

## Effects of Psychosocial Risks on the Performance of Teacher-Researchers: Moroccan Context



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**ABSTRACT:** In recent years, the concept of psychosocial risks has assumed enormous importance in working life. Indeed, PSR at work has become almost synonymous with work life and more specifically work stress, and it is widely accepted that work experiences can have a major impact on the psychological health of employees.

Psychological risks are the human pressures that arise as a result of implementing an organization's strategy, and take different forms such as anxiety, pressure, violence, mental load and poor communication, musculoskeletal disorders and other pressures that are transmitted differently among employees depending on their position in the organization.

Thus, mental health is an integral part of health and a state of happiness. In this state, a person can achieve self-actualization, overcome the normal pressures of life, engage in productive work and contribute to community life. Its degree is determined by social, psychological and biological factors. In the workplace, it is associated with psychosocial risk (PSR), which can cause a variety of discomforts and negative emotions about work. The assessment of PSR in the workplace is necessary, their identification allows to take preventive measures to have an objective impact on absenteeism, performance, productivity and health of workers and organizations

In this sense, the objective of this work is to evaluate the prevalence of work-related psychological organizational constraints in the group of practicing teachers based on the Karasek model.

This is a cross-sectional survey with data from 100 qualified teachers in elementary school, secondary schools and universities. The respondents were informed in advance of the purpose of the survey and the anonymity of the data. They are teachers, men and women of all ages, different learning levels, different cycles, different teaching professions and different levels of experience.

**KEYWORDS:** Psychosocial Risks - Mental Health - Evaluation - Teachers – Stress

### I. INTRODUCTION:

In recent years, recognition of psychosocial risks has increased considerably in professional circles. More specifically, psychosocial risks in the workplace have become synonymous with professional life, particularly work stress;

Management of psychosocial risks: a perspective in terms of well-being at work and the enhancement of discussion spaces (Doctoral dissertation, University of Grenoble). It is widely recognized that work experiences can have a profound impact on employees' psychological well-being Ngoya, J. (2016).

Study of the relationships between the professional development of postsecondary teachers and their psychological wellbeing at work. These risks encompass various human pressures arising from the implementation of an organization's strategy, which manifest in the form of anxiety, pressure, violence, mental load, poor communication, musculoskeletal disorders and other stressors that affect employees differently depending on their position within the organization Nasse, P., Légeron, P., & Bertrand, X. (2008). Report on the determination, measurement and monitoring of psychosocial risks at work.

Mental health is a crucial aspect of general well-being, enabling individuals to realize their potential, cope with life pressures, engage in productive work and contribute to community life. Goyette, N. (2014).

Its quality is determined by social, psychological and biological factors. In the workplace, mental health is linked to psychosocial risks (PSR), which can cause discomfort and negative emotions towards work. Assessing PHI in the workplace is

## Effects of Psychosocial Risks on the Performance of Teacher-Researchers: Moroccan Context

essential; their identification makes it possible to take preventive measures that have an objective impact on absenteeism, performance, productivity and the health of workers and organizations.

The professional context has undergone profound changes due to globalization and the introduction of information and communication technologies. These transformations have led to the reorganization and modification of the organization of work thanks to new management techniques Gollac & Volkoff (2007). However, these changes underlie new forms of organizational and psychosocial constraints that affect working conditions, particularly in terms of increased workload, time pressure, autonomy and control (Karasek, 1979; Karasek & Theorell, 1990; Gollac & Volkoff (2007). The same goes for tasks that have become more varied, sometimes contradictory and repetitive Clot, Fernandez & Scheller(2007). All of these changes often involve psychosocial risks, notably work stress Légeron, (2008). Several empirical and epidemiological studies indicate that the work environment and certain factors linked to organizational change influence the deterioration of individual health BruchonSchweitzer, (2002); Karasek & Theorell, (1990); Neboit & Vézina, (2003).

According to the European Agency for Safety and Health at Work (AESST), stress at work occurs “when there is an imbalance between a person's perception of the constraints imposed on them by their environment and their own resources to deal ”. Continuing with stress, psychosocial risks at work (RPS) have been defined by a panel of experts as “the risks to mental, physical and social health, generated by employment conditions and organizational and relational factors likely to interact with mental functioning.

In this context, the objective of our study is to evaluate psychosocial risks and their impacts on professional performance, using the Karasek model, within a population of teachers.

