

## Occupational safety and health conditions and informal work

Condiciones de seguridad y salud en el trabajo y trabajo informal

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### ABSTRACT

Informal work in Colombia has generated great interest due to the presence of occupational hazards in the population. The objective of this research is to describe the conditions of Safety and Health at Work in the Informal Workers of the Villa de San Diego de Ubaté Market Square. This is quantitative research, descriptive in scope. A data collection instrument was designed to be applied to 183 workplaces in the marketplace. Descriptive statistics and measures of central tendency and dispersion were applied. The results show that only 25% contribute to the health system; however, of this 25%, 20% contribute to health, 3% to pension and 2% to ARL, additionally, the knowledge related to hazards and risks identified in their workplaces is not clear, generating confusion in the terms. Similarly, the term "risks" is unknown, therefore, the identification of unsafe acts and conditions is not clear to workers. For the development of this article, review works on working conditions in marketplaces in Colombia and informal work were selected, to analyze and make known, which are the most important characteristics within this population and determine how to work to improve them, as well as to implement strategies to improve their working conditions.

**Keywords:** Safety, health, work, informal, risks.

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## RESUMEN

El trabajo informal en Colombia ha generado gran interés gracias a la presencia de riesgos labores presentes en la población. El objetivo de la presente investigación es describir las condiciones de Seguridad y Salud en el Trabajo en los Trabajadores Informales de la plaza de Mercado de Villa de San Diego de Ubaté. La presente investigación es cuantitativa, de alcance descriptivo. Se diseñó un instrumento de recolección de datos para aplicarse a 183 puestos de trabajo de la plaza de mercado. Se aplica la estadística descriptiva y medidas de tendencia central y de dispersión. Los resultados permiten observar que sólo un 25% cotizan al sistema de salud, sin embargo, de este 25%, un 20% cotizan salud, un 3% a pensión y un 2% a ARL, adicionalmente, los conocimientos relacionados con peligros y riesgos identificados en sus lugares de trabajo no están claros, generándose confusión en los términos. De igual manera se desconoce el término de riesgos, por lo tanto, la identificación de actos y condiciones inseguras no es claro para los trabajadores. Para el desarrollo de este artículo se seleccionaron trabajos de revisión sobre las condiciones laborales dentro de las plazas de mercado en Colombia y el trabajo informal, con el fin de analizar y dar a conocer, cuales son las características más importantes dentro de esta población y determinar la manera en la que se debe trabajar para mejorarlas, así como implementar estrategias que permitan mejorar sus condiciones laborales.

**Palabras clave:** Seguridad, salud, trabajo, informal, riesgos.

## INTRODUCTION

Informality has been a topic of great interest due to its impact on the safety and health of workers. One of the main characteristics observed is the lack of adequate organizational systems; health and occupational risk protection systems are deficient and, in some cases, nonexistent.

The conditions present in this population allow observing a latent risk related to unsafe conditions and acts that generate accidents and occupational diseases as a result of exposure to risk factors inherent to the work activity or the environment in which the worker has been forced to work; the probability of accident occurrence is high. The Municipality of Villa de San Diego Ubaté is part of the municipalities that encompass the Central Sabana of Cundinamarca Colombia, municipalities that have awakened great interest thanks to the different economic sectors that are found and the variety of population that works there; Central Sabana presents a great development of the diverse markets, contributing to the Departmental GDP; however, the absence of strategies that potentiate the good economic development has limited its potential development.

The "Competitiveness Plan of the Province of Ubaté", according to the Chamber of Commerce of Bogotá (2013), shows that one of the weaknesses in the municipality lies in informality; mining, tourism and the agro-industrial sector are the main activities carried out by the population; therefore, it generates a significant impact on social, health, environmental and evidently occupational safety. According to the Bulletin of the

Economic Development Observatory (2014), informality in the municipalities of central savannah revolves around 43.5%, a population that does not make contributions to the health system, pensions or ARL. (Alcaldía Mayor de Bogotá, 2015, p.2).

