"The Impact of Personal Variables on Job Satisfaction among Employees of the Civil Protection Directorate in Djelfa Province: A Statistical Analytical Study"

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ABSTRACT

This study investigates the impact of personal variables on job satisfaction among employees of the Civil Protection Directorate in Djelfa Province. Using a descriptive analytical approach, the research surveyed a stratified random sample of 261 employees, with 248 valid responses analyzed. The study examined the influence of several personal variables—age, experience, educational level, obtained qualification, marital status, number of dependent children, military rank, workplace location, job role, and work schedule—on job satisfaction. Statistical analyses, including one-way ANOVA and independent samples t-tests, revealed that educational level, marital status, and workplace location significantly affect job satisfaction, while other variables showed no statistically significant impact. Notably, employees with lower educational levels and those who are single reported higher satisfaction levels. The findings underscore the importance of aligning job roles and organizational environments with employees' personal characteristics to enhance satisfaction and performance within semi-military institutions.. ..

1. INTRODUCTION

Job satisfaction is a variable that cannot be directly observed, but rather measured through its effects and outcomes among employees. The manifestations of job satisfaction are reflected in employees' performance, enthusiasm for work, alignment of personal goals with organizational objectives, demonstration of initiative, voluntary compliance with instructions and regulations, integration into team spirit, and a sense of pride and belonging to the institution.

The Civil Protection Directorate is one of the security agencies affiliated with the Ministry of Interior, entrusted with the mission of protecting lives and property from accidents, natural and industrial disasters, as well as preserving the environment.

This mission requires a high level of job satisfaction among civil protection personnel to ensure high performance in carrying out these tasks efficiently and effectively. It also necessitates identifying the key variables that influence job satisfaction in order to reach a high level that has a strong and effective impact on achieving the desired goals of the Civil Protection Directorate in Djelfa.

01– Study Methodology

The descriptive method focuses on accurately identifying the characteristics and features of the subject being studied, expressed both quantitatively and qualitatively. This method is widely used in military fields as well as in human sciences, where applying the experimental method is often challenging. It can be defined as a scientific approach to analysis and interpretation aimed at achieving specific objectives related to a social situation. It is also a way to describe the studied

phenomenon and represent it quantitatively by collecting standardized information about the problem, classifying it, analyzing it, and subjecting it to thorough examination (Hassan, 2007, p. 72). In collecting the information and data related to the study topic, the researcher relied on the descriptive method, which involves describing job satisfaction among employees and its relationship to performance, in order to classify, analyze, and rigorously examine the study. This approach is particularly suitable given that the research population is characterized as a semi-military system.

Through the descriptive method, the researcher aims to analyze and interpret the collected data and extract its implications, which may lead to generalizations about the phenomenon under investigation.

02 The problem of the study:

Job satisfaction is a central construct in organizational psychology, influencing employee performance, retention, and overall well-being (Locke, 1976). While organizational factors such as leadership, compensation, and work environment are often emphasized, personal variables also play a critical role. These include demographic characteristics (e.g., age, gender, education) and psychological traits (e.g., personality, values, attitudes), which shape how individuals perceive and respond to their work environment (Judge, Bono, & Locke, 2000). Understanding these personal dimensions provides a more comprehensive view of job satisfaction and its determinants.

Job satisfaction within the Civil Protection Directorate in Djelfa is influenced by a range of personal variables such as age, gender, educational level, years of experience, and marital status. These factors often shape employees' perceptions of their work environment. these personal variables significantly affect satisfaction levels among staff in Djelfa , Accordingly, the following research problem is proposed

"What is the impact of personal variables on job satisfaction in the Civil Protection Directorate in Djelfa."

2.1 Data Collection Method

Descriptive statistical techniques to describe the characteristics of the study sample using percentages and frequencies. "Five - Point-Likert Scale" .

The statistical package (SPSS) is used for analyzing data and general information.

2.2 Study Population and Sample

2.2.1 Study Population

The study population includes all employees of the Civil Protection Directorate in the Wilaya of Djelfa, totaling 778 individuals, among whom are 41 officers and 360 agents. These personnel are distributed across 12 secondary units.

Random sampling requires that every statistical unit in the population has a non-zero probability of being selected. Therefore, it is essential to have a reference framework that allows access to all statistical units. This framework consists of a complete, updated nominal list of the study population, free from omissions or duplications, and clearly identifying each unit without ambiguity (Rémy, Philippe, 1997, p. 4).

