

WORKERS’ SAFETY ON CONSTRUCTION SITES: USE OF PPEs IN LESOTHO

Emuze, Fidelis; Khetheng, Alice

Department of Built Environment, Central University of Technology, Free State, Bloemfontein, Free State, South Africa

Abstract

This paper presents the findings of a study that focus on the safety of construction workers. The study explored the poor use of personal protective equipment (PPE) by construction workers in Lesotho. The aim of the study was to identify and assess the causes of poor usage of PPE on project sites in Lesotho in order to suggest practical solutions to them. The primary data for the study were collected through direct site observations and face-to-face interviews with construction workers and their site managers in Lesotho. Given that textual data do not lend itself to statistical analysis, thematic analysis was used for producing the results of the study. The study reveals that inadequate enforcement of regulations, unfounded attitude towards H&S and non-availability of PPE forms the major reasons for their poor usage by workers on project sites. These imply that inspection functions related to regulations must be addressed while contracting parties should see investment in PPE as money spent wisely for the business. In other words, PPE can prevent injury and fatalities on construction sites of workerds, as it is evident from practice that its optimum usage is crucial to saving workers in the event of an accident during construction.

Keywords: Construction, Health and Safety, Workers, Lesotho

1 Introduction

The construction industry in the global context has a poor health and safety (H&S) record and Lesotho is no exception. The construction industry has been closely linked to the economy of a country and is often a good indicator of the state of an economy (James et al., 2012). This is also applicable in Lesotho where the construction industry is an important player in the economy and in spite of the numerous constraints facing the industry in developing countries; it makes significant contributions and plays a vital role to economic growth. The construction industry is a challenging environment to work in, and the industry has been associated with high risks where workers are exposed to tough and hazardous situations. For example, workers have to work with dangerous tools, plants and equipment on a daily basis and as a result every construction worker is likely to be temporarily unfit to work at some stage in their life as a result of moderate injuries or health problems caused by working on a construction site.

Although industrialisation and advances in technology in recent decades have made inroads into the construction industry, the industry is still very much dependent on human resources to perform the physical work required on a construction site. It is therefore imperative that the health and safety (H&S) of workers are taken into consideration. This consideration will be beneficial as it will save the employer a lot of time and money that would have been spend managing an accident that occurred due to poor H&S on site. If the construction industry and the economy of a country are so closely linked, then it makes economic sense to care for the

people active in the industry (Dainty et al., 2007). It should also be noted that the cost of managing accidents is higher than the cost of prevention; therefore H&S should be viewed as a profit centre by contractors and their employers (Smallwood, 2004).

The international construction management literature also alludes to the fact that H&S is part of employers' legal, moral and management obligation because it is an investment, a cost saver, and productivity promoter (Reese, 2008). From a business point of view, accidents affect the bottom line of projects since the economic impacts of site accidents add direct and indirect costs to projects. In fact, the construction H&S literature is full of evidences that finger management failure is a major cause of injuries and accidents in the workplace (Choudhry and Fang, 2008). The lack of PPEs at work can be likened to be a form of management failure, which engenders workplace fatalities, injuries and diseases (Cavazza and Serpe, 2009). In the context of this research, management failure pertains to either non issuance of required PPE to workers or non-enforcement of the use of the PPE by workers. The problem statement of the research is therefore predicated on evident poor use of PPEs by workers on construction project sites in Lesotho, especially in Maseru. To unravel the problem, three questions were used to drive the research. The questions include:

- What is the attitude of employers towards the Health and Safety (H&S) of construction workers in Lesotho?
- Why do construction workers in Lesotho proceed with construction site activities without the required Personal Protective Equipment (PPE)?
- What role should clients and the government in Lesotho play to ensure that construction workers' H&S are not compromised?

