Gender Equality, Norms, and Health 4



Disrupting gender norms in health systems: making the case for change

Katherine Hay, Lotus McDougal, Valerie Percival, Sarah Henry, Jeni Klugman, Haja Wurie, Joanna Raven, Fortunate Shabalala, Rebecca Fielding-Miller, Arnab Dey, Nabamallika Dehingia, Rosemary Morgan, Yamini Atmavilas, Niranjan Saggurti, Jennifer Yore, Elena Blokhina, Rumana Huque, Edwine Barasa, Nandita Bhan, Chandani Kharel, Jay G Silverman, Anita Raj, on behalf of the Gender Equality, Norms, and Health Steering Committee*

Restrictive gender norms and gender inequalities are replicated and reinforced in health systems, contributing to gender inequalities in health. In this Series paper, we explore how to address all three through recognition and then with disruptive solutions. We used intersectional feminist theory to guide our systematic reviews, qualitative case studies based on lived experiences, and quantitative analyses based on cross-sectional and evaluation research. We found that health systems reinforce patients' traditional gender roles and neglect gender inequalities in health, health system models and clinic-based programmes are rarely gender responsive, and women have less authority as health workers than men and are often devalued and abused. With regard to potential for disruption, we found that gender equality policies are associated with greater representation of female physicians, which in turn is associated with better health outcomes, but that gender parity is insufficient to achieve gender equality. We found that institutional support and respect of nurses improves quality of care, and that women's empowerment collectives can increase health-care access and provider responsiveness. We see promise from social movements in supporting women's reproductive rights and policies. Our findings suggest we must view gender as a fundamental factor that predetermines and shapes health systems and outcomes. Without addressing the role of restrictive gender norms and gender inequalities within and outside health systems, we will not reach our collective ambitions of universal health coverage and the Sustainable Development Goals. We propose action to systematically identify and address restrictive gender norms and gender inequalities in health systems.

Introduction

Health systems are necessary for effective and efficient health-care delivery. Their strength is fundamental to achieving universal health coverage, a target of the Sustainable Development Goals (SDGs) shared by 193 nations.1 Gender inequalities and biases rooted in restrictive gender norms, described in other papers in this Series,1-3 are also reflected in health systems. Left unaddressed, gender inequalities can weaken or even incapacitate a health system's functioning, as seen in Taliban-controlled Afghanistan in the 1990s, where female health providers were denied the right to practice, compromising health-care access and quality.4 Other examples might be less extreme, but 20 years of crossnational research from high-income countries and lowincome and middle-income countries shows that gender inequalities are embedded in our health systems, 5-7 are rarely addressed,5-8 and impede our capacity to achieve universal health coverage.1

In this paper, the fourth in a Series on gender equality, norms, and health, we examine how to address restrictive norms and inequalities in health systems, through recognition and disruptive solutions. We used intersectional feminist theory to guide our approach, 9.10 reviewing the literature and doing new empirical analyses. We aimed to determine how restrictive gender norms and gender inequalities manifest in health systems and how we can disrupt health systems in ways that address, reduce, or prevent gender inequalities and the underlying restrictive

gender norms that maintain them. Findings from this work offer insights into how health systems leadership, policy makers, and community activists can work together to create more equitable and accountable health systems.

How do gender norms and inequalities manifest in health systems?

To understand the implications of restrictive gender norms and inequalities in health systems, we consider

Key messages

- Health systems reflect and reinforce the gender biases and restrictive gender norms in society, and these biases and norms undermine the functioning of health systems and compromise the safety and wellbeing of providers and the health of communities.
- Gender and social inequalities (based on class, race or ethnicity, etc) intersect and multiply these negative effects on both the health system and the communities they serve.
- Health systems can be disrupted (eg, from within, through social and economic policies, and through community accountability mechanisms) to shift gender norms and reduce inequalities.
- Gender transformative approaches can help address gender inequalities in health and health systems.
- Individuals working to change health systems should align and ally with social movements, community activism, and collective efforts for change and accountability.

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This is the fourth in a **Series** of five papers about gender equality, norms, and health

*Members of the Steering Committee are listed at the end of this Series paper

Bill & Melinda Gates Foundation, Seattle, WA, USA

(K Hay MA, Y Atmavilas PhD); Center on Gender Equity and Health, Department of Medicine, School of Medicine, University of California San Diego, La Jolla, CA, USA (L McDougal PhD, R Fielding-Miller PhD, J Yore MPH, N Bhan ScD, Prof LG Silverman PhD. Prof A Raj PhD); Norman Paterson School of International Affairs, Carleton University, Ottawa, ON Canada (V Percival DrPH); Department of Pediatrics, Stanford University School of Medicine, Stanford University, Stanford, CA, USA (S Henry MPH); Georgetown Institute for Women, Peace and Security, Georgetown University, Washington, DC, USA (J Klugman PhD); Women and Public Policy Program, Harvard Kennedy School, Cambridge, MA, USA (J Klugman); College of Medicine and Allied Health Sciences, University of Sierra Leone, Freetown, Sierra Leone (H Wurie PhD); Liverpool School of Tropical Medicine, Liverpool, UK (J Raven PhD); Faculty of Health Sciences, University of eSwatini, Mbabane, eSwatini (F Shabalala PhD); Sambodhi Research & Communications, Noida, Uttar Pradesh, India (A Dey MBA, N Dehingia MBA); Johns Hopkins Bloomberg School of Public Health. Department of International Health, Baltimore, MD, USA

(R Morgan PhD); Population Council, New Delhi, Delhi, India (N Saggurti PhD); Vladman Institute of Pharmacology. Department of Psychiatry, First Paylov State Medical University of St Petersburg, Saint Petersburg, Russia (E Blokhina MD); The ARK Foundation, Dhaka, Bangladesh (R Huque PhD); Kemri-Wellcome Trust, Kenya Research Programme, Nairobi, Kenya (E Barasa PhD); and HERD International, Thapathali, Kathmandu, Nepal (C Kharel MD)

Correspondence to:
Prof Anita Raj, Center on Gender
Equity and Health, Department of
Medicine, School of Medicine,
University of California San Diego,
La Jolla, CA 92093, USA
anitaraj@ucsd.edu

both gender inequalities in the health system and the health system's response to them. Health systems are comprised of components (eg, clinical facilities, financing, governance, and workforce) to support health for populations at scale (figure 1, 2).11 Interactions within and between the health system and community are influenced by restrictive gender norms and inequalities (eg, power and trust), affecting the strength, efficiency, and health impact of health system components and the system as a whole.12 Restrictive gender norms and inequalities endemic in society (ie, the larger social and policy environment in which the system exists) are mirrored, reinforced and perpetuated in health systems, harming the system and compromising the health of communities (ie, the immediate environment directly served by the system).

Theory

Our analysis is built on intersectional feminist theory, which posits that multiple social identities and experiences of social marginalisation (ie, subordination and exclusion based on social characteristics such as gender, race or ethnicity, class or caste, social position, etc) intersect to create compounded privilege or marginalisation for individuals.¹⁰ Put more simply, power and hierarchy manifests in health systems in ways that make some people more likely to gain benefit, be supported, and advanced, while others are more likely to be marginalised or disempowered. Hence, we consider not just gender inequalities but also social inequalities and their intersection, including inequalities based on social positioning in health systems, which commonly value physicians over nurses, for example, and medical structures over community. Gender and health system hierarchies, in conjunction with other hierarchies attached to social characteristics, maintain power structures that advantage some at the cost of others, reinforcing social and gender inequalities within health systems and health outcomes.9,10

Intersectional feminist theory points to the overlapping and intersecting nature of inequalities in health systems and highlights the need for accountability to

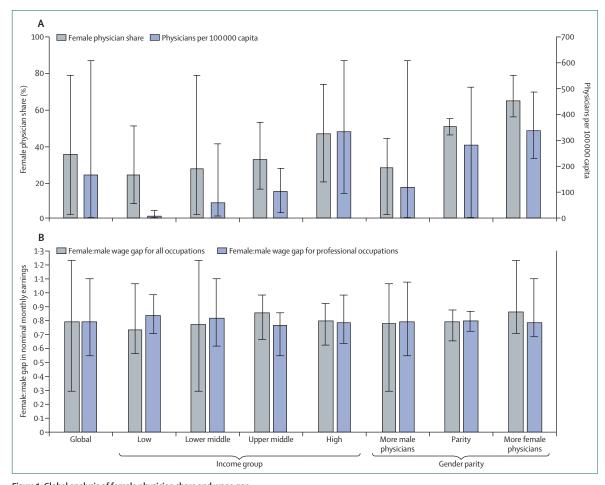


Figure 1: Global analysis of female physician share and wage gap

(A) Distribution of female physician share and physicians per capita across categories in 91 countries. (B) Female:male wage gap across categories in 91 countries.

Bars show group means and error bars indicate minimum and maximum values. Parity is defined as 45%–55% female.

eliminate these inequalities.10 We also draw upon feminist standpoint theory, which posits that perspectives are shaped by intersecting identities and social and political experiences, which are multifaceted rather than universal. In this Series paper, our objective engagement with the research, or strong objectivity as Harding¹³ called it, entails the inclusion of diverse perspectives, such as those well positioned to recognise and question inequalities and marginalisation. We built our research team with this theoretical underpinning in mind and focused on research questions that emphasise hierarchies and marginalisation within the health system and respectful and high-quality health-care delivery.

Methods

We critically reviewed the published literature to guide our understanding of how restrictive gender norms and gender inequalities manifest in health systems (panel). Given the enormity of the literature and the contextual nature of health systems, we based reviews on input from a working group of 22 multidisciplinary experts on gender and health from across four continents. These experts included nurse and physician researchers, social scientists with qualitative and quantitative research expertise, and health systems experts to guide our conceptualisation and analysis. Experts guided priority areas of focus for review—gender inequalities in health and gender inequalities in the health-care workforce and helped identify key papers reflective of cases from diverse regions of the world.

