



Safety in High Risk Tasks: A Literature Review

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Abstract Review main postulates of industrial safety applied to activities of high risk in the industry. Security is fundamental in the processes of each company even more for those who handle high risk tasks, since this way will preserve the safety of workers, this article focuses on this issue as it is important to maintain the working environment Safe, a fundamental part in prevention, for this it is necessary that workers are aware of the risks to which they are exposed and how to prevent accidents and work diseases, there are specific regulations for each of these tasks, although it is a topic Which must be managed by all companies, there are few articles that talk particularly about safety in high risk tasks, thematic that contributes to continuous improvement and sustainable development.

Keywords Safety, tasks, risk, workers, knowledge, prevention, control, work accident, labor illness

Introduction

The present article of review, part of the need to investigate and document its own concepts on safety in high risk tasks, which allow, from various points of view, to interpret the present situation of small, medium and large companies.

Throughout history, companies have undergone significant changes, in order to meet the demands and needs of the global market. This situation has led to rethinking the way in which workers within factories and companies coexist on a daily basis with the environment, spaces and tools necessary for the production of goods and services. According to research the tertiary sector, that of services, has increased its importance and not only grows in absolute but relative terms, reaching a volume of 60 to 70%, which is why it is vital to adequately support the work environment so that Sustainable development in the tertiary sector [1].

Safety at work becomes an inalienable social right for the exercise of work. The aim is to guarantee the employee's well-being and as an effect, a positive value added and greedy for the organization, from a universal concept, safety at work is defined as actions that identify and evaluate possible risks, accidents and everything that which violates the physical, mental and emotional integrity of an employee. In its most common sense, high risk is determined as the combination of the probability of an event and its consequences [2]. It states that according to the new Labor Compilation Decree establishes that the worker has the right to work in safe and hygienic conditions, alluding that they participate in the identification and evaluation of risks at work and comply with the measures indicated to prevent accidents and diseases Professionals, so they have the right to receive instructions on safety and health at work.

Parallel to these concepts, organizations worldwide have established a set of entities, processes and regulations to prevent and address occupational hazards, a significant advance in sustainable development and social welfare [3]. Through empirical research on the influence of management system certification on the relationship between safety



management and safety performance in the severe accident chemical industry based on a survey applied to 1550 sixty-six workers. With a response rate of 72% and whose validity and reliability of the scales are considered acceptable, demonstrated the importance of OHSAS 18001 certification in companies to reduce accidents and thereby reduce liability and improve productivity and safety and Health of employees.

It should be noted that the information obtained, in addition, relates the challenges that still face security in high-risk jobs and puts ideas on the subject, which from the academy can be oriented to contribute to social welfare, productivity and efficiency in the management of organizations. Zutshi and Sohal in 2005 [4] stated that environmental and occupational health and safety (OHS) systems now form the three main pillars of the organization, the fourth is financial accounting.

The integration of these systems tends to be more and more common, especially in the educational system. Special emphasis should be placed on the studies of this branch on safe behaviors and start generating risk prevention actions from university campuses, since up to The same students are violated their rights of protection in the daily practices of the professional practice. Auqui *et al.* [5] in their study of medical students at the University of Cuenca of the Faculty of Medical Sciences found that the majority (77.04%) of the students considered that the medical career should be integrated into the pensum of studies the subject of Occupational Health as it will contribute to a better professional performance.

One of the challenges mentioned above is the ignorance reflected in the employees and employers in the face of the regulations and the lack of guides to train the interested public, as well as a greater spirit in the laws that regulate the exercise of the security, that although Are not implemented in their entirety, for their own interests or for process savings. In the study by Mejía and others in 2010 [6], they reported secondary data, with reports from the monthly bulletins from September 2010 to December 2014 reported at the national level 54 596 non-fatal occupational accidents, Non-fatal occupational accidents per million inhabitants increased in the period 2011-2013, which shows that although there are laws but if they are not put into practice there will be no safety in workers.

