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## **PSYCHOSOCIAL RISKS AND OCCUPATIONAL STRESS IN TIMES OF COVID-19: INSTRUMENTS FOR THEIR ASSESSMENT**

### **Riesgos Psicosociales y Estrés Laboral en Tiempos de COVID-19: Instrumentos para su Evaluación**

**Luz Martínez Martínez**<sup>1</sup>

Complutense University of Madrid. Spain

[luzmar03@ucm.es](mailto:luzmar03@ucm.es)

#### **Abstract**

In the world, every year almost three million people die from accidents or work-related illnesses, more than five hundred suffer from occupational diseases or injuries. In 2019, job stress caused 30% of sick leave in Spain, with a high cost and a reduction of productivity. The COVID-19 presents new challenges, almost four million unemployed, another four with an ERTE and an uncertain and slow recovery that causes instability. Also new risks related to work and stress, such as biological contamination, control measures, uncertainty and a high mental burden for workers. Different organizations defend the importance of occupational health and well-being in all aspects, physical, mental and social. Given this situation, it is essential to detect psychosocial risk factors that affect health in the workplace to create effective prevention plans adapted to changing situations. Some authors highlight the difficulty of this evaluation due to insufficient methodologies at the conceptual and technical level or lack of standardization. The objective of this research is to identify different tools, dimensions, reliability, validity, psychometric analysis and use, which serve as references for research in occupational risk prevention. A descriptive analysis of bibliographic review was carried out in searching engines and pages of specialized organizations. Some highly reliable measurement instruments are offered for the detection of psychosocial factors in various contexts. It is recommended to complement these tools with others that introduce other variables such as uncertainty, anxiety or mental state.

**Keywords:** Psychosocial risks, Occupational Risk Prevention, work stress, measurement tools, COVID-19, health crisis.

#### **Resumen**

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<sup>1</sup> Corresponding author: Luz Martínez Martínez, Universidad Complutense de Madrid,

En el mundo, casi tres millones de personas mueren al año por accidentes o enfermedades relacionadas con el trabajo, más de quinientos sufren enfermedades ocupacionales o lesiones. En 2019, el estrés laboral causó el 30% de las bajas en España, con un alto coste y reducción de la productividad. La COVID-19 presenta nuevos retos, casi cuatro millones de parados, otros cuatro con un ERTE y una recuperación incierta y lenta que provoca inestabilidad. También nuevos riesgos relacionados con el trabajo y el estrés. Distintos organismos defienden la importancia de la salud y bienestar laboral en todos los aspectos, físicos, mentales y sociales. Ante esta situación es imprescindible la detección de factores psicosociales de riesgo que afectan a la salud en entornos laborales para crear planes de prevención eficaces y adaptados a las situaciones cambiantes. Algunos autores destacan la dificultad de esta evaluación por metodologías insuficientes a nivel conceptual y técnico o faltos de estandarización. El objetivo de este trabajo es identificar distintas herramientas, dimensiones, fiabilidad, validez, análisis psicométrico y uso, que sirvan de referentes para la investigación en PRL. Se realizó un análisis descriptivo documental de revisión bibliográfica en buscadores y páginas de organismos especializados. Se ofrecen algunos instrumentos de medición con alta confiabilidad para la detección de factores psicosociales en diversos contextos. Se recomienda complementar estas herramientas con otras que tengan en cuenta otras variables como la incertidumbre, la ansiedad o el estado mental.

**Palabras clave:** Riesgos psicosociales, Prevención en Riesgos Laborales (PRL), estrés laboral, herramientas de medición, COVID-19, crisis sanitaria.

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## 1. INTRODUCTION

According to the International Labor Organization (ILO, 2019), each year more than 2.8 million people die from occupational accidents or work-related diseases, 160 million workers suffer occupational diseases and 374 million non-fatal work-related injuries occur estimating the cost of poor safety and health practices at 3.94% of global GDP each year. According to the World Health Organization, health refers not only to the absence of disease, but is "a complex state of well-being in physical, mental and social aspects" (WHO, 1948). Work is a source of health, not only because of the acquisition of a salary that allows the purchase of goods, but also because it involves physical and mental activity, social contact that allows affective development, and allows people to feel useful and satisfied with results. It also means a contribution to the well-being of others through the production of goods and services. However, work can also cause damage to health, not only through accidents, but also through occupational diseases,

work organization and labor relations, giving rise to other types of diseases such as *burnout* or stress (ILO, 2019).

