

CLIENT ATTITUDE TO HEALTH AND SAFETY (H&S) – A REPORT ON CONTRACTOR’S PERCEPTIONS

I. Musonda, Department of Construction Management, University of Johannesburg, Johannesburg, innocentmusonda@yahoo.co.uk, Tel: +27(0)11 406 2911

Dr. T. Haupt, Department of Construction Management, Cape Peninsula University of Technology hauptt@cput.ac.za, Tel: +27 (0) 21 959 6637, Fax: + 27 (0)21 959 6870

ABSTRACT

Purpose – The purpose of this paper is to present findings of a preliminary survey on Contractors’ perceptions of clients, attitude relative to health and safety (H&S) implementation in Botswana’s construction industry.

Methodology – A questionnaire survey was conducted on construction projects to establish clients’ attitude towards H&S. Interviews were also conducted with contractor’s representatives on selected construction sites in and around Gaborone, Botswana.

Findings – Findings from the survey include: clients do perceive H&S to be very important on construction projects, most clients do not address H&S adequately in contract documentation and H&S is rarely a major agenda item in progress meetings. Findings were also that clients are not fully committed to H&S implementation. The Client sets the tone for H&S culture. Client attitude is therefore very important for H&S performance improvement as all stakeholders are compelled to act in line with the client’s values.

Originality / value – The importance of the client to H&S performance improvement has been recognised by various researchers. The extent to which they are involved in H&S implementation has however not been researched extensively especially in Southern Africa. This paper therefore provides an insight on the clients’ attitude towards H&S and in a way explains the reason for the current state of H&S in Botswana’s construction industry.

Keywords: Attitude, Botswana, Client, Construction, Health and Safety

1. INTRODUCTION

Although Botswana’s economy is dominated by the diamond mining industry which has been the largest contributor to GDP for the past thirty years, accounting for 38% of GDP, followed by services at 44%, construction also contributes significantly to GDP accounting for about 7% (<http://web.worldbank.org/WBSITE/EXTERNAL/>)

[COUNTRIES/AFRICAEXT/BOTS...](#)) .The construction industry has also been growing at a very high rate with a development expenditure estimated to be well over hundreds of billions of Dollars at least for the next ten years. What is notable as well in this part of Africa is that infrastructure is becoming more complex compared to the past years and inadvertently will cause many challenges for H&S.

The construction industry is dominated by a large number of small and medium size contractors having sprung from the citizen empowerment programs implemented in most Southern African countries. Most of the labour force is also either semi skilled or unskilled with little education. This poses a great challenge in managing H&S. Risks to H&S increases with a low level of awareness and lack of training.

Research conducted in Botswana revealed that the level of H&S awareness in the construction industry is low, H&S legislation is not complied with, the management of contractors is not committed to H&S implementation, there is a lack of H&S management systems, procedures, and protocol, and clients and designers do not adequately participate in the implementation of H&S (Musonda 2005). A similar study conducted by P. Van Ooteghem (2006) revealed that occupational accidents and fatalities continue to be recorded in Botswana. Between the period 2000 and 2003, a total of 251 occupational fatalities were registered with the workmen's compensation authority from all sectors (Ooteghem 2006). 96 accidents in the construction sector alone were registered with the workmen's compensation during the same period. Allowing this status quo to continue considering the contribution construction makes to the economy, the amount of labour force that is at risk, the anticipated complexity of projects that are going to be implemented, the human suffering that has occurred and continue to happen and considering the people that continue to face H&S risks, is totally un acceptable and thus the motivation for this study.

The need to find solutions to improve the above picture and work at building a better H&S culture in the construction industry is now just as compelling as before.

In this paper, a key proposition is that although safety is everyone's business, improving H&S performance would be realised with the right attitude by the client to H&S. Clients set tone for H&S.

2. BACKGROUND

2.1 Client role

Striving for a better H&S performance will remain elusive if the client is not seen to be actively involved in H&S implementation especially in Southern Africa. Huang and Hinze (2006) rightly argue that the involvement of clients (owners) is an essential requirement for the zero injuries objective. Other researchers have also recognised the importance of the client in the management of H&S. Smallwood (1998) noted that construction H&S can be successfully influenced by clients.

Suraji (2001) contends in his paper on accident causation that construction accidents are caused by inappropriate responses to certain constraints and the environment. He observed for example that the client (owner) responses are the actions or failure to act in response to constraints that emerge during the development of the project scope. According to him, these include for example reducing the project budget, adding new project criteria, changing project objectives and accelerating the design or construction efforts of the project. All of which are factors that impact on H&S.