2.2.2 Study Sample

The sample is defined as a subset of statistical units drawn from the population about which we seek to understand specific characteristics. The results obtained from the sample are used for "inference" to generate estimates about the entire population (Figure 12). (Rémy, Philippe, 1997, p. 4)

Due to the lack of precise sample size calculations in previous studies, the following parameters were selected:

Margin of error (precision level) "e" = 0.05

Confidence level "α" = 95% or 1.96

Estimated proportion "P" ≈ 50%

Population size "N" = 778

The research sample was calculated using the following formula:

$$n \geq \frac{t^2 * N}{\frac{e^2}{p*(1-p)} * (N-1) + t^2} \qquad n = \frac{t^2 N}{t^2 + (2e)^2(N-1)}$$

A sample size of approximately 257.394 was obtained, rounded to 258 individuals.

A simple stratified random sample was chosen, as it is a type of probability sampling based on the idea that certain characteristics distinguish elements of the study population and must be considered before selection. This method allows

the creation of smaller, more homogeneous groups or strata, based on the assumption that elements within each stratum share similarities while also differing from other groups (Ingers, 2006, p. 304).

In this type of sampling, the population is divided into segments based on characteristics such as age, occupation, or gender (Hassan, 2007, pp. 73–74). The nature of the study population and its division into units further supported the choice of this method.

The sampling interval was calculated as

:(N/n = 778 / 261 = 2.992 ~ 3)

A random starting number (1) was selected, and the sample was drawn using the sequence:

(1, 4, 7, 10, … nj+3, … n) This method was applied across all units.

Thus, the sample size reached 261 individuals, representing 29% of the total population. A total of 261 questionnaires were distributed, of which 248 were successfully retrieved, representing 95% of the distributed questionnaires. This is considered an adequate response rate for generalizing the study results.

03 Definition of Job Satisfaction

Job satisfaction is the enthusiasm that employees feel toward their work, stemming from an internal force based on a personal feeling. This feeling can be attributed to three sources: the relationship between the employee and their work, their attitude toward the job, and the relationship between the employee and their colleagues (Al-Sharayid, 2008, p. 63).

It is generally a positive personal impression resulting from several factors, including the achievement of desired goals. It is considered an indicator of self-fulfillment (Brangier, Lancry, Louche, 2004, p. 411).

The Job satisfaction has been defined in many studies. Cranny, Smith and Stone (1992, p.1) define job satisfaction as employees' emotional state regarding the job, considering what they expected and what they actually got out of it. In fact, an employee with low expectations can be more satisfied with a certain job than someone who has high expectations. If one's expectations are met or exceeded by the job, then one is happy and satisfied with the job. Weiss, H. M. (2002). The Job satisfaction is the feeling of pleasure and achievement which an employee experience at their job, when the work is worth doing, or the degree to which their works gives them satisfaction. The Job satisfaction is the collection of feelings and beliefs people have about their current jobs.Locke, E. A. (1969). (Ng & Feldman, 2010).

Job satisfaction is a complex phenomenon since it arises from the worker evaluation of numerous job dimensions created each day (Kinicki et al., 2002). Furthermore, job satisfaction is not solely based on the degree to which the job itself offers the employee with satisfaction connected to a particular job characteristic but also on the degree to which the job characteristic is relevant to employee (Locke, 1969). Job satisfaction is a personal construct since it is a personal attitude centered on personal experience, which differentiate it from organisational environment experienced by an average individual or a combined attitude of organisation employees towards their jobs (Schneider, Erhart, and Macey).

Demographic Variables

Age Research suggests that job satisfaction often follows a U-shaped curve across the lifespan. Younger employees may experience lower satisfaction due to unmet expectations, while older employees report higher satisfaction, possibly due to adjusted expectations and greater stability (Clark, Oswald, & Warr, 1996).

Gender Findings on gender differences in job satisfaction are mixed. Some studies suggest women report slightly higher satisfaction despite lower pay, possibly due to differing expectations or occupational roles (Sousa-Poza & Sousa-Poza, 2000). However, these differences often reflect contextual factors such as occupational segregation rather than inherent gender differences.

