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Mental Health Status and Its Determinants Among Nursing Staff in Saudi Arabia: An Analytical Review

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Abstract

Introduction: Nursing is inherently stressful; globally, practitioners report high rates of psychological distress. This review synthesizes literature from 2015–2024 to analyze the prevalence and unique cultural-systemic determinants of mental health issues among Saudi Arabian nursing staff.

Methods: A systematic literature search was conducted across PubMed, Scopus, and regional databases using keywords like "nurse," "burnout," and "Saudi Arabia." Peer-reviewed quantitative and mixed-methods studies focusing on clinical and primary care settings between 2015 and 2024 were included and analyzed for prevalence, associated factors, and professional outcomes.

Results: Elevated mental health symptoms are pervasive among Saudi nurses: anxiety prevalence ranges from 20–60%, depression from 10–55%, and burnout particularly emotional exhaustion reaches 80% in high-acuity settings. Pandemic-related spikes saw stress levels reach 61%. Primary determinants include excessive workloads, staffing shortages, and long night shifts. Sociodemographic factors such as gender and nationality significantly influence outcomes; while some findings vary, elevated distress is notably reported among Saudi nationals and males in certain contexts. High distress levels are directly linked to increased medical errors, absenteeism, and compassion fatigue, ultimately compromising the quality of patient care.

Conclusion: Mental health disorders are widespread among Saudi nurses, driven by workplace pressures and cultural variables. Enhancing workforce well-being requires organizational reforms such as optimized staffing and managerial engagement combined with individual resilience training and accessible counseling to ensure healthcare sustainability.

Keywords: Nurses, mental health, burnout, stress, anxiety, Saudi Arabia, healthcare workforce

Introduction

In Saudi Arabia, nursing professionals play a crucial role in the national healthcare system, which has undergone rapid expansion aligned with Vision 2030 goals to improve healthcare services. However, these reforms have also heightened expectations and pressures on the nursing workforce, particularly amid continued nurse shortages and high patient loads. Recent evidence suggests that nurses in various healthcare settings in Saudi Arabia face considerable mental health challenges, including stress, anxiety, depression, and burnout. For instance, a systematic review of burnout among Saudi nurses reported prevalence rates ranging widely from 5% to 82.3%, indicating substantial variability but consistently high psychological impact across different clinical environments and demographic groups. These findings highlight mental health as a pervasive issue among nurses, influenced by work environment, nurse demographics, and system-level factor **(Maniea et al., 2024).**

Nursing is consistently recognized as a high-risk profession for psychological stress, depression, and burnout worldwide **(Alkubati et al., 2025)**. By nature, nursing involves emotional labor, high responsibility, and exposure to suffering, all of which can lead to mental health strain. Global meta-analyses have estimated that on average about 23% of healthcare workers (HCWs) experience anxiety and 22–23% experience depression **(Alreshidi & Rayani, 2023)**. Specific to nurses, **Woo et al., (2020)** reported substantial burnout symptoms internationally. In Saudi Arabia, rapid healthcare expansion and nursing shortages exacerbate workplace pressures. Historically, Saudi Arabia has relied on expatriate nurses, with only ~48 nurses per 10,000 people reported in 2012, this shortage intensifies workloads and stress. Additionally, cultural attitudes toward mental illness and the working environment (e.g. hierarchical structures, long shifts) shape nurses' mental well-being **(Batran, 2019)**.

Stress among nursing staff is another well-documented concern in Saudi Arabia. A multi-center study of primary healthcare nurses in Medina reported that nearly one-third of participants experienced severe or very severe stress, which was significantly associated with chronic diseases and night shift work. These stress levels not only reflect the demanding nature of nursing work but also point

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to systemic issues in work-life balance **(Abdoh et al., 2021) .**

