

Occupational Safety In The Urban Informal Sector Of Gaborone, Botswana: A Situational Analysis

Fuyane Buhlebenkosi, Nokuthula Sibanda, Pearson Chaurura, Oscar Chiwira

Abstract: The informal sector constitutes an employment refuge for individuals who may not have formal employment and those that seek to earn an extra income. The sector is therefore, becoming the realm of employment for the majority of urban dwellers in developing countries who apply their energies in semi-skilled jobs. However, seldom do developing countries monitor the activities of this sector and or the working conditions of those employed in this sector. Safety is increasingly becoming more important in the worlds dynamic environment. This study analyzed the working conditions of the urban informal sector of Gaborone. The purpose was to assess the working conditions of different survey research methods, interviews and focused group discussions with the owners and employees in the trade. The results depict that the level of education amongst workers is high but however safety awareness is not being practiced and were it is being practiced standards are compromised.

Key words: Occupational safety, informal sector, safety standards, safety regulation, safety framework

Introduction

Rapid urban expansion of the last decade has greatly increased the economic importance of human settlements and the pressure on the urban environment; and on surrounding regions and their natural resources [16]. It is clear that the rapid rate of urbanization in Sub-Saharan Africa has not been accompanied by a corresponding expansion of the formal sector. This has resulted in the growth of urban unemployment on one hand and a thriving informal sector on the other hand. The proliferation of informal sector activities in urban areas has been increasing as a result of the decline of formal sector employment of the urban labor force [15]. Natural population increases and rural urban migration has also limited employment opportunities in rural areas. The implications of rapid urban growth include increasing unemployment, environmental degradation, lack of urban services, overburdening of existing infrastructure and inadequate shelter. Botswana has been a rapidly urbanizing country. The level of urbanization has increased from less than 10 percent in 1971 to close to 60 percent in 2011[3]. The urbanization process in Botswana can be described as a typical peripheral capitalist urbanization [14]. This is characterized by rapid urban growth that exceeds the rate at which the urban economy can absorb and adequately accommodate the population in terms of gainful employment and access to basic infrastructural service. This inability of the economy to adequately absorb the population in gainful employment has consequently led to the population seeking alternative routes in earning an income. Botswana unemployment rate is 17.8% as per the Botswana Core Welfare Indicators Survey 2009/10 [6]

Table 1.1: Rate of urbanization in Botswana

	1971	1981	1991	2001
No. of Urban Places	5	8	25	34
Total Urban Population	54 300	166 400	600 100	909 800
Total National Population	596 900	941 000	1 326 800	1 680 900
Urban as a % of Total Population	9.1	17.7	45.2	54.1

Source: Botswana Central Statistics Office 2001

Table 1.1 depicts urbanization levels from 1971-2001. The current rate of urbanization is 3.4 percent per year. Statistics used are not covering up to at least 2011 because the current disaggregated dissemination results for the 2011 census results have not been released

Table 1.2 Depicts Growth of Population In Major Urban Settlements, 1971-2001 ('000)

Urban Settlement	1971	1981	1991	2001	% Change 1991-01	Growth % annum 91-01
Gaborone	17.7	59.7	133.5	186.0	39.3	3.3
Francistown	18.6	31.1	65.2	83.0	21.4	2.4
Lobatse	11.9	19.0	26.0	29.7	14.2	1.3
Selibi Phikwe	4.9	29.5	39.8	49.8	25.1	2.2

Source: Botswana Central Statistics Office 2003

Table 1.2 shows the growth of population in major settlements. Gaborone has seen the highest growth in terms of population. The inability to eke out a living in the rural areas is driving growing numbers to the few urban areas, where employment opportunities are rare, while housing and urban facilities cannot cope with the inflow.

The informal sector recorded a 72% growth rate in eight years[3], and this is attributed a decline in formal employment opportunities and the establishment of various industry support agencies by the government among them the Citizen Entrepreneurial Development Agency (CEDA) and the Local Enterprise Authority (LEA).

Problem Statement

Although substantial progress towards reducing occupational accidents and incidents was made during the last decade in Gaborone, Botswana, significant and emerging constraints exist and threaten further any substantial progress. Generally, factors responsible for the occupational accidents and incidents in the formal sector are investigated and known, in the informal sector however, the situation is generally not known and not adequately covered and this may be due to the unconventional nature and location of the informal work. Informal workers are not protected by the institutions that officially govern occupational health and safety (OHS). These institutions have been designed to protect formal workers in formal work environments such as mines, offices and shops, and so have no bearing on the working conditions of most informal workers [2].

