

# Assessment of psycho-organizational constraints among nurses at the Batna University Hospital, using the Karasek model

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## Abstract:

**Nursing is essential in ensuring quality healthcare delivery, but nurses often encounter various psychosocial challenges that can affect their well-being and job performance. To address these concerns, the Karasek Job Demand-Control-Support model has been widely utilized to assess the impact of psychosocial factors on occupational stress and job satisfaction among healthcare professionals, including nurses. This study aimed to evaluate the psycho-organizational constraints experienced by nurses at the University Hospital of Batna through the lens of the Karasek model. The study sought to identify potential stressors and areas for improvement to enhance nurses' overall work experience and well-being by examining the job demands, control levels, and Social Support available within the nursing environment. A cross-sectional study design was employed, and a structured questionnaire based on the Karasek model was administered to a representative sample of nurses at the University Hospital of Batna. Data were analysed using appropriate statistical methods to determine the prevalence and impact of psycho-organizational constraints on the nursing workforce.**

**The results highlighted several significant psycho-organizational constraints faced by nurses at Batna University Hospital. High job demands were reported, leading to increased stress levels and potential burnout. The study also revealed relatively low decision-making latitude and skill discretion, which could contribute to reduced job satisfaction and motivation. Furthermore, social Support was identified as a crucial factor in mitigating the harmful effects of job demands and enhancing nurses' well-being.**

**The findings underscore the importance of systematically evaluating psycho-organizational constraints among nurses and provide valuable insights into the factors**

**influencing their job satisfaction and occupational stress. Addressing these challenges could lead to implementing targeted interventions, such as enhancing decision-making autonomy and promoting social support networks, to improve nurses' overall working conditions and, ultimately, enhance the quality of patient care at Batna University Hospital. Future research should explore potential long-term effects and the effectiveness of intervention strategies to create a more supportive and fulfilling work environment for nurses.**

**Keywords: Occupational risk; occupational stress; nursing; Karasek questionnaire.**

### **Résumé:**

**Dans le contexte des risques psychosociaux, la profession infirmière est essentielle pour assurer la qualité des soins de santé, mais les infirmières rencontrent souvent divers défis psychosociaux qui peuvent affecter leur bien-être et leurs performances professionnelles. Pour répondre à ces préoccupations, le modèle de demande-contrôle-soutien de Karasek a été largement utilisé pour évaluer l'impact des facteurs psychosociaux sur le stress professionnel et la satisfaction au travail parmi les professionnels de la santé, y compris les infirmières. Cette étude visait à évaluer les contraintes psycho-organisationnelles vécues par les infirmières à l'hôpital universitaire de Batna, en utilisant le modèle de Karasek. En examinant les demandes du travail, les niveaux de contrôle et le soutien social disponibles dans l'environnement infirmier, l'étude cherchait à identifier les facteurs de stress potentiels et les domaines d'amélioration pour améliorer l'expérience de travail et le bien-être des infirmières. Un design d'étude transversale a été utilisé, et un questionnaire structuré basé sur le modèle de Karasek a été administré à un échantillon représentatif d'infirmières à l'hôpital universitaire de Batna. Les données ont été analysées à l'aide de méthodes statistiques appropriées pour déterminer la prévalence et l'impact des contraintes psycho-organisationnelles sur le personnel infirmier.**

**Les résultats ont mis en évidence plusieurs contraintes psycho-organisationnelles significatives auxquelles les infirmières de l'hôpital universitaire de Batna font face. Des exigences professionnelles élevées ont été signalées, entraînant des niveaux de stress accrus et un épuisement potentiel. L'étude a également révélé des niveaux relativement faibles de latitude décisionnelle et de discrétion dans l'utilisation des compétences, ce qui pourrait contribuer à une satisfaction professionnelle et une motivation réduites. De plus, le soutien social a été identifié comme un facteur crucial pour atténuer les effets négatifs des exigences professionnelles et améliorer le bien-être des infirmières.**

