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Sources of occupational stress among intervention officers at the Civil Protection Directorate in Annaba

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ABSTRACT

This study aimed to identify the main sources of occupational stress among intervention officers at the Civil Protection Directorate in Annaba by focusing on the following factors: the nature of the work, workload and poor human relations. To achieve the study's objectives, a descriptive method was adopted and a questionnaire was used to collect data. This was administered to a sample of 50 intervention officers, who were selected using simple random sampling. The collected data were processed using the Statistical Package for the Social Sciences (SPSS). The study found that the main sources of occupational stress for intervention officers at the Civil Protection Directorate in Annaba are workload, poor human relations and the nature of the work.

Keywords: Stress, Sources of Occupational Stress, Intervention Officers, Civil Protection.

INTRODUCTION:

Since their earliest emergence, human beings have sought to improve their way of life and living conditions to enhance survival and continuity. This has been achieved by pursuing various gains that contribute to this goal throughout successive eras and generations. Alongside this development, human beings have constantly sought to improve and renew their lifestyle and living conditions.

In order to achieve this, individuals have had to engage in work within organisations whose activities vary in nature, including economic and productive activities, as well as service-oriented activities. Within these organisations, individuals perform professional duties and undertake activities in exchange for financial compensation or material benefits that meet their needs and contribute to the organisation's objectives.

However, an unsuitable and sometimes unhealthy work environment may force individuals into roles that are exhausting and draining, ultimately leading to an inability to perform effectively amid ambiguity of roles, duplication of tasks, multiple professional duties, conflicting interests and a lack of clarity regarding lines of authority and responsibility. These conditions generate psychological pressures that negatively impact work motivation, communication with others, adaptation to changes and developments, and job performance. They also threaten their professional future, as well as their retention and continuity within the organisation.

Given the increasing risks posed by these pressures to individuals and organisations, the latter particularly service-oriented security organisations whose personnel are entrusted with performing highly dangerous tasks requiring rapid response and intervention at all times and in all circumstances, such as the Civil Protection

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Directorate in Annaba — have sought to pay particular attention to examining the sources of occupational stress among intervention officers and identifying practical solutions capable of reducing their severity.

1. PROBLEM STATEMENT:

Contemporary organisations play a prominent role in the local economies of developing countries by encouraging domestic investment, creating employment opportunities and supporting development, innovation and technology. This enables them to adapt to rapid technological developments in their environment. This requires them to diversify their resources and sources and increase their production by optimising the use of available resources and introducing modern technology across all organisational fields. It also requires them to improve work methods, planning and administrative empowerment. In other words, they must adopt a process of comprehensive and continuous development to enable them to progress to a better organisational state.

However, if this improvement encompasses all organisational fields but is not placed within an appropriate framework — namely, systematic planning, scientifically established stages and modern programmes — it may have negative consequences if unsuccessful. These consequences manifest as numerous organisational problems, such as role overload, role ambiguity, conflicts of interest, and a lack of clarity regarding lines of authority and responsibility. They also manifest as organisational conflicts, and increased levels of tension, anxiety, frustration and isolation among employees.

When an organisation is unable to adapt to changes and resists ongoing development, excessive energy and effort can generate negative responses among employees. These responses manifest as psychological, physical and organisational changes that lead to occupational stress. This is a state of physical, psychological and emotional tension resulting from a lack of harmony between an individual’s abilities, qualifications and the requirements of their work. This negatively affects performance, psychological and physical health, job satisfaction, work motivation and feeling of job security and stability. It also leads to a decline in work-life quality and sustainable development within the institution.

There are several psychological sources of occupational stress, such as a lack of self-confidence, fear of dismissal, internal conflict, an inability to adapt to changes and technological developments, and a failure to achieve self-fulfilment. Other sources are related to organisational factors, such as heavy workloads, conflicting or ambiguous roles, a lack of participation in decision-making processes, poor communication and interaction, and an absence of a sense of organisational justice.

One of the most important sources is the nature of the work itself. Loukia and Ben Zeroual (2006, pp. 36–37) argue that this leads to occupational stress through factors such as shift work, work intensity, danger, the degree of compatibility between individuals and their work, work pressure, and the amount of work required. Other sources relate to social aspects, such as the failure to balance psychological and social life, including family problems, weak social support and poor human relations.

In the same context, we believe that all the aforementioned sources and causes contribute to the emergence of occupational stress among employees at varying and different levels. This phenomenon has increasingly become a burden on organizations, regardless of the nature of their activities, whether economic and productive or even service-oriented.

One example is the Civil Protection Directorate in the wilaya of Annaba, a public institution responsible for responding to and preventing natural and industrial disasters. Its primary objective is to protect members of society, providing them with support and raising awareness of the dangers of such disasters.

This mission is carried out by Civil Protection personnel assigned to intervention units. The multiplicity of their tasks and roles, the nature of their work, the danger associated with situations and interventions, and the psychological impact of certain events and scenes contribute to the exhaustion of the physical and psychological capacities of Civil Protection intervention officers, as do inadequate field training, limited professional experience, declining physical capacities and fitness, insufficient academic qualifications, and the lack of compatibility between these factors and the modern requirements of Civil Protection work. Furthermore, the rapid technological changes that this institution has experienced have intensified these challenges.

These factors have contributed to the depletion of the physical and psychological energies of intervention officers, prompting the administration of the Directorate to investigate this issue. The present study seeks to

address this issue, as reflected in the following central research question:

- What are the main sources of occupational stress among intervention officers at the Civil Protection Directorate in Annaba?