Recognising the importance of the lived experiences of female health-care workers, experiences of gender inequalities, professional opportunities, and the role of policy in affecting such opportunities, we also included two qualitative studies. Case 1 concerns the life course of an HIV nurse in eSwatini and is based on the aggregated stories taken from qualitative and demographic data. Case 2 is a policy analysis using qualitative data from community health workers and their managers, following the introduction of a policy to ensure better support and remuneration for community health workers in Sierra Leone.

How do health systems affect gender inequalities in health?

Health services prioritise care in ways consistent with traditional norms, which results in poor care for women, men, and gender minorities.³¹ Examples include valuing women on the basis of their reproductive capacity and provision of care for children, viewing men as strong and not in need of care, and defining both as heterosexual and cisgender (ie, where biological sex at birth matches gender).31 For example, women are at greater risk than men for depression or anxiety, 32-34 cancer, 35 and health burdens due to ageing,36,37 but health systems show little response to these differences and in some contexts show worse care than for men.38 In India, which has a glaring

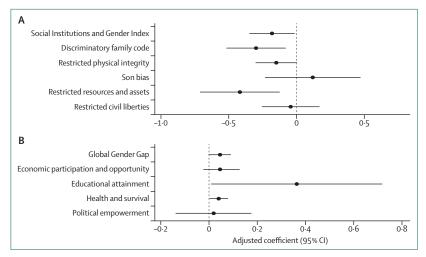


Figure 2: Global analysis of female physician share and gender equality indicators Association of female physician share (A) with Social Institutions and Gender Index and subindices and (B) with Global Gender Gap index and subindices. Each line represents the coefficient and 95% CI for separate fractional logit generalised linear model regressions, adjusting for gross domestic product (as a natural log) and year.

sex ratio imbalance39 attributed in part to lower healthcare seeking for female relative to male children, 40,41 there is little indication that health services are addressing these biases.41

Men's health receives even less focus, even though men have higher health risks and lower life expectancy relative to women, 32,33,42-48 and restrictive gender norms related to masculinity have been linked to behavioural risks (eg, substance use, suicide, and injury) and delayed health seeking. 42,49,50 Furthermore, there is evidence that providers differentially respond to men seeking care, assuming lower compliance for male relative to female patients.51,52 Men are often excluded from maternal and child health care, despite evidence of the importance of their inclusion; research documents clinical resistance to men's engagement in maternal and paediatric care, reinforcing restrictive norms that men are not needed for maternal and child health.53-55 Health disparities for sexual and gender minorities are also well documented, and include lower health-care coverage, higher physical and mental health concerns and unmet medical needs, and increased behavioural risks (eg, substance use, violence, and sex trade involvement) and prevalence of sexually transmitted infections and HIV.56-62 For both sexual and gender minorities, stigmatisation and discrimination from health providers is common, 63-65 reinforcing barriers to health care for these groups. Such issues are even more prominent in countries where sexual and gender minorities are criminalised, a health and human rights violation rooted in restrictive gender norms. 56,58,59,66

Health systems must recognise and respond to the negative effects of restrictive gender norms to address the inequalities they reinforce.⁶⁷ Responses range from gender unequal (reinforcing male advantage) to, far less commonly, gender transformative (altering gender norms and power; appendix). 68 We systematically See Online for appendix

Panel: Research methods

How do health systems affect gender inequalities in health?

What are health system responses to gender inequalities in health? We did a critical review of published literature using PubMed, Google Scholar, and Web of Science. We did not define or constrain search terms a priori; trained researchers reviewed abstracts while searching and determined which papers were of interest at the time of the search. We created annotated bibliographies on papers of interest and sorted these into subtopics identified iteratively. Expert groups discussed findings from these reviews to identify key themes of interest, and small groups did write-ups of review findings on the basis of identified subthemes. Experts reviewed all writings to ensure presented work reflected the breadth of perspectives from across contexts and disciplines.

Do health system models consider gender or gender equality and their intersection with social inequalities? We did a systematic review of published literature in September, 2018, using PubMed, Scopus, Google Scholar, and the World Bank and the WHO websites to identify papers and reports published between Jan 1, 2000, and Sept 30, 2018. Papers were included if they provided a model of health systems, not system components or a country specific system. We concentrated on models designed for low-income and middle-income countries or with a focus on culture and health systems. After database searches, a snowballing method was used to retrieve articles from the bibliographies of papers identified in the review. All compiled papers were screened to ensure they met inclusion criteria and data were extracted to describe the components of the model and whether they addressed social and gender inequalities. Search terms can be found in the appendix.

Can gender transformative clinical interventions improve health and gender equality?

A systematic review was done by the IRIS Group in January, 2018, to identify studies published from Jan 1, 2000, to Dec 31, 2017, on evaluated gender transformative health interventions done in clinic settings or by clinical providers. Gender transformative was defined as affecting restrictive gender roles or norms, including gender-based power differentials.14 Selected papers were those written in English, French, Spanish, or Portuguese and involved controlled trial designs, either randomised (with n≥50 per group) or quasi-experimental (with n≥100 per group); showed a significant effect on health outcomes; and had a study retention rate of over 60%. Published papers were identified through EBSCO, ProQuest, Scopus, and Web of Science and for grey literature we used governmental and non-governmental project websites. IRIS Group researchers and library staff at Washington University in St Louis (MO, USA) developed search terms for this review and then tested

them for accuracy and noise before full use. After these articles were reviewed and compiled, snowballing was used to identify additional studies from July 1 to Oct 31, 2018, which involved retrieving articles from the bibliographies of identified papers, review of ClinicalTrials.org, and expert input. Once all articles were compiled, titles and abstracts were screened for study inclusion criteria, and relevant articles were placed into a reference manager and tagged by health issue of focus. Two senior researchers with expertise in gender and health then reviewed and extracted data on effective interventions. Data and search terms can be found in the appendix.

How do gender inequalities manifest in the health-care workforce?

How does the health system (medical) hierarchy intersect with qender inequalities?

A critical review of the literature was done using the same method described for the previous critical review. As noted previously, cross-national and cross-disciplinary input from our expert panel quided analysis.

How does gender in the life course affect women's training and employment opportunities in health care?

A case study of a trained nurse in eSwatini was developed based on findings from qualitative research in HIV clinical settings and with HIV affected populations, including nurses, community health workers, and volunteers and adolescent and adult HIV patients; methods from these studies are available elsewhere. These stories were triangulated with national health, demographic and economic data to accurately reflect the context of the country. The story was developed to describe the gendered aspects of health-care training and employment using a life course perspective (appendix).

How do gender blind health-care financing policies differentially affect women and men as paid health-care providers? We created a case study of a health policy to support and pay community health workers in Sierra Leone. In 2016, Sierra Leone established the National Community Health Policy and Programme to increase support and remuneration for community health workers, 21 in recognition of their work through conflict and the 2014 Ebola epidemic. After policy implementation, in-depth interviews were conducted with community health workers' managers (n=16) in two districts to provide insight into how the policy affects recruitment and retention of community health workers. Data were coded and analysed using NVivo. Ministry data were also reviewed to assess demographics of community health workers following the policy and the recruitment of female community health workers (appendix).

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How can we disrupt health systems in ways to eliminate and prevent gender inequalities?

Do nations with higher gender development have a higher share of female physicians per capita, and is it associated with better health outcomes?

Using sex-disaggregated health workforce data from WHO's Global Health Workforce Statistics²² and the Organisation for Economic Cooperation and Development's Health Statistics 2017,²³ we did a cross-sectional analysis to determine whether greater female representation of women physicians was associated with indicators of gender development and health indicators in 91 nations. Gender development indicators included the Social Institutions and Gender Index,²⁴ the Global Gender Gap,²⁵ and the gender gap in wage earnings.²⁶ Health indicators included maternal mortality,²⁷ infant mortality,²⁸ female and male life expectancy,²⁹ and universal health-care scores.³⁰ Country-level data and detailed methods are in the appendix.

Do frontline workers receiving more respect and support from family, community and the health system show higher productivity and health impact?

We did a mixed-methods analysis, which involved quantitative analyses of survey data from a state-wide sample of community health workers (known as accredited social health activists) in Uttar Pradesh, India (n=1341) and their clients who gave birth in the past year (n=8319), to explore whether family support and community respect for accredited social health activists, as reported by the activist, affects productivity and health impact. Productivity was defined as household visits and earnings, as reported by activists, and health impact was defined as antenatal care and institutional delivery, as reported by clients.

We also created a Case based on findings from in-depth interviews with medical officers in charge and staff nurses from four high-performing clinics and two low-performing clinics in a

single district in Uttar Pradesh to explore supervisory and support structures for nurses in these clinics (n=12). Two researchers coded and analysed detailed interview notes collected from participants and identified themes on effective and problematic supervision and support in the clinics (appendix).

Can social mobilisation, through social movements or community organising, support better quality care from health systems? We did a two-group quasi-experimental trial that involved quantitative analyses of survey data from two repeated cross-sectional surveys done in April-June, 2013, and June–August, 2016, among women from self-help groups in India. A two-stage cluster sampling design was used to select study participants. All women aged 18-49 years in the self-help group who have given birth in 1 year before the survey were eligible. 2407 women were interviewed from 713 self-help groups in 2013 and 2970 women from 1390 groups in 2016. Three group-level process indicators were considered: whether the group interacted with the local health facility, whether the group came together to negotiate with the health centre, and whether the group came together to negotiate with the anganwadi (a form of rural care centre for children). Three individual-level process indicators were included: whether woman negotiated with staff of the health-care centre, whether woman negotiated with frontline health workers in villages, and whether women had confidence in accessing health services from government health centres. The health system response was measured using four indicators that assessed whether accredited social health activists provided health care with respect, directed to appropriate providers, responded quickly to emergency situations, and were available when needed. The service uptake was assessed using three indicators: receipt of iron and folic acid for 100 or more days, at least one visit by a health worker within a week of delivery, and health worker accompanied women for delivery at a health facility.

reviewed health system models (n=17) and found few that guide gender responsiveness (appendix). The more widely known and used models, including the Control Knobs,⁶⁹ Building Blocks,⁷⁰ and the Universal Coverage Cube,⁷¹ are mechanistic in nature, mapping components but not how they interact with the social environment. Other models recognise that health systems are dynamic and complex^{12,72–74} but do not provide an intersectional gender analysis to understand how gender bias and restrictive gender norms affect health systems.