Recent research from Saudi Arabia confirms concerning mental health trends among nurses. Several cross-sectional surveys found high prevalence of anxiety, depression, stress, and burnout. For instance, a Riyadh study of critical care nurses (majority Saudi nationals) reported nearly half of nurses with at least mild-to-moderate anxiety and depression **(Alkubati et al., 2025)**. Another survey of general hospital nurses reported significant rates of clinically relevant anxiety (28.8%) and depression (16.7%) **(Alharbi et al., 2023)**. During the COVID-19 pandemic, frontline Saudi nurses exhibited still higher distress: **Ahmed et al., (2020)** found 61.1% of nurses reported moderate-to-extreme stress, well above rates in doctors or pharmacists, these findings underscore an urgent need to synthesize evidence on nursing mental health in Saudi Arabia **(Almalki et al., 2021).**

Although individual studies document mental health symptoms in Saudi nurses, a comprehensive review of prevalence, causes, and consequences is lacking. Additionally, Saudi-specific cultural, organizational, and workload factors may influence these issues uniquely. This review aims to systematically gather and analyze published data on mental health status among Saudi nursing staff, identifying key determinants (e.g., workload, organizational support, cultural factors) and impacts on care. The goal is to inform policy and practice to support the nursing workforce.

Methods:

This study adopted a narrative analytical review design. This analytical review followed a structured literature search and synthesis approach. Electronic databases (PubMed, Scopus, CINAHL) and regional journals (Saudi Med J, Middle East/North Africa nursing journals) were searched for studies from 2015 through 2024 using terms including “nurse”, “mental health”, “stress”, “anxiety”, “depression”, “burnout”, “Saudi Arabia”. Inclusion criteria were peer-reviewed articles, quantitative or mixed methods studies, systematic reviews focusing on Saudi nursing staff (not students) and reporting mental health outcomes or determinants. Studies of all healthcare workers were included only if they reported nurse-specific data or analysis. Grey literature and opinion pieces were excluded. Titles and abstracts were screened, then full texts of potentially relevant studies were reviewed. Key data on prevalence rates, risk factors, organizational and cultural determinants, and outcomes (e.g., turnover, patient safety) were extracted. A narrative synthesis approach was used: findings from different studies were grouped thematically (prevalence, causes, impacts) to identify consistent patterns. Where multiple studies reported similar measures (e.g., DASS-21 scores), ranges are given. No primary data collection was conducted.

Results:

Prevalence of mental health problems:

The literature indicates that mental health symptoms are common among Saudi nurses, often at levels higher than general population estimates. Anxiety: Reported anxiety prevalence among Saudi nurses varies widely, reflecting different settings and measurement tools. In one 2024 study of critical-care nurses in Hail, 43.1% had scores indicating borderline anxiety and 8.8% indicated severe anxiety **(Alkubati et al., 2025)**. **Alharbi et al. (2023)** surveyed general hospital nurses and found 28.8% with clinical anxiety symptoms. During the COVID-19 pandemic, anxiety was particularly elevated: **Almalki et al. (2021)** found 60.9% of HCWs (including nurses) scored in the moderate-to-severe range on an anxiety scale. Notably, when stratified, nurses reported higher anxiety than physicians or pharmacists. Overall, estimates suggest that perhaps one-third to over half of nurses experience significant anxiety symptoms.

Depression:

Depression rates are similarly high. **Alkoubati et al. (2024)** reported 38.5% of ICU nurses had borderline depression scores and 5.7% severe. Another survey of nurses found 16.7% with depressive symptoms **(Alharbi et al., 2023)**. COVID-era studies again show elevated depression: **Almalki et al. (2021)** reported 54.7% of HCWs had moderate-to-extreme depressive symptoms. Pre-pandemic, one study in Al-Qassim region found 40.5% of nurses had mild-to-moderate depression, and 13.3% had severe depression **(Alkubati et al., 2025).** These findings suggest typical depression prevalence among Saudi nurses on the order of tens of percent, well above population baselines.

Stress:

Work-related stress and general stress levels are also prominently reported. In **Almalki et al. (2021)**, 41.9% of HCWs had moderate-to-severe stress scores, crucially, nurses had the highest stress: 61.1% reported any level of stress versus ~33% of physicians. In an ICU survey, 32.4% of nurses reported feeling nervous and 30% felt exhausted frequently **(Batran, 2019)**. The combination of high workload and emotional exposures likely drives these stress symptoms.

