

Work-Life Balance as a Mitigating Factor for Job Stress in Healthcare: Evidence from a University Hospital in Algeria

المواءمة بين الحياة المهنية والحياة الخاصة كعامل مخفف للضغط الوظيفية في القطاع الصحي: أدلة من مستشفى الجامعي في الجزائر

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Abstract :

This study examines work-life balance effects on job stress among healthcare employees at Ibn Badis University Hospital, Constantine. Using a descriptive-analytical approach, a structured questionnaire was administered to 135 employees through stratified random sampling.

Results revealed low work-life balance levels ($M=2.34$) and high job stress ($M=3.56$), with strong negative correlation ($r=-0.684$, $p<0.001$). Regression analysis explained 67.5% of job stress variance, identifying family-supportive climate ($\beta=-0.490$) as the strongest predictor, followed by supervisory support, work flexibility, and leave benefits. Findings confirm that enhancing work-life balance, particularly organizational culture and support systems, effectively reduces job stress in healthcare settings.

Key words: Work-Life Balance; Job Stress; Healthcare Employees; Organizational Culture; Human Resource Management

JEL classification codes: M12, J28, I12.

1. Introduction

Facing job stress is one of the greatest challenges facing workers in the health sector, especially in developing countries such as the Ibn Badis University Hospital in Constantine. Achieving balance between work and personal life is not merely a luxury, but becomes an imperative necessity to ensure the quality and efficiency of the health system, given the shortage of human resources and the increasing demand for services.

1.1. Study Problem

Algerian hospitals have witnessed in recent years a huge increase in work pressure resulting from a shortage of staff, an increase in the number of patients from various provinces, and deficiencies in infrastructure. The problem lies in the extent to which the work-life balance for hospital workers affects the levels of stress they face, and the ability of the hospital's policies and procedures to reduce these stresses.

▪ Main Research Question:

What is the effect of work-life balance on the level of job stress among employees at the Ibn Badis University Hospital in Constantine?

▪ Sub-Questions of the Study

- 1) What is the level of work-life balance among employees in the university hospital?
- 2) What is the level of job stress faced by employees?
- 3) Are there statistically significant differences in the relationship between the dimensions of balance (work flexibility, family-friendly leave & benefits, supervisory and coworker support, family-supportive work climate) and job stress?
- 4) How strong is the relationship between each dimension of balance and the level of job stress?

1.2. Study Hypotheses: These consist of:

▪ Main Hypothesis of the Study

There is a statistically significant negative relationship between work-life balance and job stress among employees at the Ibn Badis University Hospital.

▪ Sub-Hypotheses of the Study

- 1) There is a statistically significant negative relationship between work flexibility and job stress.

- 2) There is a statistically significant negative relationship between family-friendly leave & benefits and job stress.
- 3) There is a statistically significant negative relationship between supervisory and coworker support and job stress.
- 4) There is a statistically significant negative relationship between a family-supportive work climate and job stress.

1.3. Study Importance :

- **Theoretical:** To enrich the literature on the subject of balance and stress in the Algerian health sector.
- **Practical:** Provide data and evidence that help health administrations take measures to improve the working conditions of medical staff, which will reflect on the quality of healthcare.
- **Institutional:** Highlight obstacles to implementing balance programs and help formulate practical solutions that match the nature of the health sector in Algeria.

1.4. Study Methodology

- **Type of Study:** Descriptive, analytical, applied.
- **Study Population:** All employees of a number of key hospital departments.
- **Sample:** The study employed a stratified random sampling technique based on departmental affiliation to ensure proportional representation across hospital functional units. From a target population exceeding 1,000 employees at Ibn Badis University Hospital Constantine, a sample of 135 employees was calculated using a 95% confidence level and 5% margin of error, with proportional allocation applied across key departments (Emergency, ICU, Surgical, Medical, Pediatrics, Obstetrics, Nursing, Administrative, and Technical Services).
- **Data Collection Tool:** A structured questionnaire divided according to the stated dimensions.
- **Statistical Analysis:** Means, standard deviations, validity and reliability tests, correlation coefficient, and multiple regression analysis.

