

# Psychosocial risk factors in university teachers

## Factores de riesgo psicosocial en docentes universitarios

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#### ABSTRACT:

The psychosocial factors constitute a fundamental axis of the effects that work has on people's lives. The present research applied the adaptation and validation of the "CoPsoQ-Istas 21" (short version) in the Ecuadorian environment. It was applied to 435 university professors to identify the level of psychosocial affectation that they are exposed in their context. The results showed that 72% of the participating teachers were located at a high level of exposure.

**Keywords:** Psychosocial risk factors, COPSOQ, stress, work demands.

#### RESUMEN:

Los factores psicosociales constituyen un eje fundamental de los efectos que el trabajo tiene en la vida de las personas. La presente investigación aplicó la adaptación y validación de la "CoPsoQ-Istas 21" (versión corta) en el entorno ecuatoriano. Se aplicó a 435 profesores universitarios para identificar el nivel de afectación psicosocial que están expuestos en su contexto. Los resultados mostraron que el 72% de los profesores participantes estaban ubicados en un alto nivel de exposición.

**Palabras clave:** Factores de riesgo psicosociales, COPSOQ, estrés, demandas de trabajo.

## 1. Introduction

Work has been perceived on different aspects; in some cases, as a source of improvement and development, in others as a cause of illness and alienation. Many studies have focused on it as a generator of physical affectations, while others have analyzed it from its influence on the physical and mental health of people. For these reasons, it is necessary to analyze the meaning of work in the individual's life and how it can alter and/or transform it considering the inescapable person-work fusion, and its involvement in the personal, emotional and social development.

Before attempting to change the conditions in the work environment, the present research takes an approach on contributing to the analysis of the psychosocial risks to which workers are exposed daily, the rules and regulations that are developed within organizations, and the way work organization affects one's physical and mental health.

The analysis of psychosocial risk factors is a current that has gained strength in Latin America, however more empirical studies are required.

In this sense, there are different instruments that address psychosocial issues, however for this research, the "CoPsoQ" has been considered due to its methodology that is based on the combination of stress levels and the epidemiological methodology which analyzes the exposure to psychosocial risks and how they harm the health of workers. Consequently, it is top priority to deepen the search for an ideal solution for the humanization of work towards building healthy environments and producers of quality in the workers' lives.

### 1.1. State of the art

The metamorphosis in the work universe (Antunes, 2000) has generated a transformation, diminishing work positions due to organizational virtualization (Rentería, 2008). This logic of the market has without a doubt marginalized (Malvezzi, 2012) those who have not managed to handle sophisticated information technologies in today's world. (García, Iglesias, Saleta & Romay, 2016). On the other hand, the role that work has in the lives of individuals, allows them to amend and develop their identities when they have satisfactory links with their work, taking into consideration that the link with work constitutes in a second chance to build the identity so to personally improve and correct defects originated on the childhood and adolescence (Dejours, 2015).

Work has been analyzed as a generator of personal fulfillment, social growth, identity, and as a determining factor in the way people improve their quality of life, however the workplace presents multiple risk factors for the biopsychosocial health of workers which generate disabilities, absenteeism and even chronic diseases. (Vieco Gómez & Abello Llanos, 2014). In addition, the ongoing transformations in the work environment, the limitations of full employment, the reduction of job offers with relationship systems with people of higher salary brackets, the fragmentation and flexibilization of work, and the increase of informal jobs, originated new forms of precariousness, exclusion and insecurity at work (De la Garza Toledo, 2009), which have generated a change of orientation for the notion of health at work, from a purely physical concern to a complementary one for mental health. (Díaz & Rentería, 2017).

In effect, what determines the perception that the individual has of work and its effects on his life, undoubtedly depend on several aspects in the workplace such as: environment, organizational policies, employment conditions, work conditions, organization, etc.; which combined, constitute in psychosocial factors. Therefore, the study of psychosocial risk factors has become urgent, especially when epidemiological investigations have provided strong evidence of their impact on health. (Cáceres, Campillan, Cvitanic & Bargsted, 2015).

