

ASSESSING LEVEL OF COMPLIANCE OF OCCUPATIONAL HEALTH AND SAFETY AMONG SMALL AND MEDIUM ENTERPRISES

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Occupational Health and Safety (OH&S) is the responsibility of everyone at work, construction companies have to be aware that they are responsible for managing and improving issues related to H&S on construction sites. The data in this research was obtained from secondary and primary sources. 70 Questionnaires were dispersed to different companies in the construction industry, 42 were brought back and they were all valid and usable. This represented 60% response rate. The research revealed that the level of implementation was not practice well to the level of acceptance. Therefore, the study went on to assess the hindrance of the poor implementation among small medium enterprise's (SMEs) which were poor supervision, lack of regular audits and inspection, poor material and component, poor management commitment, lack of equipment and tools, lack of training and risk education, lack of communication, lack of skilled workforce, poor working condition, poor subcontractors involvement, lack of incentive for good performance, poor investigation and risk assessment. The research point out that safety and health of the workers is not negotiable, is all pervasive, increases productivity, and leads to better performance, improve the company image, reduced claims and accidents also reduce lost times spent on injuries and property loss. Emphases on the OHS level of implementation are greatly urged to be implemented non-stop to overcome the challenges facing the SME's contractors.

Keywords: Construction industry, Hindrances, SME, South Africa, Health and safety training.

1 INTRODUCTION

The primary objective of any occupational health and safety (OH&S) legislation is the prevention of accidents and their consequences in terms of injury, disablement and fatality, and ill health within the work environment (James *et al.* 2012). The achievement of this objective depends on good legislation supported by effective, sensible and accountable enforcement (Hsiao and Armstrong 2012). Worldwide, the construction industry contributes a large number of injuries (James *et al.* 2012). However, construction in developing countries, including South Africa, performs worse than construction in developed countries (Ramatloa 2007). Furthermore, there is a high level of non-compliance with H&S regulations in South Africa.

According to Mashwama *et al.* (2017a), the construction industry creates employment and serves as a means of generating income for many people and also as a means of application of

technologies in various degrees. Furthermore, the sector engages about 240.000 workers in South Africa thus contributing significantly to the gross domestic product (GDP) (James *et al.* 2012). Nonetheless, the construction industry can be interlinked with the economy of a country and this often is an indicator of how healthy the state of the said economy is (James *et al.* 2011). Therefore, if the construction sector and the economy of a country are linked, it is necessary for the sector to effectively attend to the welfare of the workers in that industry (Brace and Gibb 2005). Moreover, the sector is associated with high risks particularly for workers nonetheless its importance in the social and economic development in South Africa (Brace and Gibb 2005, James *et al.* 2011). The construction industry has great number of injury and fatality among workers and this is substantiated by the (Chartered Institute of Building 2008) that many construction workers become unfit at one point or the other as a result of minor injuries or some kind of problems in their health.

Health and Safety (H&S) is the responsibility of everyone at work, construction companies have to be aware that they are responsible for managing and improving issues related to H&S on construction sites (Davies and Tomasin 2000). Adherence to regulations and legislation is not the only way to ensure safety on the working environment however it provides a basis for the employment and enforcement of good construction practices at minimal cost (Opaleye and Talukhaba 2014). Hence the study is to examine the level of implementation among SME's in-order to prevent future occurrences of poor implementation and discover the actual hindrance for SME's to implement. Therefore, health and safety is the responsibility of everyone at work on site.

2 OCCUPATIONAL HEALTH AND SAFETY IN SOUTH AFRICA

Worldwide construction industry contributes a large number of injuries (Department of Labour 2011). However, construction in developing countries, including South Africa, performs worse than construction in developed countries (Department of Labour 2011). Furthermore, there is a high level of non-compliance with H&S regulations in South Africa. According to Opaleye and Talukhaba (2014), poor performance in construction H&S is attributable to a lack of management commitment, inadequate supervision, and inadequate or lack of H&S training. Moreover, a lack of worker involvement, personal risk appreciation and work pressures also contribute to poor implementation of health and safety. Management and leadership at all levels are therefore important to improve construction H&S in South Africa. Leadership needs to manifest itself among all the stakeholders, commencing with clients and including project managers, designers, quantity surveyors, contractors, manufacturers and suppliers (Opaleye and Talukhaba 2014).