**Ces résultats soulignent l'importance d'évaluer systématiquement les contraintes psycho-organisationnelles chez les infirmières et fournissent des informations précieuses sur les facteurs influençant leur satisfaction au travail et leur stress professionnel. Aborder ces défis pourrait conduire à la mise en œuvre d'interventions ciblées, telles que renforcer l'autonomie décisionnelle et promouvoir les réseaux de soutien social, pour améliorer les conditions de travail des infirmières et, en fin de compte, améliorer la qualité des soins aux patients à l'hôpital universitaire de Batna. Des recherches futures devraient explorer les effets potentiels à long terme et l'efficacité des stratégies d'intervention afin de créer un environnement de travail plus favorable et épanouissant pour les infirmières.**

**Mots-clés: Risque professionnel; stress professionnel; infirmier; questionnaire Karasek.**

## **1. Introduction :**

Various theories focus on the relationship between work and the psychological and organizational constraints it induces: stress and coping theory, work psychodynamics, and ergonomics (Chen, 2023). The sources of mental stress at work identified in the scientific literature are manifold (Calnan et al., 2001; Lazarus, 2020; Michie, 2002). The main ones are monotony, repetitiveness, pace, fast rhythm, attention required, concentration, quantitative or qualitative overload, work based on human relations, responsibilities (workers, property), conflicting demands, insecurity linked to the work performed, lack of autonomy, unsuitable qualifications (too few or too many), relations with the professional environment (whether hostile or non-supportive), as well as other possible sources of mental stress such as sensory loads (noise, light), working hours, employment, atypical working hours, and job insecurity. The notion of insecurity is not discussed very much (Calnan et al., 2001; Lazarus, 2020).

It is clear that the notion of psychological and organizational constraints at work is subjective and that exposure to them cannot be measured objectively or externally. It is also useful to measure psychological and organizational stress independently of its effects (although the two are linked in stress theory). The tool used to quantify this exposure must be validated, and it is preferable to use a tool that is known and validated by other studies, even if it seems slightly less suited to the situation being studied, rather than a tool specifically created for one study and insufficiently validated (Laurent et al., 2020). The Karasek model appears to be a relevant approach for measuring these constraints in an epidemiological

framework, i.e., at the level of groups of working individuals and in terms of mental constraints at work (Häusser et al., 2010; Hernández et al., 2007; Pelfrene et al., 2001).

## **2. Psychosocial risks:**

Risks related to human relationships in the workplace arise from the interaction between individuals and their interaction with their work. They are commonly called "psychosocial risks" (Leiter & Robichaud, 1997). The lack of a stable definition of psychosocial risks (or psycho-affective risks) is symptomatic of the problem of recognizing these risks by lawmakers and society. The term "psychosocial risks at work" encompasses risks encountered in the professional sphere that can affect individuals' mental health and even their physical integrity, with the following causes: the sense of responsibility experienced in work, the organization and conditions of work, the attention demands it requires, or the relationships between individuals and the tensions that may arise from them (Smylie, 1999).

The term "Psychosocial Risks" (or PSRs) describes elements that undermine employees' physical integrity and mental health within their work environment. These risks can take various forms, including stress, one of the most well-known, harassment, burnout, and even workplace violence. They cause multiple ailments and pathologies (sleep problems, depression, musculoskeletal disorders, psychosomatic diseases, etc.) (Delmas, 2017).

### **2.1. Occupational stress:**

The National Institute for Occupational Safety and Health (NIOSH) (Niosh, 2008) posits that job stress can be characterized as detrimental physiological and psychological reactions arising from a lack of congruence between the demands of a job and the employees' abilities, resources, or requirements. This incongruence may have adverse implications for the well-being of workers, potentially leading to compromised health and increased vulnerability to injuries. The genesis of job stress can be traced to instances where the job demands exceed the workers' capacities, available resources, or individual needs (Légeron 2008).

According to the European Agency for Safety and Health at Work, stress is the most widespread health problem in the world of work, and the number of people suffering from a state of stress caused or aggravated by work is likely to increase (Milczarek et al., 2007).

Occupational stress is a psychosocial risk commonly defined as: "a state accompanied by physical, psychosocial or social disorders or dysfunctions that result from an individual's feeling of not being able to meet the demands or expectations placed on him or her" (Loriol, 2010). Occupational stress represents a major challenge for organizations, as it can lead to burnout, absenteeism and high staff turnover. It can also hinder employee recruitment and retention (Faure & D'Hoore, 2020).

