

# A Comprehensive Evaluation of Work-Related Factors Affecting Nurse Leaders' Well-Being in a Tertiary Hospital in Riyadh, Saudi Arabia

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DOI: <https://doi.org/10.36348/sjnhc.2025.v08i02.001>

| Received: 22.12.2024 | Accepted: 28.01.2025 | Published: 01.02.2025

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## Abstract

Since nursing leadership is acknowledged as a critical determinant of health care outcomes, this study assesses job burnout, embracing emotional exhaustion, depersonalization, and personal accomplishment, as well as overall job engagement among leaders in the nursing field. Notably, the study proposes to compare the nurse leaders' well-being by evaluating job burnout as occupational exhaustion (OE), depersonalization/loss of empathy (DP), and personal accomplishment assessment (PA) indices of work-related well-being in Prince Sultan Military Medical City in Riyadh. The cross-sectional design of the work includes 177 participants being nurse leaders, with the help of instruments such as the Maslach Burnout Inventory and the Work Engagement Scale. Studies show that 53.7% of the respondents had moderate job burnout, and 24.9% had high job burnout. Consequently, 49.7% of the nurse leaders described moderate work engagement and 35.0% strong. The co-relational analysis depicts an insignificant negative coefficient between job burnout and work engagement. However, the evidence of the study revealed that age and work experience have positive and direct effects on job burnout and that age, work experience, and marital status have positive indirect effects on work engagement. This paper underscores the importance of preventing and mitigating burnout among nurse leaders to improve the well-being of the workers with the view of increasing patient outcomes amid enduring workforce scarcity in healthcare. Potential strategies to enhance the role resources for promoting the adaptive functioning of nurse leaders at work are examined.

**Keywords:** Job Burnout, Work Engagement, Nurse Leaders, Healthcare Outcomes, Maslach Burnout Inventory.

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## INTRODUCTION

In the last ten years, there has been a rapid advancement of literature on nurse leadership. [Cummings *et al.*, 2021]. The following research points prove that relationship-based nursing management fosters positive results for the nursing workforce: satisfaction with the job, intent to remain a nurse, and health and well-being. [Cummings *et al.*, 2021]. Nurse leaders are essential in determining the nursing practice or shaping the practice place in healthcare facilities. (Remegio *et al.*, 2021) According to Remegio *et al.*, (2021), Nurse leaders envision, develop, and reproduce improvements to quality safety, access, cost, and effectiveness of patient-centered care. [Remegio *et al.*, 2021] As much as 50 percent of the world's healthcare labor force is made up of nurses, and almost all nations around the globe struggle with critical and chronic nursing shortages. [Alsadaan *et al.*, 2023] According to the International Council of Nurses, this number will balloon to 13 million personnel shortage in the coming

years. [Alsadaan *et al.*, 2023] Due to the lack of nurses, those who exist are overworked daily, thus threatening their working quality and productivity, significantly affecting patient care. [Sharma & Dhar, 2016].

Nursing leadership behaviors play a critical role in shaping nursing performance, thereby meeting the organizational goals of guaranteeing the delivery of quality care and improving patient outcomes [Vaismoradi *et al.*, 2020]. Work-related well-being can be defined in various ways, depending on the discipline, organization, and nation, among other factors. [Niinihuhta *et al.*, 2022] Well-being at work is a broad, complicated, and diversified phenomenon that affects the well-being of persons at work and is influenced by various circumstances, both in the workplace and in workers' personal lives. [Herttuala *et al.*, 2023] One of the problems that primarily affect the ancillary professions, including nursing, is work-related stress, which is due to many reasons, including daily contact with suffering, shift work, the need for high skills, weak

social and economic recognition, as well as exposure to long periods of work lead to physical, psychological, behavioral consequences, sleep disorders, and cognitive impairment [Mannocci *et al.*, 2023]. One way to conceptualize well-being at work is as a collection of emotive and cognitive components; general job satisfaction with coworkers and pay is referred to as cognitive elements. [Almeida *et al.*, 2024] The affective components deal with emotional reactions to the work environment, including comfort, enthusiasm, depression, and anxiety. [Almeida *et al.*, 2024].

In general, experiences referring to employees' mental health, personality and characteristics, and organizational or job characteristics are commonly related to the notion of work well-being. Other than that, a high level of supervisor support is positively connected with high levels of work well-being [Niinihuhta *et al.*, 2022]. Nurse managers are critical to healthcare organizations since their performance impacts patients, especially nurses [Hult *et al.*, 2023]. Further, the condition of LMs affects the nurse turnover intention and organizational commitment level of RNs to the patients. The mental health status of nurse managers and what may affect it is, therefore, very critical given the central position of the leaders on the health of the workplace [Hult *et al.*, 2023].

The significance of leadership in cultivating healthy workplaces is well acknowledged. Several studies have examined how leadership affects health outcomes, specifically burnout, work engagement, and job performance and satisfaction [Kohnen *et al.*, 2024]. Insufficient leadership can negatively impact employee well-being and contribute to illness, often due to inadequate perception, measurement, or analysis of leadership and burnout [Kohnen *et al.*, 2024]. As nurse managers' stress and anxiety levels increase, recruiting new nurse leaders is getting more challenging. Additionally, the desirability of the role is also rising [Kelly *et al.*, 2019]. Healthcare businesses must comprehensively understand the most efficient recruitment and retention of newly appointed nurse managers [Djukic *et al.*, 2017]. Work-related stress (WRS) is prevalent in the nursing workplace and significantly affects the performance of both nurses and the organization [Alenezi *et al.*, 2018].

Lack of effective quality performance among the nurses and administrators presents a danger to delivering quality and safe patient care [Alenezi *et al.*, 2018]. Job stress is defined as an unfavorable psychological response associated with employing experiential and ergonomic resources when the demands of a job exceed the abilities, facilities, or needs of the employee. It can also be regarded as the confrontation between the prerequisites of work and the person's coping capacity. By definition, stress is closely linked to health care and leadership [Niinihuhta *et al.*, 2022]. However, chronic stress in the workplace reduces the

amount of work commitment or can lead to burnout, which is not defined as a continuous response to long-lasting stressors at the workplace [Labrague *et al.*, 2018].

