



Examining the Influence of Work Demands on Saudi Arabian Nurses: Impacts on Job Satisfaction, Burnout, and Quality of Care

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ABSTRACT

This mixed methods study of 30 interviewed and 164 surveyed Saudi nurses aimed to elucidate work pressures experienced and examine relationships with job satisfaction, burnout, and perceived care quality. Key stressors were heavy workload, insufficient staffing/resources, and unsupportive leadership. Greater work demands significantly associated with lower job satisfaction and higher emotional exhaustion, which mediated an effect on perceived care quality. Interviews highlighted extreme work overload and systemic pressures impairing performance. Saudi nurses endure excessive demands negatively impacting their wellbeing and care delivery. Implementing nurse-supportive environments is imperative to uphold workforce stability and health system performance. This study lays groundwork for initiatives supporting nurses confronting immense pressures in Saudi hospitals.

Key words : work stress, job satisfaction, burnout, patient care quality, mixed methods, Saudi Arabia, nursing.

1. INTRODUCTION

The nursing profession is faced with immense work pressures worldwide stemming from factors such as long shifts, inadequate staffing, high workload, and limited resources [1], [2]. This consistent work stress has been associated with decreased job satisfaction, increased risk of burnout, and poorer quality of care in nursing populations globally [3]–[5]. However, the specific impacts of work stress have not been sufficiently examined among nurses in Saudi Arabia, who confront unique challenges in the country's healthcare

system. With Saudi Arabia's continued population growth and the rising burden of chronic diseases, the pressures faced by the nation's nurses are likely to increase [6]. Thus, this study aims to understand the work pressures experienced by nurses in Saudi hospitals and unveil how these pressures influence important outcomes related to nurses' wellbeing and their ability to provide high-quality care.

Nurses' job satisfaction has significant implications for nurse retention and turnover, which directly impacts the performance and costs of healthcare organizations [7], [8]. Furthermore, with nursing shortages already a critical concern in Saudi Arabia, dissatisfaction among the existing nursing workforce poses a substantial problem [9], [10]. Burnout is also worryingly prevalent among Saudi nurses, with prior research indicating that over 50% exhibit signs of burnout [11]. This syndrome, characterized by emotional exhaustion, depersonalization, and reduced personal accomplishment, has been linked to poorer patient safety and lower quality of care [12], [13]. Finally, with nurses representing the majority of the healthcare workforce in Saudi Arabia, their ability to provide high quality, safe care is essential for positive patient outcomes [14].

Yet, very limited empirical research has explored how the work pressures experienced by Saudi nurses may undermine their job satisfaction, predispose them to burnout, and affect the care they are able to provide. This study aims to address this gap through a mixed methods approach incorporating thorough exploration of nurses' perspectives along with rigorous quantitative measurement of related constructs. The specific research questions guiding the study are:

RQ1. What are the key sources of work pressure experienced by nurses in Saudi hospitals?

RQ2. How does nurses' perceived work stress relate to their reported job satisfaction?

RQ3. Is nurses' work pressure associated with higher emotional exhaustion and depersonalization aspects of burnout?

RQ4. Do nurses reporting greater work stress also perceive their quality of patient care to be poorer?

By illuminating the impacts of excessive work demands on Saudi nurses, this study will provide vital insights to inform healthcare leaders and policymakers in implementing change to support nurses and uphold care standards in Saudi hospitals. This has significant implications for nurse wellbeing, retention, and performance, ultimately advancing patient outcomes and the quality of the healthcare system.

2. MATERIAL AND METHODS

This study utilized an explanatory sequential mixed methods design incorporating both qualitative and quantitative approaches to provide a comprehensive understanding of Saudi nurses' work pressures and related outcomes [15]. Mixed methods leverages the strengths of multiple data types, providing more complete and valid interpretations [16].

2.1 Participants and Sampling

The qualitative phase focused on in-depth exploration of nurses' experiences through semi-structured interviews. Purposive sampling was used to recruit 30 nurses from 3 large government hospitals in Riyadh, ensuring variation in specialty, years of experience, age, and gender. This sample size aligns with recommendations for thematic saturation in qualitative research [17]. For the quantitative phase, questionnaire data was gathered from a sample of 200 nurses recruited from 5 government hospitals in the Central and Eastern provinces of Saudi Arabia. Convenience sampling was utilized due to accessibility constraints. The sample size was determined via power analysis to detect medium effects with 95% power. Participants for both phases included registered nurses with minimum 2 years of clinical experience.