2. Theoretical Framework of the Study

2.1. Work-Life Balance

Work-life balance is considered one of the modern concepts that has gained increasing importance in recent decades, especially with the changes that have occurred in the nature of work and social

life. This concept refers to the balance that individuals seek to achieve between the demands of their professional roles and their personal and family responsibilities, with the aim of achieving comprehensive well-being and satisfaction in both areas.

2.1.1. Concept

Work-life balance is defined as a state of dynamic balance between work demands and personal life, where an individual can allocate the necessary time and energy to each aspect without one negatively affecting the other (Greenhaus & Powell, 2006). This concept does not necessarily mean an equal division of time between work and life, but rather relates to achieving a balance that suits the individual's needs and personal circumstances. This can include the ability to manage boundaries between work and home, meet family and social obligations, engage in hobbies and recreational activities, and care for physical and mental health (Clark, 2000).

Some researchers point out that balance is not merely the absence of conflict between work and life, but rather the presence of mutual facilitation and enrichment between them, where skills and experiences gained in one area can enhance performance and satisfaction in the other area (Grzywacz & Marks, 2000). Therefore, effective balance leads to an individual's sense of control over their life, reduced stress levels, and increased overall satisfaction.

2.1.2. Origin and Development

The concept of work-life balance emerged in the late 1970s and early 1980s, as a reaction to the demographic, social, and economic changes witnessed by Western societies. With the increasing participation of women in the workforce, changing family roles, and rising working hours, it became necessary to find solutions to reconcile work demands with personal life requirements (Kossek & Ozeki, 1998).

Initially, the focus was on the concept of Work-Family Conflict, which refers to the difficulties individuals face in meeting the demands of their roles at work and family simultaneously. Over time, the concept evolved to include broader aspects of personal life, such as health, recreation, self-development, making the term "work-life balance" more comprehensive (Greenhaus & Beutell, 1985).

The 1990s and the beginning of the third millennium witnessed increasing interest from researchers and institutions in the concept of balance, as companies realized that supporting employees in achieving this balance could lead to significant benefits.

Technological developments, such as the Internet and smartphones, also contributed to facilitating remote work and flexible work, providing new opportunities to achieve balance (Allen et al., 2000).

2.1.3. Importance for Individuals and Organizations

The importance of work-life balance is manifested at two main levels: individual and organizational.

a) **At the Individual Level:**

- Improving Health and Well-being .
- Increasing Job and Life Satisfaction.
- Enhancing Performance and Productivity.
- Personal Development.

b) **At the Organizational Level:**

- Increasing Employee Loyalty and Retention.
- Improving Organizational Reputation and Attractiveness.
- Increasing Productivity and Profitability.
- Reducing Absenteeism and Tardiness.

2.1.4. Key Balance Programs That Can Be Implemented

There are many programs and practices that organizations can implement to support work-life balance for their employees. These programs vary to suit the different needs of organizations and employees, and among the most prominent are:

- a) **Flexible Working Hours:** These programs allow employees to determine their start and end times, or distribute working hours throughout the week in a way that contributes to enabling them to better manage their personal and family commitments.
- b) **Telecommuting/Remote Work:** This program allows employees to perform part or all of their work from home or any other location outside the office. The COVID-19 pandemic has proven the effectiveness of this work pattern in many sectors (Gajendran & Harrison, 2007).
- c) **Part-Time Work:** This option allows employees to work fewer hours than full-time, providing them with additional time for personal commitments (Glass & Estes, 1997).
- d) **Parental Leave:** Providing paid or unpaid leave for new fathers and mothers to care for their children. These leaves contribute to supporting families and enabling parents to spend sufficient time with their infants (Gatrell, 2007).
- e) **Childcare and Elder Care Support Programs:** Providing support to employees in caring for their children or elderly

family members, whether through providing care facilities at the workplace, or offering financial subsidies, or providing information and resources (Bond et al., 1998).

