Impact of Job Stress on Job Satisfaction for Nursing Staff: A Survey in Healthcare Services in Yemen

Ammar Ali Alraimi[1]* and Abhijeet Shelke[2]

[1]*Dr. Health Management, Dr. Babasaheb Ambedkar Marathwada University, India*

[2]*Prof. Management Science, Dr. Babasaheb Ambedkar Marathwada University, Aurangabad, India*

***Corresponding author**
Ammar Ali Alraimi, Al-Rakas Street, Sanaa, Yemen.

ABSTRACT
This study looks at the effect of job-related stress on the job satisfaction of nursing staff in hospitals. Job stress is one of the most significant workplace health concerns for employees, and job satisfaction has been identified as an important factor in the delivery of high-quality services and superior performance at hospitals. This paper presents a field survey. Drawing on a sample of 362 nurses operating in Yemeni hospitals, we examined the degree to which stressors such as conflict, workload, interpersonal relationships, career development, information access, physical surroundings, career prospects, management style, job enrichment, rewards, and job security are all factors that influence job satisfaction. Conflict, excessive workload, and a lack of job autonomy were shown to be negatively correlated with all job satisfaction characteristics, whereas a lack of information access and feedback was found to be positively associated with employees' satisfaction with rewards and job security.

Introduction

The impact of workplace stress on employees' well-being and productivity has gained increasing attention in recent years, especially in the healthcare sector where nursing staff play a critical role [1]. The relationship between work stress and job satisfaction has been extensively studied in the literature, particularly in the context of healthcare workers [2]. Nursing staff shortages have been identified as a major challenge in many healthcare systems, with adverse effects on patient outcomes and staff well-being [3].

Job satisfaction is a key driver of employee performance and retention [4]. In the healthcare sector, the quality of services heavily relies on nursing staff and their level of job satisfaction [4]. However, nursing staff face various challenges in their daily work, such as heavy workload, inadequate resources, and limited autonomy, which can contribute to work-related stress [6].

Work-related stress is a prevalent issue in the healthcare sector, with potential negative effects on patient care and staff well-being [7]. Managing work stress effectively is crucial for improving job satisfaction and overall staff well- being [8]. However, the factors contributing to work-related stress among nursing staff are complex and multifaceted, requiring a comprehensive approach to address them [9].

Therefore, this study aims to examine the relationship between work-related stress and job satisfaction among nursing staff in the healthcare sector, with a focus on identifying the specific factors contributing to work-related stress and their impact on job satisfaction. The findings of this study can inform the development of targeted interventions to improve staff well-being and ultimately enhance the quality of patient care.

Background
Job-Related Stress
Work-related stress has been recognized as a significant occupational health concern worldwide. It is defined as a negative psychological and physiological response to workplace stressors, resulting in detrimental effects on an individual's well-being and work performance [10,11]. Studies have shown that healthcare professionals, including nursing staff, are at a higher risk of experiencing work-related stress due to their demanding work environment, high workload, emotional labor, and exposure to violence and aggression [12,13].

The consequences of work-related stress on nursing staff are profound and can impact their physical, mental, and social health, as well as their job satisfaction and turnover intention. High levels of work-related stress have been associated with increased absenteeism, presenteeism, and staff turnover, leading to reduced quality of care and increased healthcare costs [12,13]. Several studies have identified organizational factors, including low job control, poor leadership, and inadequate support, as significant contributors to work-related stress among nursing staff [14,15]. In addition, work-related stress among nursing staff has been linked to decreased patient satisfaction and increased medical errors, infections, and adverse events [16,17].

To address work-related stress among nursing staff, interventions have been proposed at the individual, organizational, and policy levels. These include stress management programs, communication and teamwork training, supportive leadership, workload management, and flexible scheduling [11,12,14]. It is important for healthcare organizations and policymakers to prioritize the prevention and management of work-related stress among nursing staff to ensure safe and high-quality patient care, as well as to promote the well-being and retention of healthcare professionals.

Job Satisfaction
Job satisfaction is an essential aspect of employee wellbeing and organizational effectiveness. According to Hackman and Oldham, job satisfaction is a psychological state resulting from the evaluation of one's job and work environment [18]. It is a multidimensional construct that encompasses several aspects of work, including the nature of the work, the work environment, relationships with coworkers and supervisors, rewards, and opportunities for growth and advancement.

