

Human Resources for Health

Unconventional determinants of health system capacity: a qualitative study of the gender division of labor and nursing

--Manuscript Draft--

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Full Title:	Unconventional determinants of health system capacity: a qualitative study of the gender division of labor and nursing
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Abstract:	<p>Background The Covid-19 pandemic raised concerns about health system capacity, namely the number of hospital beds, ventilators, and oxygen. Analyses of the determinants of healthcare system capacity and quality of care do not typically consider the gendered division of labor in practitioners' households. This study aims to make visible the avenues through which these factors impact the quantity and quality of care supplied, and not just during pandemics. Absenteeism is an indicator of capacity, but gender analysis challenges the interpretation of absence as a labor supply issue. Systemic gendered challenges confronting women healthcare workers constitute systemic challenges to the stability of health systems.</p> <p>Methods This study applies an adapted version of Moser's gender framework to qualitative data from 71 face-to-face, semi-structured interviews with black [1] women nurses employed in a public hospital in Johannesburg. Social reproduction, a concept from feminist political economy, clarifies the demands on nurses and highlights interdependence in the home and the hospital.</p> <p>Results The study demonstrates how interrelated stressors associated with paid employment and unpaid care work can undermine individual and group well-being among participants. Critically, at the level of wards, hospitals, and healthcare systems, the quantity and quality of care supplied depends on each nurses' household and family conditions. Where the patient-care workload is shared among nurses in hospital wards, the interaction of an individual nurse's paid work with her gendered household responsibilities impacts not only her own well-being, but that of multiple other nurses.</p> <p>Conclusions Women healthcare workers individually and collectively navigate occupational demands in the context of responsibility for unpaid labor. The invisibility of unpaid work, distributed according to gender roles and along a gendered division of labor in nurses' households, can be a destabilizing force in healthcare. Through nursing and nurses, public health depends on gendered dynamics at the household level, and on nurses' abilities to withstand extreme pressures, which may be compromised during a pandemic. The systemic nature of these challenges further demonstrate how gender roles and "women's work" are not a "women's problems," they are social problems that impose especially high costs on women.</p> <p>-----</p> <p>1. The apartheid government's racist terminology distinguished between four populations groups: "African," "Coloured," "White," and "Indian." Although the term "Black" is sometimes used to identify all peoples oppressed under apartheid, in this article I use the term "Black" to mean "African." Of the 71 participants in the study, 70 were "Africans" and one was "Coloured."</p>
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Response to Reviewers:	<p>Editor comments:</p> <p>We would like to thank you for your submission. Overall the paper takes a gender lens to look into HS, HWF households and gender unpaid work in COVID times among female nurses in SA. The study aims to make visible the avenues through which these factors impact the quantity and quality of care supplied, and not just during pandemics.</p> <p>Thank you for considering the manuscript and providing very helpful comments.</p> <p>While the concept and idea of the paper is good applying grounded theory , yet specific gender-analysis frameworks could have been brought forward.</p> <p>I revised the manuscript considerably in this respect and drew gender frameworks-as-approach through the paper. Specifically, I integrated the triple role concept from the Moser gender Planning Framework. I complemented that framing with a social reproduction analytic to clarify linkages across activities and over time to demonstrate the dynamics of reproduction.</p> <p>Furthermore, the write-up of the paper, i.e. the study aim versus the methods and requires further clarity and conclusion.</p> <p>To be considered for this issue, we would like to see if you could re-consider revising the MS insight of the GSHRH, based on the aforementioned comments, drawing explicit links and providing a more concrete analytic view in addition to the above comments. Alternatively, welcome resubmission to the Journal but not thematic series.</p> <p>The two comments above provided the foundation for the revision.</p> <p>The line of analysis is constructed with greater clarity and more concrete linkages in the revised draft, from Background through Methods, through Conclusions. A more focused examination of the Global Strategy sharpened contrasts between the document and insight from the study. Where I would typically copy in selections from the revision, the new manuscript has changed to such a degree that it is not practicable to do so.</p> <p>I hope that the revision adequately addresses these points. I will be happy to revise further as needed.</p>
Additional Information:	
Question	Response
<p>Is this study a clinical trial?</p> <p>A clinical trial is defined by the World Health Organisation as 'any research study that prospectively assigns human participants or groups of humans to one or more health-related interventions to evaluate the effects on health outcomes'.</p>	No

[Click here to view linked References](#)

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4 1 **Article type**
5 2 Research article
6 3
7 4 **Title**
8 5 Unconventional determinants of health system capacity: a qualitative study of the gender division of labor
9 6 and nursing
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12 9

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17 14

18 15 **Abstract**

19 16 **Background**

20 17 The Covid-19 pandemic raised concerns about health system capacity, namely the number of hospital
21 18 beds, ventilators, and oxygen. Analyses of the determinants of healthcare system capacity and quality of
22 19 care do not typically consider the gendered division of labor in practitioners' households. This study aims
23 20 to make visible the avenues through which these factors impact the quantity and quality of care supplied,
24 21 and not just during pandemics. Absenteeism is an indicator of capacity, but gender analysis challenges the
25 22 interpretation of absence as a labor supply issue. Systemic gendered challenges confronting women
26 23 healthcare workers constitute systemic challenges to the stability of health systems.

27 24 **Methods**

28 25 This study applies an adapted version of Moser's gender framework to qualitative data from 71 face-to-
29 26 face, semi-structured interviews with black¹ women nurses employed in a public hospital in
30 27 Johannesburg. Social reproduction, a concept from feminist political economy, clarifies the demands on
31 28 nurses and highlights interdependence in the home and the hospital.

32 29 **Results**

33 30 The study demonstrates how interrelated stressors associated with paid employment and unpaid care work
34 31 can undermine individual and group well-being among participants. Critically, at the level of wards,
35 32 hospitals, and healthcare systems, the quantity and quality of care supplied depends on each nurses'
36 33 household and family conditions. Where the patient-care workload is shared among nurses in hospital
37 34 wards, the interaction of an individual nurse's paid work with her gendered household responsibilities
38 35 impacts not only her own well-being, but that of multiple other nurses.

39 36 **Conclusions**

40 37 Women healthcare workers individually and collectively navigate occupational demands in the context of
41 38 responsibility for unpaid labor. The invisibility of unpaid work, distributed according to gender roles and
42 39 along a gendered division of labor in nurses' households, can be a destabilizing force in healthcare.
43 40 Through nursing and nurses, public health depends on gendered dynamics at the household level, and on
44 41 nurses' abilities to withstand extreme pressures, which may be compromised during a pandemic. The
45 42 systemic nature of these challenges further demonstrate how gender roles and "women's work" are not a
46 43 "women's problems," they are social problems that impose especially high costs on women.