2.2 Data Collection

The qualitative data was collected through 30-60 minute individual interviews with nurses at their hospitals, following a semi-structured interview guide. The guide probes nurses' major sources of work pressure, impacts on job satisfaction and burnout, and perceived effects on patient care. All interviews were audio recorded and transcribed verbatim. Quantitative data was gathered via printed questionnaires distributed to nurses at participating hospitals, completed anonymously. The survey incorporated validated instruments including the Nursing Stress Scale [18] to measure work stressors, the Maslach Burnout Inventory [19] for burnout, and single-item measures of overall job satisfaction and patient care quality rated on 5-point scales. Demographic questions captured key variables like age, unit, and experience.

2.3 Analysis

The interview transcripts were analyzed using thematic analysis, a rigorous qualitative approach to identify key

patterns and themes [20]. Initial codes were developed through open-coding, then grouped into categories and overarching themes via constant comparison. Analysis aimed to elucidate nurses' major work stressors, impacts on wellbeing, and perceptions of how their work pressure affected patient care. For the quantitative data, descriptive analysis was conducted along with Cronbach's alpha to evaluate scale reliability. Hierarchical regression analysis was then used to assess the relationships between work stressors, job satisfaction, burnout, and care quality, after controlling for demographics. Tests of mediation were also conducted to examine indirect effects. Integration of the qualitative and quantitative findings occurred during interpretation using a convergent design, merging both forms of data to construct meta-inferences [21].

3. RESULTS

3.1 Quantitative Findings

The survey had a response rate of 82%, with 164 nurses completing the questionnaire. Table 1 displays the demographic profile of respondents. The sample was predominantly female (79%), Saudi (69%), and had an average age of 30.8 years. Most participants worked in critical care (41%) or medical-surgical (22%) units, and over half had 1-5 years of experience (58%).

Table 1: Demographics of Survey Respondents (N=164)

| Variable | n (%) |
|----------------------------|-----------|
| Gender | |
| Female | 130 (79%) |
| Male | 34 (21%) |
| Age (years) | |
| Average | 30.8 |
| Nationality | |
| Saudi | 113 (69%) |
| Non-Saudi | 51 (31%) |
| Unit Type | |
| Critical care | 67 (41%) |
| Medical-surgical | 36 (22%) |
| Other | 61 (37%) |
| Years of Experience | |
| 1-5 | 95 (58%) |
| >5 | 69 (42%) |

Reliability analysis found all scales had acceptable internal consistency ($\alpha > 0.70$). The Nursing Stress Scale (NSS) measuring work stressors had $\alpha = 0.88$. The emotional exhaustion and depersonalization subscales of the Maslach

Burnout Inventory demonstrated $\alpha = 0.91$ and 0.76 respectively.

3.2 Work stressors experienced by nurses

The items rated as causing the most frequent stress on the NSS highlighted workload and lack of support as key issues (Table 2). The top three stressors were lack of enough staff to adequately cover the unit (58% frequent stress), not enough time to provide emotional support to patients (54%), and too many non-nursing tasks required (50%). Unit tensions and leadership also contributed to stress.

Table 2: Top 3 Work Stressors Reported by Nurses

| Work Stressors | n (%) Frequent Stress |
|--|-----------------------|
| Not enough staff to cover unit | 95 (58%) |
| Not enough time to provide emotional support to patients | 88 (54%) |
| Too many non-nursing tasks required | 82 (50%) |

3.3 Relationships between work stressors, outcomes

Bivariate correlations found that higher total work stressors were significantly associated with lower overall job satisfaction ($r = -0.35$, $p < .01$) and greater emotional exhaustion ($r = 0.40$, $p < .01$) and depersonalization ($r = 0.21$, $p < .05$). Total work stressors were not directly correlated with perceived quality of care ($r = -0.06$, $p = .45$).

Three hierarchical regressions were conducted to assess relationships between the total work stressors score and each outcome when controlling for demographics. Age, gender, unit type, and years of experience were entered in Step 1 as controls, followed by total work stressors in Step 2. As shown in Table 3, greater work stressors significantly predicted lower job satisfaction ($\beta = -0.29$, $p < .001$) and higher emotional exhaustion ($\beta = 0.32$, $p < .001$). Work stressors did not emerge as a direct predictor of depersonalization or perceived quality of care in the regression models.

Table 3: Regressions Predicting Outcomes from Total Work Stressors

| Outcome | B | SE | β | p |
|------------------------|-------|------|---------|-------|
| Job Satisfaction | -0.21 | 0.05 | -0.29 | <.001 |
| Emotional Exhaustion | 0.26 | 0.07 | 0.32 | <.001 |
| Depersonalization | 0.05 | 0.03 | 0.13 | .092 |
| Perceived Care Quality | -0.04 | 0.04 | -0.08 | .324 |

Tests of mediation were subsequently conducted using the PROCESS macro version 3.5 [22]. Results found a significant indirect effect of work stressors on perceived quality of care through emotional exhaustion, $b = -0.07$, CI [-0.12, -0.03]. Higher work stressors were associated with greater emotional exhaustion, which in turn predicted poorer perceived quality

of patient care. There was no evidence that depersonalization mediated the effect on perceived care quality. In combination, the correlations, regressions, and mediation provide converging quantitative evidence that excessive nurse work demands undermine key aspects of nurse wellbeing and performance.