The safety and health conditions at work of the informal population become a challenge, as defined by the Agency for Occupational Safety and Health Research (2014), concentrating the informal population in high impact activities such as agriculture, livestock, mining, construction, among others. Hence the importance of answering the question: What are the safety and health conditions at work of informal workers in the Villa de San Diego de Ubaté marketplace in Ubaté - Cundinamarca? The objective of this research is to describe the safety and health conditions at work of informal workers in the Villa de San Diego de Ubaté marketplace.

The marketplaces are framed in activities of sale of basic household necessities such as fruits and vegetables, fish, clothing, footwear and household utensils; Informality is taken into account as the lack of a general social security system, so this type of working population does not have formal employment, which forces them to perform poorly paid activities, with long working hours, and exposed to different risk factors that affect their safety and health, related to possible accidents and/or occupational diseases that may occur in companies with informal work.

## MATERIALS AND METHODS

Type of study: The present research is a quantitative study of descriptive scope. Population: Marketplace workers. Sample population: The established sample is of 183 jobs in the Ubaté marketplace. Design and instruments for the collection of information: An instrument was designed with the following variables: sociodemographic, healthy habits, health conditions, working conditions, and safety conditions at work. The instrument was applied by approaching the workers in their informal jobs, in order to deepen their answers and make a humanized approach with the population, so that they could understand the importance they have as informal workers in the market place, being this a space of tradition and culture of the municipality. Emphasizing the importance of honesty in the answers given in order to know the reality of them in their jobs.

## RESULTS

A relevant aspect observed is related to affiliation to the health system, where only 25% contribute to the health system; however, of this 25%, 20% contribute to health, 3% to pension and 2% to ARL.

**Table I.** Distribution according to health affiliation

Health Affiliation	n	%
Contributory	37	20%
Subsidized	146	80%
None	0	0%

<b>NR</b>	0%
<b>Total</b>	183 100%

Source: Authorship

The time spent in marketplace activities is related to the length of time they have been working in this job. The marketplaces are traditional places that have been inherited from generation to generation, therefore, 65% have worked in the marketplaces for more than 10 years, and the time they dedicate to this activity ranges from 7 to 10 hours, contemplating in addition to the 8 working hours, 2 extra hours for a total of 10 hours.

**Table 2.** *Distribution according to time of dedication to the marketplace*

<b>Working Time in the Activity</b>	<b>n</b>	<b>%</b>
<b>Less than 1 year</b>	7	4%
<b>From 1 to 2 years</b>	14	8%
<b>3 to 5 years old</b>	22	12%
<b>From 6 to 10 years old</b>	21	11%
<b>More than 10 years</b>	119	65%
<b>NR</b>		0%
<b>Total</b>	183	100%

Likewise, it is important to keep in mind that the time of dedication that continues is from 1 to 5 years, considerable time dedicated to the activities in the marketplace.

**Table 3.** *Distribution according to presented symptomatology*

<b>Symptoms in the last month</b>	<b>n</b>	<b>%</b>
<b>Headache</b>	87	48%
<b>Neck Pain</b>	41	22%
<b>Arm Pain</b>	52	28%
<b>Hand Pain</b>	57	31%
<b>Numbness in Hands</b>	27	15%
<b>Back Pain</b>	56	31%
<b>Leg Pain</b>	42	23%
<b>Leg numbness</b>	25	14%
<b>Frequent Cough</b>	9	5%
<b>Frequent influenza</b>	15	8%
<b>Allergies</b>	10	5%
<b>Stomach Pain</b>	5	3%
<b>Feelings of Sadness</b>	24	13%

Source: Authors

It can be observed that the presence of symptomatology is quite high, people present an average of 3 to 4 symptoms associated with their work activities, which is an indicator to keep in mind in their health status, and a potential risk factor that can trigger accidents and possible occupational diseases.

Another important aspect to keep in mind is the safety and health conditions at work in the marketplace workers, where 53% state that the activities always require physical effort and in addition to this, they require forced postures, 40% state that the activities are repetitive; 65% of the population state that they are always exposed to high temperatures due to cold and heat; 40% state that they are sometimes exposed to noise, and 40% state that they are sometimes perceived as being exposed to noise.

## **DISCUSSION**

One of the epicenters of informal work are the marketplaces, places of human and cultural recreation (Coronado, 2010), where not only products and services are exchanged, but also an endless number of tasks are developed that support thousands of families, likewise, the existence of inequalities and dangers within this workplace are latent.