47 44
48 45 **Keywords:** Nursing; Gender; Race; Mental health; Sub-Saharan Africa; South Africa
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53 53 ¹ The apartheid government's racist terminology distinguished between four populations groups: "African,"
54 54 "Coloured," "White," and "Indian." Although the term "Black" is sometimes used to identify all peoples oppressed
55 55 under apartheid, in this article I use the term "Black" to mean "African." Of the 71 participants in the study, 70 were
56 56 "Africans" and one was "Coloured."
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4 1 **Unconventional determinants of health system capacity: a qualitative study of the gender division**
5 2 **of labor and nursing**
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9 5 **Background**
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12 7 The Covid-19 pandemic raised concerns about healthcare system capacity. Hospital beds, ventilators, and
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14 8 oxygen were identified as capacity constraints. Health workforce-related constraints have attracted less
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16 9 attention. Practitioners' individual and collective well-being have implications for individuals, families,
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18 10 communities, public healthcare systems, and population health. In many developing countries doctors are
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20 11 scarce and nurses are often the most senior healthcare practitioners available, making nurses' well-being
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22 12 the foundation of public health. Globally, 85% of nurses and midwives are women.[1-4] In the context of
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24 13 a global shortage of practitioners,[5] healthcare systems depend fundamentally on women's continued
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26 14 participation as suppliers of care. Hence, systemic challenges that compromise the well-being of women
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28 15 healthcare workers constitute systemic challenges to health system stability
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35 17 Despite being the vast majority of the healthcare workforce, *women* are not directly indicated in The
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37 18 Global Strategy on Human Resources for Health: Workforce 2030's vision, overall goal, principles,
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39 19 objectives, or milestones. These are gendered pursuits, nonetheless. Accordingly, perhaps, *gender* appears
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41 20 repeatedly in the Strategy, primarily a policy subject. It calls for gender-sensitive employment conditions,
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43 21 gender-sensitive attraction and retention policies, and an enabling and gender-sensitive working
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45 22 environment. Awareness that gender influences women's and men's experiences is evident, but gender-
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47 23 awareness does not necessarily mean *women* or *women's experiences* are included in reporting or
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49 24 planning.² "Gender" alone does not provide information about the different impacts of gender roles on
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54 ² This choice of language and analytical lens differs considerably from the WHO's contemporaneous engagement
55 with a women-dominated health workforce. For example, in the Final Report of the Expert Group for the High-
56 Level Commission on Health Employment and Economic Growth (2016) although neither "women" nor "gender"
57 made it into the three main messages, "Prioritizing women" was one of the ten recommendations put forward in
58 support of the main messages. In the Executive Summary the authors write, "...the opportunities to be realized
59 depend upon radical reform – *putting gender equality and women's empowerment at the centre of our thinking...*"
60 (emphasis added, p. 1). The report later confirms, "*The contribution of women to health, health equity and the*
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1 women and men. The difference between including the social category “gender” as a policy topic, and
2 “women” as a demographic, is substantive. “Gender” acknowledges that gender is salient while “women”
3 acknowledges that women are salient.

4
5 This manuscript examines gender roles that assign responsibility for unpaid labor to women combine with
6 occupational demands to function as a determinant of healthcare system capacity. This gender analysis
7 challenges the literature that approaches absence as a gender-neutral, individual labor supply decision.

8
9 Absences reflect healthcare workers’ well-being and can serve as an indicator of health system capacity
10 directly related to the workforce. Absence is missing a scheduled, paid workday; a failure to be present.
11 Absenteeism suggests chronic or habitual absence. Neoclassical economic theory on absence posits a
12 rational individual who divides his³ time between labor and ‘leisure.’⁴ Absence presents moral hazard
13 problem for workers; it is a way for an individual to opportunistically choose leisure *and* pay.[8] Real-

economy has been vastly underestimated...This message is a core argument in our report and not a peripheral observation. ...” (emphasis added, p. 42-3).

The Expert Group was informed in part by a policy brief, “Women’s contribution to sustainable development through work in health: using a gender lens to advance a transformative 2030 agenda” (Magar, Gerecke, Dhillon, Campbell 2016), that was later published in a book, “Health Employment and Economic Growth: An Evidence Base” (Buchan, Dhillon, and Campbell 2017), of evidence for the relationship between health employment and economic growth. In the book’s introduction, the editors lay out five key messages and the word “women” is included in ‘headline’ of three of the five (p. xviii-xxi). The second sentence of the Magar et al. policy brief, as published in Buchan et al.’s 2017 edited volume (p. 28), points out that the health workforce is “not gender-neutral terrain.”

The authors of the Global Strategy are not identified, but may be less attuned to gender analyses. The (uncitable) zero draft of the Global Strategy noted,

31. **New evidence is starting to emerge on the broader socioeconomic impacts of health workforce investments.** Health care employment has a significant growth-inducing effect on other sectors: (41) this, together with the expected growth in health labour markets,... to create qualified jobs in the formal sector, an opportunity likely to be harnessed in particular by women due to the *gender-neutral opportunities in health workforce education and employment* and the increasing role of women in the health workforce” (emphasis added, p. 12).

³ Homoeconomicus is male.[6,7]

⁴ The term ‘leisure’ is in quotes because the availability of leisure time is gendered. If women work a total of 38 minutes more than men per day (paid and unpaid work; average for 82 countries, period 2001-2018), it is akin to working almost 5 additional hours per week or 231 hours per year.[10, own calculations] That is almost six additional 40-hour workweeks per year. Every nine years a woman would have worked an additional 40-hour per week *year* on average compared to men

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1 world studies are far more complex and identify multi-factor causality from organizations, management,
2 and workers. Both analyses tend to regard phenomena located outside of paid work that impact
3 individuals as “personal” problems.[9] Therefore when absenteeism is approached as an issue with
4 individual workers, it is typically understood as a labor supply problem.

6 In contrast, gender frameworks integrate unpaid reproductive labor, moving the focus from simplified
7 models of individual decisionmakers to the institutional and structural constraints under which actually-
8 existing individuals make decisions. The shift illuminates challenges rooted in gendered (and racialized)
9 inequities.⁵ For example, occupational demands, such as inflexible work schedules or long shifts, may
10 conflict with women’s responsibility for care and other household work. In a workforce dominated by
11 women, absence can be a consequence of gendered responsibilities for unpaid work. Gendered work in
12 households can limit women workers’ ability to meet occupational demands, not because the household
13 work is a problem per se (although gender inequity is), but because the occupation is not designed for
14 women’s lives. Even in occupations dominated by women, the organization of paid work often makes
15 little allowance for the demands of unpaid work.

17 The question, ‘who does which tasks?’ is a cornerstone of gender analysis.[11] Gender analyses trace the
18 ways gender roles and norms affect individuals, groups, and society.⁶ All gender frameworks emphasize
19 the relevance of the gender division of labor. In the Moser Gender Planning Framework, women’s *triple*

⁵ I am not suggesting that absenteeism is not an issue in health. My point is that conceptualizing absence as a freely made decision between labor and leisure is not realistic for the health workforce. Operationalizing metrics and data collection that integrate the assumptions underlying that conceptualization and/or implementing contingent policy may have perverse consequence because the decision set – the options we may [safely] choose – are themselves influenced by, e.g., gender. Refocusing on the gendered and racialized constraints under which decisions are made can provide more solid empirical grounding.

