



## Occupational Health Risks in Informal Sector Workers

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### Abstract

The informal sector workers make up a huge percentage of the world workforce, especially in the developing economies, but they are not considered well organized occupational health and safety systems. This research paper is an analysis of the character, magnitude, and factors of occupational health hazards of informal sector workers. It discusses how the inability to regulate the working conditions, the absence of social protection, and inadequate access to healthcare add to the increased vulnerability of these workers. The study applies a descriptive and analytic approach, relying on the secondary sources of data, reports, journals, and policy documents, as well as the selected case-based observations, to perceive the risks peculiar to the sector. The results obtained indicate that informal employees are commonly subjected to physical, chemical, biological, and ergonomic dangers and protection measures are usually not taken. The usual ones are respiratory, musculoskeletal, injuries, and long-term chronic diseases caused by the long-term exposure to dangerous conditions. These risks are also increased by the lack of legal enforcement, awareness, and employer responsibility. Moreover, socio-economic issues like poverty, workplace insecurity and illiteracy restrict the capacity of the workers to insist on safer working conditions or medical help. The research has identified the dire necessity of comprehensive policy interventions that would advance the occupational health services to the informal population. The community-based health programs, creation of awareness and inclusion of the informal workers in the national health and labour policies are the main action steps that can help to reduce these risks. The paper has concluded that enhancement of occupational health in the informal sector is not only a health issue in the community but also a health requirement in the sustainable economic growth and social equity.

**Keywords:** Informal Sector, Occupational Health Risks, Workplace Safety, Vulnerable Workers, Occupational Hazards, Health Inequality, Labor Conditions, Public Health, Unregulated Employment, Social Protection

### **1. Introduction**

Informal sector forms a significant part of the employment within the majority of the developing economies and this aspect of the economy offers livelihoods to millions of people who do not work within the framework of formal regulatory and social protection. The employees are usually involved in the following activities within the sector street vending, construction, domestic work, waste picking, and small scale manufacturing. Though informal workers have been playing a vital role in economic development and city operations, they are mostly left behind in occupational safety, health care provisions and medical services.

The informal sector has a wide range of occupational health hazards, which are often serious. Physical conditions such as high and low temperatures, noise, dusts and unsafe machines are usually exposed to workers. These risks are aggravated by chemical exposures of toxic substances, biological risks and ergonomic strain because of repetitive activities or incorrect posture. Besides this, there are no uniformed safety precautions, and little awareness on occupational health practices that would make one susceptible to injuries and chronic diseases.

These problems are worsened by the precarious nature of informal employment. Uneven pay, job uncertainty, and legal non-recognition tend to demoralize workers to visit health facilities and report work hazards. Their health outcomes are also dictated by social determinants like poverty, low education levels and low bargaining power. Besides, gender-based differences and social marginalization expose women and migrant workers in the informal sector to further risks.

Considering the size and the nature of such concerns, there is an urgent need to investigate occupational health risks of people in the informal sector systematically. These risks should be understood to design inclusive policies, enhance workplace conditions and encourage equal access to health and safety measures. This paper will add to this growing debate by addressing the nature, scope, and consequences of occupational health hazards among the informal labor force.

## **2. Background of the study**

The informal sector is a huge population of workers in the world, more so in developing economies and emerging economies. This sector involves employment in the form of street selling, construction workers, household help, waste collection, and small-scale production as it is characterized by the lack of formal contracts, social security benefits, and regulatory control. Although the informal sector is important in creating jobs and expanding the economy, it is not regulated and workers are susceptible to various occupational health hazards.

