

Health and Safety Regulation and Its Compliance Among Small and Medium-Sized Enterprises Contractors in Ghana

Zakari Mustapha, Clinton Aigbavboa and Wellington Thwala

Abstract The Ghanaian construction industry has been dominated by Small and Medium Sized-Enterprises (SMEs) contractors and this domination has been attributed to the rate of urbanization in the country. Whilst, poor Occupational Health and Safety (OHS) practices by these contractors have resulted in a high rate of occupational accidents. Non-compliance with Health and Safety (H&S) regulations among SMEs contractors' has led to their inability to manage Occupational Health and Safety (OHS). The purpose of the study was to identify the causes of SMEs contractors' non-compliance with H&S regulations. An extant review of literature was conducted, that provided the road map to source out information relevant to SMEs contractors' Health and Safety (H&S) practices in Ghana. The study adopted the Delphi survey method of data collection to investigate the study objective. List of experts (construction professionals and academics) were generated from peer reviewed conference proceedings and journal articles. A structured Delphi technique questionnaire was administered amongst the selected construction experts who consented to participate in the study. The rating of the SMEs non-compliance with H&S regulations were based on either the impact was considered to be high or very high. Data collected were analysed using Microsoft EXCEL, spread-sheet software. The findings reveal that limited knowledge of OHS, unavailability of H&S policy and knowledge on H&S policy implementation have high impact on SMEs contractors' non-compliance with H&S regulations. Other findings were that the SME contractors provided limited training to their employees on H&S regulations and management bottleneck. The study contributes to the body of knowledge on the causes of SMEs contractors' non-compliance with H&S regulations in the Ghanaian construction industry.

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Keywords Health and safety • Compliance • Regulation • SMEs contractors'

1 Introduction

The construction industry in Ghana is dominated by Small and Medium-Sized-Enterprises (SMEs) contractors [1–4]. Their domination has not improved on the OHS practices, but rather increased the accident rate in the construction industry in Ghana. Accidents and injuries are likely to be minimised if workers know the correct procedure in carrying out their activities and abide by them [5]. SMEs contractors play a role as sub-contractors for large firms and offer operational flexibility [1]. The compliance of SMEs contractors was found to have an effect on their compliance levels within individual employees in the construction industry [6]. SMEs contractors non-compliance with safety regulations is affected by their financial, expertise and staffing capabilities [6, 7]. Since SMEs contractors conceive compliance in a different way to the view of enforcers [7]. This paper attempts to demonstrate H&S regulations and its compliance among SMEs contractors in Ghana. The paper discusses OHS Act and SMEs contractors.

2 Design/Methodology

The Delphi survey was selected for the study based on the criteria that was developed from the research questions under investigation. Experts were made up of academics and construction professionals (building technologists and quantity surveyors). A Delphi Study is a group decision mechanism requiring qualified experts who have deep understanding of the issues at hand [8]. Experts were expected to meet a minimum of at least five (5) minimum criteria: residency—have lived in any of the Metropolitan/Municipal/District in Ghana at least more than one (1) year, knowledge—has knowledge of Health and Safety (H&S) in the construction industry, academic qualification—has been presented an earned degree (Bachelors-degree/Masters-degree/PhD) related to any field, certification of employment/experience focusing on construction development or sustainable issues, experience—has a history of or currently performing consultation services for the government of Ghana, individuals, businesses, agencies, companies, and or organizations, relating to construction or other sustainable development.