It also has even been determined that psychosocial risk factors influence aspects such as motivation, emotions, feelings, attitudes and in turn, also generate high rates of stress, depression, fatigue and emotional burden (Unda, Uribe, Jurado, García, Tovalín & Juárez, 2016); these being health risk factors that originated on work organization of work which generate physiological (neuroendocrine), emotional (anxiety, depression, alienation, apathy), cognitive (restriction of perception, level of concentration, creativity and decision making), and behavioral (use of alcohol, drugs, violence, assumption of unnecessary risks, etc.) (Arriagada & Pujol, 2017).

They even have not even allowed humans to merge with their work and change their vision of a perspective "work = punishment", or "work = suffering", to a new reality of "work = pleasure"; so to speak, changes in society have generated transformations in the centrality of work, which instead of improving the work environment, have actually contributed to the deterioration of mental health in it as a consequence of the so-called work organization (Dejours, 2015).

It is also necessary to consider that the transformations have modified even the workload that a worker must handle, and, as a consequence, a general overload is generated, which is intensified above all in their psychic and mental demands having a direct impact on the biological, mental, and social health. (Neffa, 2015); in which are influenced by both intra-work and out-of-work conditions (Osorio & Cárdenas, 2017).

The changing conditions that have been mentioned have given rise to circumstances of precarious work, generally visible in indexes of physical and psychological affectation on the workers. Consequently, it is necessary to increase the indicators of health and quality of life based on the reduction of the negative effects of work. (Almirall et. all, 2010). On the other hand, considering that the right working conditions allow the individual to develop capabilities of innovation, adaptation, and perception of greater activity and competence in their work (García, Iglesias, Saleta & Romay, 2016),

especially when working in environments endowed with autonomy. These conditions allow them to discover their capabilities and potentialities, mobilize their knowledge and experiences, and constitute as an instrument for the construction of meaning and identity (Neffa, 2015).

The above might be a panacea; however, the existence of organizations that grant greater autonomy to the worker allowing an active participation with conditions of individual development, can contribute to improve their quality of life; as well as the level of competitiveness of the organizations ensuring their permanence in the market, which would imply a double-track benefit.

Several researches show the direct relationship between psychosocial factors with the perception of overload and psychological demands (Karasek, 1979), with performance (Chiang, Gómez & Sigoña, 2013); as well with the physical and psychological health of the workers (Almirall, 1993; Juárez-García, 2007; Rodríguez, 2001).

The educational is one of the sectors with the most psychosocial affectations (Múnera, Sáenz & Cardona, 2013), various factors of its work environment such as: demands for permanent updating, labor market demands, changes in structures and strategies (Bedoya, Oquendo & Gallego, 2014), curricular changes (Múnera et al, 2013), institutional, career and professional evaluations, all increase in requirements and demands for teachers who must face them without sufficient resources (García Iglesias, Saleta & Romay, 2016); these are factors that have modified the working environment of university teachers.

The new demands of higher education related to the number of publications that must be had in order to achieve a degree have generated conflict between family time and the time required to research, in addition to the perception of the teacher in assuming that their work is never enough and never ends which reduces their family time (Gómez, Perilla & Hermosa, 2014).

The psychosocial risk factors are one of the aspects of occupational health and safety management in the educational area of greater interest. The European Union considers them within its strategic framework in the workplace and analyzes them from the healthcare field and its direct relationship with absenteeism, performance, work capacity and satisfaction (Rosario et al., 2017).

Several instruments have been applied for the evaluation of psychosocial risk factors in the work context, focusing on: occupational stressors (Unda et al, 2016.), double presence and esteem (Kristensen, Hannerz, Hogh & Borg, 2005), conditions of employment, social context, health, stress and satisfaction (Orozco, 2010), psychic wear and work content (Carrión, Gutiérrez & López, 2014), and social interaction, work systems, and organization (Aranda et al, 2015).