In this sense, occupational health is concerned with well-being not only in the performance of work but also with its consequences at the physical, mental and social levels. That is why it must work, through the prevention of injuries and diseases, as well as in the promotion of workers' health, helping to create a quality labor market (Benavides, Delclós, & Serra, 2018). In Spain, the Occupational Risk Prevention Law (PRL) (Law 31/1995) obliges companies to prevent injuries and diseases, this concerns prevention actions on working conditions, not only structural, environmental and psychosocial; but also health promotion activities that educate workers in the care of their own well-being. Therefore, health promotion in the workplace must take a holistic approach that also includes psychosocial factors and work organization (Sjöberg, 2017). This is especially important in crisis situations such as the current one with COVID-19 where workers and the labor market have been affected in various ways (macroeconomic factors, indebtedness, business closures, etc).

### **1.1. Work stress and psychosocial risks**

Although stress is a natural reaction of our organism that facilitates response and adaptation to the environment, essential for survival itself, and helps humans to perform effectively in their activities (Ivancevich and Matteson, 1989; Peiró, 2005), it is important to keep stress levels moderate to enjoy its benefits for both health and performance. When we become stressed, our autonomic nervous system responds to a state of alarm with psychophysiological adaptations, the heart pumps more blood to the extremities, the heart rate accelerates, the pupils dilate and the brain secretes more cortisone (Sandín, 2003). It is normal for us to live in intermittent states of stress and for the levels to normalize when the stimulus or stressor disappears, in this case it would be a positive stress or eusthasia (Selye, 1960). If it persists, the organism will develop resistance which will allow it to cope with the stresses for a while, but at the cost of reducing its biochemical reserves, leading to exhaustion, becoming negative stress or distress. When the stressor stimulus persists and the stress is experienced as a permanent state, the organism does not recover, and in high doses and in a continuous manner it becomes harmful to health. This state not only increases the risk of suffering physical accidents at work due to lack of attention or disorientation, but also produces negative emotions, which leads to a propensity to activate the autonomic and neuroendocrine systems (Siegrist, 1996).

Job stress involves psycho-physiological responses due to the threatening perception of a risk factor (Sauter, Murphy and Levi, 1998) or psychosocial risk factors that affect the health of workers and business functioning (Jiménez and León, 2010), it is an imbalance between demand and response capacity (García-Herrero, Mariscal, Gutiérrez and Ritzel, 2013). This stress causes feelings of anguish, tiredness and restlessness, irritability, difficulties in making decisions, and even physical problems such as heart disease, increased blood pressure, digestive and musculoskeletal disorders, among others (Leka, Griffiths and Cox, 2004). Although work stress has often been considered

as a subjective experience of a person derived from the perception of having to deal with excessive or threatening demands that are difficult to control, it does not only affect people's health and physical well-being, but also has repercussions on their activity at work and their relationship with their environment. Exposure to a harmful work environment can lead to higher absenteeism, lower productivity, psychosomatic and affective problems, increased practice of addictive habits such as drinking and smoking, and a reduction in other healthy habits such as physical activity (Fernández, Fernández and Siegrist, 2005; Sandín, 2003). At a cognitive level, it causes a feeling of worry, indecision, low concentration, disorientation, bad mood and feelings of lack of control (López et al., 2004).

## **1.2. What causes stress and how it is related to work**

According to the "Transactional Theory" of Lazarus and Folkman (1986), in addition to a biological structure, individuals are determined by social background and lived experiences. Individual and social factors intervene in the evaluation of situations and their meaning, influencing the construction of values, commitments and beliefs. This cognitive evaluation comprises an individual's interpretation of a situation as threatening or dangerous to him/herself. This is why a situation does not affect everyone in the same way, since personal characteristics such as values, commitments, beliefs, coping and individual resources come into play. In relation to work-related stress, the "Demand-control-social support model" (Karasek, 1979, Karasek and Theorell, 1990) is one of the most widely used perspectives. Initially, this model proposed that among the main sources of stress are two factors: the psychological demands of the job (time pressure, mental workload and role conflicts) and the control of the job (monotonous work, exercise of competencies, autonomy and use of skills). Later Jeffrey Johnson (1986) adds the moderating variable of social support (interaction with peers and supervisors) as it can increase the ability to cope with a situation of sustained stress. Under these premises, stress can be analyzed through stressors (risk of stress-related illness) and the degree to which the worker can make decisions about his job (active/passive behavior). A job with high levels of control demands and social support would be an active job without being stressful, promoting motivation, learning and personal growth. A situation with high demands, low control and little support would be stressful because of the perception of not being able to respond to these demands, in which case psychological tensions such as fatigue, depression, anxiety and physical illnesses are produced (Johnson and Hall, 1988).