## **2.2. Occupational stress among healthcare professionals:**

Occupational stress among healthcare professionals is a significant concern. These professionals face numerous psychosocial risks impacting their well-being and job satisfaction. Some of the most common factors contributing to occupational stress in healthcare settings include (Chaudhari et al., 2018; Mughal, 2023):

- High workload and time pressure: Healthcare professionals often experience heavy workloads, tight schedules, and the need to provide efficient care within limited time frames;
- Emotional demands: Dealing with patients' suffering, handling traumatic situations, and managing intense emotions can take a toll on healthcare workers' mental and emotional health;
- Lack of control and autonomy: Limited decision-making authority and involvement in work-related decisions can lead to feelings of frustration and a lack of job satisfaction;
- Interpersonal conflicts: Healthcare environments involve collaboration among diverse individuals, which can result in conflicts, disagreements, and strained relationships;
- Organizational culture and leadership: Negative workplace cultures, poor communication, and ineffective leadership can contribute to a stressful work environment;
- Violence and aggression: Healthcare professionals may encounter verbal or physical aggression from patients, their families, or even within the workplace itself, leading to heightened stress levels;
- Irregular working hours and shift work: Rotating shifts, long working hours, and irregular schedules can disrupt sleep patterns, affect work-life balance, and contribute to fatigue and burnout;

- Job insecurity: Uncertainty about employment stability, contract types, and future career prospects can generate anxiety and impact the overall well-being of healthcare professionals;
- Lack of social Support: Insufficient Support from colleagues, supervisors, or the organization can exacerbate stress levels and hinder coping mechanisms.

Addressing occupational stress among healthcare professionals requires a comprehensive approach that focuses on promoting a healthy work environment, implementing supportive policies, providing resources for stress management, and fostering open communication and collaboration. By acknowledging and addressing these psychosocial risks, healthcare organizations can support the well-being of their employees and improve overall patient care.

In our study, we will be examining:

- High workload and time pressure;
- Emotional demands;
- Lack of control and autonomy;
- Interpersonal conflicts;
- Organizational culture and leadership;
- Irregular working hours and shift work;
- Lack of social Support;

### **2.3. consequences of occupational stress on healthcare workers:**

Occupational stress can significantly affect healthcare workers' well-being and performance. Some of the critical consequences of occupational stress among healthcare professionals include (Chen et al., 2021; Hamaideh, 2011):

- Physical health issues;
- Mental health disorders;
- Decreased job satisfaction;
- Impaired performance and patient care;
- Increased absenteeism and turnover;
- Interpersonal difficulties;
- Poor work-life balance;
- Professional burnout;

Addressing occupational stress through preventive measures, workplace support programs, and creating a supportive and healthy work environment is crucial to mitigating these consequences. By prioritizing the well-being of healthcare workers, organizations can foster a positive work culture, improve retention rates, enhance patient outcomes, and promote overall quality of care. To this end, we assessed this type of stress using the Karasek model with nurses at the Batna University Hospital.

### 3. Karasek model Job Content Questionnaire (JCQ):

The JCQ is a widely used questionnaire that assesses various aspects of job stress, including job demands, decision latitude/control, Social Support, and job insecurity (Marcatto et al., 2014). It provides insights into the psychosocial factors of work that can contribute to stress (Karasek et al., 1998).

Robert Karasek developed it in the 1970s, and has been extensively used in research and occupational health settings. The JCQ measures different dimensions of job characteristics that can contribute to stress, including job demands, decision latitude/control, Social Support, and job insecurity (Karasek, 2020; Karasek, 2004).

#### 3.1. JCQ scales (Karasek Jr, 1979):

The JCQ consists of several scales or subscales that capture various aspects of the job:

##### 3.1.1. Psychological Demand:

This scale measures the perception of workload, time pressure, and conflicting demands in the job. It assesses the psychological and physical demands placed on individuals in their work. The psychological Demands scale is composed of 8 items measuring excessive quantity, enough time and contradictory demands.

Psychological Demand = (10, 11, 12, 13, 14, 15, 16, 18),  
Reverse questions 12 (excessive quantity), 13 (enough time), 14 (contradictory demands).

