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Occupational Stress and Psychoactive Substance Use: A Study of Cable Factory Workers in Morocco

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Abstract

Work-related stress has become an alarming reality that continues to intensify over the past decades. The pressure exerted by the work environment demands the utilization of defensive and coping strategies to deal with it. Our study aims to explore the relationship between professional stress factors, stress symptoms, and the consumption of psychoactive substances as a defensive and coping strategy deployed to address psychological distress at work. A qualitative and quantitative study was conducted with a sample of 405 employees from a wiring manufacturing. The main professional stress factors identified were concentration, overload, long working hours, and monotony, which showed a significant correlation with PAS consumption. Women were found to be more affected by stress and tended to consume more sedatives. Among the respondents, 21.98% reported PAS consumption, with tobacco being the most commonly used (M = 2.66), followed by alcohol (M = 1.94), cannabis (M = 1.79), and sedatives (M = 1.45). There was a significant positive correlation between PAS consumption and stress symptoms {tobacco (r = 0.232*), alcohol (r = 0.305**), cannabis (r = 0.389**)}.

Keywords

Professional Stress, Psychoactive Substance, Suffering, Coping

1. Introduction

The use of psychoactive substances (PAS), including tobacco, alcohol, cannabis, and psychotropic medications, in the workplace has been receiving increasing attention in recent years [1]-[3]. However, this field remains relatively unexplored in Morocco, with a lack of scientific data on the subject. It is evident that our

research will aim to identify potential links between these two concerning issues, particularly the role of occupational factors in the initiation or exacerbation of PAS consumption, with a psychopathological perspective on this comorbidity.

This study aims to investigate the subjective work experience, perceived stress, distress, coping strategies employed to deal with this distress, and the use of different PAS among individuals working in a private industrial wiring establishment in the Rabat-Salé-Zemmour-Zaër region of Morocco.

The automotive industry is a crucial sector of the Moroccan economy, with numerous international companies established in Morocco to take advantage of skilled labor and fiscal benefits offered by the government. However, working conditions in this sector can be challenging for employees who may face significant time pressure to meet production demands, resulting in stress and demands. Additionally, workload can be high, especially for production line workers who often have to work long hours and perform repetitive and monotonous tasks, leading to health issues. Therefore, it is important to recognize the challenges faced by workers in this sector and work towards improving their working conditions to ensure their well-being.

2. Occupational Stress

The phenomenon of stress has garnered significant interest within the scientific community, particularly in psychological circles. Psychologists have sought to define psychological stress, with Lazarus, one of the leading proponents of this research in North America, defining it as the result of a transaction between an individual and their environment. His work with Folkman (1984) suggests that "stress is the product of a transaction between the individual and the environment, which is evaluated as exceeding the individual's resources and threatening their well-being" [4]. Therefore, stress is not simply a transaction or adjustment between the individual and stressors, but rather how the individual perceives, analyzes, and evaluates encountered situations. This transactional model studies the interactions of bio-psycho-social factors and occupational factors.

The integrative model of stress adopted in this research is based on the transactional stress theory. This model proposes a holistic and multidimensional approach to stress, considering the physiological, emotional, cognitive, behavioral, and social dimensions of stress. It highlights the crucial role of personal and situational factors in the perception and management of stress, as well as the importance of coping strategies to deal with stressful situations.

Occupational Stress and Psychoactive Substance Use

Occupational stress is a growing problem in the modern world, and it can lead to increased consumption of psychoactive substances [5] [6]. It is an area of increasing interest for researchers in psychology and mental health. Several studies have suggested that occupational stress can increase the risk of psychoactive substance use as a coping mechanism to deal with work pressure and difficulties [7] [8].

However, it is important to note that the relationship between occupational stress and psychoactive substance use can be influenced by individual factors such as personality, gender, age, and work experience [9]. Social factors such as organizational culture, policies, and perceptions of stigma can also play an important role [10]. This complexity underscores the importance of a comprehensive analysis of the various factors that may interact to better understand the relationship between these two phenomena.

3. Methodology

This research employs both qualitative and quantitative methods. The first study (pre-study) aims to explore the factors of occupational stress in this factory, the various psychological symptoms related to stress, and the types of psychoactive substances most commonly consumed. This preliminary study was conducted with 30 employees from our target population, who were not part of our main research sample, through semi-structured interviews. This step was decisive to undertake our confirmatory study. The latter was conducted using a questionnaire developed based on previous research and the results of the qualitative study.