2 Literature Review

Occupational H&S is neglected in sub-Saharan Africa (Puplampu and Quartey, 2012) where H&S performance appears to be poorer in comparison to developed countries (International Labour Organization (ILO), 2003). This view is partly because of the lack of resources in developing countries that has constrained H&S performance (Kheni et al., 2007) and this is obvious in sub-Saharan Africa where Lesotho is located. In addition, the inadequate legal and institutional arrangements for management of H&S have compounded the problem of H&S performance in developing countries (Kheni et al., 2007). Other contributors to poor H&S performance include a lack of effective mechanisms to implement legislation and regulations (Alkilani et al., 2013), the lack of infrastructure, equipment and rampant corruption and lack of concerted effort by policy makers to address H&S (Kheni et al., 2007). In addition, the industry is also labour intensive and utilises people for physical conversion processes on site even for tasks that may be hazardous (ILO, 2005). The industry in developing countries is dominated by small and medium contractors and most of these do not have effective systems to manage H&S (Kheni et al., 2007). Protecting people through PPEs is therefore mandatory on project sites.

2.1 Personal Protective Equipment

PPE refers to protective clothing, helmets, goggles, or other garment or equipment designed to protect a construction worker's body from injury by blunt impacts, electrical hazards, heat, chemical hazards, and infections. In South Africa, the construction regulations (2003) urge the use of PPEs to reduce employees' exposure to hazards where administrative controls are not feasible or effective in reducing these exposures to acceptable levels (Republic of South Africa, 2003). To ensure a safe and effective use of PPE by employees, a PPE programme should be designed and implemented. The implementation will always elicit reactions from workers who are directly involved in physical work on sites. The reaction of workers to unsafe working

conditions is however dependent on whether they identify the condition as “unsafe” or not. Hosseinian and Torghabeh (2012) summarise the issues as:

- The worker does not identify the unsafe condition; therefore there is no risk and hazard consideration by the worker. Some unsafe conditions cannot be identified such as non-human-related conditions or human factors violation. Human factors violation may lead to injuries namely cumulative trauma disorders, carpal tunnel syndrome, fatigue and overexertion.
- The worker identifies the unsafe condition and recognizes the related hazards; the reaction might be ‘safe act’ meaning one would quit the task until the unsafe condition is modified or one could disregard the unsafe condition and continue the task (unsafe act). The reasons of failure to identify unsafe conditions and also the reasons that worker continue the task after identification of unsafe condition should be investigated by management.

H&S climate also affect the use of PPEs by workers (Cavazza and Serpe, 2009). Please see Cooper (2001) for a discussion on H&S climate in relation to organisational systems, leadership, risk control systems, H&S auditing, training and behaviour in the workplace. Cavazza and Serpe (2009) observe that organisational H&S concern, senior managers’ H&S concern, and supervisors’ attitudes towards H&S tend to be positively associated with the individual ambivalence level in terms of the use of PPE. In brief, the poor use of PPEs is indicative of the elements of poor management of construction H&S (Tam et al., 2004).

2.2 Attitudes towards Construction Health and Safety

Despite efforts to effectively prevent and control the cause of accidents in the construction industry, the problem of H&S in the industry is still a cause of great concern (Health and Safety Executive (HSE), 2003). Much of this concern can be minimised with the active involvement of the client, which will ultimately result in less incidents and accidents on site. Enshassi and Mayer (2004) state that if construction sites are to become safer, the major task is to change people’s attitude. In practise, for example, not all clients pay great attention to H&S management because of other business objectives such as profitability, schedule and quality (Zeng et al. 2004). Issues of H&S are rarely addressed by owners, engineers and contractors during the construction planning and execution processes (Rowlinson, 2004).

Thus, striving for enhanced H&S performance in Lesotho will remain elusive if the client is not actively involved in solutions. Huang and Hinze (2006) argue that the involvement of clients or owners is an essential requirement for the achievement of the zero harm goals. Other researchers have also recognised the importance of the client in the management of H&S. Suraji et al. (2001) noted that construction H&S can be successfully influenced by clients. To emphasise the point that clients are very important in the management of H&S, Suraji et al. (2001) argue in their paper on accident causation that construction accidents are caused by inappropriate responses to certain constraints in the environment. They observed for example that the client responses are the actions or failure to act in response to constraints that emerge during the development of a project. According to them, these include reducing the project budget, adding new project criteria, changing project objectives and accelerating the design or construction efforts of the project. These perceptions are reinforced by clients who abdicate their roles and put on H&S responsibilities on contractors.

