

## Professional stress levels among nurses and medical assistants

Saida Zerkak

Laboratory of Education Training Work, University of Algiers 2 Abou El Kacem Saadallah (Algeria), E-mail: [saida.zerkak@univ-alger2.dz](mailto:saida.zerkak@univ-alger2.dz)

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### Abstract:

The current study aims to reveal the levels of occupational stress that nurses and medical assistants are exposed to, and the differences in those levels according to gender, age, and professional seniority.

To achieve the objectives of the study, the Kraszak Stress at Work Scale was relied upon, which links stress to work requirements, freedom of decision-making and independence in changing work methods and goals, in addition to social support in confronting the psychological load at work. The test was applied to a sample of 50 (nurses and medical assistants).

The results of the study showed that most of the sample members (nurses and medical assistants) are exposed to a high level of stress at work, as the statistical analysis showed that the one-sample t-test for the differences between the hypothetical mean and the arithmetic mean of the sample members' scores on the stress scale was statistically significant. As for the differences in the level of stress at work, it was found that there were no differences according to gender, but significant differences were recorded according to age, where the differences were in favor of the oldest, and significant differences were recorded according to professional seniority, where the differences were in favor of nurses and medical assistants whose seniority exceeded 15 years.

**Keywords:** occupational stress - nursing profession - medical assisting profession.

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### Introduction

The topic of mental health at work has received great attention from many researchers, and many disciplines have been interested in the relationships between health and work from different angles, and psychology has contributed to the development of research and studies.

Occupational stress is the most important topic that psychology and ergonomics have been interested in, as it is considered a serious immediate problem that threatens public health, workers' health and even the performance of the institution, and may be the result of various factors: psychological, organizational, professional, relational.

The development of the work itself has resulted in changes in the content and organization of the work (e.g. speed in completing the work, competition, compulsions, labor intensity...), all factors that affect the mental health of the worker trying to adapt to them.

There are undoubtedly some professions that are more vulnerable to pressure than others, such as health-related professions in which workers interact directly with people and in which they dedicate themselves to serving others, caring for the sick and helping them recover their health and qualifying them to rely on themselves. Most studies confirm that medical assistants and nurses in the field of health and medical care are more exposed to pressure than others, due to the large number of responsibilities placed on them, the requirements and burdens associated with their work, and the great effort they exert while dealing with patients. (Meanings, 2006)

### **The problem**

Social professions have been ranked as the most stress-prone professions, such as jobs with difficult and dangerous conditions and multiple and sensitive tasks in which individuals dedicate themselves to serving others. Among these professions is the nursing profession, which is one of the pivotal professions in the health system, as it is primarily a humanitarian work that requires its practitioner to deal with various segments of society, as the nurse is considered a link between patients and their companions on the one hand and the medical staff on the other. (berkani, 2020)

A number of studies in this field have also shown that nursing workers are among the most vulnerable professionals, due to their sudden situations, sense of responsibility and excessive workloads that expose them to many psychological, professional and health problems resulting from their feeling of pressure at work. (Fouad, Ismail, 2015)

Nurses are exposed to many sources of pressure, including what is imposed by the nature of the tasks entrusted to them, such as direct responsibility on patients and the great effort they exert in order to care, assist, rehabilitate, take care of their health and hygiene. Care and responsibility for others is usually one of the most important factors leading to professional fatigue, including job-related pressures such as the burden of the role, nurses perform different roles that are often ambiguous and unclear due to the contradiction of the orders they receive from doctors and management and are obliged to apply them. This exposes him to pressure as a result of the fear of making treatment errors against the patient that may lose his life, excessive workload, overtime work, night shifts, unhealthy physical environment, the

cost and lack of medical equipment, the noise it causes and the possibility of infection are all factors that increase the exposure of nurses to pressure. (berkani, 2020).

