, the evidence is limited and mixed (Kirk et al., 2017; Lewis et al., 2022; Sapkota et al., 2019). Interventions in LMICs are sometimes adapted from those developed in high income countries (HIC), but translating these can be challenging. In contexts of constraint, socially sanctioned gender inequalities manifest in varying combinations of social, cultural, economic and political exclusion. Such conditions are often associated with issues such as social conflict, displacement, poverty, illness and food insecurity. Collectively, these factors significantly curtail women's capacity to respond to men's violence and limit the options available to them (Campbell and Mannell, 2016).

Few studies have compared the adaptation and implementation challenges of health system responses to DV across different contexts. This study is the first to bridge this evidence gap by examining the adaptation and implementation of HERA (Healthcare Responding to Violence and Abuse) in four LMICs; Brazil (Br), Nepal (Ne), the occupied Palestinian territory (oPt), and Sri Lanka (SL).

These countries present diverse settings for addressing DV, shaped by cultural, religious and gender norms, as well as political and economic factors. Brazil has the most comprehensive legal framework for DV, with the Maria da Penha Law being a landmark piece of legislation on VAW (Brasil, 2006; D'Oliveira et al., 2020). Nepal and Sri Lanka have also advanced their legal responses: Nepal's Domestic Violence Offence and Punishment Act (2009) criminalises DV and provides protective measures for women (Colombini et al., 2016; Ministry of Law and Justice of Nepal, 2009) and in Sri Lanka, the Protection of Domestic Violence Act No. 34 of 2005 includes protection orders and shelters (Colombini et al., 2018; Parliament of the Democratic Socialist Republic of Sri Lanka, 2005). In oPt, the protracted Israeli military occupation continues to impact DV response efforts. Despite the existence of a National Committee for Domestic Violence, signifying the Palestinian Authority's commitment to legal protections for women, there is a lack of comprehensive legislation specifically addressing DV experienced by women (Colombini et al., 2020).

Health systems in the four countries differ in their development, structure, health coverage, and funding. Brazil's Unified Health System (SUS) offers universal, tax-funded health services free at the point of delivery. Similarly, Sri Lanka's government-financed healthcare is free for users, supported by taxes and external aid. In contrast, Nepal's healthcare system requires user payments for some services, though efforts are underway to increase coverage and reduce out-of-pocket costs. The health service landscape in the oPt is complex due to the involvement of government, non-governmental organisations (NGOs), and UN agencies, resulting in variable access and costs.

The health system approach to DV varies across these regions, each with its own strategies. In Brazil, São Paulo implements national and municipal guidelines that emphasise documentation and case

management in healthcare facilities. Nepal and Sri Lanka have policy frameworks that engage the health sector in responding to VAW, primarily through hospitals that offer immediate medical care, counselling, and referrals for further support. In the occupied Palestinian territories, primary healthcare facilities follow a National Referral System and work with gender-based violence focal points within the Ministry of Health to manage cases of DV. In all countries, limited or no DV training is provided (Colombini et al., 2024). Further details on existing policy frameworks, health systems and DV training in these countries are available in our related publication (Colombini et al., 2024).

This paper describes the implementation of HERA in four diverse country contexts.

## Methods

### Aim

This study aimed to characterise and explain factors influencing the translation of HERA's intended goals into a 'real world' set of activities, and examine their role in shaping implementation processes in four diverse countries, drawing on the theoretical lenses of complex adaptive systems (CAS) (Plsek and Greenhalgh, 2001) and sensemaking theory (Maitlis, 2005; Weick, 2009).

### Description of the HERA intervention

The HERA intervention aimed to strengthen the health system response to DV and included: (i) training and support for healthcare providers to identify and respond to DV from partners or family members; (ii) improved documentation of DV via clinical records; (iii) and a care pathway for affected women within and beyond the health system (Figure 1). The initial response, based on the WHO LIVES protocol (World Health Organization, 2014), involved non-judgmental listening, addressing needs and concerns, and validating and reassuring victims. Selected providers received further training to enhance safety, provide comprehensive support, and coordinate referrals. The approach emphasised trauma- and violence-informed care to reduce re-victimisation (Wathen and Mantler, 2022), supported by reflective practice through supervision, case discussions (Br) and reinforcement training (Ne, oPt, SL).

### Settings

The criteria for choice of study settings were health services serving relatively socioeconomically disadvantaged communities and providing sexual and reproductive health (SRH) care services (Table 1).

### Study design

Each country conducted a formative evaluation to guide intervention development (Colombini et al., 2024), ensuring that HERA could be aligned with and integrated into local policies. A parallel mixed method evaluation was conducted between November 2019 to February 2022. A mixed methods approach was used to comprehensively explore factors influencing the translation of HERA's goals into real-world activities. This approach captured both the depth and breadth of implementation processes across different contexts, providing a robust framework to explain their multifaceted nature. Country teams engaged with local advisory groups including Ministries of Health, healthcare managers, women's groups and DV organisations.

### Data collection and samples

The research team co-designed and culturally adapted a core set of instruments, translated into local languages using cognitive interviewing (Ryan et al., 2012). Quantitative data were gathered through the

Provider Intervention Measure (PIM) to assess changes in provider readiness to address DV, training attendance records, and clinic records and notification systems for tracking DV identification and referrals. Qualitative data collection comprised semi-structured interviews (Br, Ne, oPt, and SL) and most significant change stories interviews (Ne) with providers and DV affected women, all conducted in local languages, audio recorded and transcribed verbatim. Observational field notes were taken during training sessions, stakeholder meetings, and clinic visits (Table 2).

### Theoretical and conceptual foundations

The analysis is grounded in complex adaptive systems (CAS) and sensemaking theories. The health system is a CAS characterised by individuals engaged in unpredictable, interconnected actions leading to continually emergent behaviours (Plsek and Greenhalgh, 2001). Furthermore, it is shaped by rules, resources, and relationships that influence individual and collective agency. Adaptability is a key feature of a CAS, enabling transformation in response to new challenges or environmental changes (Hawe et al., 2009; May et al., 2016). The extent to which adaptive behaviour can occur hinges on the flexibility of systems

to accommodate intervention components, as well as the malleability of interventions themselves to fit diverse contexts. This involves restructuring relationships, resources, group dynamics and norms that provide the scaffolding for everyday work (Weick et al., 2005).

The complexity of the HERA intervention was amplified by its introduction into diverse, Covid-19 impacted contexts, prompting adaptive behaviours. To understand how providers and others integrated HERA amidst uncertainty, we also drew on sensemaking theory, which focuses on how individuals understand complex environments and phenomena, forming mental models (also known as schema, cognitive maps, or frames) to guide their actions (Maitlis, 2005; Weick, 2009). In sensemaking, meaning is negotiated and co-constructed through reflection and interaction, integrating the concept that discursive actions not only generate meaning, but also shape the environment being interpreted. In this way, structures emerge and shift as people interact in ways to make sense of their situation. These interactions may encompass symbolism through language and discourse, metaphors, navigating tensions, emotions and somatic perceptions. Additionally, sensemaking is a holistic practice, whereby environmental, cultural, social and historical context are integral (Weick et al., 2005). Later research included the role of non-human actors, such as material

**Table 1**  
Intervention components and study sites.

Study sites and intervention features	Brazil	Nepal	oPt	Sri Lanka
<b>Number of facilities</b>	8	15	4	2
<b>Level of care/ Type of Facility</b>	Primary healthcare/ Family Clinics	Outreach Centers (private) and Government health posts (free)	Primary healthcare	Hospitals
<b>Location</b>	Urban	Rural	Rural (1) and Urban (3)	Urban
<b>Intervention components</b>	Care pathway + Training of HCP + Educational materials + Monthly supervision and case discussion sessions	Computer Assisted Self Interview Screening tool for women + Training of HCP + 3–6 month reinforcement sessions + Training of FCHVs and reinforcement sessions	Training HCP + 1 reinforcement session	Training HCP + 2 reinforcement sessions
<b>GBV specialist for case referrals</b>	Violence Prevention Nucleus (clinic-based) and VAW reference centres (external, not part of the health system)	One Stop Crisis Management Center (Hospital-based - external) Direct legal help Counsellors	Clinic case manager (clinic-based) and GBV focal points (MoH Directorate Clinic - external but still part of the health system)	Mithuru Piyasa (Gender-based violence centre) (Hospital based - internal)
<b>Training model</b>	Cascade: ToT and replication in the clinics	On site training to HCP of Outreach Centers and government health posts	Cascade: ToT and replication in the clinics	Training to HCP in the Hospitals
<b>Length of training</b>	ToT: 12 h; Replication: 4 h	24 h	4 ToT days, 2 two-hour HCP training sessions, monthly reinforcement for 6 months	Initial session plus two reinforcement sessions 2.5 h + 1.5 h + 1.5 hr
<b>Training and reinforcement/ supervision session modality</b>	Face to face (before COVID) and online synchronous sessions (during COVID)	Face to face (before COVID) and online synchronous session during COVID; reinforcement online;	Face to face (before COVID) and online synchronous sessions	Face to face (before and during COVID when restrictions relaxed)
<b>Timeline</b>	ToT: Nov/2019 and Aug-Sep/2020 Replication: Dec/2019 - Mar/2020 and Nov/2020 - Feb/2021 Supervision: Feb/20 - Feb/22	Training to HCPs: Dec/2020 - Feb/2021 Reinforcement HCPs: May/2021 - Sep 2021 Training to FCHVs and Women's groups: Dec/ 2020 - Mar/2021	Training: Oct/2020 - July/2021	Training: Dec/2020 (H1) - Jan/2021 (H2) Reinforcement: (1st session)- Jan/2021, (2nd session) Mar/2021 (H1) (1st session)- Mar/2021 - (2nd session)-Apr/2021 (H2)
<b>Training leads and reinforcement/ supervision leads</b>	ToT: Principal Investigator (PI) + psychologist specialist on VAW/ Replication: HCP trained in ToT sessions/Supervision: psychologist specialist on VAW	External gender expert, medicolegal doctors, legal experts, psychologist and nurse midwives	Clinical Psychologists from an NGO	Gender experts, consultant community physicians affiliated to the Family Health Bureau in the Ministry of Health
<b>Trained HCP (n - %)</b>	589–74 %	34–100 %	31–83 %	65 81 %
<b>NB: attended any training</b>				
<b>Number of reinforcement/ supervision sessions involving case discussion</b>	45	3	24	4