A parallel systematic review of gender transformative clinical interventions yielded few studies, despite research documenting their capacity to affect wellbeing (appendix).⁷⁵ Only four identified studies⁷⁶⁻⁷⁹ used a clinic-based gender transformative approach and showed significant health impact. These studies focused on family planning counselling or intimate partner violence and on counselling to improve restrictive

gender norms and inequalities to promote health. Although few studies were identified, they resulted in multiplicative behavioural health effects (eg, reduction in intimate partner violence and increased contraceptive use), suggesting that gender transformative approaches can produce multifold benefits.

Gender inequalities in health persist with little response from health systems, which is not surprising because our models of health systems do not guide us to consider or address gender inequalities. These findings highlight a missed opportunity to engage health systems in gender transformative strategies to improve health at a population level.

How do gender inequalities manifest in the health-care workforce?

Globally, women remain least represented at the top of the medical hierarchy, among health ministers and physicians, and most represented at the bottom as nurses, nurse midwives, and community health workers 5-8,31,80 and hold positions of lesser authority across the bulk of the formal system.7,31,81-83 Similar gender patterns are seen in the informal health sectors, where women are the vast majority of unpaid health workers. 5,7,84 These gender inequalities in the health-care workforce are bolstered by underlying restrictive gender norms that maintain the cure versus care standard. Where communities look to physicians and specialists to cure, nurses and community health workers are expected to care, with services from nurses and community health workers viewed as less skilled, less deserving of remuneration, and more aligned with women's traditional gender role as caregivers.31,85-87 Even when women are in higher trained positions, such as physicians, gender biases persist in opportunity and position.88-90 In the USA, only 15% of medical school deans are women, 91 and, when appointed, female deans are often assigned to nurturing roles (eg, student affairs) rather than policy setting (eg, finance) roles. 91-94 Low visibility of women in these leadership and cure roles, combined with early exposure to gendered expectations for girls to serve in caring roles and for boys to develop maths or science (cure) skills, maintain these positions, as illustrated by Case 1: The life story of Simphiwe (appendix). This case highlights how gender norms affect career aspirations and expectations.

This relegation has both social and economic costs. Providers higher in the health system hierarchy (ie, physicians) not only hold more prestige, larger and more stable salaries, and greater opportunity for advancement, they also have greater job security, greater freedom in practice, more optimal locations of work, and lower risk of abuse by and within the system. 5,7,8,80 In many contexts, even those with majority female primary care physicians, curing physicians are viewed as male. Research from the USA has found that early in medical training, women are advised against working in specialties with higher mortality risks for patients and longer work hours, such as surgery. 95,96 They can receive social backlash from peers and superiors if assertive, even when providing care in high mortality situations. where it is a requirement. 97 Sex differences in health research productivity have also been documented, 76,98,99 in part due to biases in peer review of papers and grants, 100-102 although these differences are improving.99 Such biases are not only unfair, they compromise the breadth and perspectives of research 103,104 and, combined with the greater burdens of workplace harassment and domestic labour responsibilities women face relative to men. increase burnout and attrition of these workers.94,105-107 Simultaneously, restrictive gender norms maintain greater expectations of male employment and earning, often resulting in their prioritised employment and salaries. This prioritisation of male over female employment and salary is illustrated by Case 2: Unintended consequences of a gender blind policy to salary community health workers in Sierra Leone (appendix). This case was developed from qualitative data collected from community health worker managers. Findings indicate that upon salarying community health workers, men more than women took these roles, reinforced by restrictive gender norms related to male employment and female domestic responsibilities.

As noted previously, lower positioning in the hierarchical health system increases vulnerability to abuse and mistreatment, including devaluation and even assault. There is substantial evidence of devaluation of community health workers, 5,8,31,80,108,109 a growing cadre of minimally trained staff that is largely or exclusively female. Public health systems increasingly rely on community health workers for community outreach and education to increase demand for and use of clinical care, 110-112 especially in low-resource and conflict-affected settings. 113-115 Community health workers have a lynchpin role in supporting the health system's reach and health impact for socially marginalised groups, typically in their own communities, yet these positions continue to range from low paid, to incentivised, to unpaid. 5,8,31,80,108,109 Poor and unpaid salaries for community health workers are rooted in beliefs from across cultures and over time that women seeking payment for health-care services should be viewed with skepticism and distrust, because care is a part of women's nature and responsibility, whereas paid employment is for men. 31,116,117 Norms that community health workers should be motivated by altruism rather than money are reinforced by donors, the health system, communities, and community health workers themselves and are used to justify low or non-salaried positions.111 Such gendered role expectations are stronger in contexts of restricted female employment and crisis.7,118-122 Social harassment, alienation, and even violence can arise from women failing to adhere to the expected gender norm as a caregiver. 123,124

Nurses and midwives constitute about half of the healthcare workforce globally.¹²⁵ However, there is a shortage of nursing staff,125 with fewer women entering nursing in part due to its low status and pay and disrespectful treatment, despite the requisite training and credentials. 126-128 In a common context of substantial overwork (eg, high patient:provider ratio), inadequate institutional support and opportunity to advance, and absence of a supportive peer network, 129-132 there is also substantial documentation of the disrespect, abuse, and harassment, including sexual harassment in the workplace among nurses, with perpetrators of these abuses including physicians, supervisors, peers, and patients. 133-138 Underlying gender norms of male hypersexuality and female sexual passivity create a tolerance for sexualisation and sexual harassment and abuse of women in the workplace for female nurses and female physicians. 139

These challenges of overwork and abuse manifest in work stress, job dissatisfaction, and burnout of

nurses, 132,135,136,140 resulting in poorer quality of care and even abuse of patients and poorer patient outcomes. 129,132,146 Poor quality care and abuse appear to disproportionately burden the most socially marginalised patients and communities, typically women and often the rural poor or young, the least resourced to demand or expect respectful treatment. 141,143,144 These populations have lower clinical care use, as a means of avoiding poor treatment from providers,147 further compromising their health. This picture suggests a kick down (ie, overwork and abuse of those lower in the health system hierarchy) to kick out (ie, abuse of socially marginalised patients or clients) health system dynamic consistent with other hierarchical structures with a climate of bullying. 148 These abuses disproportionately burden women and other socially marginalised groups as patients141,143,144 and healthcare providers133-138,141,143 and probably go unreported by victims, with impunity for perpetrators.

Restrictive gender norms embedded and perpetuated in health systems devalue women's labour and capacity for skilled work and maintain a standard where female providers care with little or no recognition or remuneration, and males cure and, thus, deserve training and remuneration for their work. This standard facilitates overwork, devaluation and abuse of female health-care providers. These burdens, particularly in the stressful, hierarchical climates in medicine, foster a bullying culture that can lead to abuse of patients and ultimately, if left unaddressed, poor health outcomes.

How can we disrupt health systems in ways that transform gender norms?

Using the findings from our review, we identified three areas of disruption to explore. We emphasised approaches that can be gender transformative, altering restrictive gender norms as a means of improving health. The first area relates to the cure versus care standard and underlying norms shaping employment that hinder women from becoming physicians. The second relates to the devaluing and abuse of female health workers, underlying domestic labour norms, and acceptability of disrespect and abuse of women. The third relates to the authority and power of the health-care system and the subsequent social and institutional tolerance of abuse, particularly for socially marginalised victims.

On the basis of these areas of focus, we did empirical analyses to examine the evidence on what might positively disrupt health systems (panel). We aimed to evaluate three issues: whether nations with higher gender development have a higher share of female physicians per capita, and whether it is associated with better health outcomes; whether female frontline workers who receive more respect and support from family, the community, and the health system, have greater productivity and health impact; and whether social mobilisation, through social movements or community organising, support gender equality and better quality of care from health systems.

Do nations with higher gender development have more female physicians per capita, and is it associated with better health outcomes?

Findings from our global analysis of the physician workforce indicate that only a third of physicians globally are female. Nations with higher female physician shares also had greater gender equality in education, access to resources and assets, and policy protections (figure 1A–D). We cannot assume causality or the direction of the relationship from these cross-sectional findings, but results suggest that greater representation of female physicians is supported by greater gender equality in social and economic realms, a finding corresponding with research on the value of gender equitable policies.³

We also examined whether higher female physician share is associated with better health outcomes. It is associated with lower maternal and infant mortality, longer life expectancies, and higher universal health coverage index subscores in reproductive, maternal, and child health and service capacity and access (figure 3). Exploratory analyses replicating these models adjusting for physicians per capita rather than year found that female physician share was no longer significant in most models. These findings, and those related to gender equality policies described previously, indicate that more equal representation of female physicians is likely reinforced by greater gender equality at the societal level and linked to better public health globally, possibly by supporting a larger physician workforce for primary care.

Improvement of gender parity in the physician workforce has value, particularly given evidence of ongoing institutionalised and policy discriminations against women in medicine. 149,150 Higher representation of female relative to male physicians is occurring in many regions, including Western Europe, 151,152 former Soviet States, and China. 152-154 Higher female physician representation appears to correspond with higher representation of women in the labour force, 152-154 but does not necessarily mean equal treatment, pay, or opportunity in these positions. When women are the majority of physicians or a physician specialty, wages for the position stagnate or even decline, 152,155,156 as seen in other occupations when they become female dominated.¹⁵⁷ Even when women and men are in comparable specialties, women often receive less pay for the same work. 155,158 Gender parity in the workforce has value, but gender parity alone will not result in gender equality without systemic, political, and policy effort.

Do frontline workers receiving more respect and support have greater productivity and health impact?

Findings from a quantitative study of accredited social health activists in India, an exclusively female cadre of community health workers, and their clients suggest that family support and community respect are important for their productivity, but only family support, particularly for domestic labour responsibilities, is associated with health

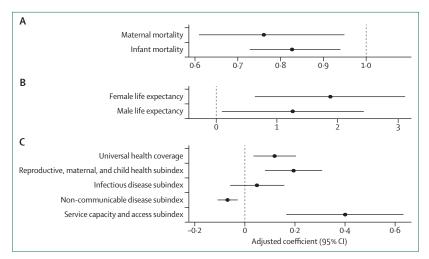


Figure 3: Global analysis of female physician share and health outcomes

Global analysis of the association of maternal and infant mortality (A), life expectancy outcomes (B), and universal health coverage index (C) with female physician share. Each line represents the coefficient and 95% CI for separate generalised linear models with a Poisson family and log link (A), linear (B), or fractional logit (C) regressions, adjusting for gross domestic product (as a natural log) and year.