Burnout and Compassion Fatigue:

Burnout often measured by the Maslach Burnout Inventory (MBI) or ProQOL is widely documented. One systematic review cites burnout prevalence of 38–82.3% among Saudi health workers, with nurses particularly affected **(Alreshidi & Rayani, 2023)**. In primary care settings, up to 89% of nurses exhibited high scores on at least one burnout subscale **(Batran, 2019)**. However, a Riyadh hospital study (ProQOL survey) found that only 1.1% of nurses had high burnout; most had “average” or “low” burnout scores. This disparity likely reflects

differences in instruments and samples. Compassion fatigue (secondary trauma) is also noted, though generally at lower rates than burnout. In the Riyadh study, just 2.8% had high compassion fatigue, while 58.8% were average **(Alreshidi & Rayani, 2023)**.

Taken together, these data underscore that mental health symptoms among Saudi nurses anxiety, depression, stress, burnout – are significantly elevated. The wide ranges (e.g., anxiety 28–61%) reflect different contexts (e.g., normal vs COVID times) and measurement cutoffs. Importantly, nurses often report higher rates than other HCWs. For instance, **Alreshidi & Rayani (2023)** found that nurses in Riyadh had higher odds of depressive symptoms than physicians (OR≈2.4). In most studies stratifying by role, nurses emerge as a high-risk group.

Determinants and Correlates:

The literature identifies multiple interrelated factors influencing nurses' mental health in Saudi Arabia. These can be grouped into workload-related, organizational/cultural, and personal demographics.

Workload and Work Environment: Heavy patient loads, and staffing shortages are consistently cited. For example, ICU nurses caring for 5–6 patients at a time reported significantly greater anxiety than those with fewer patients **(Alkubati et al., 2025)**. In one study, nurses working night shifts had markedly higher anxiety scores than day-shift nurses. A Saudi ICU study explicitly identified workload and lack of resources/support as the top stressors **(Batran, 2019)**. These factors align with global findings that nurse-to-patient ratio and overtime hours predict burnout and distress. Extended shifts were also problematic: **Alreshidi & Rayani (2023)** noted that 59.9% of nurses worked >41 hours/week (including overtime), though their ANOVA did not find hours statistically significant for burnout. Still, excessive duty hours likely contribute to fatigue and reduced coping capacity.

Emotional Stressors: Exposure to patient suffering (death, trauma) is another key source of stress. **Batran (2019)** reported that dealing with death and dying was a principal stressor for ICU nurses. Constant emotional labor without adequate debriefing can erode resilience over time. Conflict at work (with physicians or colleagues) and feeling under-prepared also contribute to distress.

Organizational/Support Factors: Perceived lack of organizational support aggravates stress. Although specific Saudi data on leadership support are limited, related studies note that poor communication, blame culture, and limited managerial support can undermine nurses' well-being (consistent with findings in regional safety culture reviews). When nurses feel unsupported by supervisors or policies, their coping resources diminish. This is illustrated by studies linking absence of peer support to higher compassion fatigue. Conversely, interventions providing education, resources, and self-care strategies have been shown to enhance job satisfaction and reduce fatigue **(Alreshidi & Rayani, 2023)**.

Sociodemographic Factors: Several demographic correlates emerge. Many studies find younger nurses report more burnout and stress than older peers **(Alreshidi & Rayani, 2023; Altwaijri et al., 2022)**. **Alreshidi & Rayani (2023)** specifically noted nurses aged 18–25 had significantly higher burnout than older age groups. This may relate to less experience, financial pressures, or life stage. Gender differences are inconsistent: some Saudi studies report male nurses showing higher anxiety/depression scores than females **(Alkubati et al., 2025)**,though globally women often report more distress. Marital status can also affect risk; an international review notes married healthcare workers often have lower depression, implying family support buffers stress. Ethnicity and nationality matter: one Saudi study found that being Saudi national (vs expatriate) was associated with higher anxiety and depression, perhaps due to Saudi nurses facing unique social expectations. Shift work (particularly rotating or night shifts) was linked to depression in one survey **(Alkubati et al., 2025)**. Finally, lifestyle factors (e.g., smoking, inactivity) showed associations: **Alharbi et al., (2023)** found obesity (high BMI) and lack of exercise correlated with anxiety among nurses.