Note: Reinforcement sessions refer to refresher training (oPt, Ne, SL); Supervision and support with case discussion refers to periodic meetings with health care provider led by an external professional with VAW expertise

DV: Domestic Violence; FCHV: Female Community Health Volunteers; GBV: Gender-based violence; H1: Hospital 1; H2: Hospital 2; HCP: Healthcare providers; MoH: Ministry of Health; NGO: non-governmental organisation; PI: Principal Investigator; ToT: Training of trainers; VAW: Violence against women.

**Table 2**  
Data collection and participants by country.

Data source	Brazil	Nepal*	oPt	Sri Lanka
<b>Qualitative interviews<sup>1</sup></b>	<b>32</b>	<b>15</b>	<b>22</b>	<b>33</b>
Healthcare providers	27	7	19	18
Manager	7	-	1	-
Nurse	7	3	11	8
Doctor	6	2	3	10
Other higher education	3	-	5	-
Other technical education	1	-	-	-
Lay workers	3	-	-	-
Paramedics	-	2	-	-
Trainers	0	4	2	-
DV Survivors	5	4	-	15
<b>Most significant change stories<sup>2</sup></b>	<b>0</b>	<b>45</b>	<b>0</b>	<b>0</b>
Healthcare providers	0	31	0	0
Doctor	-	5	-	-
Paramedics	-	26	-	-
Female Community Health Volunteers	0	7	0	0
Women's groups	0	7	0	0
<b>Observation field notes</b>	<b>78</b>	<b>19</b>	<b>25</b>	<b>12</b>
Training sessions	21	5	25	3
Reinforcement/supervision sessions	45	3	-	6
Stakeholder meetings	12	8	-	3
Other activities	9	3	-	-
Provider Intervention Measure (PIM)				
Pre intervention	210	29	23	74
Post Intervention	99	6 months n = 21 12 months n = 17	22	65
<b>Identification and referral data</b>				
Notification systems	Yes <sup>3</sup>	No	Yes <sup>4</sup>	No
Clinic records	No	Yes	No	Yes <sup>5</sup>

1. Interviews translated to English: 16

2. Most Significant Change stories translated to English: 2 (Nepal)

3. Epidemiological Surveillance System

4. National Reporting System

5. Records of the referrals that arrived in the specialised service

artefacts and technologies, highlighting the interplay between social and material elements in sensemaking processes (Hultin and Mahrning, 2017; Korica and Molloy, 2010; Oborn et al., 2013). Sensemaking is inextricably linked with sensegiving in organisational change initiatives. In order to support changes within their organisation, leaders attempt to shape the understanding of change by engaging in purposeful sensegiving. This entails influencing others' perceptions towards a specific direction (Gioia and Chittipeddi, 1991). Consequently, leaders' sensegiving serves as a crucial catalyst for employee sensemaking, fostering shared interpretations of change (Mantere et al., 2012) and encouraging supportive behaviour towards change (van den Heuvel et al., 2013). Thus, individuals in organisations are continuously engaged in a cycle of sensemaking and sensegiving.

## Analysis

Each country team analysed their qualitative data and field notes in local languages using content analysis (Bardin, 2004) and populated tables with themes on implementation challenges and successes, adaptations made to accommodate HERA, and women's experiences of support. Tables included theme descriptions, interpretative notes, illustrative quotes, and field notes, guided by a set of prompts to aid in the interrogation of data. Prompts asked about beliefs and values that shaped participants' perspectives; roles and relational processes; organisational rules and norms; technology use (clinic guides,

documentation sources); and causal relationships (how events within and outside of the health system influenced sense making). LJB and SP conducted six group analysis workshops with early career researchers across country teams to discuss comparative insights. This was followed by an inductive analysis of a subset of interviews translated to English, alongside the completed tables, and ten meetings to refine emerging themes (LJB and SP). Qualitative analysis explored social relationships within HERA, the diverse roles that were adopted and the status conferred on them, and the meanings that emerged as people worked together to implement the intervention. Descriptive statistics summarised PIM survey variables. Additional file 1 contains qualitative data pertaining to the key themes presented. Qualitative and quantitative data were integrated at the level of interpretation and reporting using a narrative synthesis (LJB, SP) (Fetters et al., 2013). Wherever possible, the qualitative and quantitative findings were connected to each other thematically. Qualitative data from interviews enabled deeper exploration of findings from the PIM survey and clinical records, but also provided potential explanations for differences between countries. Abductive inference was used to analyse the explanatory relationship between the theories and data (Earl Rinehart, 2021). Italicised text is used to denote in vivo codes (participants' words).

## Ethics

The relevant country specific ethics committee approved the study. A country specific HERA Safety and Distress Protocol was developed, incorporating the WHO Safety and Ethical Guidelines for Violence Against Women Research (World Health Organization, 2016).

## Results

Findings are organised around three interconnected themes: i) contextualising HERA in diverse settings; ii) integrating soft technologies into DV response; and iii) leadership, management, and support for HCPs.

### Contextualising HERA in diverse settings

The enmeshment between the health system in each country and its broader socio-cultural, political, and economic context was important in shaping sensemaking and implementation processes.

### Political and economic factors

In Brazil, austerity measures led to reduced health system funding, affecting the capacity of clinics to integrate HERA. A rising conservative wave, driven by the ultra-right political party, opposed gender equity efforts and feminist activism in addressing VAW. Concurrently, the federal government's denial of gender inequalities led to significant funding cuts for policies and services combating VAW. Staff morale was low, providers felt undervalued, and DV prioritisation became challenging due to budgetary constraints and competing goals within health facilities.

In the occupied West Bank Areas A and C, where the study clinics were located, Israel's oppressive governance system posed significant obstacles to the safety of providers and women. The Palestinian Authority controls Area A, whilst Israel fully controls Area C, resulting in unreliable police protection.

You know, in the small, faraway villages our personal safety is not guaranteed. The Israeli police are the ones responsible for the village area H, and the Palestinian Authority aren't able to come into it because they need permits and permission. [Clinic H, Nurse and GBV Focal Point, Female, oPt]

Safety strategies were a key topic in the training, with pre-post PIM findings showing changes in providers' perceptions of personal safety when addressing DV, especially in Sri Lanka (Table 3). Despite an overall



**Table 3**

Provider readiness to identify and respond to DV.

PIM Questions	Brazil <sup>a</sup>		Nepal <sup>b</sup>		oPt <sup>c</sup>		Sri Lanka <sup>d</sup>	
	Pre PIM	Post PIM	Pre PIM	Post PIM	Pre PIM	Post PIM	Pre PIM	Post PIM
	n = 210	n = 99	n = 29	n = 21	n = 23	n = 22	n = 74	n = 65
Feels afraid when dealing with DV cases	58.6 %	52.6 %	48.3 %	57.1 %	47.7 %	36.0 %	54.1 %	6.1 %
Feels protected by the organisation/institution when dealing with DV case	51.0 %	64.7 %	82.8 %	90.5 %	21.7 %	18.0 %	44.6 %	75.4 %
Can talk to women patients about DV in a private and confidential space	71.0 %	68.7 %	79.3 %	90.5 %	43.5 %	54.5 %	54.1 %	49.4 %
Patient disclosures of domestic violence can be kept confidential within the workplace	94.3 %	94.0 %	82.8 %	76.2 %	95.6 %	99.8 %	97.3 %	98.4 %
Knowledge of services from the DV specialised multiagency network to refer women	69.5 %	73.7 %	20.7 %	71.4 %	65.2 %	95.4 %	70.3 %	100.0 %
Feels ready to ask about domestic violence	49.5 %	64.7 %	55.2 %	61.9 %	73.9 %	95.5 %	29.7 %	73.9 %
Feels ready to respond to disclosures of domestic violence	42.4 %	62.6 %	20.7 %	47.6 %	82.6 %	100.0 %	27.0 %	73.9 %
Feels ready to identify signs and symptoms associated with domestic violence	52.4 %	67.7 %	37.9 %	57.1 %	82.6 %	90.9 %	24.3 %	76.9 %
Feels ready to make referrals	31.9 %	51.5 %	65.5 %	71.4 %	69.6 %	86.4 %	32.4 %	92.3 %
Feels ready to document disclosures of domestic violence	44.3 %	61.6 %	41.4 %	57.1 %	78.3 %	81.8 %	16.2 %	32.3 %
Feels ready to provide ongoing support	37.6 %	55.6 %	72.4 %	57.1 %	73.9 %	95.5 %	20.3 %	47.7 %
Feels ready to discuss concerns about children living in a home where there is domestic violence	41.9 %	56.6 %	72.4 %	38.1 %	78.3 %	86.4 %	23.0 %	67.7 %

DV, Domestic violence

Note: Timeframe differences between countries arose from COVID-19 restrictions, requiring adaptation from face-to-face to online formats. Also, low participant adherence necessitated extended data collection periods and frequent reminders from the research team (Br, Ne).