Education Education level can influence satisfaction in complex ways. Higher education may increase expectations, leading to dissatisfaction if jobs do not match qualifications (Ng & Feldman, 2009). Conversely, education can enhance adaptability and career opportunities, which may improve satisfaction.
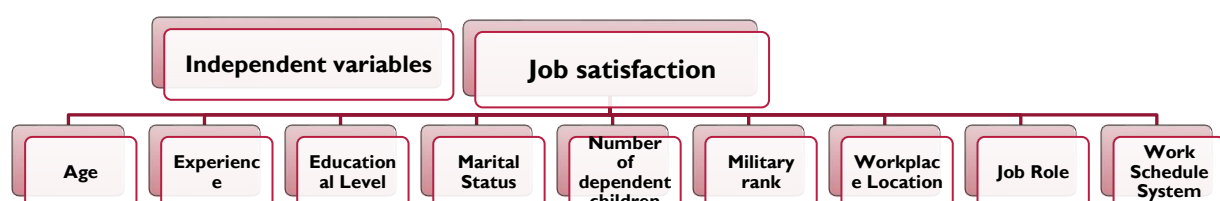

Figure 1. The Conceptual Framework of the Research

Figure 1 shows the search form for this study. Framework is supposed to 10 characteristics is gender, age, marital status,

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education level, and others. In fact, the main objective of this study is to identify the relationship these demographic characteristics of job satisfaction.

04 Results of the study data analysis

Personal variables differ from one individual to another, yet their collective impact on job satisfaction can sometimes be evident. Therefore, we posed the following question: Are there statistically significant differences in job satisfaction attributable to personal variables among employees of the Civil Protection Directorate in Djelfa Province?

4.1. The variable of Age in relation to Job Satisfaction

The age variable is one of the personal characteristics frequently used in sociological research, particularly within organizations where age varies and converges depending on job roles and ranks. This makes it an important variable to study. The following table presents the results of a one-way ANOVA test examining the relationship between age and job satisfaction.

Table No. 01: One-Way ANOVA Analysis of the Age Variable and Job Satisfaction

Satisfaction	ANOVA à 1 facteur				
Signification	F	Moyenne des carrés	ddl	Somme des carrés	
,107	2,051	,459	3	1,377	Inter-groupes
		,224	244	54,598	Intra-groupes
			247	55,975	Total

Source: Output from SPSS software

The p-value (P-sig) associated with the F-statistic for the age variable is not statistically significant at the 0.05 significance level ($\alpha = 0.05$). Therefore, we accept the null hypothesis, which states that there are no statistically significant differences in job satisfaction means attributable to age. In other words, age does not affect job satisfaction among employees of the Civil Protection Directorate in Djelfa.

4.2 The variable of experience variable in relation to Job Satisfaction

Years of professional experience is considered one of the personal variables, as differences in experience can lead to varying perceptions of the workplace—either positively or negatively. The following table presents the results of a one-way ANOVA test examining the relationship between the experience variable and job satisfaction.

Table No. 02: One-Way ANOVA Analysis of the Experience Variable and Job Satisfaction

Satisfaction	ANOVA à 1 facteur				
Signification	F	Moyenne des carrés	ddl	Somme des carrés	
,804	,506	,116	6	,696	Inter-groupes
		,229	241	55,279	Intra-groupes
			247	55,975	Total

The p-value (P-sig) associated with the F-statistic for the Years of professional experience variable is not statistically significant at the 0.05 significance level ($\alpha = 0.05$). Therefore, we accept the null hypothesis, which states that there are no statistically significant differences in job satisfaction means attributable to experience. In other words, experience does not affect job satisfaction among employees of the Civil Protection Directorate in Djelfa.

4.3 The variable of educational level in relation to Job Satisfaction

The educational level is considered one of the key personal variables, as it reflects ideas and cultural values acquired through social upbringing, which vary depending on the level of education. It is also a source of differences in employment and rank. Therefore, the following table presents the results of a one-way ANOVA test examining the relationship between educational level and job satisfaction.

Table No. 03: One-Way ANOVA Analysis of Educational Level and Job Satisfaction

Satisfaction   **ANOVA à 1 facteur**

Signification	F	Moyenne des carrés	ddl	Somme des carrés	
,038	3,320	,739	2	1,477	Inter-groupes
		,222	245	54,498	Intra-groupes
			247	55,975	Total

The p-value (P-sig = 0.038) associated with the F-statistic (F = 3.320) for the educational level variable is statistically significant at the 0.05 significance level (α = 0.05). Therefore, we reject the null hypothesis, which states that there are no statistically significant differences in job satisfaction means based on educational level. In other words, educational level does influence job satisfaction among employees of the Civil Protection Directorate in Djelfa.