Research has shown that job satisfaction is a critical factor in determining employee retention, productivity, and organizational commitment [19]. When employees are satisfied with their jobs, they are more likely to stay with their organizations, work harder, and contribute more to the organization's goals. In contrast, job dissatisfaction can lead to absenteeism, turnover, and reduced productivity, ultimately affecting the organization's bottom line [20].

There are several theories explaining job satisfaction, including the dispositional theory, affective events theory, and social information processing theory. Dispositional theory suggests that job satisfaction is a stable personality trait, with some individuals being predisposed to feel satisfied or dissatisfied with their jobs [21]. In contrast, affective events theory suggests that job satisfaction is determined by emotional responses to specific work events, such as a promotion or a positive interaction with a colleague [22]. Social information processing theory proposes that job satisfaction is influenced by social comparisons with other employees in similar jobs and organizations [23].

Several factors have been identified as determinants of job satisfaction, including job characteristics, work-life balance, organizational culture, and interpersonal relationships. Job characteristics theory suggests that specific job characteristics, such as task variety, autonomy, and feedback, can impact job satisfaction [18]. Work-life balance has also been linked to job satisfaction, with employees who can balance their work and personal life reporting higher levels of job satisfaction [24]. Organizational culture, including the values, beliefs, and norms shared by employees, can also impact job satisfaction [25]. Positive interpersonal relationships with colleagues and supervisors have also been linked to higher levels of job satisfaction [26].

Several studies have investigated the relationship between job satisfaction and individual and organizational outcomes. For instance, research has shown that job satisfaction is positively related to job performance [19]. Employees who are satisfied with their jobs are more likely to perform well and achieve their goals. Job satisfaction has also been linked to lower levels of absenteeism and turnover [27]. Satisfied employees are less likely to miss work or quit their jobs, leading to reduced costs for organizations. Additionally, job satisfaction has been linked to higher levels of organizational commitment, with satisfied employees being more committed to their organizations [28].

In conclusion, job satisfaction is a critical aspect of employee wellbeing and organizational effectiveness. It is a multidimensional construct that encompasses several aspects of work and is influenced by various factors, including job characteristics, work-life balance, organizational culture, and interpersonal relationships. Job satisfaction has been linked to several individual and organizational outcomes, including job performance, absenteeism, turnover, and organizational commitment. It is, therefore, essential for organizations to prioritize job satisfaction in their human resource management practices.

Relationship between Job Satisfaction and Job-Related Stress
Work stress has long been recognized as a significant occupational health problem that can have serious implications for employee well-being, job satisfaction, and organizational productivity [29]. Many studies have found a negative relationship between work stress and job satisfaction, with stressors such as workload, job insecurity, lack of control, and poor organizational support being particularly problematic [30,31].

Numerous studies have demonstrated that job satisfaction is negatively associated with job-related stress [30-33]. For instance, a study of nurses in South Africa found that job stress was significantly negatively related to job satisfaction, with workload and organizational support being the most important predictors of both constructs [33]. Similarly, a study of nurses in Iran found that high levels of job stress were associated with lower job satisfaction and higher intention to leave [34]. A meta-analysis of over 200 studies found that job stressors, such as role ambiguity, role conflict, and job demands, were negatively related to job satisfaction [35]. Conversely, job resources, such as social support, feedback, and autonomy, were positively related to job satisfaction.

In the healthcare sector, job satisfaction is particularly important, as it has been linked to better patient outcomes, lower rates of turnover, and higher levels of organizational commitment [36]. One study of healthcare workers found that job satisfaction was positively associated with patient safety and quality of care, and negatively associated with absenteeism and turnover [36]. Another study of nurses found that job satisfaction was related to better patient outcomes, such as lower mortality rates, shorter hospital stays, and higher patient satisfaction ratings [37]. Thus, promoting job satisfaction among healthcare workers is important not only for their own well-being, but also for the quality of care they provide to patients.