The International Labor Organization of the United Nations on labor and labor affairs also revealed the results of research derived from the data of a set of statistical and scientific studies on the subject conducted on five industrialized countries, where it was found that about (10% of adults are affected by stressful working conditions with types of frustration leading to depression every year, and the study states that Germany's loss of health problems of a psychological and mental nature is estimated at about \$ 22 billion in the world, and in Britain suffers (30%) of The workforce from a form of stress or frustration, and in Poland anxiety about occupational stress and fear of losing a job increased by 50% between 1997 and 1999.

Studies and statistics have shown that about 12 billion working days are wasted each year due to depression, anxiety and stress, which costs the economy a trillion US dollars annually in wasted productivity globally.

The World Health Organization also released a report showing that 15% of working-age adults suffered from a mental disorder **in 2019**. (WHO, 2022).

Therefore, we tried in this study to address the occupational stress of nurses and medical assistants through the application of the Karazac stress test, where stress is linked to the three dimensions of the work situation, which are: psychological requirements, independence in decision-making and social support at work. Accordingly, this study started from the following questions:

- What level of occupational stress do nurses and paramedics experience?
- Are there differences in the level of occupational stress of nurses and paramedics by gender, age and occupational seniority?

### **Identify the basic concepts:**

#### **Occupational pressure**

There are several definitions of occupational pressure, including:

- Occupational pressures The worker's feeling of his inability to face the requirements and burdens of the profession due to the resources in the work environment and their interaction with personal factors, which result in a range of psychological, physiological and behavioral effects. (Akoun, 2012)
- Occupational stress is a state of psychological and physical imbalance that usually arises from factors that are present in the work or the surrounding environment, and its result is usually psychological and physical balance that appears in many manifestations of imbalance in work performance. (Maher, 2004)

- Occupational stress is a set of stimuli that exist in the work environment of individuals, which results in a set of reactions that appear in the behavior of individuals at work or in their psychological and physical states, or in the performance of their work as a result of the interaction of individuals with their work environment that contains pressures. (Abdul Baqi, 2005)

- Occupational stress is a subjective experience experienced by an individual that occurs as a result of factors related to the internal or external environment of the institution or related to the individual himself that have negative or positive effects on the performance of the individual. (Shater, 2010)

- Karazak defines it as the physical and mental exhaustion resulting from the psychological burden of working with the narrowness or lack of freedom to make decisions and the absence or lack of social support at work. Karazak developed his model on the study of the correlation between the individual and the work environment. Based on the following elements:

-Psychological requirements that focus mainly on the performance of tasks (workload, complexity of tasks, lack of time, unexpected or repetitive events)

- Decision making, which is related to the independence of the worker in decision-making

- Social support at work, i.e. relationships in his work environment and his relationships with others in general.

According to Karazak, occupational stress results from an imbalance between a person's perception of the constraints imposed by their work environment and their perception of their own resources to cope with them. (Vésina, 2002)

### **Nursing and medical assistance profession:**

The nursing profession is one of the lofty humanitarian professions for its association with the health of the individual and the preservation of his life, as it aims to alleviate the suffering and pain of patients, and the **American Nursing Association 1980** defines nursing as a diagnosis and treatment of current or expected health problems to human responses. The general objectives are to provide medical and therapeutic services to patients and to pay attention to providing the necessary health care services to improve the health of the community. The activity of nursing and medical assistance is mainly in patient care, and nurses in this field contribute to various activities, according to their educational locations, the most important of which are:

- Organizing the admission of patients to the various departments, and implementing the doctors' instructions regarding the coordination between the various departments (care, laboratory, radiology...)