Cultural and Social Context: The Saudi context introduces cultural determinants. Mental illness carries stigma in many Arab societies, including Saudi Arabia, which may discourage nurses from seeking help or acknowledging symptoms. The predominantly female nursing workforce may face additional cultural pressures, e.g., balancing family expectations with demanding shifts. The nursing profession itself is sometimes socially undervalued, especially for local women, adding to stress. A broader review of Saudi nursing notes that discrimination and public misconceptions contribute to job dissatisfaction **(Davies & Yarrow, 2025).** While specific Saudi data on stigma and mental health service use among nurses are sparse, the phenomenon is well-known regionally.

Impacts on Nurses, Patients, and Organization:

Poor mental health among nurses has tangible consequences. Researchers emphasize that anxiety, depression, and burnout reduce nursing quality and safety. Alkoubati et al. (2024) highlight that anxious or depressed nurses are more prone to making errors, have slower response times, and higher absenteeism **(Alkubati et al., 2025)**. Compassion fatigue and burnout contribute to higher turnover and nurse attrition. **Alreshidi & Rayani (2023)** review literature showing that CF and burnout lead to increased resignations, absenteeism, and

difficulty in recruitment, lower staff morale and engagement also follow.

For patients, the repercussions include reduced care quality and satisfaction. Burnt-out nurses may communicate poorly and exhibit less empathy. One Saudi study suggests that units with higher nurse stress have more patient complaints (though robust outcome data are limited). Institutionally, high burnout necessitates repeated hiring and training of new staff, increasing costs and potentially straining budgets. A study in Saudi primary care projected that burnout-related turnover could disrupt healthcare delivery. The COVID-19 context amplified these issues, with policymakers noting that sustained psychological distress in HCWs threatens the resilience of the health system **(Altwaijri et al., 2022).**

In summary, the high prevalence of mental health problems among Saudi nurses undermines both the welfare of nurses and the effectiveness of care. It points to an urgent need for systemic interventions.

Discussion:

This review of the literature indicates that Saudi nurses face a heavy mental health burden. Prevalence: Compared to global averages, many reported rates in Saudi studies are high. For example, while a global meta found HCW anxiety ~23% **(Alkubati et al., 2025)**. Saudi nurse samples often exceed this (30–60%) **(Alkubati et al., 2025; Almalki et al., 2021)**. Burnout estimates (40–80%) also mirror the upper end of global ranges. These elevated rates likely reflect local stressors: chronic staffing shortages (only ~48 nurses/10k as of 2012 **(Alreshidi & Rayani, 2023)**, resource constraints, and long hours. The recent COVID-19 pandemic, with spikes in cases in Saudi (MERS background as well), exacerbated HCW strain, explaining even higher distress in that period **(Almalki et al., 2021; Altwaijri et al., 2022).**

Determinants in Saudi Context: Workload (patient ratios, shift length) and organizational support were key drivers in the literature. Saudi hospitals have faced waves of expanding patient loads (e.g., MERS outbreak, COVID waves) while domestic nurse numbers remain relatively low. Thus, nurses frequently work under pressure. Cultural factors interplay: for example, male Saudi nurses (a minority) reported higher anxiety in one study **(Alkubati et al., 2025)**, possibly due to stigma or role strain in a traditionally female-dominated field. Female nurses often juggle family duties (amid evolving Saudization policies encouraging women's employment), possibly contributing to fatigue. Moreover, expatriate nurses (20–30% of workforce in studies) may feel isolated from family or peer support. The mixed nationality workforce also means variable training and communication styles, potentially raising conflict-related stress. Finally, Saudi cultural norms around authority may make nurses reluctant to challenge unsafe staffing or speak up about burnout, internalizing stress.