According to the study, nurses and nurse supervisors are experiencing burnout due to increased patient variability and patient acuity, concern over quality and safety, and expectations to train and manage diverse teams while practicing in a dynamic environment. In the era of digital communications, an assumption is that nurse leaders are supposed to be always on call or at least reply to emails at any time [Prochnow *et al.*, 2021]. Previous works have shown that significant factors that lead to stress in nurse leaders include a lack of staff, new roles assumed by nurse leaders, complex work systems, and overload in the work activities assigned [Labrague *et al.*, 2018].

The policy results indicate that the decisional role of a nurse manager involves understanding system-level policy and ensuring its application in their unit(s), supervising, supporting, and overseeing the clinical staff to provide safe and optimal patient care. [Penconek *et al.*, 2021]. It is up to the leadership to create positive and healthy work environments and implement new caring models for stressed nursing staff. However, further study and understanding are still needed to investigate the true nature of leadership styles, the correct strategies for application, and the overall consequences.

Leadership is a well-studied phenomenon because of its importance in fashioning sustainable and constructive working climates and enhancing nurses' ability to bring about beneficial change in their organizations [Ferreira *et al.*, 2022]. Cope and Murray (2017) pointed out that understanding various leadership types can help nurses create a healthy working environment [Cope and Murray 2017].

Training can increase the leadership knowledge and competencies of nurse executives and nurses, allowing them to acquire, promote, emulate, and coach leadership behaviors that are disparate and effective. In return, it can upgrade the numerosness of nursing staff retention and optimize more efficient patient care and safety by avoiding formal leadership roles without sufficient preparation. [Cope & Murray, 2017] Leadership activities are needed to grow the nurses and nurse leaders and support their visions for enhancing the processes and outcomes of care delivery [Alilyyani *et al.*, 2022]. UWES defines work engagement as a positive effect relating to the work one is doing. Work involvement has three dimensions: energy, devotion, and absorption. The first aspect, vigor, is described as "physical and psychological concentrations while at work, willingness to expend effort to achieve work-related goals, and determination to overcome obstacles on the job" [Al-Dossary, 2022]. Workplace stress sources and work-related conflicts that influence

turnover seem equally valid for the nursing staff and nurse leaders [Labrague *et al.*, 2018]. The research proposed that heavy workloads and job pressure may result in low organizational commitment and intention to quit the employer among nurse leaders [Niinihuhta *et al.*, 2022].

Poor leadership, job dissatisfaction, and declining retention rates in the nursing sector would not allow sustainability in healthcare operations, which is one of Vision 2030 objectives; nursing is one of the core units in health services that offer services to patients directly [Al-Dossary, 2022]. Saudi Arabian registered nurses also ranked themselves in moderate to high levels of burnout, where emotional exhaustion and depersonalization dominated. Participants also said they experience conflict and job dissatisfaction but are satisfied with their work's nature. According to Alharbi *et al.*, (2016), the study established that burnout influences the job satisfaction of nurses [Alharbi *et al.*, (2016)]. However, there is limited empirical literature available on the original work-related well-being of nurse leaders, along with the factors affecting them, with limited publications on the methods of increasing recruitment and retention of nurse leaders [Niinihuhta *et al.*, 2022]. This study was designed to evaluate only the work-related well-being of nurse leaders by measuring Job burnout (occupied exhaustion, depersonalization/loss of empathy (DP), and personal accomplishment assessment (PA) at Prince Sultan Military Medical City in Riyadh.

**Aim:** To explore the work satisfaction of the nurse leaders in this study by measuring job burnout and three parameters: occupational exhaustion, depersonalization/loss of empathy (DP), and personal accomplishment assessment (PA) of the nurse leaders in Prince Sultan Military Medical City Riyadh.

### Specific Objectives

1. To evaluate the work-related well-being, Job burnout, occupational exhaustion, depersonalization/loss of empathy (DP), and personal accomplishment assessment (PA) of the Prince Sultan Military Medical City Riyadh nurse leaders.
2. The present study measures the level of job engagement of nurse leaders at Prince Sultan Military Medical City in Riyadh.
3. This study aims to find out the social demographic characteristics most closely related to the well-being of nursing leaders regarding job burnout in Prince Sultan Military Medical City Riyadh.

### Significance of the Study/ Rationale

Understanding nurse leaders' well-being is critical, especially given the healthcare sector's substantial problems, such as workforce shortages and rising patient demand. Nurse leaders impact both their

personal and nursing teams' well-being, directly affecting the quality of patient care [Cummings *et al.*, 2021; Remegio *et al.*, 2021]. With a predicted 13 million nursing shortage worldwide (Alsadaan *et al.*, 2023), high levels of job burnout and work-related stress among nurse leaders present a crucial concern that might jeopardize team stability and patient outcomes [Alenezi *et al.*, 2018; Labrague *et al.*, 2018].

In Saudi Arabia, Vision 2030 emphasizes the importance of long-term healthcare operations. Nurse leaders are essential in building supportive settings, yet many report feeling exhausted and dissatisfied with their jobs [Alharbi *et al.*, 2016]. This study intended to find solutions for improving the well-being of nurse leaders by analyzing aspects such as job burnout, depersonalization, and personal successes [Niinihuhta *et al.*, 2022]. Supporting nurse leaders is critical for increasing retention and assuring the overall efficacy of the nursing profession in providing high-quality care.

## LITERATURE REVIEW

### Search Strategy

A comprehensive search approach was designed to correctly measure the work-related elements influencing the well-being of nursing leaders at a Riyadh University hospital. This strategy involves selecting relevant databases, carefully selecting keywords, establishing explicit inclusion and exclusion criteria, and systematically summarizing pertinent literature. The search was carried out using multiple large databases such as PubMed, CINAHL, MEDLINE, PsycINFO, and Scopus, known for their extensive healthcare and nursing literature coverage. These sources supplied diverse peer-reviewed articles about nursing leaders and managers, laying a solid foundation for the literature review.

The search was guided by a list of keywords including "nursing leaders," "work-related well-being," "burnout," "leadership styles," and "job satisfaction," combined using Boolean operators to refine the results. These terms were joined using Boolean operators (AND and OR) to refine the search results. This method aided in the identification of literature that investigated the intricate links between numerous work-related characteristics and nurse leadership well-being. The search used precise inclusion criteria to narrow down publications highly relevant to the research aims. Only peer-reviewed articles about nurse leaders and managers were considered.

Furthermore, studies must be published in English and conducted in hospitals to ensure contextual relevance. Selected literature addressed work-related issues that affect nurse leaders' well-being, burnout, and job satisfaction. The review rejected non-peer-reviewed articles, studies irrelevant to the target population, and publications in languages other than English.