This review of the literature has proposed to know and confront the concepts of safety at work, establishing the sectors most vulnerable to these problems and their due controls. To achieve this, the review was supported by various sources; documentary and oral; among them academic research on the subject and regional and international legal frameworks that govern them, it is pertinent to say that although it is a topic that is very important for companies there are few articles that speak specifically about safety in high risk tasks.

Basic Concepts in High Risk Work

In Colombia, the history of safety at work began in 1904 with Rafael Uribe Uribe, who was the first to mention the need to legislate on accidents at work. However, it was only until 1915 that Law 57 was created, which defined this concept as: "Any unexpected and sudden event because of or on the occasion of the work, and that produces an injury or a disturbance in the worker and from Law 100 in 1993, was where the General System of Professional Risks - GRP was created, which is defined as: "The set of public and private entities, norms and procedures, intended to prevent, protect and care for workers from the effects of occupational diseases And work accidents that may occur on occasion or as a consequence of the work they do." [7].

Since then, it was specified as an accident at work: "Any sudden event that arises because of or on the occasion of the work and that produces in the employee an organic injury, a functional disturbance, a disability or death. It is also a work accident that occurs during the execution of orders of the employer or during the execution of a work under his authority still out of place and hours of work" [8].

Due to the need for a document that would help companies to prevent, control and care for the integrality of workers, many years later the SGSST Safety and Health Management System appears, it should be noted that it was designed as an Assurance system so that the entity or organization assumes the corresponding affiliation for each employee. This action is done through the insurer, which is the risk management entity ARL, being the most



representative of the SGSST, as it enforces organizational objectives in terms of risk prevention, promotion of lifestyles and jobs Health care, and the payment of the economic compensation that each employee demands, in addition, involves all employees as well as employers [9]. The creation of a whole system is done in order to preserve the health of workers, which generates benefits not only for them but also for employers, health is a fundamental part of the human being, that is why it is necessary to define Which is Occupational Health, in a Public and Private Framework: "It is constituted in daily practice, as a service designed to meet minimum requirements laid down in the current labor regulations, whose main objective is the protection of workers' occupational health, but in Which has a minimum decision power "[10] this premise that reflects the lack of spirit of the laws.

The systems should be accompanied by surveillance to support the health authority and managers with the best available evidence to effectively address and address health problems, the WHO World Health Organization defines health surveillance Public health as the systematic practice of the collection, analysis, interpretation, and dissemination of health data for the planning, implementation and evaluation of public health actions "[11].

In order to preserve workers' health, risk management is pertinent; there are many definitions of the word risk; For example, Hermansson defines it as "something negative that can happen in the future", thus, risk is usually and indistinctly related to words such as opportunity, possibility and probability [12]. One of these risks is biological risk, which is defined as the probability of acquiring disease from contact with biological material [13]. What can produce a biological accident [14] this is defined as a high risk event due to the probability of infection as agents such as human immunodeficiency virus or hepatitis B [15]. It is important to know the meaning according to the normativity of high risk tasks to clarify the above, according to the decree law 2090 of 2003 is understood by activities of high risk those in which the work carried out implies the decrease of the healthy life expectancy or The need to withdraw from the work functions that he performs, during his work and from which the different high-risk tasks emerge [16].

According to Aguilera and collaborators in 2012 in his research [17] on cultural meanings of the concept of health at work in professionals in training, in the first phase of their results shows practices of the concept of health at work, which says Were defined through the elements prevention, health, hygiene and standards. In a hygienic work environment, there is less risk of developing occupational disease and activities are performed with higher quality, although many companies do not care about business hygiene, Where the rules imply all that governs a company, are guidelines that define the behavior of the employer, company and employees, health at work depends on knowledge and compliance with standards and procedures, meet and follow the standards ensures safety.

The purpose of occupational health services is to prevent work-related illnesses by developing preventative-promotional health programs, based on occupational examinations [18], it is of great importance to identify existing pathologies in order to assess the state of the employee's health. That is why a healthy working environment or environment is indispensable. According to the WHO, workers and bosses collaborate in a process of continuous improvement to promote and protect the health, safety and well-being of workers and the sustainability of the work environment. [19]. The healthy work environment helps in the execution of the work tasks since it allows the workers to perform in a pleasant space, which produces motivation and this is a pillar important effectiveness and efficiency of the results.