## II. LITERATURE REVIEW

There are many definitions of stress, and the ambiguity of these definitions illustrates the globality of the concept: the large number of stressors or stress agents, the complexity of the interactions and the number of disciplines mentioned. The study of stress has led to the emergence of numerous theoretical models seeking to understand the relationship between different stressors and various indicators and symptoms of stress.

Thus, medical, epidemiological and psychosocial approaches have been developed to try to understand the role of personality, perception and even body functioning in the evaluation of stress.

There are two fundamental approaches to stress: the transactional approach and the interactionist approach. In the transactional approach we will be particularly interested in the model of Siegrist (1996), while in the interactionist approach our attention will be drawn to the model of Karasek (1979).

Transactional approach: Cohen's Perceived Stress Scale is based on the transactional concept of stress, according to which stress occurs neither in the environment nor in the individual, but in a specific interaction between the individual and their environment. This approach gives an important place to coping processes (coping, adjustment or adaptation processes), that is to say, to individual strategies implemented to reduce tensions through actions directed towards the causes (problem-oriented coping) or emotion-oriented coping (emotion-oriented coping).

These strategies depend on individual differences and transactional models therefore take into account the individual's perception of the environment as the main determinant of the stress response. Lazarus and Folkman's (1984) transactional approach defined a dual assessment model in which an individual faced with a situation assesses the stress potential of that situation and then evaluates the resources available to them to cope with it. The process and the result of these evaluations depend not only on the reality of things (the constraints present in the situation, the resources available to the person), but also on the specific characteristics of the person making their evaluations which influence their judgment.

Siegrist's model, known as the transactional model of “effort-reward imbalance” (Siegrist, 1996), suggests that chronic stress can be defined in terms of an imbalance between high costs and low rewards. In other words, according to this model, job stress results from high effort combined with low rewards. Siegrist distinguishes two sources of effort: an external source and an internal source.

External effort is defined by Siegrist as work constraints, such as time limitations, interruptions, tasks, physical demands, and increasing job demands. Internal effort, or “over-involvement”, corresponds to attitudes and motivations associated with overinvolvement in work combined with a strong desire to be accepted and respected (Siegrist, 1998). The definition of overinvolvement is closely related to Type A behavior Friedman and Rosenman, (1971, 1974).

Regarding rewards, three aspects are important: financial rewards, socio-emotional rewards (respect) and status (job security, promotion prospects). Siegrist's (1996) effort-reward imbalance model enriches stress models by proposing an approach based on the dissonance between high costs and low rewards. Work stress results from perceived high effort combined with low rewards.

## Effects of Psychosocial Risks on the Performance of Teacher-Researchers: Moroccan Context

The work linked to Siegrist's model has often been studied in the medical field, with particular emphasis on cardiovascular imbalances and diseases (Siegrist (1990, 1996), ischemic heart disease (Bosma et al. 1998) and hypertension, and cholesterol. Siegrist et al., (1997); Peter et al., (1999).

An interactionist approach: The interactionist approach to stress suggests that the quality of an individual's fit with their environment helps explain behavior better than individual or contextual differences. According to this approach, stress results from the interaction of an "incompatible" person with their environment. These are fairly mechanistic behavioral models, in which a combination of certain characteristics of the situation results in different types of responses from individuals.

The two most widely used interactionist models are the Karasek model (the job demands control model, JD-C, followed by the job demands control support model, JD-C-S) and the person-environment fit model by Karasek's (1979, JD-C) twodimensional model explains the high level of tension by the presence of low discretion and high levels of constraint. The threedimensional model (Johnson and Hall, 1988, Theorell and Karasek, 1989, Karasek, 1990, JD-CS) presents social support as a moderating variable in the relationship between freedom of decision and constraints.

The psychological assessment of demand in Karasek's (1979) demand breadth model is very similar to Siegrist's (1996) assessment of external efforts.

French et al. (1982) also argue that it is the interaction between environmental variables and individual characteristics that determines the occurrence of stress. They identified two aspects of fit: firstly, the extent to which operators' attitudes, abilities, motivations and needs match job demands, resources, opportunities and rewards and secondly on the other hand, the extent to which the professional environment meets the needs of employees. The latter aspect focuses on how the individual is encouraged to apply their knowledge and skills to their profession.