<sup>a</sup> Pre-PIM: Nov/2019 - Jan/2020 (region 1) and Jul/2020 - Sep/2020 (Region 2). Post-PIM: May/2021 - Aug/2021(region 1) and Aug/2021 - Dec/2021(region 2).

<sup>b</sup> Pre-PIM: Oct/2019 - Oct 2020. Post-PIM: June/2021 - September/2021.

<sup>c</sup> Pre-PIM: Nov/2019 - Dec/2019. Post-PIM: Jul/2021 - Aug/2021

<sup>d</sup> Pre-PIM: Dec/2020 - Jan/2021. Post-PIM: Jul/2021 - Aug/2021

Source: PIM Provider Intervention Measure

increase in providers' sense of organisational support and ability to discuss DV with women confidentially—rising from 82.8 % to 90.5 % and 79.3–90.5 %, respectively—Nepali providers also reported a slight increase in fear when handling DV cases (48.3 % vs 67.1 %). This conflicting finding may stem from their perceived difficulty in maintaining confidentiality within the workplace, which actually decreased (82.8–76.2 %). Providers feared that DV disclosures could potentially be leaked within close-knit communities, amplifying concerns around safety and confidentiality. Provider accounts in oPt and Brazil revealed that occupation-related violence and drug cartel activities, respectively, meant that providers were immersed in environments of social violence, making them more vulnerable to aggression compared to those in Nepal and Sri Lanka. PIM findings indicate that providers in all countries felt more protected by their organisations when dealing with DV after HERA, with the exception of oPt, where providers felt less protected. This may be related to a major outbreak of violence in the Israeli-Palestinian conflict which occurred during the study. Whilst providers in Brazil felt more protected and less afraid when dealing with DV cases, there was a reduction in the number of providers reporting being able to talk to women in a confidential and private space (Table 3). This was attributed to the emphasis on obtaining privacy during HERA training (Br) and to more community health workers, who visit women in their homes, responding to the post-PIM compared to pre-PIM (Br).

### Sociocultural

In Nepal, Sri Lanka and oPt, traditional gender norms, shaped by cultural and religious values, positioned men as heads of family and women as caregivers. DV was considered a *private matter* causing discomfort among some providers when responding to women. Across the four countries, there was evidence of provider attitudes that reflected harmful gender norms such as victim blaming and moral judgement of women.

This is my personal opinion. This is a patriarchal society. A male dominant society. It is not right to change that. It means that we need to give them what is confined to the female gender role and to the male gender role. [IDI10, Doctor, Male, Sri Lanka].

Despite provider training being based on a framework of gender and

human rights, the trainers understood that transforming harmful gender norms was a long-term endeavour that could not simply be trained away. Some male providers experienced unease when discussing societal structures that reinforce men's violence towards women with female trainers.

Fear of violating social norms regarding family privacy hindered responses to DV in all countries, but especially in primary care, where the provider's duty of care extended to all family members (Br, Ne and oPt).

### Covid-19 pandemic

The arrival of Covid-19 was a significant shock to health systems, introducing another layer of complexity and uncertainty for providers to navigate. The pandemic brought increased demands on workloads, and HERA had to compete alongside the vaccination programme and care for patients with respiratory issues. Opportunities for women to access the clinics were reduced, as was the ability of providers to offer follow-up care.

Things have changed at the clinic (...) The receptionist at the door asks what you want (...) Now it's been a year since I last saw a doctor. I only went there to get a prescription and as the cases of Covid were increasing, they asked us not to go to the clinic, because they were only treating emergency cases. [IDIW01, DV Survivor, Brazil]

Some providers tried to mitigate the problem of reduced clinic access for women experiencing DV, by offering telephone support (Br, oPt), which created specific safety and confidentiality concerns. When restrictions relaxed, providers tried to see women outside the clinics (in their homes), but the lack of privacy was a hindrance. Restrictions on in-person meetings disrupted clinical team meetings and informal exchanges about DV cases, and hindered in-person training which was delivered online. Staff illnesses and redeployment to Covid-19 duties also negatively affected training attendance and limited the capacity of providers to fully participate in HERA.

## Integrating soft technology into the healthcare response to domestic violence

HERA encompassed relational processes, protocols, documentation systems, and care pathways, collectively understood by some providers as a form of *soft technology*. This theme explores the individual and collective meanings that emerged as providers interacted with HERA's soft technology and integrated it into their existing mental models. We draw on Merhy's (Merhy and Franco, 2003) definition of soft technology as including knowledge, standards, protocols, norms, communication, relations and networks.

### Reimagining the clinical encounter: identifying domestic violence

Care for survivors extended beyond identify, document and refer, embodying a holistic approach that included empathy, understanding social contexts, shared decision making, and respecting women's autonomy. Providers also needed to recognise the varying levels of women's awareness about DV dynamics and their readiness to seek help. Women referred to providers' *caring* interactions as vitally important for creating encounters that were person-centred and enabling during the disclosure process.

I did not feel anything like fear, but I thought he motivated me in a few things [referring to the doctor]. I felt that he had shown kindness toward me. I didn't feel scared. [IDI4, DV Survivor, Nepal]

Nepal and oPt used screening tools for DV case identification. In Nepal, the Audio Computer-Assisted Self-Interview (ACASI) screening tablet was eventually abandoned by providers. The tablets were discovered to be uncharged and without headsets in some clinics, indicating a lack of ownership of HERA. Women found it burdensome, leading to incomplete entries. Some providers perceived the tablet to be a research data collection device rather than a clinical tool to facilitate discussions about DV.

In oPt, women used a paper-based DV screening tool in the waiting areas, a pre-existing Ministry of Health initiative, although its implementation varied by clinic. Despite its intention to enhance privacy and reduce stigma, providers noted limitations; reporting that some women were reluctant to disclose violence, viewing the tool as impersonal and hindering trust-building. Some providers used their tacit knowledge, drawing on years of professional experience, insights from personal life, and cultural understanding in their efforts to discover cases of DV. HERA improved individual and collective awareness among providers towards the cues, signs and symptoms signalling DV.

The post-intervention rates of DV identification increased in all countries except oPt (Table 4). The most frequently identified form of DV was intimate partner violence, likely due to its prevalence in the populations under study. Various types of violence were reported across different settings, including physical, psychological, sexual, financial abuse and reproductive coercion. The decrease in oPt was partly due to the prioritisation of the longstanding core services within the clinics during Covid-19, but also a major outbreak of violence in the Israeli-Palestinian conflict that commenced in May 2021. Aside from the traumatic psychological impact on providers and women, the violence disrupted organisational and provider capacity to implement HERA, hindering training, monitoring and support. Moreover, physical barriers and movement restrictions adversely affected the ability of the research team to connect with providers. The interview data indicates the decrease in oPt also reflects persistent gaps in readiness, both at provider and organisational levels. This included a lack of managerial support, a disconnect between what the HERA care pathway offered and women's needs, some women not wanting referrals for further support, and insufficient privacy. However, the figures relating to identification of DV are based on different data sources, each with its own potential biases. PIM findings (Table 3) indicate that in all countries, there was an increase in providers' self-reported readiness to identify signs and symptoms of DV, inquire about it, and respond by documenting and making

**Table 4**

Documentation of DV cases identified before and after HERA.

Studied Country	Before	After
Brazil <sup>a</sup>	81	144
Nepal <sup>b</sup>	0	38
oPt <sup>c</sup>	74	56
Sri Lanka <sup>d</sup>	167	283

Sources: a) Epidemiological Surveillance data based on 12 months before (Region 1: Nov/2018 to Oct/2019, and Region 2: Sept/19 to Aug/20) and after intervention (Region 1: Nov/2019 - Oct/2020, and Region 2: Sept/2020 to Aug/2021);

b) Government paper-based documentation system in place at Dhulikhel Hospital before HERA. This system was converted into an Excel version for use at the ORCs during HERA. Post-intervention figure was based on C-ACASI and the Excel register implemented as part of HERA based on 7 months after intervention implementation (Aug/2021 to Feb/2022);

c) Ministry of Health clinics' registries, with pre-intervention figure representing 22 months before (Jan/2019 to Oct/2020) and 23 months post-intervention (Sept/2020 to Jul/2022);

d) Before and after figures based on self-reported pre and post PIM, based on 6 months before (Hospital 1: Jul to Dec/2020 and Hospital 2: Aug/2020 to Jan/2021) and after intervention (Hospital 1: Jan to Jun/2021, and Hospital 2: Feb to Jul/2021).

referrals and offering ongoing support, with exception of Nepal, where readiness for offering support decreased. HERA training included a component to raise provider awareness of the negative impact of children witnessing DV. This led to increases in readiness to discuss concerns with women about children living in DV-affected homes, ranging from 8.1 % in oPt to 44 % in Sri Lanka. However, Nepal experienced an 8 % decrease in readiness to discuss concerns about child exposure to DV. The decline in readiness for ongoing support and discussing concerns about children can be attributed to the repurposing of most ORCs as patient isolation centres, where providers shifted their focus toward Covid-19 testing and management. This re-directed resources away from DV-related support.