To conduct an effective search, we entered specific keywords into each database and then used advanced search tools to limit results by publication date, study design, and publication type. Titles and abstracts were assessed for relevance using the relevant inclusion criteria before complete articles were retrieved for further analysis. Secondary screening of these full texts helped validate that the research fulfilled the criteria, resulting in a more focused selection of literature. In addition, reference lists from the discovered publications were examined for more relevant research.

### Previous Studies

Several research provided valuable insights into nurse leaders' experiences with work-related well-being by investigating its relationship with various elements such as background variables, work circumstances, work engagement, sense of cohesion, and fatigue. For instance, Niinihuhta *et al.*, (2022) found statistically significant connections between participants' well-being. Work-related factors include leadership abilities, current position, sense of cohesion, levels of burnout, and all aspects of the working environment [Niinihuhta *et al.*, 2022]. The study emphasizes the challenge of quantifying work-related well-being and the significance of considering many elements. While many participants reported experiencing stress, their overall job-related well-being was high, implying that resources such as practical leadership abilities, supportive work environments, and a strong sense of cohesion may mitigate the impact of stress on nurse leaders' well-being.

Niinihuhta & Häggman-Laitila's (2022) systematic review summarized previous study findings on the association between nurse leaders' leadership styles and nurses' work-related well-being [Niinihuhta & Häggman-Laitila's 2022]. The study addressed the worldwide nurse shortage while increasing nurse retention and well-being. It identified three primary leadership styles - disruptive, supportive, and relationship-focused - and their direct and indirect linkages to nurses' well-being, particularly burnout. The study found that leadership styles influenced well-being through confidence in leaders and organizations, empowerment, work-life conflict, social capital, emotional tiredness, passion, job satisfaction, and motivation. The study underscored the necessity of considering the mediating and indirect effects of leadership styles on nurses' work-related well-being and the need for specialized treatments and training programs to enhance nurses' overall well-being [Niinihuhta & Häggman-Laitila, 2022].

Rushton & Pappas's (2020) study found that burnout is a common condition caused by persistent workplace stress, significantly influencing nurses [Rushton & Pappas, 2020]. Burnout is defined as emotional weariness, depersonalization, and loss of professional competence, and it affects roughly 35% of nurses, with critical care nurses being especially

vulnerable owing to their stressful work environment. The research recommended that interventions target individual and systemic variables contributing to burnout. Strategies to improve individual resilience and well-being should supplement systemic reforms to foster an environment favorable to ethical practices, restore job satisfaction, and encourage resilience and overall well-being among healthcare professionals.

Regarding literature, the analysis examined nine research studies to determine the most effective leadership style for nurse leaders/managers to enhance job satisfaction and minimize burnout among competent staff nurses. The review identified transformational leadership as the most successful strategy to achieve these objectives using databases such as PubMed, CINAHL, MEDLINE, British Educational Index, and Academic Search Premier. The study found a substantial favorable association between transformational leadership and job satisfaction among staff nurses and a positive relationship with burnout avoidance. The analysis also considered other leadership styles, such as transactional, situational, and laissez-faire. The findings highlight the importance of transformational leadership methods in improving job satisfaction and reducing burnout among nursing personnel [Alrobai, 2020].

According to research by Jankelová & Joniaková (2021) conducted on the effect of communication skills and the transformational leadership style of first-line nurse managers (FLNMs) on nurses' job satisfaction, as well as the moderating effect of three main factors - management practice, degree of control (span of control), and psychological and social work factors, as it indicated [Jankelová & Joniaková 2021]. The findings show that communication and transformational leadership skills substantially directly impact job satisfaction and have moderate but significant effects on management and control methods. Low levels of these variables strengthen positive connections, while psychosocial work aspects exhibit a negative moderating effect, with greater values lowering the direct beneficial effects on job satisfaction. These findings emphasize the importance of effective communication, transformational leadership, and organizational practices in increasing nurses' job satisfaction in healthcare settings [Jankelová & Joniaková, 2021].

A systematic review and meta-analysis by Membrive-Jiménez *et al.*, (2023) investigated the prevalence and correlates of burnout among nurse managers [Membrive-Jiménez *et al.*, 2023]. The search was performed across numerous databases, including Medline, PsycINFO, CINAHL, LILACS, Scielo, and Scopus, using the search equation "burnout AND nurs\* AND (health manager OR case managers)." The findings revealed that nursing administrators frequently feel high emotional weariness and depersonalization. Burnout has been linked to a variety of demographic and professional characteristics, including age, gender, married status,

having children, workplace harassment, and job-related stress. Work overload, people management conflicts, time limits, and inadequate support from superiors have all been cited as significant drivers of burnout among nurse managers [Membrive-Jiménez *et al.*, 2023].

To examine the prevalence and levels of burnout among nurse managers and investigate the association between burnout and various socio-demographic, occupational, and psychological aspects. The findings found that a significant majority of participants reported high degrees of emotional tiredness (22.4%), depersonalization (21%), and low personal accomplishment (57.6%) [Membrive-Jiménez *et al.*, 2022]. Working long shifts was a significant risk factor for burnout. Depression was also found to predict emotional weariness and depersonalization, while conscientiousness, agreeableness, and openness predicted personal success. 34.1% of individuals experienced high burnout, particularly in reduced personal accomplishment. The study emphasizes the role of psychological and occupational factors in the development of burnout among nurse managers, emphasizing the need to address these factors to reduce the frequency of burnout in this population [Membrive-Jiménez *et al.*, 2022].

One quantitative systematic review sought to collect, appraise, and synthesize current knowledge on interventions meant to improve nurses' well-being at work, an area formerly dominated by burnout. The review looked at eight papers published between 2009 and March 2015 using databases such as CINAHL, Cochrane, EBSCO, PubMed, PsycINFO, and Scopus. The investigations comprised three randomized controlled trials (RCTs), three controlled before-and-after (CBA) designs, and two interrupted time series (ITS) designs. The Cochrane method was used to assess the risk of bias. The findings revealed a wide range of interventions: two were person-directed, two integrated individual and organizational methods, and two were entirely organization-directed. Approximately half of these interventions focused on stress management, while others sought to improve colleague interactions, working circumstances, or professional skill monitoring. The findings demonstrated moderate evidence for the efficacy of four out of six interventions for nurses in inpatient and outpatient settings. However, the research found significant variety in the conceptual frameworks and evaluation criteria employed and a need for standardized interventions and long-term effectiveness studies to address nurses' work-related well-being [Romppanen *et al.*, 2017].

