

## WORKPLACE ACCIDENTS OVERVIEW IN THE LAST 10 YEARS IN BRAZIL

### Felipe Felix Ferreira

Instituto Federal de Educação, Ciência e Tecnologia da Paraíba (IFPB)

E-mail: [felipe.felix@academico.ifpb.edu.br](mailto:felipe.felix@academico.ifpb.edu.br)

### Aleff de Moura Nascimento

Instituto Federal de Educação, Ciência e Tecnologia de Sergipe (IFS)

<http://lattes.cnpq.br/7130061883840670>

E-mail: [aleff.moura@academico.ifpb.edu.br](mailto:aleff.moura@academico.ifpb.edu.br)

### Luma Mirely de Souza Brandão

Instituto Federal de Educação, Ciência e Tecnologia de Sergipe (IFS).

<http://lattes.cnpq.br/7251598207534325>

<https://orcid.org/0000-0002-8698-4017>

E-mail: [luma.brandao@academico.ifs.edu.br](mailto:luma.brandao@academico.ifs.edu.br)

### Milson dos Santos Barbosa

Instituto Federal de Educação, Ciência e Tecnologia da Paraíba (IFPB).

<http://lattes.cnpq.br/9231820567606047>

<https://orcid.org/0000-0001-5412-7865>

E-mail: [milson.barbosa@ifpb.edu.br](mailto:milson.barbosa@ifpb.edu.br)

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**ABSTRACT:** The damages caused by workplace accidents are immeasurable, especially for the workers. These accidents have been a major concern over time, especially in Brazil, even with advances in legislation. In this context, this study aims to understand the numbers, causes, and consequences of workplace accidents in Brazil in the last decade (2012 to 2022). To achieve this, a detailed survey was conducted on the SmartLab platform to collect important information about workplace accidents over the last 10 years (2012-2022). The survey revealed a high number of workplace accidents in Brazilian territory, causing significant harm to workers, companies, the government, and society. This includes physical and mental injuries to workers, reduced productivity, as well as financial and reputational losses for companies. Therefore, this survey highlighted the urgency of adopting preventive and protective measures in workplaces in Brazil, aiming to ensure, especially, the physical and mental well-being of workers.

**KEYWORDS:** work safety. Work accidents. Work environment.

## INTRODUCTION

Work accidents and work-related illnesses have been responsible for millions of deaths annually worldwide. In the year 2022, 612.9 thousand accidents and 2,538 fatalities were recorded among formally employed workers, resulting in the highest mortality rate in the formal labor market in the last ten years: an average of 7 notifications for every 100

thousand employment relationships (ANIMASEG, 2023).

Work accidents are unwanted occurrences that manifest during the performance of work activities or during the route between home and the workplace, resulting in physical, psychological injuries, or illnesses. In this perspective, according to Brazil (1976, art. 2), work accident is one that occurs in the course of work in the service of the company, causing bodily injury or functional disturbance that results in death, or loss, or permanent or temporary reduction of the capacity for work.

In the last 10 years, in Brazil, accidents and work-related illnesses are still frequent, causing serious harm and absenteeism among workers. Absences due to work-related accidents and illnesses result in significant losses for both workers and companies. This is reflected primarily in financial losses, emotional and physical impacts on employees, decreased productivity, and damage to corporate image (SMARTLAB, 2023).

A study carried out by Machado et al. (2023) emphasized the urgency of taking measures to promote the health and safety of workers within companies. The research highlighted the scarcity of programs focused on the well-being of employees and underscored the critical need to implement effective policies in organizations to ensure the quality of life for these professionals.

It is essential to adopt preventive and corrective measures in workplaces to prevent these environments from becoming potential sources of diseases and even fatalities for workers. This aims, above all, to preserve the physical and mental integrity of these professionals. In this context, implementing appropriate and effective projects and actions in the workplace has proven to be a promising alternative to promote and protect the health and safety of professionals. This includes preventive measures regarding occupational risks, support for workers, training programs, as well as educational and awareness initiatives (SIMAN, 2023). In light of the above, the purpose of this study is to investigate the records of work accidents that occurred in the last decade (2012 to 2022) in Brazil. This investigation aims primarily to understand the numbers, causes, and consequences of work-related accidents and illnesses.

