

## **Occupational hazards affecting the university professor in Ecuador. Practical suggestions for occupational wellness**

Johanna Elizabeth Fajardo Vargas<sup>1\*</sup> <https://orcid.org/0009-0000-3710-1049>

Dominga Rodríguez Angulo<sup>2</sup> <https://orcid.org/0000-0001-8022-2428>

Gladis Lola Luján Johnson<sup>1</sup> <https://orcid.org/0000-0002-4727-6931>

<sup>1</sup>Universidad César Vallejo. Perú

<sup>2</sup>Universidad Técnica Estatal de Quevedo. Ecuador

\*Autor para la correspondencia: [jfajardov@ucvvirtual.edu.ec](mailto:jfajardov@ucvvirtual.edu.ec)

### **ABSTRACT**

One of the difficulties affecting the occupational health of university teachers in Ecuador is occupational hazards. The objective is to analyze occupational risks in order to strengthen occupational wellbeing from an integral point of view. We classify occupational risks into ergonomic, psychosocial, and organizational risks for decision-making. We suggest policies for risk prevention, creating an adequate work environment, which will provide quality training. Theoretical and empirical methods of the mixed research approach were used, with a factual approach carried out by teachers of the Universidad Técnica Estatal de Quevedo, Ecuador.

**Keywords:** Occupational risks; University teachers; Occupational well-being

### **Introduction**

The current work of university teachers in Ecuador is conceived as a profession of respect and intellectual assistance, this profession contains challenges and risks that are often not perceived in their full dimension. The education system today is a source of knowledge and development; however, problems arise that have a profound impact on the welfare

of key players: teachers. As the twenty-first century, marked by globalization and technology, the teacher's workload diversifies to the point of acquiring new work commitments that require urgent attention.

One of the most evident risks that teachers in Ecuador currently face is the emotional, physical and mental exhaustion that leads to constant pressure to meet the expectations of the institution, the family and the students. In an environment where research, teaching and university extension as characteristic processes compete for the teacher's time, it is difficult to maintain a balance between these processes.

On the other hand, the university environment in Ecuador is not always conducive to their professional and personal development. On numerous occasions, they face precarious working conditions, with temporary contracts or low salaries, thus generating insecurity, instability and uncertainty. This job insecurity not only demotivates educators, but also increases the risk of suffering from anxiety-related illnesses. Similarly, the lack of resources in public universities, with a deficient infrastructure and sometimes a shortage of teaching materials, increases difficulties for teachers, (Acome *et al.*, 2021).

Although there is research on occupational risks in teachers at a general level, there is a need for more specific information, considering the particularities of the educational system and the sociocultural context in Ecuador. Psychosocial risk factors are related to working conditions, organization and social relations, (Acome *et al.*, 2021). (Vera *et al.*, 2023) emphasize ergonomic risks such as musculoskeletal injuries as one of the main occupational risks. Thus, preventive actions are required that lead to greater safety and socio-labor welfare and that include and systematize a culture of risk prevention in the university space and time.

The thorough and detailed review of the literature led to the confirmation of theoretical-methodological and practical limitations in the approach of the occupational risks faced by university teachers. In this sense, we emphasized the following: the insufficient orientation towards specific groups, the homogeneity in the conception of university teachers disregarding variables such as age, gender, and area of specialization, category and the institution where they work.

It was examined the magnitude and causes of the problems mentioned above as well as the impact of these on the mental health and emotional well-being of teachers. We would

have to agree that the attention to psychosocial risks is insufficient, thus limiting the effectiveness of interventions through policies and strategies, where the impact of these is rigorously evaluated; thus, allowing to identify best practices for the promotion of safety and teaching well-being.

There is a lack of longitudinal studies to analyze the trajectories of teachers and the factors that influence their occupational health throughout their professional career, since they are carried out transversally. On the other hand, their participation in research is scarce; they are excluded from the design and development of scientific inquiries, thus ensuring that the results are relevant and applicable to their work reality.

It is crucial to reflect on practical solutions aimed at improving the occupational well-being of university educators. In the first place, the aim is to achieve an educational system that gives value and support to teaching work in an integrated and comprehensive manner. This includes the development of professional development and training programs that promote knowledge and competencies and do not add pressure to their workload.

Therefore, it is essential for educational institutions to be able to provide psychological and organizational support to their teachers and to recognize that their well-being at work is a guarantor of their emotional and physical stability.

This research was carried out based on the mixed research approach with empirical theoretical methods for the review of documentary sources, norms and university legal provisions, interviews and observation of various activities, meetings with teachers and managers of the Quevedo State Technical University. The documentary information is based on the review of the theoretical literature on the subject found in various publications.