Objectives

This study seeks to fulfill two main objectives,

1. assess awareness of workers to occupational safety;
2. Check compliance with general safety regulations when working in their different trades.

Materials and Methods

To adequately capture the information required the study focused on three trades namely carpentry, mechanics and welding. The study concentrated two specific villages which are Mogoditshane and Tlokweg. These were selected on the basis of being identified as having a high concentration of informal sector within the Greater- Gaborone Area. A sample of 25 informal sector traders was selected randomly. These included garages with open area activities of car repair including welding, upholstery and painting; wood workshops of two types, permanent workshops with fixed wood machines carrying out sawing, cutting and carving and simple shelter workshops having workbenches with three or more workers polishing wood for furniture. Metal workshops were shelters with usually three workers, using heavy hammers, metal cutting scissors, soldering and welding equipment working on scrap metal and producing gates, window and door frames, buckets and bath basins. To collect the data, a combination of focus group discussions (FGD's), observations and interviews were used. The enterprises were visited and all possible exposures listed and personal protective equipment used by welders, metalworkers and wood workers using a checklist. Four focused group discussions were done in the two villages. The FGDs were carried out among employees and employers of the trades. The FGD focused on; identification of perceived safety problems related to working in the informal sector; and identification of work related health issues. In addition to focus group discussions, the following were observed at the workplaces using a checklist.

1. Exposures to hazards
2. Use of protective equipment
3. Safety complaints

Structured interview using a questionnaire were administered face to face to all observed workers.

Results and Discussions

A total of 25 enterprises were assessed. Of the 25, 10 were car mechanical workshops, 8 were wood workshops and 7 were welding workshops. All the enterprises assessed were located in backyards of residential homes. The workshops were housed in makeshift houses made of timber and or corrugated iron and or under trees and shades within the confinement of the resident plot. The goods and wares are then displayed outside the plot and some along the main road if the enterprise is off the busy road. From the enterprises investigated, it was noted that the sector is largely male dominated, with no female that was found on site. There was a fair distribution of workers across the economically active age group as tabulated below:

1.3 Distribution of workers by age

Age Group	19-25	26-35	36-45	46-55	56-65	65+	Total
No#	24	29	22	17	8	0	78

The level of education for the workers and those involved was also placed under scrutiny, most of those involved in the business had at least secondary level education and only 6 out of the 78 had primary education only. Of those that had reached tertiary level 30 had been trained in a Vocational College, 34 in a Technical College. Formal skills and literacy rates were noted to be high although the need for safety seemed to have been ignored.

1.1 Perceived Problems

Collectively all trades outlined the following as their perceived safety problem

- **No safety Induction**
All employees in the different trades agreed that what they were not inducted when they started their job. Most of them although they have experience from their college or vocational background had to learn through experiences after they had been injured and or through mere warnings from those that have more experience in the field than them.
- **No standing procedures on how to deal with emergencies/accident/risk**
All trades did not have any work standing procedures on how to deal with emergencies. There were no emergency equipment on site, no first aid kit and no adequate safety equipment. There also was no system in place to identify risks and proper procedure to deal with accidents. The reasons brought forward were that it was difficult to establish safety systems of promotion as workers were consistently mobile and changing. Therefore, innovative schemes that would link risk reduction to improving economic viability; occupational safety inputs and public health inputs; and safety

measures with other technology options are necessary

- **No working area demarcation**

The working areas were not demarcated and confined. Other tenants of the plot walk through and or the makeshift workshop is not under lock and key and therefore even children can be found loitering around the area. For most car workshops the area the work done is in the open air. Any mechanical problems, spray painting is done in full view of even the neighbors. There were no safety mechanisms to protect gas tanks that were used in welding. Given the danger associated with the explosion of tanks, imminent danger was noted.

- **Protective Gear**

Due to the fact that most trades are small time businesses who want to save money, the choice of personal protective gear, were it exists is of an inferior quality. Most PPG worn was not of industrial material and therefore fell short when it came to the actual protection. In some instance the chemicals used in the trades would just go through the work suits.