PD= q10 + q11 + (5 - q12) + (5 - q13) + (5 - q14) + q15 + q16 + q18

##### 3.1.2. Decision Latitude/Control:

This scale assesses individuals' control over their work and decision-making processes. It includes two components: skill discretion (using skills and abilities) and decision authority (the autonomy to make decisions). They are composed of 9

items measuring skill discretion and decision authority.

Decision Latitude = "skill discretion" (q1, q2, q3, q4, q7, q9) + "decision authority" (q6, q5, q8)

$$\mathbf{DL = q1 + q2 + q3 + (5 - q4) + q7 + q9 + q6 + q5 + q8}$$

### 3.1.3. Social Support at Work:

This scale measures the perceived Support from colleagues, supervisors, and the overall social climate in the workplace. It assesses instrumental Support (e.g., help with tasks) and Emotional Support (e.g., understanding and empathy). Composed of 11 items measuring hierarchical Support and colleague Support

Social Support = hierarchical Support + colleague support

Hierarchical Support: q19, q20, q21, q22, q23 (Reverse question 21)

Colleague Support: q24, q25, q26, q27, q28, q29 (Reverse question 26)

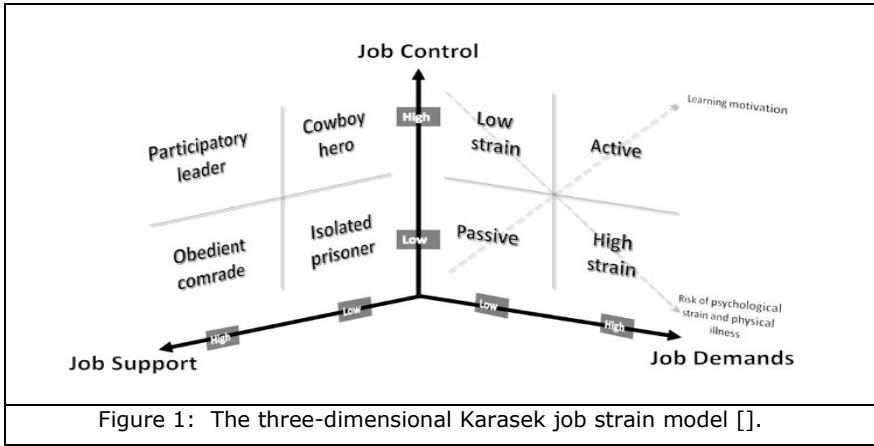
$$\mathbf{SS = support\ from\ hierarchy + support\ from\ colleagues\ [q19 + q20 + (5 - q21) + q22 + q23] + [q24 + q25 + (5 - q26) + q27 + q28 + q29]}$$

The JCQ typically uses a Likert scale format, where respondents rate their agreement or frequency of experiences on each item with a range of (1-4). The questionnaire captures individuals' perceptions of their job characteristics, which can contribute to stress levels and impact their well-being.

The two-dimensional Karasek job strain model suggests that workers simultaneously experiencing high psychological demands (PD) and low decision latitude (DL) are more likely to develop stress-related health problems (See Figure 1). PD refers to an excessive workload, hard or fast work, task interruption, intense concentration and conflicting demands. DL is a combination of skill discretion (learning new things, opportunities to develop skills, creativity, variety of activities, non-repetitive work) and decision authority (taking part in decisions affecting oneself, making one's own decisions, having a say on the job and having freedom as to how the work is accomplished).

Poor social Support (SS), as indicated by a lack of help and cooperation from supervisors and co-workers, Johnson et al. (1989) (Johnson et al., 1989) introduced poor Social Support (SS) as a third component of the job strain model (Vuong et al., 2022). Johnson used the term "Iso-strain" to characterize a situation that combines "Job-strain" and "Isolation" (Aronsson et al., 2021) (See Figure 1).

The JCQ is widely recognized for its ability to assess the psychosocial work environment and identify potential sources of stress. It has been used in various occupational health studies, organizational assessments, and intervention evaluations. The results from the JCQ can help organizations and researchers identify areas of improvement, design interventions, and promote employee well-being in the workplace.



There are several ways of interpreting the results of your Karasek questionnaire. In our case, we will compare scores with values adopted at the national level.

		psychological Demand	
		Low	High
Decision Latitude	High	Low strain	Active
	Low	Passive	High

If the psychological demand score is greater than 21 and the decision latitude score is less than 70, the individual is in the "stressed" quadrant and therefore considered to be in a job strain situation. In addition, if the social support score is lower than 24, the nurse is in the job Iso strain quadrant (synthèses, 2008).

