A QUALITATIVE REVIEW OF THE HEALTH AND SAFETY LEADERSHIP ROLES OF MANAGERS IN SOUTH AFRICAN CONSTRUCTION

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ABSTRACT

Top management in an enterprise has decisive roles to play in terms of health and safety (H&S) management. A key role in this context pertains to leadership. The study that is reported upon assessed the H&S leadership styles and behaviours of managers in South African construction. The study, which follows the phenomenological approach, obtained information that highlights H&S practices in terms of leadership styles, behaviours and attitude of managers in the construction sector. The themes of the findings show that managers play critical leadership roles in managing workers' H&S on site; managers' leadership styles and behaviours have considerable influence on workers' at-risk work practices, and managers have the capability to drive team performance by creating an enabling environment for zero tolerance for H&S failures on project sites. Thus, the leadership styles and behaviours of construction managers is undoubtedly an important factor in shaping workers' H&S behaviours in the workplace. In promoting and sustaining optimum H&S in construction, managers should endeavour to appropriate management skills that embrace transformational leadership styles, commitment to H&S, and qualities that will help them to instil and maintain a positive H&S culture.

Key words: Adoption, BIM, collaboration, diffusion of innovations, single information source

1.   **INTRODUCTION**
    The construction industry has been classified as one of the most dangerous, difficult and dirty sectors to work in (2006: 13). The Construction Industry Development Board (cidb, 2009: i) reports that the industry has a poor H&S record, accidents in the industry being the highest of all industrial sectors, resulting in a third of all work fatalities. During the period 2007 to 2008, the construction industry experienced 160 fatalities and 14000 disabilities. In addition, there were over 120 000 days lost due to injuries and the total loss to the industry was excess of R3 000 million. This state of affairs is not peculiar to South Africa, as poor construction H&S performance is often cited as a global phenomenon. Relying on global statistics, the International Labour Organisation (ILO) (2005: 2) reports that:

- Each year there are at least 60 000 fatal accidents on construction sites;
- One in every six fatal accidents at work occurs on construction sites;
- In industrial countries, as many as 25 to 40% of work-related deaths occur on construction sites even though the sector employs only 6 to 10% of the workforce, and
- In some countries, it is estimated that 30% of construction workers suffer from back pain or musculoskeletal disorders (MSDs).

    Apart from the human cost, the economic effects of accidents can be devastating (Brauer, 2006: 23; Cooper, 2009: 36; Coke and Sridhar, 2010: 135). Even though the direct costs of accidents as a result of injuries, illness or property and equipment damage can be insured against, these direct costs are minor when compared with the indirect costs of an accident (Goetsch, 2013: 14). Thus, poor H&S leadership ethos among managers leads to numerous negative consequences that have financial implications. For example, McAleenan (2010: 56) points out that for every £1 of accident cost that an insurance company has to pay out; the contractor could incur £50 to £100 in indirect costs. The indirect costs range from product and material damage to legal costs (Hinze, 2006: 45). These costs have an adverse effect on the image and balance sheet of a firm and the national economy of a country.
    Research findings (Smallwood, and Haupt, 2005: 2; Choudy, 2007: 55) indicate that concerted efforts are required by all management levels within a contracting firm to achieve a sustained improvement in construction H&S performance,. Haslam, Hide, Gibb, Gyi, Pavitt, Atkinson and Duff (2005: 404), Gibb, Hide, Haslam, Hide, Gyi and Duff (2005: 5) and Sherratt and Farrell (2012: 374) maintain that optimum H&S performance depends largely on effective leadership at all levels of management. In addition, a strong H&S culture is needed in the construction industry for effective and efficient management of workers' H&S. Such H&S culture entails commitment, involvement, and participation of both the management and line managers.
    Injuries in the construction industry remain high despite numerous codes of practices developed specifically to manage workers' H&S more effectively. These codes define how to control the physical work environment, how to use tools, and how to perform certain procedures in the safest possible manner (Choudy, 2007: 51).