Hence, the intention of this work is to analyze the occupational risks that affect the university professor for the strengthening of occupational welfare in the context of Ecuador.

## **Development**

In the university context of Ecuador when addressing occupational risks affecting teachers and their implications on occupational wellbeing, it leads to evaluate it as circumstances or conditions present in the work environment that can generate physical, psychological or social damage to workers, (González *et al.*, 2022).

Characterizing work environments with the presence of risks that cause affections to educators, leads us to highlight: lack of solid legal frameworks, inadequate inspection of workplaces, insufficient training in occupational health. Also, occupational risks that are not officially reported or recorded, exclusion of workers from decision-making processes, lack of access to resources and social protection programs, and the weakening of labor standards and protections overshadow the university work environment, (Cruz & Huerta-Mercado, 2020).

In the specific case of teaching, several of the authors, (Mató *et al.*, 2020), (Díaz-Patiño & Anaya-Velasco, 2023) identify stress as a particularly relevant risk factor, due to the psychological demands and work overload that describe this profession. We consider that a tense or psychosocially inadequate work context, anxieties, frustrations, dissatisfactions due to the non-fulfillment of expectations, as well as the absence of rest spaces, exacerbate occupational stress in educators.

The consequences of this type of stress on pedagogical specialists are not limited to their physical and mental health, but also have a negative impact on their professional obligation. Stress demotivates them, affects their outreach with the educational institution and, in general, degrades the quality of teaching, (Díaz-Patiño & Anaya-Velasco, 2023).

In this same aspect, (Noroña & Vega, 2022) point out that the emotional exhaustion syndrome has been studied more in teachers than in other professions, due to the constant demands of students. Three stages converge in this syndrome: emotional exhaustion due to the workload, feelings of inefficiency, cynicism, insensitivity, apathy and detachment from work in the interpersonal context.

The analysis of occupational hazards in this proposal has made it possible to delve deeper into ergonomic risks. Science related to the study of work (Vera *et al.*, 2023). There are musculoskeletal affections, caused by a work environment with inadequate and precarious material conditions, with unhealthy environments, and without optimal hygienic conditions, have given rise to postural affections of health, vision, quality of life

and osteoarthribo-neuromuscular alterations, thus preventing the optimal performance of the educator.

These conditions that have developed due to incorrect and prolonged posture, affect the cervico-dorsal musculature, the attitude of anterior trunk flexion, and the position of head ante pulsation, fixation of the shoulder joint to keep the hand and wrist joints free, are common in this work and therefore a high risk of injuring the spine, (Vera *et al.*, 2023).

Therefore, it is found in ergonomics a scientific discipline that serves as a theoretical underpinning to the present study, and aims to provide comfort by adapting goods, services and environments to the needs of employees for the prevention of occupational injuries and diseases, (Paredes, 2017 cited in Vera *et al.*, 2023).

The importance of these studies highlights the need to provide adequate physical, emotional, hygienic, organizational, cognitive and environmental conditions for educators, together with material assurance. Likewise, investment in infrastructure and resources is fundamental to guarantee the necessary tools that allow the educator to work well without having to face additional difficulties and thus avoid subsequent long hours of absence. When the person-environment interface does not work properly, conditions may arise that affect the performance of the person in activities proper to the work and in his/her daily life, (Bornacelli *et al.*, cited by Vera *et al.*, 2023, p-3).

The poor presence of the issue in the scientific debate on the influence of working conditions in the teaching work environment has led to the development of preventive guidelines, with a preventive and anticipatory character, thus taking care of the teacher, not deteriorating his health. The disease is attacked not by its consequence but by its cause. The analysis of the present working conditions should be carried out in a systemic way in order to know how the present factors may be positively or negatively influencing the relationship between the person and his/her work environment (Bornacelli *et al.*, 2020 in Vera *et al.*, 2023).

It is often confirmed that teachers have worse mental health and well-being outcomes than other occupational groups. However, academic evidence on this issue remains limited. The main results showed a high workload associated with multiple responsibilities emanating from the management of educational institutions, which generates a lack of time for personal life (...) and physical impairments, (Castilla *et al.*, 2021).

On the other hand, they highlight in the university the presence of influential organizational factors not only in the teacher, but also in the structure of the pedagogical collective of the organization itself, favoring favorable or unfavorable climates, such as internal communication for the formative mission. Hence, several authors have emphasized organizational factors. These encompass technological, business, socioeconomic or personal aspects present at work, with the potential to affect positively or negatively health, well-being, performance or individual and collective development, (Llamocca and Velarde, 2017).