On the other hand, the "Person-Environment Fit Theory" (P-E) considers the way in which the interaction of individual and job characteristics influence the worker's well-being (Dawis and Lofquist, 1984; Pervin, 1967; Luceño, Martín, Jaén and Díaz, 2005) as a determinant for understanding cognitive, affective and behavioral reactions. In this model, a poor fit would be due to an imbalance between the demands of the job and the worker's needs to use his or her abilities and skills. This model incorporates the concept of frustration as a moderating sensation of job stress. Following this line, Siegrist (1996) postulates the "Effort-Reward Imbalance Model" (ERM) that analyzes the balance between the costs or efforts of the worker (job demands, motivation and involvement)

and the gains or rewards received in return (monetary, organizational support and security, such as promotion and stability). For this author, demands will influence self-regulation on self-esteem, self-efficacy and the feeling of being part of the group. Therefore, when there is an imbalance between effort and reward, feelings of threat, anger, depression and demoralization may appear. This model not only considers structural variables of the work environment, but also incorporates personal variables. It emphasizes the importance of the subject's interpretation, which can make the relationship between effort and reward unreal, the need for control as a personality characteristic and involvement (personal coping style).

Each person's perception of reality is based on his or her interpretation, which in turn is influenced by past experiences, patterns of beliefs and values, attitudes and emotions provoked both in the work environment and in other aspects of life. It is therefore important to distinguish certain characteristics of the subject in the perceptions between effort and reward. For example, an individual with a motivational pattern with high commitment and high need for approval is more vulnerable to frustration and stress by exposing himself more to high work demands or exaggerating his efforts. Having few opportunities to change jobs, exposure to unemployment and rapid socioeconomic changes will also cause an imbalance (Fernández et al., 2005; Luceño et al., 2005). These perspectives have incorporated the concept of psychosocial risk in relation to work.

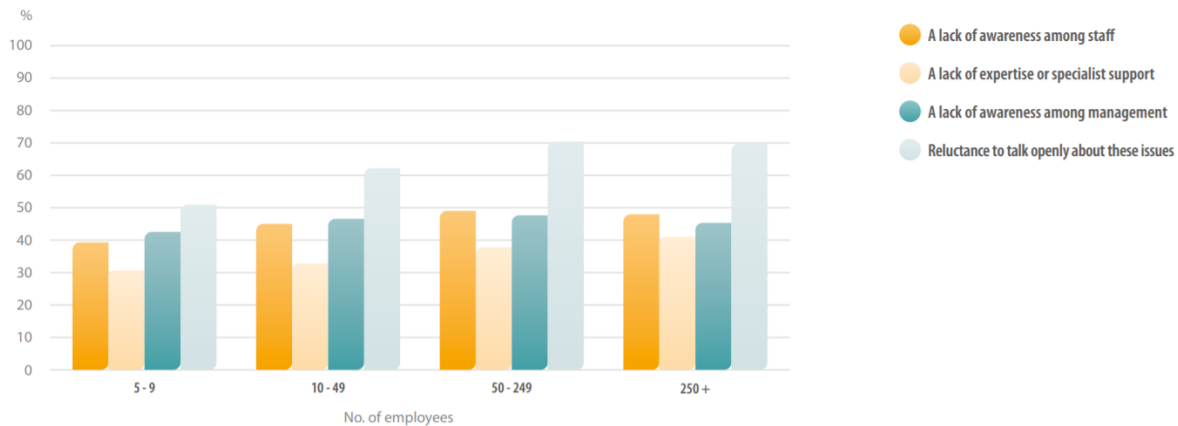
### **1.3. Importance of assessing occupational stress**

Transformations in the world of work (automated jobs, demographic changes, time demands, intensity) generate the emergence of new psychosocial risks related to chronic occupational stress and *burnout* syndrome (ILO, 2019), especially in professionals who provide services to others (EU-OSHA, 2019). In fact, by 2022 this disorder will be recognized by the WHO as a work-related disease by being included in the update of the "International Classification of Diseases and Related Health Problems" (ICD-11). The aim is to give visibility to the ailment and facilitate the management of sick leave and incapacity due to work-related stress. Three elements will be taken into account: "a feeling of exhaustion", "cynicism or negative feelings related to their work" and "reduced professional efficiency". This manifesto is a step towards the recommendation of the World Commission on the Future of Work that safety and health at work should be recognized as a fundamental principle and right.