In addition, construction management textbooks provide detailed information for developing and maintaining H&S programmes in workplaces (Hinze, 2006: 23). H&S management systems such as H&S induction (Brauer, 2006: 13), H&S committees (McAleenna, 2010: 56), H&S training programmes (Smallwood, 2006: 2), worker involvement and participation (Cooper, 2009: 36), and zero-injury polices (Northouse, 2012: 3), have been suggested as ways of improving and developing teamwork in the industry that is comprised of different independent stakeholders, who often have conflicting goals. Through the promotion of the aforementioned interventions, some contracting firms have achieved remarkably low injury rates, and implement robust H&S management systems and demonstrate that construction operations can be performed safely (Oloke, 2010: 29).

Howarth and Watson (2009: 115) argue that managers should promote project H&S management, which results in lower site accidents and incidents. Studies comparing low and high accident rates have shown that on the safest sites, managers who demonstrated good quality leadership as a planner, an organiser, and a good role model for others have excellent H&S performance records (Hinze, 2006: 231). In terms of direct effects, managers can demonstrate their commitment to workers' H&S by prioritising H&S over productivity when production conflicts with H&S (Flin and Yule, 2003: 46). Managers' leadership and behaviours such as transformational leadership styles that aim at building trust and team spirit among workers is needed to sustain a high level of worker H&S performance in the industry (Northouse, 2012: 45). However, Sunidijo and Zou (2012: 3) point out that lack of intelligence and interpersonal skills have been found to negatively impact on managers in promoting a positive H&S culture. Hinze (2006: 241) concurs and states that a site which experiences poor H&S performance is one with an autocratic leader who is mostly dogmatic and lacks good human relations. Furthermore, when these attributes are lacking among construction managers, there is less than optimal H&S performance. The role of managers emphasise H&S as they constitute the conduit between top management and site managers with their crews, and play an important role in shaping workers' understanding by communicating to them the firms' H&S policies (Lingard, Blismas and Wakefield, 2005: 2). Roles that managers can play in this context are connected to the formulation of H&S policies for top management, supervision of the activities of supervisors, H&S officers, and coordination of affairs within the H&S department (Lingard et al., ibid).

Site managers have roles and responsibilities to achieve tasks and also to maintain the H&S of the workforce (Lingard et al., 2005: 2; Fisk and Reynolds, 2012: 343). They know the workers' problems as they are always with them. Furthermore, they interpret organisation policies and procedures, and provide management with feedback on construction site H&S performance. According to Flin and Yule (2003: 48) and Brauer (2006: 342), site managers or supervisors have contributed to changing the unsafe behaviours and unsafe acts of workers such as enforcing the use of personal protective equipment (PPE) on site.

Although management and leadership are used interchangeably, managers who have the ability and personality to direct, control, supervise, and show concern towards others in order to achieve organisation goals, are leaders. Documented research findings have shown that managers who show empathy and genuine concern for workers' H&S and welfare can retain them longer and motivate them to achieve higher performance (Lutchman, Maharaj and Ghanem, 2012: 34). Flin, O'Connor and Crichton (2008: 49) also argue that when managers emit transformational leadership qualities, employees are motivated, and this usually manifests as better H&S behaviour of workers.

Notably several studies have examined the effectiveness of the manager in promoting H&S performance in terms of site H&S induction of new workers, disciplining of workers, co-ordination of work activities, motivation of workers, and conducting of site H&S training. For example, a past study relative to supervisory roles in H&S performance concluded that lack of commitment among site managers or supervisors are contributory factors to unsafe conditions and unsafe acts on sites (Lingard et al., 2005: 1). However, this study was aimed at examining leadership styles and behaviours of managers in construction concerning H&S management practices, including strengths, limitations, and gaps. To this end, the study examined H&S leadership and behaviours of site managers in both large and small firms in South African construction.