The following sub-questions arise from the central research question:

- Does the nature of the work lead to occupational stress among intervention officers at the Civil Protection Directorate in Annaba?
- Does workload lead to occupational stress among intervention officers at the Civil Protection Directorate in Annaba?
- Do poor human relations lead to occupational stress among intervention officers at the Civil Protection Directorate in Annaba?

2. STUDY HYPOTHESES:

2.1 General hypothesis:

The main sources of occupational stress among intervention officers at the Civil Protection Directorate in Annaba are the nature of the work, the workload and poor human relations.

2.2. Sub-hypotheses:

The nature of the work leads to occupational stress among intervention officers at the Civil Protection Directorate in Annaba.

Workload leads to occupational stress among intervention officers at the Civil Protection Directorate in Annaba.

Poor human relations lead to occupational stress among intervention officers at the Civil Protection Directorate – Annaba.

3. SIGNIFICANCE OF THE STUDY:

The present study focuses on occupational stress, one of the most important topics to have attracted the attention of researchers and specialists in psychology and organisational behaviour. Numerous academic and scientific studies have addressed this subject in various faculties, institutes and institutions with different types of activities.

Despite the limited number of references and sources dealing with this topic, this study makes a valuable contribution to national and international libraries.

From a practical perspective, this topic is significant because it has become a contemporary issue concerning one of the most important problems facing employees in all institutions, regardless of their activities. This problem is more evident in certain institutions and occupations than in others.

This is particularly important given that the present study's sample represents a sensitive category compared to other occupational groups, due to its role and the tasks assigned to it. Civil protection personnel, particularly intervention officers, perform jobs characterised by pressure and tension, numerous tasks and responsibilities, and a high degree of danger. Therefore, this study seeks to identify the main sources of occupational stress at the Civil Protection Directorate in Annaba.

4. OPERATIONAL DEFINITIONS OF TERMS:

4.1 Occupational Stress:

It refers to all forms of fatigue, exhaustion, and tension experienced by intervention officers at the Civil Protection Directorate in the Wilaya of Annaba, resulting from the performance of their duties and their interaction with the internal and external environment. It manifests itself through several sources, the most important of which are:

4.1.1 Nature of work:

This refers to the nature of the work itself, including the various periodic and routine tasks and activities performed by intervention officers at the Civil Protection Directorate in Annaba. It also includes the degree of danger, task complexity and surrounding conditions, all of which may generate feelings of tension, anxiety and pressure.

4.1.2 Workload: Workload:

This refers to the quantity, amount or nature of the tasks and responsibilities assigned to intervention officers at the Civil Protection Directorate in Annaba within a specified timeframe. This workload may be excessive or insufficient, generating feelings of tension, anxiety and pressure.

4.1.3 Poor human relations:

This refers to the difficulties intervention officers face in establishing good relationships and creating an atmosphere of trust, cooperation and mutual respect with other personnel at the Civil Protection Directorate in Annaba. This may result in negative and unhealthy relationships characterised by a lack of trust, cooperation and communication.

4.2 Civil Protection Intervention Officers:

They belong to the Civil Protection Corps and are mobilised to protect members of society from various risks and natural disasters. They also raise awareness and educate the public about these risks. They are characterised by a high level of physical fitness.

5. PREVIOUS STUDIES:

5.1 The study by Tidjani and Bayad El Goul (no date), entitled:

'Occupational Stress among Physicians Working in a Public Hospital Institution': A Field Study of a Sample of Physicians Working at the Public Hospital – Djelfa'.

The study aimed to identify the level of occupational stress experienced by physicians working at the Public Hospital Institution in Djelfa, and to determine whether this level is affected by gender. A descriptive approach was adopted and data were collected using Ben Zeroual Fatiha's Occupational Stress Scale (2008). This was administered to a randomly selected sample of 30 male and female physicians. The study produced the following results:

Physicians experience a high level of occupational stress.

There are no statistically significant differences in the level of occupational stress among physicians attributable to gender. (Tidjani & Bayad El Goul, n.d., pp. 115–128).

5.2 The study by Belahi (2023) is entitled:

'Sources of occupational stress among civil protection intervention officers: A Field Study at the Secondary Civil Protection Unit of El Hadjar – Annaba'.

This study aimed to identify the sources of occupational stress among intervention officers at this unit. A descriptive method was adopted and a questionnaire was used to collect data. This was administered to a sample of 37 individuals using the comprehensive survey method. The study produced the following results:

The main sources of occupational stress affecting the study sample were found to be professional development, relationships with superiors, workload and the nature of work. (Belahi, 2023, pp. 66–84).

First section: The Nature of Occupational Stress

First subsection: The Concept of Occupational Stress

Stora (1993) argues that the word 'stress' is derived from the Latin 'stringere', meaning 'to tighten' or 'to squeeze', and from the French 'étreindre', meaning 'to grip tightly' or 'to squeeze'.

Occupational stress is defined as: 'The sum of emotional, behavioural and physiological responses to a painful stimulus'. It is considered to be the result of the interaction between the employee and their environment and is defined as a state of discrepancy and incompatibility between the demands perceived by the employee and their perception of their ability to meet those demands. In this situation, the individual feels unable to control the situation. This condition is referred to as the stress response and is manifested through physical responses such as hormonal changes, an accelerated heartbeat and excessive sweating, as well as psychological responses such as feelings of discomfort, psychomotor inhibition and intense emotional reactions (Coutanceau, 2016, p. 64).