- f) **Employee Assistance Programs (EAPs):** Providing confidential counseling services to employees to help them deal with personal and professional problems, such as stress, family and financial problems (McLellan & Turner, 2008).

2.2. Job Stress

Job stress is considered one of the common phenomena in the modern work environment, significantly affecting workers' health, performance, and organizational productivity. It is a natural response to the demands and challenges that an individual faces in their workplace.

2.2.1. Concept

Job stress is defined as a physical, psychological, and emotional response that an individual experiences when they perceive that work demands exceed their ability to adapt or surpass their available resources (Lazarus & Folkman, 1984, PP 62-63). These stresses can arise from multiple factors within the work environment, such as work overload, role ambiguity, role conflict, lack of social support, or injustice (Cooper et al., 2001, PP 33-35).

Job stress is not always negative; moderate levels of stress (positive stress - Eustress) can be motivating and increase performance and productivity, driving individuals to develop their skills and achieve their goals. However, when stress levels exceed an individual's capacity to cope, they turn into negative stress that can lead to serious consequences for physical and mental health, such as anxiety, depression, fatigue, and heart disease, (Selye, 1976, P28).

2.2.2. Origin and Development

Interest in the concept of stress in general dates back to the early twentieth century, when researchers began studying the impact of environmental factors on human health. Hans Selye played a pioneering role in this field, introducing the concept of "General Adaptation Syndrome" (GAS) in 1936, which describes the body's response to stress (Selye, 1936).

With the increasing complexity of work environments in the mid-twentieth century, researchers began focusing on work-related stress specifically. Industrial and technological changes, increased competition, and changing job nature led to new challenges for workers, increasing the importance of studying job stress. In the

1970s and 1980s, important theoretical models emerged, such as Karasek's "Demand-Control Model" and Siegrist's "Effort-Reward Imbalance Model," which contributed to a deeper understanding of the relationship between work characteristics and job stress (Karasek, 1979; Siegrist, 1996).

recently, with the emergence of concepts such as globalization, flexible work, and digital technology, job stress has become more complex and diverse. The focus has shifted to psychological and social factors in the work environment, in addition to organizational and personal factors that contribute to stress (Schabracq, 2000).

2.2.3. Importance for Individuals and Organizations

The study of job stress is of paramount importance for both individuals and organizations:

a) **At the Individual Level:**

- **Physical and Mental Health:** Excessive job stress negatively affects individual health, increasing the risk of chronic diseases, sleep disorders, anxiety, depression, and fatigue (Ganster & Rosen, 2013).
- **Job and Life Satisfaction:** Continuous stress leads to decreased job satisfaction, feelings of frustration, and deterioration of overall quality of life.
- **Job Performance:** Although some stress can be motivating, high levels lead to performance deterioration, increased errors, and difficulty making decisions.
- **Personal Relationships:** The effects of job stress can extend to an individual's personal life, negatively affecting family and social relationships.

b) **At the Organizational Level:**

- **Productivity and Profitability:** Job stress leads to decreased productivity and increased costs related to absenteeism, turnover, and employee healthcare costs.
- **Quality of Services and Products:** Stress can affect work quality, leading to errors in products or services provided, thus damaging the organization's reputation (Burke & Richardson, 2000, P 350).
- **Organizational Climate:** Job stress creates a negative work environment, affecting employee morale, increasing internal conflicts, and reducing cooperation.

- **Employee Retention:** Excessive stress drives employees to seek other job opportunities, increasing turnover rates and recruitment and training costs for the organization.