4. **Servery presentation:**

4.1. **Presentation of the Batna University Hospital:**

Batna University Hospital is a health establishment whose mission is to provide general and specialized care and services and to contribute to the practical training in hospitals of medical and pharmacy students and students from vocational training institutes and schools and to the training of managers in the health field. It also contributes to the continuing education of health professionals and managers.

The Batna University Hospital is a 540-bed structure comprising 9 medical departments, 06 surgical departments and a medical and surgical emergency ward: Internal Medicine, Detainees, Paediatrics, Cardiology, Anaesthesia Intensive Care, Nephrology-Haemodialysis, Neuroendocrinology, Burns, Haematology, General Surgery, Maxillofacial, Paediatric Surgery, Urology, Orthopaedics-Traumatology, Neurosurgery, Ophthalmology.

In addition, these disciplines provide specialist consultations with the following disciplines: Forensic Medicine, Occupational Medicine, Neurosurgery, Dermatology, Neurology, Functional Rehabilitation, Physiology, Rheumatology, Gastroenterology, Epidemiology, and Dental Surgery.

#### **4.2. The survey sample:**

The sample comprised 51 nurses from Batna University Hospital, who were selected through a random sampling procedure. 80 questionnaires were distributed to cover as many employees as possible uniformly. Of the 80 questionnaires distributed, 65 were collected, of which 14 could not be used due to insufficient or incorrect responses. 51 nurses participated in the questionnaire, giving a response rate of 63.75 %.

The Karasek questionnaire has an outstanding level of relevance and reliability, and to ensure this, the questionnaire's psychometric properties were calculated in this study. Discriminatory validity was approved by Kouider Benahmed [15], and Alfa Cronbach's stability coefficient was 0.89.

#### **4.3. Study hypotheses:**

In this study, we will attempt to answer the following questions:

What is the level of work-related stress among employees according to the following variables: psychological Demand, decision-making and Social Support?

The sub-questions, according to the three axes of the scale, emerge:

- Q1- What is the level of occupational stress among employees according to decision latitude?
- Q2- What is the level of occupational stress among employees according to the psychological demand variable?
- Q3- What is the level of occupational stress among employees according to the social support variable?

The hypotheses of this study are as follows:

- H1 - Employee occupational stress is high among employees according to decision latitude.
- H2 - According to the psychological demand variable, there is a high level of occupational stress among employees.
- H3 - Employee occupational stress is high among employees according to the social support variable.

**5. Result and discussion:**

In the context of our study, we used the Karasek questionnaire to assess the occupational stress nurses of the Batna University Hospital.

**5.1. Socio-demographic study:**

The survey covered 51 nurses of the Batna University Hospital. 80 questionnaires were distributed to cover as many nurses as possible uniformly. Of the 80 questionnaires distributed, 51 were collected and processed.

Table 2 presents characteristics of our survey sample regarding sex and age distribution, as well as marital status. The data indicates a higher representation of women, with 64.70% of the entire group.

The data shows a relatively balanced distribution across the different age ranges, with the largest group falling in the 35-45 years old category, representing 51% of the group, followed by the 24-34 years old category with 33.33% of the group. Finally, the 46-58 years old category accounts for 15.67% of the group. The data also reveals a high percentage of married individuals, with 90.20% of the total.

Characteristics		N	%
Sex	Men	18	35.30
	Women	33	64.70
Age	Between 24 and 34 years old	17	33.33
	Between 35 and 45 years old	26	51
	Between 46 and 58 years old	8	15.67
Marital status	Single	5	9.80
	Married	46	90.20

**5.2. Karasek questionnaire results and discussion:**

	Psychological Demand	Decision Latitude	Social Support
$\alpha$ Cronbach	0.816	0.807	0.795

The high Cronbach's alpha values for Psychological Demand, Decision Latitude, and Social Support demonstrate that the scales used to measure these constructs are dependable and internally consistent.