## METHODOLOGY

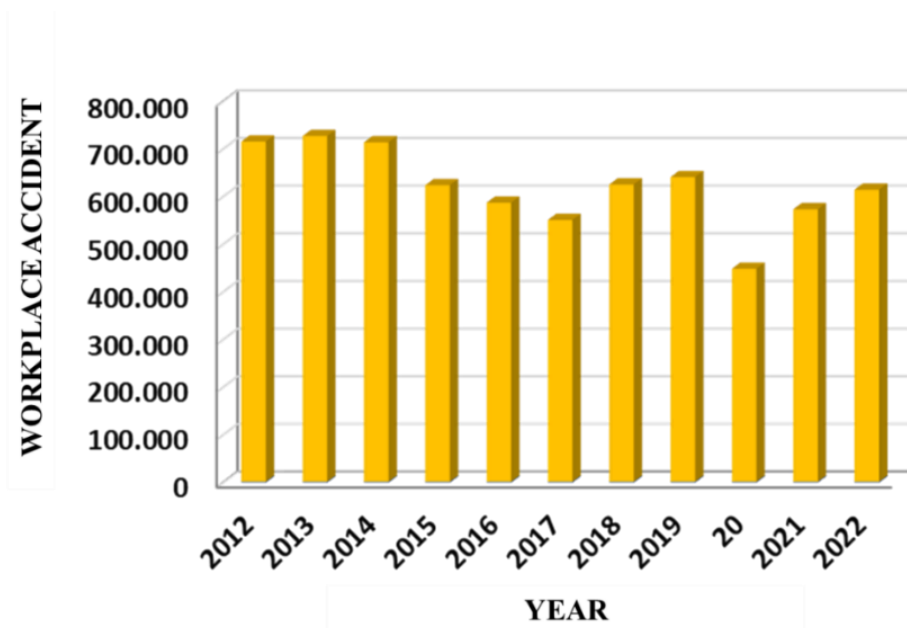
This is a mapping of workplace accidents in Brazil. Searches were conducted on the SmartLab Platform, which was developed in collaboration with the Public Ministry of Labor (MPT) and the International Labour Organization in Brazil. Data collection considered information on accidents in Brazil from 2012 to 2022, covering the past 10 years. After data collection, tabulations and analyses of the data were carried out.

## RESULTS AND DISCUSSION

Initially, it was observed that between 2012 and 2022 over 6 million workplace accidents were reported in Brazil, resulting in the death of more than 25,000 professionals. In light of this, it is estimated that more than 1 death occurs every 3 hours and 47 minutes in Brazilian territory. Additionally, over 461 million workdays were lost due to social security-related absenteeism among these workers, and more than R\$160 million were spent on these accidents during this period.