⁶ “Gender norms are socially constructed normative rules or cultural expectations that shape and constrain people’s behavior in accordance with received, often stereotypical, notions of “masculinity” and “femininity.” Gender norms are deeply internalized prescriptions that influence preferences, skills, interests, even at an unconscious level. Gender roles are roles, jobs, and actions associated with the same notions of “masculinity” and “femininity.” They are the performances of gender associated with gender norms: the gender norm ensures that the gender role is taken up by the “appropriate” person.”[12]

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1 *role* describes women’s activities: reproductive work, productive work, and community work.[11,13] The
2 triple role usefully directs attention toward women’s gendered activities. A second concept, *social*
3 *reproduction*, adds temporality and clarifies linkages across those activities. Social reproduction includes
4 the daily and intergenerational work required to sustain human life. It is the day-to-day work assigned
5 largely to women – household labor, physical and emotional caregiving, and other activities – necessary
6 to ‘maintain existing life and to reproduce the next generation.’[14] In the household, people, typically
7 women, combine unpaid labor with items purchased using wages to provision needs.[15,16]⁷ Social
8 reproduction forms the base of any society or economy by reproducing people, aka the labor supply, daily
9 and intergenerationally. Without the activities of social reproduction, what many think of as “The
10 Economy” – the production of goods and services – would cease to exist. In pointing out the critical and
11 systemic importance of triple role activities, social reproduction describes how those activities reproduce
12 individuals, families, communities, and society itself over time.

13
14 Gender-sensitive data is required to better understand the impacts of the triple role on women healthcare
15 workers and on health systems. The Global Strategy on Human Resources for Health: Workforce 2030
16 (Strategy) discusses data in Objective 4.[5] Although the literature emphasizes the need for gender
17 disaggregated data, Objective 4 does not mention women or gender; however, it notes that data should be
18 collected about “...absence, absenteeism and their root causes.”^{8,9} The present study demonstrates how an
19 analysis lacking a gender lens is incomplete and may lead to incorrect conclusions that reinforce

⁷ E.g., most raw foodstuff must be cleaned, cut, cooked, and composed into a consumable meal that will replenish energy.

⁸ The economic and human costs of presenteeism may be even higher than the costs of absenteeism in nursing. Presenteeism is the potentially productivity-reducing practice of going to work despite illness. It does not appear in the Strategy.

⁹ From the 2016 Report of the Expert Group to the High-Level Commission on Health Employment and Economic Growth (p. 43, emphasis added):

The biggest opportunities lie in expanded leadership roles for women, pay for unpaid care work, addressing gender biases, hierarchies and vulnerabilities (including violence against women), challenging gender stereotypes and political representation. *Sex-disaggregated data and analysis must be supported so that women’s contributions to health can be more accurately represented and recognized.* Health employment with a strong gender lens can be a powerful lever to promote female empowerment in society.

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1 inequities. Data about the gender division of labor are necessary to correctly interpret data about
2 absenteeism, and therefore to understand health system capacity and stability.

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4 This interview-based study is part of a broader project on nurses' stressors, which are grounded in the
5 ways occupational demands combine with gendered responsibility for social reproduction.[17] Nurses
6 identified gender roles and the gender division of labor as sources of distress.[17] Familial pressures on
7 their incomes, time, and resources contributed to daily lives of chronic distress. Familial dependency is
8 shouldered disproportionately by women due to gender roles that designate them responsible for child-
9 rearing.[14-17]¹⁰ The static concept of work-life conflict fails to capture how challenges are created
10 through the interaction of paid and unpaid work demands. For example, the structure of the occupation
11 limited nurses' options for grappling with major life concerns, such as whether one raises one's own
12 children.¹¹ 'Conflicts' between the demands of paid work and the demands of living a fully human life
13 may be reconciled – or 'coped with' – at considerable economic, mental, emotional, and time costs to
14 individual workers.

15
16 The study makes two contributions. First, it reveals how gender roles that assign responsibility for unpaid
17 labor to women combine with occupational demands to function as a determinant of healthcare system
18 capacity. The quality and quantity of care supplied depends on nurses' well-being, the well-being of
19 colleagues, and the well-being of each nurse's household members and others who rely on her for care.
20 From this perspective, absences are a predictable phenomenon for a workforce constituted mostly by
21 women many of whom have care responsibilities. The implication is that absenteeism is not a labor
22 supply problem; it is a problem with the structure of the occupation, with labor demand, and with the
23 inequitable division of reproductive labor.

¹⁰ It is not gender roles alone that dictate responsibility, but those roles given a local context and social reality.

¹¹ Child-leaving is a common practice in South Africa and ought not be read as implying that all, or most, women who adopt this household form would prefer to have their children with them.[17]

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This gender analysis challenges the literature that approaches absence as a gender-neutral, individual labor supply decision. An exclusive focus on paid work or viewing paid and unpaid work as separable into different spheres, can lead to an interpretation of economic activity that is not merely incomplete, but incorrect. Such an assessment may [mis]inform policy. For instance, a narrow focus on absence in paid work that does not examine gendered responsibilities could incorrectly lead a policy-maker to conclude that something is “wrong” with the labor supply. Underlying the economic analysis is an assumption that workers would prefer to shirk than to work, which, ceteris paribus, would reduce productivity. Thus, the workers are framed as having ‘undesirable behaviors’ and being uncaring. Another assumption is that unexcused absences are ‘voluntary,’ which casts doubt on their legitimacy and can make an employee appear untrustworthy. Hence, if policymakers approach absence as a gender-neutral labor supply problem, a plausible and misguided outcome is advocating the substitution of men, who have fewer work burdens outside of paid work, for women, rather than addressing the challenges confronted by the existing workforce. Such a response is triply punitive for women: they are unjustly maligned as having character defects for attempting to meet the care demands they are tasked with outside of paid work – the same care demands that reproduce people and society – and risk punitive measures (and limitations on advancement) in paid work for doing so.

Second, because nurses’ work is shared, complex interdependencies between nurses, households, and health systems mean that the stability of health systems depends on women’s ability to cope with stressors linking their households, their families, and themselves to their paid work. Conceptualizing paid and unpaid work activities as separable or delinked obscures these high-stakes systemic challenges – issues that demonstrate that gender roles and “women’s work” are not a “women’s problems,” they are social problems that impose especially high costs on women. In-depth qualitative research clarifies root causes of occupational and social issues and can help identify where policy can target deeper causes while alleviating shorter-term stressors.