Numerous factors have been identified as influencing job satisfaction and job-related stress in the healthcare sector. For example, a study of nurses in the United States found that job stress was negatively related to control over practice and job autonomy, as well as job demands and role conflict [38]. Similarly, a study of nurses in Iran found that job stress was associated with high workload, lack of social support, and low

organizational commitment [34]. Another study of nurses in the United States found that job satisfaction was positively related to autonomy, job resources, and social support, and negatively related to job demands and work-family conflict [39].

Organizational factors have also been found to influence job satisfaction and job- related stress. For instance, a study of nurses in the United Kingdom found that job satisfaction was related to organizational support, staffing levels, and perceived fairness of pay [40]. Another study of nurses in Canada found that job satisfaction was positively related to organizational culture, work-life balance, and opportunities for professional development [41].

In conclusion, job-related stress and job satisfaction are interconnected and affect not only the mental health of employees but also their job-related behavior. Understanding the factors that affect job satisfaction and job-related stress is crucial to promoting employee well-being and job performance.

Research Methodology
Sample and Questionnaire Design

The study was conducted in private hospitals located in Sanaa, the capital city of Yemen. A total of 384 nurses were provided with structured questionnaires, of which 362 responses were considered valid, resulting in a response rate of approximately 95%. The majority of the nurses (68%) were female, and 65% were between the ages of 30 and 50. Approximately 31% of the nurses had work experience ranging from one to five years, and the majority of nursing staff (85%) earned less than $200 per month.

Before the survey was made public, ten experts in psychology, human resources, and statistics reviewed it to ensure its validity. The survey instrument used to measure job satisfaction and occupational stress was developed by modifying preexisting multidimensional scales. The respondents were asked to rate their answers on a 7-point Likert scale. The Job-Related Tension Scale (JRTS), which consists of 15 items, was chosen to assess workplace stress [42,43]. To measure job satisfaction, a 15-item scale was used that has been validated in previous studies [19,44].

Data Analysis
Construct Validity

PCA was initially utilized to explore the underlying factors of job stress and job satisfaction scales. The screen test measure was used to identify four factors, which accounted for 56% of the variance. According to Stevens PCA is commonly used to reduce the number of variables in a dataset, as it identifies the underlying structure of the data [45]. The item scale was selected based on a cutoff of 0.50, and a normalized varimax rotation was applied to make the structure easily interpretable. Following an examination of the loadings of each factor, four primary components were discovered: (a) conflict & workload, (b) work autonomy and career advancement, (c) information access and feedback, and (d) interpersonal interactions at work. The eigenvalues of these primary components are presented in Table 1.

Additionally, PCA was employed to determine the latent structure of the job satisfaction measure. As shown in Tables 1, the analysis revealed three factors that met the Kaiser criterion and had eigenvalues greater than one. The same factor solution was obtained using the screen test criterion. These three main factors accounted for approximately 58% of the total variation and were identified as (a) the physical environment and career options, (b) management style and job enrichment, and (c) rewards and job stability. Prior to conducting PCA, the Kaiser Meyer Olkin (KMO) test was conducted to assess the adequacy of the sample (KMO $\geq$ 0.50), and the Bartlett sphericity test was used to evaluate the degree of correlation between variables (p<0.001). Finally, Cronbach's coefficient alpha was calculated for each dimension to confirm the internal consistency or reliability of all scales. According to DeVellis, a coefficient alpha of 0.7 or higher is considered acceptable. All subscales demonstrated reliability levels significantly above this threshold [46].

Table 1: Internal reliability examination of all scales, descriptive statistics, and factor constructs (PCA).

	Mean	Std. dev.	Number of items	Eigenvalues	Var. expl. (%)	Alpha Cronbach	KMO**
Work-related stress	0.890						
Workload and Conflict	4.06	1.276	5	4.770	31.79	0.758	
Career development and Work autonomy	3.81	1.612	3	1.351	9.03	0.787	
Information access	3.24	1.210	4	1.272	8.46	0.754	
Interpersonal relations at job	3.05	1.309	3	0.965	6.42	0.709	
Job satisfaction	0.903						
Career opportunities and Physical	4.15	1.119	6	6.073	40.48	0.815	
Job enrichment and Management style	4.45	1.152	6	1.494	9.95	0.841	
Job security andRewards.	3.37	1.215	3	1.052	7.01	0.727	