2.2.4. Factors Contributing to Job Stress

Multiple factors contribute to the emergence of job stress, and these can be classified into several main categories:

a) **Work-Related Factors:**

- **Work Overload:** Excessive workload that exceeds an individual's capacity to handle effectively within the given time frame.
- **Role Ambiguity:** Lack of clarity about job responsibilities, expectations, and performance criteria.
- **Role Conflict:** Conflicting demands or expectations from different sources within the organization.
- **Lack of Control:** Limited autonomy or decision-making authority over work processes and outcomes (Karasek, 1979).
- **Poor Working Conditions:** Inadequate physical work environment, including noise, lighting, temperature, and safety concerns (Evans & McCoy, 1998).

b) **Organizational Factors:**

- **Organizational Culture:** unsupportive organizational culture that does not value employee well-being.
- **Communication Problems:** Poor communication channels and lack of feedback mechanisms.
- **Lack of Social Support:** Insufficient support from supervisors and colleagues.
- **Job Insecurity:** about job continuity and career prospects.
- **Organizational Change:** Frequent changes in policies, procedures, or organizational structure (Armenakis & Bedeian, 1999).

c) **Individual Factors:**

- **Personality Traits:** Certain personality characteristics that make individuals more susceptible to stress.
- **Coping Skills:** Individual differences in stress management and coping strategies (Lazarus & Folkman, 1984, P 75).
- **Work-Life Balance:** Difficulty in managing work and personal life demands (Greenhaus & Beutell, 1985).
- **Career Stage:** Different career stages present unique stressors and challenges.

3. METHODS AND PROCEDURES

3.1. Definition of Ibn Badis University Hospital

Ibn Badis University Hospital in Constantine is considered one of the largest and most important hospital complexes in Algeria. It was established in 1974 as a university hospital institution combining the provision of specialized health services with medical training and scientific research. The hospital is located in the Wilaya of Constantine, the third-largest city in Algeria, and serves a wide area including the eastern wilayas of the country.

Due to its strategic location and its role as a regional medical reference, the hospital faces significant challenges, including:

- Overuse: receiving numbers of patients exceeding its capacity.
- Resource shortage: deficits in medical personnel and weaknesses in advanced medical equipment.
- Work pressure: extended working hours and increasing burdens on staff.
- Financing: reliance on the state's general budget with limited financial resources.

3.2. Study Data Analysis:

3.2.1. Validity and Reliability Tests

Prior to delving into the analysis of results concerning work-life balance and job stress, it is imperative to ascertain the validity and reliability of the instruments employed in this study. This section details the application of statistical tests to ensure that the collected data are both reliable and valid for analysis. Validity refers to the extent to which an instrument measures what it is purported to measure, whereas reliability indicates the consistency and stability of results upon repeated application of the instrument under similar conditions. These psychometric evaluations are critical for ensuring the quality of the research and the credibility of the conclusions drawn therefrom.

Table 1. Validity and Reliability Test Results

Test	Value	Significance Level	Interpretation
Cronbach's Alpha – Work-Life Balance	0.989	-	Excellent
Cronbach's Alpha – Job Stress	0.993	-	Excellent

Kaiser-Meyer-Olkin (KMO)	0.835	-	Excellent suitability for factor analysis
Bartlett's Test of Sphericity	$\chi^2 = 1247.563$	0.000	Statistically significant – relationships exist between variables

Source: elaborated by the author.

Table (1) shows the results of the validity and reliability tests conducted on the measurement instruments used in the study, namely the Work-Life Balance scale and the Job Stress scale. These results serve as a strong indicator of the data's quality and the reliability of the subsequent statistical analysis.

3.2.2. Results of Work-Life Balance

Work-life balance is a pivotal concept in understanding employee well-being and productivity, particularly in high-pressure work environments such as hospitals. This section of the study assesses the extent to which this balance is achieved among the employees of Ibn Badis University Hospital by examining the mean scores of their responses across the various dimensions of the balance scale. These findings aim to provide a clear picture of the current state of work-life balance from the employees' perspective and to identify dimensions that may require improvement.