- Doing some typical work before the patient is admitted to the examination department, such as measuring his temperature, pulse, breathing rate, blood pressure, height and weight, which facilitate the diagnosis of the disease, and contribute to saving effort for doctors, which gives them more time to diagnose patients accurately and develop an early treatment plan.
- Provide assistance to the doctor during the examination of the patient by providing him with the means and supplies he needs.
- Assist in resuscitating and resuscitating the patient, following up on the developments of the pathological condition, and preparing patients for emergency surgeries.
- Organization of surgical appointments.
- Preparing the operating room before starting operations by ensuring the safety of existing equipment
- Assist the patient in taking treatment or organize the intake of medications and intravenous fluids to be given to patients.
- Carrying out nursing work such as measuring temperatures, pulse and pressure, and following up the patient's medical record during treatment and after completion of treatment.
- Preparing patients for radiography and all therapeutic matters.
- Helping patients eat, prepare bed linen and take into account the medical conditions of each patient.
- Holding seminars, workshops, scientific and training courses for the new nurse and new nursing work
- Carrying out administrative and organizational matters in the hospital and setting shift programs.

The nursing profession is one of the important humanitarian professions in society, but it is also among the most difficult professions because it contains many risks and difficulties, as its workers endure harsh conditions in order to provide the necessary care and comfort for patients and relieve their pain, and all this at their expense and at the expense of their health. This overburden at work may generate professional pressures that increase over time and negatively affect their personal and professional lives.

### **Methodological procedures of the study:**

**Study assignments:** To answer the question posed, we propose the following provisional answers:

- Nurses and medical assistants experience a high level of occupational stress.

- There are differences in the level of occupational stress of nurses and paramedics by gender, age and occupational seniority.

### Study Methodology

The nature of the topic imposed reliance on the descriptive approach, considering that the study mainly aims to know the level of occupational pressure among nurses and medical assistants, and the differences in this according to gender, age and professional seniority.

### Study Sample

The study sample consisted of (50) nurses and medical assistants who were deliberately selected, where the sample members are distributed as follows:

#### 1. Distribution of the sample by sex

Sex	Iteration	Percentage
Male	18	36 %
Females	32	64 %
Total	50	100 %

**Table (01) Distribution of Respondents by Sex**

#### 2- Distribution of the sample by age

Age groups	Iteration	Percentage
20 - 30	20	40 %
30 -40	16	32 %
50 -60	14	28 %
Total	50	100 %

**Table (02) Distribution of Respondents by Age Groups**

#### 3- Distribution of the sample according to seniority

Years of seniority	Iteration	Percentage
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01 - 10	18	36 %
10 - 20	16	32 %
20 - 30	16	32 %
<b>Total</b>	50	100 %

**Table (03) Distribution of sample members according to years of seniority.**

**Study Tools:** Relied on:

- **The Karazak Occupational Stress Scale** as one of the most commonly used psychological measures for quantitative studies of stress, in addition to linking stress to work as mentioned earlier. This scale consists of 26 items distributed on three dimensions (psychological demand, independence in decision-making, and social support at work), to which the answer is four alternatives (I absolutely disagree, I do not agree, I agree, I very agree).

**Statistical techniques used in data processing:**

- Descriptive statistics techniques: frequencies and percentages, arithmetic mean, standard deviation...
- T test for one sample
- T test for two independent samples
- Variance Analysis Test

Statistical processing was carried out using the SPSS system.

**Presentation, analysis and discussion of study results**

**First: Presentation and analysis of the results of the study**

**1. Presentation and analysis of the results of the level of occupational stress among nurses and paramedics**

We assumed that nurses and medical assistants suffer from a high level of occupational pressure, and to measure this hypothesis we used the "T" test for one

sample, where it measures the differences between the hypothetical mean and the arithmetic mean and its results appear in the following table:

Sample	Arithmetic average	Standard deviation	Hypothetical average	Single sample T test	Significance level
50	80.6	7.19	65	9.7	0.01

**Table (04) represents the difference between the arithmetic mean and the hypothetical average of the level of occupational stress.**

It is clear from the above table that the arithmetic mean of the sample in the occupational stress scale is estimated at (80.6) and the standard deviation is estimated at (7.19), and to find out if there are differences between the arithmetic mean and the hypothetical average estimated at (65), we used the test (T) for one sample, where its value was estimated at (9.7), which is statistically significant at the level of (0.01), meaning that most of the degrees of occupational pressure among nurses and medical assistants exceed the hypothetical average, meaning that they suffer from occupational pressure. High and therefore the hypothesis was realized.