The quantitative study is carried out using a questionnaire with 67 items developed based on previous research and the findings of the qualitative study. The quantitative study was conducted with a sample of 405 employees (288 men and 117 women) from a wiring factory in Morocco to identify occupational stress factors, psychological stress symptoms, and psychoactive substance use, as well as potential links between these three variables.

We conducted this study in 2021; it targeted all employees of a private wiring company. The objective of this survey was to specify the socio-demographic characteristics of the working population, to take stock of the consumption of different psychoactive substances (PSS) and the products most commonly encountered in the professional context, and the factors that motivate and maintain this consumption, to explore the main factors of stress at work, the stress reaction and its physiological, psychological and behavioral manifestations, as well as the different strategies implemented to deal with it, among workers in the automotive industry sector "wiring sector". Our target population includes employees of a private wiring company located near Rabat, which is one of the subsidiaries established in Morocco by a leading global group in the manufacture of wiring and electrical harnesses for the automotive industry and which employs approximately 5000 people. The staff consists of engineers, managers, senior technicians and mainly skilled operators. The plant is a subcontractor for European and Japanese car manufacturers, including Renault, Peugeot, Citroën and UK Nissan. It produces cable harnesses, flexible harnesses for hybrid vehicles, electrical wires, connectors, terminals, central panels, terminal blocks and electronic control units. The plant is committed to producing without any defects in terms of design, performance, reliability and manufacturing, which leads to increasing intensification and proceduralization for workers. The latter are confronted with paradoxical injunctions due to time constraints and quality objectives for optimal customer satisfaction.

Data collection procedure

Our survey was preceded by an exploratory pre-study conducted through semi-directed interviews with 30 employees from our target population, outside our research sample. The interviews took place on the factory premises and lasted between 15 and 40 minutes for each employee. However, it should be noted that, as part of this pre-study, no data processing software was used. We only grouped the ideas that converge in the direction of the theme to highlight the variables of interest to our study (*i.e.*, a manual thematic analysis in terms of content analysis was undertaken). Subsequently, we developed a questionnaire based on previous work (*i.e.* literature review and our exploratory study). This questionnaire was reviewed and validated by psychology professors from Mohammed V University, Ibn Tofail University, and Choaib Doukkali University and a statistics professor from Hajjah University in Yemen. This instrument was then statistically processed to verify its psychometric properties (Table 1).

Table 1. The internal consistency coefficients for each axis.

Axes	Items	(α)
Stress Factors	24	0.92
Stress Symptoms	16	0.85
Substances Consumed (Products Used)	12	0.70
Reasons and Causes of Consumption	6	0.65
Symptoms Related to Substance Use	9	0.91

The questionnaire covered the following elements:

The sociodemographic characteristics of the research population; the main stress factors in the workplace; stress reactions and their somatic, emotional and behavioral manifestations; the different individual adjustment strategies deployed to cope with stress; the use of psychoactive substances and the types of products most frequently used in the professional context; the factors motivating this consumption and finally the symptoms related to the consumption of these substances.

The questionnaire includes axes with items (*i.e.* statements), each item to be evaluated according to a 5-point Likert-type scale, ranging from 1 "Not at all" to 5 "Extremely". In addition, it includes closed questions with single or multiple choices, as well as open questions:

- A first series of questions focused on socio-demographic characteristics: gender, age, marital status, level of education, grade and years of experience.

- A second axis presents work-related stress factors: we found it useful to construct it based on data from the literature, clinical experience and exploratory interviews conducted with 30 employees outside the research sample.

We formulated 24 statements to highlight the most influential professional stress factors based on the three main dimensions:

Organizational stress factor: Task ambiguity: lack of clarity in the prescribed tasks; Work overload; Low control over the professional environment;

Interpersonal stress factor: Role conflict: conflicting demands from different partners in the organization; Team spirit, interpersonal relationships: conflict and rivalry between colleagues, non-recognition of the work provided; Psychological stress factor: Perception of working conditions; Mismatch between the type of work and the person's ambition; Meaning at work (meaning, usefulness).

- A third axis focuses on psychological symptoms of stress and includes a series of 15 questions inspired by the stress scale of Charly Cungi, 1997. The concept of stress symptoms corresponds to the evaluation of the physiological, emotional/affective and behavioral reaction of the individual subjected to professional stress factors. Using the Likert scale, we evaluate the way in which stressful work events are perceived rather than the intensity of stress experienced by an individual. An open question was added relating to the strategies deployed to manage stress. This question will allow us to develop and identify a typology of coping strategies and the means used to adjust to them in the face of professional stress.