According to French et al. (1982), stress occurs when there is an imbalance in at least one of these aspects.

Furthermore, research carried out over decades confirms the impact of the characteristics of the organizational environment on occupational health. The study by Kyriacou and Sutcliffe (1978) shows that stress is defined by a set of negative effects, painful emotions (tension, anger, depression), resulting directly from the teacher's working conditions. This study carried out on 257 teachers reports that 20% of participants consider that being a teacher is very or extremely stressful. The sources of stress expressed relate to student behavior, working conditions, time pressure and the bad atmosphere at school. Many studies specify that certain characteristics of the establishment or the status of the teacher are among the risk factors for health at work Jaoul, Kovess, & FSP-MGEN, (2004).

This is evidenced by the results of studies carried out by the Carrefour Santé Social in 2011, which revealed that out of nearly 5,000 teachers, 24% of them declared themselves "in permanent tension at work" and 14% in "professional burnout". Exposure to stress at work concerns all age groups and career levels Laugaa & Bruchon-Schweitzer (2005). Concerning young teachers, starting work constitutes a "reality shock".

The rigid prescriptions of the hierarchy and the little autonomy they have accentuate their distress. The gap observed between efforts, the ideal goal of the teacher, and the disappointing results of these efforts would lead to exhaustion Jaoul et al., (2004); Ponnelle (2008); Fotinos & Horenstein, (2011). As for primary and secondary teachers, aged almost 50, their suffering comes from the increase in the constraints linked to the practice of their profession, which requires strong mobilization of resources to be able to meet the increasingly professional demands. Higher Cau-Bareille, (2014).

This observation is also underlined by Mukamurera and Balleux (2013). The results they obtained highlight psychological distress among teachers (stress, anxiety and professional burnout), which led a quarter of the study sample to drop out of work, even temporarily, while half are considering actually do it.

### III. METHODOLOGY

The data for this survey were collected from 100 primary, secondary and higher education teachers. Respondents were informed in advance of the purpose of the survey and the anonymity of the data. This cross-sectional survey is carried out between December 22 and March 8, 2022. These are teachers, men and women, young and old, with different levels of education, different cycles, different teaching specialties and different levels of experience.

The questionnaire consists of three parts: The first part concerns the identity of the teacher, sociodemographic characteristics, social specialty and clinical characteristics. The second includes Karasek's 26 questionnaires assessing the three dimensions of the psychosocial environment at work:

- **Psychological needs** (9 items) correspond to the mental load, quantity, complexity of the task, unforeseen tasks, time constraints, interruptions and contradictory demands linked to carrying out the task.
- **The decision-making perimeter** (9 items) contains two concepts: The decision-making perimeter (9 items) contains two concepts: autonomy or decision-making control and the use of skills.

## Effects of Psychosocial Risks on the Performance of Teacher-Researchers: Moroccan Context

- **Social support at work** (11 items) is defined by help and approval from colleagues and supervisors.

The suggested response is: “strongly disagree, disagree, agree, completely agree”, which allows you to rate from 1 to 4 and calculate the score for each of the three dimensions.

Then we calculated the median of each score. Work stress is defined as a situation where psychological needs are above the median and decision tolerance is below the median, which constitutes a health risk. A stressful work situation or work pressure corresponds to a situation that combines results with low decision-making power and high psychological demands. When job tension is coupled with low social support, a new situation of “isotension” appears.

The third part contains questions on the well-being of teachers in relation to the exercise of the teaching function and also in relation to the use of new technologies during the running of lessons.

The scores obtained are calculated according to the following formulas:

- Psychological Demand (D.Psy.) =  $Q10+Q11+Q12+(5-Q13)+Q14+Q15+Q16+Q17+Q18$ .
- Decision latitude (LD) =  $4*(Q4+(5-Q6)+Q8) + 2*(Q1+(5-Q2)+Q3+Q5+Q7+Q9)$
- Social support. (S.S.) =  $Q19+Q20+Q21+Q22+Q23+Q24+Q25+Q26$

### IV. RESULTS

The study population is made up of 100 general education teachers, of whom 66% are men and 34% women, 43% of teachers aged between 30 and 39. 10% of teachers are primary school, 13% in secondary to middle school teachers and 4% qualifying secondary school teachers and 34% of higher education teachers. 80% of teachers are in the public sector and 20% in private education. Thus, 35% of respondents are from the Tangier-Tétouan-Al Hoceïma region.