Table 2. Results of the Work-Life Balance Measure

Dimension	Statement	Mean	Standard Deviation	Direction
Work Flexibility	The hospital allows adjustments in working hours when needed for family commitments	2.23	1.31	Low
	I can request to swap or adjust my shifts easily when necessary	2.45	1.24	Low
	There is a possibility to work flexible hours or reduce working hours temporarily	2.18	1.28	Low
	Dimension Mean	2.29	1.28	Low
Family-Friendly Leave & Benefits	The hospital provides paid or facilitated family leave when needed	2.52	1.33	Low

The Impact of Work-Life Balance on Job Stress Among Employees – A Case Study of the University Hospital in Constantine

	It is possible to take emergency leave to care for a family member	2.39	1.27	Low
	There are clear policies to support childcare or eldercare	1.73	1.12	Low
	Dimension Mean	2.21	1.24	Low
Supervisor & Coworker Support	My direct supervisor understands my family commitments and takes them into account when scheduling work	2.67	1.29	Medium
	Coworkers cooperate to facilitate meeting family commitments when needed	2.85	1.25	Medium
	Managers encourage taking advantage of family-supportive policies	2.14	1.22	Low
	Dimension Mean	2.55	1.25	Low
Family-Supportive Work Climate	The hospital's culture encourages balance between work and personal life	2.08	1.18	Low
	I do not feel pressured to ignore my family needs for work	2.31	1.35	Low
	Employees are valued based on their performance, not the number of hours spent at work	2.57	1.32	Low
	Dimension Mean	2.32	1.28	Low
	Overall Mean of the Measure	2.34	1.26	Low

Source: elaborated by the author.

Table (2) reveals the results of the Work-Life Balance scale for the employees of Ibn Badis University Hospital, indicating that the overall level of work-life balance is low, with a general mean of 2.34. This suggests that the majority of employees face difficulties in achieving the desired balance between their work demands and personal lives. Furthermore, the subsequent table, Table (3), presents a summary of the specific work-life balance dimensions by providing the general means for each dimension, ranked from highest to lowest. This table complements the overview provided in Table (2) by summarizing the results at the dimensional level,

thereby facilitating an understanding of the priorities and areas that require greater attention.

Table 3. Summary of Work-Life Balance Dimensions

Dimension	Mean	Standard Deviation	Direction	Rank
Work Flexibility	2.29	1.28	Low	2
Family-Friendly Leave & Benefits	2.21	1.24	Low	4
Supervisor & Coworker Support	2.55	1.25	Low	1
Family-Supportive Work Climate	2.32	1.28	Low	3
Overall Work-Life Balance	2.34	1.26	Low	-

Source: elaborated by the author.

Table (3) confirms that all dimensions of work-life balance at Ibn Badis University Hospital are at low levels. Although support from supervisors and colleagues is relatively the best, there is an urgent need for comprehensive improvements across all dimensions, particularly in providing leave and family-supportive benefits, enhancing work flexibility, and developing an organizational climate that supports balance. These findings provide a clear roadmap for the hospital to identify areas that require immediate interventions to improve employee well-being and reduce job stress.

3.2.3. Results of Job Stress

Job stress is a common phenomenon in modern work environments, and its intensity is heightened in critical sectors such as hospitals, where employees face unique challenges ranging from physical to psychological burdens. This section of the study aims to measure the level of job stress experienced by the employees of Ibn Badis University Hospital by analyzing their responses on the Job Stress Scale. These findings will help identify the dimensions that are most influential in creating stress, thereby paving the way for the development of effective strategies to mitigate these pressures and improve the work environment.

Table 4. Results of the Job Stress Measure

Statement	Mean	Standard Deviation	Direction
I feel physically and mentally exhausted at the end of the workday	4.15	0.94	High
The amount of work required of me often exceeds my capacity	3.92	1.08	High
I find it difficult to deal with the emotional and psychological demands of my work (such as dealing with death cases)	3.67	1.16	High
I feel my tasks and job responsibilities are not sufficiently clear	2.88	1.21	Medium
I receive conflicting instructions/orders from different parties at work	3.14	1.19	Medium
I feel a lack of support and appreciation from my direct supervisors	3.52	1.13	High
Relationships with coworkers are tense and a source of stress	2.79	1.26	Medium
I worry about making a mistake that could negatively affect a patient's health	4.21	0.87	High
I have little authority or control over how I perform my work	3.38	1.15	Medium
I feel that available resources (equipment, staff) are insufficient to perform the work effectively	4.06	0.91	High
I consider looking for another job due to the pressure I am exposed to here	3.29	1.24	Medium
I suffer from physical symptoms related to stress such as headaches or sleep disorders	3.74	1.02	High
Overall Mean of the Measure	3.56	1.10	High

Source: elaborated by the author.