- A fourth axis concerns questions about products consumed during the last twelve months: we have listed all the most used psychoactive products in Morocco, namely: cannabis or hashish (Sebsi, Joints, Maâjoune), Stimulants (Amphetamines, Appetite suppressant pill, Ritalin, Cocaine), Opiates (Heroin, Morphine, Opium, Methadone, Codeine), Hallucinogens (LSD, Mescaline, Ecstasy), Volatile solvents (Glues), Sedatives (Valium, Xanax, Temesta, Lexomil, etc.), Alcohol (Vodka, Beers, Whiskey, Brandy), Hookah or shisha and adding an option "Other products".

- A fifth axis relating to questions about the reasons that motivate the consumption of different SPAs. We opted for six proposals, namely: Getting high and Enjoying, Changing your mood, Reducing stress, Curiosity, Being around users and Others.

Questionnaire Analysis Procedures

The questions are organized in a sequential logic, favoring thematic groupings that facilitate the transition from one theme to another:

The constructed questionnaire was subjected to statistical processing in order to verify its psychometric properties.

For the measurement scales used, we opted for the classic Cronbach alpha coefficient to verify the internal consistency of the questionnaire. It is very important to specify that the coefficient (α) is interpreted as follows: the closer the value is to 1, the more the test is considered to be reliable and reliable. Thus, a value greater than or equal to (0.70) ensures satisfactory reliability.

Similarly, we calculate the saturation indices: This is a correlation coefficient between a retained factor and an item. In other words, the saturation index of an item to a factor is translated by the weight or contribution of this item in the constitution and composition of this same factor. In this regard, only saturation indices greater than (±0.045) are accepted.

4. Results

According to our survey, we found that the majority of the company's employees

are male, with a rate of 71.11%, compared to 28.89% for female employees. This disparity can be explained by the fact that Moroccan women tend to be more reluctant regarding the consumption of psychoactive substances (PSA), which is why their presence in the sample is low.

Most of the population in our sample are relatively young with a percentage of 23.7% for the age group under 30% and 60.2% for the age group between 30 and 40, which explains why the factory favors the recruitment of young and dynamic people. The majority of employees are married with a rate of 60% compared to a rate of 34.6% for singles, while divorced employees represent only 5.4% of our sample.

A quarter of our population 27% have a primary and college education level and almost half of the employees 47.2% are high school graduates, while 17.5% of the employees are vocational training graduates and 8.4% have a Bachelor's, Master's or Engineering degree. This means that the workforce does not require a great deal of knowledge to accomplish the various tasks within the factory, with the exception of a certain qualified and qualified workforce. This explains why most of the employees are in the "Operator" execution category with a rate of 79.8%, followed by the Technician category with 17.8%, then the managerial category with 2.5%.

Results Related to Occupational Stress

One of the objectives of our research is to identify the main sources of stress related to job content, work context, and interpersonal difficulties that may trigger psychological stress reactions.

Table 2 highlights the main work-related stress factors identified in the study, which include the need for sustained concentration, excessive workload, long working hours, and the monotony of repetitive tasks. These factors contribute significantly to the psychological strain experienced by employees in the workplace.

Table 2. Main work-related stress factors.

	N = 405			N1 = 89			N2 = 47		
Stress Factor Items	M.	SD	Result	M.	SD	Result	M.	SD	Result
At work, I feel tired and stressed	3.19	1.21	**MEDIUM**	3.21	1.26	**MEDIUM**	3.15	1.18	**MEDIUM**
I suffer from workload overload	3.00	1.34	**MEDIUM**	3.02	1.36	**MEDIUM**	3.02	1.28	**MEDIUM**
I suffer from long working hours	2.89	1.43	**MEDIUM**	2.89	1.56	**MEDIUM**	2.94	1.58	**MEDIUM**
J I feel a lack of appreciation from my administration	2.76	1.52	**MEDIUM**	2.51	1.45	**MEDIUM**	2.68	1.46	**MEDIUM**
My job does not suit me, it does not match what I would like to do	2.71	1.62	**MEDIUM**	2.62	1.57	**MEDIUM**	2.68	1.56	**MEDIUM**
My job does not allow me to make decisions independently	2.34	1.48	**MEDIUM**	2.29	1.48	**LOW**	2.40	1.51	**MEDIUM**
In my job, I feel the monotony of repeating the same tasks	2.66	1.45	**MEDIUM**	2.53	1.32	**MEDIUM**	2.51	1.25	**MEDIUM**
My job intensely demands concentration, attention, and responsibility	3.92	1.26	**HIGH**	3.76	1.25	**HIGH**	3.85	1.30	**HIGH**

*SD: Standard Deviation.