Clients have a positive role to play in lowering injury rates (Smallwood: 1998, Hinze & Gambetese: 1991)

2.2 Client Attitude

Clients' attitude can be deduced from the extent to which they are involved in the management of H&S. Until now, as Smallwood observed (1998), the major agencies of client influence have been prescriptive, regulatory or coercive measures as opposed to upstream proactive measures such as design, detail and specification and more importantly prioritisation.

Clients can be seen to be more involved by for example clients setting H&S objectives, selecting suitable contractors in terms of H&S and participating in H&S management (Huang & Hinze: 2006). Smallwood outlines further by saying that clients should:

- Provide financial support;
- Include H&S as a prequalification criteria;
- Schedule H&S requirements prior to bidding process;
- Structure contract documentation to allow for H&S and,
- Conduct audits in H&S.

One of the areas where clients can show leadership and attitude to H&S is by conducting periodical audits. Auditing, if properly done, has many benefits for the implementation of H&S. According to Thompson (1999), successful auditing provides a methodical and comprehensive approach to the H&S program analysis. Auditing also identifies new areas of concern as the program and project evolves. It is clearly an essential activity for the client to undertake and tells of their attitude to H&S in construction.

In order to show commitment, clients should input adequate resources into construction H&S instead of relying on contractors (Huang & Hinze: 2006). Successful implementation of H&S also depends on the extent to which construction-project clients participate and assign resources to the process.

H&S performance improvement depends on the extent to which construction-project clients provide leadership on H&S matters. Loosemore, Lingard, Walker, and Mackenzie (1999) identified the importance of this and contend that the lead must come from clients themselves. They maintain that without this, the construction industry has a long way to go in changing attitudes towards H&S. Levitt and Samuelson (1993) also argued that monitoring which is one of the activities in providing leadership, makes a difference, and

that excellent H&S performance can be obtained with the active participation of clients, even from average contractors. If the clients are taking the lead, they must know exactly what is required to develop a detailed comprehensive brief for the design team and to issue H&S specifications. Further, as suggested by Suraji, Sulaiman, Mahyuddin, and Mohamed (2006) the client must take responsibility for preventing accidents. The client should carefully consider H&S control in ordering works, exercising supervision, and providing instructions. As Huang (2006) correctly put it, clients set the safety culture tone for a project.

3. RESEARCH METHODOLOGY

The study was quantitative and was aimed at determining the level of client commitment to H&S in construction projects. The survey instrument therefore needed to be designed so as to capture clients' actions or lack of it and perceptions from contractors as they are the direct implementers of project goals. Because of the type of data that was to be obtained, it was found that questionnaires with supervisory staff on construction sites coupled with physical observations constituted the best method to conduct the research.

Questionnaires were preferred to face-to-face interviews because respondents find it easier to answer questionnaires in privacy and during their spare time. On the negative side, the response rate is usually lower with questionnaires that have to be returned. Questionnaires are also a good way of obtaining information because it is cheap and less time consuming. A pilot study was conducted in the preliminary stages and the response rate was determined as being between 50% and 70%.

The questionnaire was designed to address among other areas, the clients' level of participation or commitment to H&S on construction projects. Both open and closed ended types of questions were used. Care was taken to avoid bias by providing for alternative responses by related and preceding closed questions. Respondents were asked to 'state or specify'. Closed questions were put before open-ended questions. Rating scales were also used for respondents to mark the level of importance, frequency, or severity.

On the clients' level of commitment, the evaluation was conducted through the following questions:

- Evidence of active participation, as seen in the client project meetings, by establishing whether H&S was a major agenda item;
- Respondents' view on how clients and designers regarded H&S in relation to other factors on a construction project;
- The purpose of the third question was to identify the respondents' opinion on how H&S could best be improved; client and designer participation is also included to assess whether respondents deemed it important, and
- The extent to which clients and designers address H&S in contract documents.

3.1 Analysis of Data

Primary data that was obtained through questionnaires and physical observations by using checklists was analysed and interpreted relative to secondary data obtained from the literature review. From observations and responses, inferences were drawn about the larger and general practice relative to client commitment and thus their attitude towards H&S.

The calculation of scores was also done to establish the order of importance or severity. A score was given to each factor. This was done by adding up multiples of the opinion and the number of respondents with that particular opinion. The marks have been allocated as presented in Table 1.

Table 1: Opinion marks on the level of importance.

Opinion	Mark
Very important	25
Important	20
Fairly important	15
Slightly important	10
Not important	5

3.2 The Population

The selection of the sample stratum was based on the following:

- Number of registered building contractors that were currently undertaking projects in Gaborone, Botswana;
- Limitations of time and financial resources, and
- Anticipated response rate.