The Copenhagen Psychosocial Questionnaire (CoPsoQ-Istas 21) was adapted in Spain in 2003 for the Spanish language. Its origin is in the "CoPsoQ" prepared by the National Institute of Occupational Health of Denmark (2000), it covers a wide range of psychosocial factors (Moncada et al., 2014), which are based on the evaluation of general and mental health, vitality, behavioral symptoms, and somatic symptoms (Fernández, Longás, Chamorro & Virgili, 2015).

The "CoPsoQ-Istas 21" is based on the general theory of stress with the assumption that the work dimensions are adapted to the quality of life of the workers (Kristensen et al., 2005; Kristensen, 2010). It is constructed on the basis of theoretical and statistic reasoning (Berthelsen, Hakanen, Kristensen, Lönnblad & Westerlund, 2016), it assesses 6 psychosocial dimensions: Psychological demands, active work, social support and quality of life, insecurity, double presence and self-esteem (Kristensen et al., 2005; Fernandes & Pereira, 2016; Da Silva, Wendt & De Lima Argimon, 2017); which is why it is frequently applied in research as well as in workplaces (Berthelsen et al., 2016). The linguistic and psychometric validation of the different versions of CoPsoQ-Istas 21 is very well documented in several countries (Aminian, Dianat, Miri & Asghari-Jafaradadi, 2017).

## 2. Methodology

This research done through a non-experimental, transversal and quantitative design, with a sample of 435 university teachers aged between 30 and 50 years old, of which 56.7% were women and 43.4% men; all the individuals who participated in the study, did so under conditions that preserved their anonymity.

To collect the data, the Copenhagen Psychosocial Questionnaire (CoPsoQ-Istas 21) was applied in its Spanish version. The validation processes of the instrument were applied adhering to the methodological process for adaptation and validation of an instrument by Herdman, Fox- Rushby and Badía (1998), promulgated by Hasselmann and Reichenheim (2003), and applied by several researchers like. Paris (2011); Pan et al. (2014); Salessi and Omar (2014); Vaamonde (2015).

For the verification of reliability and validity, statistical processes were applied (Alpha de Cronbach) and following the phases of conceptual, semantic, and operational equivalence and measurement; besides the application of statistical procedures for the reliability and validity of the instrument.

The CoPsoQ (Copenhagen Psychosocial Questionnaire) is an international instrument for research. Its short version, the one applied, consists of 38 items and a likert scale of five options, which evaluate six groups of risk factors for health at work of a psychosocial nature: Psychological demands, double presence, control over work, social support and leadership quality, esteem, and uncertainty about the future.

## 3. Results

The data analysis and the results of the instruments were made in the SPSS, 21 version. Table 1 corresponds to the general Cronbach's Alpha showing a total of 6 elements taken from the 8-question questionnaire (reliability level according to the size of the questionnaire, level of reliability related to the type of results, and the level of reliability related to the type of questions). The Cronbach's Alpha total is 0.874, high value in the scale that obeys to a high reliability.

**Table 1**  
Cronbach's alpha test total

Cronbach's Alpha	Elements #
0.874	6

In addition to the validation process of the instrument by factor, the individual Cronbach's Alpha was applied. The results are presented in table 2, displaying validity in the items. Considering Lind, Marchal & Wathen (2012), who mention that valid results mean values higher than 0.70, the results for each category of analysis were superior, even individually. The instrument in total form reached an index of internal consistency of .874, and by categories: psychological demands (.794), active work (.801), social support and quality of life (.789), insecurity (.842), double presence (.798), and esteem (.870); which allow to consider that the instrument is apt to be applied.

**Table 2**  
Cronbach's alpha by category

Category	Item #	Cronbrach's Alpha
Psychological Demands	6	.794
Active Work	10	.801
Social Support & Quality of Life	10	.789
Insecurity	4	.842
Double Presence	4	.798
Estimate	4	.870

Regarding the results achieved, descriptive statistics were applied which showed the levels that the teachers in each category by gender reached. The results are presented in Table 3, taking into consideration the established ranges for each category in the instrument.