This table presents the frequency of psychoactive substance (SPA) use prior to employment in the current position.

The results show that 52.81% of surveyed employees did not regularly consume SPAs before joining the company, while 47.19% reported prior use. This nearly balanced distribution indicates that almost half of the employees had some experience with SPAs before starting their current job, suggesting pre-existing coping behaviors.

Our study shows that, among our entire sample, 89 employees (21.98%) consume psychoactive substances, with 47 employees (11.60%) having started this consumption after joining the factory (Table 3). Among the main PAS consumed, tobacco is the most commonly used substance (M = 2.66), followed by alcohol (M = 1.94), cannabis (M = 1.79), sedatives (M = 1.45), and hookah (M = 1.28).

Table 3. Distribution of psychoactive substance (SPA) users after joining the factory.

Did you regularly consume any SPAs before joining your current position?	F.	P.
No	47	52.81%
Yes	42	47.19%
Total	89	100%

Variances in Work-Related Stress Factors, Psychological Stress Symptoms, and PAS Consumption by Gender

This is a results table from a data analysis comparing stress levels and substance consumption between males and females. Here's what each column represents:

- Axes: The different categories of stress and substances evaluated in the study.
- Gender: The two groups being compared are male and female.
- N: The number of participants in each group.
- Mean Rank: The average ranks obtained for each category of stress and substances.
- Sum of Ranks: The sum of the ranks obtained for each category of stress and substances.
- Z: The Z-value from the Mann-Whitney U test.
- Asymp. Sig. (2-tailed): The significance value of the test.
- Result: Whether the result is significant (Sig) or not significant (N.Sig).

There are no statistically significant differences in work-related stress factors attributable to the gender variable, with a value of (Z = 1.527) at a significance level of (0.127). This indicates that men and women experience similar levels of work-related stress factors. However, there are differences in the level of psychological stress symptoms in favor of women, with an average score of (67.50) compared to men (42.15), where the Z value was (2.925) at a significance level of (0.003). This indicates that women experience more psychological stress symptoms at work than male employees.

There are statistically significant differences in the consumption of Sedatives in favor of women with an average rank of (58.90) compared to men (43.24) where the Z value (2.771) is at a significance level (0.006). This means that women are higher consumers of sedatives than men.

Correlation Between Work Stress Factors, Stress Symptoms, and Substance Use

The Pearson correlation coefficient was used to determine the nature of the correlation between work-related stress factors, psychological stress symptoms, and SPA consumption. The results are as follows:

The analysis of the correlation matrix confirms the positive and statistically significant impact of clinical stress symptoms on substance use, with a correlation coefficient of (0.452**) at the 0.01 (two-tailed) level. In other words, the more employees use substances, the more likely they are to experience stress symptoms, or the more severe the stress symptoms are among workers, the more they tend to use psychoactive substances more frequently.

However, it is important to note that the correlation between the substances consumed and stress factors is very weak, with a correlation coefficient of 0.019. This indicates that substance use does not appear to be related to stress factors.

In summary, these results suggest that substance use may be a way to cope with stress symptoms, but it does not seem to be directly related to stress factors.

This table presents the correlation analysis between different psychoactive substances (SPAs) consumed and two primary variables: stress factors and stress symptoms. Each SPA is evaluated for its association with these two variables, using the Pearson correlation coefficient.

- Tobacco shows a slight negative correlation with stress factors (−0.195), suggesting a marginal decrease in tobacco consumption with increased stress factors, though this correlation is not statistically significant ($p = 0.067$). However, tobacco has a statistically significant positive correlation with stress symptoms (0.232, $p = 0.029$), indicating that individuals with higher stress symptoms are more likely to consume tobacco.

- Cannabis (including various forms such as sebsi, joints, and maâjoune) shows no significant correlation with stress factors (−0.013, $p = 0.907$) but has a strong positive and statistically significant correlation with stress symptoms (0.389, $p = 0.000$). This suggests that cannabis use is associated with heightened stress symptoms but not directly with stress factors themselves.