A survey was conducted before the study and it was determined that there were at least 47 building construction sites in and around Gaborone. It is recommended that, for small populations of less than 100, there is little point in sampling (Leady and Ormrod 2001). The entire population was surveyed as a result. With a response rate of 50% to 70%, it was determined that at least 21 building contractors would respond to questionnaires.

The study excluded private homebuilders and civil engineering contractors. The justification for this delimitation was the time limit, resources, and the difficulty in obtaining information, especially from private homebuilders.

For the sample to be representative, it was ensured that all categories were represented in the study. The Public Procurement and Asset Disposal Board (PPADB) categorisation is based upon five categories: for projects worth up to P0.5 Million, between P0.5 Million and P1 Million, between P1 Million and P4 Million, and more than P10 Million.

A sample of 40 contractors was randomly selected. Each category contributed 8 contractors. The only exception was the lowest category because there were only 5 building construction sites at the time. Three more construction sites were randomly selected for the survey. Although some building contractors were working on more than 1 construction site, only 1 site was selected for each building contractor. As there were at least 47 active construction sites within Gaborone during the research period, this meant that all the contractors were surveyed. Table 2 tabulates the summary of the sample stratum.

Questionnaires were addressed to site managers, site engineers, and site agents as they are based on site and are able to relate what actually transpires on projects. This group was viewed as having sufficient knowledge and being impartial relative to top management and the actual practice on sites and their perception of the client.

Site observations were conducted for all 40 contractors that had been interviewed. Checklists were used to record or tick off the observed elements on sites.

3.3 Response Rates

In total, 40 questionnaires were distributed to building contractors. Twenty-five questionnaires were completed and collected by the researcher, which equates to a response rate of 62.5%. Response rates for all categories are as tabulated below in Table 3.

Table 2: Sample stratum

Category	Value in USD	Construction sites	Questionnaires distributed	Observations
OC	< 100,000.00	5	5	5
A	>100,000.00< 200,000.00	11	8	8
B	>200,000.00< 800,000.00	10	8	8
C	>800,000.00<2,000,000.00	8	8	8
D & E	>2,000,000.00	13	11	11
Total		47	40	40

Table 3: Questionnaire response rates

Category	Value in USD	Response (No.)	Response rate (%)
OC	< 100,000.00	1	20.0
A	>100,000.00< 200,000.00	3	37.5
B	>200,000.00< 800,000.00	8	100.0
C	>800,000.00<2,000,000.00	6	75.0
D & E	>2,000,000.00	7	63.6
Total		25	62.5

4. FINDINGS

Respondents were asked in question 1 how frequently H&S audits and inspections were conducted by clients and other key stakeholders. With respect to clients' commitment to H&S, 56% of the respondents indicated that clients had 'never' conducted H&S audits and inspections, and 28% 'rarely'. The above compared to 40% of the respondents who indicated that contractors top management 'never' conducted H&S audits and inspections, 36% 'rarely', and 20% 'often' (Table 4) showed a little bit of more commitment by contractors than clients. Only 8% of the respondents indicated that clients 'often' conducted audits and inspections. None of the respondents indicated that clients 'always' conducted audits and inspections. The clients' leadership in H&S and thus their attitude is even more questionable as over 50% of the respondents indicated that neither the supervising consultants nor the Government Factories Inspector conducted H&S audits and inspections. Supervising consultants are directly answerable to clients. The above may probably confirm the respondents perception that clients consider cost, time and quality to be more important than H&S (table 7).

Table 4: Frequency of audits and inspections by all stakeholders

Entity	Response (%)				
	Never	Rarely	Sometimes	Often	Always
Contractor top management	40.0	36.0	0.0	20.0	4.0
Client	56.0	28.0	8.0	8.0	0.0
Supervising consultants	52.0	20.0	16.0	12.0	0.0
Factories Inspector	56.0	32.0	8.0	4.0	0.0
Civil organisations	84.0	4.0	8.0	4.0	0.0

Apart from inspections, site project meetings are important events where all issues regarding H&S can be raised and discussed. To indicate the extent of participation by clients and designers or supervising consultants, the position that they accord to H&S on the agenda of project site meetings would be used for measurement. This is all the more true because they mostly visit the sites at the time of these meetings. Question 2, therefore, sought to determine whether H&S was a major agenda item during client progress meetings. 28% of respondents indicated that H&S was a major item on the agenda and 72% that it was not (Table 6).

Table 6: Status of H&S in progress meetings

Response	(%)
Yes	28.0
No	72.0
Unsure	0.0
Total	100.0

It was deemed that contractors would best describe clients' attitudes towards H&S. This would, in turn, explain the level of commitment by clients and designers. Therefore,

contractors were asked to rate the importance of various aspects to clients on projects. Remaining within budget was the most important, followed by contract period. Quality and avoiding litigation were ranked third and fourth, whilst H&S was identified as the least important (Table 7).