Table (4) shows the results of the Job Stress scale, where the overall mean for the scale reached 3.56. This indicates that the employees of Ibn Badis University Hospital experience a high level of job stress. This high general mean reflects the significant challenges faced by workers in this vital sector.

The results in Table (4) confirm that the employees of Ibn Badis University Hospital experience high levels of job stress, particularly concerning physical and psychological exhaustion,

excessive workload, fear of medical errors, and a lack of resources and administrative support. These findings highlight the urgent need for comprehensive interventions to address these stressors, not only to improve employee well-being but also to ensure the quality of healthcare services provided.

3.2.4. **Analysis of the Relationship Between the Two Variables**

Following the separate analyses of work-life balance and job stress levels, it becomes necessary to understand the nature of the relationship between these two key variables. This section aims to uncover the strength and direction of the correlation between work-life balance and job stress, as well as to determine the extent to which the study's model can explain the variance in job stress. These analyses are crucial for testing the study's main hypotheses and providing insights into how these variables influence one another.

Table 5. Correlation and Regression Analysis Results

Test	Value	Significance Level	Interpretation
Pearson Correlation Coefficient	-0.684	0.0000	Strong negative statistically significant correlation
Correlation Significance Test (t-test)	t = -11.418	0.0000	Statistically significant at $\alpha = 0.05$
Coefficient of Determination (R^2)	0.675	-	Model explains 67.5% of variance
Model F-test	F = 75.229	0.0000	Model is statistically significant

Source: elaborated by the author.

Table (5) presents the results of the correlation and regression analysis between work-life balance (WLB) and job stress, which are crucial for understanding the relationship between the two variables and confirming the study's main hypotheses. The findings decisively confirm a strong and statistically significant negative relationship between WLB and job stress. Furthermore, the regression model has

high explanatory power (67.5%), which highlights the significant importance of work-life balance as a mitigating factor for job stress in the hospital environment. These results provide strong support for the study's primary hypothesis and offer a solid basis for recommendations aimed at improving the work environment.

3.2.5. Multiple Regression Analysis

After confirming a strong and statistically significant relationship between work-life balance and job stress as aggregate variables, it becomes important to delve deeper into this relationship. The objective is to identify which of the four dimensions of work-life balance (work flexibility, leave and family-supportive benefits, supervisor and colleague support, and a family-supportive organizational climate) has the greatest impact on job stress. The multiple regression analysis aims to reveal the relative importance of each of these dimensions in explaining the variance in job stress, thereby providing valuable insights to guide future interventions.

Table 6. Regression Coefficients for Dimensions

Dimension	Regression Coefficient (β)	Effect Direction	Effect Strength	Rank by Effect Strength
Work Flexibility	-0.289	Negative	Medium	3
Family-Friendly Leave & Benefits	-0.123	Negative	Weak	4
Supervisor & Coworker Support	-0.333	Negative	Medium	2
Family-Supportive Work Climate	-0.490	Negative	Strong	1

Source: elaborated by the author.

Table (6) displays the standardized regression coefficients (Beta Coefficients) for each dimension of work-life balance on job stress. These coefficients indicate the strength and direction of each dimension's effect independently, while controlling for the influence of the other dimensions. The greater the absolute value of the beta coefficient, the larger the impact of that dimension on the dependent variable (job stress).

The results of the multiple regression analysis demonstrate that all dimensions of work-life balance contribute to the reduction of job

stress, but to varying degrees. A family-supportive organizational climate emerges as the most powerful factor in reducing job stress, followed by supervisor and colleague support, then work flexibility, and finally, leave and family-supportive benefits. These findings offer strategic guidance for the hospital in prioritizing interventions, suggesting a particular focus should be placed on fostering a family-supportive organizational culture and providing a positive social work environment to effectively reduce job stress.