- Stimulants have a weak, non-significant positive correlation with stress factors (0.064, $p = 0.554$) but a statistically significant positive correlation with stress symptoms (0.237, $p = 0.025$), suggesting that individuals with more pronounced stress symptoms are more likely to use stimulants.

- Sedatives (such as Valium, Xanax, Temesta, Lexomil) display a strong, statistically significant positive correlation with both stress factors (0.365, $p = 0.000$) and stress symptoms (0.481, $p = 0.000$). This indicates that higher levels of both stress factors and symptoms are linked to increased use of sedatives, implying that sedatives may serve as a coping mechanism for managing various dimensions of stress.

- Alcohol (including vodka, beer, whiskey, and brandy) shows no significant correlation with stress factors (0.026, $p = 0.811$) but has a statistically significant positive correlation with stress symptoms (0.305, $p = 0.004$), suggesting alcohol is

more likely consumed by individuals experiencing heightened stress symptoms rather than in response to general stress factors.

In summary, the table indicates that stress symptoms have a stronger and more consistent association with SPA consumption than stress factors, especially for tobacco, cannabis, sedatives, and alcohol, underscoring the potential role of SPAs as a coping mechanism for stress symptoms rather than stress factors directly.

5. Discussion

The results of the item-by-item analysis of the questionnaire provide important insights into the factors that are likely to affect the psychological well-being of employees in the wiring company. In this regard, the occupational stressors identified as sources of vulnerability and deterioration of psychological health at work are varied and often intertwined. It was found that the mean and standard deviation of the stress factor expressed by the question stating that the job requires intense concentration, attention, and a heavy weight of professional responsibility are "HIGH" in our overall population, indicating that this factor is the most influential. Other factors were primarily conditioned by fatigue, overload, long working hours, lack of appreciation and recognition, job-profile mismatch, lack of autonomy, non-participation in decision-making, and work monotony (**Table 2**).

The results also reveal that the respondents tend to consider their job as stressful and demanding, which motivates the manifestation of physiological, emotional, and behavioral stress symptoms as a consequence of the failure to manage sources of occupational stress. We found that the questions regarding:

- Emotional symptoms (increased sensitivity and emotionality) are at a "MEDIUM" level in our studied population. In this vein, irritability and perfectionism are the most manifested emotional symptoms among employees who consume psychoactive substances, while they are less manifested among those who consumed after joining the factory. The psychological or psychopathological manifestations such as anxiety, chronic fatigue, sleep disorders, irritability, consumption of PAS, etc., generated by the inability to cope with the demands of the work environment and to manage anxiety-inducing work situations, find their psychogenesis primarily in the psychological processes mobilized and the defense mechanisms developed to endure this professional suffering. Some authors have associated depression with a high level of job strain and low autonomy [11]. Lowe and Bennett [12] also affirm that anxiety is one of the main emotions associated with occupational stress.

Studies and research have suggested that the failure to manage occupational stress can have significant consequences on mental health and may contribute to the onset of psychological and psychopathological problems [13]-[17].

Physiological symptoms (disrupted sleep and chronic fatigue) are at a "MEDIUM" level in our studied population. Additionally, digestive disorders, pain, headaches, allergies, and eczema are the most common physical manifestations among employees who initiated the consumption of psychoactive substances after joining the factory. This somatic decompensation could be attributed to a psychic

silence that weakens the body, according to Davezies [18]. Dejours highlights the link between occupational stress and somatic decompensation by considering that stress causes psychological suffering, which is denied or repressed by the individual. This suffering may manifest as physical symptoms that reflect an impairment of the individual's psychic integrity. Somatic decompensation is a manifestation of psychological suffering, which, no longer being bearable psychologically, finds a mode of expression in the body. He asserted that the consequences of occupational stress should be expected not in the realm of mental pathology but in the domain of somatic fragilization.

Studies have shown that the failure to manage sources of occupational stress can contribute to the onset of physical symptoms such as headaches, sleep disorders, and fatigue, which are the most commonly reported symptoms [4] [19]-[21], as well as a deterioration in mental health [4].

Furthermore, tobacco use as a clinical manifestation of stress is the most expressed behavioral symptom among the population of consumers. Indeed, tobacco is often used as a coping mechanism to deal with stress due to its relaxing and anxiolytic effects [22]. Moreover, it has been demonstrated that workers exposed to high levels of occupational stress are more likely to smoke than those who are not [23]. This finding is consistent with previous research showing that tobacco consumption is higher among individuals facing prolonged stress situations [24] [25].