This strengthens the validity and credibility of the study's findings and indicates that the measurements of these psychological constructs are likely to be reliable. Researchers often strive to achieve Cronbach's alpha values above 0.70, and all three constructs in this study have surpassed this threshold, further reinforcing the quality of the measurement instruments employed. Consequently, these findings enhance the study's robustness and contribute to the trustworthiness of any conclusions drawn based on the data collected.

The approach is based on responses to the Karasek questionnaire, one of occupational health research's most widely used models. This questionnaire assesses three dimensions of the psychosocial work environment: psychological Demand, decision latitude and social Support.

The analysis of the questionnaire illustrated the work pressure felt by the workers. Descriptive and inferential statistical analyses were conducted to test the hypotheses' validity. The score of each dimension of the Karasek model according to gender, age and marital status were calculated using the SPSS package (see Table 4).

The results are presented in the following section:

Tableau 4: Results of the different dimensions of the Karasek model according to gender, age and marital status.													
Characteristics		N	%	LD %	P value	PD	P	SS	P	Job strain	P	Iso strain	P
Sex	Men	18	35.30	38.89	0.000	61.11	0.000	5.55	0.002	27.77	-	5.55	-
	Wemen	33	64.70	48.48	0.000	78.78	0.000	33.33	0.000	30.30	-	12.12	-
Age	Between 24 and 34 years old	17	33.33	64.70	0.000	58.82	0.000	52.94	0.000	35.29	-	23.53	-
	Between 35 and 45 years old	26	51	38.46	0.004	76.92	0.000	11.53	0.000	26.92	-	3.84	-
	Between 46 and 58 years old	8	15.67	25	0.042	87.5	0.021	0	0.003	25	-	0	-
Marital status	Single	5	9.80	80	0.004	40	0.001	80	0.003	40	-	40	-
	Married	46	90.20	41.30	0.000	76.08	0.000	17.39	0.000	28.26	-	6.52	-

Through a rigorous analysis of the data presented in Table 4, following the predefined research hypotheses, conspicuous patterns and correlations pertinent to the nursing workforce come to the fore:

**Sex:**

The tabulated data unveils that 18 individuals (35.30%) are male among the surveyed nurses, while 33 individuals (64.70%) are female.

- Both male and female nurses exhibit statistically significant elevations in job strain, psychological Demand, and low decision latitude ( $p < 0.05$ );
- Notably, a significantly higher prevalence of job strain is observed among female nurses than male nurses ( $p < 0.001$ ).

### **Age:**

The nursing cohort has been stratified into three distinct age groups: 24-34, 35-45, and 46-58.

- All three age cohorts manifest heightened levels of job strain, psychological Demand, and low decision latitude ( $p < 0.05$ ).
- Remarkably, the youngest age group (24-34 years old) exhibits the most pronounced elevations in job strain, psychological Demand, and low decision latitude ( $p < 0.001$ ).
- Notably, the oldest age group (46-58 years old) experiences a significantly lower degree of social Support when contrasted with the other two age cohorts ( $p = 0.021$ ).

### **Marital Status:**

The respondents are classified into two groups based on their marital status: single and married nurses.

- Single and married nurses demonstrate heightened levels of job strain, psychological Demand, and low decision latitude ( $p < 0.05$ ).
- Nevertheless, single nurses exhibit a significantly higher degree of psychological Demand than their married counterparts ( $p = 0.004$ ).
- Conversely, married nurses evince elevated job strain and reduced decision latitude when juxtaposed with single nurses ( $p < 0.001$ ).

In summary, the data from Table 1 suggest that nurses collectively encounter notable levels of job strain, psychological Demand, and low decision latitude, thereby substantiating the underlying hypotheses (H1, H2, and H3). Furthermore, discernible influences of gender, age, and marital status on the stress levels experienced by nurses are evident. Notably, female nurses, younger individuals, and those belonging to specific age groups may be particularly susceptible to heightened stress

levels and diminished social Support. Considering these findings is paramount when formulating interventions or policies to mitigate psychosocial risks and enhance nurse well-being within the healthcare milieu. Nevertheless, further statistical analyses and comprehensive interpretation of p-values remain indispensable to establish more robust conclusions and recommendations.

Building upon the data from the table and the hypotheses mentioned above, several additional insights emerge from the investigation:

- Gender Disparities:

Female nurses experience significantly greater levels of job strain relative to their male counterparts. They also report higher levels of psychological Demand and diminished decision latitude compared to male nurses (See Figure 2).