Kafi also defines it as follows: 'The interaction between the external environment, internal organisational forces and the individual's response, resulting in physical, psychological and behavioural effects. The degree to which these effects are experienced varies according to the individual's characteristics, affecting their performance,

efficiency and willingness to perform’ (Kafi, 2014, p. 386).

Based on the foregoing, an operational definition of occupational stress can be derived as follows: ‘It is a natural condition resulting from a lack of psychological and physical balance due to various factors affecting intervention officers at the Civil Protection Directorate in Annaba.’

Second Subsection: Sources of Occupational Stress

Sources of occupational stress refer to the various variables, factors and causes related to either the organisation or the individual themselves which lead to occupational stress. Researchers and specialists have classified these sources as either organisational, such as workload, role conflict, role ambiguity, physical working conditions, career advancement and organisational structure, or personal, such as disturbed relationships and incompatibility between the individual’s abilities and work requirements.

The present study focuses on the following sources:

First branch: Nature of work

Askar emphasises that sources of stress differ from one occupation to another. For instance, administrative roles tend to involve high levels of stress due to time constraints, numerous interviews and the need to meet specific productivity targets. Conversely, jobs that are considered to have low stress levels often involve technical problems, such as machine breakdowns, or role frustration resulting from low social status or inadequate supervision (Askar, 2000, p. 11).

Second Branch: Workload

Workload can be defined as an individual’s inability to complete tasks within the available time or their lack of the necessary skills to perform the tasks (Askar, 1988, p. 13).

Al-Kubaisi, on the other hand, considers workload to be a set of tasks assigned to human resources for execution which may exceed or fall below the required amount (Al-Harbi, 2009, p. 27).

Here, we are dealing with types of workload, which are classified into two main categories: quantitative and qualitative.

Third Branch: Poor Human Relations

Relationships with superiors, colleagues and subordinates are interactions between individuals and depend on how well they understand one another. Each individual considers themselves capable of maintaining harmony with others.

However, if these relationships are not characterised by cooperation and friendliness, and if the need for affection, friendship and belonging is not fulfilled through work groups, the result will be tension, anxiety and boredom arising from poor relationships. This leads to occupational stress among superiors, colleagues and subordinates (Belahi, 2023, p. 72).

Second section: Applied Procedures

In this section, we will present the field procedures of the study, followed by the presentation, analysis and discussion of the results. We will then test the validity of the hypotheses on the basis of these results. The aim is to arrive at the final results, which will be compared with the findings of previous studies. Finally, we will attempt to formulate some recommendations.

First Subsection: Field Procedures of the Study

First branch: Scope of the study

Through our preliminary examination of the study field, we identified its scope. The study was conducted at the Annaba Civil Protection Directorate, whose intervention mission is limited to the city centre and providing support to other secondary units in the event of major risks. The study was conducted between 2 February and 30 May 2026, with a sample size of 50 intervention officers.

Second branch: Research method used:

Due to the exploratory nature of the topic, which aims to identify the main sources of occupational stress among intervention officers at the Annaba Civil Protection Directorate, a descriptive method was adopted. This method involves accurately describing the phenomenon as it exists in reality and allows us to

analyse data both quantitatively and qualitatively.

Third Branch: Study Population and Sample

The study population consisted of intervention officers at the Civil Protection Directorate in Annaba, totalling 1,116 employees according to January 2026 statistics, of whom 225 were intervention officers.

Accordingly, a simple random sampling method was adopted through a lottery procedure. We prepared a list containing the names of all intervention officers in random order, ensuring that no individual was repeated or omitted. The individuals were numbered from 1 to 225. These numbers were then written on separate slips of paper. After mixing the slips in a bag, the first individual was drawn. The same mixing and drawing procedure was repeated until a sample of 50 individuals was obtained from the 225 intervention officers.

It should be noted that ten individuals were excluded from the main sample used to calculate the R-TEST-TST coefficient, representing 22.22%.

Fourth Branch: Data Collection Instruments

To test the validity of the hypotheses and achieve the objectives of the study, a questionnaire was designed based on theoretical literature and previous studies. Consisting of 18 items, it measures the sources of occupational stress among intervention officers at the Civil Protection Directorate in Annaba, as illustrated in the table below:

Table No. (1): Dimensions of the questionnaire

Items	Dimension
1-6	Nature of Work
7-12	Workload
13-18	Poor Human Relations

The five-point Likert scale was adopted as follows: Strongly Agree, Agree, Neutral, Disagree, Strongly Disagree. A score was assigned to each response: 1, 2, 3, 4 or 5 for positive statements, and 5, 4, 3, 2 or 1 for negative ones. To ensure the reliability of the questionnaire, its psychometric properties were calculated.

A. Validity assessment:

To ensure the instrument’s validity and suitability for the study’s objectives, face validity was adopted by submitting the questionnaire to a panel of three Work and Organizational Psychology professors from Badji Mokhtar University and the University of 8 May 1945. Accordingly, the required modifications were made, most of which concerned rewording certain items.

B. Reliability assessment:

Due to the large size of the population, the R-TEST coefficient was calculated by administering the questionnaire to a sample of 10 intervention officers and then administering it again to the same sample after 15 days. It should be noted that these officers were excluded from the main study sample. Cronbach’s alpha coefficient was also used to calculate the questionnaire’s reliability, consisting of 18 items.