Alluhaybi *et al.*, (2023) review sought to find and consolidate studies on the relationship between nurse managers' leadership techniques and staff nurses' work engagement in hospital settings and make recommendations for improvements and future research. The review thoroughly evaluated papers published

between 2010 and 2021 across numerous databases, adhering to Joanna Briggs Institute methodology principles and PRISMA 2020 reporting criteria. Eleven studies were selected, and three main leadership style themes emerged: relationally-focused, task-focused, and lack of leadership. Each theme is strongly associated with nurses' work engagement, measured by devotion, absorption, and vigor. Trust in the leader, structural empowerment, work-life balance, and personal resources all played roles in mediating the effects of leadership styles. The findings show that positive leadership styles, particularly relational behaviors, can increase nurses' work engagement, emphasizing the need for practical leadership training and a supportive working environment for nurse retention and engagement [Alluhaybi *et al.*, 2023].

## METHODOLOGY

### Research Design

The study conveniently targeted nurse leaders in the Prince Sultan Military Medical City in Riyadh, Saudi Arabia, and the research was cross-sectional in design. A cross-sectional research design is an epidemiological approach to capturing data at a solitary time. [Polit & Beck, 2019] Cross-sectional studies possess several strengths; these include time and cost-effectiveness, wide sample size, assessing prevalence, and hypothesis generation. However, they cannot show 'causation,' are prone to selection bias, can give little time information, and do not help study rare occurrences. [Weyant, 2022]

### Study Setting

In research, context means the geographical location, the organizational environment, the characteristics of the participants, and any other circumstances that define the study project domain and framework [Spector, 2019]. The study was conducted in Prince Sultan Military Medical City in Riyadh, Saudi Arabia, which is considered one of the region's largest and most important medical facilities. It contains many clinics offering various types of medical services.

### Study Sample

The study comprised all registered nurses practicing in leadership roles at Prince Sultan Military Medical City in Riyadh, Saudi Arabia. Participants in the study were nurse leaders across periods, including the nurse manager, charge, head or clinical director, or head nurses. The participants comprised current employees at Prince Sultan Military Medical City during the study period and were willing to give informed consent to participate. Survey participants excluded from the sample included the following categories: nurses in the facility lacking formal leadership positions, those on leave, and those who did not complete the administration's survey questionnaire. Other personal details, including age, gender, years of experience, and education level, were also obtained from the study participants.

**Study Procedure**

The sampling approach for this investigation was convenience sampling. This technique entailed selecting people who were easily accessible and available for the study, considering factors including convenient places and desire to participate. Convenience sampling resulted in a more representative sample. Convenience sampling can supplement a cross-sectional study design [Scholtz, 2021]. Convenience sampling enables researchers to conduct cross-sectional studies in less time by gathering data quickly and efficiently from easily accessible individuals. Furthermore, convenience sampling assures that individuals are available [Scholtz, 2021]. An electronic questionnaire was developed and distributed to nurse leaders who met inclusion criteria via WhatsApp, email, and social media.

**Study Instrument**

The data collection technique is sequential, mainly when human expertise in network data collection is used to solicit information from respondents using a survey tool, evaluate the answers, and arrive at conclusions to enhance understanding in this field [Zhou *et al.*, 2018].

**Section One: Socio-Demographic Characteristics**

This study explored the socio-demographic and professional characteristics of Prince Sultan Military Medical City nurse leaders. Participants were provided data on gender, age, marital status, work experience, education level, departmental affiliation, nationality, and job title.

**Section Two: The Maslach Burnout Inventory (MBI)**

One of the most recognized tools psychologists utilize to quantify burnout in people, especially in the workplace, is the Maslach Burnout Inventory (MBI) test. Psychologists Christina Maslach and Susan Jackson created the job characteristics model in the early 1980s. The MBI consists of three subscales: Negative outcomes include emotional exhaustion, depersonalization, and personal accomplishment. Emotional Exhaustion is a subscale that captures the emotional fatigue resulting

from work-related requirements. They evaluate the emotional costs and an individual’s capacity to handle demands arising from work. The depersonalization subscale aims to capture the feelings of the people in the organizations regarding negativity, cynicism, or detachment from their tasks. It signifies the emergence of meanness or sarcasm as a coping mechanism for handling emotions. The Personal Accomplishment Scale captures an individual’s feeling of self-efficiency and triumph in his or her occupation. It measures perceptions of productivity, success, and job satisfaction. For burnout assessment among nurses in hospitals in Prince Sultan Military Medical City in Riyadh, Saudi Arabia, research and practice will employ the MBI commonly. It offers valuable information about employees’ emotional and psychological functioning levels, guiding the organization on which members may be vulnerable to burnout and which domains may require treatment. Related to this, Soares *et al.*, 2023 revealed that the questionnaire will also feature questions regarding age, gender, years of service, and educational attainment [Soares *et al.*, 2023].

**Section Three: The Work Engagement Scale (WES)**

A work engagement questionnaire was used in this study. The Work Engagement Scale (WES) was used to measure the level of engagement an individual feels towards their job. The scale consists of 17 statements that employees are asked to rate based on how often they feel that way about their work. The scale covers three critical dimensions of work engagement: vigor (VI), dedication (DE), and absorption (AB) (Choi *et al.*, 2020).

**Sample Size**

The sample size included all nursing leaders at Prince Sultan Military Medical City in Riyadh who meet the inclusion and exclusion conditions. The total number of nursing leaders in Prince Sultan Military City in Riyadh is 326, distributed as shown in Table 1. According to the OpenEpi program and at a confidence level of 95%, the target sample number in the study was 177, as shown in Figure 1.