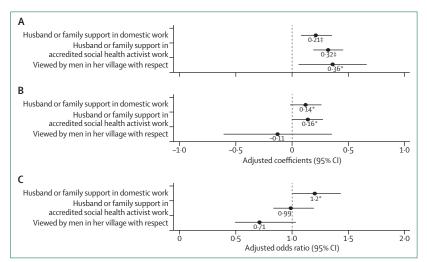


Figure 4: Associations of family and community support and respect with accredited social health activists productivity and health impact

(A) Number of households visited. (B) Number of women accompanied to facility. (C) Percentage of women receiving minimum antenatal care. All three models were adjusted for sociodemographic covariates. *Statistically significant at p<0·05.†Statistically significant at p<0·01.

impact (ie, better service uptake among clients; figure 4). These results emphasise the importance of support, respect, and reductions in domestic labour responsibilities, particularly in strengthening productivity, earnings, and impact among community health workers. Findings highlight the need for transforming norms to support equitable redistribution of domestic labour to help reinforce the valuing and health impact of women's professional work.

A qualitative case study of nurses and their supervisors indicated that positive supervision, in conjunction with community value for nurses, occurred in high performing clinics, whereas punitive supervision, little peer support,

low community value for nurses, and a high burden workload for nurses occurred in the low performing facilities (appendix). These findings are consistent with previous research documenting that nurse satisfaction is higher in institutions with supervisors who value nurse training and contributions, deliver feedback using validation and correction rather than punitively, and provide opportunities for advancement.¹⁵⁹⁻¹⁶¹

Improved treatment, value, and respect for these predominantly or exclusively female workers and their work would be gender transformative, helping alter the gender norm-reinforced cure versus care standard that persists in health systems. However, improved value based on compensation and advancement opportunities are also needed.

Can social mobilisation support better quality care from health systems?

In the past two decades, community organising for health has become increasingly common, building policy demands, community awareness of health concerns, and increasing use of health services.¹⁶² Systematic reviews and meta-analyses^{163,164} show that community groups help bring moderate to strong improvements in agency,165 economic empowerment, 166 social or political empowerment, 167 and health 168-172 at the individual and community levels. Women's movements and social movements that target gender roles have gained traction, bringing gendered health policy improvements, as occurred with the expansion of reproductive rights in Ireland¹⁷³ and the strengthening of the criminal justice system's response to rape in India.¹⁷⁴ The global #MeToo movement against sexual assault and harassment, built through women's collective responses and use of social media, is reverberating across sectors. In the USA, it led to research documenting that a third of women in science and technology have been harassed at work or in training, which was followed by a statement of nontolerance made by the National Academies of Science, Engineering and Medicine.175

Although information on gender transformation around the roles of men and gender minorities is scarce, we use evidence from women's collectivisation to illustrate how localised community organising can also disrupt systems. Women's empowerment collectives of different types have increasingly gained ground and now include millions of members.¹⁷⁵ Using participatory action approaches, they are enacting change for women in the spheres of financial inclusion, livelihoods, $^{\mbox{\tiny 176-178}}$ and political participation. $^{\mbox{\tiny 175}}$ For example, women's self-help groups are one large and growing platform meant to empower poor and marginalised women in India.¹⁷⁹ The National Rural Livelihood Mission alone has more than 56 million self-help group members working for socioeconomic transformation¹⁸⁰ and activism. ¹⁸¹⁻¹⁸⁴ Research shows that self-help groups combining health education with community mobilisation had significant effects on neonatal

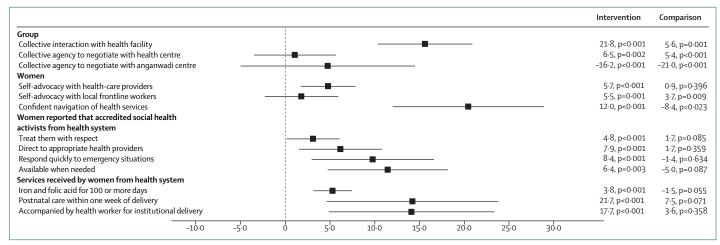


Figure 5: Effects of self-help group-based health intervention on interactions between clients and accredited social health activists in Bihar, India

and maternal mortality, ^{164,185} and gains were even stronger among more marginalised women.

Research has not examined how community mobilisation affects women's interactions with health providers or whether women's interactions could shape the health system itself. Using data from Bihar, India, we did new analyses to understand the effects of self-help groups, with and without focus on mobilisation for health care, on women's interactions with health providers and responses from providers to these women. We explored whether women from these collectives could inform health worker interactions and response. The results indicate that women from self-help groups with a focus on health, relative to those in control areas, were significantly more likely to increase self-advocacy with health-care providers and exhibit confident navigation of health services from baseline to follow-up (figure 5). Women from intervention areas relative to control group areas were also significantly more likely to report respectful and responsive care from the accredited social health activists. These women also showed increased service use. These findings support the hypothesis that community mobilisation processes can change the way women interact with the health system, directly challenge restrictive gender norms and the health system hierarchy, and in turn bring positive changes and deeper accountability in the health system at the local level.

These three analyses (figures 3–5) highlight that disruption is possible and illustrate that gender transformative approaches can strengthen health systems and improve care (figure 6).

Our global analysis of the physician workforce highlights that gender equality in the larger social environment can prevent and reduce gender inequalities in the workforce. Our mixed methods analysis with frontline workers in India shows that respect and value for work is needed from family, community, and institution to support productivity. These findings suggest that support is necessary to maintain workers' performance and health impact even in settings affected

by gender inequalities. Social movements and women's empowerment collectives offer an external accountability structure, pushing for it to provide universal and equitable care.

We recognise that our disruptions research draws heavily from gender inequalities disadvantaging women, despite our previously noted recognition of the need for greater focus on the ways that gender norms and inequalities can impede the health of women, men, and sexual and gender minorities. Inadequate, and inadequately diverse, data speaks to the need for better measures and more gender norm-focused data, as noted in other papers in this Series. Nonetheless, these findings suggest that gender transformative approaches (within health systems and in partnership with the communities they serve) can affect gender inequalities and health outcomes.

Discussion

It has been 40 years since the Alma Ata Declaration committed governments to provide primary health services for all, enshrined the importance of individual and community participation in health care, underscored the political, social, and economic causes of ill-health, and reaffirmed health as a human right. Although we have made progress, the aims of the Declaration have yet to be met. How can we ensure that new international commitments rooted in the SDGs and universal health coverage do not similarly fall short?

Our analysis shows that restrictive gender norms manifest in the health system and reflect and reinforce gender inequalities, compromising the health and wellbeing of patients and providers. It also shows that health systems can be disrupted, using gender transformative approaches, operating outside (social and economic policies supportive of gender equality), within (support, value, and safety for workers), and with (social or community accountability) health systems, to alter restrictive gender norms and reduce gender inequalities.

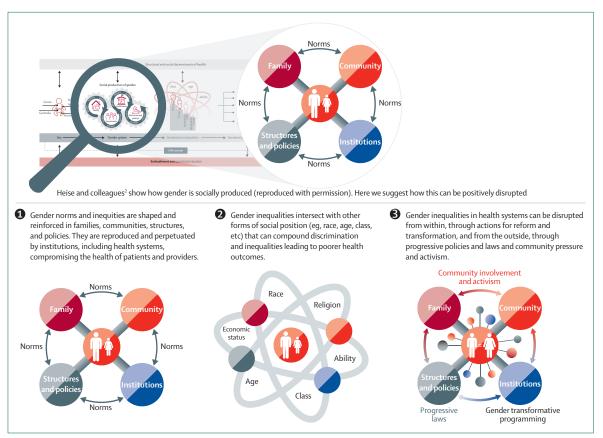


Figure 6: How can we disrupt gender inequalities in health systems?

This evidence suggests that we need to move from a consideration of gender as something that can be easily patched upon existing health systems, towards a recognition that gender inequality fundamentally predetermines and shapes health systems and outcomes in ways that require fundamental changes.6 We need to rethink our models, which at their core reflect our collective aspirations of what health systems are meant to deliver. We need to build our aspirations around gender equality, from policy to administration and to service provision, and evaluate and assess progress against these values. Drawing from research in this Series paper, and building on previous work, 186,187 we put forward a set of aspirations for gender equitable health systems that: (1) reflect and reinforce a gender equitable society; (2) address gender norms and root causes of inequalities across the life course; (3) provide equal opportunity for health-care professionals of all genders to enter, thrive, and advance within health systems; (4) ensure equal access and usage of high-quality health services by people of all genders, unimpeded by financial, social, and geographic barriers; and (5) commit to being held accountable to address gender inequalities at all levels.

Health systems must be held accountable to address gender inequalities and restrictive gender norms. Given the persistence of restrictive gender norms within systems, even with progressive policies and programmes, innovative approaches are needed. Social forces and change outside of health systems hold potential. Growing waves of collective action, often connected in new ways by social media, show promise in diverse settings in improving equitable access to quality care, services, and accountability. Given the strength of discrimination and restrictive norms, social movements are needed to bring about equality and change. The global health community needs to see itself as an integral part of this broader social reform. Reform efforts will not be comfortable. It will entail calling out power and hierarchy and the privileges they bring. We suggest, however, that the question is not whether these steps should be taken but when? The call for change in systems and hierarchies upholding inequitable gender norms and outcomes is growing stronger. The global health community can passively resist or assume a leadership role in overcoming gender inequitable norms and, in doing so, deliver on the aspirations of the SDGs and universal health coverage.

