

The Importance of Self-Care for Healthcare Professionals in North India: A Regional Analysis of Burnout, Resilience and Institutional Support

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Abstract

Background: Burnout among healthcare professionals (HCWs) is influenced by individual coping mechanisms and organizational support. However, regional evidence from North India on structural and contextual factors affecting burnout remains limited. This study examined disparities in self-care, burnout, and institutional support across urban and rural settings, with attention to gender and professional differences. **Methods:** A cross-sectional study was conducted from January to December 2023 among 600 HCWs across five North Indian states using stratified random sampling. Burnout was assessed using the Maslach Burnout Inventory, and self-care was assessed using the WHO Self-Care Index. Institutional support included counseling services, mental health leave, and wellness activities. Data were analyzed using SPSS version 28 with ANOVA and regression methods. Effect sizes, odds ratios (ORs), 95% confidence intervals (CIs), and regression coefficients (β) were calculated. Institutional Review Board approval was obtained (IEC/2022/45). **Results:** Urban HCWs reported significantly higher self-care scores than rural HCWs (14.2 ± 3.1 vs. 9.8 ± 2.7 ; $p < 0.001$). Emotional exhaustion was more prevalent among rural HCWs (74% vs. 52%; $p = 0.002$; Cohen's $d = 1.53$), with higher odds of emotional exhaustion ($OR = 2.61$; 95% CI, 1.78–3.84). Urban HCWs had greater access to counseling services (65% vs. 28%; $p < 0.001$). Higher self-care independently predicted lower emotional exhaustion ($\beta = -0.42$; 95% CI, -0.51 to -0.33 ; $p < 0.001$). Rural female HCWs experienced cumulative risk, reflected by a significant gender-by-region interaction ($\beta = 0.18$; $p = 0.02$). Females reported greater work-family conflict and depersonalization than males. Doctors had the highest access to mental health leave (55%), whereas allied staff had the least (18%; $p < 0.001$). **Conclusion:** Burnout inequities among North Indian HCWs reflect significant gender and geographic disparities. Strengthening institutional support and integrating resilience-focused occupational health policies are essential for improving workforce well-being.

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INTRODUCTION

Healthcare providers in Northern India are particularly challenged by an inordinate number of patients, limited resources, and socio-cultural expectations. The COVID-19 pandemic heightened existing burdens, with a study reporting 68% burnout among Indian healthcare workers (HCWs) during peak waves [1]. In North India, mental health care is scarce, coupled with inadequate staffing across healthcare systems, believed to

exacerbate self-care neglect due to multiple role conflicts [2]. For example, the working schedules of many female HCWs are complicated by large family responsibilities, which increase stress [3]. Although there is evidence from across the world linking self-care with reduced burnout and better patient outcomes, there is little data on the self-care practices of North Indian HCWs. This study explores self-care practices, the prevalence of burnout, and the level of institutional support in urban and rural healthcare facilities in Northern India to assist in developing targeted policies.

Conceptual Framework

The conceptual framework includes self-care as an individual resilience factor that affects burnout outcomes (emotional exhaustion, depersonalization, and personal accomplishments). Institutional support (counseling, mental health leave, and wellness initiatives) was a moderator. Gender and region are interaction variables that cumulatively affect vulnerability, particularly among rural female healthcare professionals [4].

METHODOLOGY

Study Design and Population

A cross-sectional survey was administered to 600 HCWs (physicians, nurses, and other support staff) from Delhi, Punjab, Haryana, Uttar Pradesh, and Rajasthan between January and December 2023 at their respective tertiary care centers.

- *Sampling frame:* Full-time registered doctors, nurses, and allied health staff in Delhi, Punjab, Haryana, Uttar Pradesh, and Rajasthan.
- *Recruitment:* Institutional permission taken; electronic informed consent obtained.
- *Ethical approval:* Institutional Ethics Committee (IEC/2022/45).

Inclusion Criteria

1. Healthcare workers who are full-time employed and have more than one year of experience.
2. Stratified sampling was performed by profession (physicians/nurses/other staff), sex, and urban or rural areas.

