

Factors Driving Construction Organisations to Implement Health and Safety within the Gauteng Province in South Africa: A Literature Review

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Abstract

Research about the implementation of health and safety (H&S) within the construction industry is necessary, as it promotes the significant impact of incidents and fatalities on construction organisations. As a result it encourages construction organisations to improve their H&S performances on construction projects. The aim of this paper is to establish the motives behind H&S implementation in construction organisations within the Gauteng Province. This paper presents findings from a literature review conducted from conference proceedings, journals, text books and dissertations. The findings of this study indicate the motives behind H&S implementation as follows: reduced cost of accidents and penalties; increased productivity, profitability and quality; client satisfaction; completion of projects on-time and preserving the image and reputation of the construction organisation. These results could assist construction organisations to set H&S as their number one priority, as little attention has been given to the objective of H&S implementation.

Keywords

Construction industry, health and safety, South Africa

1. Introduction

The construction industry is known for being highly dangerous and complex, despite the important role it plays as a contributor to economic growth (Smallwood, Haupt and Shakantu, 2009). Construction sites all over South Africa, in particular, produce enormous amounts of accidents annually (Smallwood, Haupt and Shakantu, 2009). Hamid, Yusuf and Singh (2003) added in saying that, despite the contribution to economic growth, this industry has been responsible for high rates of accidents and fatalities, placing them amongst one of the industries

with the highest rate of accidents, fatalities, and permanent- and non-permanent disabilities. According to statistics from the Federated Employer's Mutual Assurance Company (FEMAC) (2016), the Gauteng Province construction industry incurred accidents, as presented in Table 1. It is clearly visible that the number of accidents, although lower in 2014 (than in 2012, 2013 and 2015), is still high and costs companies enormous amounts. Furthermore, inadequate H&S results in lost days (representing time), cost and eventually quality. Okorie and Smallwood (2010) supported this by stating that the construction industry is responsible for the highest cases of lost workdays. Hamid *et al.* (2008) indicated that clients and contractors tend to focus more on profit maximization, and less on H&S implementation.

Table 1: Construction H&S statistics (as at June 2016)

Year of accident	No. of accidents	Lost days	Average cost/accid
2012	3873	45 269	25 694
2013	3954	38 060	27 272
2014	3654	31 294	28 422
2015	3840	30 520	31 682

Source: FEMAC (2016)

Health and safety is a humanitarian and economic concern that comes at costs and it needs proper management control (Muiruri and Mulinge, 2014). They further stated that the cost concern as direct costs (hospitalisation, medical costs, liability and property losses, sick leave administration, premiums for workers and temporary disability payments) and indirect costs (delays, payment for replacement of workers, training of new workers, *etcetera*). Construction managers tend to think profits will decrease and costs will increase when H&S measures are implemented on construction projects. However, it was found that investment in construction H&S increases profitability by increasing productivity and uplifting employee confidence, and it decreases attrition.

According to Smallwood (2002) and Smallwood *et al.* (2009), lack of H&S implementation results in: poor housekeeping, decline in productivity, programme delay, increased cost of accidents, increased compensation insurance claims and harm to the environment *etcetera*. It is therefore necessary to implement H&S in order to reduce the incidence of accidents. The reasons for implementing H&S have been highlighted in other studies, for instance, Smallwood (2010) to include legislation, financial issues, fines and penalties, quality, late completion and the reputation & image of the construction organisation. This paper reviews motives for implementing H&S in the construction industry in which cost, time and quality are usually the dominating parameters used in evaluating the success and which receive more attention and take preference over H&S in a project. As a result, a higher risk of accident becomes possible. The objective of the paper is therefore to identify motives which drive H&S organisations to implement H&S. To achieve this objective, a review of literature was conducted from databases including Google, Ebscohost, Google Scholar, Science Direct, *etcetera*. Materials were selected based on their relation to the subject under study. Keywords therefore included health, safety, organisation commitment, safety culture, safety implementation, construction industry and H&S improvement. The current paper provides information which would aid in understanding the motives why construction organisations are motivated to implement H&S.

□ **Motives behind health and safety implementation**

According to Smallwood and Haupt (2006), a project team's efforts to accomplish a project on time, and within quality and budget can be highly affected by accidents and its associated costs. Furthermore, bad publicity from such accidents may also damage the construction organisation's name and strain relationships between project stakeholders, where one is quick to blame each other, in terms of responsibility. The British Safety Council (2014) indicated that when an organisation invests in their employees' H&S, then the organisation invests in success and continuity. The motives which have been identified are discussed hereunder.

□ **Cost of accidents in the construction industry**

Darshi De Saram and Tang (2005) indicated that construction accidents have an immense impact on families and construction organisations in terms of damages and losses. The cost of a poor H&S record will, either earlier or later, reflect on the balance sheet of the construction organisation. Research done in South Africa estimated that 5% of a completed project's value is responsible for cost of accidents, whereas the implementation of H&S systems is estimated to cost between 0.5% and 3% of the total project value (Smallwood *et al.*, 2009). Therefore, the cost of accidents go beyond the cost of H&S. According to Hughes and Ferrett (2016) poor H&S management may lead to cost of accidents and reduced cost of accidents can be achieved through a positive H&S culture (Chinda and Mohamed, 2008). Costs of accidents can be classified as direct or indirect costs.

□ *Direct costs*

Hughes and Ferrett (2016) and Waehrer *et al.* (2007) defined direct costs as costs directly related to an accident, usually covered by the workers' compensation insurance premiums and may include hospitalisation, medical costs, liability and property losses, sick leave administration, premiums for workers and temporary disability payments. These costs are associated with the treatment of an injury and any compensation offered to injured workers (Hinze, 2006; Smallwood *et al.*, 2009).