### Embedding collective knowledge and practices

The qualitative interviews provide a more nuanced understanding of the reasons for differing levels of provider readiness both between and within countries. Personal experiences of DV among providers emerged during training which necessitated support from the research team. Having designated time and space for providers to collectively discuss difficulties, including personal experiences of DV, and potential approaches was an essential process within HERA which evolved differently across the countries. This required the integration of individual and collective knowledge - a kind of case-based reasoning.

I think using the tools that the research gave us (...) I say they are tools of soft technologies (...) So, for example, the tool of careful listening (...) to be aware of what are the signs [of DV] (...) the research reinforces non-judgemental attitudes, of giving time to the person [not pressuring]. [Clinic C, Occupational Therapist, Female, Brazil]

In three countries (Ne, oPt, SL), opportunities to embed new ways of thinking were limited, being dependent on *ad hoc* reinforcement training sessions which were not linked to existing structures within the health setting. In Sri Lanka, the reinforcement session served as a *booster* and a *useful way to refresh knowledge*. In Nepal, the planned monthly sessions were scaled back to every three to six months owing to increasing workloads. In oPt, ambiguity surrounded the support to clinic case managers, a task designated to the GBV Focal Points within the Directorate, but not consistently implemented. Despite GBV Focal Points attending provider training sessions, their lack of active involvement in co-delivering training with the NGO hindered their ability to clarify their role in the HERA pathway and build stronger relationships with

clinic providers. In oPt and Nepal, case discussion was more *ad hoc* with providers contacting the NGO trainers. However, there was still evidence of a shift in thinking among providers across all countries, which emphasised the importance of considering women's perspectives, avoiding judgement and promoting shared decision making. Still some providers found it challenging to integrate new ways of thinking, as their mental models about DV and gender norms were entrenched in such deeply rooted values that changing them would require more effort and time. In Brazil, the existing multi-disciplinary Violence Prevention Nucleus (NPV) facilitated this process and HERA notably strengthened the NPV policy in study clinics by implementing supervision sessions that involved case discussion.

These NPV meetings help the professionals to act in a way that takes out part of the burden. Because sometimes they think “this should happen like that, the woman should do it in a certain way”, but the conversation helps them. Because there used to be a lot of “we need to solve this, we need to change this”, and it's not like that, we are not the heroes of this situation. We are partners, allies [with the woman] as long as this is what she wants. [Clinic P2, Manager, Female, Brazil]

Organisational culture was a powerful reinforcing factor for integrating and embedding HERA, with a notable difference between Brazil and the other countries. The conceptual knowledge, casual beliefs, and understandings about care for women experiencing DV seemed more familiar to providers in Brazil, where organisational culture is grounded in a collective health movement (Castro, 2023; Dowbor and Westphal, 2013) that acknowledges the broader social determinants of health and illness.

In Brazil, providers' interactions with community health workers (CHW) were invaluable. As the ‘eyes and ears’ of the communities within which they worked (and lived), CHW played a crucial role in advising clinic staff about potential risks, especially in territories controlled by violent drug gangs, and their tacit knowledge aided providers in devising safe support strategies. Providers felt the loss of this *rich information* source that connected them to the territories during Covid-19 due to restrictions on home visits.

#### Documentation: purposes and practices

Documentation of DV was an important sense-making tool for providing care. Providers held different assumptions, expectations and knowledge about documentation that shaped their actions towards it. This was influenced by institutional norms and constraints, as well as their interactions with women. Sri Lanka did not have a specific documentation system in place for DV, whilst the other countries had multiple systems which often created confusion regarding their purpose.

The Ministries of Health in Brazil and oPt had pre-existing systems to collect data on DV among women attending primary healthcare as part of national epidemiological surveillance. In oPt, cases of DV were entered in a clinic logbook and each woman was assigned a unique identification code. In Brazil, all providers were required to report suspected or confirmed cases of DV to SINAN (Information System for Notifiable Diseases). Under-reporting to SINAN was common – *due to lack of time and fear of repercussions* if an aggressor learned about the notification. Additional official documentation methods included medical charts, electronic records, NPV follow-up spreadsheets, and monthly reports to the Municipal Health Department.

Informal documentation, such as paper notebooks, played an important role in the clinical workflows of providers in Brazil and oPt. They were portable, versatile spaces for writing free-form notes and reminders. The findings hint at multiple uses including prompts for verbal handovers, recording details needed for official records, and constructing narratives of women's circumstances (as aide-memoires to track progress and guide care decisions). Informal note-taking was also a way to reassure women of their confidentiality and ease providers' anxiety about the potential harmful consequences of *documenting too*

*much information* in official records. Some women were reluctant to have violence officially recorded, which required balancing their safety, confidentiality, and care needs. At times documentation decisions had to be negotiated, and some providers agreed not to document violence to honour women's wishes and foster trust, thereby maintaining their engagement in the support offered.

I keep [informal notes] for myself in a notebook. (...) Our case numbers are high and with the business of work (...) you might forget some things. When you make little notes, you remember all the details again. (...) Ninety per cent of these women refuse to report the cases...One woman refused totally to have her case documented. You can't force anyone. There's no imposition; we respect [her wish], but this woman still comes to see me, she just does not want to be documented. [Clinic H, Nurse and GBV Focal Point, Female, oPt]

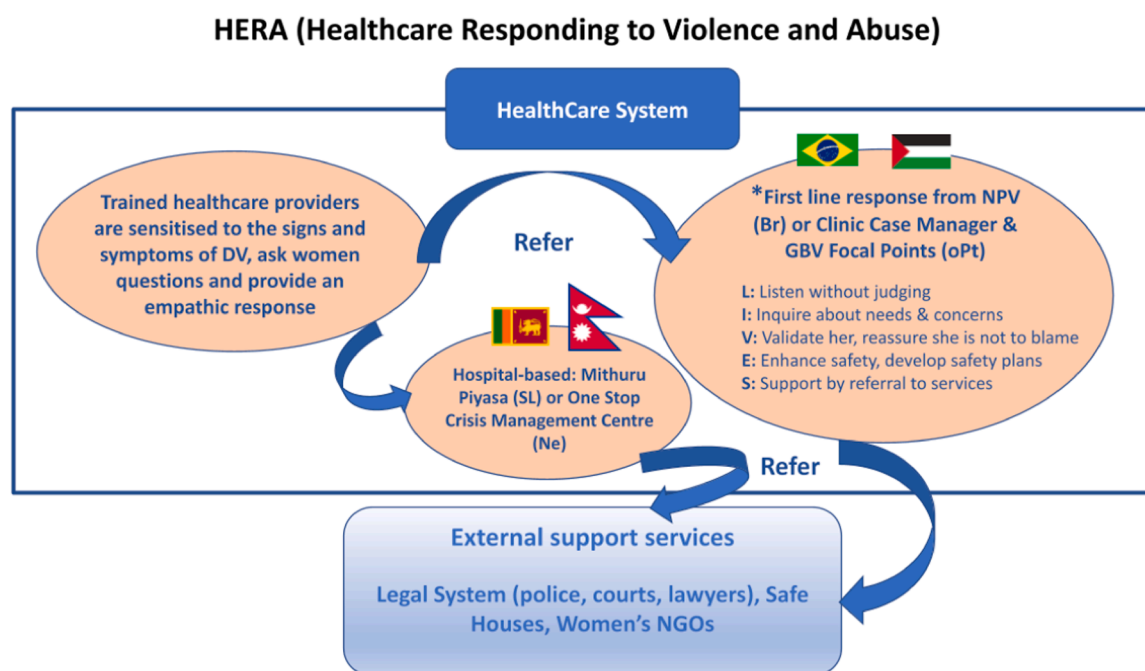
In Nepal, the presence of multiple documentation systems, including a pre-existing government paper-based register which was converted to an Excel version during HERA for the ORC, and a computer tablet designed by the research team, confused providers, leading them to create their own documentation strategies. Notably, two out of five ORCs bypassed the Excel version entirely, while others documented only those DV cases identified via the tablet, thereby excluding direct disclosures of DV to providers. In Sri Lanka, calendars were placed on the doctors' desks in the outpatient departments to act as a cognitive trigger to ask about DV. The calendars contained the slogan “She is in front of me. This is my responsibility” and pictures of families from different ethnic groups engaged in different activities. Each page contained a place where providers could mark the number of women they identified as experiencing DV and referred to Mithuru Piyasa, but this became impractical as some calendars were misplaced. Some providers in Brazil and oPt commented on the improved quality of their documentation after training, noting increased detail on specific acts of violence (e.g. swearing, throwing objects, insults) and their impacts. An NPV nurse in Brazil highlighted the importance of accurate and detailed documentation to protect herself against legal repercussions regarding women involved with the justice system. The increase in providers' self-reported readiness to document DV ranged from 3.1 % in oPt, where baseline rates were already very high, to between 16 % in Nepal and Sri Lanka and 17 % in Brazil (Table 3).