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6 **2 Methods**¹²
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9 3 The study aims to demonstrate how gender roles that assign responsibility for unpaid labor to women
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11 4 combine with the demands of the nursing occupation to function as a determinant of health system
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13 5 capacity. The study uses a Moser-inspired gender framework to highlight the paid and unpaid work
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15 6 activities nurses described in interviews.[12,13] The concept of social reproduction helps map the
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17 7 relationships between activities, showing how distress can have destabilizing impacts at multiple scales.
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22 9 Study design
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24 10 In-depth one-time semi-structured life history interviews were conducted by the PI/author with 71 black¹³
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26 11 women nurses in 19 wards and clinics in a public hospital in Johannesburg. Purposive sampling and
27
28 12 saturation guided the sample size.[18] Heterogeneity was present in age/life-stage, income, and tier within
29
30 13 the nursing occupation (Table 1). Participants were recruited in in-person interactions in hospital wards
31
32 14 and day clinics selected at random, excluding emergency and trauma. Seventy of the interviews were
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34 15 digitally recorded and transcribed, and 71 were analyzed using software for qualitative research (Nvivo)
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36 16 and spreadsheet applications (Excel, Numbers).
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42 18 Table 1. Participant demographics.

Nursing tier	Years of nursing education required	N	Age (Median)
Registered nurse	4 years, or status as enrolled nurse plus one year of bridging courses	24	49
Enrolled nurse	2 years	24	35
Enrolled nurse auxiliary	1 year	23	33
Total		71	

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56 ¹² The project was approved by the Human Research Ethics Committee at the University of the Witwatersrand
57 [H19/08/05] and the Institutional Review Board [IRB 14/15-61] of [Blinded], the PI's employer at the time of the
58 study, and relevant senior hospital officials.

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60 ¹³ Of the 71 participants in the study, 70 were "Africans" and one was "Coloured."
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1 After obtaining written and verbal consent, participants recounted their educational backgrounds, paid and
2 unpaid work histories, and described their households, health, and stressors in life history
3 interviews.[18,19] Participants detailed time-use on typical days at the hospital and days off paid work,
4 documenting the time allotted to tasks in their triple role. Data and quotes are drawn from across the
5 interviews as participants raised these issues while discussing a variety of topics.

6
7 The study takes a grounded theory approach. Grounded theory is a style of qualitative analysis of
8 interviews that take seriously the influences of social structures on respondents' experiences.[20] Gender
9 describes an inequitable, unjust structural relationship, a hierarchy, that advantages some groups at the
10 expense of others. The material, mental, physical, and emotional articulations of disadvantage – and
11 advantage – are lived experiences.¹⁴ Details about nurses' experiences reveal common themes and,
12 through inductive reasoning, a more general picture of the worlds nurses inhabit. The study is informed
13 by non-essentialist phenomenology and critical ethnography, with rich descriptions of lived experiences
14 and analyses of power relations.[17]

15
16 The methodology adopted in this study is its greatest strength and limitation. Qualitative studies
17 contribute to understanding the circumstances that workers navigate individually and as a group. In-depth
18 interviews provide insight from nurses in a highly unequal, unevenly developed country. Qualitative
19 research also clarifies and contextualizes connections across different scales. While it lacks
20 generalizability by nature of the approach, it elucidates the constraints under which people make
21 decisions. These data indicate how women workers' responsibility for social reproduction can have broad
22 impacts across societies. The results section examines care-giving obligations to children, family, and
23 oneself and occupational demands.¹⁵ The social reproduction analytic shows that “women's work” is not a

¹⁴ Not homogeneously, of course. Intersectionality and occupational segregation means investments in health will be particularly beneficial to women of color, where, for example, three of the five most common jobs help by Black women are in the care sector.
¹⁵ Less obvious occupationally-related demands are described in [12,17].

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4 1 “women’s problem;” the gender division of labor is a social problem with implications for theory and
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11 4 **Results**
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13 5 Health issues are a major cause of absenteeism directly and through care obligations.¹⁶ Because most
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15 6 nurses are women, and many women bear responsibility for caring for family members, the health of
16
17 7 family members can cause absence from paid work.
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20 8 **Care for children**
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22 9 Most study participants had children who are dependent on them for care, financial support, or both. Only
23
24 10 five of the 71 nurses had never had a child, and two of the five were pregnant with their first. Three-
25
26 11 quarters had a child under the age of 18.¹⁷ Participants described gender roles related to childcare: when
27
28 12 children were sick, they were primary carers, therefore illness among children was a determinant of
29
30 13 absence. A nurse (R2I29) explained the distribution of responsibility in the home:¹⁸
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32

33 14 *[W]omen face a lot of difficulties...You are the only one taking care of the kids. [Y]ou’ll find the*
34 15 *baby is sick and the man is not there. You’re the only one facing that difficulty...Everything is the*
35 16 *woman’s responsibility.*
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44
45 ¹⁶ A variety of factors contribute to absenteeism among nurses. These are sometimes divided into organizational
46 characteristics (i.e., short of staff, supply shortages), [paid] work characteristics (i.e., overwork, workload), and
47 “individual” or “personal” characteristics (family responsibilities, work stress, financial problems).[8,9] These
48 divisions may be meaningful in other studies, but causation is multi-factorial and I emphasize the connections
49 between factors. Being short of staff is a cause of overwork which can be a cause of psychological distress, a cause
50 of sickness absenteeism. Having financial problems may be the result of low pay for feminized paid work and high
51 familial dependency for, say, single mothers, and can likewise contribute to distress and absenteeism. Hence, I do
52 not distinguish between causes of absence. It bears noting that missing paid work due to family obligations such as a
53 child’s illness would typically fall under “voluntary absenteeism.”
54

55 ¹⁷ The Western concept of single motherhood does not apply neatly in context of traditional and ‘formal’ marriages.
56 Many nurses who would be considered single mothers, i.e., in the US, did not consider themselves single mothers,
57 while others did. Financial and care burdens may go unshared in co-resident households, particularly with respect to
58 children, some married women may experience obligations similar to those expected to affect single mothers.[17]
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60 ¹⁸ For a more on gender norms in context, see Blinded [12,17]
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4 1 Absenteeism is typically seen by management as a problem with nurses, while nurses tended to
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6 2 understand the occasional absence as a function of gendered responsibility for care. One participant
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8 3 (R1I14) described this disjuncture with management:
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10
11 4 *[The management] will come and complain about absenteeism and they don't know why the girls*
12 5 *were absent. And the girls, they've got young kids and those kids were sick. So, if their children*
13 6 *are sick, they can't leave their sick children at home and come and work. They have to look after*
14 7 *their sick children and take them to the doctors. I can't understand this. So, the management, I'll*
15 8 *say they're not on our side.*
16 9