Studies such as the one conducted by González, et al. (2018), show that the working conditions of workers are extreme and poorly paid, it is also possible to identify risks of continuous exposure, aggravating the fact that they are not perceived by the affected population, which comes to consider it up to 59% safe, Cacua, et al. (2017), in addition most of the people who work in this space are older adults with low academic levels and inability to support themselves with other work, Girardot et al. (2018) which increases the likelihood of occupational accidents. Similar results were found in the present research, emphasizing chemical, biological, physical and ergonomic risks, due to the postures and weight that workers sometimes have to bear. A relevant aspect to keep in mind in this study is that 12% of the population are adults over 65 years of age, 31% are between 51 and 64 years of age, considering that it is an inherited work activity and is transmitted from generation to generation.

An important aspect to keep in mind, is related to the effects on occupational health, Cruz, and Tique (2018) suggest that part of the responsibility for the increase in the risks to which workers are exposed, are propitiated by themselves, since they have to do with the poor disposal of solid waste and the increase of diseases due to these elements, all this, a result of the activity developed in the market place; that is, an activity in which the workers themselves have opportunities, but due to lack of knowledge about it, they perform the entrusted work in a dangerous way.

Taking into account that occupational risk factors directly affect the health and productivity of workers, these need to be evaluated in order to obtain better conditions that significantly mitigate the repercussions that they can generate in people Pinto and Rodriguez (2017). Hence the importance of evaluating the knowledge or perspective that they handle on the conditions that make their workplace a safe one or on the contrary one with health risk factors; in this case, it is evident that people in the

marketplace do not know in 80% the meaning of an unsafe act or condition, an aspect that generates a greater risk implication to the labor processes that are performed there. Barragán and Rojas (2017), provide an important point of view in their project: The formulation of an environmental management plan for the marketplace "plaza naranja" of the municipality of Funza - Cundinamarca.

It is very important to keep in mind that the absence of knowledge about environmental policies and care is evident in the marketplace under study, since it increases occupational and health risks, therefore, it is necessary to propose an Environmental Management Plan (EMP) to reduce these hazards, which can contribute to their management.

This issue stands out particularly in the results of the studies obtained, since the main risk factors are related to the handling of biological waste, occasional exposure to noise, overcrowded workplaces, improper lifting of objects, prolonged poor body posture, occasional exposure to fumes, vapors and suspended particulate matter, and the proliferation of diseases among rodents and insects, These aspects generate negative impacts for the workers, and with proper training and the implementation of protocols and occupational health and safety management systems, the quality of life of those involved would improve considerably. It should be noted that exposure to fumes, vapors and particulate matter are not present in the marketplace under study.

There are several works that study this problem and approach it from different angles, which allows for a general evaluation of the problem, considering from the housing conditions to the perspective of the individuals observed. However, it has been a complex task since there are several factors that influence the proliferation of unsafe conditions in informal work environments.

According to data from the National Administrative Department of Statistics (DANE) 2019, in the quarter from June to August 2019, emphasizes that 47% corresponds to informality, it is noteworthy that it is essential to implement actions to prevent possible injuries and promote healthy living habits in the study population. This reality allows generating actions in the different municipalities of Cundinamarca, since the presence of informal workers is present not only in marketplaces, but also in artisans, vendors who have their informal income.

The concept of occupational safety and health refers to different practices implemented to reduce occupational risks and diseases that may occur; in this sense, such interventions allow acting towards the protection and promotion of workers' health; legislation in Colombia establishes mandatory compliance with Law 1562 of 2012 issued by the Congress of the Republic of Colombia, by which the Occupational Risks System is modified and other provisions on Occupational Health are issued. where the guidelines related to the general system of occupational risks are indicated and from this law, through the decree 1072 of 2015 issued by the presidency of the Republic of Colombia by means of which the Sole Regulatory Decree of the Labor Sector is issued. its obligatory nature for all formal and informal companies that allow having a management system. Additionally and with the aim of having an integrated management system, the

international standards Chilean Official Standard (NCh) 18001.0f2004 and International Organization for Standardization (ISO) 45001:2018 are implemented; however, in practice there are many economic sectors that evade the application of these standards, evidencing the informality as one of the most affected by this situation.