Increasing research findings are beginning to highlight the gaps in enforcements (Geminiani and Smallwood, 2008). In essence, regulations alone are not a panacea in dealing with the challenges of H&S in the construction industry. Trained manpower also has a role to play in dealing with the matter. At the moment, anecdotal evidence suggests that there is a competency deficit in the sector in Lesotho. Most contractors do not have trained personnel who understand

the complexity of issues on the construction site and are able to come up with interventions. Though it would be unfair to paint all contractors with one brush, as some contractors may have employed competent H&S practitioners and the situation of those contractors would be better than those who do not have competent practitioners; contractors that lack competent H&S practitioners are the ones that have high potential to accommodate failures. It would also be good for the economy of Lesotho, if contractors whose H&S performance is poor learn from best practices. One of such best practice is the provision of required PPEs for workers on project sites.

Nevertheless, a proactive management of H&S requires the use of an approach that is not dependent on the monitoring of injuries after they occur (lagging indicators of performance) (Hinze, 2005). Rather than basing H&S actions on measures of failure, a shift in thinking is needed whereby the focus is on actions that can lead to good H&S performance (leading indicators of performance) (Hinze, 2005). The attitude of leaders plays an important role in cultivating a good H&S culture. As an illustration, a good leader will ensure that workers have all required protections in the form of PPEs while working on site.

3 Research Methodology

Qualitative research explores the attitudes, behaviour and experiences through interviews and focus groups. It aims to obtain rich perceptions from participants. As it is attitudes, behaviour and experiences which are important, fewer people take part in the research, but the contact with people yields expected rich data (Ritchie et al., 2014). Moreover, qualitative research focuses on meaning, language and cultural experiences in social context. This approach is concerned with understanding particular situations, rather than generalizing findings, so the method used in this study is analyses of interviews, and recorded observations (Thomas, 2011). Thus, face-to-face interviews that were preceded by on site observations were used to collect the responses to the research questions. Site observation is necessary to visually establish how construction workers use PPEs on site in Lesotho. Although pictures were prohibited in the sites, the researcher was able to identify poor use of PPEs on the selected sites and several other sites visited in 2014. Figure 1 is indicative of the extent of the problem in Lesotho. The picture was taken on a construction site in Maseru, Lesotho. The picture is one of the random construction site pictures obtained for the study. The interviewees include 12 construction workers in four project sites, four contractors in charge of the four project sites, and a represented of the Department of Labour (DoL) in Maseru, Lesotho. The interviewees were therefore 17 and for a qualitative study, the number is reported to be enough for data analysis (Thomas, 2011). In conformance to qualitative research tradition, the interviewees were purposively selected by visiting construction sites in which work activities were on going in Maseru (Tracy, 2013). The 17 interviewees were asked 10 open ended questions with the use of a protocol that was designed based on the research questions presented in section 1. The interview protocol is enclosed as annexure 1 at the end of this paper. The length of industry exposure of the interviewees ranges from 2 to 44 years. The interviewees hold certificates, diplomas and degree qualifications, and they were all fluent in the use of English Language, which makes the interviews less problematic. The textual data from the interviews were analysed thematically as shown in the discussion of the findings in section four of this paper.

4 Findings and Discussion

As mentioned earlier, interview data were collected and the analysis of the data provides the basis for the results in this section. The perceptions of the interviewees concerning the PPE issues are herein discussed in the next sub sections.