□ *Indirect costs (Hidden costs)*

Griffin (2006), Waehrer *et al.* (2007) and Hughes and Ferrett (2016), defined indirect costs as costs that are not directly related to the accident but may result from a series of accidents. Griffin (2006) and Hughes and Ferrett (2016) agreed that these costs are the most evasive cost component associated with construction worker injuries, and the elusiveness of the indirect costs of these injuries lies in the lack of clear definition. Smallwood *et al.* (2009) and Hughes and Ferrett (2016) stated that typical indirect costs incurred by construction organisations are reduced productivity of the injured worker/s; reduced productivity of workforce; costs resulting from delays; additional supervision costs; costs of clean-up after the accident; costs resulting from rescheduling of work to ensure timely completion, *etcetera*.

2 The OHS Act (85 of 1993) and Construction Regulations 2014

Othman *et al.* (2008) briefly stated that the OHS Act 85 of 1993 and other H&S regulations set out critical standards to which the performance of companies towards production is expected to comply with and be monitored against. The Act firmly specifies that a H&S plan must be prepared and executed for the protection of all participants against hazards and risks of injuries at and around the working environment. According to Azimah *et al.* (2009), for H&S performance to be enhanced, the H&S legislation and regulations must be communicated on a regular basis.

3. Improvement in quality

Nicholas and Steyn (2012) defined quality as specifications or requirements that are being met. The authors identified that when construction organisations meet the project specifications, the chance that the organisation will be taken to court by the client is likely to be zero.

According to Adnan, Husin and Jusoff (2008), Quality Management may be defined as the arrangement of efforts to ensure that the requirements as specified are achieved on the first attempt, in order to avoid “rework”. “Rework” according to Collins COBUILD Dictionary (2006), is to re-organise the work and making changes to improve it. The Project Management Institute Staff (PMIS) (2013) agreed, for project quality to be satiating, one must plan for quality, perform planned quality activities and control quality. Wanberg *et al.* (2013) found a strong relationship between injuries and rework, due to the fact that rework involves unstable work processes, pressure from the schedule programme and demolition work.

4. Achievement of client satisfaction

According to Kärnä (2009) client satisfaction within the construction industry could be determined by the extent to which a physical facility and the construction process meet the client’s expectations. Omonori and Lawal (2014) added client satisfaction is essential when it comes to the construction process development and client relationship. The findings in Omonori and Lawal (2014) indicated that client satisfaction involves the quality of a construction project within budget, and affects the future of the company, as well as increasing profitability. A good H&S record will lead to a satisfied client, because the project will be completed on time (Zou and Sunindijo, 2015). Therefore, when the client is satisfied, the construction organisation will be more profitable and will have an increased reputation.

5. Timely completion of projects

According to Zou, Zhang and Wang (2007), who conducted a study on risks and their significance on project objectives, it was indicated that an improperly planned schedule would have a negative impact on workers, in terms of accidents. Moreover, Zekri (2013) supported the statement by implying that an unworkable schedule can deeply affect the success of project objectives in terms of safety, cost, quality and environment. When accidents take place or construction programs clash, the project schedule may be more delayed. In addition, rapidity of work and impracticable target deadlines by the client may also contribute to accidents. According to statistics from the FEMAC (2016), the number of workdays lost due to accidents in the year 2013 amounted up to 38 060, compared to 31 294 in 2014 and 22 163 in 2015.

□ **Preservation of the image and reputation of the organisation**

A good H&S record and safety management system (SMS) according to Holt (2005) and Ikpe (2009) are very important tools for expanding a business as well as attracting new clients. It was further stated by Li and Poon (2013) that if there is no proper safety measures implemented for the protection and wellbeing of workers, then the reputation of the organisation is at stake. The British Safety Council (2014) supported this by stating that an enterprise, in which a lot of injuries and accidents occur will be unattractive to current and future investors, as well as the public. Therefore, an organisation's image and reputation is linked with its H&S performance.

□ **Improvement in productivity and profitability**

According to Tangen (2005) profitability is most of time confused with productivity. Profitability considers the monetary effects, while productivity considers the real progression that takes place among purely physical phenomena. Pekuri, Haapasalo and Herrala (2011) stated that profitability is a critical indicator, when it comes to determining whether a company is making money. Productivity according to Lingard *et al.* (2007) improves when company H&S goals and objectives are clearly understood by all workers. For H&S goals and objectives to be understood, Gatti and Migliaccio (2013) suggested that management must ensure a higher level of supervision and communication. As a result of improved H&S, better services will be rendered with the same resources in a shorter timeframe. Through this attempt, cost overruns as well as accidents can be reduced (Wanberg *et al.*, 2013). This was reinforced through a study done by Aviva (2011), where it was found that if an employer invests in workers' H&S, the workers would be motivated to work harder. Further findings indicated that a safe and healthy workforce is far more productive than an unsafe and unhealthy workforce.

The above findings suggest that certain factors drive construction organisations to implement safety and that implementation of safety procedures and ensuring that workers practice H&S as they should, accidents will be reduced on construction sites.

3. Discussion and conclusion

The factors that drive construction organisations to implement H&S within the Gauteng Province in South Africa was identified and discussed. Seven factors were identified, namely: costs incurred, regulations, timely completion of projects, improvement of organisation's image, improvement in productivity and profitability, quality improvement and client satisfaction. The objective of the study was therefore achieved. Lack of H&S implementation will affect construction organisations negatively. Therefore, focusing on the drivers or motivators for H&S implementation for construction organisations will assist to improve H&S performance in the industry. The study has a major limitation, being a review paper. Therefore, further research could be conducted in order to determine the influence of the identified factors on H&S implementation.

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