According to data from the General Treasury of Social Security (TGSS, 2020), in 2019 work stress was the cause of 30% of sick leave in Spain, 40% of workers and more than half of the self-employed reported being stressed, causing them to be 60% less efficient at work. According to Eurostat (2019), Spain is the third European country with the highest occupational stress with almost 500,000 affected. In 2019, there is a perceived greater dissatisfaction with working hours and relationships with colleagues and supervisors causing a "depressing environment" and "less productivity" (Cigna, 2019). Seventy-two percent stated that where they work they are not provided with any health and wellness programs. What is significant about this information is that 42% of

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Spaniards believe that these programs refer to policies focused only on physical, and not mental, wellness care, showing a high lack of knowledge in this regard. Moreover, only 7% of those who have a wellness program participate in it. The European Company Survey on New and Emerging Risks (EU-OSHA, 2019) in its latest report picks up on these trends at European level, shows that awareness of psychosocial risks arising from work remains low compared to more physical risks such as musculoskeletal risks. They are also more complicated to manage, mainly because workers are reluctant to talk openly about these issues and because of a lack of awareness on the part of management and workers themselves (Figure 1).



*Factors that make psychosocial risks more difficult to manage, by size (number of employees) Figure 1.*

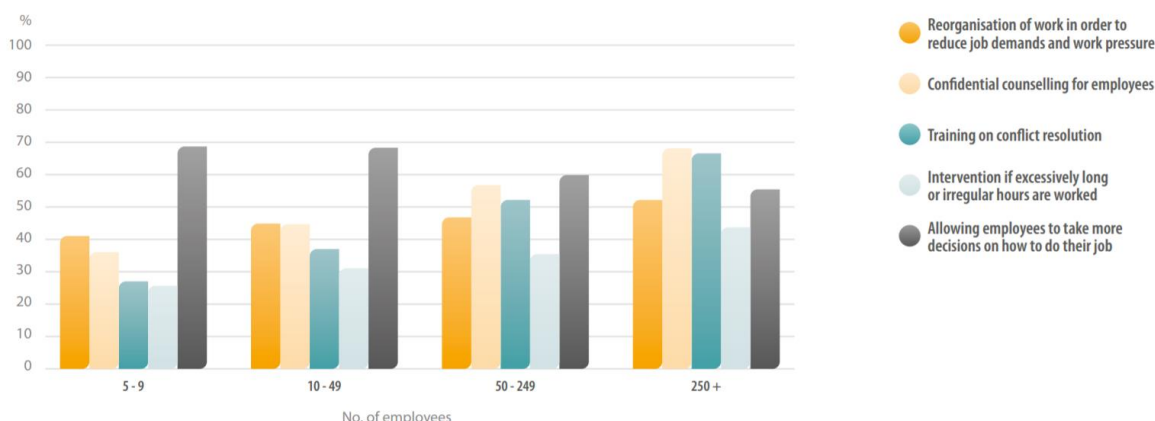
**Source:** EU-OSHA (2019). European Agency for Safety and Health at Work ESENER 2019 survey "What does it tell us about safety and health in Europe's workplaces? ". <https://osha.europa.eu/es/publications/esener-2019-policy-brief/view>

We can see that there is a lack of knowledge and awareness among both employees and employers. Although safety and health management is often associated with performance, the report shows that companies are mainly motivated to implement these measures by legal obligation, to cover workers' demands and to avoid possible fines by labor inspection. However, since 2014 there has been an 8% decrease in the number of these inspections. Periodic risk assessments are not carried out due to the perception that all risks are already known (83%) and because "there is no major problem" (80%), perceptions in turn related to the absence of knowledge of risk factors. In addition, there are other variables that hinder the management of these programs, such as the complexity of legal obligations, paperwork or lack of staff time.