The consumption of various PAS as a passive strategy also reflects the failure to manage stress (52.81% of the entire sample of PAS consumers) (**Table 3**). This population, which initiated consumption after joining the factory, used Tobacco, followed by Alcohol and Cannabis, then Sedatives and Hookah (**Table 4**). According to our study, reducing stress is considered the main motive and reason driving employees who use psychoactive substances to consume them, whether before or after joining their current job at the factory, followed by the motive of changing their mood.

Table 4. Different psychoactive substances consumed after joining the factory.

Different SPAs consumed	Mean Standard	deviation
Tabacco	2.66	1.76
Alcohol	1.94	1.37
Cannabis	1.79	1.44
Sedatifves	1.45	1.04
Hookah	1.28	0.77
Stimulants	1.21	0.78
Hallucinogens	1.04	0.29
Volatile Solvents	1.04	0.29
Opiates	1.02	0.15
Cocaine	1.02	0.15

Indeed, the interactions between individuals and stressful work situations lead to a weakening and depletion of internal resources, and the triggering of psychopathological manifestations elicits physiological, behavioral, and psychological responses that can impact mental and physical health.

Our study also demonstrated that women experience more psychological stress symptoms at work than male employees (Table 5). This finding is supported by several studies showing that women tend to have higher levels of stress and anxiety disorders than men and are more likely to resort to substances to cope with stress [26]. It can be hypothesized that balancing work and family life may be more challenging for women, leading to increased stress that negatively impacts their mental health.

Table 5. Variances in work-related stress factors, psychological stress symptoms, and PSA Consumption by gender (Mann-Whitney U Test).

Axes	Gender	N	Mean Rank	Sum of Ranks Z	Z	Sig. Asymp	Result
Stress Factors	Male	79	43.51	3437.50	1.527	0.127	N. Sig
	Female	10	56.75	567.50			
Stress Symptoms	Male	79	42.15	3330.00	2.925	0.003	Sig
	Female	10	67.50	675.00			
Tobacco	Male	79	46.14	3645.00	1.223	0.221	N. Sig
	Female	10	36.00	360.00			
Cannabis	Male	79	46.70	3689.50	1.949	0.051	N. Sig
	Female	10	31.55	315.50			
Stimulants	Male	79	45.15	3567.00	0.263	0.793	N.Sig
	Female	10	43.80	438.00			
Cocaine	Male	79	45.06	3560.00	0.356	0.722	N. Sig
	Female	10	44.50	445.00			
Opiates	Male	79	44.63	3526.00	1.205	0.228	N. Sig
	Female	10	47.90	479.00			
Hallucinogens	Male	79	45.13	3565.00	0.506	0.613	N. Sig
	Female	10	44.00	440.00			
Volatile Solvents	Male	79	45.06	3560.00	0.356	0.722	N. Sig
	Female	10	44.50	445.00			
Sedatives	Male	79	43.24	3416.00	2.771	0.006	Sig
	Female	10	58.90	589.00			
Alcohol	Male	79	45.97	3631.50	1.070	0.285	N. Sig
	Female	10	37.35	373.50			
Hookah	Male	79	45.92	3627.50	1.208	0.227	N. Sig
	Female	10	37.75	377.50			
Substances Consumed	Male	79	46.08	3640.50	1.116	0.265	N. Sig
	Female	10	36.45	364.50			

On the other hand, employees who consume PAS exhibit higher stress symptoms compared to non-consumers. This indicates a significant link between PAS consumption and psychological stress symptoms (Table 6), in the sense that the more an employee experiences psychological stress symptoms, the more they consume PAS, and vice versa.

Table 6. Correlation between work-related stress factors, psychological stress, and psychoactive substances consumed.

Substances Consumed	Evaluation Source	Stress Factors	Stress Symptoms
Substances Consumed	Pearson Correlation	0.019	0.452**
	Sig. (2-tailed)	0.859	0.000
	N	89	89

*Correlation is significant at the 0.05 level (2-tailed), **Correlation is significant at the 0.01 level (2-tailed).

This result could be explained by:

- The fact that workers who experience more severe stress symptoms tend to consume psychoactive substances more frequently.

- Due to their increased susceptibility to stress, consumers may experience stress related to both work and their PAS use, which represents another factor that increases stress. This can lead to a spiral of stress, where stress and PAS consumption mutually reinforce each other, meaning that as workers' stress levels increase, their propensity to consume more psychoactive substances also increases, and vice versa. A study by [27] examined the relationships between occupational stress, alcohol consumption, and drug use among American workers. The results showed that occupational stress was associated with higher alcohol and drug consumption, but this relationship was partially mediated by depression and anxiety. This suggests that workers who feel stressed may be more likely to develop mental health problems, which may in turn lead them to consume PAS.