When the health of the worker is affected by the risks inherent in the labor activities can appear what is known as work sickness established in Act 31/1995, prevention of occupational hazards, in its article 4, will be considered as work-related damages Diseases, pathologies or injuries suffered by reason or occasion of work, is broader than that of occupational diseases, and covers all diseases in which work is an etiopathogenic factor to be taken into account [13].

The healthy work environment must be accompanied by health promotion, the historic Ottawa Charter of 1986 defines it as the one that constitutes a global political and social process that encompasses not only actions directed directly at strengthening the abilities and capacities of individuals, But also those aimed at changing social,



environmental and economic conditions, in order to mitigate their impact on public and individual health [20]. The ability to work is based on the balance between a person's resources and the demands of work [21].

Identification of High Risk Work

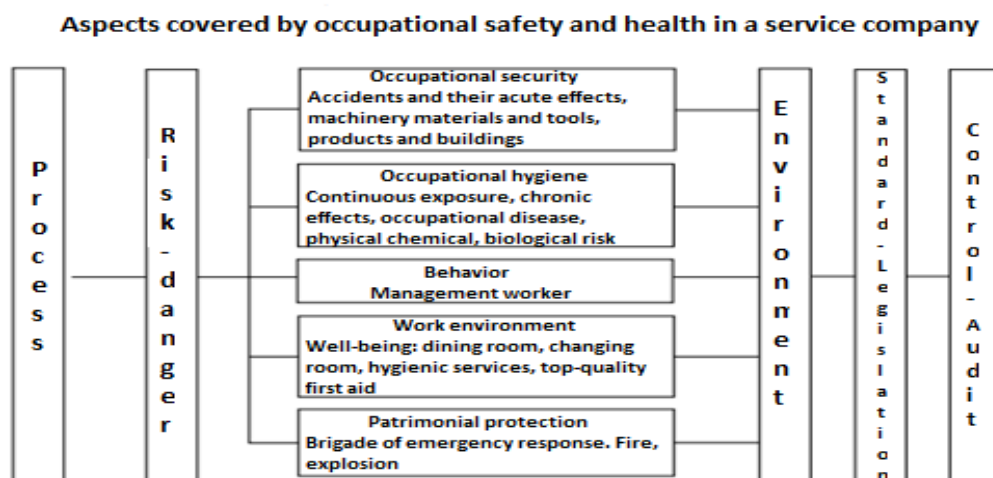
The workers are exposed to risks in their work activity, in order to know what preventive and control measures must be handled, it is necessary to know the nature of the activity and the level of risk it has, [22] states in its article that Occupational Risk Manager (ARL), oblige organizations to provide guarantees of protection to their employees. In addition, to analyze the regulation and the assurance of the General System of Professional Risks, in Colombia 1994 - 2004 [23], that at present is supported in the SGSST.

The permanent improvement of working conditions, the reduction of accidents and the promotion of the integration of preventive management has always been one of the objectives of the organization, for which there are management systems for the prevention of occupational hazards such as Basic tool of action, that ensure that employees, whatever their position in the scale of controls, can and should participate in key processes such as: Hazard identification and risk assessment, incident investigation, control processes, Inspection plans, management control meetings, development and review processes such as planning and goal setting [9].

Illnesses caused by poor working conditions are one of the worst pandemics that plague humanity. Every year in Spain, 2,350,000 people die, 6,500 every day, due to illness and accidents at work. Some 340,000 deaths are due to an occupational accident, the rest - two million deaths a thousand - are due to work-related illness. The accidents are visible, they leave every day in the news and in the press, provoking a justified union and social reaction; Even though they are much more numerous, deaths from occupational disease are invisible. Although these deaths carry with them years of illness and pain before death and enormous costs to health systems, they are hardly prevented because they remain hidden [24].

Unintended events that affect the health of workers can occur in any workplace and their effects can be so varied, from a simple annoyance to those who suffer, decrease in their quality of life, in some cases even leading to death of workers. Therefore, the integration of safety and health at work as a necessary part of the general management system of the company becomes an urgent need. [25], Table 1 shows the aspects that cover occupational safety and health.