These gender discrepancies underscore the potential vulnerability of women to workplace stressors, warranting targeted interventions to bolster the well-being of female nursing staff.

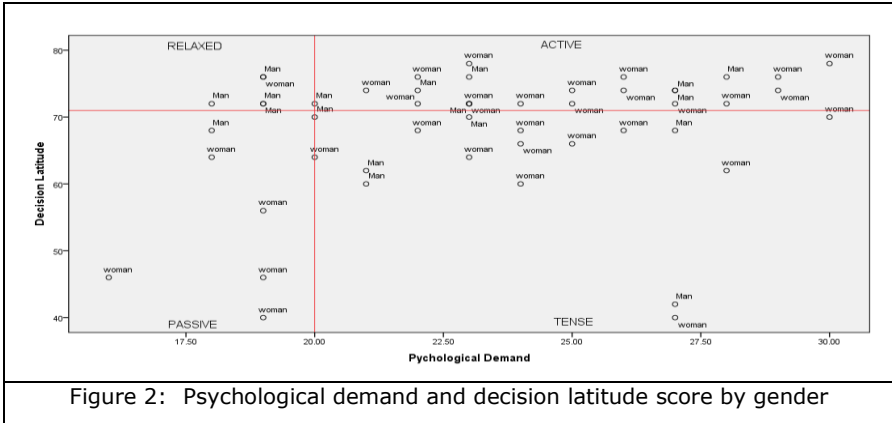


Figure 2: Psychological demand and decision latitude score by gender

-Age-Related Stress Variations:

Nurses in the youngest age group (24-34 years old) manifest the highest levels of job strain, psychological Demand, and low decision latitude.

As nurses' age advances, job strain and psychological Demand tend to decrease, while decision latitude tends to improve.

Notably, the oldest age group (46-58 years old) experiences significantly lower social Support when juxtaposed with the other two age groups.

These findings indicate that younger nurses may grapple with more significant stress stemming from job demands and decision-making constraints, whereas older nurses might encounter challenges relating to social Support within the professional milieu.

- **Marital Status and Stress Levels:**

Single nurses report significantly higher levels of psychological Demand than their married counterparts (See Figure 3). Conversely, married nurses evince higher job strain and diminished decision latitude relative to single nurses.

These results underscore the influence of marital status on specific facets of work-related stress, warranting nuanced interventions to address the distinct stressors encountered by single and married nursing personnel.

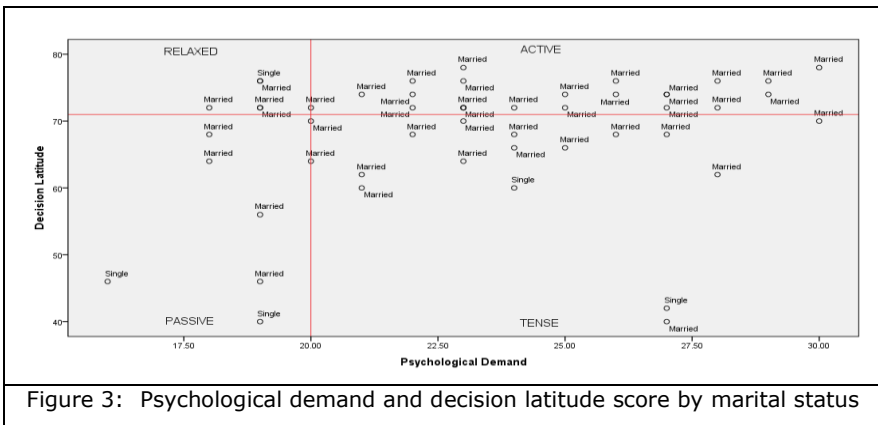


Figure 3: Psychological demand and decision latitude score by marital status

- **Elevated Overall Stress Levels:**

Across all delineated categories of sex, age, and marital status, nurses collectively experience heightened levels of job strain, psychological Demand, and low decision latitude.

These consistent manifestations of high-stress levels suggest systemic issues within the nursing workplace that contribute to employee stress, irrespective of individual characteristics.

Addressing these systemic concerns and fostering a healthier work environment may prove pivotal in alleviating overall psychosocial risks and advancing nurse well-being.