<b>Sample Size for Frequency in a Population</b>	
Population size(for finite population correction factor or fpc)(N):	326
Hypothesized % frequency of outcome factor in the population (p):	50%+/-5
Confidence limits as % of 100(absolute +/- %)(d):	5%
Design effect (for cluster surveys-DEFF):	1
<b>Sample Size(n) for Various Confidence Levels</b>	
ConfidenceLevel(%)	Sample Size
95%	177

**Figure No.1**

**Table No.1**

Clinical Director	17
Head Nurse	52
Charge Nurse	257
<b>Total</b>	<b>326</b>

**Data Analysis**

SPSS version 23 was used to analyze the data. To investigate nurse leaders' well-being and job engagement at Prince Sultan Military Medical City in Riyadh, we used descriptive statistics (Frequencies and Percentages) with SPSS version 23. We calculated frequencies and percentages for the Maslach Burnout Inventory (MBI)'s three core burnout dimensions: occupational tiredness, depersonalization/loss of empathy (DP), and personal accomplishment (PA). We then used the Work Engagement Questionnaire (UWES) to assess job engagement. The frequencies and percentages of engagement ratings were calculated using descriptive statistics.

We used Pearson correlation coefficients to investigate the links between burnout and engagement. This investigation contributed to a better understanding of how differences in job engagement may link with various characteristics of burnout. To investigate socio-demographic features linked with job burnout, we used correlation to evaluate burnout ratings across demographic variables such as gender, age, years of experience, and P-value less than 0.05.

**Scoring System**

The Maslach Burnout Inventory (MBI) system will calculate the total scores for each subscale and interpret the results based on established cutoff points. The following scoring guidelines are commonly used for the MBI:

Emotional Exhaustion	Low	0-16
	Moderate	17-26
	High	27-54
Depersonalization/Loss of Empathy	Low	0-6
	Moderate	7-12
	High	13-30
Personal Accomplishment	Low	0-31
	Moderate	32-38
	High	39-48

**Ethical Considerations**

The principles of ethical research practices were complied with throughout the study. Ethical approval was obtained from the Institutional Review Board (IRB) at Prince Sultan Military Medical City in Riyadh, Saudi Arabia (Number: E-2385). As for ethical considerations, the participants' consent was gained before the study, and their anonymity was preserved. The study complied with ethical standards and regulations regarding research

on human subjects. Participation risks/benefits concerns were identified. Before executing the study, possible risks or benefits that may arise among the participants were considered.

**RESULTS**

**Findings**

**Table 1: Demographic Profile of Participants**

Variable		N	%
Gender	Male	37	20.9
	Female	140	79.1
Age in Years	Less than 30 years	24	13.6
	31-40 years old	86	48.6
	41 years or more	67	37.9
Marital status	Single	51	28.8
	Married	112	63.3
	Divorced or widowed	14	7.9
Work Experience	1-5 years	21	11.9
	6-10 years	31	17.5
	More than 10 years	125	70.6
Education Level	Diploma in Nursing	8	4.5
	Bachelorette	130	73.4
	Master's degree	39	22.0

Variable		N	%
Department	Critical Care	49	27.7
	Emergency	6	3.4
	OBGYNE	39	22.0
	Medical/Surgical	9	5.1
	OPD/Clinic	24	13.6
	Hematology/Oncology	21	11.9
	Renal Department	3	1.7
	OR/Theater	21	11.9
	Neonatal	5	2.8
Nationality	Saudi	69	39.0
	Non-Saudi	108	61.0
Job Title	Charge Nurse	119	67.2
	Head Nurse	48	27.1
	Clinical Director	10	5.6
<b>Total</b>		177	100.0

Table 1 presents demographic information about the participants of the study. A gender distribution preference was observed where only 20.9% of the respondents were male while 79.1% were female, showing that the study mostly had female participants; 37 participants were male, and 140 were female. The largest group comprises respondents aged between 31 and 40, 48.6% (86) of the participants of sixty-seven participants, 41 and above years, 37.9%, whereas the 30 and below years were 13.6% with only twenty-four participants. Regarding marital status, most of the participants are married 63.3 % (112 participants); then singles 28.8 % (51), divorced or widowed 7.9 % (14). The practical experience of field practice shows that 125 participants out of the total have 10 years or more experience 21 participants have 1-5 years of working experience, and the rest of the participants, 31

participants, have 6-10 years of experience.

Seven out of ten participants (73.4% of 130 participants) possessed a bachelor's degree, while 22.0% (39 participants) possessed a master's degree in nursing, and 4.5 % (10 participants) possessed a Diploma in Nursing. The departments have diverse lateral levels; the critical care department has ranked 27.7% (49 respondents). Others include: OBGYNE (22.0%, 39); OPD/Clinic (13.6%, 24). Concerning nationality, Saudi Arabian participants comprised 39.0 % (69), and non-Saudi participants comprised 61.0 % (108), showing that the workplaces have a diverse population. For the job titles, Charge Nurses are the most on the list (67.2%, 119 participants), and Head Nurses (27.1%, 48 participants), while Clinical Directors are limited to only 5.6%, 10 participants.

**Table 2: Job Burnout Domains among Participants**

Job Burnout Domains		N	%
Emotional Exhaustion (EE)	Low	56	31.6
	Moderate	62	35.0
	High	59	33.3
Depersonalization/Loss of Empathy	Low	83	46.9
	Moderate	46	26.0
	High	48	27.1
Personal Accomplishment	Low	79	44.6
	Moderate	68	38.4
	High	30	16.9

Table 2 analyzes job burnout domains among the participants, examining three key areas: Emotional Exhaustion (EE), Depersonalization/Loss of Empathy, and Personal Accomplishment. Regarding Emotional Exhaustion, the responses reveal a relatively balanced distribution among the levels of burnout. A substantial 31.6% (56 participants) report low emotional exhaustion, while 35.0% (62 participants) experience moderate exhaustion. However, a significant portion, 33.3% (59 participants), indicate high levels of emotional exhaustion, suggesting that about one-third of the respondents are experiencing a considerable amount of

fatigue related to their job roles.

The Depersonalization/Loss of Empathy domain exhibits a different trend. A majority of participants, 46.9% (83 participants), report low levels of depersonalization, which implies they maintain a healthy level of empathy in their professional interactions. In contrast, 26.0% (46 participants) report moderate depersonalization, while 27.1% (48 participants) indicate high levels. Therefore, these results suggest that while many participants can retain empathy, a notable percentage experience challenges maintaining this

critical aspect of professional relationships.

For the Personal Accomplishment domain, results show that 44.6% (79 participants) feel a low sense of personal accomplishment, implying that nearly half of the respondents may struggle with feelings of efficacy

and achievement in their work. These results contrast with 38.4% (68 participants) who experience a moderate sense of accomplishment and only 16.9% (30 participants) who report high levels of personal accomplishment.