The experts must exhibit a high degree of knowledge of experience in the subject matter in addition to extensive theoretical knowledge, employment—currently serves (or has previously served) in a professional or voluntary capacity (e.g., at place of employment—institution, business, agency, department, company) as supervisor or manager of establish that is involved with construction or sustainable

development in Ghana, influence and recognition—has served or currently serving as a peer reviewer for one or more manuscripts received from a journal editor prior to its publication in the primary literature, with focus of the manuscript(s) on construction or sustainable development, authorship—is an author or co-author of peer-reviewed publications in the field of construction with emphasis in Ghana, has prepared and presented papers at conferences, workshop or professional meetings focusing on construction, sustainable development and H&S, research—has submitted one or more proposals to or has received research funds (grant or contract) from national, local government, regional, and or private sources that support construction, sustainable development and studies related to H&S, teaching—has organized, prepared, and successfully presented one or more H&S or sustainable development training workshops focusing on the group for which expertise is sought. The workshop or course must have been on H&S practices or has served as an individual or as a collaborative instructor in the teaching of one or more Polytechnics or University courses focusing on construction, sustainable development or related field, membership-member of a professional body (as listed on the expert questionnaire).

The expert should also be the representative of a professional body so that their opinions may be adaptable or transferable to the population and finally, willingness—Experts must be willing to fully participate in the entire Delphi survey. The selected experts for the paper represented a wide variety of backgrounds and guarantee a wide base of knowledge [9]. Rowe et al. [9] recommendations were adopted for the current study. The number of respondents should be large enough to ensure that all perspectives are represented, but not so large as to make the analysis of the results unmanageable by the researcher [10]. The adoption of five of these criteria was considered more stringent than the recommended number of at least two criteria by [9, 11]. The five minimum criteria were framed after the four recommendations made by [12], with the inclusion of experts' residency status, which was considered to be compulsory for all selected experts. This was considered significant because experts were required to have a wide-ranging understanding of H&S practices within their locality.

Nine (9) experts were used for the study and this number was considered adequate based on literature recommendations from scholars which have employed the technique previously. Hallowell and Gambatese [13] suggested that since most studies incorporate between eight (8) and sixteen (16) panellists, a minimum of eight (8) is reasonable. This was beyond the given limit in the current study. Hallowell and Gambatese [13] argued that the size of a panel should be dictated by the study characteristics, number of available experts, the desired geographical representation and capacity of the facilitator. Experts were asked to rate the impact of other factors in predicting H&S regulation and its compliance among Small and Medium-Sized Enterprises (SMEs) contractors in Ghana. Data obtained from the survey was analysed with Microsoft EXCEL, spread-sheet software. The output from the analysis was a set of descriptive statistics such as means, median, standard deviations and derivatives of these statistics.

3 Occupational Health and Safety Act and SMEs Contractors

Factories, Offices and Shops Act 1970, Act 328 and the Mining Regulations 1970 are the two major edicts in Ghana that provide guidance in the provision of OHS practice and management [14]. Considering the multifaceted distribution of industrial operations in Ghana, these edicts are fragmented and limited in scope. Even though, the concept of OHS was introduced in the Ghanaian industries before the introduction of the Factories, Offices, and Shops Act 1970 [14], but the Ghanaian construction industry which is dominated by SMEs contractors is faced with OHS problems.

The OHS regulation normally requires that SMEs contractors take some action likely to involve expertise, finance and management. Taking into account the characteristics of SMEs contractors, they are likely to find regulations difficult to implement because they have limited resources that result in strict control of staffing. There is also limited personnel to monitor changing legal requirements, interpret and implement the necessary control measures [7]. The Confederation of British Industry (CBI) notes that SMEs contractors have special needs of their own and are faced with the challenge of one or more of a group of special characteristics. Some of the special characteristics of SMEs contractors as reported in [7] are lack of specialist skills, low cash flow, small asset base etc. [7].

Arewa and Farrell [15] posited that SMEs contractors have limited time in dealing with regulatory requirements. While adequate OSH training and education as indicated by [16] will enhance the compliance of SMEs contractors with OSH regulations. Hence, this is not feasible due to lack the staff with the requisite knowledge in OHS regulations. Within the SMEs contractors, responsibility for dealing with regulations often fall on the proprietor who may not have any specialist skills. SMEs contractors do not have representatives when it comes to policy review, this denies them the opportunity to implement and monitor legal requirements [7].