Internal communication in universities has been an indispensable element; inattention can favor the appearance of an occupational risk. That is why, the university institution must share its values, vision and objectives among its professors and students, thus contributing, in large part, to the alignment of teachers with the projections of the university and ensuring that work teams are sufficiently effective and productive to achieve successfully the strategic objectives, an essential issue for the healthy life of universities and their internal and external users, and their results.

Internal communication has provided coherence and integration between objectives, plans and actions that are carried out in the educational institution, to keep its teachers motivated and keep them informed of its successes and failures, ensuring that the purposes and objectives are well understood by all and to collect contributions to avoid risks and enrich the teacher's role within the university's substantive processes.

According to (Arru, 2023) there are several conflicts that have generated poor management of internal communication, which can be transformed into occupational risks: disorientation and difficulties in aligning personnel with corporate strategy; lack of collaboration and commitment; difficulties in the circulation of information; profusion of rumor and a culture based on “confidentiality” and distrust; lack of protection of talent; deterioration of the work climate; scarcity of opportunities for the development of collaborative skills; problems in adapting to changes and/or new working conditions; lack of collaboration spaces; difficulty in managing knowledge; complexity in effective decision making; lack of channels to convey people's needs to express themselves; few actions to measure and monitor staff opinions; poor knowledge of the organizational chart and problems in finding experts.

Deficient communication in the internal order of the university generates conflicts and detrimental situations for educators in terms of efficiency, productivity, their educational work and the work environment. Failure to solve these problems in time has caused and continues to cause adverse consequences for teachers, training and the organization.

Another aspect to be considered in occupational hazards in the organization is conflicts. According to Fernandez (1986), an acceptable definition of conflict must take into account, at least, the "existence" of two or more individual or collective participants that, when interacting, show internal or external incompatible behaviors with the purpose of preventing, obstructing, interfering, harming, or in some way making less probable or less effective the action of one through the other, as an observable consequence of a subjective incompatibility, impair or otherwise make less likely or less effective the action of one through that of the other, as an observable consequence of a subjective incompatibility of goals, values, positions, means, strategies or tactics involving the exercise of power by one over the other in an environment of absence, free interpretation or transgression of norms.

In the university context, conflict is conceived as a situation generated by two or more teachers or groups of teachers where discordant behaviors are exposed by exercising power, in a situation free of norms; however, it must be evaluated in the sense of verifying if it is a conflict that shows an occupational risk and harms the educator. According to the above definition, there are five basic elements to be taken into account for a situation to qualify as a conflict or not: 1. Interaction between two or more participants. 2. Existence of subjectively incompatible internal and/or external behaviors. 3. Intentionality to harm the other or attribution of such intentionality. 4. Direct or indirect use of power. Normative ineffectiveness (Fernandez, 1986).

Policies aimed at teachers are conceived in three aspects: training, evaluation and teaching careers. The initial and continuous training of competencies seeks to empower teachers for their work, while teacher evaluation, through various mechanisms, seeks to improve teaching or to accredit performance for assignments, salaries and incentives. The teaching career has established the professional trajectory in terms of entry, permanence, promotion and retirement, with the inclusion of labor rights and duties.

Therefore, the prevention of occupational hazards should start with training, evaluation and the teaching career with the development of an institutional plan that includes these three moments and dictate measures to minimize the chances of suffering any injury or

damage at the time of performing their work. Working conditions conducive to teachers' well-being should consider the diverse and emotional nature of work and its connection with moral purposes, (Mató *et al.*, 2020), (Oyarzún *et al.*, 2022).

In order to systematize occupational hazards and their influence on the work of teachers, a regrouping was developed according to three criteria or perspectives: psychosocial, ergonomic and organizational.

In the psychosocial order, the following risks were identified: mental workload, work overload, performance pressure and lack of institutional support. Stress due to conflicting interpersonal relationships, high workload, and lack of control over work. Emotional exhaustion, influenced by high work demands and lack of institutional support.

On the other hand, dysphonia is also delimited as a psychosocial risk, here the excessive use of the voice, inadequate environmental factors; besides suffering from chronic diseases in precarious socio-labor conditions are emphasized.

Among the ergonomic risks, musculoskeletal injuries that appear as result of inadequate postures and prolonged use of computers stand out. These include pain in the neck, upper and lower back. Also recorded in this same aspect are the use or abuse of the voice and insufficient knowledge of ergonomics conditioned by inadequate postures at the computer.