For the good management of prevention, it is important to develop ORP plans that allow structuring and communicating correctly, according to objectives and needs, developing continuous dialogue and active listening that takes into account the opinion and perceptions of workers, as well as identifying possible shortcomings, always focusing on prevention as a participatory activity. In this sense, employers or managers should make use of different validated assessment tools (questionnaires, focus groups, interviews, observation, etc.) to identify risk factors or stressors for the implementation of

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more useful measures (Artazcoz and Molinero, 2004; Ortiz, 2010; Landsbergis, Schnall, Pickering and Schwartz, 2002). The WHO (Leka et al., 2004) urges member states to generate evaluable occupational health plans to promote workers' well-being. According to the same report, some of the measures most commonly used by companies to prevent psychosocial risks are: allowing employees to make decisions about how to do their work, reorganization of work to reduce job demands and pressure, confidential counseling, training in conflict resolution, and intervention if the workday is long or irregular hours are worked. As Figure 2 shows, the applications of these measures vary according to the size of the company.



**Figure 2. Workplace measures to prevent psychosocial risks, by size (number of employees), 2019**

**Source:** EU-OSHA (2019). European Agency for Safety and Health at Work ESENER 2019 survey "What does it tell us about safety and health in Europe's workplaces? ".  
<https://osha.europa.eu/es/publications/esener-2019-policy-brief/view>

### 1.4. Prevention in times of COVID-19

The COVID-19 situation has been a shock and a transformation in many companies with major repercussions on income and jobs, a situation already labeled as the worst global crisis since the Second World War (ILO, 2020). According to the International Labour Organization's observatory report "COVID-19 and the world of work" (2020), some 436 million enterprises in the most affected sectors (hotels and restaurants, manufacturing, commerce, real estate and business activities) will experience major disruptions. Sixty-eight percent of the world's workforce is located in countries that have closed workplaces due to confinement, exposing them to a high risk of insolvency. But, in addition, these companies will have to prepare for an uncertain and slow recovery. They will need to make adjustments to ensure safe working environments and measures to protect both companies and workers.

This situation has not only led to a health crisis; these measures have directly affected the labor market, causing profound instability and unease. According to data from the Spanish Ministry of Labor and Social Economy (2020), in March and April there

was a drop of 947,896 in the number of people registered with Social Security, and the number of unemployed rose to 3.7 million. April also saw a drop in the number of registered companies, -7.9% compared to the same period in 2019. Of those registered, nearly 4 million (almost 25%) have a total or partial suspension due to Expedientes de Regulación Temporal de Empleo (ERTE) and more than one million self-employed have applied for aid for cessation of activity. Those companies that can carry out their activity by their nature or that have been opening gradually according to the phases set by the Government, must adapt their spaces and protocols in order to safeguard the health of both workers and customers. Some of these measures consist of maintaining safety distances, hygiene of spaces, hands and footwear, use of masks, gloves and protective screens, and even quarantine of products touched by customers (INSST, 2020; EU-OSHA, 2020). Employers are responsible for ensuring such measures to workers, but in the case of the service sector with customer service, it is also the workers themselves who will control that customers comply with the prevention measures.

Therefore, workers are faced with new risks or hazards related to work and stress, such as biological contamination, not because of the work itself but because of exposure to the pandemic. Tasks that become unpleasant due to fear of contagion by exposure to others, lack or ineffectiveness of control measures, social fear itself and uncertainty in their workplace (Leka et al., 2004). This situation also places a mental burden on workers who must continually interpret what is happening around them in the material and social environment. This increases their demands on concentration and attention, there is a large amount and dispersion of information on regulation, norms and prevention that they must assimilate. In fact, the WHO is already warning of the need for greater investment in mental health in view of the risk of a drastic increase in mental illness (WHO, 2020). Factors such as social isolation, fear of contagion, loss of family members, loss of income and, in many cases, loss of employment make the effects of COVID-19 on mental health very high.

## 2. OBJECTIVES

In view of this situation, it is critical to design health plans with preventive programs that promote the well-being of workers, for which it is necessary to study the different factors of psychological and social stress. Several organizations such as the European Agency for Safety and Health at Work (EU-OSHA) or the National Institute of Safety and Hygiene (INSHT) recommend various evaluation and monitoring tools that allow the identification of possible psychosocial risks or stressors that influence the production of stress at work. However, some authors point out the difficulty of this evaluation by means of traditional methodologies, insufficient at a conceptual and technical level or lacking standardization processes, recommending the incorporation of items aimed at capturing the experience of workers also in their subjective and psychosocial dimension (Blanch, Sahagún and Cervantes 2010; Olmos, Cebollero and Carrejón, 2008; INSHT, 2004; Tejada and Gómez, 2009). This research presents some of the most commonly used standardized questionnaires with the aim of unifying criteria when analyzing psychosocial risks at work and to serve as a reference for research in ORP. Knowing

the different dimensions and their application allows the analysis of possible stressors in the workplace and thus, a better design of prevention measures.