3.2.6. Hypothesis Testing

The hypothesis testing phase is the culmination of the statistical analyses conducted, wherein the validity of the assumptions upon which the study was based is verified. This section aims to present the final results of the tests for the subsidiary and main hypotheses concerning the relationship between the dimensions of work-life balance and job stress. These findings will provide direct answers to the research questions and will either confirm or refute the posited relationships between the variables.

Table 7. Hypothesis Testing Results

Hypothesis	Test Result	Significance Level	Interpretation
Sub-hypothesis 1: There is a relationship between work flexibility and job stress	Accepted	$\alpha < 0.05$	Negative statistically significant relationship
Sub-hypothesis 2: There is a relationship between family-friendly leave and benefits and job stress	Accepted	$\alpha < 0.05$	Negative statistically significant relationship
Sub-hypothesis 3: There is a relationship between supervisor & coworker support and job stress	Accepted	$\alpha < 0.05$	Negative statistically significant relationship
Sub-hypothesis 4: There is a relationship between family-supportive work climate and job stress	Accepted	$\alpha < 0.05$	Negative statistically significant relationship

Main hypothesis: There is a relationship between work-life balance and job stress	Accepted	$\alpha < 0.05$	Strong negative statistically significant relationship
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Source: elaborated by the author.

Table (7) summarizes the results of the subsidiary and main hypothesis tests for the study, providing statistical confirmation of the posited relationships between work-life balance and its various dimensions on one hand, and job stress on the other.

- **Subsidiary Hypotheses:**
 - a) **Subsidiary Hypothesis 1 (Work Flexibility and Job Stress):** This hypothesis was accepted, confirming a statistically significant negative relationship between work flexibility and job stress. This means that an increase in work flexibility contributes to a reduction in employee job stress.
 - b) **Subsidiary Hypothesis 2 (Leave and Family-Supportive Benefits and Job Stress):** This hypothesis was also accepted, indicating a statistically significant negative relationship between leave/family-supportive benefits and job stress. This confirms that providing these benefits helps reduce pressure on employees.
 - c) **Subsidiary Hypothesis 3 (Supervisor and Colleague Support and Job Stress):** This hypothesis was accepted, demonstrating a statistically significant negative relationship between supervisor/colleague support and job stress. This highlights the positive role of social support in the work environment in mitigating stress.
 - d) **Subsidiary Hypothesis 4 (Family-Supportive Organizational Climate and Job Stress):** This hypothesis was accepted, confirming a statistically significant negative relationship between a family-supportive organizational climate and job stress. This result reinforces the conclusion from the multiple regression analysis that the organizational climate is the most powerful factor in reducing stress.
- **Main Hypothesis (Work-Life Balance and Job Stress):**

The study's main hypothesis, which posits a strong and statistically significant negative relationship between work-life balance and job stress, was accepted. This finding is the core of the

study and confirms that work-life balance is not merely a theoretical concept but a highly influential factor in the level of job stress experienced by employees.

▪ **Summary of Table Analysis:**

The hypothesis testing results conclusively confirm that all four dimensions of work-life balance, in addition to the overall concept of balance, are negatively and statistically significantly related to job stress. This implies that improving any of these dimensions, or the overall balance, will lead to a decrease in job stress levels. These findings provide a strong scientific basis for recommendations aimed at promoting work-life balance as an effective strategy to combat job stress in hospitals."

4. Discussion of Results

4.1. Regression Model Assumptions Assessment

Prior to interpreting the regression results, the key assumptions of the multiple regression model were examined to ensure the reliability of findings. The Durbin-Watson test ($DW = 1.89$) confirmed the absence of autocorrelation between residuals. Multicollinearity was assessed using Variance Inflation Factor (VIF) values, which ranged between 1.12–1.87 for all predictors, indicating no multicollinearity concerns (threshold: $VIF < 5$). Normality of residuals was confirmed through Kolmogorov-Smirnov test ($p = 0.156$), and homoscedasticity was validated via Breusch-Pagan test ($p = 0.267$), both indicating normally distributed and homogeneous variance. These diagnostics confirm the validity and reliability of the regression model parameters presented in subsequent analyses.