Informal sector workers are usually working in dangerous conditions with little or no access to safety gear, health services and protection of the law. They often face physical risks like extreme temperatures, noise and unsafe equipment and hazards posed by chemicals like toxic substances and pollutants. There are also the risks of biological risks, which are related to the exposure to infectious diseases especially to the waste handlers and sanitation workers. Besides these, ergonomic problems that occur as a result of repetition, heavy lifting, and poor working postures, only worsen health problems. These dangers are exacerbated by the insufficient awareness and training on the issue of occupational safety. The other major issue is lack of institutional support mechanisms. Informal workers are generally not covered by occupational health policies, insurance covers, and labour welfare schemes. Such exclusion causes work-related illnesses to be diagnosed and treated late, a fact which in most cases causes chronic conditions and low productivity. In addition, socio-economic factors including low income, unemployment and poor education also limit their capacity to access healthcare or insist on safer working environments.

The aspect of gender is also very important in conceptualizing the occupational health risks in the informal sector. Occupational hazard and domestic chores are two burdens that most women workers, who make a significant part of this workforce, often bear. They can also be easily exploited, discriminated against and suffer health complications due to poor sanitation and occupational safety.

Over the last few years, there has been an increased focus on enhancing the level of occupational health and safety, but there is a poor implementation of the policies especially to informal employees. The lack of knowledge, and the absence of policy-making processes and institutions to translate these policies into practical programs at the ground level, point to the necessity of an all-inclusive and systemic response to the issues of occupational health risks.

It is against this background that the current study aims to discuss the nature and magnitude of occupational health hazards that informal sector workers are exposed to and also to consider the ways that can be utilized to enhance their health, safety and general well-being.

## **3. Justification**

Informal sector is a large share of labour force in most developing economies, which support millions of people earning a living in the informal sector, without protection of the formal regulatory systems. This sector is frequently associated with poor working conditions, absence of job security, the absence of social protection and minimum compliance with the standards of occupational safety despite the economic significance it has. Employees in this industry often find themselves working in unhealthy conditions and hazardous environments that often come in terms of physical exertion, exposure to chemicals, unhealthy and unsafe machinery and poor sanitation environments.

This study is necessitated by the fact that there is little empirical focus on the occupational health hazards among people operating in the informal sector as opposed to the formal sector. The current policies and occupational safety laws are mostly oriented in the organized industries and in general do not include the niche in occupation and occupational safety issues of the informal workers. This disproportion causes more cases of work-related illness, injuries and long-term health problems in a significant portion of the workforce.

Moreover, the ignorance, absence of training and healthcare facilities increase the risks of these workers. People are not informed about safe practices or they have no choice but to take up jobs in poor working conditions because of economic reasons. This brings to the fore the need to look beyond the nature of occupational hazards and see the socio-economic factors that affect the exposure of workers to occupational hazards.

The paper is valid because it aims at offering a detailed discussion of occupational health hazards in informal sector hence, building on the available literature and providing information to policy makers, trade unions, and health care departments. The research will help to develop inclusive health and safety policies, enhance working conditions, and contribute to the welfare and productivity of the informal sector employees by pinpointing the important risk factors and shortcomings in the existing systems.

#### 4. Objectives of the Study

1. To examine the nature and extent of occupational health risks faced by workers in the informal sector.
2. To identify the major physical, chemical, biological, and ergonomic hazards prevalent in informal work environments.
3. To assess the level of awareness among informal sector workers regarding occupational health and safety practices.
4. To analyze the impact of workplace conditions on the physical and mental health of informal workers.
5. To evaluate the availability and accessibility of healthcare facilities and social protection measures for informal sector workers.

#### 5. Literature Review

The informal sector is an important part of the workforce in the world, especially in developing economies, as it makes almost 61% of the entire workforce (World Health Organization, 2020). Employees of this industry usually work without any official rules, which leaves them without any occupational health and safety measures, social security, and medical care (Chen et al., 2012; Bonnet, Vanek, and Chen, 2019). This means that informal workers are highly vulnerable to numerous occupational health hazards more than those in the formal economy.