- A form of rationalization that involves finding logical or reasonable justifications to excuse their consumption behaviors, which are actually motivated by unconscious desires or anxieties. While this can help alleviate feelings of guilt or remorse, it can also lead to a defensive attitude and make it more difficult to resolve problems.

- It can also be hypothesized that the trivialization or avoidance of work-related factors plays a role. The use of PAS and the symptoms experienced are considered defensive mechanisms or a response to a stressful work environment; the discomfort is felt, but it is not always verbalized and expressed by the employees.

The results from this research show that, among our overall sample (405), 89 employees (21.98%) consume psychoactive substances. Similarly, 52.81% of the consumer sample reported that they began using PAS after starting their current job (Table 3). In this context, tobacco remains the most commonly used substance (M = 2.66), followed by alcohol (M = 1.94), cannabis (M = 1.79), and then sedatives and shisha (M = 1.45, M = 1.28) (Table 4).

For Psychoactive Substances, the correlation matrix confirms the positive impact of stress symptoms on the consumption of Tobacco (r = 0.232*), Cannabis (r = 0.389**), Stimulants (r = 0.237*), Sedatives (r = 0.481**), and Alcohol (r = 0.305**) (Table 7). In other words, professionals who experience significant stress symptoms tend to use these substances to manage and tolerate the emotional responses and constraints of their work situation. Conversely, stress symptoms have no effect on the consumption of Cocaine, Opioids, Hallucinogens, Volatile Solvents, or Hookah.

Table 7. Correlation between work stress, psychological stress and psychoactive substances consumed.

Substances Consumed	Evaluation Source	Stress Factors	Stress Symptoms
Tabacco	Pearson Correlation	−0.195	0.232*
	Sig. (2-tailed)	0.067	0.029
	N	89	89
Cannabis	Pearson Correlation	−0.013	0.389**
	Sig. (2-tailed)	0.907	0.000
	N	89	89
Stimulants	Pearson Correlation	0.064	0.237*
	Sig. (2-tailed)	0.554	0.025
	N	89	89
Sedatives	Pearson Correlation	0.365**	0.481**
	Sig. (2-tailed)	0.000	0.000
	N	89	89
Alcohol	Pearson Correlation	0.026	0.305**
	Sig. (2-tailed)	0.811	0.004
	N	89	89

For Tobacco, there is a marginal negative correlation (p = 0.067) with stress factors (−0.195), indicating that employees with higher levels of stress factors tend to consume less tobacco. In contrast, there is a significant positive correlation (p = 0.029) between tobacco and stress symptoms (0.232*), suggesting that individuals with higher levels of stress symptoms tend to consume more tobacco (Table 7).

For Cannabis, there is no significant correlation with stress factors (−0.013), but there is a significant positive correlation (p = 0.000) with stress symptoms (r = 0.389**). This indicates that individuals that individuals with higher levels of stress symptoms tend to consume more cannabis. Various functions of cannabis related to its psychotropic properties can be considered: anxiolytic, analgesic, hypnotic, antidepressant, anti-deficiency, preservation of the self, combating anhedonia and athymhormia, etc. It is true that in some cultures, including the Moroccan context, cannabis may be viewed as a relatively benign psychoactive substance

compared to others, such as alcohol or hard drugs. This perception may be due to several factors, including the long history of cannabis production in the country and the culture of using "kif", a traditional cannabis preparation, in certain regions. Indeed, cannabis might be perceived as less harmful or less stigmatized, and therefore, it may be chosen as a way to cope with work-related stress.

On the other hand, our study shows that male employees consume more cannabis than female employees (Table 5). We can therefore hypothesize that cannabis consumption is not widely considered a coping strategy among Moroccan women for dealing with work-related stress, due to various factors related to societal perceptions of Moroccan women who use cannabis, as well as the social, educational, cultural, and traditional roles women play within the family.

For Stimulants, there is a marginal positive correlation ($p = 0.554$) with stress factors (0.064) and a significant positive correlation ($p = 0.025$) with stress symptoms (0.237) (Table 7). This suggests that individuals with higher levels of stress tend to consume more stimulants.