4 Findings

Findings from the Delphi survey show that the factors that causes SMEs non-compliance with H&S regulations were varied in nature. From the ten (10) listed measurement variables that were identified by the experts to have effect on SMEs contractors' non-compliance with H&S regulations in Ghana. Only four (4) factors or measurement variables (limited company resources, unavailable Health and Safety (H&S) policy, limited knowledge of OHS and limited access to body responsible for the implementation of H&S policy) were considered by the experts to have reached consensus with IQD cut-off ($IQD \leq 1$) score on H&S

Table 1 Factors that causes SMEs non-compliance with H&S regulations

Factors that affect SMEs in not (to) complying with H&S regulations	Median	Mean	SD	IQD ≤ 1
Limited company resources	7.00	7.43	1.05	0.82
Unavailable health and safety (H&S) policy	8.00	7.71	1.28	0.71
Limited knowledge of occupational health and safety (OHS)	8.00	7.71	1.28	0.71
Inability to employ H&S personnel	7.00	7.00	1.07	1.25
Inability to train employees on H&S regulations	8.00	7.43	1.59	3.00
Lack of knowledge on H&S policy implementation	7.00	6.86	1.64	1.61
Lack of coordination of the implementation of H&S policy within the organisation	7.00	6.57	1.92	2.25
Limited access to body responsible for the implementation of H&S policy	7.00	7.00	0.93	0.25
Lack of cooperation from client	6.00	6.00	1.93	1.50
Management bottleneck	7.00	6.43	1.84	1.50

SD = standard deviation; IQD = Interquartile deviation

compliance as shown in Table 1. From the ten (10) factors or measurement variables, nine (9) had high impact (HI: 7–8.99) on factors that causes SMEs non-compliance with H&S regulations. Only one (1) factor or measurement variable had medium impact (MI: 5–6.99) on factors that affect SMEs non-compliance with H&S regulations (Table 1).

Results from the study revealed that the following ten factors or measurement variables were considered by the experts to have varying impact on SMEs contractors' non-compliance with H&S regulations.

- Limited company resources (HI)
- Unavailable Health and Safety (H&S) policy (HI)
- Limited knowledge of Occupational Health and Safety (OHS) (HI)
- Inability to employ H&S personnel (HI)
- Inability to train employees on H&S regulations (HI)
- Lack of knowledge on H&S policy implementation (HI)
- Lack of coordination of the implementation of H&S policy within the organization (HI)
- Limited access to body responsible for the implementation of H&S policy (HI)
- Lack of cooperation from client (MI)
- Management bottleneck (HI).

From the impact ratings of the factors, findings revealed that 9 of the factors or measurement variables have a high impact (HI: 7.00–8.99), while only one factor or measurement variable has a medium impact (MI: 5.00–6.99) and four other factors or measurement variables have medium impact.

5 Discussion of the Findings

This section presents the discussions of the findings from the Delphi survey on the factors that cause SMEs contractors non-compliance with Health and Safety (H&S) regulations. SMEs contractors are found not to be able to comply with H&S regulations due to several factors, some of which may be beyond their control and others out of their reach [6]. Findings are that SMEs contractors have limited company resources, knowledge of OHS and access to experts to implement H&S policy. These findings correspond with the findings of [6, 7]. Further findings revealed that SMEs contractors do not have ample time to discuss H&S policy [15]. Hence, the resultants of their non-compliance with H&S regulations.

6 Conclusion and Recommendation

The purpose of the study was to identify the causes of SMEs contractors non-compliance with H&S regulations. Findings have revealed that SMEs contractors lack resources and knowledge of OHS. Others are lack of access to H&S experts and time to discuss about H&S. It is recommended that government should make it mandatory for all SMEs contractors to employ H&S personnels. SMEs contractors should make funds available for H&S training of their. A workshop or seminar should be organized by the H&S personnel to educate other employees on H&S issues.

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