2.   RESEARCH METHODOLOGY

The sample for the interviews was chosen among site managers to facilitate in-depth discussion and wider analysis of the major issues. The sample selection criteria include interviewees' knowledge in their fields, currently work at operational level in South African construction; more than five years' industry experience, and either a manager or supervisor in their respective firms. In addition, the sample criteria were in line with the research topic that seeks to examine the relevance of leadership and behaviours of managers on construction H&S management practices. The purposive sampling technique was used to draw participants from both large and small firms who were considered by virtue of their position within their organisations. It is notable that participants that work for large firms were managers that are saddled with contract administration responsibilities that include H&S, whereas participants from the small firms were owners whose responsibilities included H&S management. Although twenty-six managers were contacted at the beginning of the field work, only five firms agreed to take part in the study. The decision to proceed with the five participants was made based on the fact that the study at this stage is exploratory, and that a phenomenology based study can be conducted with five participants (Flick, 2014: 200). The interviews and discussions were conducted with due regard to ethical considerations governing this type of study.

The interview approach was chosen, rather than focus group protocols, due to problems and difficulties congregating ever busy managers for focus group discussions. A semi-structured interview was developed to guide the discussions.

The primary sources of the interview questions included an exhaustive literature review on construction H&S management practices (Lutchman et al., 2012: 56; Hopkins, 2008: 147). In addition, the questions allowed participating managers to discuss H&S best practices such as top management H&S leadership and ethical behaviours, frontline managers' leadership and behaviours, workers' H&S training, workers' involvement and participation, and obstacles to optimum H&S management.

The questions were structured to elicit responses from the managers on H&S management practices and leadership styles in their organisations. Interviewees were informed of the voluntary nature of their participation and they were assured of the confidentiality of their comments. The discussions with each interviewee were recorded on iPhone with the permission of the interviewee before transcription. The opinions and suggestions of the interviewees were recorded on iPhone. The researcher then captured the data on computer after each interview. The principal investigator listened several times to the recorded opinions and suggestions and personally transcribed them. To enhance validity of the findings, the transcribed versions were sent to the participants / interviewees who indeed vouched that accurate version of the discussions were obtained. After the transcription of the data, the analysis thereof brought about the identification of major themes in the form of:

- Poor H&S leadership and lack of commitment to workers' H&S;
- Lack of top management commitment to H&S;
- Frontline managers' leadership styles and behaviours;
- Influence of H&S training on workers' H&S behaviours;
- Workers involvement and participation in H&S decisions, and
- Obstacles to optimum H&S management.

3.   RESULTS AND DISCUSSION

The findings presented in this section are based on the perceptions from H&S managers, and risk managers that are knowledgeable.

3.1 Lack of top management commitment to H&S and poor leadership

The quality of leadership at the top level determines the H&S behaviours of workers on site. It is the responsibility of the top leaders to develop organisation H&S policies, allocate resources for H&S, approve H&S training of workers, and assign responsibility to managers and supervisors. In fact, organisation H&S is grown and nurtured by top leaders. Thus, it is the top management leadership, behaviours and commitment that influence the behaviours of other managers down the line. One of the managers from the large company put it this way:

- *"Companies' H&S management is determined by the top management".*
- *"They set the company's H&S policy and lead by example".*

- *"Regardless of the company size, it is the leadership styles of the top management that influences the H&S behaviours of managers and supervisors that translate to at-risk practices".*

Statements of supervisors from small firms include:
- *"The big bosses, owners of the companies never attended any site meetings".*
- *"We lead by example", a good H&S management system must come from the top…"*
- *"H&S culture has to start from the top, we at the frontline nurture it, by just reinforcing every day, by example".*

The traditional approaches to management have given way to leadership skills, which entail construction managers at all levels of management need to develop interpersonal skill, intelligent and transformational leadership qualities to meet up with contemporary management challenges. Sunindijo and Zou (2011: 1) contend that project personnel play an important role in construction H&S management that require them to have relevant capabilities. It has been argued that visible leadership demonstrated at the top level, have both a direct and indirect impact on organisational H&S outcomes. Leadership roles and behaviours particularly by the top leaders are the critical factors that drive organisation H&S performance and culture (Markiewichz, 2009: 20). Markiewichz (ibid) further maintain that effective H&S management in any construction organisation largely depends upon the top management commitment and visible leadership. For instance, top leaders develop organisation H&S policy, and assign responsibility, authority, and accountability to managers and supervisors. Thus, the leadership styles and behaviours of senior managers influence the H&S behaviours of the site managers / supervisors that directly impact on workers' H&S.

