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Evaluation of Professional Risks in the Informal Sector: Case of the Car Garages of Conakry

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Abstract: Introduction: Occupational risks represent a problem of health at work in the world; they are defined by the probability that an event puts a person in a dangerous situation within the framework of the exercise of a trade. Material and Method: A prospective descriptive study lasting 6 months from May 2021 to November 2021, the general objective of which was to evaluate the occupational risks among garage owners in the commune of Ratoma. RESULTS: the male gender was the most dominant, the most represented age group was 25-35 years old (41.58%). The most common level of education was primary school. The majority of garages were located in the commune of Ratoma. The most common work position was master followed by assistant. The most common work experience was 5 years followed by 2 to 5 years. Most of our respondents had had an accident at work. When asked if they had ever heard of an accident at work, 95.5% of our respondents said yes. During our survey the most frequent work accidents were slips followed by burns, the most used protective equipment was glasses followed by helmets. Conclusion: accidents in the construction industry represent a real occupational health problem. Of the 400 workers involved in accidents, 40% were under 25 years of age; around 30% had a secondary education; 52.3% did not have sufficient PPE; 80% of accidents were caused by inappropriate gestures and 99.5% had not received any safety training.

Keywords: Profile, Work Accident, Building and Public Works, Company

1. Introduction

Occupational health is defined by the Canadian Centre for Occupational Health and Safety as a comprehensive, integrated approach to health that addresses all individuals in a workplace and the organization as a whole (health, physical and psychosocial conditions, health practices, personal resources) [1].

Occupational hazards are a worldwide occupational health problem [2]; they are defined as the probability that an event will put a person in a hazardous situation in the course of performing a job [3].

Occupational accidents are frequent in garages.

Statistics show that one third of accidents are related to handling, 12% of accidents with work stoppage are due to tools, 8% are due to muscular effort.

Falls are explained by oily, slippery floors, poorly stored objects, the existence of inspection pits, and the abundance of waste such as sheet metal, tires, and storage cans for oil change fluids that clutter the workshops.

A study by SINGH L et al showed a prevalence of 85% and 58% in India [4, 5], that of SHUKRIAH A et al 92% in Malaysia [6] and that of SHAMIMA A et al 77% in Bangladesh [7].

In Africa, few studies have been carried out on this subject.

In Nigeria, the use of PPE is not very widespread among informal automobile craftsmen. ADEJUMO et al (2017) reported that 91.9% of auto mechanics did not use PPE while Ojo et al (2017) reported that 3% of auto paint shops had a respirator with filter [8].

In Côte d'Ivoire, 93.6% of jobs are almost exclusively in the informal sector with a near subsistence level of production.

In this proportion, almost all informal production units are in the handicraft sector, with an employment rate of 40% of the active population [9].

Thus, the lack of knowledge of occupational risks in automobile garages and the high frequency of work accidents in this work environment led to the present study, the general objective of which is to evaluate the occupational risks among garage owners in the commune of Ratoma.

2. Methodology

Study Framework: The Commune of Ratoma served as the study framework.

The commune of Ratoma is one of the six (6) communes constituting the city of Conakry, capital of the Republic of Guinea.

Material: It was constituted by the car garages of the commune of Ratoma.

Collection medium: A pre-established survey form was used as a medium.

Type and duration of the study: It was a prospective study of descriptive and analytical type with a duration of six (6) months from January 6 to July 6, 2021.

Selection Criteria:

Inclusion Criteria: All car garages in the commune of Ratoma were included in our study.

Non-Inclusion Criteria; Not included in our study were all car mechanics who were not present during the survey and those who refused to participate in the study.

Study Variables: Our study variables were qualitative and quantitative. Socio-demographic data Age Sex Professional status Residence Education level Marital status.

3. Statistical Analysis of the Data

The data were entered using the Kobocollect software and analyzed through SPSS, then presented by the pack office 2016.

For bibliographic management, we used Zotero software with Vancouver as reference system.

Ethical Consideration: the anonymity of the participants was respected as well as the confidentiality.