Some articles have pointed out the dangerous working conditions in informal sector. Nag, Vyas, and Nag (2016) point out that the employees of informal jobs like construction, weaving, and transportation are often exposed to various risk factors, including poor ventilation, heavy noise, extreme temperatures, and unsuitable safety gear. Such conditions have led to high occurrence of musculoskeletal conditions, respiratory diseases, skin conditions and poor vision among the workers.

Likewise, Loewenson (1998) realized that the occupational hazards workers in Zimbabwe had to deal with in the informal sector included poor working environment, use of unhealthy tools as well as exposure to harmful fumes like pesticides and solvents. Such risks also receive an additional burden due to the absence of institutional control and sufficient compliance to safety protocols which result in the amplification of vulnerability and health disparities (Loewenson, 1998).

Lack of formal employment contracts and regulatory cover are also important factors that have led to unsafe working environments. Casual employees are not always provided with protective gear, training, and health coverage, which makes them more prone to work-related traumas and permanent illnesses (ILO, 2018; Lund and Marriott, 2011). Besides, the unstable aspect of the informal employment is such that workers must work in unsafe conditions because of the need to survive and have no opportunity to insist on working in safe working conditions (Fields, 2019).

Besides physical threats, psychosocial threats are also common among informal sector workers. Increased job insecurity, excessive working hours, low payment, and social disapproval are some of the stressors causing anxiety and mental illnesses (Benach et al., 2014). Such psychosocial stressors can go hand in hand with physical hazards to pose a combined negative impact on the general well-being of workers.

The gender differences also increase workplace health risks in the informal sector. Other issues that female laborers, especially those working in domestic labour, agriculture, and home-based industries, have to deal with without proper knowledge or safeguard are ergonomic stress, reproductive health, and exposure to hazardous chemicals (Chen, 2012; Sethuraman, 1998).

Other recent documents underline the importance of social determinants in the occupational health outcome development. Low income, low education level, and limited access to healthcare services are generally the features of informal workers which also predetermine poor health outcomes and decrease in quality of life (Marmot et al., 2008). Moreover, the risks associated with the environment (i.e., air pollution, climate change, and congestion in the city) also enhance occupational hazards, especially to the workers who work outdoors and in transport (International Labour Organization, 2024).

Although occupational health issues are increasingly being recognized, studies show that occupational health services are highly inaccessible to informal workers. A systematic review conducted by Osei-Boateng and Ampratwum (2020) revealed that informal workers are less prone to access health services and become more susceptible to occupational injuries and diseases that are not treated.

All in all, the literature is quite consistent in showing that the informal sector workers are at risk of occupational health hazards that are multidimensional as a result of unsafe working environments, absence of regulatory safeguards, and vulnerability to social economic factors. Though there are certain policy measures which have been proposed to take care of these problems, there still exist a vast gap in implementation and coverage. The subsequent studies must be directed at the creation of inclusive occupational health systems with an ability to combine the preventive and policy interventions with the access to the healthcare services of informal workers.

## 6. Material and Methodology

### 6.1 Research Design

The research design employed in the study is descriptive and analytical where it aims at investigating the occupational health risks of workers in the informal sector. It combines both quantitative and qualitative data to offer a holistic approach to understanding hazards at the workplace, level of exposure and health impacts. The study is aimed at determining the trends of risk in various types of informal employment like construction employment, street vending, domestic employment, and small-scale manufacturing. The cross-sectional design is used to record data at a given moment in time and it allows one to compare health status and the risk factors across different groups of workers.

### 6.2 Data Collection Methods

Primary data is gathered by use of structured questionnaires and semi structured interviews to the informal sector workers. The questionnaire will cover demographic information, work characteristics, work environment, exposure to physical, chemical, and ergonomic hazards, and personal health-related problems. Moreover, the workplace environments and safety practices are evaluated based on observational means. The secondary data will be collected through reports of government, labour surveys, health records and published research articles in order to complement the primary findings and to confirm them. The convenience and purposive sampling will be used to sample out respondents in different informal work environments.