As organizational risks, labor relations are conceived in this order highlighting conflict situations, lack of communication with internal and external audiences, inadequate leadership, lack of equity in the workspace, inadequate management of work dynamics from inadequate planning, with insufficient resources, lack of institutional support, inadequate infrastructure, contributing to an unhealthy work environment.

Within the labor prevention policies, integral policies against risks that address both physical and psychosocial risks, assessing the specific needs of each work area, promoting a culture of safety in universities, training teachers on occupational hazards, emotional exhaustion, ergonomics and mental health evaluations, and providing educators with the resources and tools to work in a safe and healthy manner with a positive work environment.

To improve the occupational well-being of university teachers we start from the institutional level and in this sense, we suggest actions aimed at developing preventive policies and comprehensive projects supported by dialogic communicative guidelines



between internal and external audiences, from the administration, teachers and students, managing to provide opportunities for decision making of teachers on issues that affect their participation in the work environment.

In this university educational environment, the capacities and skills of all the members of the community will be favored, where the directors assume specific roles with its members: the role of collaborators, according to the competencies of each one; thus contributing with their knowledge, aptitudes and effort to the achievement of the common objectives. This vision provides a collaborative organizational climate of openness and trust. It develops technical and management skills to turn the university's vision into reality.

Training teachers is another way to prevent and evaluate working conditions that have affected the wellbeing of teachers in matters of mental and physical health, with the necessary skills and expertise, making a periodic assessment of the ergonomic conditions of the work spaces, thus achieving, outlining potential risks, such as inadequate postures, poor lighting and excessive noise with the intention of preventing occupational hazards and promoting the wellbeing of teachers.

A second level, the individual, is constituted in other suggestions of actions for the improvement of the occupational welfare of university teachers, starting with an awareness of the occupational risks to which they are exposed and adopting measures to prevent them, allowing teachers to ask for help if they are experiencing physical or mental health problems related to their work so they can be in a position to actively participate in training programs and prevention of occupational risks, managing to maintain good communication with superiors and co-workers. In this way, they are able to adopt healthy lifestyle habits to prevent stress and other illnesses.

A third level of public policies aimed at improving the occupational well-being of university teachers is aimed at developing and implementing public policies that give value and support to teachers, thus achieving greater security and teaching stability in the university environment, strengthening legislation with regulations that protect them, allocating resources for research.

In addition to the development of prevention strategies, promoting a culture of risk prevention in which safety and health are priorities for the entire university community, encouraging the active participation of educators and shared responsibility in risk

management. An active participation that ensures that the voices of teachers and students are heard and considered in these management processes, thus improving the connection between the institution and its community.

To favor the socialization of knowledge, adequate interpersonal relations, as actions that administrators can take to the university practice and thus prevent university educators from feeling relegated in their work. It is also proposed to group the professors by affinity of tastes, interests and motivations in diverse activities and moments of the working life of the university, achieving the interrelation among all; to redelimit activities of collective character, favoring friendship and solidarity, avoiding discrimination and undervaluations that damage in some way the subjectivity of some of them from the specialized help and psychological assistance.

In correspondence with current trends, universities and especially their managers, must change their way of projecting and acting according to the development and evolution of university human capital, in order to achieve coherence in the flexibility of their policies to assimilate the future from the current training and preparation, so that organizational strategies contribute efficiently and effectively to improve their ability to address occupational risks and provide positive responses that account for the occupational welfare of their teachers and the demands posed by society.

Thus, it is up to the universities to keep themselves in constant improvement with regard to the satisfaction and welfare of one of their main publics, and thus be able to fulfill their social purpose, mission and the development of their processes with quality.

## **Conclusions**

The main occupational risks that have affected teachers in the context of Ecuador are psychosocial (mental workload, stress, emotional exhaustion, dysphonia, risk of chronic diseases), ergonomic (musculoskeletal injuries, neck, upper and lower back pain) and organizational (conflictive labor relations, inadequate management of work dynamics, poor working conditions). Among the policies and strategies that we value in this order are the prevention of occupational risks and the promotion of teachers' wellbeing from a transversal and longitudinal perspective.

The proposed policies and actions constitute a vital tool for decision making in the management of occupational risk, a systemic, comprehensive and proactive approach prevails where occupational safety and health are guaranteed in the university environment; to ensure quality education with all the actors involved in the university educational environment, and thus create a safe and healthy work environment that allows teachers to develop a work with full satisfaction and achieve the maximum potential.

In general, the occupational risks that affect the Ecuadorian university teacher are a reality that we cannot ignore, although the recognized challenges are significant, because there are practical measures that we can take to improve the occupational welfare of teachers. It is everyone's responsibility to create an environment for quality training, thus ensuring the future of higher education in Ecuador.