After performing the calculations, we obtained a Pearson correlation coefficient of 0.89, indicating a high level of reliability, as well as an overall internal consistency coefficient for the questionnaire of 0.86, also indicating a high and acceptable level of reliability.

Fifth Branch: Statistical Methods Used

The Statistical Package for the Social Sciences (SPSS), version 20, was used. The main statistical methods employed were the R-test, the test coefficient and Cronbach’s alpha, which were used to calculate the reliability of the results, and frequency, percentage, arithmetic mean, standard deviation and weighted arithmetic mean, which were used to analyse the responses of the study sample to the questionnaire items and to test the validity of the hypotheses.

Second Subsection: Presentation, Analysis and Discussion of the Study Hypotheses

Since this study aims to identify the main sources of occupational stress among intervention officers at the Annaba Civil Protection Directorate, and in accordance with the descriptive method adopted, which is consistent

with the exploratory nature of the topic and focuses primarily on the analytical approach, this subsection will present and analyse the data and discuss the proposed hypotheses.

First Branch: Presentation and Analysis of Data

First: Presentation and analysis of the data related to the first dimension

Table No. (2): Results of the Nature of Work Dimension among Intervention Officers

Number		Alternatives					Arithmetic Mean	Standard Deviation	Trend (Direction)
		Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree			
1	F	16	23	8	2	1	4,02	0,12	+
	%	32	46	16	4	4			
2	F	13	29	6	1	1	4,04	0,11	+
	%	26	58	12	4	4			
3	F	21	25	4	00	00	4,3	0,03	+
	%	42	50	8	00	00			
4	F	16	25	6	2	1	4,06	0,12	+
	%	32	50	12	4	4			
5	F	16	29	4	00	1	4,18	0,10	+
	%	32	58	8	00	4			
6	F	16	27	4	2	1	4,10	0,12	+
	%	32	54	8	4	4			
Grand Total							4,11	0,10	+

Table No. (2) presents the responses of the study sample members regarding the first dimension, “Nature of Work,” represented by items 1–6. The arithmetic mean values ranged between \[4.02–4.30\], indicating a positive tendency expressed by the intervention officers at the Civil Protection Directorate – Annaba –, reflecting the fact that the nature of work leads to occupational stress at the Civil Protection Directorate – Annaba –. The table also shows that the standard deviation values ranged between \[0.03–0.12\], indicating the degree of homogeneity among the responses of the intervention officers at the Civil Protection Directorate regarding this dimension.

The first statement reads: ‘The shift work system makes me feel physically exhausted.’ The results revealed that 46% of respondents agreed with the statement, while 32% strongly agreed. The neutral response rate was 16%, the disagreement rate was 4%, and the “strongly disagree” rate was 2%. The arithmetic mean was 4.02 and the standard deviation was 0.12.

Based on the responses of the study sample members, we interpret the results as indicating that one of the most important characteristics of the work of intervention officers at the Civil Protection Directorate in Annaba is the 24×48 shift work system, which requires their continuous presence at the Directorate. This system causes physical exhaustion resulting from irregular sleep patterns and insufficient rest periods. This may lead to physical illnesses such as headaches, back pain, sleep disorders and pathological anxiety. This, in turn, can lead to work refusal, absenteeism, occupational accidents and organisational conflicts.

As for the second statement, which reads: ‘I feel bored due to the lack of work tools’, the results revealed that 58% of respondents agreed with the statement, while 26% strongly agreed. The neutral response rate was 12%. The percentages for ‘Disagree’ and ‘Strongly Disagree’ were equal at 2% each. The arithmetic mean was 4.04, while the standard deviation was 0.11.

Based on the responses of the study sample members, we interpret the results as indicating that one of the main reasons why intervention officers feel bored and anxious is the shortage of tools and equipment used in their work, both individually and collectively. The study participants explained that these tools and equipment are sometimes unsuitable or unfit for use, causing them to repeatedly express their dissatisfaction. Most of them confirmed that the shortage of such equipment and tools, including clothing and firefighting equipment, makes

performing tasks difficult and creates occupational stress among intervention officers. They are compelled to use primitive means to carry out their duties, which makes them feel frustrated.

The third statement reads: ‘The lack of occupational health and safety equipment increases my anxiety.’ The results revealed that 50% of respondents agreed with the statement, while 42% strongly agreed. The neutral response rate was 8%. The arithmetic mean was 4.3, while the standard deviation was 0.03.

Based on the responses of the study sample members, we can interpret the results as indicating that the absence of occupational health and safety equipment is one of the main obstacles hindering the work of intervention officers, particularly during dangerous missions such as natural disasters and fires. Most sample members confirmed that a lack of occupational health and safety equipment, whether individual or collective, makes them feel afraid and tense while performing their duties due to the risk of occupational accidents resulting from outdated or frequently unavailable equipment. This equipment includes fire-resistant protective clothing, helmets, leather boots, tanker-equipped trucks, water hoses and pumps, communication devices, fire extinguishers, personnel transport vehicles equipped for emergencies, and modern ambulances with medical equipment.

As for the fourth statement, which reads: ‘Poor physical working conditions cause me stress’, the results revealed the following:

- 50% of respondents agreed with the statement
- 32% of respondents strongly agreed with the statement
- 12% of respondents were neutral
- 4% of respondents disagreed with the statement
- 2% of respondents strongly disagreed with the statement The arithmetic mean was 4.06 and the standard deviation was 0.12.