Informality, being a labor condition that intensifies in more flexible organizational structures Gutiérrez (2019) and Fajardo (2015), changes in the labor market, the current economic situation and the innate need for subsistence, promotes the development of alternatives other than formal employment and the guarantees it handles, but can also affect employment conditions despite the fact that sometimes the labor market can be considered to apparently favor the low-skilled population with a lower level of unemployment, (UDS, 2015).

Informal jobs often imply poor working conditions, especially in terms of social security, since with low incomes, the possibility of accessing health insurance and paying pension contributions become privileges that must be dispensed with, a fact that directly affects the integral wellbeing of these people and their families, This situation is evident in the population under study, where many are beneficiaries but a very relevant aspect is the affiliation to the ARL, without coverage in 97% of the sample.

This law defines Comprehensive Social Security as the set of institutions, rules and procedures available to the individual and the community to enjoy a quality of life, through the progressive fulfillment of plans and programs developed by the State and society to provide comprehensive coverage of contingencies, especially those involving health and economic capacity, in order to achieve individual welfare and community integration. Thus, there is a significant gap in the labor market, where informal workers not only have fewer guarantees, but also lower incomes, in addition to the above, their quality of life is vulnerable and is evident in the general population.

Another relevant aspect observed in the study are both personal and working conditions such as low levels of education and work experience whereby the lack of opportunities generates workers to accept long working hours, high levels of insecurity and physical vulnerability and uncertain income, (Fasecolda, 2014, p. 34).

Upon identifying this problem, the Ministry of Labor and the Ministry of Health and Social Protection propose different strategies to ensure that the different informal workers are affiliated to the general occupational risk system. For this reason, the Colombian Ministry of Health and Social Protection, through the Ten-Year Public Health Plan (PDSP) 2012-2021, seeks to guarantee optimal health conditions for the entire population through equity in health, regardless of their economic, social or cultural context, in order to generate appropriate strategies for the population.

In addition to the above, the Colombian national government through the Ministry of Labor created Resolution 0312 of 2019. By means of which the Minimum Standards of the Occupational Safety and Health Management System SG -SST are defined. Being the minimum standards the set of rules, requirements and procedures of mandatory compliance of employers and contractors, through which the basic conditions of technical-administrative capacity and patrimonial and financial sufficiency indispensable

for the operation, exercise and development of activities in the Occupational Safety and Health Management System are established, verified and controlled. Resolution 0312 defines certain minimum standards depending on the number of workers and the risk level, whether I, II, III, IV or V; however, the reality is that compliance with the minimum standards according to the number of workers and risk level, regardless of the economic activity, is not reflected in the informal working population under study. This undoubtedly generates social affection and therefore a deterioration in the quality of life by affecting the safety and health at work of this population and demonstrates that despite the extensive existing legislation, it does not guarantee the inclusion of the informal working population.

In fact, although there are current applicable regulations, it is interesting to note that they are unknown to the workers in this study, although they see the importance of having policies related to improving their working conditions, they are unaware of the fact that the application of the regulations is mandatory, where evidently, it is related to increased costs that they sometimes consider would be assumed by them; however, this situation is not clear to the workers in the study in question.

## **CONCLUSIONS**

It is interesting to note that a large part of the population working in the marketplaces have always belonged to the informal sector and because of this they do not have guarantees for the development of their work, mainly in terms of health and social protection, in addition, their low educational level leads to inequality and increases the high risk conditions in their workplaces, risks related to biological, psychosocial, ergonomic and physical level, as well as the environmental related to the disposal of organic and inorganic waste. The existence of efforts by different governmental entities to achieve the formalization of employment has not yet been achieved and informality continues to prevail in the working population, mainly observed in marketplace workers as evidenced in this article. It is evident that the application of practical and methodological tools for the initial risk assessment in marketplaces is necessary to identify the unsafe conditions and acts that increase the probability of occurrence of accidents and occupational diseases.

It is evident to implement training programs related to risk identification and intervention measures to prevent accidents and permanent physical limitations that worsen their living conditions.

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