Table 1



Source: Herrera Herrera, Percy Rafael., 2009



The great challenge for the countries is to create a universal and compulsory social security system that allows homogeneous benefits regardless of whether the worker provides a service in a structured or self-employed scheme [26]. In spite of the above expressed the problematic of the security in the spaces of work constitutes a complex subject to approach and to analyze. Fundamentally, because in the work spaces the conception about the security is composed of naturalized, crystallized senses and above all the definition of the security in the work, is in general, a monopolistic attribution of the companies. [27] For example, the Agency European Union for Safety and Health at Work, a constant focus on the ongoing changes in work environments has been one of the priorities in its work program. For three years, it has been working with the European Risk Observatory. Its objective is to identify new and emerging risks. To this end, the Observatory aims to provide an overview of health and safety in Europe and to discover trends at work and the factors that influence them, as well as anticipate changes in the world of work and its possible consequences on safety and health In order to make the most of available resources and to be able to intervene as swiftly and efficiently as possible [28].

Different disciplines have formulated theoretical and methodological models centered on an economic rationality, trying to explain the best ways to make organizations more efficient and productive, however, there are alternative perspectives that seek to understand organizations not only as spaces for economic production but as Spaces of creation of cultures and of subjectivities, that is to say, they seek to understand them in their role of generators of social realities [29]. In order to analyze the effects of the management of high-risk financial instruments on companies, particularly those in the public sector, a review in the private sector is also important [30].

Construction is one of the main sources of employment in any country; In a work involved workers of a great diversity of trades and each one of them has associated its own occupational risks, the exposure to the risk in the construction works are usually intermittent and of short duration, reason why is considered that the best form of Controlling the risk is by reducing the concentration of exposure [31], following the legal parameters that regulate it. The construction sector is one of the most dangerous. Death and injury rates can be described as unacceptably high [32].

For the identification of high-risk jobs, it is essential to have a working methodology that takes into account the human-machine relationship, the dimensional relationships that incorporate the dynamic anthropometric measures of workers [33], and evaluate work processes, postures, Movements, times of permanence and frequency of changes, forces and hours of work / rest [34]; Such as depression, anxiety, sleep problems, stress, and thus little motivation, nonconformity and job instability [35].

In the evidence provided by the scientific literature, it has been found that psychosocial aspects can be grouped around six axes, these are: work intensity and working time, emotional requirements, autonomy, poor quality of relationships Social conflicts in the workplace, conflict of values and insecurity of the work situation [36].

It is striking the effects that the adverse conditions of the work have as much in the cardiovascular system as in the musculo-skeletal, endocrine, gastrointestinal, as well as its incidence in the type II diabetes, in the sleep disorders, the disruptions in the relation work -families and in disorders such as depression, anxiety and minor psychiatric disorders [37] hence the importance of the implementation of preventive measures based on the risk to which the worker is exposed.

In order to diagnose a professional disease, it is necessary to have specific knowledge and experience. That is why it is so important to strengthen the role of specialists in occupational medicine, who, despite their small number, are a major asset in the management of this contingency. [38]

As for example to identify non-specific occupational lumbar pain (DLIO), it is necessary to know the risk factors that could cause this type of pathology since it is a health condition that generates a high absenteeism and disability. Because of its multifactorial origin, it is difficult to determine accurate diagnoses and prognoses. The clinical prediction of DLIO is identified as a series of models integrating a multivariate analysis to determine early diagnosis, course, and occupational impact of this health condition [39].



The protection of particularly sensitive workers (TES) is based on adapting jobs or working conditions to the worker's person (not the other way around), to protect their health, to facilitate their integration in the workplace safely, and to ensure that these people do not lose their job in those cases in which it is not possible to adapt the work satisfactorily to the person. [40] Therefore there must be a relationship between working conditions and health status [41].

Controls in High Risk Work

The approval of law 100 of 1993 by the Congress of the Republic of Colombia, which defined the ordering of the Social Security System [42], which contributed to the welfare of the country's working population. The State seeks to comply with the regulations contained in the different laws that make up the "labor and social security legislation"; Contemplating in some cases expressly, and in others, implicitly, the sanctions that the Labor and Social Security Administration also affirm that the system of sanctions must be reviewed, in order to require workers to comply And compliance with these standards [43].