### 3. METHODOLOGY

For the study, a descriptive documentary analysis of bibliographic review of the tools used for the evaluation of psychosocial risks at work between 2009-2020 was carried out in different search engines and databases such as Google scholar, bibliographic sources UCM, WOS, Science Direct, SciELO, Dialnet, DOAJ, JOEM and official pages of the Ministry of Labor, INSHT, WHO, ILO and EU-OSHA. The values "work stress", "occupational stress", "psychosocial risks", "occupational stress", "work stress", "psychosocial risks" and "working conditions" were used. We proceeded to read and review the works in search of tools validated both by institutions and by different researches, taking into account the works of idiomatic adaptations and application in different sectors (health, education, construction, manufacturing, etc.) analyzing the research background, reliability index, validity tests and psychometric analysis of the items (Lluís and Navarro, 2006).

### 4. DISCUSSION

There are currently different types or categories of questionnaires in relation to ORP and psychosocial risks (Blanch et al., 2010). Those that provide a general approach to working conditions from the objective dimension of the different risk factors, but do not take into account the structural realities of the organization or the personality, an example is the Quality of Life at Work survey (Villalobos, Vargas, Escobar, Jiménez and Rondón, 2010). Those that analyze some particular effect of exposure to psychosocial factors such as *burnout*, job satisfaction, harassment, etc. Such as the Occupational Burnout Scale (Uribe-Prado, 2010), the Inventory of Violence and Psychological Harassment at Work (Moreno, Beltrán, Serrano, Chávez and Estrada, 2006). Finally, there are the self-report questionnaires that are essential for collecting and analyzing the perception of workers and the processes that generate stress. These consider the relationship between various dimensions and factors, both individual, social and occupational. The following are several options of this type of questionnaires with validity as predictive tools that allow relating dimensions of the work environment with health problems. (Bourbonnais, Comeau and Vézina, 1999; Karasek, 1979; 1996; Siegrist, 1996; 2004; 2010).

#### 4.1. Demand-Control-Social Support Questionnaire (DCS)

Based on the initial demand-control model (Karasek 1979; Karasek and Theorell, 1990). Demand would be the combination of three dimensions: quantity and type of demand; control over the tasks being performed; and social support as a possible intensifier of the stressful reaction (Johnson, 1986; Johnson and Hall, 1988). It allows the identification of job stress levels in four levels from low to high stress. A high stress situation would be when psychological demands exceed their control over the job and there is also low social support vs. low stress, with low demands and high control.

Intermediate levels would be identified as active (high demands and high control) and passive (low demands and low control) jobs. It is a 22-item questionnaire with a 4-point Likert scale, adapted to Spanish and validated in different research studies. For example, this tool was used by Lazcano and his team (1996) in their research on the relationship between job strain, job satisfaction and psychological disorders in the health sector, showing the relationship between job strain and satisfaction, as well as between strain and disorders. Also in the healthcare sector, García, Rísquez, Fernández and Roche (2018) used this model for the identification of job stress factors in nursing staff finding low control over work, high demand in learning and multitasking and low social support, especially from superiors, which could favor the occurrence of stress.

In another study on the relationship between the model and teacher creativity (Gallegos, Iturrizaga and Salinas, 2014), they found a positive relationship between control, social support and creativity. Although high levels of stress were found, with high demands, high control was also observed categorizing the teacher's activity as an active job, rather than high stress. A positive relationship was also found between stress and creativity, showing that a certain degree of stress favors creativity at work. More recently, in reference to organizational culture and the impact of digital work, Castiblanque and Palomares (2020) found that the existence of work intensification, less control and low social support lead to higher levels of technostress, technoanxiety or cyberbullying in digital vs. non-digital workers, and a lower degree of protection.

#### **4.2. Effort-Reward Imbalance Questionnaire (ERQ)**

The Effort-Reward Imbalance Questionnaire (DER) is the Spanish version of the German Effort-Reward Imbalance Questionnaire (ERI). Based on Siegrist's (1996) Effort-Reward model, it analyzes the exchange relationship of the work function (effort) in the process of social reciprocity (rewards). It allows identifying stressful reactions at work as those involving high cost or effort and low benefit or reward, combining contextual information of the reward structure, job characteristics and evaluative information of stress coping states. The discrepancy between effort and rewards would be a determinant of stressful reactions and their effects. It has several versions, the extensive one consisted of 23 items, however, it has undergone modifications in order to be applied also to self-employed or small business owners (Siegrist, Li and Montano, 2014) remaining a questionnaire of 22 items in 4-point Likert scale. These items are aggregated into 3 main scales: extrinsic effort (job ladder, increased demands and physical demands), reward (salary adequacy, promotion possibilities, job security and esteem received) and overprinting (intrinsic effort). The questions refer to the current or most recent position held.