Analysis of variance (ANOVA) measures the overall difference between means, but not the specific differences between individual groups. Statistical significance may result from a large difference between just two means among several. For this reason, statisticians developed post hoc comparison tests that account for such cases (Fox, 1999, p. 247).

At this stage, we do not yet know which educational levels (middle school, secondary, or higher education) differ in terms of job satisfaction. Therefore, we will conduct a post hoc comparison test.

"If there are five means, all differences will be tested as if they were five separate steps, controlling the error rate against each possible null hypothesis. Tukey's HSD is a preferred pairwise test for many researchers because it effectively controls the error rate." (Howell, 2009, p. 392)

In cases where the groups have unequal sample sizes or the variances are not homogeneous, the same general procedure is used to compare means—typically employing the Tukey test. However, when the goal is to compare one group against all other groups, the Duncan test is recommended (Howell, 2009, p. 396).

In this case, we chose the Duncan comparison test because it allows for comparing different groups against a control group.

Table No. 04: Duncan Post Hoc Comparison Test for Educational Level and Job Satisfaction

Duncan **Satisfaction**⟩

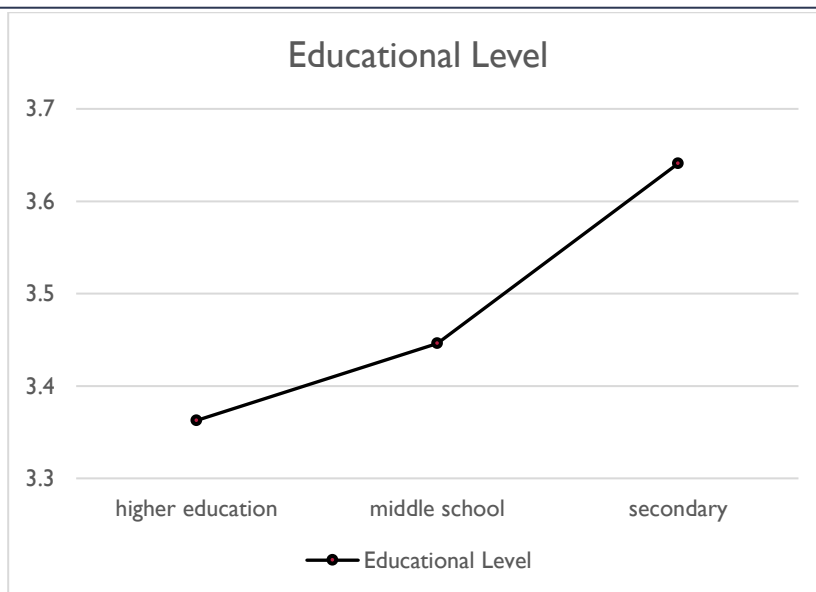| Sous-ensemble pour alpha = 0.05		N	Educational Level
2	1		
	3,3627	60	higher education
	3,4460	160	middle school
3,6408		28	secondary
1,000	,373		Signification

Figure No. 02: Graphical Representation of the Mean Scores for Educational Level Groups Based on Likert Scale Ratings

Source: Output from SPSS software

"Educational level is found to be related to job satisfaction. While some researchers have found positive relationships between education levels and job satisfaction, others have found a slight negative correlation, especially for higher levels of education. The explanation is that better-educated persons have higher expectations and believe that their work should provide greater responsibility and fulfillment. Many jobs however do not satisfy these expectations resulting in lower levels of satisfaction". (IGNOU.2025)

This chart illustrates how the average job satisfaction scores vary across different educational levels (e.g., middle school, secondary, higher education), as measured by the Likert scale. It provides a visual comparison of group means, helping to identify which educational categories are associated with higher or lower satisfaction levels.

Duncan's test shows that the mean job satisfaction score for the "middle school" educational level is significantly higher than those of the other two levels.

In other words, employees with a middle school education are more satisfied with their jobs than those with secondary or higher education levels. This can be attributed to the mismatch between the educational qualifications of employees in the secondary and higher education categories and the positions they hold within the organization. In contrast, employees with a middle school education tend to occupy positions that exceed their educational level, which likely contributes to their higher job satisfaction.