17
18 10 At the same time, many nurses identified *staff shortages* as a major problem – one that they saw as a
19
20 11 problem created through a lack of demand for staff by hospital management. For nurses, absences *become*
21
22 12 a problem when a ward is short of staff. Staff shortages can make occasional absences significant
23
24 13 challenges for nurses in a given ward. Chronic shortages can even cause managers to recall nurses on
25
26 14 leave. A nurse (R2I37) recalled mid-leave explains:
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28
29 15 *[W]e were short-staffed. People were nursing too many babies. [Coming back to the hospital]*
30 16 *was so difficult... leaving the child [while breastfeeding and the child had eczema]. I had signed*
31 17 *for six months leave, including my two annual leaves, and then they called and said I must come*
32 18 *in, we are short-staffed. I had already prepared myself to stay six months because they had*
33 19 *initially granted me the [leave]... So, now they called me on Friday to say I must come back on*
34 20 *Monday. ... [O]n Monday I came here with the baby. Like, "See, why did you call me?"*
35 21 *I spoke to the...Human Resources people. I went to the...manager, and she said because I went to*
36 22 *them, she will grant me [what was already agreed to]. I just left and went home.*
37 23

38 24 **Care for other family members**

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41 25 Childcare is only one source of demand for care. Other care demands may be present, particularly where
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43 26 morbidity and mortality are relatively high, especially for those trained in healthcare. Many nurses cared
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45 27 for family members in multiple households.¹⁹ The same nurse above (R2I37) elaborates her distress – a
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47
48 28 feeling of disempowerment – from navigating the demands of paid work, unpaid work and demand for
49
50 29 care:
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52 30 A: *With my family it is a long-standing thing...my mother is not well and both brothers are*
53 31 *also HIV-positive. It's a constant stress for my sister and I...you never know when they*
54 32 *are going to get ill. When they call and say they have the flu, you start to panic.*

55 33 Q: How does it make you feel?
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60 ¹⁹ See Blinded [12,17] for more on immediate households and extended household networks.
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A: *Powerless. I wish there was something I could do. And there's nothing. Especially with my mom. She is [elderly] to be HIV-positive...She sometimes gets sick. And I'm at work and can't go home when I hear that my mom isn't well. Here in the ward, there are times when I am absent, and they don't understand. We are short-staffed so you can't go. That is why I say I am powerless. I can't go, but I need to be there for my mom...Sometimes my brother will call and say she is ill, but I can't go and help her while [I'm] helping other people. ... Sometimes you feel useless when they say your mother has been sick for seven days and unable to bathe. And I can't just pick up and go to her. But I also know that I have to be there for my kids too. And then I can't always be there for my mother. ... With my mom, I worry that I am taking care of people here while she is suffering there.*

Care for oneself

Nurses themselves may be acutely or chronically ill. When a nurse's health is compromised and she misses work, her absence simultaneously reduces the quantity of care supplied (e.g., by her) and the quality of care supplied by her colleagues. Nurses described psychological distress; physical symptoms related to tension, surgeries, and other illnesses; as well as car accidents and assaults, including one which fractured both of a nurse's wrists. A nurse (R2I22) living with HIV explains how the being short-staffed can limit access to accommodation:

I experience it in this ward. There were times when I was not well but someone will tell me that, "No, you must come to work. There's no one here. ... So, I was very sick by the time I phoned HR saying, "Really...I just can't do anything." And they say, "Oh! You must come to work" and I say, "I'm sick. What I'm trying to say to you is I'm sick."

Illnesses and responsibility for care are not unique to nurses or nursing, but both can be aggravated by the demands of the occupation.

Occupational demands

Staff shortages and overwork were frequently described as something nurses disliked about paid work. Shortages and overwork are related insofar as nurses share workloads. Some nurses said an intervention addressing shortages would improve their paid worklives by reducing stress.

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4 1 Participants identified three causes of staff shortages: not hiring or replacing staff when nurses retire, pass
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6 2 away, resign, fall ill, take maternity or educational leave, or are otherwise absent;²⁰ increasing some
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8 3 aspects of capacity, such as the number of beds in a ward, without adding staff thereby adding to
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10 4 workload; or changing care requirements that intensify work demands, such as expecting dressings on
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12 5 burns to be changed twice rather than once per day.

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16 7 In nurses' lived experiences, labor supply and demand factors are linked. One participant (R2I36) pointed
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18 8 to a cyclical dynamic. She connected heightened demand, a cause of reduced quality of care, with reduced
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20 9 quantity of care through absences and resignations:

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24 10 *Maybe my stress level will be better because I won't be as tired from looking after eight babies. It*
25 11 *causes all of this death, infections, you see. The quality of nursing care drops. It contributes to*
26 12 *absenteeism. And to nurses who decide to resign.*

27 13
28 14 Nurses' dependence on one another is apparent in overwork that results from short-staffing and
29
30 15 absenteeism: a ward admits a certain number of patients determined by institutional capacity, practitioner
31
32 16 capacity, intensity of care needed, etc. The absence of two nurses from a ward that should have four can
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34 17 be the difference between work and overwork for nurses, and life and death for patients. A second nurse
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36 18 (R2I20) explains:

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40 19 A: *People are often absent from work because they are tired; some, they have family*
41 20 *problems so they stay away. Sometimes I'm the only registered nurse [in the ward] for*
42 21 *two weeks. I'll find out we are four [including staff nurses and nursing assistants] in a*
43 22 *shift for two weeks. I can't do any specific task and finish without interference [because*
44 23 *the other nurses have questions or need assistance].*

45 24 Q: Are those usually the reasons that people are gone? When you say family problems what
46 25 do you mean?

47 26 A: *Yes. Like some, their family is sick. 'My husband is sick or my child is sick.' Or, 'I have a*
48 27 *problem.' That's all...And sometimes it's short notice. They will call late to say they have*
49 28 *a problem. And some when they come back from being absent they will say, 'No, to tell*
50 29 *you the honest truth I was tired. I needed rest.'*

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57 ²⁰ The focus of the present study is on nurses' lived experiences and their perceptions. Not hiring/replacing staff was
58 the most frequently cited cause of short-staffing. Whether shortages are 'technically' staff shortages in terms of
59 nurse-patient ratios or are perceived as staff shortages by management is beyond the scope of this study. Likewise,
60 broader shortages of personnel are not addressed here.
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4 1 Workers in most occupations are less directly involved in the maintenance of human life; the direct
5
6 2 involvement makes work particularly stressful for nurses. A short-staffed ward can negatively impact
7
8 3 nurses' physical and mental health. "When we're short of staff you have to work harder. Sometimes
9
10 4 you're so tired you forget to eat," said another (R1I19). A fourth nurse (R1I35) describes her anxious
11
12 5 thoughts during her morning commute:

15 6 *[W]hen I'm in the [minibus] taxi, on my way to work... I think of this work, it's too much. You*
16 7 *know, here is hectic. There's lots of work, and we are short of staff. So, I'm thinking, 'How many*
17 8 *of us are coming to work? How many have phoned saying that they are sick?' And then, '...How*
18 9 *are we going to handle the work?' you see. Like, today, we are short of staff. And then, we have*
19 10 *to work in that situation.*

22 12 Being overburdened contribute to poor engagement with patients by making already-tired nurses anxious
23
24 13 to get to other patients, according to a fifth nurse (R2I31). In some instances, this manifests as shortness
25
26 14 with patients. Another (R1I21) clarified impacts on quality and quantity of care:

28
29 15 A: *[S]ometimes our ward, it's really busy; ...sometimes it is light. Even with the same*
30 16 *number of patients, because sometimes you have a patient that needs a lot of attention...*
31 17 *It depends on the diagnosis.*

32 18 Q: Does that give a kind of unpredictability that you don't like?