- **Psychological Demand and Decision Latitude:**

The pervasive high levels of psychological Demand and low decision latitude across all cohorts of nurses suggest they

may confront substantial work-related pressure and limited control over their professional processes.

These elevated psychological demands and diminished decision latitude constitute well-known risk factors for stress and burnout, emphasizing the imperative of targeted interventions that empower nurses and augment their capacity to manage work demands effectively.

## **5.2. A Comprehensive Action Plan to Mitigate occupational stress at Batna University Hospital:**

Proposing an action plan to prevent occupational stress among nurses at the Batna University Hospital involves addressing various aspects of the work environment and implementing supportive measures to promote nurse well-being. The action plan should focus on creating a positive and conducive work atmosphere, enhancing social support, and empowering nurses to manage job demands effectively. Here is a comprehensive action plan:

- **Comprehensive Stress Assessment:** Conduct a detailed and comprehensive stress assessment among nurses using validated tools and surveys. This will help identify specific stressors and factors contributing to work-related stress within the hospital.
- **Awareness and Training Programs:** Organize workshops and training sessions for nurses and hospital administrators to raise awareness about work-related stress, its impact on health and productivity, and strategies for stress management. This should include information about the importance of work-life balance and self-care.
- **Implement Karasek Model Recommendations:** Based on the findings of the Karasek model assessment, implement targeted interventions to address gender-specific stressors, age-related stress variations, and stressors related to marital status. Tailor support programs accordingly.
- **Social Support Initiatives:** Create support systems within the hospital to foster a sense of camaraderie and community among nurses. Encourage peer support groups, mentoring programs, and regular team-building activities to enhance social connections and emotional support.
- **Flexible Work Arrangements:** Explore the possibility of

providing flexible work schedules and job rotations to help nurses balance their personal and professional commitments. This can help reduce work-life conflict and alleviate stress.

- **Stress Reduction Techniques:** Introduce stress reduction techniques such as mindfulness meditation, relaxation exercises, and yoga sessions. These practices can help nurses manage stress and promote emotional well-being.
- **Conflict Resolution and Communication Skills Training:** Provide training on conflict resolution and effective communication to improve nurse-nurse and nurse-administrator interactions. Better communication can reduce misunderstandings and decrease workplace stress.
- **Empowerment and Decision-Making:** Empower nurses to have a say in decision-making processes that directly affect their work. Involving them in decision-making can increase job satisfaction and foster a sense of control over their work environment.
- **Leadership Support:** Ensure hospital leadership actively supports stress prevention initiatives and fosters a positive and supportive work culture. Leaders should serve as role models for stress management and well-being.
- **Regular Feedback Mechanisms:** Establish regular feedback mechanisms to allow nurses to share their concerns and suggestions for improving the work environment. Act on the feedback received to implement necessary changes.
- **Employee Assistance Program (EAP):** Establish an EAP to provide confidential counselling services and resources for nurses facing personal or work-related challenges.
- **Ongoing Evaluation:** Continuously assess the effectiveness of the action plan through periodic evaluations and make adjustments based on feedback and changing circumstances.

By implementing this action plan, the University Hospital in Batna can proactively address work-related stress among nurses and create a supportive and healthy work environment. Reducing stress improves nurse well-being and enhances patient care and overall organizational performance.

## 5. **Conclusion :**

In summary, the assessment of psycho-organizational constraints among nurses at Batna University Hospital, using the Karasek model, highlights the prevalence of work-related

stress factors and their potential impact on nurse well-being. The findings underscore the importance of addressing gender-specific stressors, considering age-related variations in stress levels, and recognizing the influence of marital status on stress experiences. Interventions aimed at promoting a healthier work environment, increasing social Support, and empowering nurses to manage job demands and decision-making could be essential in mitigating psychosocial risks and enhancing the overall well-being of the nursing workforce.

It is crucial to acknowledge that this conclusion is drawn based on the information available and the study's specific context. Further research would be necessary to develop more comprehensive and generalizable insights, including more extensive data analysis and consideration of potential confounding variables. Additionally, implementing evidence-based interventions and policies based on these findings could potentially enhance the quality of nursing practice and improve the overall work environment at the Batna University Hospital.

## 6. **Références :**

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