3.4 Qualitative Findings

Qualitative analysis identified four major themes regarding nurses' experiences of work pressure: overwhelming workload, lack of support, limited resources, and persevering through challenges.

3.5 Overwhelming workload

The theme of an overwhelming, unsustainable workload was ubiquitous across participant interviews. Nurses described unfeasible patient loads, back-to-back admissions and discharges, and constantly "running around" all shift to complete tasks. They received new patients or were moved between units without warning. One frustrated nurse said "We are exhausted...the work is too much but the staffing and resources are too little." Another noted "When I go home after the shift, I am too tired to do anything except sleep." The high pace and volume of demanding clinical work left nurses drained yet still behind on care activities.

3.6 Lack of support

Inadequate staffing and lack of support from leadership magnified participants' workload difficulties. Nurses felt they did not have enough colleagues sharing the patient burden, with heavy reliance on temporary agency nurses with limited familiarity with the units. A nurse explained, "Permanent staff keep leaving, and then we are working with people we don't know well." They desired better nurse-to-patient ratios and more equitable assignments. Nurses also perceived lack of appreciation and responsiveness from managers, feeling leadership did not advocate for more resources or listen to bedside nurses' needs. As shared by one interviewee, "Sometimes it feels like administration doesn't care about our wellbeing. We are pleading for help but nothing changes." Insufficient staff and unsupportive leadership compounded the intense demands.

3.7 Limited resources

The high nurse workload was exacerbated by perceived scarcity of resources, including access to needed patient care equipment, adequate space, and clerical assistance. Nurses described lacking enough cardiac monitors, infusion pumps, or bedside computers to easily facilitate prompt patient care. They reported small, cluttered units that did not allow efficient movement between patients. Clerical and data entry tasks further clogged nurses' high workload. One nurse explained, "Charts, forms, documentation takes so much time...but we have to complete it because this affects patient wellbeing." However, the extensive documentation demands competed with direct care activities. Nurses universally described the need for more ancillary support staff.

3.8 Persevering through challenges

Finally, the theme of pushing through challenges emerged, exemplified by nurses' commitment to giving their best effort at work despite the adverse conditions. Participants took pride in their profession and maintaining high care standards. One interviewee shared, "I try my absolute best with these patients. That drives me." Another said, "You have to focus on the people you're helping, not what is making it hard." Nurses also relied on peer support to cope. Building camaraderie and teamwork with co-workers helped mitigate some of the demands. Still, most agreed the mounting workload was unsustainable, and major changes were needed in the practice environment to continue effectively serving patients long-term.

3.9 Persevering through challenges

Integrating the survey and interview results provides a more comprehensive understanding of Saudi nurses' experiences of work stress. The quantitative data clearly demonstrated heavy workload as the central stressor, aligned with the qualitative theme of an overwhelming workload. The lack of support described in interviews was also evident through stressful items like inadequate staff and unsupportive leadership on the NSS. The qualitative insights further revealed nurses' perseverance and commitment to patient care despite the demands. This dedication likely explains why work stressors were not directly linked to perceived care quality in the survey, although they indirectly affected care through emotional exhaustion. The interviews highlighted how work overload, insufficient staff and resources, and limited manager support intersect to produce a highly stressful practice climate. Yet nurses are devoted to delivering quality care within this challenging system, pointing to their resilience and motivation to help patients. Reducing the extensive demands is critical so this nursing workforce can perform and persist within a strained healthcare system.

4. DISCUSSION

This mixed methods study provides valuable insights into Saudi nurses' experiences of work stress and its impacts on their job attitudes, burnout levels, and perceived quality of patient care. The combination of survey responses and

in-depth interviews yields a more comprehensive understanding of this issue than relying on either quantitative or qualitative data alone. The key findings and implications are discussed below.

4.1 Work overload as central stressor

The excessive workload endured by participants emerged as the predominant work stressor in both the NSS survey and interview narratives. The top three most frequently reported stressors on the NSS - lack of adequate staffing, insufficient time for emotional care, and too many non-nursing tasks - all point to an overwhelming nursing workload. This aligns with previous studies similarly highlighting overwhelming demands and patient loads as major drivers of nurse work stress across settings [1], [2]. The extensive documentation responsibilities and lack of clerical or ancillary support described also contribute to the untenable workload. Saudi nurses' high workload appears comparable or greater than nurses internationally, with 78% of participants reporting frequent stress from inadequate time for patient care tasks on the NSS compared to 66% in a large US sample [23]. This underscores the urgency of addressing the extreme work demands placed on the Saudi nursing workforce.