**Table 1: Socio-demographic characteristics of the target**

n=222	Nombre	%
<b>Âge</b>		
<b>Moins 25</b>	14	<b>14%</b>
<b>25 à 29 ans</b>	17	<b>17%</b>
<b>30 à 39</b>	43	<b>43%</b>
<b>40 à 49</b>	14	<b>14%</b>
<b>&gt;49 ans</b>	12	<b>12%</b>
<b>Genre</b>		
<b>Femme</b>	66	<b>66%</b>
<b>Homme</b>	34	<b>34%</b>
<b>Ancienneté professionnelle</b>		
<b>- 5 ans</b>	39	<b>39%</b>
<b>5 - 10 ans</b>	28	<b>28%</b>
<b>10- 20 ans</b>	17	<b>17%</b>
<b>&gt; 20 ans</b>	14	<b>14%</b>
<b>Région</b>		
<b>Béni Mellal-Khénifra</b>	6	<b>6%</b>
<b>Casablanca-Settat</b>	8	<b>8%</b>

## Effects of Psychosocial Risks on the Performance of Teacher-Researchers: Moroccan Context

Drâa-Tafilalet	10	10%
Fès-Meknès	14	14%
L'Oriental	2	2%
Marrakech-Safi	12	12%
Rabat-Salé-Kénitra	11	11%
Souss-Massa	2	2%
Tanger-Tétouan-Al Hoceïma	35	35%
<b>Secteur</b>		
Enseignement Public	80	80%
Enseignement Privé	20	20%
<b>Poste</b>		
Doctorant- chercheur	27	27%
Professeur assistant	18	18%
Professeur de l'enseig.primaire	10	10%
Professeur de l'enseig.secondaire collegial	13	13%
Professeur de l'enseignement secondaire qualif.	4	4%
Professeur de l'enseignement supérieur	14	14%
Vacataire	6	6%
Professeur habilité	2	2%
Autres	6	6%

Table 2: Distribution of the study population according to the domains of the questionnaire

N=100	LD	DP	SS	job-strain	iso-strain
<b>Âge</b>					
Moins 25	8 %	6 %	8 %	2 %	0 %
25 à 29 ans	13 %	8 %	10 %	4 %	4 %
30 à 39	23 %	20 %	24 %	10 %	6 %
40 à 49	2 %	6 %	4 %	0 %	0 %
>49 ans	46 %	50 %	50 %	16 %	10 %
<b>Genre</b>					
Femme	34 %	30 %	32 %	14 %	10 %

## Effects of Psychosocial Risks on the Performance of Teacher-Researchers: Moroccan Context

Homme	12 %	20 %	18 %	2 %	0 %
<b>Ancienneté professionnelle</b>					
- 5 ans	21 %	22 %	22 %	8 %	4 %
5 - 10 ans	14 %	12 %	18 %	6 %	6 %
10- 20 ans	11 %	8 %	6 %	2 %	0 %
> 20 ans	46 %	50 %	50 %	16 %	10 %
<b>Région</b>					
Enseignement Public	36 %	42 %	42 %	14 %	8 %
Enseignement Privé	10 %	8 %	8 %	2 %	2 %
<b>Poste</b>					
Doctorant- chercheur	21 %	18 %	12 %	14 %	8 %
Professeur assistant	2 %	8 %	12 %	0 %	0 %
Professeur de l'enseig.primaire	6 %	4 %	6 %	0 %	0 %
Professeur de l'enseig.secondaire collegial	11 %	4 %	10 %	2 %	2 %
Professeur de l'enseignement secondaire qualif.	2 %	2 %	2 %	0 %	0 %
Professeur de l'enseignement supérieur	0 %	0 %	0 %	0 %	0 %
Vacataire	4 %	0 %	2 %	0 %	0 %
Professeur habilité	0 %	0 %	2 %	0 %	0 %
Autres	0 %	4%	0 %	0 %	0 %
<b>L'école / Institut / Établissement</b>					
Ecole primaire	4 %	0 %	6 %	0 %	0 %
Collège	15 %	0 %	0 %	0 %	0 %
Lycée	0 %	0 %	0 %	0 %	0 %
Ecole d'enseignement supérieur	27 %	0 %	0 %	0 %	0 %

**Decision latitude** had a median of 72. Low decision latitude decreased with age. It was found in 46 (almost half) of subjects over 49 years old. 46 of the subjects had seniority greater than 20 years, and decision-making latitude was low in 46% of cases. Low decision-making latitude among women, i.e. 34% of cases, more than men, 12% of cases. Decision-making latitude depended on the category of teaching; it was low among public teachers and private teachers in 36% and 10% of cases respectively.