Table 7: Perceived importance of H&S according to clients

Aspect	Score
Remaining within budget	590
Contract period	565
Quality	555
Avoiding litigation	515
H&S	270

In an endeavour to further establish the extent to which clients participate in H&S, respondents were asked whether, in their opinion, contract documents always addressed H&S implementation. The reasoning behind this question was that one way in which clients would definitely participate in H&S implementation is through allowing and addressing it in the contract documents. Seventy-one percent of the respondents indicated that H&S was addressed and 29% that it was not addressed. A follow-up question to check the validity of these responses was posed. The responses ranged between ‘not being addressed’ and ‘being fairly addressed’. Only 4.2% and 8.3% of the respondents, respectively, indicated that H&S was ‘addressed’ and ‘fully addressed’ in the contract documents (Table 8).

Table 8: Extent to which H&S is addressed in contract documents

Scale	Extent	Response (%)
1	Not addressed	25.0
2	Slightly addressed	29.2
3	Fairly addressed	25.0
4	Addressed	4.2
5	Fully addressed	8.3
	No response	8.3
	<i>Total</i>	100.0

One of the other areas believed to be where clients could show commitment and leadership and thus their attitude towards H&S is in insisting and ensuring that contractors have safety programs in place. Respondents were therefore asked whether they had H&S policy, procedures, programs, meetings, representatives, and documented work procedures on their projects (Table 9). More than 50% of respondents indicated that they never had any of the above. Between 20% and 30% of respondents indicated that they had whilst less than 10% of respondents were not sure.

Table 9: Existence of H&S programme elements

Element	Response (%)			
	Yes	No	Unsure	No response
H&S policy	20.0	64.0	4.0	12.0
H&S procedures	28.0	60.0	0.0	12.0
H&S programs	4.0	64.0	8.0	24.0
H&S meeting	20.0	64.0	0.0	16.0
H&S representatives	12.0	68.0	4.0	16.0
Documented work procedures	32.0	56.0	0.0	12.0

Specifically, 64% of respondents responded in the negative relative to having the required elements of a management system.

5. DISCUSSION

Given the aforementioned, it can be concluded that the contribution by non-contractor stakeholders specifically clients and their agents, designers, is virtually non-existent. Such stakeholder input and commitment is cardinal and essential to H&S performance improvement and describes the clients' attitude towards H&S. The respondents' ratings of the perceived importance of H&S to clients reveal the extent to which the client is committed and attitude to H&S. Relative to cost, time, quality, and avoiding litigation, clients view H&S to be the least important aspect on a construction project. The attitude seems to be wrong here and it can be argued that this influences H&S performance in construction.

Based upon clients' attitudes and actions, respondents perceived that they considered H&S not to be important. Responses relative to whether H&S was a major agenda item in client progress meetings validates the perception rating - almost 71% of the respondents said that H&S was not a major agenda item. Client progress meetings are an important event during a project as all stakeholders are required to attend such meetings on site. It is also a forum where progress is evaluated and problems on site are discussed. If clients have the right attitude and committed to H&S it will be an agenda item. Standard contract documentation also does not reflect commitment by clients to H&S. Although 70% of the respondents said that H&S was addressed in contracts, only 8% indicated that it was extensively addressed. On average, 26% said it was not, slightly, or fairly addressed. A positive attitude towards H&S by the client would have had influenced a different perception by respondents especially regarding the rating of H&S among other traditional project parameters.

6. CONCLUSIONS

It can be concluded that participation and commitment by clients to H&S is low and thus in a way describes their attitude towards H&S which is seen to be negative because of the following;

- Clients and even designers never or rarely conduct H&S audits and inspections;
- H&S is not regarded as a major agenda item in clients' progress meetings; 72 % of the respondents indicated thus, and only 28% indicated that H&S was regarded as a major agenda item. Clients influence project progress meetings. With the right attitude therefore would have seen higher percentages of respondents indicating that H&S was a major agenda item and;
- According to contractors, it was found that clients and their agents, designers, regarded H&S to be the least important aspect on a construction project. It follows that, if clients perceive the importance of H&S to be low it is because their attitude is not positive towards H&S. In fact, avoiding litigation and quality was rated higher than H&S.

Clients set the H&S tone for construction projects. Their attitude therefore has great influence on the performance of H&S especially among smaller national contractors. Improving or addressing clients' attitude would greatly contribute to the improvement of H&S in the sector. The question however is, how can that be achieved?

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