## **2. Presentation and analysis of the results of differences in occupational stress levels according to the gender variable**

We assumed that there are differences in occupational stress among nurses and paramedics according to sex, we used the "T" test for two independent samples to measure the differences between the average degrees of occupational stress male and female, and the statistical analysis showed the following results:

Sex	Arithmetic mean	Standard deviation	Test "T"	Significance level
males	79.15	7.53	1.05	Non-function
females	81.76	4.16		

**Table (05) represents the differences in occupational stress degrees by sex.**

The differences between the results of males and females in the occupational pressure scale were estimated at (1.05), which is not statistically significant, although the arithmetic mean of females was greater than the average of males, but the difference is insignificant, and therefore we reject the hypothesis.

## **3. Presentation and analysis of the results of differences in occupational stress levels according to the age variable**

The hypothesis states that there are differences in the levels of occupational stress among nurses and medical assistants according to the age variable, and to measure this hypothesis we used the variance analysis test, the results of which are shown in the following table:

Age groups	Arithmetic mean	Standard deviation	Analysis of variance	Significance level
20 - 30	78.15	5.52	3.04	function at 0.05
30 - 40	80.66	4.16		
50 - 60	83.55	3.86		

**Table (06) represents the differences in occupational stress levels by age.**

The above table shows the results of the differences in occupational stress among nurses and medical assistants according to the age variable, where the variance analysis test was used, whose value was estimated at (3.04), which is a statistically significant value at the level of 0.05, meaning that there are significant differences in the levels of occupational stress among nurses and medical assistants by age, and the differences are due to the benefit of the group between the ages of 50 and 60 years, and thus the hypothesis was achieved.

#### **4. Presentation and analysis of the results of differences in occupational stress levels according to professional seniority**

We assumed that there were differences in the levels of occupational stress among nurses and medical assistants according to the variable of professional seniority, and to confirm this, we used a variance analysis test, the results of which are shown in the following table:

Professional seniority categories	Arithmetic mean	Standard deviation	Analysis of variance	Significance level
01 - 10	78.15	7.52	3.14	function at 0.05
10 - 20	81.75	4.16		
20 - 30	83.66	3.86		

**Table (07) represents the differences in occupational stress levels according to professional seniority.**

The above table shows that the differences in occupational pressures according to seniority were estimated at (3.14), which is a statistically significant value at the level of 0.05, meaning that there are statistically significant differences in the levels of occupational stress among nurses and medical assistants and the differences are due to the benefit of those whose seniority exceeds 20 years, and therefore we accept the hypothesis.

## **Second: Discussion of the results**

### **1. Discuss the results of the level of occupational stress among nurses and paramedics**

The hypothesis states that nurses and paramedics experience a high level of occupational stress.

After presenting and analyzing the results related to the level of occupational stress according to the "Karzak" scale with its three dimensions represented in the dimension of independence in decision-making, after psychological demand and after social support, it was found that the majority of occupational stress degrees suffered by nurses and medical assistants to whom the scale is applied exceeds the hypothetical average, as shown in Table (04), and this is due to the burdens of the profession and its requirements, which constitute a basic source of pressure generation for them. The result obtained can be interpreted according to several factors including great accuracy, constant concentration and situations that are difficult to adapt to, the preservation of human lives is a great responsibility and any mistake can lead to the patient's life or further worsen his condition. Exposure to these factors frequently and permanently makes the nurse in very high professional pressure that he does not know how to control and its consequences.

This is what Lazarnos and Folkman & Lazarmus pointed out in their book *Stress, Appraisal and Coping*, that the cause of occupational stress is hard and exhausting work that exceeds the ability of the individual to adapt and adapt to work, in other words it is the result of inequality or imbalance between the competencies of the individual worker with the work he is required to accomplish.