4.5 The variable of Marital Status in relation to Job Satisfaction

The marital status variable, like other personal variables, differs from one employee to another. Group behavior also varies depending on marital status. To determine whether there are differences in job satisfaction based on this variable, the following table presents the results of a one-way ANOVA test examining the relationship between marital status and job satisfaction.

Table No. 05: One-Way ANOVA Analysis of Marital Status and Job Satisfaction

Satisfaction			ANOVA à 1 facteur		
Signification	F	Moyenne des carrés	ddl	Somme des carrés	
,019	4,052	,896	2	1,792	Inter-groupes
		,221	245	54,183	Intra-groupes
			247	55,975	Total

This table presents the results of a one-way analysis of variance (ANOVA) conducted to examine the relationship between marital status and job satisfaction.

The p-value (P-sig = 0.019) associated with the F-statistic (F = 4.052) for the marital status variable is statistically

significant at the 0.05 significance level ($\alpha = 0.05$). Therefore, we reject the null hypothesis, which states that there are no statistically significant differences in job satisfaction means. In other words, marital status does influence job satisfaction among employees of the Civil Protection Directorate in Djelfa.

However, at this stage, we do not yet know which specific categories (married, single, and divorced) differ in terms of satisfaction. Therefore, we will proceed with a post hoc comparison test.

Table No. 06: Duncan Post Hoc Comparison Test for Marital Status and Job Satisfaction

Duncan   **Satisfaction**

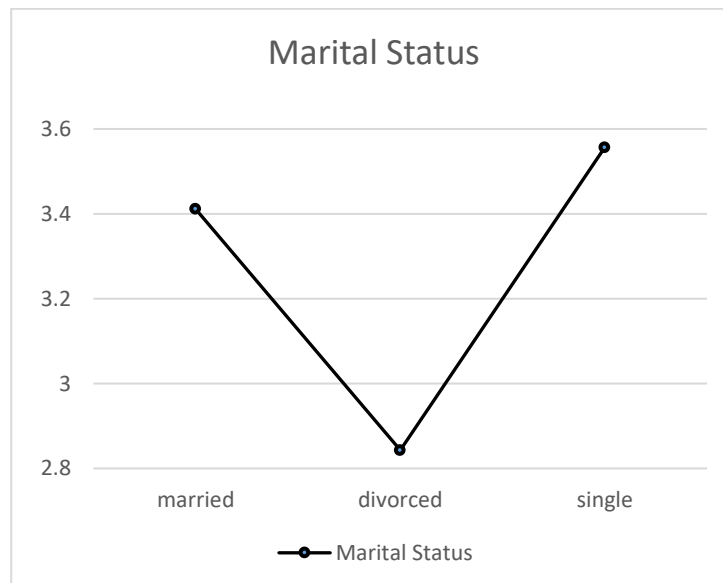| Sous-ensemble pour alpha = 0.05		N	Marital Status
2	1		
	2,8431	2	divorced
3,4114		176	married
3,5566		70	single
,601	1,000		Signification

Figure No. 03: Distribution of Mean Scores for Marital Status Groups Based on Likert Scale Ratings

Source: Output from SPSS software

It is observed from Table No. 05 that the "divorced" marital status group contains only two individuals. Therefore, we will focus on comparing the "single" and "married" groups to validate the results of the ANOVA. For this purpose, we will use the independent samples t-test to examine the difference in mean job satisfaction between these two groups.

4.5.1 Independent Samples t-Test

4.5.2 Conditions for Using the t-Test

The dependent variable must be quantitative.

The dependent variable should follow a normal distribution within the study population, especially in cases involving small samples (fewer than 50 individuals).

Within the two groups of the independent variable, the variances of the dependent variable should be equal—this is known as homogeneity or equality of variances (Fox, 1999, p. 220).

Before conducting any statistical test—and ideally even before data collection—we must define several key features of the test. First, we need to establish the null and alternative hypotheses:

$H_0 : \mu_1 = \mu_2$

$H_1 : \mu_1 \neq \mu_2$

The null hypothesis is two-tailed (we reject H₀ if $\mu_1 > \mu_2$ or if $\mu_1 < \mu_2$). Therefore, we will use a two-tailed independent samples t-test to examine the difference between the two means. To do so, we can now calculate the t-value using the following formulas: (Howell, 2009, p. 208)

$$t = \frac{\bar{X}_1 - \bar{X}_2}{S\,\bar{X}_1 - \bar{X}_2} = \frac{\bar{X}_1 - \bar{X}_2}{\sqrt{\dfrac{s_p^2}{n_1} + \dfrac{s_p^2}{n_2}}} = \frac{\bar{X}_1 - \bar{X}_2}{\sqrt{s_p^2 \left(\dfrac{1}{n_1} + \dfrac{1}{n_2}\right)}}$$

$$s_p^2 = \frac{(n_1 - 1)s_1^2 + (n_2 - 1)s_2^2}{n_1 + n_2 - 2}$$

This table presents the results of an independent samples t-test conducted to compare the mean job satisfaction scores between two marital status groups—**single** and **married**—among employees of the Civil Protection Directorate in Djelfa. The test was used to verify whether the observed differences in satisfaction are statistically significant, especially after excluding the "divorced" group due to its small sample size.

Table No. 07: Calculation of Mean and Standard Deviation for the Marital Status Variable

Statistiques de groupe

Erreur standard moyenne	Ecart-type	Moyenne	N	Marital Status	
,03348	,44417	3,4114	176	married	Satisfaction
,06375	,53337	3,5566	70	single	

Table No. 08: Independent Samples t-Test for Marital Status and Job Satisfaction

Test d'échantillons indépendants

Test-t pour égalité des moyennes							Test de Levene sur l'égalité des variances		Satisfaction
Intervalle de confiance 95% de la différence		Différence écart-type	Différence moyenne	Sig. (bilatérale)	ddl	t	Sig.	F	
Supérieure	Inférieure								
-,01402	-,27628	,06657	-,14515	,030	244	-2,180	,206	1,609	Hypothèse de variances égales
-,00244	-,28787	,07201	-,14515	,046	109,0	-2,016			Hypothèse de variances inégales

It is clearly observed that Levene's test for equality of variances is not statistically significant (0.206 > 0.05), indicating that the assumption of homogeneity of variances is met. Therefore, we can proceed with interpreting the results of the independent samples t-test.

The p-value (P-sig = 0.030) associated with the t-statistic (T = -2.18) is statistically significant at the 0.05 level (α = 0.05). Accordingly, we reject the null hypothesis, which states that there are no statistically significant differences between the two groups. This means that there is a significant difference in job satisfaction between single and married employees.

Contrary to expectations, the results show that **single employees report higher job satisfaction** than their married counterparts within the Civil Protection Directorate of Djelfa.

4.6 The variable of Number of dependent children in the household and job satisfaction

The Number of dependents is a variable that often correlates with marital status. It reflects the employee's level of social

and economic stability. As with other external environmental factors, this variable may influence the level of job satisfaction among workers. To examine this relationship, the following table presents the results of a one-way ANOVA test assessing the impact of the Number of Dependent children In the household on job satisfaction.

Table No. 09: One-Way ANOVA Analysis of Number of Children and Job Satisfaction

Satisfaction			ANOVA à 1 facteur		
Signification	F	Moyenne des carrés	ddl	Somme des carrés	
,516	,889	,178	7	1,243	Inter-groupes
		,200	170	33,948	Intra-groupes
			177	35,192	Total

The p-value (P-sig) associated with the F-statistic for the number of children variable is not statistically significant at the 0.05 level (α = 0.05). Therefore, we accept the null hypothesis, which states that there are no statistically significant differences in job satisfaction means based on the number of children. In other words, the number of children does not affect job satisfaction among employees of the Civil Protection Directorate in Djelfa.

4.7 The variable of military rank in relation to job satisfaction

Rank is one of the variables that defines social and economic differences within the organization, as it determines both responsibility and salary. To assess whether rank has an impact on job satisfaction, the following table presents the results of a one-way ANOVA test examining the relationship between rank and job satisfaction.

Table No. 10: One-Way ANOVA Analysis of Rank and Job Satisfaction

Satisfaction			ANOVA à 1 facteur		
Signification	F	Moyenne des carrés	ddl	Somme des carrés	
,567	,805	,183	6	1,099	Inter-groupes
		,228	241	54,876	Intra-groupes
			247	55,975	Total

The p-value (P-sig) associated with the F-statistic for the rank variable is not statistically significant at the 0.05 level (α = 0.05). Therefore, we accept the null hypothesis, which states that there are no statistically significant differences in job satisfaction means based on rank. In other words, **rank does not affect job satisfaction** among employees of the Civil Protection Directorate in Djelfa.