33 19 A: *It's not that I don't like it. It's just that you feel overworked. Because now you're alone*
34 20 *and you have the person who needs attention. [Y]ou can be one person while you have*
35 21 *five other patients, because you have to nurse six. So, while I am working with the one*
36 22 *patient, I feel sorry for the others because now this one is transfusing, I must do*
37 23 *observation, everything. Or the temperature was high; I must do the sugar. So, the other*
38 24 *[patients] end up not getting what they are supposed to get.*

40 25
41 26 *That is what I don't like about when there is not enough staff. It is the other patients that*
42 27 *suffer.*

47 31 Discussion

48
49 32 Applying Moser's gender framework and a social reproduction analytic to nursing highlights three things:

50
51 33 (a) Chronic stress is a function of the requirements of paid and unpaid work in combination;

52
53 34 (b) Economic theory's focus on individual decisions at the expense of social context contributes to

54
55 35 'privatizing' occupational concerns that have origins in gendered (and racialized) power relations;

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4 1 (c) Privatization obscures interdependencies that reveal how fundamentally health systems rely on
5
6 2 women health workers' ability to withstand extreme pressures. Systemic gendered challenges are
7
8 3 sources of systemic instability in health systems.
9

10 4
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13 5 First, the nursing occupation is intimately linked to gendered responsibilities for social reproduction
14
15 6 outside of paid work.[17] This relationship is reflected in chronic stress that comes neither from paid
16
17 7 work alone nor from responsibilities for social reproduction alone, but from their interrelated, and
18
19 8 sometimes contradictory, demands on nurses' resources. One cannot and should not interpret this study as
20
21 9 identifying sources of stress with *origins* in social reproduction; the stress described is primarily the result
22
23 10 of the demands of paid work in a context of gender roles, norms, and work.²¹
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26 11

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29 12 Second, some stressors have the appearance of being household-based, 'private' concerns but the way
30
31 13 they are related to paid work and shared among those in the occupation means they are occupational
32
33 14 issues.[17] Many of the characteristics described as "personal" or "individual" issues in the literature are
34
35 15 *privatized* by institutional environment and culture (e.g., not by nature) are in fact social. Family
36
37 16 responsibilities – unpaid work that reproduces people (aka the labor supply in economics) on a daily and
38
39 17 intergenerational basis – reproduce society itself. The fact that this work is associated with households
40
41 18 does not make it a characteristic of individuals, much less a characteristic of *women*; it is a characteristic
42
43 19 of the ways paid work in production and unpaid work in reproduction are organized along gendered lines
44
45 20 in capitalist economies.[22]
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51 22 Third, because the patientcare workload is shared among hospital nurses in many locations[23], the
52
53 23 interaction between an individual nurse's paid work and her household impacts the well-being of multiple
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57 ²¹ Gender norms about caring labor are strong in South Africa due to apartheid legislation including the Group Areas
58 Act of 1950, the Population Registration Act of 1950, and the Pass Laws Act of 1952. The legislation created a
59 rural-urban migrant labor system for men, and restricted women's mobility to "homelands." See Hunter.[21]
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1 nurses. Interdependence has implications for health system stability. Nurses' well-being depends upon the
2 well-being of their colleagues. Absenteeism can reduce the quantity and quality of care available. Higher
3 workloads raise the likelihood of burnout among colleagues.[24-30] Care quality can fall as the nurses
4 who are present become overworked.[9,24] It is through the shared workload within hospital wards that
5 the quantity and quality of care is revealed to depend on the well-being of each nurse. However, because
6 of the gender division of labor *outside* of paid work, absence may be due to one's own illness *or* that of
7 family members. Therefore, nurses' well-being depends not only on themselves, their families, and their
8 colleagues, but on their colleagues' family members' well-being. Hence, even if nurses themselves do not
9 become ill, as an occupational group, nurses' collective household conditions can threaten healthcare
10 systems.

11
12 Practitioners' own illnesses can also destabilize public healthcare systems. From a supply and demand
13 perspective, ill healthcare workers simultaneously increase demand for care while reducing supply. That
14 endogeneity is cause for concern as tired, anxious, burnt out nurses may choose to leave nursing or retire,
15 leaving colleagues with ever higher workloads.[31] The pandemic offers an extreme context. Nurses'
16 deaths – from COVID-19, intimate partner violence, and other morbidities – as well as their retirements
17 have institutional and social consequences, exacerbating staffing issues in wards and clinics. Nurses'
18 departures reduce capacity in perpetuity, subject to a replacement rate of nurses graduating and
19 registering.²²

20
21 These relationships expose interdependencies between hospitals and households. They suggest an
22 additional weight on the workers on whom hospitals rely, and consequent fragility of healthcare systems.
23 Health occupations – especially those requiring shiftwork, and especially during a pandemic – can be
24 extremely stressful for women, many of whom were *already* experiencing chronic stress from the same

²² Training and registration present context-specific issues that cannot be explored in detail here. On COVID-19 and healthcare workers see Dramowski et al.[31] On registration, see Breier et al.[32]

1 sources prior to the pandemic.[17] Health systems risk being subject to crises of social reproduction of
2 their own.

3
4 Absenteeism and staff shortages are overlapping problems. They may even be the same problem from
5 different perspectives: where management sees a worker-based labor supply problem – individual
6 instances of absence that aggregate into absenteeism-as-problem, nurses see an employer-based labor
7 demand problem – a preexisting condition of being chronically short of staff. Cost-minimization may
8 mean wards are assigned the minimum number of staff necessary, or the minimum required by collective
9 bargaining.²³ This practice can cause overwork among nurses in ward when a colleague is absent for any
10 reason.

11
12 Caregiving obligations may be interpreted as labor supply ‘issues’ at the level of a ward and hospital.
13 Many of those issues, however, are predictable. An occupation filled by women, particularly of
14 childbearing age in a culture – like many – in which having children is a signifier of adulthood and
15 femininity, will have relatively high rates of maternity leave and other significant caregiving
16 obligations.[12,14-17,21] In one ward four nurses were on maternity leave at the same time (R2I20).
17 Locally-specific conditions related to HIV, apartheid, and weak enforcement of mandated shared parental
18 support increase care-giving obligations for black women. Other social determinants of health such as
19 high levels of violence and car accidents must also be taken into consideration. Employers should
20 anticipate absences from nurses who are caregivers and from nurses affected by other nurses’ caregiving
21 obligations. The predictability of these [gendered] issues suggests that they have little to do with
22 individual labor supply decisions and a great deal to do with gender roles and norms.