3.2 Frontline managers' leadership styles and behaviours
A strong link exists between managers and site supervisors' behaviours and at-risk work practices or unsafe behaviours of site workers. The safe and unsafe behaviours of managers and supervisors are often emulated by the workers. H&S culture within an organisation indicates the workforce's attitudes with respect to H&S. Leadership style, particularly at the site management level, helps to foster a supportive organisation H&S culture. For example, on site where the managers and supervisors go about without having their safety hats on are seen by workers as normal. In relation to the abovementioned topic, questions pertaining to H&S culture relative to H&S behaviours were asked: Do you wear your safety hat and reflective clothing while on site? How do you treat a case of a worker who did not wear his or her safety boots? Are these PPE adequately provided to workers? What are the procedures relative to incident and accident reporting and investigations in your company?

In response to these questions, a manager from a large firm said: "It is a mandatory rule in my company that all personnel on site must wear the safety hat and reflective clothing on site" and "Site H&S Committee is responsible for investigations of all reported incidents and accidents on site".

However, contradictory comments were recorded in this instance. The interviewee from a small firm made the following comments:

- *"Provision of PPE is grossly inadequate".*
- *"Sometimes workers are asked to buy".*
- *"We do not have H&S committee in place".*
- *"One of the managers said that our site H&S Committee is only active when a major accident occurs on site".*

Arguably, these comments indicate that poor site H&S management resulting from a lack of commitment to H&S and poor leadership among managers and site supervisors impacts negatively on H&S performance and organisation H&S culture.

3.3 Influence of H&S training on workers' behaviour

H&S training for personnel is an absolute requirement for an optimum H&S culture. Workers' H&S training not only increases their technical competencies, but also engenders commitment to their work. H&S training is very important to an organisation as it creates awareness for workplace H&S. Questions on how the interviewees regularly conduct site H&S training, types of H&S training, induction training and toolbox talks, were posed. Some of the verbatim responses include:

- *"In my company, we conduct H&S training to every new employee".*
- *"The company sends every supervisor for H&S training".*
- *"We conduct toolbox talks on every Monday morning before the week works start".*
- *Two supervisors from the small firms have different views. Their comments were:*
- *"Our weekly toolbox talks are dependent on the pressure of work".*
- *"On such situations our managers focus more on meeting the target".*
- *"Twenty to thirty minutes induction training may be given to new employees to join the team".*

Lack of worker H&S training is a serious challenge in the construction industry, particularly among small firms, despite the fact that H&S training helps in creating awareness about workplace hazards among workers. Hinze (2006: 132) asserts that safe work practices not only pay in terms of financial gain, but also company corporate image. It has also been noted by Okorie and Smallwood (2012: 592) that effective H&S training programme and H&S communication in a manner that the workers are capable of understanding, can provide numerous benefits such as fewer injuries, illness, better worker morale, and lower insurance premiums.

3.4 Worker involvement and participation in H&S decisions

Involving experienced workers in workplace H&S decisions is critical in the continuous H&S improvement process (Lutchman et al., 2012: 89). Workers feel more valued by organisations when they are involved in decision making, particularly in H&S matters that concerned their H&S and welfare. The followings questions were asked to site supervisors relative to worker involvement and participation: Do you attend management meetings where H&S matters are discussed? How many workers attend such meetings? As a site supervisor do you buy-in input(s) from experienced site worker under you? Responses from manager were in the line of: "I have never attended management meetings for H&S matters". However, one of the managers from the large firms agreed that he has attended such a meeting once, to present his reports on a fatal accident that occurred on site.

Lack of worker involvement and participation in construction site H&S matters is poor in South African construction. This fact was supported by research conducted by Haupt and Feng (2008). The study benchmarked H&S practices between Singapore and South Africa in terms of lack of worker involvement and participation in H&S management. The comparative study indicates that South African contractors have poorer H&S management systems relative to worker involvement in H&S decisions.

3.5 Comments regarding obstacles to optimum H&S management

Construction site activities are unique and the presence of subcontractors and transient workforce make it more complex. Management of subcontractors' workers on construction sites in terms of H&S has been identified as a serious challenge in terms of the improvement of H&S performance. Based on this premise, the following questions were asked: How do you manage your subcontractors' workforce to ensure that they comply with site H&S rules and regulations? In your position as a manager or site supervisor what are the obstacles to optimum H&S management?