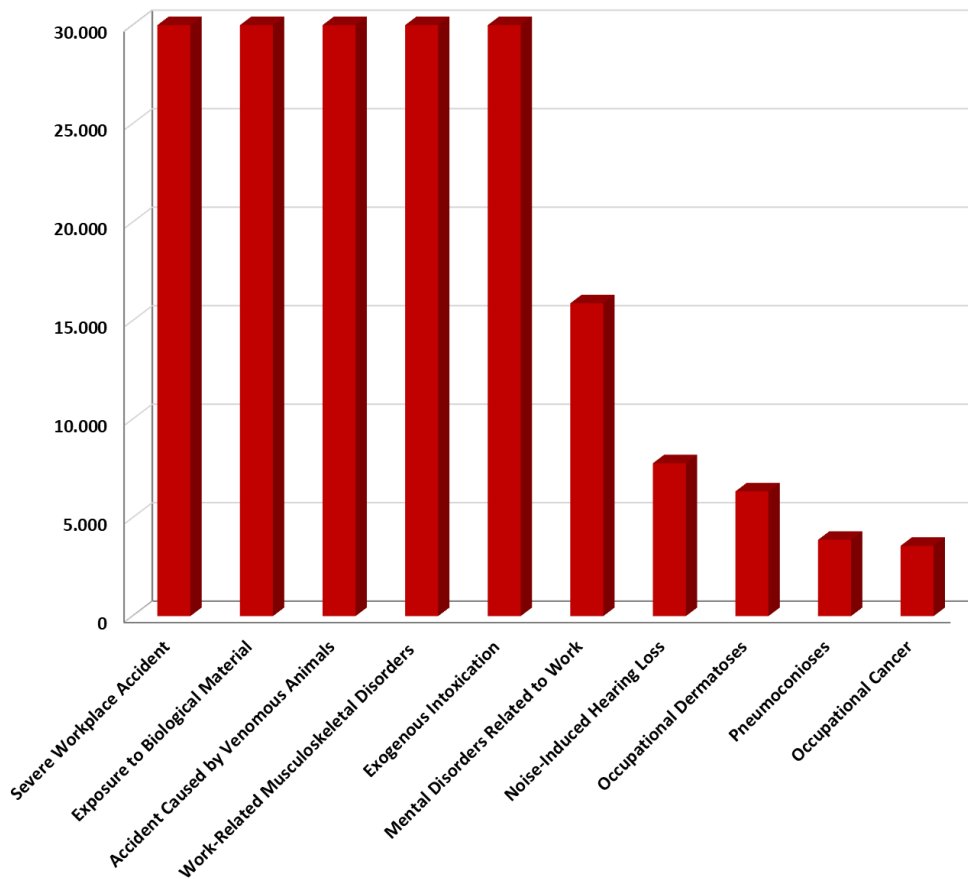
In this perspective, during this period, the highest number of workplace accidents in Brazil was recorded in the year 2013, with the equivalent of 725,664 workplace accidents, as shown in Figure 1. Following that, the year 2012 had 713,984 registered accidents, and 2014 totaled 712,302. On the other hand, a significant reduction in the number of accidents was noted in 2020, with 446,881 records, possibly due to the COVID-19 pandemic affecting working conditions in Brazil. It is important to highlight that, due to this scenario, several professionals had to enter quarantine, which consequently significantly reduced the risks of workplace accidents, as these workers were not working in their usual work environments. However, an increase in the numbers of workplace accidents was observed from 2021, possibly due to the return of these professionals to their work environments. Between 2021 and 2022, 571,786 accidents were recorded. It is important to note that there is an estimated underreporting of these workplace accidents, indicating that the actual number of these accidents is even higher.

Figure 1: Workplace accidents in Brazil between the years 2012 and 2022 with regular employment relationships.



Regarding notifications related to work in the Notification of Injuries Information System (SINAN), considering diseases and conditions monitored with an emphasis by the Worker's Health Surveillance of the Ministry of Health, it was found that there was an increase over time, with 2022 having the highest recurrence (392,575 records). Additionally, a higher frequency of severe workplace accidents (55.8%) was observed, as shown in Figure 2. It is also noteworthy the accidents involving venomous animals, exposure to biological materials, Work-Related Musculoskeletal Disorders (LER/DORT), mental disorders related to work, exogenous intoxication, Noise-Induced Hearing Loss (NIHL), occupational dermatoses, work-related cancer, and pneumoconioses.

Figure 2: Notifications related to work in the Notification of Injuries Information System (SINAN) in Brazil between the years 2012 and 2022 with regular employment relationships.



Regarding the annual incidence of work-related notifications per 10 thousand workers, there was an increase in incidence over time, with the highest frequency in 2022, corresponding to 40 cases per 10 thousand workers. These data from the last 10 years are extremely concerning, considering the intensification of Brazilian labor legislation and Regulatory Norms over the years. These alarming numbers indicate that, despite advancements in Brazilian legislation, workplace safety within companies is still not a priority, consequently impacting the health and well-being of workers. Therefore, it is essential to promote greater awareness and enforcement of legislation by companies, along with increased regulatory oversight.

Regarding the Brazilian regions, a higher concentration of workplace accident records was observed for the population with regular employment relationships in the

Southern and Southeastern regions. On the other hand, the North region showed the lowest records. In 2022, for instance, São Paulo was the state with the highest quantity, equivalent to 204,157 (34.6%), while Amapá had the lowest with 756 accident records.