#### Perceptions and use of the HERA care pathway

In Brazil and oPt, providers referred women to designated staff (NPV and female nurses who received additional training respectively) within the primary care setting for case management and coordination of external referrals (e.g., police, safe houses, DV services). In contrast, in Nepal and Sri Lanka, direct referrals were made to female nurses at hospital-based DV services (One Stop Crisis Management Centre - OCMC and Mithuru Piyasa) for further support (Fig. 1). Differences between countries regarding the strength and functionality of these relationships affected follow-up and coordination of care.

In Nepal, the discretion exercised by certain providers resulted in notable adaptations to the HERA care pathway. This included designating female nurses, in some ORCs, as DV focal points to identify, document and refer women experiencing DV. Initially, these tasks were assigned to all providers in the ORCs, and the modification became untenable due to the increased workload it imposed on nurses. Occasionally, other adaptations to the HERA care pathway occurred in Nepal and Sri Lanka, for example, women attending with injuries were referred directly to the police despite their reluctance to involve them.

During the height of Covid-19, the OCMC in Nepal, offered women telephone counselling and occasionally, the HERA research team connected providers to legal services via the Viber social media platform and offered telephone support to women. In Brazil and oPt, the NPV and clinic case managers were based in the clinics, which facilitated smoother internal follow-up and provided immediate support access for



**Fig. 1. HERA (Healthcare Responding to Violence and Abuse) country specific care pathways.** \*WHO (2014) Healthcare for women subjected to intimate partner violence or sexual violence. A clinical handbook. Ne, Nepal; SL, Sri Lanka; Br, Brazil; oPt, occupied Palestinian Territories: NPV, Violence Prevention Nucleus in primary healthcare Brazil; GBV, Gender-based violence.

women compared to Nepal and Sri Lanka. Additionally, having NPV in primary care clinics facilitated informal *corridor discussions* with providers that had referred women to them.

At times, a disconnect arose between the kinds of help women sought and possibilities offered within HERA. Explanations from some countries suggest the influence of normative factors, whereby some women expressed a desire to maintain family unity whilst seeking support (oPt, SL, Ne). Across all countries, providers sometimes expressed feelings of *helplessness* and *impotency* when working with women for whom a *solution* seemed far out of reach. Individually located uncertainty about how to respond emerged in providers' accounts of *complicated* or *difficult cases* involving women who were economically dependent on their partner; suffering with mental health issues; living with partners who were entrenched in violent gangs (Br); and whose experiences of DV from multiple aggressors in the home were rooted in complicated family structures and relationships (SL, Ne, oPt).

Normative gender role expectations were sometimes reflected in provider perceptions of culturally appropriate support (Ne, SL, oPt). These beliefs led some providers to think of their role as potential mediators of conflict within families. They tried to support women by speaking to their husbands, quite often at the request of the women themselves (SL, Ne, oPt). Providers in Brazil exercised more caution when considering discussions with abusive partners or family members, prioritising women's needs and addressing the aggressor's issues in separate consultations. Whilst mediation was not advocated in the HERA training, it emerged as an accepted practice among families in some countries, despite not all providers being comfortable with this approach (SL, Ne, oPt). However, HERA encouraged consideration of potential harm in mediating DV cases, and a number of providers reported a shift in their attitudes following the intervention.

I am not saying that women should be oppressed. But we need to keep the dominant place of the male as it is and remove the bad side of it. When talking to both of them, if we harm the personality of the man, he will get angry with his wife. Therefore, these cases should be handled in a way that there is no conflict between these two. [Hospital 2, Doctor, Male, Sri Lanka]

(...) when a woman had come in facing violence, if we knew the husband we would call him [to the hospital] and scold him saying "why did you do it"? What has changed is, rather than keeping them together, we make an environment where one can say things openly, we keep sister [the woman] separate - [ORC15, Health Assistant, Male, Nepal]

Non-normative factors also influenced women's choices. Providers noted barriers such as the lack of safe houses (SL, oPt), out of pocket costs and lack of transport for accessing services (Ne), and women's distrust of the police (Br, Ne, SL). In some instances, women were not ready to make decisions and simply wanted to confide in someone. In Sri Lanka, some women sought assistance that was beyond the scope of the providers' role, underscoring the importance of managing women's expectations and having an internal focal person to liaise with external services. Some providers spoke about the woman-centred approach advocated by HERA, which helped them to make sense of their role as *collaborators* with women in developing care plans. This approach aided both in managing expectations and alleviating providers' feelings of anxiety.

Some might request financial assistance. (...) We guide them to the department of social affairs...guidance and psychological support for these women, mostly. Referring them to whichever is more appropriate. (...) They want you to offer solutions. We tell them that they must come up with the solutions themselves and we will help you get there. Once they tell us what they're comfortable with, how they perceive their current situation, then we can provide more direction. [Clinic N, Nurse and GBV Focal Point, Female, oPt]

Interviews with women who accessed Mithuru Piyasa (SL) revealed their satisfaction with the support they received. Having someone to talk to and the knowledge that they had a dedicated place to return to was reassuring.

I could get all this help because that nurse introduced me to the Mithuru Piyasa nurse (...) I'm always grateful to her for her kind help [EV08, DV Survivor, Sri Lanka].



Non-judgemental and sensitive interactions between women and providers were often seen as valuable therapeutic interventions. They provided both immediate and sustained support as women made sense of their circumstances and the options available to them. In the following narrative, the woman articulates her internal (avoidance and peacekeeping) and external (mobilising NPV support) coping mechanisms as she works towards her goal of achieving greater financial security to leave her partner. It illustrates the importance of considering women's readiness to engage with referrals and working at their pace. Furthermore, positive changes experienced by women could not always be assessed by their use of services.

What I really wanted was to separate for good, but I know that now it is not possible (...) When he comes home drunk (...) I try not to have a lot of conflict. I'm trying to calm the situation down (...) until who knows, I get a financial condition to get out of this situation (...) I think that day I went to the clinic was my limit. [The nurse] tried to calm me down, she said that I have to think that I will be able to find a way out and that we cannot live like this, we cannot accept it, but we also have to take it easy, to solve things in the best way so that nothing worse happens (...) She looked at me as a human being (...) She said "you cannot suffer all of this alone, you really need to share this" (...) I saw changes [after talking with the Nurse]. First, because I controlled my anxiety because they gave me medicine. I could think (...) "someone knows that I go through this. I have to organise myself, my ideas (...) my life to get out of this" (...) I felt a little more secure to have gone there and talked to this professional. [Woman 2, DV Survivor, Brazil]

Post-training, providers in all countries reported increased knowledge of specialised DV services and multi-sector networks in the PIM (Table 3). Yet, the qualitative interviews revealed that they seldom received feedback on external referrals, leading to perceptions of underutilisation by women. In Brazil, HERA expanded referral options through the multi-sector DV network, but fragmented care persisted due to complex cases and weak connections with community-based violence referral centres. This reduced confidence in certain external services among women and providers, often resulting in DV case management remaining clinic centred. In Nepal, training included online panel sessions with external referral sources due to Covid-19, which, while informative, was less effective in fostering strong relationships and coordination.

Quantitative data on referrals and women's use of external services were difficult to compare and sometimes unreliable due to the disparate documentation systems and reporting practices, therefore these are not reported here. However, qualitative accounts indicate that some women did use external services and were satisfied with the support provided.

#### *Leadership, management and support for providers*

This theme is concerned with different leadership and management practices that emerged as healthcare providers navigated implementation challenges. It also delineates the types of support that providers received or wanted. Related to this are issues of power and agency which were played out in very different organisational cultures. Healthcare providers' accounts of managing burgeoning workloads, competing priorities, staff turnover, and burnout were ubiquitous across the settings. Whilst these obstacles were an ever-present threat to HERA, they were exacerbated by Covid-19, as discussed previously.

#### *Higher level leadership*

Initial discussions about HERA's logistics involved high-level managers in the health system. This included central and regional level managers from various health zones and private not-for-profit organisations (Br); hospital directors and officials from the Family Health Bureau within the Ministry of Health (SL); Ministry of Health officials (oPt); and municipality level healthcare coordinators and deputy

mayors (Ne). Their endorsements helped to elicit a positive reception for HERA among providers and facilitate the delivery of training, but also underscored their influential sensegiving role. In oPt, the Ministry of Health agreed on the establishment of DV case managers in clinics, assumed by skilled up female nurses, who offered immediate support to women disclosing DV. This role aimed to connect clinics with Directorate-based GBV Focal Points for comprehensive support and guidance, thus addressing a critical structural gap.