Based on the responses of the study sample, we can interpret the results as indicating that poor physical working conditions are one of the main sources of occupational stress, given the nature of the tasks assigned to them. These tasks involve confronting natural disasters, such as fires, floods and earthquakes, as well as industrial disasters, including factory explosions, occupational accidents, traffic accidents and injuries sustained by members of society in homes and neighbourhoods. The scenes and events of such incidents have a psychological impact on intervention officers at the Civil Protection Directorate in Annaba, increasing their tension and frustration. Therefore, it is necessary to provide the Directorate with appropriate working conditions, including ventilation, moderate temperatures, quiet surroundings, green spaces and sports facilities (particularly swimming facilities) to provide recreation and reduce occupational stress.

This was followed by the fifth statement, which reads: ‘The large number of complex tasks increases my tension.’ The results revealed that 58% of respondents agreed with the statement, while 32% strongly agreed. The neutral response rate was 8%, and the “Strongly Disagree” and “Disagree” rates were 2% each. The arithmetic mean was 4.18 and the standard deviation was 0.10.

We can therefore interpret the results as indicating that, according to the responses of the study sample members, one of the main sources of occupational stress is the duplication of tasks. Civil Protection intervention officers perform multiple tasks through the shift work system as they must be available to intervene in all circumstances, places and times to confront natural and industrial disasters and traffic accidents. These tasks range from providing first aid to injured people and transporting bodies to extinguishing fires, evacuating disaster victims, providing coverage for sporting events and celebrations, and working shifts at government headquarters and hospitals. This creates occupational stress and both psychological and physical exhaustion.

Finally, the sixth statement reads: ‘The nature of my work requires rapid intervention, which increases my anxiety.’ The results revealed that 54% of respondents agreed with the statement, while 32% strongly agreed. The neutral response rate was 8%, the disagreement rate was 4%, and the “strongly disagree” rate was 2%. The arithmetic mean was 4.10 and the standard deviation was 0.12.

We can therefore interpret the results as indicating that, according to the study sample members, another major source of occupational stress is the nature of the work performed by Civil Protection intervention personnel. This work is characterised by the need for rapid intervention and accuracy in carrying out tasks, as well as increased vigilance and caution when responding quickly. The aim is to protect public and private property and preserve

human lives. The faster the intervention, the lower the human and material losses. However, the need for such speed and accuracy creates tension and apprehension among intervention officers, particularly those experiencing a decline in readiness and physical fitness with age, thereby exposing them to constant pressure and chronic stress.

Therefore, it can be concluded that the majority of responses from the study sample reflect a positive tendency towards the items, as confirmed by the arithmetic mean values, which exceeded the threshold value of 3. The overall arithmetic mean was 4.11. It can also be concluded that the standard deviation values for all items were close to zero, with an overall standard deviation of 0.10.

Second: Presentation and Analysis of Data Related to the Second Dimension

Table No. 3: Results of the Workload Dimension among Intervention Officers

Number		Alternatives					Arithmetic Mean	Standard Deviation	Trend (Direction)
		Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree			
7	F	21	25	4	00	00	4,3	0,08	+
	%	42	50	8	00	00			
8	F	13	25	8	4	00	3,94	0,12	+
	%	26	50	16	8	00			
9	F	19	25	5	00	1	4,22	0,11	+
	%	38	50	10	00	2			
10	F	10	36	4	00	00	4,12	0,07	+
	%	20	72	8	00	00			
11	F	22	19	6	3	00	4,20	0,12	+
	%	44	38	12	6	00			
12	F	12	30	6	2	00	4,04	0,10	+
	%	24	60	12	4	00			
Grand Total							4,13	0,10	+

Table 3 presents the responses of the study sample regarding the second dimension, ‘Workload’, represented by items 7–12. The arithmetic mean values ranged between 3.94 and 4.30, indicating a positive tendency among the intervention officers at the Civil Protection Directorate in Annaba, reflecting the fact that workload leads to occupational stress. The table also shows that the standard deviation values ranged between 0.07 and 0.12, indicating the degree of homogeneity in the responses of the intervention officers regarding this dimension.

The seventh statement reads: ‘I face difficulty in completing the tasks assigned to me.’ The results revealed that 50% of respondents agreed with the statement, while 42% strongly agreed. The neutral response rate was 8%. The arithmetic mean was 4.3, while the standard deviation was 0.08.

We can therefore interpret the results as indicating that, according to the responses of the study sample members, one of the main sources of occupational stress is the difficulty of completing tasks due to their large number, variety, and multiplicity. This reduces their motivation to achieve and leads to feelings of physical and psychological fatigue due to the accumulation of tasks and roles, a lack of awareness of their role, insufficient field training and suffering from routine and boredom at work.

As for the eighth statement, which reads: ‘The quantity of tasks assigned to me causes me tension’, the results showed agreement with the statement at a rate of 50% for ‘Agree’ and 26% for ‘Strongly Agree’, with a neutral response rate of 16% and a disagreement rate of 8%. The mean score was 3.94, with a standard deviation of 0.12.

This leads us to interpret the results as indicating that the excessive and substantial workload required of intervention officers causes chronic psychological and physical fatigue and exhaustion. In exceptional circumstances, intervention team members must be present and perform their tasks continuously and without interruption for several days until the mission is completed. This involves remaining at the workplace without rotation while adhering to the command hierarchy’s instructions. This places tremendous pressure

on them, leading to occupational stress.