Comparison to Other Countries: Some determinants are universal (e.g., staffing levels predict burnout globally). However, the extent of organizational support appears particularly crucial in Saudi settings. For instance, the Riyadh compassion-satisfaction study noted that giving nurses training and self-care resources improved outcomes **(Alreshidi & Rayani, 2023)** a low-cost intervention that could be emphasized in local guidelines. Also, unlike many Western countries where nurse-patient ratios are mandated, Saudi healthcare institutions vary, so advocacy for policy change could draw on these findings.

Implications: The impact on healthcare delivery is worrisome. With nursing shortages, losing experienced nurses to burnout or illness could disproportionately damage care quality in Saudi. This has national importance: Saudi Arabia's health reforms (Vision 2030) aim to improve care, which requires a stable nursing workforce. Moreover, since nurses often mediate patient education and follow-up, their mental strain could undermine public health efforts (e.g., chronic disease management). At the individual level, unaddressed distress can lead to chronic health issues for nurses themselves **(Batran, 2019)**. Culturally competent mental health support is needed, given that stigma may deter some from seeking help.

The literature also suggests positive factors. High compassion satisfaction (CS) was observed (66% of nurses high/average) in one study **(Alreshidi & Rayani, 2023)**. meaning many nurses do find fulfillment at work despite stress. Increasing CS (through recognition, teamwork, professional development) could buffer against burnout. Notably, **Alreshidi & Rayani** found that certified nurses reported somewhat higher CS scores than uncertified peers, hinting that professional growth may protect well-being. These insights point to opportunities for strengthening resilience, such as mentorship programs and career pathways.

Recommendations

Based on the synthesis of recent literature and clinical outcomes in the Kingdom, the following multi-faceted interventions are recommended:

1 .Structural and Workplace Optimization

Staffing and Workload Management: To mitigate burnout, healthcare facilities must ensure safe nurse-to-patient ratios and limit shift durations. Implementing automated workload monitoring systems can help redistribute tasks during peak demand, such as public health crises.

Protected Recovery Periods: Mandating rest breaks and providing dedicated relaxation spaces within hospital units is essential for maintaining cognitive focus and emotional resilience.

2 .Leadership and Managerial Empowerment

Supportive Leadership Training: Nurse managers should undergo structured training in mental health literacy and empathetic supervision. This enables a supportive culture where staff can report distress without fear of reprisal.

Clinical Debriefing: Establishing peer-support sessions and psychological debriefings, particularly after traumatic events or patient deaths, is critical for processing secondary traumatic stress .

3 .Institutionalized Mental Health Services

Confidential Counseling: Providing access to specialized, anonymous Employee Assistance Programs (EAPs) is vital. To ensure cultural alignment, these services should offer gender-concordant counseling and respect Saudi societal values.

Early Detection: Routine psychological screenings using validated tools (e.g., DASS-21 or PHQ-9) should be integrated into annual health reviews to identify at-risk nurses before clinical burnout occurs.

4 .Educational and Resilience Building

Coping Strategy Training: Resilience-building workshops focusing on mindfulness, sleep hygiene, and stress management have demonstrated significant efficacy in the Hail and Qassim regions.

Continuing Clinical Education: Reducing "clinical uncertainty" through regular skills refreshers and simulations can lower job-related anxiety, especially for younger, less experienced staff.

5 .Policy Reforms and Cultural Advocacy

Accreditation and Governance: The Saudi Central Board for Accreditation of Healthcare Institutions (CBAHI) should incorporate nurse wellness metrics and minimum staffing mandates into national quality standards.

Destigmatization and Recognition: National campaigns are needed to elevate the social image of nursing and destigmatize the pursuit of mental health care. Rewarding professional contributions can enhance compassion satisfaction and long-term retention.