Contributors

KH and AR led conceptualisation and drafting of the paper. AD led the study on nurses in Uttar Pradesh, ND the study on accredited social health activists in Uttar Pradesh, HW and JR the study on community

health workers and community health worker policy in Sierra Leone, LM, JK, and AR the study on gender parity in the global physician workforce, and KH, YA, and NS the study on self-help groups in India. FS and RF-M led development of the case on the nurse from eSwatini. VP, RH, and EBa did the systematic literature review on health systems models. JGS and AR led the systematic review on gender transformative clinical interventions. KH, LM, JK, FS, RF-M, AD, YA, JY, EBI, NB, JGS, and AR did the critical reviews of the literature on gender inequalities and gender norms affecting health and helped draft pieces of those reviews, with consideration of diverse geographic contexts. All authors offered critical inputs and reviews of this work, contributed intellectual and substantive revisions to the writing, and provided final approval of the submitted version.

Steering Committee of *The Lancet* Series on Gender Equality, Norms, and Health

Gary Darmstadt (chair), Margaret Greene, Sarah Hawkes, Lori Heise, Sarah Henry, Jody Heymann, Jeni Klugman, Ruth Levine, Anita Raj, Geeta Rao Gupta.

Declaration of interests

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Paper 4 working group

Kristen Envarli (Stanford University, USA); Natalie Wyss, Scott Blair, Holly Shakya (University of California San Diego, USA); Bidhubhusan Mahapatra, Avishek Hazra, Arupendra Mozumdar (Population Council, India); Jessica Levy (Washington St Louis University, USA); Dharmendra Chandurkar, Kultar Singh (Sambodhi Research, India); Suneeta Krishnan (Gates Foundation, India); Linda Waldman (Institute of Development, University of Sussex, UK); Sushil Baral (HERD International, Nepal); Kui Muraya, (Kemri-Wellcome Trust, Kenya); Chris Cartwright, Helen Elsey, Rebecca King (University of Leeds, UK); and the listed authors of the paper.

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References

- Weber AM, Cislaghi B, Meausoone V, et al. How gender norms shape health: insights from global survey data. *Lancet* 2019; published online May 30. http://dx.doi.org/10.1016/S0140-6736(19)30765-2.
- Heise L, Greene M, Opper N, et al. Gender inequality and restrictive gender norms: framing the challenges to health. *Lancet* 2019; published online May 30. http://dx.doi.org/10.1016/S0140-6736(19)30652-X.
- 3 Heymann J, Levy JK, Bose B, et al. Improving health with programmatic, legal, and policy approaches to reduce gender inequality and change restrictive gender norms. *Lancet* 2019; published online May 30. http://dx.doi.org/10.1016/S0140-6736(19)30656-7.
- 4 Akseer N, Salehi AS, Hossain SM, et al. Achieving maternal and child health gains in Afghanistan: a Countdown to 2015 country case study. *Lancet Glob Health* 2016; 4: e395–413.
- 5 Langer A, Meleis A, Knaul FM, et al. Women and health: the key for sustainable development. *Lancet* 2015; 386: 1165–210.

- 6 Morgan R, George A, Ssali S, Hawkins K, Molyneux S, Theobald S. How to do (or not to do)... gender analysis in health systems research. *Health Policy Plan* 2016; 31: 1069–78.
- Witter S, Namakula J, Wurie H, et al. The gendered health workforce: mixed methods analysis from four fragile and post-conflict contexts. *Health Policy Plan* 2017; 32: v52–62.
- 8 Theobald S, Morgan R, Hawkins K, Ssali S, George A, Molyneux S. The importance of gender analysis in research for health systems strengthening. *Health Policy Plan* 2017; **32**: v1–3.
- 9 Connell R. Gender, health and theory: conceptualizing the issue, in local and world perspective. Soc Sci Med 2012; 74: 1675–83.
- 10 Davis K. Intersectionality as buzzword: a sociology of science perspective on what makes a feminist theory successful. Fem Theory 2008; 9: 67–85.
- 11 Roncarolo F, Boivin A, Denis JL, Hebert R, Lehoux P. What do we know about the needs and challenges of health systems? A scoping review of the international literature. BMC Health Serv Res 2017; 17: 636.
- 12 Sheikh K, Gilson L, Agyepong IA, Hanson K, Ssengooba F, Bennett S. Building the field of health policy and systems research: framing the questions. PLoS Med 2011; 8: e1001073.
- 13 Harding S. Rethinking standpoint epistemology: what is "strong objectivity?" Centennial Rev 1992; 36: 437–70.
- 14 WHO. Everybody's business: strengthening health systems to improve health outcomes. Geneva: World Health Organization, 2007
- 15 Shabalala F, De Lannoy A, Moyer E, Reis R. Rethinking the family in the context of care for adolescents living with HIV in Swaziland. AIDS Care 2016; 28 (suppl 4): 8–17.
- 16 Shabalala FS, Vernooij E, Pell C, et al. Understanding reasons for discontinued antiretroviral treatment among clients in test and treat: a qualitative study in Swaziland. J Int AIDS Soc 2018; 21 (suppl 4): e25120.
- 17 Kennedy CE, Baral SD, Fielding-Miller R, et al. "They are human beings, they are Swazi": intersecting stigmas and the positive health, dignity and prevention needs of HIV-positive men who have sex with men in Swaziland. Journal of the International AIDS Society 2013; 16 (suppl 3): 18749.
- 18 Fielding-Miller R, Mnisi Z, Adams D, Baral S, Kennedy C. "There is hunger in my community": a qualitative study of food security as a cyclical force in sex work in Swaziland. BMC Public Health 2014; 14: 79.
- 19 Central Statistical Office, Swaziland, Macro International. Swaziland Demographic and Health Survey 2006–07. Mbabane: Central Statistical Office, Swaziland, Macro International, 2008. https://dhsprogram.com/pubs/pdf/fr202/fr202.pdf (accessed April 2, 2019).
- 20 Ulandssekretariatet. Swaziland—Labor Market Profile 2012. Helsinki: Ulandssekretariatet, 2012. http://www.ulandssekretariatet. dk/sites/default/files/uploads/public/Afrika/Landeanalyser/labour_market_profile_2012_-_swaziland_web.pdf (accessed April 2, 2019).
- 21 Government of Sierra Leone Ministry of Health and Sanitation. Policy for community health workers in Sierra Leone. Freetown: Government of Sierra Leone, 2016.
- 22 WHO. Global health workforce statistics, 2016 update. Geneva: World Health Organization, 2016.
- 23 OECD. OECD health statistics 2017. Paris: Organisation for Economic Co-operation and Development, 2017.
- 24 OECD. SIGI methodological background paper. Paris: Organisation for Economic Co-operation and Development, 2014. https://www.oecd.org/dev/development-gender/Backgroundpaper_ cover.pdf (accessed April 2, 2019).
- 25 World Economic Forum. The Global Gender Gap report 2017. Geneva: World Economic Forum, 2017.
- 26 International Labour Organization. ILOSTAT. Key Indicators of the labor market. International Labour Organization, 2019. https://www.ilo.org/ilostat/faces/wcnav_defaultSelection;ILOSTATCOOKIE=_ iksiBifMqmiZuHON70vkeCIGcl_-GE0jZgh7izI_7z87-gqzn63!1567639201?_afrLoop=2623410674737889&_afrWindowMode=0&_afrWindowId=mainwindow#!%40%40%3F_afrWindowId%3D mainwindow%26afrLoop%3D2623410674737889%26_ afrWindowMode%3D0%26_adf.ctrl-state%3D8ycdzkup6_4 (accessed April 17, 2019).

- 27 WHO, UNICEF, UN Population Fund, World Bank Group, Population Division of UN Department of Economic and Social Affairs. Trends in maternal mortality: 1990 to 2015. Geneva, Switzerland: World Health Organization, 2015.
- 28 UNICEF, WHO, World Bank Group, Population Division of UN Department of Economic and Social Affairs. Levels and trends in child mortality: report 2015. New York: United Nations Children's Fund. 2015.
- 29 World Bank. Life expectancy at birth, total (years). World Bank Open Data, 2017. https://data.worldbank.org/indicator/sp.dyn.le00. in (accessed April 17, 2019).
- 30 Hogan DR, Stevens GA, Hosseinpoor AR, Boerma T. Monitoring universal health coverage within the Sustainable Development Goals: development and baseline data for an index of essential health services. *Lancet Glob Health* 2018; 6: e152–68.
- 31 Morgan R. Gender and health systems reader: key findings from nine research projects. Research in Gender and Ethics, 2018. https://ringsgenderresearch.org/wp-content/uploads/2018/07/ Gender-and-health-systems-Reader-Key-findings-from-nine-researchprojects.pdf (accessed April 2, 2019).
- 32 Boyd A, Van de Velde S, Vilagut G, et al. Gender differences in mental disorders and suicidality in Europe: results from a large cross-sectional population-based study. J Affect Disord 2015; 173: 245–54.
- 33 Department of Mental Health and Substance Dependence. Gender disparities and mental health. Geneva: World Health Organization, 2013. https://www.who.int/mental_health/media/ en/242.pdf?ua=1 (accessed April 17, 2019).
- 34 Borges G, Nock MK, Haro Abad JM, et al. Twelve-month prevalence of and risk factors for suicide attempts in the World Health Organization World Mental Health Surveys. J Clin Psych 2010; 71: 1617–28.
- 35 Fidler MM, Gupta S, Soerjomataram I, Ferlay J, Steliarova-Foucher E, Bray F. Cancer incidence and mortality among young adults aged 20–39 years worldwide in 2012: a population-based study. *Lancet Oncol* 2017; 18: 1579–89.
- 36 Ng N, Kowal P, Kahn K, et al. Health inequalities among older men and women in Africa and Asia: evidence from eight Health and Demographic Surveillance System sites in the INDEPTH WHO-SAGE Study. Glob Health Act 2010; 3: 5420.
- 37 Nugent R, Bertram MY, Jan S, et al. Investing in non-communicable disease prevention and management to advance the Sustainable Development Goals. *Lancet* 2018; 391: 2029–35.
- 38 Shaw LJ, Pepine CJ, Xie J, et al. Quality and equitable health care gaps for women: attributions to sex differences in cardiovascular medicine. *J Am Coll Cardiol* 2017; **70**: 373–88.
- 39 IIPS. National Family Health Survey (NFHS-4), 2015–16. Mumbai: International Institute for Population Sciences and ICF, 2018.
- 40 Calu Costa J, Wehrmeister FC, Barros AJ, Victora CG. Gender bias in careseeking practices in 57 low- and middle-income countries. *J Glob Health* 2017; 7: 010418.
- 41 Vilms RJ, McDougal L, Atmavilas Y, et al. Gender inequities in curative and preventive health care use among infants in Bihar, India. J Glob Health 2017; 7: 020402.
- 42 Baker P, Dworkin SL, Tong S, Banks I, Shand T, Yamey G. The men's health gap: men must be included in the global health equity agenda. Bull World Health Organ 2014; 92: 618–20.
- 43 Trias-Llimos S, Janssen F. Alcohol and gender gaps in life expectancy in eight Central and Eastern European countries. Eur J Public Health 2018; 28: 687–92.
- 44 Mokdad AH, Ballestros K, Echko M, et al. The state of US health, 1990–2016: burden of diseases, injuries, and risk factors among US states. IAMA 2018: 319: 1444–72.
- 45 Yakoob MY, Micha R, Khatibzadeh S, et al. Impact of dietary and metabolic risk factors on cardiovascular and diabetes mortality in south Asia: analysis from the 2010 Global Burden of Disease Study. Am J Public Health 2016; 106: 2113–25.
- 46 Huxley RR, Hirakawa Y, Hussain MA, et al. Age- and sex-specific burden of cardiovascular disease attributable to 5 major and modifiable risk factors in 10 Asian countries of the western Pacific region. Circ J 2015; 79: 1662–74.
- 47 Ballesteros MF, Williams DD, Mack KA, Simon TR, Sleet DA. The epidemiology of unintentional and violence-related injury morbidity and mortality among children and adolescents in the United States. Int J Environment Res Public Health 2018; 15: E616.