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24 Reproductive labor: problematizing gender inequity instead of devaluing the work or the workers

²³ Shortages or misallocation of nurses could have similar results.

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1 Despite being experienced as a personal matter by a given nurse, chronic stress is sufficiently common to
2 be considered an occupational issue, and it can have direct and indirect impacts in the paid workplace.
3 Importantly, the privatized character of reproductive labor, reinforced by the imagined separability of
4 ‘work’ and ‘life,’ is an impediment to recognizing shared experiences. There are practical implications for
5 gender-sensitive employment conditions, recruitment, retention, and career pathways as well as for union
6 negotiations.

7
8 In addition to hiring and/or reallocating staff, plausible interventions could include subsidized childcare in
9 hospitals and counselling, possibly peer-based. Many nurses felt alone and unsupported in their efforts to
10 shoulder competing demands.[17] Making shared problems visible as ‘public’ occupational issues rather
11 than ‘private’ individual failings could allow nurses and unions to negotiate for conditions that enhance
12 well-being across domains. Efforts to deal with novel stress from COVID-19 without considering the
13 interplay of the demands of paid work and of social reproduction are less likely to be effective.

14
15 If society is to sustain its existence, reproductive labor must be undertaken regardless of whether it
16 ‘conflicts’ with paid work. The lamentable problem is not its existence; it is the gender inequity that tasks
17 women disproportionately with the work and gendered value systems that leave that activity
18 uncompensated and devalued. Gender inequity is the root cause of myriad challenges for women that are
19 related to the gender division of labor and gendered value systems.[12] This study demonstrates,
20 however, that gender inequity is not a “women’s issue,” it is a constraint on health system capacity and a
21 source of health system instability. Gender inequity is a social problem that imposes exceptionally high
22 costs on women and risks social welfare.

The Global Strategy

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25 Women do not appear directly in the Global Strategy’s vision, overall goal, principles, objectives, or
26 milestones. Yet, the feminization of the health workforce and the social context in which the Strategy’s

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1 vision, overall goal, principles, objectives, and milestones may be achieved mean the Strategy
2 disproportionately impacts women workers and women recipients of healthcare. Occupational
3 interventions to benefit the health workforce have the potential to be profoundly equity-enhancing. It is
4 humane, pragmatic, and strategic to theorize from, and design policy for, actually-existing, embodied
5 women workers, who are intrinsically valuable human beings. From an instrumental perspective, it is also
6 cost-effective.

7
8 All four of the Strategy’s objectives have key avenues for acknowledging and engaging women:
9 optimizing quality and workforce impact (Obj. 1), putting women in leadership and governance roles
10 (Obj. 3), and calling explicitly for gender-disaggregated data (Obj. 4). Objectives 1, 3, and 4 do not
11 mention women directly. Only Obj. 2 moves beyond gender-awareness (briefly and in one of its
12 subpoints, #39) to describe some impacts of gender roles on women’s entrance and advancement in health
13 occupations.

14
15 **Conclusion**

16 Gender frameworks suggest that the gender of the human resources and the impacts of gender roles on
17 those resources are critical for understanding workforce challenges. The forgoing analysis demonstrated
18 the inadequacy of interpreting absenteeism primarily as a labor supply problem neglects to integrate
19 information about the impacts of gender roles on women. The labor-supply-problem interpretation also
20 obscures the interdependency – and potential instability – present in nursing between nurses, their
21 households, and the healthcare system overall. It unfairly renders women “problematic” suppliers of paid
22 labor while concealing the ways gender inequity can undermine social welfare.

23
24 Gender-awareness is important, but a richer description of *why gender matters* could helpfully guide data
25 collection, the interpretation of challenges, and policy. Gender describes an inequitable, unjust structural

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1 relationship; a hierarchy that advantages some at the expense of others. The material, mental, physical,
2 and emotional articulations of disadvantage – and advantage – are lived experiences for women and men.

3
4 There have been many calls for approaching health research from a gender perspective.[34,35] These
5 calls are not trivial. Interview data suggest that ‘absence’ is interpreted differently by employers and
6 nurses, with implications that merit consideration, particularly in light of the aim for gender-sensitive
7 working conditions by 2030 and the high stakes of women’s continued participation in the health
8 occupations. Analyses that do not consider gender are at best incomplete, and the conclusions reached
9 may be incorrect.[36] Hence, it is heartening to see the Global Strategy advocate gender-sensitive thought
10 and practice. It is critical for those calls to be accompanied by gender analyses that describe women’s
11 experiences.

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4 **1 Abbreviations**

5 2
6 3 WHO World Health Organization
7 4

8 **5 Declarations**

9 6
10 7 Ethics approval

11 8 The project was approved by the Human Research Ethics Committee at the University of the
12 9 Witwatersrand [H19/08/05] and the Institutional Review Board [IRB 14/15-61] of [Blinded], the
13 10 PI's employer at the time of the study, and relevant senior hospital officials.
14 11

15 12 Consent for publication

16 13 Obtained
17 14

18 15 Availability of data

19 16 Some of the data underlying the results presented in the study are available on Figshare: Blinded.
20 17 Other datasets generated and analyzed during the current study are not publicly available as
21 18 details revealed in the interviews are sufficiently specific to identify individuals within the
22 19 hospital. These data are available from the University of the Witwatersrand Ethics Committee
23 20 (contact via telephone +27(0) 11 717 1408, email Shaun.Schoeman@wits.ac.za) for researchers
24 21 who meet the criteria for access to confidential data.
25 22

26 23 Competing interests

27 24 The author declares that they have no competing interests
28 25

29 26 Funding

30 27 No funding was provided for this study.
31 28

32 29 Authors' contributions

33 30 [Blinded] conducted the study, analyzed the data, and drafted and edited the manuscript.
34 31

35 32 Acknowledgements

36 33 Not applicable.
37 34

38 35 Author information

39 36 The author is an economist with an interdisciplinary background who has conducted extensive
40 37 field research in Johannesburg, South Africa. She is an assistant professor at Blinded and a joint
41 38 researcher in the Faculty of Health Sciences at the University of the Witwatersrand.
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19 Added unformatted:

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 21 Work in Health: Using a Gender Lens to Advance a Transformative 2030 Agenda. In Buchan J, Dhillon IS,
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24 Final Report of the Expert Group to the High-Level Commission on Health Employment and Economic Growth
 25 Richard Horton (Chair), Edson C Araujo, Haroon Borhat, Saskia Bruysten, Claudia Gabriela Jacinto, Barbara
 26 McPake, K Srinath Reddy, Ritva Reinikka, Jean-Olivier Schmidt, Lina Song, Viroj Tangcharoensathien, Sylvia
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Oct. 31, 2021

Dr. Ayat Abu-Agla
Dr. Jim Campbell
Dr. Michelle McIsaac

Editors, Special Collection: Global Strategy on Human Resources for Health: Workforce 2030 – A Five-Year Check-in, *Human Resources for Health*

Dear Dr. Abu-Agla, Dr. Campbell, and Dr. McIsaac,
Please find my attached revised manuscript titled, “Unconventional determinants of health system capacity: a qualitative study of the gender division of labor and nursing.” I believe *Human Resources for Health* is an appropriate journal for this timely article, which fits within the call for papers about the Global Strategy on Human Resources for Health: Workforce 2030.