It works on two dimensions, extrinsic effort or the worker's own perceptions of the effort made and the professional reward, and intrinsic effort, evaluating the degree of involvement of the worker in his or her job. In the research by Tirado, Llorente and Topa (2019) on the perceived effort-reward imbalance in health complaints in physicians, they found a greater effect in individuals with high or medium over-involvement. To analyze the relationship of the effort-reward imbalance with mental distress some research

complements the DER with the general health questionnaire (General Health Questionnaire, GHQ-28), these works have found an association between the presence of stress with poor mental health, symptoms of depression and somatic types, and overcommitment with anxiety and insomnia (Canepa, Briones, Pérez, Vera, & Juárez, 2008). Along the same lines, Tsutsumi, Kayaba, Theorell and Siegrist (2001) showed that an imbalance between effort and reward and overcommitment were related to depression. Some research has also focused on analyzing the relationship between work stress and symptoms of cardiovascular disease, hypertension and cholesterol (Siegrist, 2010; Kivimäki et al., 2002; Peter, Geißler and Siegrist, 1998).

#### **4.3. CoPsoQ (ISTAS21, PSQCAT21)**

Method for the evaluation and prevention of psychosocial risks. Developed by the Danish National Institute for Occupational Health (AMI), it allows to adapt to changes in the world of work and can be applied to any position and identify psychosocial risks in companies and areas to improve in order to reduce them (Kristensen, 2000). It is based on the General Stress Theory model and integrates the dimensions of the Demand - Control - Social Support models of Karasek and Theorell (1989), and Effort - Reward Imbalance (ERI) of Siegrist (1990), and also assumes the dual presence theory, which has to do with the need to respond to domestic and salaried work (Balbo, 1994). The AMI transferred the rights to the Spanish Trade Union Institute of Labor, Environment and Health, creating working groups for the Spanish version together with the National Institute of Safety and Hygiene at Work and other administrations, giving rise to the "ISTAS21 COPSOQ" (Moncada, 2004; Moncada, Llorens, Navarro and Kristensen, 2005).

There are several versions depending on the type of companies where it is used: short version for companies with less than 25 workers, medium version for companies with more than 25 workers and a more extensive version for use by research personnel. The medium version contemplates 21 different dimensions covering a wide spectrum, grouped in turn into 5 groups: Psychological demands (quantitative, cognitive, emotional demands, demands to hide emotions and sensory demands), Influence and skill development (influence at work, development possibilities, control over working time, sense of work and integration in the company), Social support in the company and leadership quality (predictability, role clarity, role conflict, leadership quality, reinforcement, social support, possibility of social relationship and group feeling), Compensations (insecurity and esteem) and dual presence (dual presence).

The CoPsoQ (ISTAS21) is a free public methodology used in numerous investigations on work stress. In the analysis of psychosocial risks in university professors (García, Iglesias, Saleta, & Roday, 2016) it was detected that it is an active job, with possibilities for development and job security, but with a lot of psychological demands, low esteem and social support which can lead to unfavorable stressors for health. In relation to primary care and hospital health workers (García-Rodríguez, Gutierrez-Bedmar, Bellón-Saameño, Muñoz-Bravo and Navajas, 2015) it was found that it is a sector with high cognitive, emotional and sensory psychological demands, all

showing symptoms of perceived stress, especially primary care physicians. In his research on time management in the company, Cladellas (2008) found that poor time management is related to greater dissatisfaction with their work, poorer health and greater symptoms of stress.