In Nepal, healthcare coordinators in rural and peri-urban municipalities were concerned that HERA's care pathway might exclude women accessing free government healthcare and requested that training be extended to staff at government health posts near to each ORC.

In Sri Lanka and Brazil, the replication of training to providers was embedded within existing organisational structures. In Sri Lanka, staff from the Family Health Bureau (part of the Ministry of Health with oversight for gender-based violence initiatives) assisted with developing and delivering the training to healthcare providers. In Brazil, members of the multi-disciplinary NPV, who were trained by the research team, replicated the training in the clinics. In this way, HERA was positioned as a project that aligned with existing policies for addressing violence against women, an important symbolic sensegiving strategy. In comparison, oPt outsourced provider training to a non-governmental organisation, while Nepal utilised a combination of trainers from the hospital, the research team, and non-governmental organisations.

#### *Mid-level managers - caught in the middle*

Whilst mid-level managers were also in a position to mediate perceptions about HERA and support implementation, their engagement varied within and between countries. Mid-level managers were both recipients and influencers of sensemaking in relation to HERA. Sensegiving practices entailed managing work processes, agendas, and monitoring and reviewing decisions to facilitate implementation of HERA within available resources, as well as cross-sector synergies to support referral services for women. Mid-level managers included clinic managers (Br), Heads of Nursing (oPt), Head of Community Programmes and Head of Women's Programmes responsible for managing activities at the ORCs (Ne), and matrons, ward sisters and lead consultants (SL). However, their sense-making and agency to support HERA was challenged by higher level directives, broader contextual constraints, and limited space for collective thinking. In this way, sensemaking and sensegiving was multi-directional as mid-level managers mediated between higher-level management and frontline providers. Sensemaking also had a spatial element because of the emergent nature of HERA within the broader context. Time was needed to understand and assimilate various shocks to the health system (e.g. Covid-19, outbreak of violence in oPt, measles outbreak and vaccination campaign in Brazil) that shaped implementation processes.

The experience in Brazil revealed an important distinction between passive support (simply 'giving the ok' for HERA activities to proceed) and active support which was about operationalising and monitoring (e.g. modifying tasks and agendas to accommodate HERA). This may be due, in part, to the nature of the Brazilian health system where management is more distributed and decentralised relative to the other countries. Nevertheless, differences were also found between clinics in Brazil, highlighting the importance of managerial flexibility, agency, and motivation. The capacity to encourage positive shifts in thinking and discourses about HERA, and make space for activities was an important sensegiving tool, fostering a culture of engagement and ownership.

There was a sensibility among some managers, in Brazil, of the need to balance the desire for structure (e.g. meeting centrally set goals) with flexibility so that the former would not overrule their orientation towards quality care for women affected by DV. It was also felt that some senior providers had *greater power* to organise their busy agenda around HERA activities compared to those in more junior positions. Moreover,

having a *dedicated person to lead and coordinate* ensured that HERA was *given a space* as opposed to always having to *fight for it*.

Across all countries, mid-level managers faced contextual constraints related to budgets, targets, and priorities set by higher health system levels, conflicting with HERA's delivery. The pandemic exacerbated these challenges, introducing conflicting information and redirecting most staff, including mid-level managers, to prioritise Covid-19 activities.

Violence against women was less of a priority for healthcare. Fewer clinics decreased outpatient functioning at the outreach centres, thereby decreasing the possibility of identifying violence against women. [There was] transfer of staff, [and] an isolation ward was established at the outreach centres by the government for infected healthcare providers. [Researcher Field Notes, Nepal]

In Sri Lanka, Covid-19 led to the reassignment of gender-based violence nurses at Mithuru Piyasa. The politics and power surrounding the Covid-19 pandemic manifested in leadership sensegiving that undermined the autonomy and effectiveness of even the most dedicated mid-level managers. The de-prioritisation of HERA across all countries was inescapable and delegitimised managers' efforts to integrate HERA. Their diminished power to negotiate priorities with higher level managers was diffused to frontline providers which undermined their vital role as 'value orientors' (sensegiving practices that conveyed the importance of HERA).

The trainer reported sensing an internal conflict regarding feelings of helplessness between healthcare providers in the clinics and their managers – [Researcher Field Notes, oPt].

Targets and performance indicators for DV response were absent in the healthcare systems of all countries, which might have enabled linking the implementation of HERA to existing accountability systems. Consequently, this absence resulted in a lack of guidance and low expectations, while also signalling to managers that the issue was not considered as high priority as those associated with budgetary penalties.

## Discussion

Our study set out to explore factors that shaped the translation of HERA's intended goals into 'real world' activities in Brazil, oPt, Nepal and Sri Lanka. Reflecting on these activities through the theoretical lenses of CAS (Plek and Greenhalgh, 2001) and sensemaking (Maitlis, 2005; Weick et al., 2005) provided valuable insights into potential mechanisms for strengthening the health system response to VAW in LMICs. Healthcare providers and others were the adaptive agents working within a CAS, trying to make sense of the changes required to integrate HERA, and impact on their values, roles, organisational culture and structure. Fig. 2 depicts the integration of HERA within complex adaptive health systems. It considers how diverse sociocultural, political and economic factors across the four countries impacted the reciprocal relationship between sensemaking and sensegiving processes within the health system, leading to a range of adaptive practices during implementation.

Our findings contribute to the existing literature on health system response to VAW by highlighting the importance of considering the interplay of context and intervention during development, implementation and evaluation. Failure to capture this dynamic appropriately constitutes a barrier to assessing the transferability and applicability of findings (Mielke et al., 2022; Pfadenhauer et al., 2017). This is particularly problematic in LMIC as much of the existing evidence originates from HIC, with models in LMIC sometimes adapted from these. The adaptation process may overlook the unique challenges of different settings that emerge during implementation and evaluation.

Definitions of 'context' in implementation research vary, complicating our understanding of how macro-level actors and processes shape implementation contexts at the meso and micro level (May et al., 2016). Context encompasses not only the physical environment (McCormack et al., 2002) where healthcare is delivered, but also the broader socio-cultural, political, economic and historical influences of healthcare practice (McCormack et al., 2002). More useful conceptualisations describe context as "an unstable, unfolding process", "a set of ongoing accomplishments" (May et al., 2016), or "a critical event in the history of

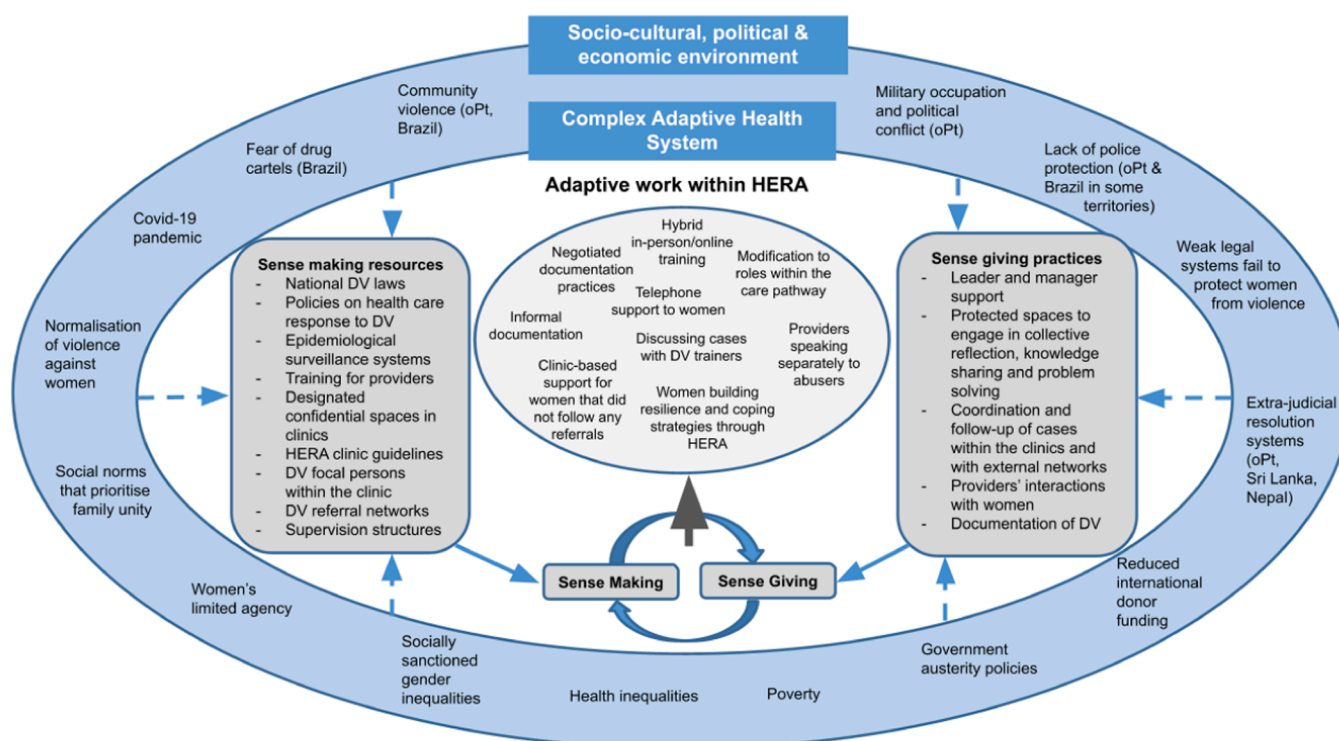


Fig. 2. Conceptual framework describing adaptation and implementation of HERA.

a system, leading to the evolution of new structures of interaction and shared meaning" (Hawe et al., 2009). This perspective shifts the focus from merely asking whether an intervention solves a problem to questioning whether it reshapes the system in favourable ways (Rutter et al., 2017).