**Table 3: Overall Levels of Job Burnout among Participants**

Variable		(N)	(%)
Level of Job Burnout	Low Job Burnout	38	21.5
	Moderate Job Burnout	95	53.7
	High Job Burnout	44	24.9

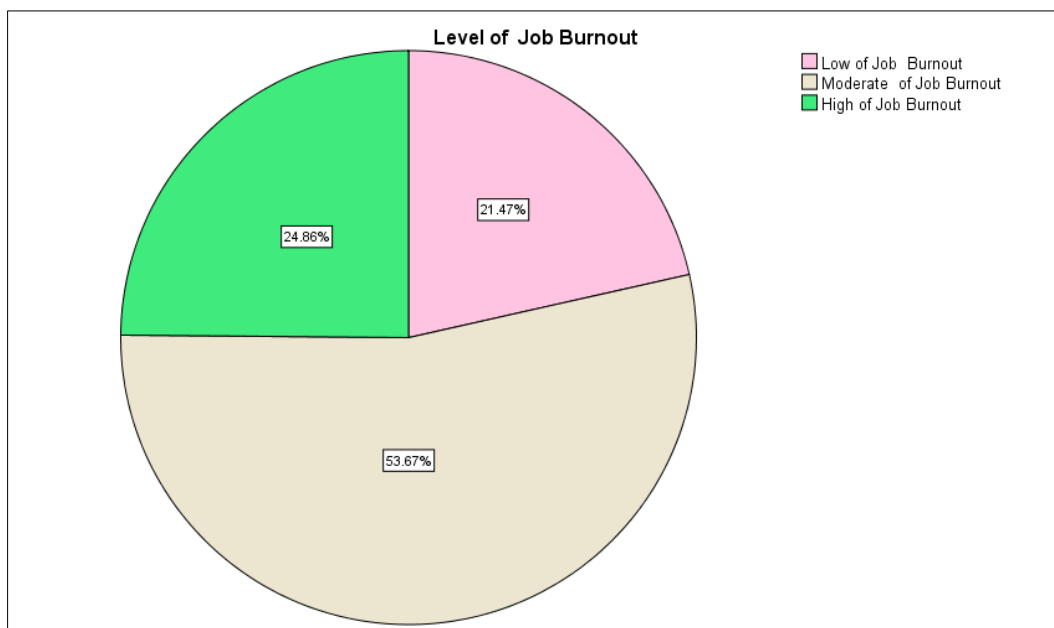
N- Sample size

% - Percentage

Table 3 and Figure 1 provide a summary of the overall levels of job burnout experienced by participants, categorizing their experiences into three distinct levels: low, moderate, and high burnout. The findings indicate that a minority of participants, 21.5% (38 individuals), report low levels of job burnout, suggesting that these individuals are relatively less affected by stressors associated with their professional roles. This is a positive indicator, as it signifies that some participants maintain a healthy balance in their work-life dynamics.

In contrast, a significant majority, comprising 53.7% (95 participants), experience moderate levels of job burnout. This suggests that more than half of the participants encounter some degree of burnout, which may impact their job satisfaction, performance, and overall well-being.

Furthermore, 24.9% (44 participants) report high levels of job burnout, indicating that nearly one-quarter of the respondents are likely facing substantial challenges related to their work, such as emotional exhaustion, depersonalization, and a diminished sense of personal accomplishment.



**Figure 1: Levels of Job Burnout among Participants**

**Table 4: Work Engagement Domains among Participants**

Work Engagement Domains	N	%
Vigor (VI)	Low	36.7
	Moderate	42.9
	High	20.3
Dedication (DE)	Low	24.9
	Moderate	26.6
	High	48.6

Work Engagement Domains		N	%
Absorption (AB)	Low	27	15.3
	Moderate	77	43.5
	High	73	41.2

Table 4 presents the distribution of work engagement among participants, categorized across three domains: Vigor (VI), Dedication (DE), and Absorption (AB). These domains are essential for understanding how engaged individuals feel in their work.

**Vigor (VI)**

The results for the Vigor domain indicate that 36.7% (65 participants) report low levels of vigor, suggesting that many individuals might be experiencing a lack of energy and enthusiasm in their work. However, a more significant segment, 42.9% (76 participants), falls within the moderate range, indicating that they experience a reasonable amount of energy and vitality. A smaller group, 20.3% (36 participants), reports high levels of vigor, reflecting a strong sense of energy and resilience in their professional roles.

**Dedication (DE)**

In the Dedication domain, 48.6% (86 participants) report high levels of dedication, indicating that nearly half of the respondents feel a strong sense of meaning, pride, and significant involvement in their work. Conversely, 24.9% (44 participants) report low levels of dedication, while 26.6% (47 participants) show moderate levels. These results show that while many individuals feel highly dedicated, they still need help finding that connection to their work.

**Absorption (AB)**

For the Absorption domain, 15.3% out of 27 participants reported low levels, indicating they might struggle to fully engross themselves in their tasks. The moderate category captures 43.5% out of 77 participants, suggesting that a considerable portion of participants experience a balanced level of engagement. Notably, 41.2% of 73 participants report high levels of absorption, reflecting their ability to engage deeply with their work tasks.

**Table 5: Overall Levels of Work Engagement among Participants**

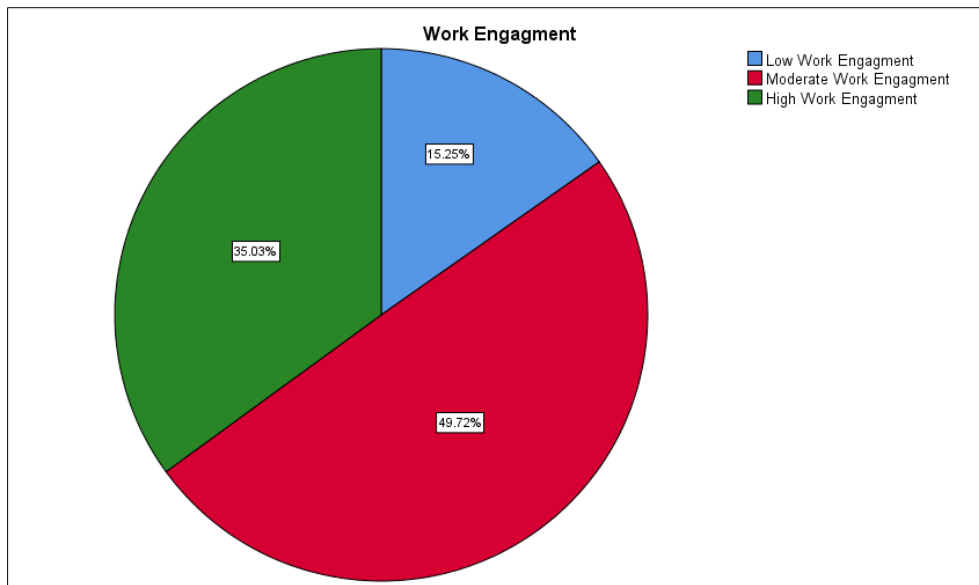
Variable		N	%
Work Engagement	Low Work Engagement	27	15.3
	Moderate Work Engagement	88	49.7
	High Work Engagement	62	35.0