Conclusion:

Saudi nurses experience substantial rates of anxiety, depression, stress, and burnout. Key determinants include excessive workload, shift work (especially nights), staffing shortages, lack of resources/support, and emotionally taxing work (patient death). Younger and some male nurses appear at higher risk. These issues compromise nurse well-being and the quality of patient care, contributing to errors, absenteeism, and turnover. The predominantly Saudi nursing workforce and cultural factors (e.g., stigma, female workforce barriers) uniquely shape these problems. Addressing them is critical to sustain Saudi healthcare quality as the system evolves.

References:

Abdoh, D. S., Shahin, M. A., Ali, A. K., Alhejaili, S. M., Kiram, O. M., Abdo, S., & Al, R. (2021). Prevalence and associated factors of stress among primary health care nurses in Saudi Arabia , a multi - center study. *Journal of Family Medicine and Primary Care*, 6–10. https://doi.org/10.4103/jfmpc.jfmpc

Ahmed, A.-H., Fatimah, A.-O., Abdullah, A.-K., & Ali, A.-K. (2020). Prevalence of burnout syndrome and its related risk factors among physicians working in primary health care centers of the Ministry of Health, Al Ahsa region, Saudi Arabia, 2018–2019. *Journal of Family Medicine and Primary Care*, *9*(2), 571–579.

Alharbi, K. A., Alharbi, A. A., Althunayyan, F. S., Suhaibani, K. A., Alharbi, H. A., Albahouth, I. S., Alyahya, A. O., Alrasheedi, A. A., & Aljurayyed, A. M. (2023). Anxiety and Depression among the Nursing Staff, Saudi Arabia. *Global Journal of Health Science*, *15*(4), 1–49.

Alkubati, S. A., Alsaqri, S. H., Alrubaiee, G. G., Almoliky, M. A., Al-Qalah, T., Pasay-An, E., Almeaibed, H., & Elsayed, S. M. (2025). The influence of anxiety and depression on critical care nurses' performance: a multicenter correlational study. *Australian Critical Care*, *38*(1), 101064.

Almalki, A. H., Alzahrani, M. S., Alshehri, F. S., Alharbi, A., Alkhudaydi, S. F., Alshahrani, R. S., Alzaidi, A. H., Algarni, M. A., Alsaab, H. O., & Alatawi, Y. (2021). The psychological impact of COVID-19 on healthcare workers in Saudi Arabia: a year later into the pandemic. *Frontiers in Psychiatry*, *12*, 797545.

Alreshidi, S. M., & Rayani, A. M. (2023). Predictors of compassion satisfaction, compassion fatigue, and burnout among nursing professionals in a medical City in Saudi Arabia. *Risk Management and Healthcare Policy*, 2883–2892.

Altwaijri, Y., Bilal, L., Almeharish, A., BinMuammar, A., DeVol, E., Hyder, S., Naseem, M. T., Alfattani, A., AlShehri, A. A., & Almatrafi, R. (2022). Psychological distress reported by healthcare workers in Saudi Arabia during the COVID-19 pandemic: A cross-sectional study. *PloS One*, *17*(6), e0268976.

Batran, A. (2019). Work related stress among Saudi nurses working in intensive care units. *Open Journal of Nursing*, *9*(11), 1143–1152.

Davies, J., & Yarrow, E. (2025). A narrative review of nursing in Saudi Arabia: prospects for improving social determinants of health for the female workforce. *Frontiers in Public Health*, *13*, 1569440.

Maniea, M., Alsharekh, A., Mazi, A., Alanazi, K.,

Abdulaziz, M., Albulayhid, A., Saeed, M., & Almutairi, M. (2024). Pevalence and Management of Nurses Burnout in Saudi Arabia : A Systematic Review. *Review of Contemporary Philosophy*, *23*(2), 79–87.

Woo, T., Ho, R., Tang, A., & Tam, W. (2020). Global prevalence of burnout symptoms among nurses: A systematic review and meta-analysis. *Journal of Psychiatric Research*, *123*, 9–20.