The health system in each country encompassed elements influenced by their respective socio-cultural, political and economic landscapes, shaping the processes through which implementation of HERA occurred. Gender normative values and differing VAW legislation influenced providers' perceptions of VAW and shaped their responses. These factors also affected women's readiness, ability and actual opportunities to access support. In oPt and Brazil, this was interwoven with the political conflict and community violence which constrained the mobility and decision-making of women subjected to DV, as well as those providing them with care. Interactions between providers and women unfolded in environments characterised by fear of retaliatory attacks or the repercussions of transgressing social norms that prioritise family unity. The Covid-19 pandemic added complexity to sensemaking and sense-giving efforts, creating a dynamically uncertain and unpredictable environment. HERA had to vie for attention and providers had to reassess their roles, functions and priorities.

At times, providers moulded their response to DV to make HERA workable within particular contexts. The concept of "intervention plasticity" refers to the degree to which actors can adapt aspects of an intervention to suit a specific context, and is possible when they have greater discretion regarding their contributions to implementation (May et al., 2016).

For instance, in Sri Lanka, Nepal and oPt, providers were asked by the women to adopt the role of 'mediator', given the limited options for leaving their husbands and living independently. Women's experiences of DV in these countries were often worsened by complex in-law entanglements that exerted power over couple interactions, a finding that has been reported in similar settings (Atteraya et al., 2015; Deuba et al., 2016). HERA training underscored the risks of mediation practices involving both the woman and her aggressor, given the significant gender inequalities between them. These approaches can trivialise the severity of violence and compromise the woman's rights and safety. In HERA, some women found relief when providers spoke separately with their husbands as this seemed to ease household tension albeit temporarily. Further research should explore safe methods for facilitating such discussions with abusive family members. While generally discouraged in HIC, particularly when it involves the same practitioner working with both victim and perpetrator (Westmarland and Kelly, 2023), this approach may be relevant in contexts valuing family integrity and strict gender roles, where women lack economic independence and legal protection from violence (Campbell and Mannell, 2016). However, safety for women and providers should always be paramount.

Other countries also engaged in adaptive work. In Nepal, ORC providers modified the HERA care pathway by assigning a nurse to assess women's needs and refer them to the hospital-based One Stop Crisis Management Centre, a task originally assigned to all providers in the ORCs. However, lack of managerial support made this unsustainable due to the increased workload and competing priorities. In oPt, there was a lack of clarity regarding the interplay between the clinic case managers and the role of the Directorate-based Gender-Based Violence Focal Points in supervising them. Therefore, providers deferred to the external NGO trainer for support, particularly during times of increased clinic workload. Due to Covid-19, periodic synchronous online training was necessary across the countries, but providers felt it hindered collective sensemaking and relationship building with external referral services. Intervention plasticity was built into the design of HERA in Brazil, as each clinic was encouraged to devise their own internal care pathway. This was due to differing opinions between PHC clinics about whether the NPV should deal with DV cases or simply support the clinic Family Health Teams who were already undertaking this role. In practice, PHC clinics proficient in dealing with DV before HERA, did not adopt the new

care pathway, while those facing roles definition challenges regarding DV response embraced the HERA NPV pathway.

Data on women's uptake of referrals to support services were unreliable and uncomparable. Providers noted that some women valued talking with the clinic-based DV focal person or the provider to whom they disclosed rather than using external services. Mistrust towards external services was evident among both providers and women, exacerbated by poor communication and coordination between healthcare providers and external services. This presents a recognised obstacle to providing an integrated and comprehensive response, given the complexity of DV and its determinants (Schraiber et al., 2012). Low utilisation of referral services by women experiencing DV has been reported in other LMIC studies (McCleary-Sills et al., 2016; Klugman, 2014). However, the literature often overlooks the context of referrals, particularly from women's perspectives. A woman-centred approach, emphasising shared decision-making between healthcare providers and women, is crucial and should be tailored to each woman's unique needs, experiences, and life goals (d'Oliveira et al., 2009). Our findings, based on interviews with women, suggest that referral uptake is associated with providers' recognition of women's agency and ability to listen, rather than relying on a standardised referral pathway. Women value comprehensive information about external services, including safety measures, confidentiality, and respect for their autonomy (e.g., not being coerced to report to the police). Colombini et al.'s (Colombini et al., 2024, 2022). conceptualisation of health system readiness to integrate VAW response, emphasises that community engagement, often overlooked in studies of healthcare response interventions, is crucial for building community trust and delivering people centred services.

The evaluation of interventions within healthcare for women experiencing DV places emphasis on women's disclosure of violence to providers and use of referral services as quantitative metrics of success. Although we acknowledge these as important indicators, the evaluation of HERA in LMIC highlighted that these metrics of success might not be best suited to every context, especially those with limited possibilities for women in the DV specialised multi-agency networks. Even countries with comprehensive DV policy frameworks, like Brazil, experience implementation constraints, and deviate from advocated policy objectives (Schraiber, 2012). In HERA, women valued their interactions with providers even though sometimes they did not follow-up on referrals. Linking the success of an intervention with referral uptake implies an individualisation of the problem, resolved through women's actions alone. This perspective overlooks the complex ways women navigate the constraints of social structure. Defining agency as the capacity to achieve one's will within a social context, enables us to better understand how the burden of social orders can hinder possibilities of full autonomy for women (Biroli, 2012). This has been largely discussed in studies exploring the obstacles and possibilities women encounter when seeking help for DV (Meneghel et al., 2011; D'Oliveira and Schraiber, 2013), which has been conceptualised as the Critical Path (Sagot, 2005). Sexism, racism and class prejudice are recognised structural barriers that directly impact women's agency to access the support they need (Pereira et al., 2024; Silveira et al., 2014).

Despite increasing scholarly attention to women's agency in the context of DV in LMIC, it is inadequately problematised and under-theorised (Campbell and Mannell, 2016). The research on health system response to DV in LMIC has been complicit in perpetuating this phenomenon (Bacchus et al., 2021). The lack of attention to complexity has resulted in a poor fit between healthcare interventions to reduce DV and the lived reality of women in LMIC, where DV is situated in structures that create marginalisation and vulnerability to violence. Even in contexts with varying levels of constraint, women employ strategies of persistence, resistance and survival, that encompass more "intangible, cognitive processes of reflection and analysis" (Pells et al., 2016). We found examples of this among women interviewed for the HERA evaluation. Future research should explore what constitutes positive outcomes for women at various stages of readiness and awareness of their



situation, accounting for their diversity and varied contexts. This approach will inform more carefully tailored healthcare interventions for DV.

HERA drew upon key principles of woman-centred care for DV, that includes emotional connection, practical support through action and advocacy, and an approach that recognises women's autonomy and is tailored to their individual needs (World Health Organization, 2014; d'Oliveira et al., 2009; Tarzia et al., 2020). Some providers encountered difficulties in making sense of HERA's *soft technology* and integrating it into their existing biomedical mental models of health care. Soft technology (Merhy and Franco, 2003) is a concept that encompasses knowledge that directs work and is generated during active, live work. Soft technologies encapsulate interactions and subjective relationships, facilitating welcoming, attachment, and accountability, while also promoting autonomy in individuals. As discussed elsewhere (Schraiber and D' Oliveira, 2008), some providers struggled to recognise the soft technologies of HERA as effective tools for addressing DV, often reverting to a biomedical approach, which was deeply embedded in their mental schema and organisational culture. This perspective was compounded by negative gender norms and attitudes towards VAW. Consequently, some providers sought alternative mental models beyond the health sector. For instance, in Sri Lanka and Nepal, some providers reported serious cases of DV to the police instead of the DV centres without first obtaining consent from the women.

Documentation practices posed challenges, due to the absence of DV documentation systems or the presence of multiple systems. There were also differences in how providers navigated and interpreted varying documentation systems and their possibilities. Hesitancy to document violence was common due to fear of community exposure or retaliation from the aggressor. At times, documentation was negotiated, resulting in the violence not being documented at all. Despite growing recognition of DV as a health issue (Pires Lucas d'Oliveira et al., 2020), healthcare providers' reluctance to document reflects a conflict in acknowledging it as a clinical problem requiring action. In contrast, the documentation of other sensitive health issues, like sexually transmitted infections, does not typically require negotiation with the patient. The underreporting of DV in the medical records, a phenomenon noted in other studies (Schraiber et al., 2007), poses an obstacle to addressing DV in services that are based on the premise of longitudinal care, such as primary health care, thus perpetuating the invisibility of DV.