Figure 1. Illustration of poor use of PPEs in Lesotho construction (Source: Authors)

4.1 Attitude towards construction H&S in Lesotho

In response to questions related to the above mentioned theme, the interviewees from the DoL confirm that construction H&S is a priority in Lesotho as there are regulations that mandate stakeholders to fulfil their responsibilities. For example, he noted that employers have to advocate for optimum H&S compliance when appointing contractors. This employer interest motivates the contractors to exercise H&S effectively. The interviewed contractors also commented on the theme. According to the contractors in Lesotho the attitude of the employers regarding H&S are positive, this can be witnessed by the H&S practices that are carried out. As a good practice, the contractors mentioned the induction that is done for every worker regardless of their time in construction industry, as all sites are different and have a wide range of hazards that change as the site develops. They emphasised that every site has a specific induction and provides information on the current hazards of the site and provides the site rules. The inductions facilitate the type and use of PPEs on sites. The contractors also highlight that the DoL takes interest in how inductions are conducted on project sites.

It is however notable that the response of the interviewed workers is at variance with that of the contractors. The workers response regarding the attitude of employers is that employers do not care about their safety as they do not always go on site to check if the contractor exercises H&S according to the H&S plan that the contractor presented to the client. So the contractors take the advantage of safety of the workers because they are aware that follow ups are made infrequently or not even made at all. The workers says that there are some instances when safety officers are not on site, yet the regulations clearly state that there should always be H&S officer to check the workers processes to ensure they follow safety precautions. The workers confirm that inductions have to be made regularly irrespective of whether workers are newly employed or already have experience in construction as every project is unique. Every induction is specific to its site; it provides relevant information on the current hazards and informs workers on the rules for the specific site. It therefore inform on the type of PPE to be used by workers on each site. In brief, the interviewed workers say that in Lesotho inductions are not always done.

4.2 Possible reasons for poor use of PPEs in Lesotho

In response to poor use of PPE, the DoL representative says that it is not possible for workers to work on site without proper PPE as the contractors are aware of the consequences they face if they do not make it a point that PPE is available for workers. Moreover the DoL representative added that due to the fact that H&S officers are always on site, it is not easy for workers to work unprotected. This perception of the DoL representative clearly differs from that of the interviewed worker.

When the interviewed contractors were requested to comment of the poor use of PPE, they all agreed that PPE is required and compliance is mandatory. Although one interview flag gaps in the compliance aspect, he was of the opinion that PPE should be a compelling factor in terms of conditions of tender and supervising engineers should not permit work without it. The interviewee further says that inspections by the DoL should endeavour to close the compliance gaps. Even on-site audits by contractors should also be used by contractors to see where gaps lie. In their responses, most workers mention that PPE is not a standard measure as mentioned by the contractors because if it happens that they provide full PPE to the workers on arrival they do not make replacements when the PPE is no longer in good conditions. It is not possible for H&S officers to check workers' H&S compliance as they are not always present on construction sites. This is another gap that negates the intent of compliance. In the workers opinion with regards to compliance in terms of PPE use, the regulating bodies should have regular audits or inspections to check the construction sites, H&S officers should conduct toolbox talks on site to make workers aware of the risks involved in construction activities. It is important to note that PPE use cannot be compromised.

4.3 The role of the regulator of construction H&S in Lesotho

In Lesotho there are regulations that are solely government responsibilities to implement in the construction industry. Moreover the government responsibility through DoL organises inspections on construction sites to make a follow up on rules and regulations compliances. For non-compliant contractors, the group of DoL in inspection process draw up the report and give warning to the contractor and allow the contractor some time to rectify the mistakes observed, when the regulatory bodies come to make a follow up and find the situation to not be rectified, the contractor is taken to the courts of law. Clients in Lesotho are forced by law to take H&S as an important factor when choosing a competent contractor to carry out their projects. Clients when choosing the contractor look at their H&S plans and their reputation in H&S matters. This mechanism is in place so that clients do not award tenders to contractors with a bad reputation in H&S. The interviewed contractors confirm the response of the DoL representative. They opine that as required by law, clients are required to take a major role in construction H&S. In Lesotho the government sets the regulations and the clients ensure that the contractors are executing their work according to the regulations. Clients initiate this process by awarding the contract to the contractor with a good H&S plan, workers compensation insurance cover, and evidence of good reputation in H&S matters. Moreover, the interviewees note that the DoL ensures construction workers H&S by setting regulations and organising site inspections to ensure compliance by contractors.