3 SMALL AND MEDUM ENTERPRISE (SME'S) CONTRACTORS IN SOUTH AFRICA

The growing importance of SMEs is clear, and SMEs currently account for about half of all people in formal employment in South Africa (Audet and Courteret 2012). SMEs in South Africa are alive, well and regard themselves as highly competitive. However, few SME owners give the government credit for their initiatives and efforts to promote SMEs (Fakoki 2010). According to Fakoki (2010), given the amount of resources being ploughed into SME development, the situation reflects poor communication rather than poor strategy. The survey also shows that less than half of the SME owners were positive about legislation, the impact of skills development programmes and the impact of BEE, the latter having more negative than positive scores (CIDB 2011). A low 12% positive rating was given for the impact of general government incentives for SMEs (Fakoki 2010, Lunsche 2010).

The lack of sufficient capital and credit is often a major handicap in the development of SMEs, especially in their growth stages (CIDB 2012, Jooste 2012). In developing countries worldwide, close to 95% of all SMEs have to rely solely on the personal resources and initiatives of the owners (Jooste 2012). The existence of a cheap source of labor, combined with the low socio-economic status of workers are major obstacles to improving OH&S as this limits workers' capacity to resist working under poor OH&S conditions on sites (Fakoki 2010, Lunsche 2010). Low skill levels linked with the adoption of labor intensive methods by the construction industry in South Africa and many other developing countries means managing OH&S can be challenging (Audet and Courteret 2012). It is clear that changing the attitudes of SMEs in construction must be handled to ensure workers' rights are not flagrantly abused in an industry setting where large numbers of the labor force are unskilled and largely uneducated (Audet and Courteret 2012). SMEs do not create better quality jobs than large enterprises, SMEs are usually created as a last resort and not as a first choice of employment and therefore have limited growth potential (Fakoki 2010).

4 METHODOLOGY

4.1 Research Approach and Design

Quantitative approach method was used to collect data for the study. A quantitative research is an enquiry into an identified problem, measured with numbers, and analysed using statistical techniques (Mashwama *et al.* 2017b). The goal is to determine whether the predictive generalizations of a theory hold true. Much research in the engineering and management sphere involve asking and obtaining answers to questions through conducting surveys of people by use of structured questionnaires, interviews and observations (Mashwama *et al.* 2017b). The study utilised questionnaires to collect data and answer the objective of the study which was to investigate the hindrances of implementation of health and safety among SME's in the Gauteng Province of South Africa. The study was carried out in Johannesburg area of South Africa, on small and medium enterprises (SME's) contractors. The target population were the owners and managers of SME's in Johannesburg Metropolitan Municipality. The reason for choosing owners and managers was that, they can offer useful information on the occupational health and safety challenges among SME's contractors in the construction industry of South Africa. 70 Questionnaires were distributed to owners and managers of SME's, 42 were brought back (15 owners and 27 managers). This reflected 60% response rate.

4.2 Analysis

In this study, the analysis employed simple statistical methodology, which is descriptive statistics (mean, mode, median, number, percentage, range, standard deviations). Respondent were required to respond to question based on the five point Likert scale. The mean item score was adopted to rank the factors from highest to lowest. The Mean Item Score (MIS) is expressed and calculated for each item as in Eq. (1):

$$MIS = \frac{1n1 + 2n2 + 3n3 + 4n4 + 5n5}{\sum N} \quad (1)$$

where:

$n1$ = number of respondents for strongly disagree

$n2$ = number of respondents for disagree

- $n3$ = number of respondents for neutral
- $n4$ = number of respondents for agree
- $n5$ = number of respondents for strongly agree
- N = Total number of respondents

5 FINDINGS AND DISCUSSIONS

5.1 Level of Implementation of OHS in SME’s Contractors

Different construction sites were visited to check the level of compliance with OHS among the SME’s, after inspectors issued notices to different site such as improvement notices, contravention notices and prohibition notices about 21% were non-compliant with OHS at about 10-20; 30-40 were non-compliant at 20%; followed by 20-30 were non-compliant at 18%; followed by 50-60 who were compliant at 16%, between 40-50 were non-compliant at 9%, 70-80 were compliant at 7%, 60-70 were compliant at 5%, 80-90 were compliant at 3% and between 90-100 were compliant at 1%.