Job satisfaction represents a major challenge in restoring the value and meaning of work. The organization's competitiveness and employee efficiency primarily depend on good internal satisfaction. Moreover, working conditions should be viewed as an investment rather than a cost to the organization.

Dana and Grifn conceptualize job satisfaction as encompassing:

Health at work;

Work-related satisfaction, such as contentment with salary, promotion opportunities, the nature of the work itself, and relationships with colleagues. (ELAFRI, 2013, p.52)

4.8 The variable of Workplace Location in relation to job satisfaction

Work conditions vary depending on workplace location and environment, which in turn reflect the unique characteristics of each region. To determine whether workplace location has an impact on job satisfaction, the following table presents the results of a one-way ANOVA test examining the relationship between workplace location and job satisfaction.

Table No. 11: One-Way ANOVA Analysis of Workplace Location and Job Satisfaction

Satisfaction			ANOVA à 1 facteur		
Signification	F	Moyenne des carrés	ddl	Somme des carrés	

,000	5,062	,971	11	10,686	Inter-groupes
		,192	236	45,289	Intra-groupes
			247	55,975	Total

The smaller the p-value (P-sig), the stronger the evidence against the null hypothesis. In this case, the mean job satisfaction scores associated with the **workplace location** variable show statistically significant differences (F = 5.062; p = 0.000). Therefore, we reject the null hypothesis, indicating that **workplace location has a strong impact** on job satisfaction among employees of the Civil Protection Directorate in Djelfa.

However, at this stage, we do not yet know which specific units or locations differ in terms of satisfaction. To determine this, we will proceed with a **post hoc multiple comparison test**.

Table No. 12: Duncan's Multiple Range Test for Workplace Location and Job Satisfaction

Duncan   **Satisfaction**

Sous-ensemble pour alpha = 0.05				N	Workplace Location
4	3	2	1		
			3,2505	54	Unit 01
			3,2593	27	Unit 02
			3,2892	24	Unit 03
		3,3221	3,3221	14	Unit 04
		3,3389	3,3389	14	Unit 05
	3,4148	3,4148	3,4148	13	Unit 06
	3,4995	3,4995	3,4995	21	Unit 07
3,6326	3,6326	3,6326		19	Unit 08
3,6499	3,6499	3,6499		14	Unit 09
3,7369	3,7369			12	Unit 10
3,7441	3,7441			19	Unit 11
3,8443				17	Unit 12
,209	,051	,052	,152		Signification

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Figure No. 04: Distribution of Mean Scores by Workplace Location Based on Likert Scale Ratings

Source: SPSS Output

It is observed that the second group of units (from 08 to 12) shows **higher levels of job satisfaction** compared to the first group, which includes the main unit (from 01 to 07) **.**

This indicates the presence of **two distinct clusters** of workplace environments, where the units within each group share similar characteristics. The difference in job satisfaction between these two groups can be attributed to several factors, including:

Human relations

Nature of the work

Interaction with machinery and equipment

Direct supervision

Communication

Work pressure

Salary

Incentives

These contextual and organizational differences appear to significantly influence how employees perceive their work environment and overall satisfaction.

It is evident that **geographic distribution is not related** to the differences in job satisfaction between the two groups.

This suggests that the variation in satisfaction levels is more likely due to **organizational and interpersonal factors** rather than regional location alone.

4.9 The variable of Job Role and Job Satisfaction

Like other variables, the **job role** encompasses several factors of differentiation, such as the hierarchical position within the organization, salary levels, and even societal recognition of higher-ranking positions. To determine whether job role has an impact on job satisfaction, the following table presents the results of a **one-way ANOVA test** examining the relationship between job role and job satisfaction.

Table No. 13: One-Way ANOVA Analysis of Job Role and Job Satisfaction

Satisfaction　　　　　　　　　　　　　　　**ANOVA à 1 facteur**

Signification	F	Moyenne des carrés	ddl	Somme des carrés	
,337	1,142	,258	7	1,805	Inter-groupes
		,226	240	54,170	Intra-groupes
			247	55,975	Total

The p-value (P-sig) associated with the F-statistic for the job role variable is **not statistically significant** at the 0.05 level (α = 0.05). Therefore, we accept the null hypothesis, which states that there are **no statistically significant differences** in job satisfaction means based on job role. In other words, **job role does not affect job satisfaction** among employees of the Civil Protection Directorate in Djelfa.