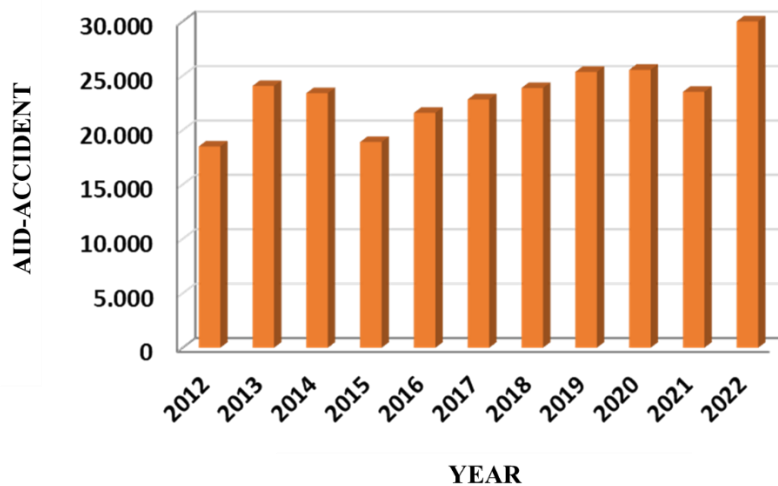
Regarding the injuries recorded in the Notifications of Occupational Accidents (CAT) due to these workplace accidents, it was found that fractures were the most common (61%), totaling almost 2 million cases per year. Traumas ranked second, accounting for approximately 13% of cases, corresponding to 150,000 cases per year. Following that, injuries were notable (7%), representing about 55,000 annual cases, amputations (4%) with around 13,724 cases per year, and burns, sequelae, and other injuries (4%).

Regarding the body parts most affected, fingers (24%), feet (8%), hands (7%), and knees (5%) stood out. As for the causative agents, machines and equipment were the most common, followed by chemical agents (14%), falls on the same level (13%), transportation vehicles (12%), and biological agents (12%).

Regarding the frequency of absences covered by the Social Security Institute (INSS) due to workplace accidents, there has been a general increase in the number of granted Accident-related Social Security Benefits over the past 10 years, totaling more than 2 million. The data for grants of Disability Retirement due to workplace accidents amounted to 103,304. As for the pension due to death from workplace accidents, there has been a reduction over the years, totaling nearly 5,000 in the last 10 years. On the other hand, there has been an increase in the number of accident-related disability benefits, as shown in Figure 2, with a higher quantity in 2022, equivalent to 29,437. In recent years, the number of grants for this benefit during this period has reached approximately 236,879.



Figure 2: Grants of social security benefits, specifically accident-related disability benefits, in Brazil between the years 2012 and 2022.



Given the above, it is evident the serious damages that the lack of awareness, negligence, implementation of preventive actions focused on workplace safety, and inspection can cause, especially to the worker. Therefore, there is an urgent need for increased inspection and awareness regarding potential risks and dangers, implementation of actions focused on the safety and health of the worker, in order to prevent workplace accidents in Brazil, and consequently, ensure a safe, healthy, and productive work environment.

## CONCLUSIONS

This mapping presented the scenario of workplace accidents in Brazil over the last 10 years (2012 to 2022). This survey allowed for the determination of the number of occupational accidents that occurred during this period, the diseases and conditions monitored, the Brazilian regions with the highest and lowest records, the most common injuries, the body parts most affected, and the frequency of absences covered by the INSS.

Through this mapping, it was observed that the number of workplace accidents in Brazil is alarming, considering that they remain high despite the progress in Brazilian legislation over the years. These data are concerning as they result in

significant impacts on workers, organizations, and society.

Regarding diseases and injuries, a higher recurrence of severe workplace accidents was observed, with over 55% of the records. Concerning injuries resulting from workplace accidents, fractures stood out, accounting for more than 60% of the records. In terms of body parts, there was a higher frequency of incidents affecting fingers, equivalent to 24%. Additionally, machines and equipment were identified as the primary causative agents of accidents.

It was observed that the number of grants for social security and accident-related benefits has increased in the last five years, with a particular emphasis on accident-related disability benefits and the granting of disability retirement due to workplace accidents. On the other hand, there was a reduction in the number of death pensions due to workplace accidents.

Therefore, this mapping has revealed a serious concern regarding the high rate of workplace accidents in Brazil, highlighting the need and urgency to adopt effective preventive and protective measures to ensure a safe and healthy work environment.

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