- 48 Sorenson SB. Gender disparities in injury mortality: consistent, persistent, and larger than you'd think. Am J Public Health 2011; 101 (suppl 1): S353–58.
- 49 Dworkin SL, Fleming PJ, Colvin CJ. The promises and limitations of gender-transformative health programming with men: critical reflections from the field. *Cult Health Sex* 2015; 17 (suppl 2): S128–43.
- 50 Teo CH, Ng CJ, Booth A, White A. Barriers and facilitators to health screening in men: a systematic review. Soc Sci Med 2016; 165: 168–76.
- 51 Samulowitz A, Gremyr I, Eriksson E, Hensing G. "Brave men" and "emotional women": a theory-guided literature review on gender bias in health care and gendered norms towards patients with chronic pain. Pain Res Manage 2018; 2018: 6358624.
- 52 Nolan M. Masculinity lost: a systematic review of qualitative research on men with spinal cord injury. Spinal Cord 2013; 51: 588–95.
- 53 Davis J, Vyankandondera J, Luchters S, Simon D, Holmes W. Male involvement in reproductive, maternal and child health: a qualitative study of policymaker and practitioner perspectives in the Pacific. Reprod Health 2016; 13: 81.
- 54 Dumbaugh M, Tawiah-Agyemang C, Manu A, ten Asbroek GH, Kirkwood B, Hill Z. Perceptions of, attitudes towards and barriers to male involvement in newborn care in rural Ghana, West Africa: a qualitative analysis. BMC Preg Childbirth 2014; 14: 269.
- 55 Tokhi M, Comrie-Thomson L, Davis J, Portela A, Chersich M, Luchters S. Involving men to improve maternal and newborn health: a systematic review of the effectiveness of interventions. *PloS One* 2018; 13: e0191620.
- 56 Reisner SL, Poteat T, Keatley J, et al. Global health burden and needs of transgender populations: a review. *Lancet* 2016; 388: 412–36.
- 57 White Hughto JM, Reisner SL, Pachankis JE. Transgender stigma and health: a critical review of stigma determinants, mechanisms, and interventions. Soc Sci Med 2015; 147: 222–31.
- Nagata JM. Challenges, health implications, and advocacy opportunities for lesbian, gay, bisexual, and transgender global health providers. Glob Health Promot 2018; 25: 70–73.
- 59 Winter S, Diamond M, Green J, et al. Transgender people: health at the margins of society. *Lancet* 2016; 388: 390–400.
- 60 Blondeel K, de Vasconcelos S, Garcia-Moreno C, Stephenson R, Temmerman M, Toskin I. Violence motivated by perception of sexual orientation and gender identity: a systematic review. Bull World Health Organ 2018; 96: 29–41.
- 61 Fredriksen-Goldsen KI, Kim HJ, Barkan SE, Muraco A, Hoy-Ellis CP. Health disparities among lesbian, gay, and bisexual older adults: results from a population-based study. Am J Pub Health 2013; 103: 1802–09.
- 62 Branstrom R, Hatzenbuehler ML, Pachankis JE. Sexual orientation disparities in physical health: age and gender effects in a population-based study. Soc Psychiatry Psychiatr Epidemiol 2016; 51: 289–301.
- 63 Shires DA, Jaffee K. Factors associated with health care discrimination experiences among a national sample of female-to-male transgender individuals. *Health Soc Work* 2015; 40: 134–41.
- 64 Mattocks KM, Sullivan JC, Bertrand C, Kinney RL, Sherman MD, Gustason C. Perceived stigma, discrimination, and disclosure of sexual orientation among a sample of lesbian veterans receiving care in the Department of Veterans Affairs. LGBT Health 2015; 2: 147–53.
- 65 Kattari SK, Hasche L. Differences across age groups in transgender and gender non-conforming people's experiences of health care discrimination, harassment, and victimization. J Aging Health 2016; 28: 285–306.
- 56 Divan V, Cortez C, Smelyanskaya M, Keatley J. Transgender social inclusion and equality: a pivotal path to development. J Int AIDS Soc 2016; 19 (suppl 2): 20803.
- 67 Holland KJ, Rabelo VC, Gustafson AM, Seabrook RC, Cortina LM. Sexual harassment against men: examining the roles of feminist activism, sexuality, and organizational context. *Psychol Men Masc* 2016; 17: 17–29.
- 68 WHO. WHO Gender Responsive Assessment Scale: criteria for assessing programmes and policies. Geneva: World Health Organization, 2019. http://www.who.int/gender/mainstreaming/ GMH_Participant_GenderAssessmentScale.pdf (accessed April 17, 2019).

- 69 Roberts M, Hsiao W, Berman P, Reich M. Getting health reform right: a guide to improving performance and equity. Oxford: Oxford University Press, 2003.
- 70 WHO. Monitoring the building blocks of health systems: a handbook of indicators and their measurement strategies. Geneva: World Health Organization, 2010.
- 71 WHO. Health financing for universal coverage—universal coverage three dimensions. Geneva: World Health Organization, 2015. http://www.who.int/health_financing/strategy/dimensions/en/ (accessed April 17, 2019).
- 72 de Savigny D, Blanchet K, Adam T, eds. Applied systems thinking for health systems research: a methodological handbook. London: Open University Press, 2017.
- 73 de Savigny D, Adam T. Systems thinking for health systems strengthening. Geneva: World Health Organization, 2009.
- 74 Gilson L. Health policy and systems research: a methodology reader. Geneva: World Health Organization, 2012.
- 75 Taukobong HF, Kincaid MM, Levy JK, et al. Does addressing gender inequalities and empowering women and girls improve health and development programme outcomes? *Health Policy Plan* 2016; 31: 1492–514.
- 76 Raj A, Carr PL, Kaplan SE, Terrin N, Breeze JL, Freund KM. Longitudinal analysis of gender differences in academic productivity among medical faculty across 24 medical schools in the United States. Acad Med 2016; 91: 1074–79.
- 77 Gupta J, Falb KL, Ponta O, et al. A nurse-delivered, clinic-based intervention to address intimate partner violence among low-income women in Mexico City: findings from a cluster randomized controlled trial. BMC Med 2017; 15: 128.
- 78 Tiwari A, Leung WC, Leung TW, Humphreys J, Parker B, Ho PC. A randomised controlled trial of empowerment training for Chinese abused pregnant women in Hong Kong. BJOG 2005; 112: 1249–56
- 79 Miller E, Decker MR, McCauley HL, et al. A family planning clinic partner violence intervention to reduce risk associated with reproductive coercion. *Contraception* 2011; 83: 274–80.
- 80 George A, Theobald S, Morgan R, Hawkins K, Molyneux S. Snap shots from a photo competition: what does it reveal about close-to-community providers, gender and power in health systems? Hum Resour Health 2015; 13: 57.
- 81 Theobald S, MacPherson E, McCollum R, Tolhurst R. Close to community health providers post 2015: realising their role in responsive health systems and addressing gendered social determinants of health. BMC Proc 2015; 9 (suppl 10): S8.
- 82 Henry J Kaiser Family Foundation. State Health Facts. Total number of physician assistants, by gender. Henry J Kaiser Family Foundation, October, 2017.
- 83 Henry J Kaiser Family Foundation. State Health Facts. Total number of physician assistants, by gender. Total number of professionally active nurses by gender. Henry J Kaiser Family Foundation, October, 2017.
- 84 George A. Human resources for health: a gender analysis. Geneva: World Health Organization, 2007.
- 85 Maes K, Closser S, Vorel E, Tesfaye Y. A women's development army: narratives of community health worker investment and empowerment in rural Ethiopia. *Stud Comp Int Dev* 2015; 50: 455–78.
- 86 Kane S, Kok M, Ormel H, et al. Limits and opportunities to community health worker empowerment: a multi-country comparative study. Soc Sci Med 2016; 164: 27–34.
- 87 Streilein A, Leach B, Everett C, Morgan P. Knowing your worth: salary expectations and gender of matriculating physician assistant students. J Physician Assist Educ 2018; 29: 1–6.
- 88 Files JA, Mayer AP, Ko MG, et al. Speaker introductions at internal medicine grand rounds: forms of address reveal gender bias. *J Womens Health* 2017; 26: 413–19.
- Boiko JR, Anderson AJ, Gordon RA. Representation of women among academic grand rounds speakers. JAMA Intern Med 2017; 177: 722–24.
- 90 Silver JK, Bhatnagar S, Blauwet CA, et al. Female physicians are underrepresented in recognition awards from the American Academy of Physical Medicine and Rehabilitation. PM@R 2017: 9: 976–84.
- 91 Schor NF. The decanal divide: women in decanal roles at U.S. medical schools. Acad Med 2018; 93: 237–40.