The ninth statement reads: ‘Some tasks require a high level of competence, which increases my stress level.’ The results revealed that 50% of respondents agreed with the statement, 38% strongly agreed, 10% were neutral, and 2% strongly disagreed. The arithmetic mean was 4.22 and the standard deviation was 0.11.

Based on the responses of the study sample members, we interpret the results as indicating that intervention officers are required to perform more complex technical or administrative tasks. These tasks exceed their academic qualifications, knowledge-based training and competencies. Performing these tasks leads to repeated occupational errors, which have a negative effect on their psychological and emotional state, particularly when such errors result in disciplinary measures. This creates psychological pressure among intervention officers at the Annaba Civil Protection Directorate, leading to occupational stress.

As for the tenth statement, which reads: ‘Not receiving instructions at the appropriate time causes me tension’, the results revealed that 72% of respondents agreed with the statement and 20% strongly agreed, while 8% responded neutrally. The arithmetic mean was 4.12 and the standard deviation was 0.07.

Based on the responses of the study sample members, we interpret the results as indicating that a lack of coordination in task performance between superiors and subordinates due to poor communication and prevailing misunderstandings leads to supervisors delaying the issuance of instructions to intervention team members to begin carrying out their tasks. This occurs under sensitive circumstances and unfavourable conditions, resulting in haste when performing tasks and leading to occupational accidents and organisational conflicts due to intervention officers lacking the mental and physical preparedness required to carry out these tasks.

The eleventh statement reads: ‘I am assigned additional tasks outside my basic duties, which increases my physical exhaustion.’ The results revealed that 38% of respondents agreed with the statement, while 44% strongly agreed. The neutral response rate was 12%, and the rate of disagreement was 6%. The arithmetic mean was 4.20 and the standard deviation was 0.12.

Based on the responses of the study sample members, we interpret the results as indicating that, in addition to their regular and basic duties, Civil Protection intervention personnel are assigned additional, exhausting tasks that are not included in their job descriptions. These tasks are communicated by field commanders through communication devices during their field patrols when they observe situations requiring intervention by Civil Protection officers. Such tasks arise unexpectedly, constituting an additional workload and source of pressure that lead to occupational stress.

Finally, the twelfth statement reads: ‘Not feeling that duties are distributed fairly increases my anxiety.’ The results revealed that 60% of respondents agreed with the statement, 24% strongly agreed, 12% were neutral, and 4% disagreed. The arithmetic mean was 4.04 and the standard deviation was 0.10.

Based on the responses of the study sample members, we can interpret the results as indicating that Civil Protection intervention team members do not feel that their professional duties are distributed fairly. Certain more dangerous and complex tasks are consistently assigned to the same individuals, with no incentives, whereas routine tasks involving less danger and complexity are consistently assigned to specific individuals. This leads to a decline in motivation, a decrease in trust and loyalty, and an increase in frustration and tension, resulting in occupational stress.

Therefore, it can be concluded that the majority of responses from the study sample reflect a positive tendency towards the items, as confirmed by the arithmetic mean values, which exceeded the threshold value of 3. The overall arithmetic mean was 4.13. It can also be concluded that the standard deviation values for all items were close to zero, with an overall standard deviation of 0.10.

Third: Presentation and Analysis of Data Related to the Third Dimension

Table No. 4: Results of the Poor Human Relations Dimension among Intervention Officers

Number		Alternatives					Arithmetic Mean	Standard Deviation	Trend (Direction)
		Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree			
13	F	12	34	3	00	1	4,12	0,09	+

%	24	68	6	00	2				
14	F	12	30	6	2	00	4.04	0,10	+
	%	24	60	12	4	00			
15	F	6	34	8	2	00	3,88	0,09	+
	%	12	68	16	4	00			
16	F	16	29	4	00	1	4,18	0,10	+
	%	32	58	8	00	2			
17	F	20	26	4	00	00	4,32	0,08	+
	%	40	52	8	00	00			
18	F	22	19	6	3	00	4,20	0,12	+
	%	44	38	12	6	00			
Grand Total							4,12	0,09	+

Table 4 presents the responses of the study sample regarding the third dimension, ‘Poor Human Relations’, represented by items 13–18. The arithmetic mean values ranged between 3.88 and 4.32, indicating a positive tendency among the intervention officers at the Civil Protection Directorate in Annaba, reflecting the fact that poor human relations lead to occupational stress. The table also shows that the standard deviation values ranged between 0.08 and 0.12, indicating the degree of homogeneity among the intervention officers’ responses regarding this dimension.

The thirteenth statement reads: ‘Receiving contradictory instructions increases my maladjustment.’ The results revealed an agreement rate of 68% for “Agree” and 24% for “Strongly Agree”, while the neutral response rate was 6% and the “Strongly Disagree” rate was 2%. The arithmetic mean was 4.12 and the standard deviation was 0.09.

Based on the responses of the study sample members, we can interpret the results as indicating that receiving multiple command instructions, some of which contradict each other within a single professional situation, causes difficulties for intervention team members in adapting to professional situations, the nature of the intervention or the individuals concerned. This creates confusion, tension and anxiety, causing incorrect responses to situations and hindering performance of duties. It also places them under occupational pressure, leading to fatigue.

As for the fourteenth statement, which reads: ‘Poor communication among my work team increases my isolation’, the results revealed that 60% of respondents agreed with the statement, while 24% strongly agreed. The neutral response rate was 12%, and the rate of disagreement was 4%. The arithmetic mean was 4.04 and the standard deviation was 0.10.