**Psychological demand** had a median approaching 20. It was high in 30% of women and 20% of men. It was high among teachers aged over 49, it is in 50% of cases. It varied depending on the workstation. Public teachers had higher psychological demand than private teachers, they had high psychological demand of 42% and 8% respectively.

The combination of the two classes low/high decisional latitude and low/high psychological demand allowed a classification of workers having:

**Job-strain** or tense work is defined by the combination of low decision-making latitude and high psychological demand according to the Karasek model. It was observed in 32 cases of the study population. The proportion of tense work decreases with

## Effects of Psychosocial Risks on the Performance of Teacher-Researchers: Moroccan Context

decreasing age. It was found in 2 of the teachers under 25 years old and in 16 of those over 49 years old. The prevalence of tense work was higher among public teachers (i.e. 42) than among private teachers (i.e. 8) and among women (i.e. 28%). Work strain was significantly related to gender. Women and men had tense labor in 14 and 2 cases respectively. It increased with professional seniority. It was found in 16 employees with professional seniority of more than 20 years and in 8 with less than 5 years of seniority.

**Social support** had a median of less than 20. The proportion of men with low social support was 18% and 32% among women. It varied according to the age of the population. It was low in 50 subjects over 49 years old and 8 in those under 25 years old. It depended on the workstation.

When strained work is combined with weak social support, it gives rise to a new dimension: iso-strain. In our study, 32 of the cases were in iso-strain. It was found in 10 women and 0 men. The prevalence of iso-strain increased with age. It was 10 among teachers aged over 49 and 4 among those aged under 29. Its prevalence was 10 in subjects with a seniority of more than 20 years. The prevalence of iso-strain varied according to workstations. The teachers in public and the others who had in private were in iso-strain in 8 and 2 cases respectively.