Linked to these issues, leadership and management values and capabilities were critical to how providers made sense of HERA and its possibilities, particularly during equivocal circumstances such as the Covid-19 pandemic. Beyond representations of support from higher level leadership (important for reducing initial resistance to HERA), substantive mid-level manager contributions were needed amid competing priorities and uncertainty. They had a role in sensegiving and creating an enabling environment for HERA. High-level leadership support during the inception of HERA was seen, by some providers, as a political gesture in response to rising cases of VAW. However, coming up with solutions to challenges that arose during implementation required spaces for collective reflection and a degree of autonomy to be flexible among mid-level managers.

Particular styles of leadership are essential for driving organisational change within a CAS, and needs to be distributed across all levels of an organisation, with particular expectations placed on mid-level managers (Balogun, 2006). Leadership needs to mediate sensemaking and encourage shifts in common beliefs and discourses regarding appropriate actions (influencing discretionary power) in different situations (Gilson et al., 2014). Our previous studies highlight how incongruent values between higher level leadership (e.g. Ministry of Health) and clinic managers can undermine efforts to implement quality care for women experiencing DV and weaken their agency (Colombini et al., 2022; Bacchus et al., 2021, 2023). Healthcare providers' readiness for DV work hinges on fostering an "authorising organisational environment", facilitating time for sensitive patient interactions, reflective

practice, and ongoing monitoring and feedback to enhances practitioners' skills (Hegarty et al., 2020). Goicolea et al (Goicolea et al., 2015). propose that supportive leadership, clear policies and defined roles function as "mechanisms for legitimising and recognising" efforts within organisations.

Mid-level managers have received little attention in the existing research on health system response to VAW, yet they have a key role in innovation implementation in healthcare (Birken et al., 2012). In HERA, managers participated in development of some intervention components (i.e. the referral path), and were both recipients and influencers of sensemaking, yet they underwent the same training as frontline providers. Future interventions should consider the inclusion of additional components to support managers in their unique role, for example, the use of mentoring models or communities of practice underpinned by situated learning (Noar et al., 2023; Ranmuthugala et al., 2011), as a way of generating contextual knowledge on successful implementation practices. In HERA, some contexts were more conducive to successful implementation than others, due to the presence of motivated leaders, appropriate monitoring of cases, and support for providers based on feedback mechanisms. Understanding health system leaders' management of uncertainty when integrating innovative DV interventions can offer fresh insights into how leadership sensegiving is enacted, and its influence on organisational discourse regarding change.

Leadership sensegiving varied between the countries and was influenced, in part, by organisational culture and the presence of existing structures and policies within which to embed new practices. In Brazil, HERA strengthened the existing NPV policy in some of the PHC clinics, thereby reactivating spaces in which providers could engage in collective sensemaking and sensegiving about DV response. The decentralised health system in Brazil, with distributed management, led to variations among clinic managers that reflected directly on implementation. Some were more proactive and motivated, organising agendas to accommodate NPV meetings and supervision sessions, and held positive values regarding HERA. In contrast, the other countries delivered reinforcement training sessions which were not embedded in existing clinical structures. Perceptions of supervision and reinforcement training varied across the countries and served different purposes. Supervision fostered a supportive space, where providers collectively discussed challenges and feedback regarding their approaches, whereas reinforcement focussed on refreshing skills and knowledge.

Systematic reviews on DV training for healthcare providers conclude that whilst training is effective in improving providers' attitudes towards DV and self-perceived readiness to respond, there is less certainty about the effect on behavioural outcomes (Zaher et al., 2014). Furthermore, the sustained effect of training beyond 12 months is undetermined (Kalra et al., 2021). In Brazil, supervision sessions supported full implementation of HERA over time, by sustaining spaces for collective reflection and case discussion. Problem solving, respectful and non-authoritative communication, allocation of resources and data monitoring to identify where supervision may be most needed are crucial elements of effective supervision (World Health Organization, 2017). Our findings support the need for spaces where providers can engage in collective sensemaking and problem solving regarding DV response facilitated by experienced supervisors (Nkomazana et al., 2016). However, there are well documented barriers to supportive and reflective supervision in primary care settings in LMIC. These include workforce shortages and turnover, time constraints, lack of motivation, passive management, lack of professional competencies to facilitate supportive supervision and approaches that focus on line management and performance (Nkomazana et al., 2016; Bailey et al., 2016).

It is also critical to recognise how personal experiences of violence among providers might affect their practice. Occasionally such cases surfaced during HERA training, requiring a response from the research teams (Colombini et al., 2024). A systematic review estimated the global prevalence of past year and lifetime DV victimisation among healthcare providers to be 10 % and 31 % respectively, with higher estimates



among female providers (Dheensa et al., 2023). Reasons that healthcare providers do not seek support are similar to those of women in the general population who experience DV. A study of female nurses in Brazil cited fear of exposure, feeling ashamed, lack of financial resources, discouragement by close relatives and fear of retaliation by the aggressor (Oliveira and D'Oliveira, 2008).

### Strengths and limitations

The comparative aspect of our multi-country study was a strength. Insights gained from one country's findings enhanced our understanding of the results from the other countries. This permitted a rich interpretation of the data, facilitating the identification of unique and shared challenges and facilitators across different contexts. The use of multiple data sources, combined with a collaborative team-based approach to analysis enabled a comprehensive and nuanced understanding of the findings. Each team analysed their data in local languages which ensured cultural sensitivity and accurate interpretation during analysis. However, Covid-19 significantly hindered data collection efforts, adversely affecting the recruitment of research participants across all countries and shortening follow-up periods. In oPt, the pandemic, coupled with an outbreak of occupation-related violence, made it impossible for the research team to gather data from women affected by DV. Therefore, they had to rely on the second hand accounts of providers to access the experiences of women. In Brazil, it was difficult to conduct observations of the provider training being replicated. A broader sampling of both providers and women across all countries, coupled with a longer follow-up period would have increased the depth and breadth of participant perspectives and the implementation processes. Disparate sources of data on identification of DV (surveillance systems, medical charts and self-reported PIM) made comparison difficult and introduced bias. Data on referrals offered by providers and utilised by women was incomplete in all countries and is not presented.

### Conclusion

HERA demonstrated acceptability and feasibility across all four countries, even in the midst of a global pandemic, while also revealing a range of adaptive practices. Capturing and analysing emergent behaviours, in context, provided valuable insights into innovative strategies that made HERA workable. It also shed light on how diverse contexts of constraint limit the agency of healthcare providers to implement evidence-based healthcare interventions to address DV, and women's agency to make use of them in LMIC. Higher level leaders and managers within the health system have a key role in mediating sensemaking through sensegiving activities that encourage positive shifts in attitudes and practices. Future research should seek to explore the tactics and methods successfully used by change leaders within the health system response to DV, and interventions should include specific components that support their unique role. Support for women disclosing DV to healthcare providers should consider women's agency, within context, to ensure that a range of options are available to women at different stages of awareness of their situation and readiness to engage.

### List of abbreviations

ACASI - Audio Computer-Assisted Self-Interviewing  
Br - Brazil  
CAS - Complex adaptive systems  
DV - Domestic Violence  
FCHV - Female Community Health Volunteers  
GBV - Gender based violence  
HERA - Healthcare Responding to Domestic Violence and Abuse  
HCP - Health care providers  
HIC - High income countries  
IPV - Intimate Partner Violence

LMIC - Low and middle-income countries  
MoH - Ministry of Health  
Ne - Nepal  
NGO - Non-governmental organisations  
NPV - Violence Prevention Nucleus  
oPt - Occupied Palestinian Territories  
OCMC - One Stop Crisis Management Centre  
ORC - Outreach Centers  
PI - Principal Investigator  
PIM - Providers Intervention Measurement  
SL - Sri Lanka  
SRH - Sexual and reproductive health  
SUS - Brazil's Unified Health System SUS  
ToT - Training of the trainers  
VAW - Violence Against Women  
WHO - World Health Organization

### Ethics approvals and consent to participate

Ethical approvals for this study were received from the University of São Paulo (3.084.387), São Paulo Municipal Health Department (3.150.024), An-Najah National University (17.02.2019), University of Peradeniya (2109\EC\21), Nepal Health Research Council and Kathmandu University, University of Bristol (80222) and London School of Hygiene & Tropical Medicine (17114).

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### CRediT authorship contribution statement

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## Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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## Author contributions

Study conceptualisation and design (LJB, SP, NJ, BK, SKC, PS, TS, AFD, PR, SS, LBS, AA, TR, AS, GF, HL, CGM, MC); data acquisition (SP, BK, SKC, PS, TS, AFD, PR, SS, AA, TR, AS); data analysis and interpretation (LJB, SP, NJ, BK, SKC, PS, TS, AFD, PR, LBS, SS, AS); writing – original draft preparation (LJB, SP); reviewing (LJB, SP, NJ, BK, SKC, PS, TS, AFD, PR, SS, LBS, AA, TR, AS, GF, HL, CGM, MC); All authors have read and agreed to the published version of the manuscript.

## Consent for Publication

Not applicable.

## Appendix A. Supporting information

Supplementary data associated with this article can be found in the online version at [doi:10.1016/j.ssmhs.2024.100042](https://doi.org/10.1016/j.ssmhs.2024.100042).

## Data availability

The datasets generated and/or analysed during the current study are available from the corresponding author on reasonable request.

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