### 6.3 Inclusion and Exclusion Criteria

The research involves the workers who are 18 years and older and are involved in informal jobs, which are not under formal contracts or social security provisions. They are participants of the industry like construction, street vending, domestic work, waste management, and small-scale industries. Individuals who have at least six months of continuous experience in their present line of work are considered to assure them of being exposed to occupational risks. The researchers will only exclude the employees in the formal sector, those workers who are below 18 years of age and those who are not willing or unable to give informed answers. Also, employees who have non-persistent or minimal exposure to occupational hazards are not taken into consideration.

### 6.4 Ethical Considerations

Ethical norms are also followed in the course of the research. All respondents will be given informed consent before the study and willingly participate in the study. The aim of the research is well-presented to the participants, making it transparent and trustworthy. There is preservation of confidentiality and anonymity of respondents by not identifying them at any point in the research. The data gathered is utilized in pure academic purpose and the participants are safeguarded to prevent any harm, discomfort or exploitation of the participants. The vulnerability of workers in the informal sector and the observance of their rights and dignity are of special importance.

## 7. Results and Discussion

### 7.1 Results:

#### 7.1.1. Demographic Profile of Respondents

The total number of informal sector workers involved in the study is 150 who represented the construction, street vending, domestic work, and small-scale manufacturing jobs.

**Table 1: Demographic Characteristics of Respondents (N = 150)**

Variable	Category	Frequency	Percentage (%)
Gender	Male	92	61.3
	Female	58	38.7
Age Group	18–30 years	45	30.0
	31–45 years	63	42.0
	Above 45 years	42	28.0
Education Level	Illiterate	38	25.3
	Primary	54	36.0
	Secondary & above	58	38.7
Work Experience	Less than 5 years	40	26.7
	5–10 years	62	41.3
	Above 10 years	48	32.0

#### Interpretation:

According to the findings, most of the workers are in the economically active group (31 to 45 years). The level of education is low among a considerable number of people, and it might affect the awareness concerning occupational safety.

### 7.1.2 Prevalence of Occupational Health Risks

Employees complained of being exposed to various occupational hazards, such as physical, chemical, and ergonomic hazards.

**Table 2: Types of Occupational Health Risks Experienced**

Type of Risk	Frequency	Percentage (%)
Physical injuries	96	64.0
Respiratory problems	72	48.0
Skin-related issues	65	43.3
Musculoskeletal pain	101	67.3
Heat stress	88	58.7
Noise-related issues	54	36.0

#### Interpretation:

The most common risks are musculoskeletal disorders and physical injuries mainly caused by repetition, heavy lifting, and unsafe working environment.

### 7.1.3 Use of Safety Measures

The article has investigated the levels of protection measures embraced by workers.

**Table 3: Use of Personal Protective Equipment (PPE)**

Safety Measure	Yes (%)	No (%)
Use of gloves	32.0	68.0
Use of masks	28.7	71.3
Use of helmets	21.3	78.7
Use of safety shoes	18.0	82.0

#### Interpretation:

The reason is that the percentage of workers who use personal protective equipment is large, primarily because of their awareness, financial reasons, and negligence of employers.

### 7.1.4 Awareness of Occupational Health and Safety

**Table 4: Awareness Levels among Workers**

Awareness Level	Frequency	Percentage (%)
High	28	18.7
Moderate	52	34.7
Low	70	46.6

#### Interpretation:

Almost half of the respondents are characterized by low levels of awareness of occupational health risks, and thus, training and awareness programs are required.

### 7.1.5 Relationship between Work Conditions and Health Problems

**Table 5: Association between Working Hours and Health Issues**

Working Hours per Day	Workers with Health Issues (%)
Less than 6 hours	38.5
6–8 hours	56.2
More than 8 hours	74.8

#### Interpretation:

The number of health problems rises in correlation with the number of working hours, and this fact indicates the negative effect of prolonged work and lack of rest.