4.2. In the Algerian Context

The results of this study are consistent with the specific characteristics of the Algerian hospital environment. The low level of work-life balance reflects the challenges faced by Algerian hospitals, especially with the migration of medical talent seeking better working conditions.

The Hakim Ibn Badis University Hospital suffers from a "shortage of staff," which adds further pressure on workers. This makes implementing work-life balance policies difficult, especially with increasing demand for health services from neighboring provinces.

4.3. Theoretical Anchoring Within Global Frameworks

These findings align with three prominent international stress-theoretical models. First, Karasek and Theorell's Job Demand-Control-Support (JDCS) Model posits that high demands combined

with low control and social support create "iso-strain" conditions, which manifests in our sample through excessive workload and insufficient supervisory support. Second, Siegrist's Effort-Reward Imbalance (ERI) Model emphasizes that unreciprocated effort (high demands, low recognition) triggers sustained stress responses, consistent with our finding that family-supportive climate reduces stress most significantly. Third, Hobfoll's Conservation of Resources (COR) Theory frames stress as resource depletion, explaining how hospital employees lose psychological resources (time, energy, emotional reserves) when work-life balance is compromised, supporting our 67.5% variance explanation in the regression model.

4.4.Implications for Healthcare Service Quality and Patient Safety

The findings underscore a critical organizational imperative beyond employee well-being. High job stress levels among hospital staff directly compromise healthcare service quality and patient safety. Research demonstrates that stressed healthcare workers exhibit significantly higher error rates; notably, 64% of residents experiencing burnout reported making medical errors compared to 22% without burnout symptoms. Enhanced work-life balance functions as a protective mechanism against stress-induced compromises in clinical judgment, medication administration errors, and communication failures. For Ibn Badis University Hospital, reducing employee job stress through family-supportive climate initiatives represents both a human resources priority and a patient safety intervention. Improved work-life balance translates directly into enhanced clinical outcomes, reduced adverse events, and strengthened patient satisfaction—critical metrics for healthcare institutional performance.

4.5.Comparison with Developing Countries

These results are consistent with findings from studies in developing countries, where “work environments in healthcare facilities are characterized by staff shortages, excessive workloads, and highly demanding tasks.” For example, in Malaysia, health workers work 52 hours per week on average, which is 15 hours more than the standard (World Health Organization, 2020).

4.6.Impact of Stress on Performance

The analysis confirms that poor work-life balance increases stress, which could negatively affect “quality of care and patient

safety.” This is critical in university hospitals, which are training centers for students and new doctors.

4.7.Recommendations

4.7.1. At the Institutional Level

- a) **Develop work flexibility policies:** Implement flexible shift systems and allow shift swapping.
- b) **Enhance supervisory support:** Train managers to understand employees’ family needs.
- c) **Improve the work environment:** Foster an institutional culture that values work-life balance.

4.7.2. At the National Level

- a) **Increase investment in health:** Provide sufficient human and material resources.
- b) **Develop labor laws:** Enact legislation protecting the rights of health workers.
- c) **Retention programs:** Provide incentives to prevent the migration of doctors and nurses.

5. Conclusion

This study confirmed the existence of a strong negative relationship between work-life balance and job stress at the Ibn Badis University Hospital in Constantine. The proposed model explains 67.5% of the variance in job stress, highlighting the critical importance of work-life balance in improving the healthcare work environment.

The results show that a family-supportive work climate has the greatest impact in reducing stress, followed by supervisor & coworker support. This requires urgent intervention at senior management level to implement comprehensive strategies that take into account the specifics of the Algerian context.

Given the challenges facing the Algerian health system, work-life balance is not merely a luxury but a necessary imperative to ensure the sustainability and quality of health services. Investing in the well-being of healthcare workers will positively reflect on the quality of patient care and the stability of the health system as a whole.

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