N- sample size  
%-percentage

Table 5 and Figure 2 highlight the overall levels of work involvement indicated by participants, demonstrating three separate groups: low, moderate, and high job engagement. A small percentage of respondents, 15.3% out of 27 participants, indicated low work engagement, indicating a potential disconnect or lack of enthusiasm in their employment, which could have a negative impact on job satisfaction and productivity. A considerable plurality, 49.7% (88 participants), fall into the moderate engagement category, indicating that while they feel motivated and connected to their work, there is still room for development in developing more profound commitment and excitement. Notably, 35.0% out of 62

participants indicated high levels of work engagement, indicating significant energy, dedication, and absorption in their jobs, which improves both performance and job satisfaction.

Overall, the findings show that most people are moderately engaged at work, with a significant portion being very engaged. Thus, it provides a chance for employers to implement engagement-boosting tactics, focusing on those who may be struggling, to foster a more motivated and engaged workforce. This allows firms to boost productivity, employee satisfaction, and retention rates.



**Figure 2: Levels of Work Engagement among Participants**

**Table 6: Correlations between Work Engagement and Level of Job Burnout**

Variables		Work Engagement	Level of Job Burnout
Work Engagement	Pearson Correlation	1	-0.137
	P-value		0.070
	N	177	177
Level of Job Burnout	Pearson Correlation	-0.137	1
	P-value	0.070	
	N	177	177

N- sample size.

The association analysis between work engagement and job burnout among the 177 participants yielded a Pearson correlation coefficient of -0.137 and a p-value of 0.070. Such a negative correlation shows an inverse, weak relationship, meaning that job burnout decreases as work engagement increases and vice versa. However, turning to our analysis, it must be noted that such a correlation is not significant at the conventional 0.05 level of risk since the calculated p-value equals

0.070. Even though the association indicates that higher work involvement correlates with reduced levels of job burnout, there is still inadequate evidence because the results are not statistically significant. Therefore, further research with greater community samples and more components may be needed to advance the understanding of the relationship between work engagement and job burnout, as revealed in the provided data.

**Table 7: Correlation Analysis of Demographic Variables and Job Burnout**

		Gender	Age	Marital status	Work Experience	Education level	Department	Nationality	Job Title
Job Burnout	Pearson Correlation	-0.199**	0.167*	0.106	0.198**	0.034	-0.009	-0.045	0.051
	P-value	0.008	0.026	0.160	0.008	0.651	0.908	0.549	0.498
	Sample size (N)	177	177	177	177	177	177	177	177

The research used a cross-sectional correlation design with 177 participants to establish relations between selected demographic variables and job burnout levels. From the findings, the following overarching conclusions are deduced: The authors proved the negative connection between gender and job burnout (Pearson correlation coefficient  $r = -0.199$ ,  $p = 0.008$ ). Consequently, this study indicates that various gender identifications may be associated with diverse degrees of job burnout enshrinement, underlining the importance of

integrating gender dimension into any workplace health promotion undertakings.

Moreover, it was found that age correlated positively with job burnout with the coefficient  $r = 0.167$ ;  $p = 0.026$ . These results suggest that older participants have higher burnout scores than younger participants, meaning that age-related features may increase workplace stress and fatigue. As in the case of job involvement, work experience proved to have a fairly

significant though negatively correlated relationship with job burnout ( $r = 0.198, p = 0.008$ ). What remains, however, is the mere fact that older employees are more susceptible to burnout because of chronic stress or stress arising out of increased responsibility with experience.

The correlation analysis of marital status has a correlation coefficient of  $r = 0.106$ , whereas the  $p=0.160$  depicts a non-significant correlation. This means that marital status can be an insignificant factor in job burnout. Moreover, there was a weak correlation between education level and job burnout ( $r = 0.034$ ) and

an insignificant correlation ( $p = 0.651$ ), which suggested that education level may not significantly influence burnout. The study also found that departmental affiliation and nationality had no significant connections with occupational burnout, as indicated by correlation coefficients of  $r = -0.009$  ( $t = -0.162, p = 0.908$ ) and  $-0.045$  ( $t=-0.727, p = 0.549$ ). These research results indicate that job burnout is consistent based on demographic factors. Similarly, there was only a weak relationship between job title and conditions ( $r = 0.051$ ), and this correlation was non-significant ( $p=0.498$ ).

**Table 7: Correlation Analysis of Demographic Variables and Work Engagement**

Variables		Gender	Age	Marital status	Work Experience	Education level	Department	Nationality	Job Title
Work Engagement	Pearson Correlation	0.108	0.363**	0.150*	0.245**	-0.017	0.045	0.147	-0.008
	P-value	0.151	0.000	0.046	0.001	0.820	0.554	0.051	0.921
	Sample size (N)	177	177	177	177	177	177	177	177

Table 7 presents a correlation comparison to identify the extent of the correlation between work engagement and critical demographic characteristics with a sample of 177 participants. The research results outline some remarkable associations that help explain how various aspects affect employee engagement levels in funny workplaces.

Data analysis proved a positive relationship between age and work engagement; more details are shown in Table 3; the Pearson correlation coefficient was equal to 0.363, and  $p < 0.001$ . This significant relationship indicates that the older employees might be more committed to their work than the young employees because of their working experience, maturity, or dedication to duty. Moreover, the results of job experience revealed a positive correlation significance with the work engagement level, which means the higher the work experience of the employees, the better the work engagement level ( $r = 0.245, p = 0.001$ ). This might be due to a better awareness of their tasks and responsibilities and a stronger familiarity with the organization's culture.