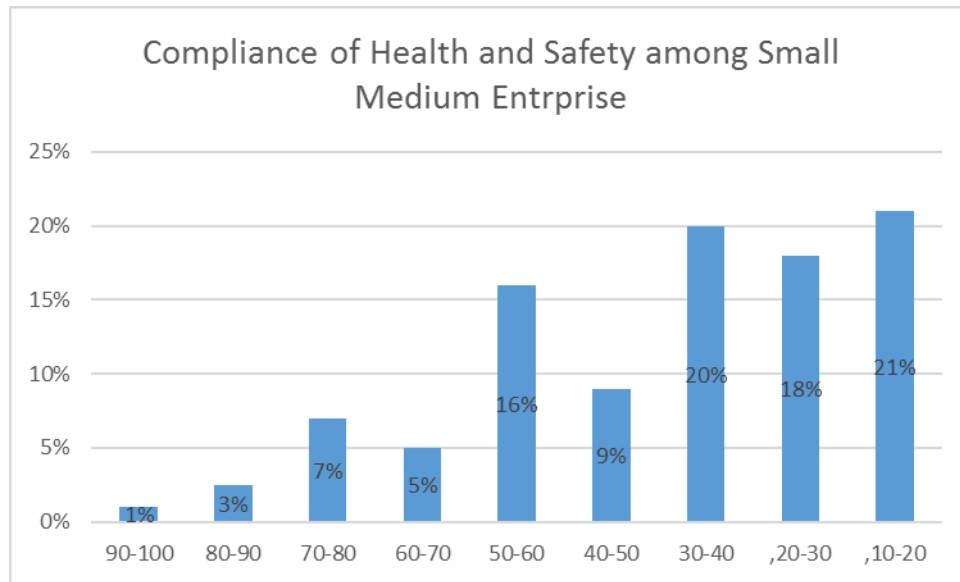


Figure 1. Compliance of OHS in SME’s.

5.2 Hindrances of OHS Implementation by SME’s

Respondent were asked to rank the factors that hinder the success implementation of OHS among SME’s contractors. The responded rank lack of regular inspections and audits the highest with a MIS =4.40 and STD=0.964; poor management/supervision/information flow; Material and components was ranked 2 with a MIS=4.31 and STD=0.924 and 1.047 respectively; lack of management commitment was ranked 3 with MIS=4.29 and STD=0.970; Equipment and tools was ranked 4 with and MIS=4.21 and STD =0.976; lack of communication between workers was ranked 5th with MIS=4.17 and STD 0.853; poor employees involvement was ranked 6th with MIS=4.14 and STD=1.049; lack of training and risk education was ranked 7th, with MIS=4.12 and STD=1.109; lack of skilled workforce was ranked 8 with MIS=4.10 and STD=0.983; work area access was ranked 9th with MIS=4.02 and STD=1.024; poor work/jobsite conditions ranked 10th with MIS=3.98 and STD=0.924; subcontractors involvement was ranked 11 with MIS=3.95

and STD=1.147; lack of incentive for good performance was ranked 12 with MIS=3.93 and STD=1.135; investigations and risk assessments was ranked 13th with MIS=3.83 and STD=1.208.

Table 1. Implementation level.

Descriptive Statistics	MIS	Std. Deviation	Rank
Lack of regular inspections and audits	4.40	.964	1
Poor management/supervision / information flow	4.31	.924	2
Material and components	4.31	1.047	2
Lack of management commitment	4.29	.970	3
Equipment and tools	4.21	.976	4
Lack of good communication between workers	4.17	.853	5
Poor employees involvement	4.14	1.049	6
Lack of training and risk education	4.12	1.109	7
Lack of skilled workforce	4.10	.983	8
Work area access	4.02	1.024	9
Poor work/jobsite conditions	3.98	.924	10
Subcontractors involvement	3.95	1.147	11
Incentive for good performance	3.93	1.135	12
Investigations and risk assessments	3.83	1.208	13

6 CONCLUSIONS

The findings of this study presented that OHS is poorly implemented by the SME's contractors. Moreover, the factors that hinder the success implementation of OHS among SMEs were lack of communication, lack of management commitment, lack of regular inspections and audits; poor management/supervision/information flow; lack of management commitment; equipment and tools; lack of communication between workers; poor employee involvement; lack of training and risk education; lack of skilled workforce; poor work/jobsite conditions. Occupational health and safety of the workers is not negotiable, is all pervasive, increases productivity, and leads to better performance, improve the company image, reduced claims and accidents also reduce lost times spent on injuries.