Based on the responses of the study sample members, we can interpret the results as indicating that poor communication among intervention team members leads to increased distance between them, misunderstandings and poor coordination when carrying out tasks. It also increases feelings of loneliness, isolation and frustration, and weakens work integration, particularly among new team members. Furthermore, it reduces reliance on others and self-fulfilment. This creates occupational pressure, which leads to chronic occupational stress over time.

The fifteenth statement reads: ‘I prefer to stay alone.’ The results revealed that 68% of respondents agreed with the statement, 12% strongly agreed, 16% were neutral, and 4% disagreed. The arithmetic mean was 3.88, while the standard deviation was 0.09.

We interpret this as indicating a tendency towards isolation and spending long periods alone, away from other team members, due to the need for psychological rest or to avoid psychological pressure. This tendency is referred to as social withdrawal and involves avoiding interaction and communication with others, rejecting their suggestions, opinions and points of view, being biased towards one’s own opinion and monopolising conversations. This makes it difficult to build human relationships and can lead to feelings of boredom, resulting in psychological and physical fatigue.

The sixteenth statement reads: ‘A lack of support from colleagues increases my tension.’ The results revealed an agreement rate of 58% for “Agree” and 32% for “Strongly Agree”, with 8% selecting the neutral response and 2% selecting “Strongly Disagree”. The arithmetic mean was 4.18 and the standard deviation was 0.10.

Based on the responses of the study sample members, we interpret the results as indicating that the shortage of qualified personnel means that Civil Protection intervention team members do not receive sufficient support when undertaking dangerous missions. This leads to feelings of fear, tension and psychological pressure, causing severe fatigue.

The seventeenth statement reads: ‘Failure to respect the principle of equality weakens the team.’ The results revealed that 52% of respondents agreed with the statement, while 40% strongly agreed. The neutral response rate was 8%. The arithmetic mean was 4.32 and the standard deviation was 0.08.

Based on the responses of the study sample members, we interpret the results as indicating that one of the main sources of occupational stress is personnel lacking a sense of equality in the distribution of rewards, salaries, wages, duties, responsibilities, and professional roles. This inequality extends to treatment, particularly with regard to mutual respect, human relations, understanding, self-fulfilment, procedural justice in the imposition of penalties, rewards, disciplinary measures, expressions of appreciation and encouragement, and fairness in evaluation. This creates psychological pressure, hindering their performance.

Finally, the eighteenth statement reads: ‘The lack of interaction with my supervisor makes me feel anxious.’ The results revealed that 38% of respondents agreed with the statement, while 44% strongly agreed. The neutral response rate was 12%, and the disagreement rate was 6%. The arithmetic mean was 4.20 and the standard deviation was 0.12.

Based on the responses of the study sample members, we can interpret the results as indicating that poor communication and interaction between superiors and subordinates, as well as failing to involve other personnel in decision-making, strategic planning processes and goal setting, creates a wall between superiors and subordinates. This results in numerous organisational conflicts, misunderstandings, poor performance coordination, increased rates of absenteeism and occupational accidents, weak work integration and cohesion, and increased feelings of isolation, frustration, tension and a lack of self-esteem. Ultimately, this leads to occupational stress.

Therefore, it can be concluded that the majority of responses from the study sample reflect a positive tendency towards the items, as confirmed by the arithmetic mean values, which exceeded the threshold value of 3. The overall arithmetic mean was 4.12. It can also be concluded that the standard deviation values for all items were close to zero, with an overall standard deviation of 0.09.

Second Branch: Testing the hypotheses

In this section, the validity of the study hypotheses will be tested to reach the final results. This will be done by calculating the weighted arithmetic mean and the overall arithmetic mean for each dimension, as well as the standard deviation for each dimension.

First: Testing the first hypothesis, which states: ‘The nature of work leads to occupational stress among intervention officers at the Civil Protection Directorate in Annaba’.

Based on the results in Table 2, which show the responses of the study sample regarding the nature of work as a source of occupational stress among intervention officers at the Civil Protection Directorate in Annaba, it is evident that the mean scores for the items ranged from 4.02 to 4.30, while the overall mean for the dimension was estimated at 4.12, indicating a high level. The standard deviation values for the items ranged from 0.03 to 0.12, indicating homogeneity in the responses of the study sample regarding this dimension. The overall standard deviation for the dimension was estimated at 0.09.

Based on the presentation and analysis of the results, it can be concluded that the hypothesis that ‘the nature of work leads to occupational stress among intervention officers at the Civil Protection Directorate in Annaba’ was confirmed, with an overall mean estimated at 4.12. This finding is consistent with the study by Belahi (2023), in which the mean was also high, and agrees with the study by Tidjani and Bayad El Goul (no date).

Accordingly, it can be confirmed that the nature of work leads to occupational stress among intervention officers at the Civil Protection Directorate in Annaba.

Second: testing the second hypothesis, which states: 'Workload leads to occupational stress among intervention officers at the Civil Protection Directorate in Annaba.'

Based on the results in Table 3, which show how the study sample responded to the question of whether workload is a source of occupational stress among intervention officers at the Civil Protection Directorate in Annaba, it is evident that the mean score for the items ranged between 3.94 and 4.30, while the overall mean score was estimated at 4.13. The standard deviation values for the items ranged from 0.07 to 0.12, indicating homogeneity in the responses of the study sample regarding this dimension. The overall standard deviation for this dimension was estimated at 0.10.