Verbatim responses include:

- *"Subcontractors' workforce are problematic....they don't attend weekly toolbox talks".*
- *"Transient workforce is common in construction".*
- *"Poor H&S training"*
- *"Illiterate and uneducated workforce"*
- *"Unplanned work activities'*
- *"Lack of funds for H&S"*
- *"Poor H&S culture"*

These factors have also been recognised by researchers: transient workforce (Hinze, 2006: 23), poor H&S training (Hamid et al., 2008: 912; Haslam et al., 2005: 2), illiterate and uneducated workforce (Vazquez and Stalnaker, 2004: 121), unplanned work activities (Fisk and Reynolds, 2012: 122), lack of funds for H&S (CIDB, 2011: 27), poor H&S culture (Smallwood, and Haupt, 2005: 2; Spangenberg, 2009: 111).

Noting lapses that exist among site managers, Vredenburg (2002: 259), and Cox (2003: 2) pointed out that poor leadership qualities such as poor communication in the use of English language among site managers or supervisors, is a serious challenge in construction site H&S management. In addition, lack of empowerment in terms of skills development and interpersonal skills among the site managers or supervisors according to Zohar and Luria (2004: 322) and Wu and Fang (2012: 99) impact negatively on site H&S management. Lutchman et al. (2012: 203) identify the following leadership qualities among site managers and supervisors that are attributed factors to poor H&S management:

- *Poor H&S behaviour by setting low standards;*
- *Not be proactive in managing risks and H&S of workers;*
- *Lack of transparency and trust in their relationship among the workforce;*
- *Lack of competence and capability to workers' H&S;*
- *Not motivating workers to do the right thing: and*
- *Lack of care regarding workers' well-being.*

Drawing from the importance of leadership attributes of managers relative to effective project H&S management, it can be argued that managers need to be proactive, transparent and trustworthy, as role models in their relationship with workers. Additionally, managers should exhibit leadership qualities and behaviour that can motivate workers to do the right thing which in turn will result in promoting a positive H&S culture.

4. TRANSFORMATIONAL LEADERSHIP STYLE AND CONSTRUCTION H&S

The purpose of this study was to examine leadership styles and behaviours of managers concerning H&S management practices. There are few studies in the areas of construction managers' H&S leadership and behaviours, but much empirical studies have been conducted on site managers' H&S management's styles. The shift from traditional approach of management 'military command' to leadership skills suggests that transformational leadership may be an appropriate model for improving workers' H&S behaviours that would ultimately reduce construction site accidents and incidents. It is equally prudent to state that no single leadership style has the solution for a complex industry such as construction (Lee and Austin, 2011: 8).

Studies conducted by Krause (1997: 105; 2003: 3), Flin and Yule (2003: 45), Geller (2008: 26), Lee and Austin (2011: 3), Sunindijo and Zou (2012: 4) and Lutchman et al. (2012: 323) have established the existence of a strong link between leadership and workers' H&S behaviour. Autocratic, democratic and situational / transactional leadership styles when properly applied can positively influence workers' H&S behaviour. As noted, there are several important behaviours among these leadership styles that would theoretically be associated with high levels of workers' H&S performance.

For instance, situational / transactional leaders may develop workers to higher levels of maturity and maintain high productivity and in particular, develop interpersonal skills among site managers and supervisors. In contrast, leaders who take action when something goes wrong and do not encourage workers to develop their potential and contribute to decision making processes may not properly align with the cooperation needed for effective construction H&S management. Examining the relevance or theoretical rationale for transformational leadership styles and behaviour will reveal that it is highly applicable to influencing H&S behaviour of workers. This is because transformational leadership encourages workers to subscribe to group and organisational goals in preference to personal gain. It is well-known that sustainability of high H&S performance and culture is highly dependent on the trust that workers perceive from management. Transformational leaders set examples for workers, which are consistent with the organisational values and expectations, through exemplary behaviour (Achua and Lussier, 2010: 307). Geller (2008: 148) argues that a workplace culture that promotes employees' distrust of instructions from management is one that cannot develop a productive H&S culture. For instance, when a worker bypasses H&S standards to improve production and this is ignored by management, workers are lead to believe this is acceptable to management. This is in parallel with transformational leadership model.