7 RECOMMENDATIONS

The concept of OHS implementation is not yet well accepted and practices by the SME's, therefore, regular training must be provided by the government in order to emphasize the critic of OHS and must be emphasized by all stakeholders involved in the construction industry, in-order to increase the awareness and the seriousness of the implementation of OHS.

References

- Audet, J., and Courteret, P., Coaching the Entrepreneur, Features and Success Factors, *Journal of Small Business Enterprise and Development*, 19(1), 515-531, 2012.
- Brace, C. L., and Gibb, A. G. F., A Health Management Process for the Construction Industry, in *Rethinking and Revitalizing Construction Safety, Health and Quality*, Haupt, T and Smallwood, J. (Eds.), *Port Elizabeth*, South Africa, 2005.
- CIDB, SME's Development, 2011. Retrieved from www.info.gov.za/view/downloadfileAction?id=68205. January 20, 2017.
- Chartered Institute of Building. Health and Safety in the Construction Industry. CIOB Supports a Zero Tolerance Approach to Unsafe and Unhealthy Practices, 2008. Retrieved from <http://www.hse.gov.uk/humanfactors/comah/common>, 09 June 2017.

- Davies, V. J., and Tomasin, K., *Construction Safety Handbook: Hardcover*, 303 Kurasa, Kuchapishwa, Thomas Telford, 2000.
- Department of Labour, Occupational Health and Safety (OH&S) Inspectorate in Relation to the Construction Industry, *Government Gazette* 539 (2010) 33176, 2011.
- Fakoki, O., *Obstacles to the Growth of SME's in South Africa. A Principal Component Analysis Approach*. PhD Thesis, University of Forte Hare, South Africa, 2010.
- Hsiao, H., and Armstrong, T. J., Preface to The Special Section on Occupational Fall Prevention and Protection: National Institute for Occupational Safety and Health (NIOSH), *Hum Factors* 2012, 54(3), 301-302, June 2012.
- James, P. M., Braam Rust, A. A., and Kingman, L., The Well-Being of Workers in The South African Construction Industry: A Model for Employment Assistance, *African Journal of Business Management*, 6(4), 1553-1558, 2011.
- James, P. M., Braam Rust, A. A., and Kingma, L., *The Well-Being of Workers in The South African Construction Industry: A Model for Employment Assistance*, Cape Peninsula University of Technology, 2012.
- Jooste, C., South African Transition to Consolidated Budget, *South African Journal of Economics*, 80(2) 181-199, 2012.
- Lunsche, S., *The Quite Death-Where to Next for South Africa Economic Policy*, Wits Business School University of Witwatersrand, Johannesburg, 2010.
- Mashwama, N. X., Aigbavboa, C., and Thwala, D., An Assessment of the Critical Success Factor for The Reduction of Cost of Poor Quality in Construction Projects in Swaziland. *Procedia Engineering*. 196: 447-453, 2017a.
- Mashwama, N. X., Aigbaboa, C., and Thwala, D., A Theoretical Assessment of the Challenges of Public Private Partnership in Improving Infrastructure Service Delivery in Swaziland, *Proceedings of the 4th International Conference on Infrastructure Development and Investment Strategies for Africa*, DII-2017. 30 August -1 September 2017. 299-239, Livingstone, Zambia, 2017b.
- Opaleye, O. S., and Talukhaba, A. A., *Evaluating Causes of Workers Fatality on Construction Sites in The City of Tshwane Metropolitan Municipality*. In: Proceedings 8th Construction Industry Board (cidb) Postgraduate Conference. 10-11 February 2014, Laryea, S. and Ibem, E. (Eds), 281-292, University of the Witwatersrand, Johanneburg, South Africa, 2014.
- Ramutloa, L., *Department of Labour Republic of South Africa, Amended Occupational Health and Safety Act.*, 2-27, 2007.