### **2. Discuss the results of differences in occupational stress levels among nurses and paramedics by sex, age and occupational seniority**

The second hypothesis states that there are differences in the levels of occupational stress among nurses and paramedics according to the variable of sex, age and occupational seniority. After presenting and analyzing the results related to the level of occupational stress among nurses and medical assistants by sex, it was found that the differences in the degrees of occupational stress for males and females are not statistically significant, i.e. they are exposed to the same level of pressure as shown in Table (05).

Although in some studies there have been differences in the level of occupational stress between males and females.

As for age differences, nurses and paramedics between the ages of 50 and 60 were exposed to higher levels of stress than younger people.

With regard to the differences in the levels of occupational stress among nurses and medical assistants according to the variable of professional seniority, after presenting and analyzing the results related to the level of occupational pressure according to professional seniority, it was revealed that the levels of occupational pressure increase with the years of professional seniority, as the degrees of occupational pressure among nurses and medical assistants whose seniority years exceed 20 years were higher compared to the lowest seniority. While confirmed by a study on psychological stress among health sector workers, which showed in its results that the research sample suffers from a high level of stress and there are no statistically significant differences in the level of psychological stress according to the variable of professional experience. (Mohammed Khamis, 2012)

These high results of professional pressure are due to the nature of the profession, despite the effort made by nurses, they do not find this sufficient appreciation from the institutions in which they work and by society, and nurses are exposed to continuous professional, intellectual and emotional burdens and requirements that exceed their capacity, from these requirements continuous activity, especially in urgent interests that require additional tender for the urgent and dangerous cases it receives, and the nursing profession requires continuous communication with field developments. Medical to keep pace with the use of modern medical devices that the nurse may find complex to use in many cases and that require the nurse to understand well to be qualified, we also mention the pressures that nurses receive from patients and their families and from officials and management, which increases the complexity of work, as well as working for long hours, especially night shifts, which makes the nurse in a state of psychological and physical imbalance, the confluence of

all these factors and circumstances is what makes the nurse in a state of increasing pressure.

The health sector in general and hospitals with their various departments in particular is a sensitive sector, providing services around the clock. The worker in these interests is exposed to multiple pressures, as he is concerned with the health and life of human beings and performs a humanitarian service that requires working long and extra hours, especially in critical health situations, working during holidays and night shifts that isolate them from the pace of social life, in addition to the pressure generated by the patient's relatives or companions ... All factors affect the behavior and performance of health workers, as they face many situations and circumstances during which they are exposed to situations of turmoil, anxiety, frustration and anger, which negatively affects their health and psychological condition, and most of the pressures and tensions come from various sources, including those related to their work, and some of them are the result of the individuals themselves. (Ayman Odeh et al., 2006)

## **Conclusion**

We conclude from the above that professional pressure in all fields is one of the important topics, and one of the topics that require more attention by researchers, especially in the field of nursing and medical assistance, is the profession that provides humanitarian service and an important role in building societies, and because of the high professional pressures in this profession of negative consequences.

Among the most important factors that can constitute a great pressure in the professional life of nurses are: ambiguity and conflict of role, balancing the responsibilities of professional life and the responsibilities of family life, troubled relationships with colleagues and subordinates... And many other factors.

Through the many studies conducted on the subject of occupational pressures among nurses, we conclude that the nursing profession in various interests, especially the interest of urgency, is one of the professions of a sensitive and arduous nature, because of the trouble and effort incurred by its workers at the expense of their psychological and physical health, and the proposal that can be submitted after this

study, which is an effective way to learn more about these pressures and work to reduce them, is to analyze this profession and analyze what It is required of the nurse to carry it out within the different departments involved in hospitals, and the analysis of this position by specialists enables to understand these pressures in a realistic and in-depth manner.

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