- **Waste disposal**

Waste disposal for all trades proved to be an major issue as all the trades worked with bulk materials that would have off cuts that needed disposal. For welding scrap metal was perceived as the major problem, for car mechanics tyres, batteries, oils, and acids and for carpenters the off cuts of timber members.\

1.2 Identification of specific work related safety issues

Table 1.4 Trade specific safety issues

Specific Safety issue		
Mechanics	Welders	Carpenters
Physical Injuries	Noxious Fumes	Physical injuries
Falls	Noise	dust
Acids	sparks	Noise
Noise	Vision Impairment	RRS
Noxious fumes		
No compensation	No compensation	No compensation

They workers outlined that the injuries were part and parcel of their work, they happened frequently and therefore they dealt with them as and when they arose. There is no system in place to address injuries and no compensation for those injured. The frequent injuries listed included minor burns, cuts and bruises. In the unregulated environment of informal work the rate of accident is found lower than might be expected, because of cases not being reported or a non-existent comprehensive monitoring of injury and illness rates [1].

1.3 Knowledge of Safety regulations

In all trades those involved acknowledged the fact that they were aware that the work done had health, safety and environmental concerns but however professed no knowledge on any specific acts that would potentially govern their industries and their work. What they knew were regulations pertaining to paying of taxes and they attributed this to the fact that the Botswana revenue service widely advertised regulations pertaining to this although they do not pay tax as yet.

1.4 Awareness of workers to occupational safety

All those involved alluded to the fact that safety was indeed an important aspect in their industries and that an unsafe workplace threatened their well being and that of their families but however underscored that they are in the informal sector because formal employment was difficult to find and therefore this was a means of earning a living. They added that business is not so good and therefore the exposure time is limited and therefore the chances are slim for them to get injured.

2.0 Observations

Four major points were noted after the walk through survey and these are –

- **No Proper Housekeeping**

All enterprises had no proper housekeeping in place. Tools used in the different trades were not stored properly. In some instances, like in welding they were just stacked on top of each other. The passage ways were in most cases cluttered obstructed with cables and wires and raw materials.

- **Equipment**

In most cases the machine and equipment used for the trades were old and most of them unguarded. In all cases the cables had been extended using crude ways were the internal wires of the cables are joined by tape so that electricity could be harnessed from the house. The danger of moving parts was noted, with high noise levels emanating from the machines when it was running.

- **No control of tenants/ Children**

Working areas were not adequately defined and as such, tenants and children from various households were using paths crossing in between the working areas. In particular welding was done outside and therefore although the welder would be wearing goggles, the rest of the people around, i.e tenants, children and even neighbors were affected by the welding flame. This goes to show that home based enterprises go beyond the worker and involve risks for the not only the worker but as well as the family.

- **No adequate PPE**

PPE were available, was inferior and of the wrong type. A general tendency amongst all the workers was to skip the wearing of the PPE. While overalls were the commonest form of PPE, safety shoes were the least available. Most workers were either in open sandals or worn out sports shoes.

The informal sector constitutes an employment refuge for workers who fall out from the formal sector in times of economic depression and provides a “safety net” for poor households’ income. The sector is therefore, becoming the realm of employment for the majority of urban dwellers in developing countries who apply their energies in semi-skilled jobs [10]. Not much work has been channelled towards the understanding of the working conditions in the informal sector of Gaborone mainly because of the location of the informal enterprises. Most informal activities are unrecorded in official statistics and therefore the measurement of informal production and labour force is difficult. Available data are scattered and not up-to-date. Given the size of the labour force, the diversity of operations and various social demographic characteristics of the informal sector operators, substantial efforts are necessary in order to obtain adequate background information on the OSH problems of the informal sector workers [11]. Although informal economic activities are a significant source of detrimental externalities, very little attention has been paid to this problem by either researchers or policymakers [2]. Four reasons have been put forward as to why policymakers in developing countries have found tackling informal sector environmental impacts an exceptionally challenging task [2]:

- The minimal requirements that informal sector firms have with the state,
- Difficulty in monitoring informal firms which are small, numerous and widely dispersed,
- Tendency of informal firms to be intensely competitive and operate on low (subsistence level) profit margins, which makes them susceptible to cost cutting even at the expense of harming the environment ,and
- The large amount of employment (mostly for the poor) generated by the informal sector

Given these constraints, policymakers in developing countries have tended to focus on the formal sector. The situation for the country of Botswana is unique in that there is no occupational health and safety act[4], what is available are scattered regulations over a number of act such as –

- The Radiation Protection Act, 2006 [9]
- Public Health Act 1981(Chapter 63.1) [8]
- Waste management 1998 Act (65.06) [10]
- Factories Act 1978 (Chapter 44:01) [7]