The multiple correlation coefficient of marital status with work engagement was  $r = 0.150$  at  $p = 0.046$ . Thus, it can be suggested that married people may be slightly more engaged than single people. The discovery is consistent with the concept that marital commitment might lead to higher organizational commitment to work. However, the other demographic characteristics did not significantly influence work engagement. Gender had a low positive correlation of  $r = 0.108$ , and its p-value was 0.151; thus, it can be inferred that gender does not play a strong role in the level of job engagement.

In addition, education level had an insignificantly negative correlation with workplace engagement, meaning there is no strong relationship

between employees' education level and engagement ( $r = -0.017, p = 0.820$ ). Likewise, there were no meaningful associations between department affiliation ( $\chi^2 = 6.554$  and  $p = 0.383$ ) or participants' nationality ( $\chi^2 = 2.301$  and  $p = 0.051$ ). Last and not least, job titles had the weakest correlation with the criterion variable ( $r = -0.008, p = 0.921$ ), and this demonstrates that a specific title to the job of an employee is not related to their level of work engagement.

**DISCUSSION AND CONCLUSION**

This study aimed to review and address all work-related factors influencing the quality of life for nurse leaders employed in Prince Sultan Military Medical City in Riyadh and identify job burnout, work engagement, and socio-demographic variables. This chapter will provide the final assessment of the presented study and compare its results to those of prior research.

**Discussion**

Our data found that 53.7% of nurse leaders experienced moderate burnout, while 24.9% reported high levels. These findings are consistent with earlier research, which suggests that nurse leaders and healthcare professionals frequently face severe pressures in their employment. For example, Niinihuhta *et al.*, (2022) found a high burnout rate among nurse leaders and linked it to leadership abilities and working conditions [Niinihuhta *et al.*, (2022)].

Similarly, Tawfik *et al.*, (2019) underlined the role of organizational elements on physician well-being, which is consistent with our findings that systemic difficulties contribute to burnout. In contrast, our survey revealed a more balanced distribution of emotional weariness levels, with only 31.6% expressing low emotional exhaustion. This finding contradicts Romppanen *et al.*, (2017), who found higher levels of

burnout among nurses [Romppanen *et al.*, 2017]. The disparity could be attributed to changes in sample size, population characteristics, and regional healthcare environments, implying that contextual factors are essential in determining burnout experiences.

Regarding work engagement, our study indicated that 35% of nurse leaders expressed high levels of engagement, a substantial difference from 15.3% who reported low engagement. This finding is consistent with Marti *et al.*, (2019), who hypothesized that work engagement is critical in reducing burnout. [Marti *et al.*, 2019] Saito *et al.*, (2018) discovered that connecting personal beliefs with organizational principles can increase work engagement among healthcare personnel, crediting the positive association between engagement and well-being. In contrast to our modest involvement levels, other studies have found variable levels of engagement among nurses [Saito *et al.*, 2018]. For example, Rastogi *et al.*, (2019) discovered that supervisors' support positively increases work engagement, showing the relevance of managerial practices in generating engagement, which may help to close some of the gaps in our sample [Rastogi *et al.*, 2019].

Our systematic literature research yielded a weak inverse correlation between work engagement and job burnout, which was  $-0.137$ ,  $p = 0.07$ , though not significant. A study by Marti *et al.*, (2019) also observed work engagement to be directly associated with burnout among nurses. Some demographic variables were also examined in relation to their correlation to job burnout. It was possible to establish statistically significant relationships between burnout levels and gender,  $r = -0.199$ ,  $p = 0.008$ , and age,  $r = 0.167$ ,  $p = 0.026$ . Previous research implies this assumption; for instance, Saito *et al.*, (2018) suggest that age and job experience, which are demographic variables, culminate in burnout [Saito *et al.*, 2018]. As for the second research question, it was found that education level and married status did not have any correlation, again in agreement with Romppanen *et al.*, (2017), who also explained that demographic factors like the ones mentioned in this study did not play a role in the burnout levels [Romppanen *et al.*, 2017]. This study established significant positive correlations between job involvement and demographic factors: age; Pearson's  $r = 0.363$ ,  $\text{sig} = 0.000$ ; work experience; Pearson's  $r = 0.245$ ,  $\text{sig} = 0.001$ ). This agrees with Rastogi *et al.*'s (2019) experience topic, which stated that increased age and experience lead to higher involvement. However, our findings differ slightly from those of Marti *et al.*, (2019), who found that demographic variables played a less significant effect on engagement while still emphasizing the importance of corporate culture [Marti *et al.*, 2019].

### Implications for Practice

Our study's overall tendencies highlight the need for organizations, particularly healthcare

institutions, to develop tailored interventions to increase nurse leaders' well-being. Our data indicate that, despite a considerable majority of nurse leaders retaining moderate to high levels of engagement, a sizable minority nonetheless suffer from burnout. Tawfik *et al.*, (2019) and Romppanen *et al.*, (2017) propose strategies to boost participation, such as leadership development programs, more supervisor assistance, and a focus on improving working conditions [Tawfik *et al.*, 2019; Romppanen *et al.*, 2017].

### Conclusion

Our study sheds light on the varied well-being character among nurse leaders, paralleling and contrasting with previous research. Significant burnout and high levels of involvement underscore the need for healthcare organizations to make changes. More studies are needed, mainly longitudinal studies and large samples, to analyze better the effects of demographic characteristics on burnout and engagement in nursing leaders. By addressing these challenges, healthcare organizations can improve their leaders' well-being, patient care, and nurse staff retention.

### Recommendations

A multimodal approach is advised to improve well-being and prevent burnout among Prince Sultan Military Medical City nursing leaders. For instance, healthcare institutions should develop comprehensive wellness programs that prioritize mental health, stress management, and burnout prevention, including counselling and stress alleviation seminars. Furthermore, fostering a supportive work environment through open communication and regular check-ins between nurse leaders and supervisors can create a sense of value and support; incorporating leadership training can provide nurse leaders with additional skills, such as emotional intelligence and conflict resolution. Promoting work-life balance through flexible work schedules and fair workloads is also critical, as it relieves the stress of demanding tasks while enabling shared decision-making and effective delegation to reduce individual obligations. Regular job engagement and burnout assessments should be carried out to identify at-risk personnel and facilitate timely treatments customized to unique team requirements. Finally, providing professional development opportunities can dramatically boost nurse leaders' job satisfaction and skill growth. Healthcare businesses that foster a culture of continual growth can assist their leadership teams and improve patient care and overall organizational effectiveness.

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