**Table 3**  
Levels of impact by gender.

CATEGORY	GENDER	AVERAGE	GRADE OF EXPOSITION
PSYCHOLOGIC DEMANDS	M	12,45	HIGH
	F	11,80	HIGH
ACTIVE WORK	M	24,12	MEDIUM
	F	23,70	MEDIUM
SOCIAL SUPPORT & LIFE QUALITY	M	21,40	HIGH
	F	17,54	HIGH
INSECURITY	M	5,17	MEDIUM
	F	8,33	HIGH
DOUBLE PRESENCE	M	2,56	LOW
	F	9,12	HIGH
ESTIMATE	M	11,20	MEDIUM
	F	9,30	MEDIUM

Regarding the *psychological demands* category, the 72% of the teachers were located at the high level, which indicates that the workload the teachers have is high and not respond to the time they have to do it; that is to say the high demands accelerate the rhythm of work to which they are exposed; which produces accumulation of work. This level of demands constitutes a health risk due to the high levels of stress and the fatigue it generates.

One of the higher categories was in relation to the requirement to which teachers are subjected to hide their emotions for their work and the high level of cognitive demands that must be handled in reference to updating and acquiring new knowledge.

The *active work* category also covered the development possibilities that teachers have within the institutions in which they work. The results showed that 81% of teachers perceive that their degrees of influence in decision making and of professorship autonomy are low, for which they were located in the yellow level with values that showed an ascending tendency towards the red level. However, within this category, the job opportunities factor shows that most teachers perceive that possibilities of development exist within their institutions. The scores obtained in this factor decrease the impact of the category in general, placing it in the yellow level.

Regarding the category of *social support and quality of life*, 84% of the surveyed population was at a high level of exposure. The results reflect that: social relations, the sense of belonging to the group, group feelings, and recognition to effort constitute critical aspects within the institutions of higher education making themselves low social support organizations.

The Insecurity category included aspects of stability, temporality, shift changes, work schedules, professional career; all aspects directly related to job insecurity. The results reached show dichotomous results; on one hand, the male gender is located at the middle, and the female gender is positioned at the high level; whereby women are those who perceive a higher level of insecurity and are more affected.

In the double presence category, is the female gender that locates in the red zone (high level). Considering the roles they should play as mothers, wives and teachers, which are still largely fulfilled by them only, they become more vulnerable to the stress factor that affects their emotional, psychological and physical health.

The CoPsoQ-Istas 21 analyzes the self-esteem as a component of the compensation dimensions within the "effort-compensations" model and is directly related to the recognition they receive from their immediate superior in relation to their contribution through their work. In the case of the teachers objects of the study, both genders are located at the middle level, which reflects that although the recognition process is not the most optimal, it is not absent; yet it should be considered that the estimate is linked to promotion prospects, job security, and working conditions; which should be a priority when establishing intervention programs.

## 4. Conclusions

The high level of cognitive demands that higher education teachers must handle in relation to the career and institutional evaluation and accreditation systems have increased their workload, and modified the organizational processes and level of academic preparation such institutions require from a university teacher; which has increased the levels of stress and fatigue in most of them which is directly related to the innumerable demands from the reorganization of work which is directly related to the innumerable demands from the reorganization of work. (Antunes, 1998; Sennett, 2000; Appel, Wendt & Argimon, 2012).

One of the most noteworthy factors of the study is the perception that teachers have that the principle of professorship freedom that was handled in institutions of higher education, but that has noticeably decreased restricting their performance with students and the pedagogical methodology they can use.

Consequently, due to the focal point that work has in the life of humans and its economic and psychosocial implications, the positive or negative effects that this exerts in lives will depend on their experiences and adaptation considering that in the process of adapting to work various agents intervene, such as: family, level of education, values, beliefs, working conditions, etc.

The results achieved constitute the starting platform for the research and the deepening of the effects of the psychosocial risk factors of work in the field of higher education; which have not yet been properly identified, recognized and typified as factors that cause disturbance in the psychic, mental and social mechanisms of workers.

The study showed the high level of exposure to which the university teacher is subjected; therefore, it is suggested to further this field, especially considering that jobs with high demands, and low control and social support are those that represent a greater risk to health and significantly decrease the level of work performance.

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