For Alcohol, there is a significant positive correlation ($p = 0.004$) with stress symptoms (0.305**), but no significant correlation with stress factors (0.026) (Table 7). This may suggest that alcohol consumption is associated with the search for ways to relieve stress rather than with the presence of stress factors themselves. Authors have proposed several hypotheses regarding the choice and use of this substance, such as the search for relaxation after an exhausting workday, as it holds anxiolytic and disinhibitory functions aimed at calming anxiety. The anxiolytic function of alcohol serves to numb the mind and neutralize fear, while its disinhibitory function helps maintain symbolic control over risk and allows workers to combat certain aspects of their job, such as physical fatigue, emotional dislocation, or professional disillusionment [28]. Alcohol, therefore, may be a way to cope with or escape from work-related stress [29]; it is a powerful stress reducer and an excellent analgesic for emotional pain. Similarly, a longitudinal study of the general Swedish population conducted in 2020, titled "The Impact of Job Strain on Substance Use: A Longitudinal Study of the General Swedish Population", examined the impact of job-related stress on substance use. The results showed that occupational stress was associated with increased use of psychoactive substances, particularly alcohol and tobacco.

For Sedatives, there is a significant positive correlation ($p = 0.000$) with stress factors ($r = 0.365$**) and a significant positive correlation with stress symptoms ($r = 0.481$**, $p = 0.000$) (Table 7). This indicates that employees in the wiring company who experience higher levels of work-related stress are more likely to consume sedatives. The stronger correlation with stress symptoms suggests that some employees may use sedatives as a means of managing their stress.

The results of the correlational analyses indicate that employees in the wiring company who encounter work-related stressors tend to consume sedatives. This finding is supported by the cross-sectional study "*Lifestyle and Work*" conducted by Medical Inter-Enterprises of Toulouse (SMIT), which aimed to understand the influence of professional factors on the initiation of psychoactive medication use

among employees in southern France over a ten-year period. This study revealed that 5.4% of employees began using psychoactive medications during the follow-up period, highlighting the significant role of professional factors in initiating psychoactive medication use, particularly among women [30].

However, it is important to note that correlations do not prove causality. For example, it is possible that sedative use worsens stress symptoms, but it is also possible that individuals with more severe stress symptoms are more likely to consume sedatives.

Our study also reveals that women experience higher levels of psychological stress at work compared to male employees (**Table 5**). Stress caused by exposure to work conditions characterized by high demands for attention and concentration, overload, and extended working hours appears to affect women more strongly than men. Additionally, women have significantly higher levels of sedative consumption compared to men (**Table 5**). This may be due to a variety of social, cultural, and biological factors, and highlights the importance of considering gender differences in stress management and substance use prevention.

These results are consistent with other surveys that have shown women tend to have higher levels of stress and anxiety disorders compared to men, and that they are more likely to turn to substances to cope [31] [32].

6. Conclusions

Occupational stress is a global issue, and Morocco is no exception. Another phenomenon affecting many people worldwide is the consumption of psychoactive substances. This widespread issue can have serious repercussions on health, social life, and professional life. Additionally, it can impact work performance and overall quality of life. Due to the significance of this topic, numerous studies and investigations have been conducted to better understand substance use and its effects.

The results have shown that occupational stress factors can promote the consumption of psychoactive substances (SPAs). However, SPA use among workers may provide them with refuge, support, or solace to forget daily work worries, manage stress, and avoid suffering, thereby artificially improving their balance. This temporary illusion or unrealistic expectation of combating stress and reinforcing homeostasis at work through cannabis and other SPAs gradually becomes a serious problem, leading to a reduction or abandonment of professional activities. What initially started as a defensive strategy and coping mechanism to mitigate work-related suffering and as a temporary remedy and escape from psychological difficulties, progressively takes over and invades the person's life, becoming the problem itself. This creates an endless cycle of suffering.

Our study reveals that when a stress-inducing event occurs and learned adjustments and coping mechanisms are ineffective, and defense mechanisms no longer serve their protective role, the individual finds themselves unable to manage the stress-inducing sources or reduce their impact on well-being. This results in a

weakened psyche and the emergence of psycho-clinical manifestations. Indeed, both mechanisms (defense and coping) lead to psychopathological issues, making the suffering potentially pathogenic and fostering the development of certain behavioral habits, including SPA consumption.

The results underscore the need to consider the psychological health of Moroccan workers as a major concern, on par with physical health and managerial and financial concerns.

Conflicts of Interest

The author declares no conflicts of interest regarding the publication of this paper.

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