The reform of the system of social security in health raised by the bill 052 of 2005 in process in the Congress of the Republic, before some of the main problems detected in the operation of the system of public health, rectory and coverings 44. In relation to the amount of benefits, two different formulas for calculating pensions apply, one where incapacity or death is the result of a common accident or illness, and another, when it is the result of an occupational accident or illness, being the second most beneficial [45].

Workers, especially newly-incorporated workers, need instructions on the safety and health of their work and be closely monitored to ensure that they are fully aware of the nature of the risks and how to avoid them. In addition, workers and their representatives should have a reasonable number of hours of paid work to receive their OSH training [46]. The conditions of work in the company are the organizational, infrastructural, welfare and social aspects that affect the maintenance and development of the potential of the worker, and in the preservation and promotion of their integral welfare. [47] Also by eliminating or controlling the risks in the work environment [48], facilitating their integration into the work environment in a safe way [49].

In some of the most significant articles of the Prevention Act 31/1995 regarding the prevention and protection of workers' health. Reference is made to the fact that the employer must guarantee the safety and health of workers, [50] and the basic regulations of Decree Law 1295 of 1994, with the Constitutional Court judgment C-452 of 2002 and the norms of Law 776 Which explain the legal content of the main regulatory decrees of the professional risk system [51].

Enhance the participation of workers and their representatives by increasing a better integration of prevention at all hierarchical levels of the company [52]. Since the end of the 1970s, the Labor and Health Conditions Surveys (ECTS) have been consolidated as an effective tool for surveying working conditions, employment and their impact on the health of workers. [53]. The SGSST is of great importance for the business sector, because in the current times in the international business sphere it is a parameter to determine if a company is socially responsible. [54] The law also indicates the need to identify, within organizational contexts, those responsible for security [55].

The development of policies to control zoonotic diseases is a major challenge because of the complex distribution dynamics of these diseases [56]. That is why the medicine of the work, branch of the human medicine, is dedicated to protect the health threatened by the work. [57], it is important to follow a model of intervention aimed at facilitating the incorporation of self-control skills of their own behavior to contribute to the development of self-protection behaviors against occupational hazards in their workplace. [58]. The legal regime of employee health surveillance seeks to safeguard the physical and moral integrity of the worker [59], identification, assessment and control of the risk factors present in the areas and jobs that affect or can Affect the safety or health of workers, help to obtain a thorough analysis for the benefit of the working population [60].



Law 1562 of 2012 stipulates that non-compliance with health promotion and accident and illness prevention programs as defined in the table established by the Ministry of Health and Social Protection and the Ministry of Labor will result in fines of up to 500 minimum wages Current legal months [61].

From the controls, favorable working environments are generated which facilitate the performance of work with greater satisfaction and in better conditions that can influence the quality of the results of an organization [62].

Conclusions

The companies have undergone significant changes, in order to meet the demands and needs of the global market for the production of goods and services, from this situation Colombia has not been foreign, since its Occupational Safety and Health System has State framed by a constant change of norms, focused on improving the quality of life of workers. However, it has also been possible to document setbacks and gaps that present themselves as challenges for professionals in this field.

Safety at work is an inalienable social right for the exercise of work, which seeks to guarantee the integral well-being of the employee and as an effect, positively impact the productivity of organizations, so it is necessary to create a culture of security, based not only on To form but to detect and anticipate new risks and the constant changes that arise day by day with new technologies, biological and environmental risks, among other factors, even external to the labor fields.

Risks need to be identified and the way to address risks can be through observation to workers and elimination of unnecessary risk practices, as it bases its effectiveness not on the reduction of accidents but on the Safe behaviors, this contributes to a healthy work environment.

Safety in high-risk tasks is possible provided that the identification of the risks and the relevant controls of the same are given; Although it is a topic that must be handled by all companies, there are few articles that talk particularly about safety in high risk tasks, thematic that contributes to continuous improvement and sustainable development.

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