#### **4.4. ILO-WHO Job Stress Scale**

It is supported by Ivancecich and Matteson (1989) and has a reliability of 0.966 according to Cronbach's alpha. It is self-administered and can be applied individually or in groups. It consists of 25 items on a 7-point Likert scale, related to organizational structure and climate, technology, leader influence, territory, cohesion and support of the work group. For this purpose, the authors identified and classified the antecedents of the stress situation as intra-organizational stressors (individual, group, organizational and physical work environment stressors) and extra-organizational stressors (family, political, social and economic factors that affect the individual). The identification of organizational stressors, which can generate difficulties in work performance and interrelationships among workers, allows the implementation of stress prevention and control measures. The tool allows predicting the sources of psychosocial risks and has been used for the study of stress in different sectors (types of occupation) such as administrative in police institutions (Díaz and Tinoco, 2011), telephone consultants (Tunanña, 2013), and industry (Chacín-Almarza, Corzo-Álvarez, Rojas-González and Corzo-Ríos, 2002). These works show the relationship of stress with multiple factors, highlighting for example the stressor effect of technological change that requires tools by the company, automated jobs and updating by employees (Peiró and Rodríguez, 2008; Díaz and Tinoco, 2011); or the negative perception of the influence of the leader. Different perceptions of stress have also been found according to age, being higher in older groups and also in those with more seniority (Chacín-Almarza et al., 2002).

#### **5. CONCLUSIONS**

Although occupational stress is recognized worldwide as a work-related disease involving certain psychosocial risks (ILO, 2019; WHO, 1948; Siegrist, 1996; Karasek, 1979), and with serious economic, organizational and health consequences for the labor market (TGSS, 2020; Cigna, 2019; WHO, 2020), there is still much work to be done to raise awareness of its importance among both employees and employers (EU-OSHA, 2019). On the one hand, these problems are more difficult to manage due to the preference of not talking about it in public and due to lack of knowledge, on the other hand, those companies that implement some measure do not do it in search of a health improvement but for legal obligations or to avoid sanctions. This shows the need to design more health and prevention information campaigns in the workplace and strategies to facilitate communication within the organization.

The COVID-19 situation has had a tremendous impact on the workplace, causing a deep crisis that has put employers and employees at high risk (ILO, 2020; TGSS, 2020). In addition to the losses caused by confinement, both companies and workers must adapt to a new scenario in coexistence with COVID-19 and with the various health

measures such as physical distancing, hygiene of spaces, masks and protective screens. This risk situation requires: 1) an increase in concentration, attention and assimilation of information on the part of workers, and 2) an overload of responsibility, since in many cases the workers themselves are responsible for ensuring that clients comply with the safety measures adopted. This means a great mental burden that can lead to high levels of stress and consequent damage to health. Faced with this crisis, it is urgent to design preventive programs and implement measures to make adjustments and ensure safe working environments, with strategies aimed at protecting both companies and workers.

For the design of these management and prevention measures in COVID-19, it is essential to take into account the different factors of psychological and social stress. To this end, there are different standardized questionnaires or scales that allow the identification and monitoring of possible psychosocial risks that influence the production of stress at work (Karasek 1979; Johnson and Hall, 1988; Ivancevich and Matteson; 1989; Karasek and Theorell, 1990; Siegrist, 1996; Siegrist et al., 2014; Moncada et al., 2005). These tools have proven to be effective in the detection of stressors in different dimensions, which allows opening lines of work according to the shortcomings discovered and thus being able to correct them. Due to the current situation, it is advisable to carry out evaluations of possible psychosocial risks, which will allow the design of effective programs that will help to better manage and adapt to changing situations. In order to understand in greater depth the possible psychological effects of COVID-19, it is recommended to complement these tools with others that allow us to take into account new variables such as uncertainty, anxiety or state of mind and thus adapt such measures to the real situation we are living (Canepa et al., 2008; Tsutsumi et al., 2001).

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## AUTHOR

### Luz Martinez-Martinez

PhD in Communication. Professor, Department of Sociology and Communication (URJC) and Department of Communication Theory and Analysis (UCM). Coordinator of the Neurolabcenter neurocommunication laboratory at UCM. Professor of several Masters of the UCM and workshops and seminars on neuromarketing. Member of research groups in the field of communication at UCM and URJC. Participation in numerous international conferences and author of several articles in high impact journals and book chapters. Participant in research projects on behavior, neuroscience and health. Lines of research: communication, learning, health, persuasion and neuroscience. In the professional field she has always been dedicated to the world of communication and marketing as director of communication, corporate development, production and advertising management.

[luzmar03@ucm.es](mailto:luzmar03@ucm.es)

**ORCID ID:** <http://orcid.org/0000-0001-8582-724X>

**Google Scholar:** <https://scholar.google.es/citations?user=YXRnxWMAAAAJ&hl=es>

**ResearchGate:** [https://www.researchgate.net/profile/Luz\\_Martinez\\_Martinez](https://www.researchgate.net/profile/Luz_Martinez_Martinez)