Lees and Austin (2011: 3) state that the military style top-down approaches for H&S management no longer achieves the desired results, and consequently, injuries and accidents continue to occur at unexpected rates. The transformational leadership model, in which managers' behaviours are aimed at encouraging and building teamwork among workers, could bring about H&S performance improvement at all levels in an organisation. Further, transformational leadership styles encourage team coaching and up-down flow of communication, free environmental accident reporting and investigation. Thus, construction site managers with these leadership attributes can bring about the desired H&S performance improvement in the industry. Lutchman et al. (2012: 30) emphasise that workers always look toward leaders for guidance, especially in their quest to emulate those exemplary qualities of their leaders. Honesty and integrity of site managers are absolute requirements for creating a motivated workforce and improving workplace H&S culture. Transformational leadership styles empower workers by challenging them to think 'outside of the box' and to re-examine old methods of doing things (Lutchman et al., 2012; 45). Empowering workers through H&S education and training will result in greater job satisfaction, organisational commitment, and higher productivity (Geller, 2008: 49). Transformational leadership according to Lutchman et al. (ibid) entails support and commitment by leaders at all levels of management. It also encourages information sharing between managers and workers, with managers as good role models and mentors to workers. In addition, transformational leaders demonstrate genuine care for all workers and make H&S a part of an organisation's work culture (Luria, 2010: 1289). The transformational leadership style as argued by Northouse (2010: 67) emphasises a participatory or collaborative work environment that involves all workers in finding the right solutions to workplace H&S.

Thus, sub-optimal H&S performance is attributable to managers who cannot inspire workers by rewarding behaviour that supports safe work and creates a continuous learning environment.

5.   THE WAY FORWARD

Lees and Austin (2011: 1) argue that organisations may have volumes of written rules and regulations designed to achieve H&S performance improvement, however on their own these written rules and regulations will not achieve the objectives. A well written H&S policy without implementation is as good as waste paper in the dustbin. Successful implementation of an organisation's policy / mission or vision relative to workers' H&S depends largely on the quality of leadership. Krause (2003: 1) argues that the quality of leadership is the single most important factor that distinguishes successful from unsuccessful H&S improvement initiatives. This pointed out the most critical question, why do construction managers need to acquire leadership skills? Managers are motivated to improve productivity (Hopkins, 2007: 340). Of course there are other compelling reasons why construction managers need leadership skills. Some reasons include deep sense of integrity, ethical principles, and compliance to H&S laws and regulations (cidb, 2011: ii).

The relevance of leadership in today's competitive world is evident in all areas that require strategic planning. The demand for leadership skills for the past two decades is on the high side. Northouse (2010: 58) states that whatever the driver, the motivation for leadership commitment needs to be framed in a solid business case in which the articulation of best fit and associated returns in the same convincing terms as any business opportunity, including establishing H&S as a profit centre. This suggests that leadership skills and abilities are relevant for organisational H&S effectiveness. For instances, investigations into major accidents in the energy sector in the 1990s revealed that a key organisation factor in maintaining H&S in high risk industries is the quality of leadership. The Piper Alpha oil platform catastrophe that resulted in 167 fatalities, points to the failure of management. Similarly, investigations into the Chernobyl accident in the nuclear power industry shows that deficiencies in the H&S culture of the organisation were to be blamed. Furthermore, the recent incidents related to the BP / Transocean oil rig explosion in the Gulf of Mexico and explosion and fire at the Tesoro refinery in Anacortes, Washington DC: in 2010, where total of 207 lives were lost and 1 105 various injuries occurred, point to lapses in leadership. Investigations into these major catastrophes indicated leadership ineptitude and the inability to learn from past incidents such that similar incidents will not occur again (Lutchman et al., 2012: 74).