Data Collection

1. *Self-care practices:* Measured by the WHO Self-Care Index (0-20), which considers the individual's level of engagement in physical activity, rest, sleep, diet, and breaks taken for mental health (T-1).
2. *Burnout:* evaluated using the Maslach Burnout Inventory (emotional exhaustion, depersonalization, and personal accomplishment) (T-2).
3. *Institutional support:* This includes counseling, paid leave, and wellness programs at work (T-3).

Statistical Analysis

Data were analyzed using SPSS v28. ANOVA was used for group comparisons. Cohen's d values, odds ratios (OR), 95% CI, and regression coefficients were provided. The interaction term was assessed by gender and region [5] (T-4).

RESULTS

Urban healthcare workers (HCWs) scored significantly higher in self-care (mean 14.2) than their rural counterparts (mean 9.8) ($p < 0.001$), suggesting a strong statistical difference. Proportionately more rural HCWs (74%) experienced high emotional exhaustion than urban HCWs (52%), and this difference was significant ($p = 0.002$). In addition, the amount of counseling services available was higher in urban areas (65%) than in rural areas (28%) ($p < 0.001$) (Table 1).

Table 2 shows profound differences in self-care and burnout by gender among healthcare workers. Male HCWs outscored females in self-care, with a reported score of 12.1, while females reported 10.3; this was statistically significant ($p = 0.01$). The work-family conflict was much more pronounced for female HCWs, where 68% were affected compared to only 44% of males ($p = 0.001$).

Also, female HCWs scored higher for depersonalization at 22.5 than males at 18.2, which was statistically significant at $p=0.003$ (Table-2).

Table 3 illustrates the differences in institutional support among healthcare professions. Doctors reported the highest access to paid mental health leave (55%) and workplace wellness programmes (60%), followed by nurses (32% and 40%, respectively), while allied staff reported the lowest support, with only 18% receiving paid mental health leave and 25% having access to wellness programmes. These differences were statistically significant, with p -values of < 0.001 and 0.001 , respectively (Table-3).

Table 4 summarizes the regression results for the selected predictors. The self-care score showed a significant negative association with the outcome ($\beta = -0.42$, 95% CI: -0.51 to -0.33 , $p < 0.001$), indicating that better self-care is linked to a lower likelihood of adverse outcomes. The Institutional Support Index was also significantly protective ($\beta = -0.35$, 95% CI: -0.44 to -0.26 , $p < 0.001$), indicating that higher institutional support is associated with a reduced risk. Participants living in rural areas had significantly higher odds of the outcome compared to urban residents (OR = 2.61, 95% CI: 1.78–3.84, $p = 0.002$), with approximately a 2.6 times greater likelihood. The gender $\times$ region interaction was significant ($\beta = 0.18$, 95% CI: 0.03–0.33, $p = 0.02$), suggesting that the effect of sex on the outcome varied by region. Overall, stronger self-care and institutional support reduced the risk, while rural residence and the combined effect of gender and region increased vulnerability (Table-4).

DISCUSSION

The results are consistent with the international burnout literature on the protective effects of self-care. However, relative to high-income countries where evidence-based wellness programs are being

Table 1. Self-care practices and burnout by region (urban versus rural).

Parameter	Urban HCWs (n=320)	Rural HCWs (n=280)	p-value
Mean self-care score	14.2 $\pm$ 3.1	9.8 $\pm$ 2.7	<0.001
High emotional exhaustion (%)	52%	74%	0.002
Access to counseling (%)	65%	28%	<0.001

Table 2. Gender differences in self-care and burnout.

Parameter	Male HCWs (n=260)	Female HCWs (n=340)	p-value
Mean self-care score	12.1 $\pm$ 3.4	10.3 $\pm$ 2.9	0.01
Work-family conflict (%)	44%	68%	<0.001
Depersonalization score	18.2 $\pm$ 5.1	22.5 $\pm$ 6.3	0.003

Table 3. Institutional support by profession.

Parameter	Doctors (n=200)	Nurses (n=300)	Allied staff (n=100)	p-value
Paid mental health leave (%)	55%	32%	18%	<0.001
Workplace wellness programs (%)	60%	40%	25%	0.001

Table 4. Expanded regression model (emotional exhaustion as outcome).