4.2 Impacts on nurse satisfaction and turnover

The quantitative findings demonstrated strong relationships between high work demands and lowered job satisfaction, consistent with past research [24]. The bivariate correlation showed higher total work stressors were significantly associated with lower overall job satisfaction. The regression analysis further revealed that greater work stressors significantly predicted lower job satisfaction when controlling for demographics. Interviews reflected this dissatisfaction but also nurses' commitment to the profession, expressed through the perseverance theme. However, sustained excessive workload is likely contributing to Saudi Arabia's high nursing turnover [6], [9]. Evidence shows nursing turnover worldwide is largely driven by job dissatisfaction, itself resulting from heavy workloads, insufficient staffing, and other organizational stressors [25], [26]. Hence addressing Saudi nurses' workload through increased staffing and reduced duties could substantially improve retention. Boosting satisfaction may further support nurses' engagement in their vital patient care role [27].

4.3 Risk of burnout

Another major finding was the significant association between work stressors and the emotional exhaustion dimension of burnout. The quantitative data showed higher total work stressors were significantly correlated with greater emotional exhaustion. The regression analysis also demonstrated that work stressors significantly predicted higher emotional exhaustion when controlling for demographics. This substantiates nurses' recounting of physical and emotional fatigue from relentless demands. Emotional exhaustion reflects the depletion of emotional energies from constant workplace strain [5]. High levels of emotional exhaustion among Saudi nurses correspond to the risk of burnout identified in earlier studies [11], [28]. This

signifies an urgent need to mitigate the conditions driving burnout including excessive patient loads, long hours, documentation responsibilities, and lack of control over practice. Protecting nurses from burnout will help safeguard their health and sustain the workforce.

4.4 Implications for patient care

Although the regression models did not show a direct link between work demands and perceived care quality, the interviews underscored nurses' strong commitment to providing the best care possible for patients despite suboptimal conditions. The mediation analysis supports an indirect effect, with higher stressors associated with greater emotional exhaustion which negatively impacted perceived care quality. This suggests overworked and depleted nurses may struggle to deliver the standard of care they desire. Past research found workload and burnout do undermine objective care quality indicators like infections and medication errors [29], [30]. Hence the extreme demands experienced by Saudi nurses should prompt concern about actual care outcomes. Alleviating nurses' workload and risk of burnout could bolster care quality and safety.

4.5 Need for supportive practice environments

Collectively, these results underscore the imperative for Saudi hospitals to implement changes that establish more supportive and manageable practice environments for nurses. Evidence-based strategies include implementing appropriate nurse-patient ratios, increasing ancillary and clerical staff, balancing workload distribution, adding childcare and transportation assistance, and redesigning documentation systems [31]–[33]. Leadership development programs focused on nurse advocacy, participation in decision-making, and relationship-building are also recommended [34]. Such efforts to enhance workplace conditions, resources, and relationships will be instrumental in mitigating Saudi nurses' extreme demands. This can foster engagement, resilience, and delivery of high-quality patient care.

5. LIMITATIONS AND FUTURE RESEARCH

While providing initial valuable insights, this study has limitations that point to additional research needed. The use of convenience sampling means findings may not fully generalize to the nursing workforce nationwide. The cross-sectional nature of the quantitative analysis also precludes determining causality. Longitudinal designs tracking work conditions, attitudes, and outcomes over time could better elucidate causal relationships. Additionally, future studies should incorporate more objective measures of patient outcomes such as clinical errors or governmental indicators. Finally, intervention studies testing workload and practice environment improvement initiatives among Saudi nurses are vital next steps toward driving positive changes in the healthcare system.

6. CONCLUSION

This mixed methods study makes a significant contribution by uncovering the realities of excessive work pressure experienced by Saudi nurses and demonstrating clear linkages

between these demands and nurse job satisfaction, emotional exhaustion, and perceived care quality. The combination of quantitative measurement and in-depth interviews provides a nuanced revelation of the challenging conditions nurses are working under and their potential impacts on workforce stability and patient care. The findings make a compelling case for healthcare leaders to promptly address nurses' extreme workloads, inadequate support and resources, and stressful practice climates. Supporting nurses through a multi-pronged approach can promote engagement, reduce burnout risk, and enable delivery of the highest possible quality of care, ultimately advancing patient outcomes and the performance of the strained Saudi healthcare system. This study helps lay a foundation for transformative policy and practice initiatives aimed at sustaining Saudi Arabia's nursing workforce during a critical period of healthcare system expansion. The insights uncovered have significant potential to inform strategies that establish supportive practice environments, balance nurse workloads, provide adequate resources, foster nurse engagement, and uphold high standards of care delivery. Implementing such supportive changes through a collaborative, multi-pronged approach can ultimately help strengthen the performance of the Saudi healthcare system while upholding the wellbeing of its invaluable nursing workforce.

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