More so, Mangham (2006: 41) observes that leadership is the personal values that lead to outstanding managerial performance. Flin and Yule (2003: 45), as well as Northouse (2010:57) suggest that continuous improvement of H&S performance requires effective leadership at all levels of management. Furthermore, past empirical findings have shown that there is a strong relationship between leadership and worker's trust and credibility in the workplace.

The results of the interviews that were conducted for this particular study and findings from literature demonstrated that construction managers at all levels of management need to develop leadership skills and abilities in order to be able to address the complex nature of construction operations that is underpinned by human dynamics of the industry. The interviewees identified best leadership qualities and attributes, and emphasised the importance of workplace culture such as leading by example (role model), top management commitment, provision of adequate financial resources for H&S, adequate training and coaching of workers, bi-directional flow of communication, involving workers on H&S matters, and empowering managers to acquire leadership skills.

Notably, what seems to be problematic in construction is how to implement some proven leadership theories in an industry characterised by transient workforce that is composed of a large number of subcontractors, poor H&S training, illiterate and uneducated workforce, unplanned work activities, and poor H&S culture (Hinze, 2006: 23; Haslam et al., 2005: 2; Vazquez and Stalnaker, 2004: 121; Fisk and Reynolds, 2012: 122; cidb, 2011: 27; Smallwood, and Haupt, 2005: 2; Spangenberg, 2009: 111).

In addition, the results of this study recognise the need for leaders (managers) commitment and transparency towards workers' H&S. Managers of both large and small organisations strongly recommended H&S training for both workers and managers at all levels of management. Research has also documented the positive effects of training for both workers and all lines of managers as an effective tool for raising awareness of H&S issues and for empowering both to be aware of the existence of hazards in workplaces (Vazquez and Stalnaker, 2004: 121). On this note, Hopkins (2007: 584) argues that focusing on unsafe acts of workers as the only cause of poor H&S, without considering the critical H&S related behaviours of managers at levels of management may not results in significant performance improvement over time. In a similar manner, Wu and Fang (2012: 3) maintain that improvement in the areas of worker' H&S should be the responsibility of management since it is their leadership and behaviour that are most critical in creating and sustaining a positive H&S culture in an organisation. Fourie (2009: 41) argues that poor leadership among some contracting organisations has been associated with huge losses to the national economy, destruction of company assets and precious lives in South Africa. Thus, leadership commitment towards workers' H&S should permeate among managers and supervisors to beget sanity in overall project performance, H&S inclusive.

There were some limitations to this study. Workers were not interviewed for this study, as the study is limited to managers' leadership and behaviours on H&S performance in South African construction industry, although it can be argued that leaders' behaviours determine the workplace H&S culture. First, the few managers that participated in this study cannot lead to generalisation of findings. Second, the participated managers may likely be those who were more interested in workers' H&S than other managers. Third, logistics, time and financial constraints imposed difficulties in getting some of the potential managers interviewed.

Despite these limitations, the study provided an overview of the influence that positive leadership would have on the H&S of construction workers in South Africa.

6.   CONCLUSIONS

Leadership in construction H&S are a very complex and often subjective issue, but an understanding exists that 'good H&S is good businesses', and the tenet that productivity and H&S are influenced by leadership remains unproven. As noted in the citations of this paper, poor leadership not only impacts on overall project performance and stakeholders profit margins, but also has a serious negative impact on workers' H&S behaviours. The study has alluded to the notion that a perceived lack of integrity and transparency could manifest as poor H&S performance.

Thus, improvement of workplace H&S performance in the construction industry should entails top management leadership, and behaviours, which empowers line managers and the workers that they supervise. Developing managers' leadership skills and interpersonal capabilities will foster better understanding and trust between them and the workforce. A review of different leadership styles made a strong case for the adoption of transformational leadership attributes by managers in the construction sector. The idea is that managers who exhibit transformational leadership qualities, show real concern for workers and the public; they are transparent and act with integrity; and they strive to resolve complex problems and support developmental culture that is needed in the construction industry to promote workers' H&S performance.

The perceptions of the interviewees have added to the voices of researchers and scholars on better ways of improving workers' H&S. The leadership styles and behaviours of managers in construction industry have to engender optimum H&S performance through a collective approach to the management of H&S on construction sites.

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