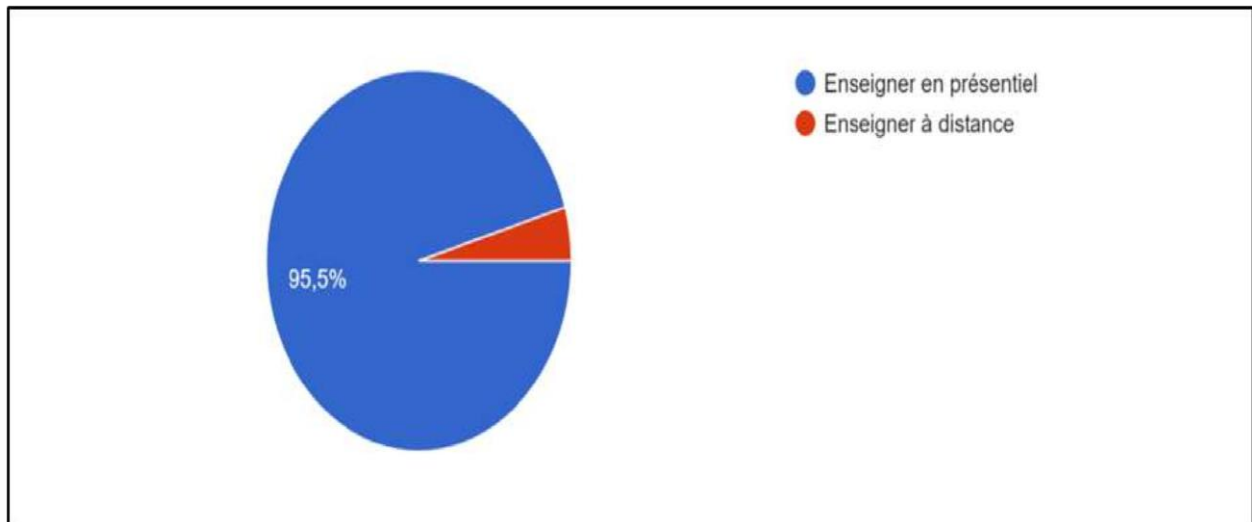


Figure 1: Sample Illustration

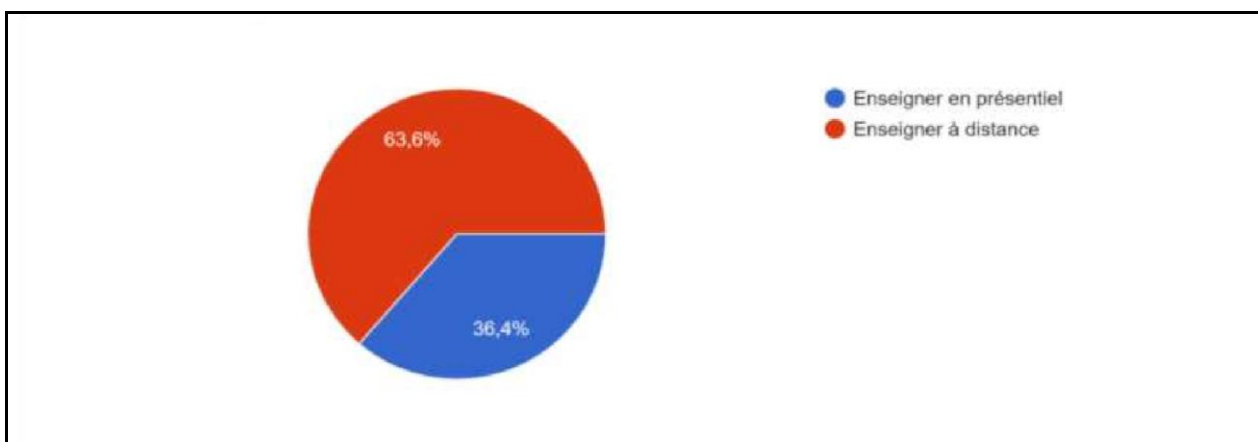


Figure2: Which teaching method do you think is stressful?

## Effects of Psychosocial Risks on the Performance of Teacher-Researchers: Moroccan Context

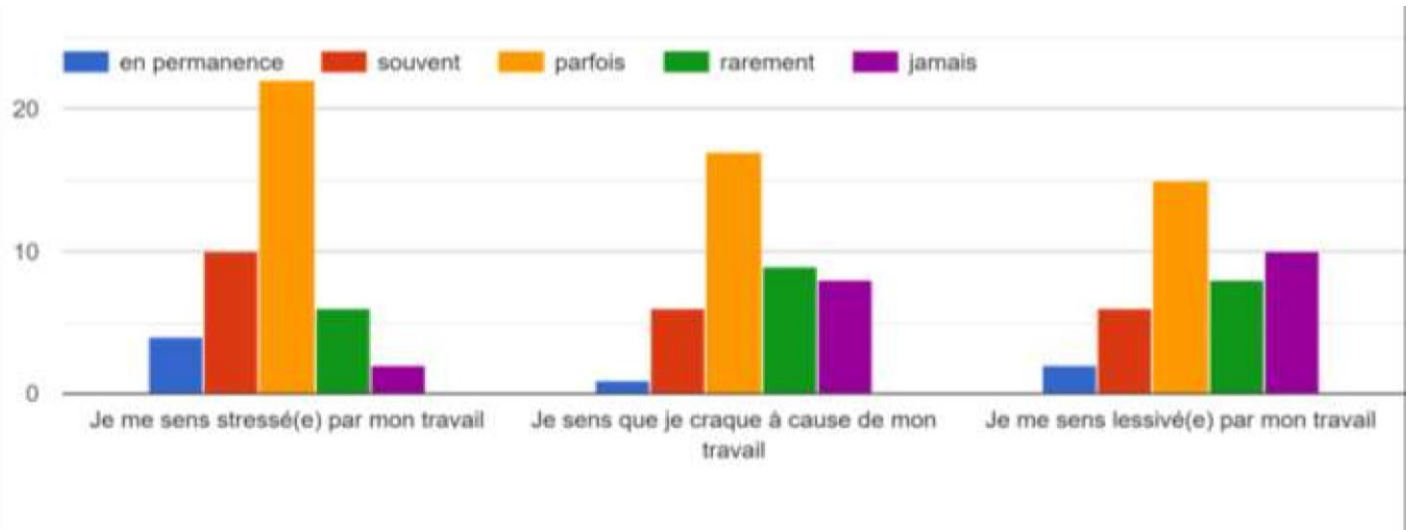


Figure3: Psychosocial demands of teachers

Concerning our questioning in relation to well-being at work and working methods, we note that the teachers subject to our survey prefer face-to-face teaching by a percentage of 95%, while 5% prefer the animation of the distance lessons. We also note that 63% of the target find that the distance learning method is stressful compared to 36% who consider that face-to-face teaching is stressful.