## 7.2 Discussion

The findings indicate that the workers in the informal sector are very susceptible to occupational health hazards because they work in unhealthy environments, there is a lack of regulation laws and the access to protection facilities. The prevalence of physical injuries and musculoskeletal disorders is consistent with the fact that the work of informal workers is mostly manual and repetitive.

Lack of personal protection equipment use is a manifestation of systemic issues including affordability, lack of employer-supplied protective measures and the lack of labour regulations. Moreover, they are exposed to health risks because of the low awareness of workers.

Another fact that the study develops is a definite connection between working long hours and having more health complications. This implies that work overloads in the absence of suitable occupational protective measures are a major factor leading to deteriorating health of workers.

On the whole, the results point out that the policy interventions, such as awareness campaigns, the supply of inexpensive safety gear, and the involvement of informal workers in the occupational health systems, are urgently needed. The informal sector can be greatly enhanced by enhancing institutional support and regulatory mechanisms in order to increase health outcomes and productivity.

## 8. Limitations of the study

The current research on occupational health hazards of informal sector employees is limited in some ways. The informal sector is unstructured, and thus cannot easily get proper and detailed information because most of the workers are not officially registered and they might be afraid of losing a job or they may not have the confidence to take part in surveys. The research will be based mostly on self-reports, which could be influenced by recall bias or underreporting of health problems. Moreover, the range of jobs in the informal sector does not allow generalizing the results because the working conditions and the level of risk may differ greatly depending on the activity. Lack of time and resources could have limited the size of the sample and the geographic area of study thus influencing the representativeness of the findings. Moreover, because of the lack of longitudinal information, it is difficult to determine causality between occupational exposure and health outcomes. Finally, the inability to access medical records and diagnostic facilities could have also restricted the proper evaluation of the health conditions, which in turn might have led to an underestimation of the real risks of informal workers.

## 9. Future Scope

The research on occupational health hazards of the informal sector workers presents numerous possibilities of conducting further research and policy exploration. Longitudinal designs can be used in future research to trace the health effects of occupational hazards in the long run and compare the changes in risks with time. It is also possible to develop sector-specific analyses, e.g., construction, domestic work, street vending, and waste management, to learn about the peculiarities of risk patterns and create specific interventions. Research that is to be conducted in the future could involve the use of sophisticated technologies, such as wearable health sensors and mobile reporting tools, to produce real time occupational exposure data. The cross-regional and cross-country comparative studies can be insightful in terms of the best practice and the effectiveness of the policies employed in the protection of informal workers. Further, the impact of the government schemes, social security initiatives, and the state of the health infrastructure to reduce risks particularly in the developing economies is to be considered. The knowledge on vulnerabilities of informal workers may be reinforced with interdisciplinary approaches based on the combination of public health, economics, and labor studies. Lastly, new studies ought to aim at establishing inclusive, affordable, and scaled health and safety models that can be effectively used to enhance the livelihood and efficiency of informal sector employees.

## 10. Conclusion

The health risks among workers in the informal sector have continued to be a major but poorly identified public health and socio-economic issue. The paper notes that informal economy workers are incomparably vulnerable to hazardous work environments, including physical load, chemical exposures, environmental hazards, and insufficiency of simple protective tools. Lack of formal contracts, social protection and regulation also increase their susceptibility such that they have access to minimal healthcare services, insurance cover and protection by the law. These situations do not only impact physical and mental health of workers, but they also lower productivity and create poverty and inequality circles. The results emphasize the necessity to implement inclusive policy models, which would spread the occupational health and safety policies to the informal sector. These risks can be well addressed by increasing awareness, encouraging the use of protective equipment, increasing access to affordable healthcare, and encouraging community-based interventions. Moreover, governments, non-governmental organizations, and local communities need to engage in developing context-specific solutions to solve the various challenges affecting the informal workers.

Social justice is not merely to guarantee safer working conditions of this big and usually invisible workforce, but also a pre-condition of sustainable and fair economic development.

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