The analysis of the responses from the workers show that they agree that there are regulations in Lesotho that are said to be governing the construction sector, but there is nothing done by the government to ensure compliance. There are workers who agree that the inspectors from the DoL do conduct inspections while others say they do not. If the main issue is to strive for zero accidents in construction all the on-going construction sites should be checked. On the part of the client, the workers say it seems in most cases clients do not take initiative in relation to H&S issues. According to them, this is why contractors take advantage of workers by not ensuring the good working conditions in terms of PPEs.

5 Conclusion and Further Research

Construction work on various sites is not only people intensive, but it could also be highly dangerous. Completion of tasks without the usage of required PPEs is not in the interest of workers, their employers, and the industry. This exploratory Lesotho study that focus on PPEs provides answers to the research questions of section 1 by pinpointing the reasons for poor use of PPEs in Lesotho through the perceived attitudes of employers in the construction industry. The study also flags the role of the DoL in this context. As illustrated in section 4, the interviewed workers are concerned about matters related to attitudes towards construction H&S in Lesotho. Whereas the DoL representative portrays the image that all is well, the contractors noted compliance gaps and the workers were unanimous about implementation and enforcement gaps. The study reveals that construction workers in Lesotho may proceed with construction site activities without the required PPEs due to either limited or total lack of requisite site inductions and inadequate H&S site supervision – no H&S officer on site.

These perceptions indicate that the government of Lesotho through the DoL should play a more active role to ensure compliance. When the responses from the DoL representative is reflected upon, one arrive at a conclusion that there are disconnections / misalignments between what is happening on various construction site as attested by the workers and what the regulator view as the status quo in Maseru, Lesotho. It is therefore suggested that:

- The government should establish a system to allow for constant monitoring and evaluation of the steady and careful application of the regulations by DoL officers to ensure that duties are executed with due diligence.
- The DoL should also ensure that a competent person inspects construction project sites at suitable and regular intervals to ensure complete compliance.
- Clients should improve their interest in H&S and appoint contractors that provide proper programmes that are consistent with national regulations to ensure the H&S of workers, especially in relation to PPEs.
- Employers and contractors should explore the costs for PPE measures and explicitly include it as part of tendering and costing for project execution.
- Contractors should ensure that PPEs are checked at regular intervals to ensure that they remain fit for purpose and site supervisors should not abdicate their H&S role by allowing the execution of work on site by workers that do not make use of required PPE.
- Workers should also wear PPE properly either as directed by their employer or in compliance with the instructions of the person in control of the construction site.
- Worker should also take care of the equipment; refrain from misuse of the equipment and most importantly, report defects and problems to their supervisors.
- Workers at a construction site have a right to proper information regarding their safety before they start of on a project. This information should be obtainable in a language that they can understand. In other words, inductions as mandated by the law must be properly conducted on project sites and it must include the basics such as the compulsory usage of PPEs.

6 References

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Annexure 1 - The Interview Protocol

Part 1: What is the attitude of employers to the H&S of construction workers in Lesotho?

1. Is H&S a priority in construction projects in Lesotho?
2. Is there a health and safety officer always on project sites?
3. Are the workers inducted for health and safety purposes on project sites?
4. Who is responsible and accountable for health and safety on project sites in Lesotho?

Part 2: Why do construction workers proceed with site activities without required personal protective equipment (PPE) in Lesotho?

1. Is PPE a standard measure for H&S on construction projects in Lesotho?
2. Does the health and safety officer ensure compliance in terms of the usage of required PPE on project sites in Lesotho?
3. Based on your experience in Lesotho, what can be done to control or assure compliance in terms of PPE use on project sites?

Part 3: What role should clients and the government in Lesotho play to ensure that construction workers' H&S are not compromised?

1. What are the contributions of the various government structures with regard to health and safety compliance on project sites in Lesotho?
2. As a major client of the construction industry, to what extent has the government of Lesotho worked to limit exposure of workers to health and safety hazards in the sector?
3. Do the inspectors from government departments check the extent of compliance with health and safety on construction projects?