4. Results and Discussion

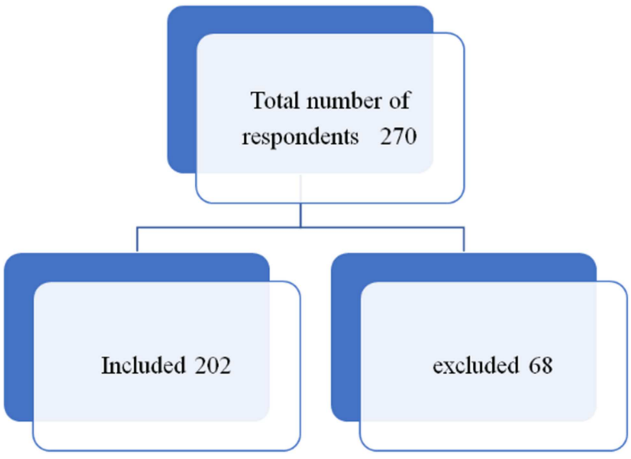

Figure 1. *Flow chart of garages during our study period.*

Table 1. *Distribution of garage owners according to work position.*

Workplace	Number	Percentage
Apprence	59	29,2
Assistant	61	30,2
master	82	40,6
Total	202	100,0

Table 2. *Distribution of garage owners according to the occurrence of work accidents.*

Have you had an accident at work	Number	percentage
No	9	4,5
yes	193	95,5
Total	202	100

Table 3. *Distribution of garage owners according to knowledge of work-related accidents.*

Have you heard of occupational hazards	Number	Percentage
No	154	76,2
yes	48	23,8
Total	202	100,0

Table 4. *Distribution of garage owners according to types of work accidents.*

	number	Percentage
Burns		
0	118	58,4
1	75	37,1
Total	193	95,5
Slips		
0	189	93,6
1	4	2,0
Total	193	95,5

Of the 270 garage owners surveyed, 202 or 74.81% met our selection criteria.

Christopher. E in Nigeria in 2014 had reported 39.25% [9]. In Côte d'Ivoire, 93.6%2 of jobs are almost exclusively in the informal sector with a production level close to subsistence [10].

The most frequent work experience was that of 5 years followed by 2 to 5 years with 77.7% and 17.8% respectively.

95.5% of our respondents had had an accident at work. Mechanics show a tendency to accept risks socially and to minimize them (especially apprentices). Moreover, in response to their individual inability to cope with risks, they develop informal systems of social protection.

Most of our respondents, 95.5%, had had an accident at work. Our results corroborate those of Philip M., who has found in his study 90,5%, in 2017 [11].

76.2% of our respondents had never heard of occupational risks. This could be due to their low level of education.

During our survey, the most frequent occupational accidents were slips, followed by burns with 93.6% and 58.4% respectively.

Thomas. G in 2022 [12] reported 15% for burns. This could be due to the fact that the garage owners let the motor oil run all over their garage on the one hand and on the other hand they do not use in most cases protective equipment which causes burns.

The most used protective equipment was glasses followed by helmets with 15.3% and 3% respectively. Thus, the low

use of the latter by garage owners accentuates the occurrence of accidents in their workplace.

5. Conclusion

The numerous and varied tasks that make up the daily routine of mechanical workshops generate several risks for the safety and health of workers. They work in difficult conditions with incalculable consequences, and the spillage of solid products (broken windows, carcasses, tires, etc.) and liquids (oils, lubricants, fuels, etc.) into the living environment of local residents constitutes an environmental threat to the latter.

The most dominant gender was male, and the most represented age group was between 25 and 35 years. The most common level of education was primary school, and the most common work position was teacher, followed by assistant. Most of our respondents had had an accident at work. During our survey, the most frequent work accidents were slips followed by burns.

List of Abbreviations

AT: Work accident
PPE: Personal protective equipment
LP: Occupational injury
PM: Occupational disease
ILO: International Labor Organization
RP: Occupational risk
MSD: Musculoskeletal disorder
NGO: Non-governmental organization
CDD: Contract of limited duration
PRP: Prevention of occupational risks)
EFR: Functional respiratory tests

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