Issues relating to occupational health and safety are dealt with under sections of the above mentioned acts. Therefore cases that need the specific attention of an occupational health and safety act are shelved away. The ILO Convention on the promotional framework for OSH recommends a national system that specifies the infrastructure which would provide the main framework for implementing national policy and programs of occupational safety and health. In this particular case inadequate safety and health standards as well as the hazards are particularly evident in the case of the informal sector. Informal sector’s workers do not have the necessary awareness, technical means and resources to implement health and safety measures. [2]. The protection of the safety and welfare of workers in the informal sector is a challenge which should be faced with an integrated approach. Innovative means to

prevent occupational accidents and diseases need to be developed through cost-effective and sustainable measures at the work-site level to allow for capacity-building within the informal sector itself.

Conclusion

The need for a healthy and safe environment is a fundamental prerequisite for sustainable development. Specific reference is made to the fact that health and development are intimately interconnected [17]. Therefore, as a prerequisite for sustainable development it maybe necessary to meet basic health needs and protect vulnerable groups such as the poor.

Recommendations

The protection of the health and safety of workers in the informal sector is a challenge and therefore it is

- Imperative to institute an inclusive national policy and harness concerted institutional support to develop a framework for the sustainable development of occupational health and safety in the country and more so in the informal sector.
- Given the size of this labor force, the diversity of their operations and the variety of their social and demographic characteristics, adequate background information should be established through the coverage of the informal sector by OHS information systems, research and studies.
- Specifically, the community resource mapping undertaken by local government units can provide statistics on constituent informal workers, and afford a quantitative framework in the preparation and formulation of comprehensive plans and programs.
- Education initiatives targeting especially raising awareness on occupational safety and health hazards in the clusters through the development of human resources for the improvement of working conditions
- Stringent implementation laws to govern micro enterprises especially were public health and environmental issues are concerned.

References

- [1]. Atienza T. (2006). Pursuing a remedy: Occupational safety and health in the informal sector. UP School of Labor and industrial relations. Philippines
- [2]. Forastieri, V. (2007) Improvement of Working Conditions and Environment in the Informal Sector through safety & health measures. Occupational Safety and Health Branch (ILO) Occupational Health Specialist
- [3]. Government of Botswana (2004) Botswana Urbanization Rates 1997/8 -2003/4. Ministry of Finance and Development. Government Printer. Botswana

- [4]. Government of Botswana (2008) Briefing on Occupational Health and Safety. Ministry of Finance and development. Government Printer. Botswana
- [5]. Government of Botswana, (2000) Informal Sector Survey, 1999/2000, Central Statistical Office, Gaborone
- [6]. Government of Botswana (2010) Botswana Core Welfare Indicators Survey. MFD. Gaborone, Botswana
- [7]. Government of Botswana (2006) Factories Act. Ministry of Finance and Development Government Printer. Gaborone Botswana.
- [8]. Government of Botswana (1981) Public Health. Government Printer, Gaborone. Botswana
- [9]. Government of Botswana (2006) Radiation Act. Ministry of Finance and Development. Government Printer, Gaborone. Botswana
- [10]. Government of Botswana (1998) Waste Management Act. Ministry of Finance and Development, Government Printer, Gaborone, Botswana
- [11]. ILO(1992) World Employment 1995.The future of urban employment, International Symposium on the Future of Urban Employment, Turin Centre, 5-7 December, 1995
- [12]. ILO (1994) Internal surveys on urban informal sector. Unpublished
- [13]. ILO. Statistics of employment in the informal sector, Fifteenth International Conference of Labour statisticians, Report III, ICLS/15/III, Geneva 19-28 January 1993.
- [14]. Molebatsi, C. O. (1998) "Urban Environmental Problems in Botswana" Environmental Issues in Botswana. Athlapheng, Molebatsi, Toteng, Totolo(eds.) Gaborone: Light books.
- [15]. Simon, P. (2001). Challenges and Strategies of accommodating informal sector activities in Urban Areas. Dar es salaam, Tanzania
- [16]. Uisso A, J (2007) Effects of informal sector activity on the urban environment: Case study of Brick making in Morogoro Municipality in Tanzania Forestry Research institute (TAFORI), Tanzania
- [17]. UNCED (1992). Protection and Promotion of Human Health. Chapter 6. Agenda 21