Well-being is influenced by the working method, and from our study we see that the well-being of teachers is negatively influenced in the case of working remotely.

### DISCUSSION

The assessment of psychosocial factors at work has become a major health, social and economic issue. It is at the heart of the preventive approach and occupational health management. In this study, women were more exposed to low decision latitude than men, which is similar to the results of the study by Lindeberg et al. in Switzerland.

Similarly, our study revealed that psychological demand was high in 42.3% of teachers, with percentages of 42.9% in women and 41.5% in men, results comparable to those of the SUMER survey in France. The prevalence of job strain was 18.2%, with a higher proportion in women (21.5%) than in men (16.2%).

The literature shows that job strain varies considerably from one study to another. For example, a survey conducted in Belgium by Sipos found that 14% of 251 professionals were in a tense work situation, while D'Souza et al. reported that 23% of 1888 Australian workers surveyed suffered from tense work. In the education sector, a study conducted by Lamti in 2013 in Tunis indicated that 18% of middle school teachers were in a tense work situation.

In Morocco, Zinoun and Bahoussa found that 22% of teachers at the École Supérieure de Technologie de l'Université Mohamed V were stressed. These differences can be explained by variations between countries and sectors of activity. In our study, tense work varied by gender. Indeed, women were at the highest risk, with 21.5% of them compared to 16.2% of men. These results are consistent with those of several studies, such as the Belstress study and that of Choi et al.

In the education sector, our results corroborate those of the SUMER survey, which indicated that 23% of female teachers in the private sector were exposed to tense work, compared to 5.3% of male teachers, as well as a Moroccan study conducted by Zinoun and Bahoussa among university teachers. In the latter study, 68.8% of women were stressed, compared to 31.1% of men, with a significant chi-square ( $p = 0.01$ ).

The teaching profession, given its specificity, is considered stressful and generating many cases of stress or burnout. Several authors highlight the importance and severity of stress among teachers. According to some, teachers report one of the highest levels of work-related stress compared to other professions.

This can be explained by a range of professional factors such as the high level of social interaction, the work climate, and individual factors such as gender and personality traits. These determinants intervene in the appearance and maintenance of stress at work, increasing absenteeism, reducing quality indicators and having economic repercussions.

### CONCLUSION

Stress at work can become a chronic illness, something that can cause professional burnout among some teachers and which can have negative impacts both on the health of the teacher and on the establishment. In this regard, the mental health of teachers



## Effects of Psychosocial Risks on the Performance of Teacher-Researchers: Moroccan Context

in Morocco must be a major perspective of scientific research; diverse and rich in order to develop compatibility between the psychosocial environment and the needs of teachers.

The assessment of psychosocial risks among teacher-researchers in Morocco reveals worrying levels of organizational constraints that directly impact their psychological well-being and professional performance. Based on Karasek's model, this study identified the main sources of stress faced by teachers, including workload, lack of social support, and limited autonomy.

The results highlight the urgency of implementing preventive measures adapted to the Moroccan educational context. It is essential that educational institutions adopt policies aimed at reducing these constraints and promoting a healthier work environment. This could include the establishment of psychological support programs, improving working conditions, and encouraging a better work-life balance.

However, this study has limitations, particularly due to the small sample size and the cross-sectional nature of the survey. Further research, with larger samples and longitudinal approaches, would be necessary to deepen the understanding of psychosocial risks in this sector.

This study contributes to the literature on psychosocial risks by providing data specific to the Moroccan educational context. The results highlight the importance of a proactive approach to improve the mental health of teacher-researchers, which is crucial not only for their well-being, but also for the quality of teaching and research in Morocco.

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## Effects of Psychosocial Risks on the Performance of Teacher-Researchers: Moroccan Context

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