- 92 Carr PL, Raj A, Kaplan SE, Terrin N, Breeze JL, Freund KM. Gender differences in academic medicine: retention, rank, and leadership comparisons from the national faculty survey. Acad Med 2018; 93: 1694–99.
- 93 Carr PL, Gunn CM, Kaplan SA, Raj A, Freund KM. Inadequate progress for women in academic medicine: findings from the National Faculty Study. J Women Health 2015; 24: 190–99.
- 94 Lautenberger DM, Dandar VM, Raezer CL, Sloane RA. The state of women in academic medicine: the pipeline and pathways to leadership 2013–14. Association of American Medical Colleges, 2014. https://members.aamc.org/eweb/upload/The%20State%20 of%20Women%20in%20Academic%20Medicine%202013-2014%20 FINAL.pdf (accessed April 2, 2019).
- 95 Burgess DJ, Joseph A, Van Ryn M, Carnes M. Does stereotype threat affect women in academic medicine? *Acad Med* 2012; 87: 506.
- 96 Fassiotto M, Hamel EO, Ku M, et al. Women in academic medicine: measuring stereotype threat among junior faculty. *J Womens Health* 2016; 25: 292–98.
- 97 Kolehmainen C, Brennan M, Filut A, Isaac C, Carnes M. "Afraid of being witchy with a 'b'": a qualitative study of how gender influences residents' experiences leading cardiopulmonary resuscitation. Acad Med 2014; 89: 1276–81.
- 98 Jagsi R, Motomura AR, Griffith KA, Rangarajan S, Ubel PA. Sex differences in attainment of independent funding by career development awardees. Ann Intern Med 2009; 151: 804–11.
- 99 Filardo G, da Graca B, Sass DM, Pollock BD, Smith EB, Martinez MA-M. Trends and comparison of female first authorship in high impact medical journals: observational study (1994–2014). BMJ 2016; 352: i847.
- 100 Nature. Gender imbalance in science journals is still pervasive. Nature 2017; 541: 435–36.
- 101 Witteman HO, Hendricks M, Straus S, Tannenbaum C. Female grant applicants are equally successful when peer reviewers assess the science, but not when they assess the scientist. bioRxiv 2017; 232868.
- 102 Bendels MHK, Muller R, Brueggmann D, Groneberg DA. Gender disparities in high-quality research revealed by Nature Index journals. PLoS One 2018; 13: e0189136.
- 103 Nielsen MW, Andersen JP, Schiebinger L, Schneider JW. One and a half million medical papers reveal a link between author gender and attention to gender and sex analysis. *Nat Hum Behav* 2017; 1: 791.
- 104 Plank-Bazinet JL, Heggeness ML, Lund PK, Clayton JA. Women's careers in biomedical sciences: implications for the economy, scientific discovery, and women's health. J Womens Health 2017; 26: 525–29.
- 105 Carr PL, Ash AS, Friedman RH, et al. Faculty perceptions of gender discrimination and sexual harassment in academic medicine. Ann Intern Med 2000; 132: 889–96.
- 106 Edmunds LD, Ovseiko PV, Shepperd S, et al. Why do women choose or reject careers in academic medicine? A narrative review of empirical evidence. *Lancet* 2016; 388: 2948–58.
- 107 Hasebrook J, Hahnenkamp K, Buhre W, et al. Medicine goes female: protocol for improving career options of females and working conditions for researching physicians in clinical medical research by organizational transformation and participatory design. JMIR Res Protoc 2017; 6: e152.
- 108 Singh D, Negin J, Otim M, Orach CG, Cumming R. The effect of payment and incentives on motivation and focus of community health workers: five case studies from low- and middle-income countries. Hum Resour Health 2015; 13: 58.
- 109 PHI. U.S. home care workers: key facts. Paraprofessional Healthcare Institute, 2016. https://phinational.org/resource/home-care-workers-key-facts/ (accessed April 2, 2019).
- 110 Indian Ministry of Health and Family Welfare. Accredited social health activists (ASHAS) and auxiliary nurse midwifes (ANMS) appointed under national rural health mission (NRHM) July 18, 2014. National Informatics Centre, 2014. http://pib.nic.in/newsite/PrintRelease.aspx?relid=106925 (accessed April 17, 2019).
- 111 Glenton C, Colvin CJ, Carlsen B, et al. Barriers and facilitators to the implementation of lay health worker programmes to improve access to maternal and child health: qualitative evidence synthesis. Cochrane Database Syst Rev 2013; 10: CD010414.

- 112 Chou VB, Friberg IK, Christian M, Walker N, Perry HB. Expanding the population coverage of evidence-based interventions with community health workers to save the lives of mothers and children: an analysis of potential global impact using the Lives Saved Tool (LiST). J Glob Health 2017; 7: 020401.
- 113 Witter S, Namakula J, Wurie H, et al. The gendered health workforce: mixed methods analysis from four fragile and post-conflict contexts. Health Policy Plan 2017; 32 (suppl 5): v52–62.
- 114 George A, Theobald S, Morgan R, Hawkins K, Molyneux S. Snap shots from a photo competition: what does it reveal about close-to-community providers, gender and power in health systems? Human Resour Health 2015; 13: 57.
- 115 Saprii L, Richards E, Kokho P, Theobald S. Community health workers in rural India: analysing the opportunities and challenges Accredited Social Health Activists (ASHAs) face in realising their multiple roles. *Human Resour Health* 2015; 13: 95.
- 116 Geldsetzer P, Vaikath M, De Neve J-W, et al. Distrusting community health workers with confidential health information: a convergent mixed-methods study in Swaziland. Health Policy Plan 2017; 32: 882–9.
- 117 Feldhaus I, Silverman M, LeFevre AE, et al. Equally able, but unequally accepted: gender differentials and experiences of community health volunteers promoting maternal, newborn, and child health in Morogoro Region, Tanzania. Int J Equity Health 2015: 14: 70.
- 118 Etters L, Goodall D, Harrison BE. Caregiver burden among dementia patient caregivers: a review of the literature. J Am Acad Nurse Pract 2008; 20: 423–28.
- 119 Lin IF, Fee HR, Wu HS. Negative and positive caregiving experiences: a closer look at the intersection of gender and relationship. Fam Relat 2012; 61: 343–58.
- 120 Chakrabarti S. Cultural aspects of caregiver burden in psychiatric disorders. World J Psychiatry 2013; 3: 85–92.
- 121 Bédard M, Pedlar D, Martin NJ, Malott O, Stones MJ. Burden in caregivers of cognitively impaired older adults living in the community: methodological issues and determinants. *Int Psychogeriatr* 2000; 12: 307–32.
- 122 Adams B, Aranda MP, Kemp B, Takagi K. Ethnic and gender differences in distress among Anglo American, African American, Japanese American, and Mexican American spousal caregivers of persons with dementia. J Clin Geropsychol 2002; 8: 279–301.
- 123 Sutherland N, Ward-Griffin C, McWilliam C, Stajduhar K. Structural impact on gendered expectations and exemptions for family caregivers in hospice palliative home care. *Nurs Inq* 2017; 24: e12157.
- 124 Sutherland N, Ward-Griffin C, McWilliam C, Stajduhar K. Gendered processes in hospice palliative home care for seniors with cancer and their family caregivers. Qual Health Res 2016; 26: 907–20.
- 125 WHO. Global strategic directions for strengthening nursing and midwifery, 2016–2020. Geneva: World Health Organization, 2016.
- 126 Wu LT, Low MM, Tan KK, Lopez V, Liaw SY. Why not nursing? A systematic review of factors influencing career choice among healthcare students. *Int Nurs Rev* 2015; 62: 547–62.
- 127 Rudner N, Kung YM. An assessment of physician supervision of nurse practitioners. *J Nurs Regul* 2017; **7**(4): 22–29.
- 128 Lippa RA, Preston K, Penner J. Women's representation in 60 occupations from 1972 to 2010: more women in high-status jobs, few women in things-oriented jobs. PloS One 2014; 9: e95960.
- 129 Aiken LH, Clarke SP, Sloane DM, Sochalski J, Silber JH. Hospital nurse staffing and patient mortality, nurse burnout, and job dissatisfaction. JAMA 2002; 288: 1987–93.
- 130 Kalita A, Zaidi S, Prasad V, Raman V. Empowering health personnel for decentralized health planning in India: the Public Health Resource Network. Hum Resour Health 2009; 7: 57.
- 131 Perry C. Empowering primary care workers to improve health services: results from Mozambique's leadership and management development program. Hum Resour Health 2008; 6: 14.
- 132 Friganović A, Kovačević I, Ilić B, Žulec M, Krikšić V, Grgas Bile C. Healthy settings in hospital—how to prevent burnout syndrome in nurses: literature review. Acta Clin Croat 2017; 56: 292–98.
- 133 Cheung T, Lee PH, Yip PSF. Workplace violence toward physicians and nurses: prevalence and correlates in Macau. Int J Environ Res Public Health 2017; 14: E879.
- 134 Cheung T, Yip PS. Workplace violence towards nurses in Hong Kong: prevalence and correlates. BMC Public Health 2017; 17: 196.