** To determine whether a sample size was sufficient, the Kaiser Meyer Olkin (KMO) indicator was calculated. An acceptable level must be at least 0.5. For all scales, the significance level for Bartlett's test of sphericity is p<0.001 Valuable N = 362

Fornell and Larcker's average variance extracted (AVE) criterion is used to estimate the convergent validity of scales. A latent variable's AVE value should be more than 0.50 to explain more than half of the variance of its indicators on average [47]. All scales met this condition, as shown in Tables 2 and 3. Furthermore, the convergent validity of a scale can be determined by assessing the item factor loadings on the model's constructs. Convergent validity is defined by items with high loadings on their underlying concept

and low loadings on unrelated constructs. In this analysis, all items' factor loadings on their connected constructs are equal to or larger than 0.70, whereas their loadings on unrelated constructs are less than 0.4.

Table 2: The results of the job-related stress scale's convergent and discriminant validity analyses.

	AVE	CR	CW	WACD	IAF	IR
Conflict and workload (CW)	0.544	0.855	0.737			
Career development and Work autonomy (WACD)	0.703	0.876	0.577	0.838		
Information access and feedback (IAF)	0.549	0.813	0.519	0.501	0.705	
Interpersonal relations at work (IR)	0.565	0.795	0.542	0.469	0.562	0.751

Fornell and Larcker's AVE test and correlation criterion were used to assess the discriminant validity of the measurement model. When the square root of the respective AVE of each concept exceeds the correlations between the components that comprise each pair, discriminant validity has been achieved. In that situation, each dimension shares more variation with its own set of indicators than with a separate set of indicators represented by another dimension. The correlation matrix for the two constructs is also shown in Tables 2 and 3. The square roots of the AVEs are contained in the diagonal of the matrix, providing a measure akin to a correlation. The diagonal elements in the relevant rows and columns are greater than the off-diagonal components, demonstrating appropriate discriminant validity for all constructs in this research model.

Table 3: The results of the job satisfaction scale's convergent and discriminant validity analysis

	AVE	CR	PECO	MSJE	RJS
Physica environment and Career opportunities (PECO)	0.557	0.880	0.746		
Management style and job enrichment (MSJE)	0.562	0.883	0.648	0.749	
Rewards and job security (RJS)	0.589	0.809	0.485	0.407	0.767

Multiple Regression Analysis
Multiple regression analyses were carried out to assess the hypotheses. Demographic data (gender, age, working experience, education level, income, department size, position, and job status) were used as control variables.

Tables 4 shows the statistical analysis results for investigating the links between job stress and several characteristics of job satisfaction. The independent factors explain 30.6% of the total variation in job satisfaction resulting from the physical environment and career opportunities (PECO), as well as 21.9% and 32.9% of the management style and job enrichment (MSJE), rewards, and job security elements (RJS), respectively.

Table 4: Results of regression models examining the effect of job-related stress on job satisfaction

Independent variables	PECO	MSJE	RJS
Gender	0.151**	0.033	0.073
Age	0.155**	0.102	-0.154**
Education	-0.193***	-0.188***	-0.052
Experience	0.041	0.016	-0.008
Income	0.093	0.036	0.161**
Position	0.029	0.000	0.124**
Department size	0.054	0.050	0.179***
Job status (permanent/ temporary)	0.096	0.115	-0.053
Workload and Conflict	-0.235***	-0.218***	-0.516****
Career development and Work autonomy	-0.290****	-0.193**	-0.118
Feedback and Information Access	0.016	0.013	0.151**
Interpersonal relations at the job	-0.033	-0.101	0.019
Adjusted -R2	0.306****	0.219****	0.329****

** significant at the 0.05 level, *** significant at the 0.01 level, **** significant at the 0.001 level, N=219

The values of standardized betas show that job stress related to conflict and high workload is significantly and negatively connected with all job satisfaction dimensions (stand. b= -0.235, p<0.01, dependent: PECO, stand. b= -0.218, p<0.01, dependent: MSJE, stand. b= -0.516, p<0.001, dependent: RJS). Occupational stress caused by autonomy and professional advancement had a detrimental impact on only two dimensions of job satisfaction (stand. b= -0.290, p0.001, dependent: PECO, and stand. b= -0.193, p<0.05, dependent: MSJE). In contrast, the stress associated with information availability and performance feedback is favorably related to rewards and security (stand. b= 0.151, p<0.05).