Predictor	β /OR	95% CI	p-value
Self-care score	$\beta = -0.42$	-0.51 to -0.33	<0.001
Institutional support index	$\beta = -0.35$	-0.44 to -0.26	<0.001
Rural (versus urban)	OR = 2.61	1.78–3.84	0.002
Gender $\times$ region	$\beta = 0.18$	0.03–0.33	0.02

developed, rural Indian institutions have limited access to paid mental health leave (18% of allied staff). Organizational inequalities, hierarchical work culture, and gendered responsibilities at home contribute to the risk of burnout [6].

This study provides an understanding of the gaps in self-care and burnout among health workers in Northern India. Urban HCWs appear to practice more self-care than their rural colleagues. This may be attributed to better infrastructure, easier access to support systems, and a more organized work setting than their rural counterparts. However, rural HCWs demonstrated higher degrees of emotional burnout (74%) and reported significantly lower access to counseling (28%). These findings support concerns about the lack of mental health infrastructure affecting rural Indians [2].

There were also marked differences based on sex. Male HCWs practiced greater self-care than their female counterparts. This could be an effect of the dual burden that some women face due to family obligations. Prior work by these researchers [3] substantiates our findings that female HCWs often experience heightened work-family conflict, which was also validated in our study (68% among women vs. 44% among men). Higher depersonalization scores among women point towards emotionally protective detachment, which jeopardizes patient care and personal well-being [7].

Support within institutions differed significantly across professional categories. Unlike allied staff, doctors have greater access to mental health leave and wellness services. This division highlights the underlying resource inequities within Indian healthcare institutions, revealing deep-seated inequalities in resource distribution and the prioritization of staff well-being. The near absence of support afforded to nurses and allied staff is all the more troubling in light of their vital role at the frontline of care and their high burnout risk [1].

The inequalities within institutional structures are equally challenging. Paid leave (18%) and wellness program (25%) allowances provided to allied staff are emblematic of their disproportionate influence as low-tier healthcare workers, reinforcing systemic inequitable bias. Such inequities risk perpetuating burnout cycles that may compromise patient safety and workforce retention [8].

The overarching policy implications underscore a systemic disregard for the welfare of India's healthcare practitioners, arising from inadequate policies. Considering the existence of well-documented associations between the well-being of providers and healthcare outcomes, providing adequate self-care and support systems for healthcare workers becomes imperative not only for occupational health but also for public health [9–16].

CONCLUSION

The healthcare disparities outlined in this study relate to self-care, burnout, and institutional support for workers in North India. Rural HCWs and women suffer disproportionately from higher rates of burnout and inadequate mental health support. Doctors receive more institutional support than nurses and allied staff, accentuating inequities within the professional hierarchy. All these factors point to a lack of systemic mental health care and self-sustaining care frameworks that enable healthcare workers at all tiers to practice equitable self-care.

Limitations

There may be biases in self-reported information, including recall and social desirability biases. The cross-sectional nature of this study prevented causal analysis. Longitudinal and hybrid studies are suggested for future research.

Recommendations

1. *Rural mental health infrastructure gaps:* Access to counseling services can be improved by increasing the availability of telemedicine.

2. Gender-responsive scheduling reforms and equitable mental health leave policies.
3. Mandatory wellness audits and tele-mental health expansion for rural facilities.
4. *Strengthening gender equity programmes*: The family conflict for female HCWs can be reduced with the provision of childcare services, flexible work schedules, and gender sensitivity training.
5. *Adequate paid leave and wellness access*: All staff in nursing or allied positions should be provided with wellness programs and paid leave on the same basis as doctors.
6. *Health care self-care programmes*: Rural HCWs should be taught the WHO Self-Care Index as part of their continuing education.
7. *Self-care training programmes*: National policies should be developed that recognize acute burnout syndrome as an occupational hazard that requires reporting and allocation of appropriate resources.
8. Incorporate self-care and stress management into teaching and training frameworks for medicine and nursing, as well as into continuous professional education (CPE).
9. Healthcare organizations should be mandated to regularly assess and publish reports on employees' well-being, including burnout levels and support service utilization.

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