4.10 The variable of work schedule system and Job Satisfaction

Work schedule is a variable that differs across organizations—and even within the same organization—depending on job requirements. In the Civil Protection sector, two distinct systems exist: one based on **shift hours** and another on **annual working hours**.

To determine whether the work schedule system affects job satisfaction, and since this variable consists of **two groups**, an **independent samples t-test** is used. The following table presents the results of the t-test comparing job satisfaction across the two work schedule systems.

Table No. 14: Calculation of Mean and Standard Deviation for the Work Schedule System Variable

Statistiques de groupe

Erreur standard moyenne	Ecart-type	Moyenne	N	Work schedule	
,07933	,52623	3,4514	44	08h	Satisfaction
,03262	,46592	3,4470	204	24h	

Table No. 15: Independent Samples t-Test for Work Schedule System and Job Satisfaction

Test d'échantillons indépendants

Test-t pour égalité des moyennes							Test de Levene sur l'égalité des variances		Satisfaction
Intervalle de confiance 95% de la différence		Différence écart-type	Différence moyenne	Sig. (bilatérale)	ddl	t	Sig.	F	
Supérieure	Inférieure								
,16056	-,15179	,07929	,00439	,956	246	,055	,270	1,221	Hypothèse de variances égales
,17606	-,16729	,08578	,00439	,959	58,417	,051			Hypothèse de variances inégales

"The work regime also acts as a moderator in the relationship between job satisfaction and perceived performance "(Pinheiro, Palma-Moreira. 2025) .but in the present study it is clearly observed that Levene's test for equality of variances is not statistically significant (0.270 > 0.05), indicating that the assumption of homogeneity of variances is met. Therefore,

we can proceed with interpreting the results of the independent samples t-test.

The p-value (P-SIG = 0.956) associated with the t-statistic (T = 0.055) is **not statistically significant** at the 0.05 level (α = 0.05). Accordingly, we accept the null hypothesis, which states that there are **no statistically significant differences** in job satisfaction between the two groups. In other words, **the work schedule system (8-hour vs. 48-hour shifts) does not affect job satisfaction** among employees of the Civil Protection Directorate in Djelfa.

"The results indicate that Herzberg's concept of work motivation, introduced many years ago, remains a relevant foundation for contemporary studies on job satisfaction—particularly in the context of social service work (Deborah Smith & Joel Shields, 2013, pp. 189–198)."

06 Results of the study found the following results:

Based on the analysis of the study results, the following key findings emerged:

The mean scores for **organizational communication** are moderate, indicating that communication does not strongly motivate employees. Barriers include **difficulty in submitting inquiries or concerns to management** and **insufficient training on civil protection regulations**.

The mean scores for **salary** reflect a neutral level of satisfaction. Employees feel that their salaries do not match their financial obligations and are lower than those in comparable professions.

Similarly, the mean scores for **material and moral incentives** are neutral, suggesting moderate satisfaction. Employees express dissatisfaction with **reward systems not based on merit**, **unfair and delayed promotion procedures**, and **inequitable distribution of incentives**, all of which negatively impact job satisfaction, as supported by organizational behavior theories.

A **moderate positive correlation** was found between **job satisfaction and job performance**, indicating that higher satisfaction levels are associated with improved performance among employees of the Civil Protection Directorate in Djelfa.

The mean scores for **performance** are generally high, with a large proportion of employees reporting compliance with instructions, task completion, and adherence to regulations—reflecting strong discipline and high performance.

Overall, most employees of the Civil Protection Directorate in Djelfa exhibit **above-average job satisfaction**.

No statistically significant differences in job satisfaction were found based on **personal characteristics**, except for **educational level**, **marital status**, and **workplace location**, which do influence satisfaction levels.

07 Recommandations

Focus on **reducing work pressure**, particularly related to the 24-hour shift system, assigned tasks, confinement periods, and the constant state of alert.

Preserve the **quality and quantity of equipment and tools**, ensuring they meet operational needs.

Review and adapt **facilities** to match the work system, especially considering employees spend 24 hours inside the unit and have physiological, psychological, and social needs.

Although the **nature of work** is generally positive, efforts should be made to **reduce routine** through facility and system adjustments.

Since **educational level** affects satisfaction, job roles should be tailored to match employees' qualifications.

Given the impact of **workplace location** on satisfaction, staff should be distributed across units in a **balanced manner** relative to workload.

As **marital status** influences satisfaction, the needs of married employees should be considered, including **housing support** and **family allowances**.

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