Dr. Abu-Agla’s comments on the initial submission are reproduced along with responses on the following pages.

Original letter:

Gender is a cross-cutting theme in the Global Strategy objectives, yet critical mechanisms through which gender impacts healthcare workers and healthcare systems remain invisible. The manuscript uses qualitative research with 71 Black women nurses in Johannesburg to describe how gender roles and the gender division of labor in the household act as constraints on healthcare system capacity. At the level of wards, hospitals, and healthcare systems, the quantity and quality of care supplied depends on each nurses’ household and family conditions. Gender inequities combine with occupational requirements in ways that constitute occupational issues, at least among nurses.

The Global Strategy acknowledges “social role expectations that translate into a greater burden of family responsibilities” as “societal barriers that prevent women from joining the health workforce or confine them to lower tiers” (p. 24). Yet that recognition of gender roles is not translated into the 2016 UN recommendations¹ in a substantive way, perhaps because the imagined separation between paid/unpaid and public/private persists in the minds of many policymakers and most economists.

Covid-19 played a revelatory role in clarifying these connections. The fundamental dependence of public health on gendered and racialized dynamics at the household level, and on women’s ability to withstand extreme pressures, is unsustainable and requires much more attention in the human resources for health literature.

I hope you will reconsider this manuscript for publication in the special collection.

Sincerely,

Jennifer Cohen

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&

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University of the Witwatersrand, Johannesburg, South Africa

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¹ UN recommendation to “Maximize women’s economic participation and foster their empowerment through institutionalizing their leadership, addressing gender biases and inequities in education and the health labour market, and tackling gender concerns in health reform processes.”

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Please note:

I have no competing interests, approve the manuscript for submission, and confirm that it has not been published or submitted for publication elsewhere.

Regarding journal policies, I have secured a waiver for the article processing charge.

Potential peer reviewers:

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Professor Elena Moore, University of Cape Town Elena.Moore@uct.ac.za

Editor comments:

We would like to thank you for your submission. Overall the paper takes a gender lens to look into HS, HWF households and gender unpaid work in COVID times among female nurses in SA. The study aims to make visible the avenues through which these factors impact the quantity and quality of care supplied, and not just during pandemics.

Thank you for considering the manuscript and providing very helpful comments.

While the concept and idea of the paper is good applying grounded theory , yet specific gender-analysis frameworks could have been brought forward.

I revised the manuscript considerably in this respect and drew gender frameworks-as-approach through the paper. Specifically, I integrated the triple role concept from the Moser gender Planning Framework. I complemented that framing with a social reproduction analytic to clarify linkages across activities and over time to demonstrate the dynamics of reproduction.

Furthermore, the write-up of the paper, i.e. the study aim versus the methods and requires further clarity and conclusion.

To be considered for this issue, we would like to see if you could re-consider revising the MS insight of the GSHRH, based on the aforementioned comments, drawing explicit links and providing a more concrete analytic view in addition to the above comments. Alternatively, welcome resubmission to the Journal but not thematic series.

The two comments above provided the foundation for the revision.

The line of analysis is constructed with greater clarity and more concrete linkages in the revised draft, from Background through Methods, through Conclusions. A more focused examination of the Global Strategy sharpened contrasts between the document and insight from the study. Where I would typically copy in selections from the revision, the new manuscript has changed to such a degree that it is not practicable to do so.

I hope that the revision adequately addresses these points. I will be happy to revise further as needed.

1 **Article type**
2 Research article

3
4 **Title**
5 Unconventional determinants of health system capacity: a qualitative study of the gender division of labor
6 and nursing

7
8 Jennifer Cohen^{1,2*}
9

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12 Witwatersrand, Johannesburg, South Africa

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14

15 **Abstract**

16 **Background**

17 The Covid-19 pandemic raised concerns about health system capacity, namely the number of hospital
18 beds, ventilators, and oxygen. Analyses of the determinants of healthcare system capacity and quality of
19 care do not typically consider the gendered division of labor in practitioners' households. This study aims
20 to make visible the avenues through which these factors impact the quantity and quality of care supplied,
21 and not just during pandemics. Absenteeism is an indicator of capacity, but gender analysis challenges the
22 interpretation of absence as a labor supply issue. Systemic gendered challenges confronting women
23 healthcare workers constitute systemic challenges to the stability of health systems.

24 **Methods**

25 This study applies an adapted version of Moser's gender framework to qualitative data from 71 face-to-
26 face, semi-structured interviews with black¹ women nurses employed in a public hospital in
27 Johannesburg. Social reproduction, a concept from feminist political economy, clarifies the demands on
28 nurses and highlights interdependence in the home and the hospital.

29 **Results**

30 The study demonstrates how interrelated stressors associated with paid employment and unpaid care work
31 can undermine individual and group well-being among participants. Critically, at the level of wards,
32 hospitals, and healthcare systems, the quantity and quality of care supplied depends on each nurses'
33 household and family conditions. Where the patient-care workload is shared among nurses in hospital
34 wards, the interaction of an individual nurse's paid work with her gendered household responsibilities
35 impacts not only her own well-being, but that of multiple other nurses.

36 **Conclusions**

37 Women healthcare workers individually and collectively navigate occupational demands in the context of
38 responsibility for unpaid labor. The invisibility of unpaid work, distributed according to gender roles and
39 along a gendered division of labor in nurses' households, can be a destabilizing force in healthcare.
40 Through nursing and nurses, public health depends on gendered dynamics at the household level, and on
41 nurses' abilities to withstand extreme pressures, which may be compromised during a pandemic. The
42 systemic nature of these challenges further demonstrate how gender roles and "women's work" are not a
43 "women's problems," they are social problems that impose especially high costs on women.
44

45 **Keywords:** Nursing; Gender; Race; Mental health; Sub-Saharan Africa; South Africa

¹ The apartheid government's racist terminology distinguished between four populations groups: "African," "Coloured," "White," and "Indian." Although the term "Black" is sometimes used to identify all peoples oppressed under apartheid, in this article I use the term "Black" to mean "African." Of the 71 participants in the study, 70 were "Africans" and one was "Coloured."