Based on the presentation and analysis of the results, it can be concluded that the hypothesis that 'workload leads to occupational stress among intervention officers at the Civil Protection Directorate in Annaba' was confirmed, with an overall mean of 4.13. This finding is consistent with the study by Belahi (2023), in which the mean score was high, and agrees with the findings of Tidjani and Bayad El Goul (no date).

Accordingly, it can be confirmed that workload leads to occupational stress among intervention officers at the Civil Protection Directorate in Annaba.

Third: testing the third hypothesis, which states: 'Poor human relations lead to occupational stress among intervention officers at the Civil Protection Directorate in Annaba.'

Based on the results in Table 4, which show how the study sample members responded to the question about poor human relations being a source of occupational stress among intervention officers at the Civil Protection Directorate in Annaba, it is evident that the mean score for the items ranged between 3.88 and 4.32, while the mean score for the dimension was estimated at 4.12. The standard deviation values for the items ranged from 0.08 to 0.12, indicating homogeneity in the responses of the study sample regarding this dimension. The overall standard deviation for this dimension was estimated at 0.09.

Based on the presentation and analysis of the results, it can be concluded that the hypothesis that poor human relations lead to occupational stress among intervention officers at the Civil Protection Directorate in Annaba was confirmed, with an overall mean of 4.12. This finding is consistent with the study by Belahi (2023), in which the mean score was high, and agrees with the findings of Tidjani and Bayad El Goul (no date).

Accordingly, it can be confirmed that poor human relations lead to occupational stress among intervention officers at the Civil Protection Directorate in Annaba.

Fourth: testing the general hypothesis, which states: 'The main sources of occupational stress among intervention officers at the Civil Protection Directorate – Annaba – are: (nature of work, workload, and poor human relations)."

Table No. (5): Results of the Occupational Stress Sources Variable

Standard Deviation	Arithmetic Mean	Weighted Mean	Dimensions	Number
0,10	4,11	24,7	Nature of Work	1
0,10	4,13	24,82	Workload	2
0,09	4,12	24,74	Poor Human Relations	3
0,09	4,12	Total		

Based on the results presented in Table 5, which show how the study sample responded to the study variable (i.e. the existence of sources of occupational stress among intervention officers at the Civil Protection Directorate in Annaba), it was found that the mean scores for the dimensions ranged from 4.11 to 4.13, while the overall mean score for the variable was estimated at 4.12, indicating a high level. The standard deviation values for the dimensions ranged from 0.09 to 0.10, indicating homogeneity in the responses of the study participants regarding the variable. The overall standard deviation for the variable was estimated at 0.10.

Accordingly, the general hypothesis that the main sources of occupational stress for intervention officers at the Civil Protection Directorate in Annaba are " (nature of work, workload and poor human relations), with an overall mean of 4.12.

4. CONCLUSION:

There are numerous sources of occupational stress among intervention officers at the Civil Protection Directorate in Annaba. In the present study, we focused on three main sources of occupational stress. The first is workload, consisting of a set of professional tasks and activities assigned to an intervention officer within a specified timeframe. This requires them to make additional mental and physical efforts to complete the tasks. This creates psychological pressure and tension, leading to occupational stress.

The second source is poor human relations consisting of disagreements, tensions and a lack of communication, interaction and understanding among intervention officers, whether between colleagues or superiors and subordinates.

The third source is the nature of the work itself, consisting of the characteristics and attributes that distinguish the professional tasks, responsibilities and duties assigned to Civil Protection intervention officers. These vary between technical and administrative activities and between complex, dangerous and routine tasks. Some of these tasks require additional mental and physical effort to complete under optimal conditions. In certain cases, the requirements of the tasks are incompatible with individuals' abilities and qualifications, causing occupational pressure, depression and tension, and leading to a feeling of occupational stress.

This can result in conflicts among individuals in professional environments, a decline in motivation, a lack of respect and appreciation, poor treatment, feelings of job insecurity, lower levels of satisfaction, loyalty and belonging, and a sense of inequality in distribution, evaluation and treatment.

The sources of occupational stress for intervention officers at the Civil Protection Directorate include professional interactions, work systems and procedures, physical working conditions, and human and social factors. These factors include a lack of balance between personal and professional life, poor human relations, ineffective time management, and psychological crises such as anxiety, tension, fear, and frustration. In other words, these issues are closely linked to human resources, the work environment, and the institution's objectives. Therefore, the institution must adopt the following recommendations:

- Reviewing the salary and wage scale in line with the cost of living and efforts made will raise the level of job satisfaction.
- The need to improve physical working conditions, such as ventilation, temperature and noise levels, in order to provide a healthy and safe work environment that encourages productivity and creativity.
- Reducing workload by adopting the principle of equality in the distribution of tasks, duties and responsibilities.
- Providing individual and collective equipment and tools to maintain occupational health and safety.
- Ensuring theoretical and field training in accordance with advanced training programmes to improve the capabilities and qualifications of Civil Protection personnel.

Conducting practical simulation exercises that replicate actual tasks to enhance personnel's readiness to confront natural and industrial disasters and ensure the objective and optimal distribution of roles within a clear and simple organisational structure. This allows for clear lines of authority and responsibility, and ensures that roles and interests do not conflict.

Focus on improving human relations within the work environment by encouraging teamwork, voluntary work and positive interaction, and strengthening communication. Communication channels should be established to foster closer relationships between management and employees, promoting mutual respect, understanding, transparency, and integrity in dealings between superiors and subordinates.

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