When the control variables are included, senior (stand. b= 0.151, p<0.05) and female (stand. b= 0.155, p<0.05) nursing staff is more satisfied with their career options and physical surroundings. Similarly, nurses with better earnings (stand. b= 0.161, p<0.05), at a higher hierarchical level (stand. b= 0.124, p<0.05), and working in large departments (stand. b= 0.179, p<0.01) are more satisfied with their rewards and job security. Nonetheless, older employees nearing retirement are unsatisfied with their compensation and job security (stand. b= 0.154, p<0.05), as the Yemen government has promised harsh austerity measures such as pension cuts, increased retirement ages, and compulsory suspension before retirement. Furthermore, less educated nurses are unsatisfied with career chances (stand. b= -0.193, p0.01) and job enrichment (stand. b= -0.188, p0.01). There are no severe issues of multicollinearity among the independent variables because the variance inflation factors (VIF) are much below the 3-point limit specified in the Social Sciences Literature.

DiscussionThis study looks at how work-related stress affects job satisfaction while controlling for gender, age, education level, income, work experience, department size, and position. Job stress caused by conflict and a severe workload, in particular, was found to be strongly and negatively correlated with all job satisfaction parameters (physical environment and career opportunities, management style and job enrichment, and rewards and job security). This finding is consistent with prior research that has highlighted the negative effects of work overload [48]. For example, Chu et al. study in Taiwan and Seo et al. study in Korea both verified the negative relationship between workload as a component of job stress and nurses' job satisfaction. Furthermore, several studies in various countries have demonstrated that nurses' workload is a major source of work-related stress [49,50]. Indeed, management encourages people to multitask and boost their performance. As the economic crisis worsens, the existing worldwide nursing shortage is likely to worsen, increasing nurses' burden [48]. Furthermore, a high level of occupational stress and a severe workload diminish the quality of nursing care, and nurses have difficulty satisfying patient needs [50].

The findings show that occupational stress caused by autonomy and career advancement has a detrimental impact on nurses' job enrichment, management style, and career opportunities. Several investigations have recognized self-development and promotion, as well as autonomy, as important elements influencing nurses' job satisfaction [48].

The work of Krugman et al. in a US study examining ten years of progressive transformation emphasizes the need to develop a clinical ladder that enables nurses' professional development, increases organizational commitment, and improves job satisfaction. A comparable grading scheme has been successfully established or proposed in other research in the United Kingdom [48,52]. Blegen's meta-analysis, as well as Chu et al. and Zheng et Liu's investigations, found a high association between job autonomy and job satisfaction [32,49,53]. Similarly, Yin et Yang's meta-analysis in Taiwan discovered that the main characteristics connected to nurse turnover were job satisfaction, job autonomy, and possibilities for advancement [54]. Many studies on nurses' responsibilities in their work conditions have also found that role ambiguity is another major source of job stress and has a substantial impact on hospital nurses' job happiness [49]. Role ambiguity shows the predictability of the outcome or responses to employee conduct. It occurs when a nurse lacks information regarding the behavioral requirements associated with his or her function, how those role needs are to be met, and the assessment processes available to ensure that the behavior done is suitable [55].

Surprisingly, the findings have an impact on the literature. Stress associated with position ambiguity, as understood as limited information availability and performance feedback, was found to improve nurses' satisfaction with rewards and job security. This finding can be explained by management's approach to performance evaluation and feedback.

Implications
There is a growing interest in enhancing the job satisfaction of nursing personnel in hospitals because it affects performance and hence health care. The Yemeni environment requires research that adds to the revitalization of academics' expertise.

It examines the reality of job satisfaction for nursing staff in Yemeni hospitals in the context of ongoing conflict, and it emphasizes work pressure and its impact on job satisfaction. The study's findings and recommendations will teach policymakers and decision makers to prioritize employee care, particularly nursing staff, who are responsible for providing health care to patients in hospitals. Additionally, the results of the current study could have several managerial implications for improving employee satisfaction and alleviating work stress.

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