- 135 Atakro CA, Ninnoni JP, Adatara P, Gross J, Agbavor M. Qualitative inquiry into challenges experienced by registered general nurses in the emergency department: a study of selected hospitals in the Volta Region of Ghana. *Emerg Med Int* 2016; 2016: 6082105.
- 136 Rodwell J, Brunetto Y, Demir D, Shacklock K, Farr-Wharton R. Abusive supervision and links to nurse intentions to quit. J Nurs Scholarship 2014; 46: 357–65.
- 137 Whitman MV, Halbesleben JR, Shanine KK. Psychological entitlement and abusive supervision: political skill as a self-regulatory mechanism. Health Care Manage Rev 2013; 38: 248–57.
- 138 Jackson D, Clare J, Mannix J. Who would want to be a nurse? Violence in the workplace—a factor in recruitment and retention. J Nurs Manage 2002; 10: 13–20.
- 139 National Academies of Sciences, Engineering, and Medicine. Sexual harassment of women: climate, culture, and consequences in academic sciences, engineering, and medicine. Washington, DC: The National Academies Press. 2018.
- 140 Hsu HY, Chen SH, Yu HY, Lou JH. Job stress, achievement motivation and occupational burnout among male nurses. J Adv Nurs 2010; 66: 1592–601.
- 141 Dey A, Shakya HB, Chandurkar D, et al. Discordance in self-report and observation data on mistreatment of women by providers during childbirth in Uttar Pradesh, India. Reprod Health 2017; 14: 149.
- 142 Raj A, Dey A, Boyce S, et al. Associations between mistreatment by a provider during childbirth and maternal health complications in Uttar Pradesh, India. Matern Child Health J 2017; 21: 1821–33.
- 143 Wood K, Jewkes R. Blood blockages and scolding nurses: barriers to adolescent contraceptive use in South Africa. Reprod Health Matters 2006; 14: 109–18.
- 144 Jewkes R, Abrahams N, Mvo Z. Why do nurses abuse patients? Reflections from South African obstetric services. Soc Sci Med 1998; 47: 1781–95.
- 145 Roberts J, Sealy D, Marshak HH, Manda-Taylor L, Gleason P, Mataya R. The patient-provider relationship and antenatal care uptake at two referral hospitals in Malawi: a qualitative study. Malawi Med J 2015; 27: 145–50.
- 146 McVicar A. Workplace stress in nursing: a literature review. *J Adv Nurs* 2003; 44: 633–42.
- 147 Sridharan S, Dey A, Seth A, et al. Towards an understanding of the multilevel factors associated with maternal health care utilization in Uttar Pradesh, India. Global Health Action 2017; 10: 1287493.
- 148 Samnani A-K, Singh P. 20 years of workplace bullying research: a review of the antecedents and consequences of bullying in the workplace. Aggress Violent Behav 2012; 17: 581–89.
- 149 Kenendy M. Report: Japanese medical school deducted points from exam scores of female applicants. NPR, Aug 2, 2018. https://www.npr.org/2018/08/02/634936967/report-japanesemedical-school-deducted-points-from-exam-scores-of-femaleapplic?t=1554219120498 (accessed April 2, 2019).
- 150 Li X, Zhang X. Female doctors in China: challenges and hopes. Lancet 2015; 386: 1441–42.
- 151 Organisation for Economic Co-operation and Development. Health care resources. https://stats.oecd.org/index. aspx?DataSetCode=HEALTH_REAC. OECD.Stat, 2017 (accessed April 17, 2019).
- 152 Ramakrishnan A, Sambuco D, Jagsi R. Women's participation in the medical profession: insights from experiences in Japan, Scandinavia, Russia, and Eastern Europe. J Womens Health 2014; 23: 927–34.
- 153 Surinov A, Baranov E, Bugakova M, et al. Federal State Statistics Service. Russia in figures 2017. Federal State Statistics Service, 2017. http://www.gks.ru/free_doc/doc_2017/rusfig/rus17e.pdf (accessed April 17, 2019).
- 154 Xiong C, Chen X, Zhao X, Liu C. Patient satisfaction and gender composition of physicians—a cross-sectional study of community health services in Hubei, China. BMC Health Serv Res 2018; 18: 217
- 155 Jena AB, Olenski AR, Blumenthal DM. Sex differences in physician salary in US public medical schools. *JAMA Intern Med* 2016; 176: 1294–304.
- 156 Grisham S. Medscape Physician Compensation Report 2017: Medscape, April 5, 2017. https://www.medscape.com/slideshow/compensation-2017-overview-6008547 (accessed April 2, 2019).

- 157 Murphy E, Oesch D. The feminization of occupations and change in wages: a panel analysis of Britain, Germany and Switzerland. SOEPpaper 2015; 731.
- 158 Butkus R, Serchen J, Moyer D, et al. Achieving gender equity in physician compensation and career advancement: a position paper of the American College of Physicians. Ann Intern Med 2018; 168: 721–23.
- 159 Morrison RS, Jones L, Fuller B. The relation between leadership style and empowerment on job satisfaction of nurses. J Nurs Adm 1997; 27: 27–34.
- 160 Almost J, Spence Laschinger HK. Workplace empowerment, collaborative work relationships, and job strain in nurse practitioners. J Am Acad Nurse Pract 2002; 14: 408–20.
- 161 Manongi RN, Marchant TC. Improving motivation among primary health care workers in Tanzania: a health worker perspective. Hum Resour Health 2006; 4: 6.
- 162 Minkler M, ed. Community organizing and community building for health and welfare, 3rd edn. Rutgers, NJ: Rutgers Press, 2012.
- 163 Prost A, Colbourn T, Tripathy P, Osrin D, Costello A. Analyses confirm effect of women's groups on maternal and newborn deaths. *Lancet* 2013: 381: e15.
- 164 Prost A, Colbourn T, Seward N, et al. Women's groups practising participatory learning and action to improve maternal and newborn health in low-resource settings: a systematic review and meta-analysis. *Lancet* 2013; 381: 1736–46.
- 165 Parimi P, Mishra RM, Tucker S, Saggurti N. Mobilising community collectivisation among female sex workers to promote STI service utilisation from the government healthcare system in Andhra Pradesh, India. J Epidemiol Community Health 2012; 66 (suppl 2): ii62–68.
- 166 Patel SK, Prabhakar P, Jain AK, Saggurti N, Adhikary R. Relationship between community collectivization and financial vulnerability of female sex workers in southern India. PloS One 2016; 11: e0156060.
- 167 Pettifor A, Lippman SA, Selin AM, et al. A cluster randomized-controlled trial of a community mobilization intervention to change gender norms and reduce HIV risk in rural South Africa: study design and intervention. BMC Public Health 2015; 15: 752.
- 168 Nagaan K, Sahay S, Mainkar MK, Deshpande S, Ramesh S, Paranjape RS. Female sex worker's participation in the community mobilization process: two distinct forms of participations and associated contextual factors. BMC Public Health 2014; 14: 1323.
- 169 Kuhlmann AS, Galavotti C, Hastings P, Narayanan P, Saggurti N. Investing in communities: evaluating the added value of community mobilization on HIV prevention outcomes among FSWs in India. AIDS Behav 2014; 18: 752–66.
- 170 Blanchard AK, Mohan HL, Shahmanesh M, et al. Community mobilization, empowerment and HIV prevention among female sex workers in south India. BMC Public Health 2013; 13: 234.
- 171 Vejella S, Patel SK, Saggurti N, Prabhakar P. Community collectivization and consistent condom use among female sex workers in southern India: evidence from two rounds of behavioral tracking surveys. AIDS Behav 2016; 20: 776–87.
- 172 Saggurti N, Mishra RM, Proddutoor L, et al. Community collectivization and its association with consistent condom use and STI treatment-seeking behaviors among female sex workers and high-risk men who have sex with men/transgenders in Andhra Pradesh, India. AIDS Care 2013; 25 (Suppl 1): S55–66.

- 173 Shaw D, Norman WV. A tale of two countries: women's reproductive rights in Ireland and the US. BMJ 2018; 361: k2471.
- 174 Bandewar SV, Pitre A, Lingam L. Five years post Nirbhaya: critical insights into the status of response to sexual assault. *Indian J Med Ethics* 2018; 3: 215–21.
- 175 Goss K, Heaney M. Organizing women as women: hybridity and grassroots collective action in the 21st century. *Perspect Politics* 2010; 8: 27–52.
- 176 Tripathy P, Nair N, Barnett S, et al. Effect of a participatory intervention with women's groups on birth outcomes and maternal depression in Jharkhand and Orissa, India: a cluster-randomised controlled trial. *Lancet* 2010; 375: 1182–92.
- 177 Baqui AH, El-Arifeen S, Darmstadt GL, et al. Effect of community-based newborn-care intervention package implemented through two service-delivery strategies in Sylhet district, Bangladesh: a cluster-randomised controlled trial. *Lancet* 2008; 371: 1936–44.
- 178 Kumar V, Mohanty S, Kumar A, et al. Effect of community-based behaviour change management on neonatal mortality in Shivgarh, Uttar Pradesh, India: a cluster-randomised controlled trial. *Lancet* 2008; 372: 1151–62.
- 179 Saha S. Expanding health coverage in India: role of microfinance-based self-help groups. Global Health Action 2017; 10: 1321272.
- 180 Brown LD, Tang X, Hollman RL. The structure of social exchange in self-help support groups: development of a measure. Am J Community Psychol 2014; 53: 83–95.
- 181 Pattenden J. A neoliberalisation of civil society? Self-help groups and the labouring class poor in rural South India. J Peasant Stud 2010; 37: 485–512.
- 182 Aruldas K, Kant A, Mohanan PS. Care-seeking behaviors for maternal and newborn illnesses among self-help group households in Uttar Pradesh, India. J Health Popul Nutr 2017; 36 (suppl 1): 49.
- 183 Singh U. Self help groups and women empowerment: appraisal of Drang Block in Mandi District of HP. Manage Insight 2017; 13: 45-53
- 184 Khatibi FS, Indira M. Empowerment of women through self help groups and environmental management: experiences of NGOs in Karnataka State, India. J Hum Ecol 2011; 34: 29–40.
- 185 Saggurti N, Atmavilas Y, Porwal A, et al. Effect of health intervention integration within women's self-help groups on collectivization and healthy practices around reproductive, maternal, neonatal and child health in rural India. PloS One 2018; 13: e0202562.
- 186 Percival V, Dusabe-Richards E, Wurie H, Namakula J, Ssali S, Theobald S. Are health systems interventions gender blind? Examining health system reconstruction in conflict affected states Glob Health 2018; 14: 90.
- 187 Percival V, Richards E, MacLean T, Theobald S. Health systems and gender in post-conflict contexts: building back better? Conflict Health 2014; 8: 19.
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