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# An assessment of health & safety measures at construction sites: A case study of Qasimabad & Latifabad, Hyderabad

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**Abstract:** Health and safety issues have always been a major problem and concern in the construction industry especially in developing countries like Pakistan. The main aim of this research is to investigate the health and safety measures adopted on different construction sites of Qasimabad and Latifabad, Hyderabad. In order to collect the data, a questionnaire survey and interviews were conducted from different stakeholders from sixteen projects in Qasimabad and Latifabad. The results revealed that all construction sites have a lack of health and safety facilities such as safety officer, first aid box, permit to work, PPE's, signboards, mobile elevated working platforms, and awareness. Therefore, it is highly recommended that prior to the execution of any construction work, proper training and all health and safety facilities must be provided so that human life can be saved from different accidents.

**Keywords:** Construction Industry, Health and Safety, Hyderabad, Qasimabad and Latifabad.

## I. INTRODUCTION

Construction process is complicated and vigorous in nature, where every project has different and unique characteristics. Almost every project of construction involves numerous phases including project feasibility study, designing, planning, implementation, decommissioning, demolition and clearance. During each phase various professions are involved. Besides, various professions, multiple stakeholders are part of construction project among which most important are client, consultant and contractors. Since, construction industry is industry which deals with labor all the time. Workers face not only variety of risks but are also susceptible to diseases when they execute their work[1]. Therefore, construction industry is counted as one of the difficult professions in the world. Among health and safety issues in construction sector, lot of accidents occur in many countries around the globe. Hence, it is the reason that construction industry is called as poor industry regarding implementation of health and safety standards especially in developing countries like Pakistan [2].

Pakistan do not have proper Occupational Health and Safety (OHS) legislation; even few industries in Pakistan, do not included in labor policy nor in the OHS legislation. Moreover, Pakistan current OHS legislation has many inconsistencies and it also does not cover agricultural and construction sector [3]. Construction in Pakistan and India, involves more labor than any developed country of the world, including 2.5-10 times as many workers per activity [4]– [10]. Therefore, the main aim of this study is to investigate the health and safety measures on different construction projects in Qasimabad and Latifabad, Hyderabad.

## II. MATERIALS & METHODS

### A. Construction Projects

About 16 construction projects were selected which are currently under construction in Qasimabad and Latifabad, Hyderabad. These construction projects including both commercial and residential plaza with minimum 3 and maximum 14 stories as shown in Table 1. These sites were selected based on construction work running.

### B. Data collection

For the collection of data, a questionnaire survey consisting of 13 questions was designed. The data was collected by conducting questionnaire survey and interviews from the site in charge, safety officer (if any) and labors working there.

## III. RESULTS

### A. Safety officer

No safety officer was found to ensure health and safety practices at all construction projects excluding Abdullah sports tower, hero square and hero tower and mall (see Table 2).

### B. Health & Safety rules

All construction projects were running without following health and safety rules (see Table 2) which may result in any serious injury/death of worker working there.

### *C. Personal Protective Equipment's (PPEs)*

Personal protective equipment's play an important role for the defense of worker. PPE for construction crews include hard hats, hand gloves, safety shoes, safety glasses etc. [11]. Since, PPEs (only hard hat and gloves) were available at all construction projects running in Latifabad and Abdullah sports tower, Qasimabad. However, other construction projects running in Qasimabad do not have provision of any PPE (see Table 2). Moreover, during field visit, we found that most of workers do not use PPE even they have access to it and few workers use them, when management visit site.

### *D. First-aid box*

Since, construction site is workplace having lot of risks involved [12]. Therefore, at construction site first-aid kit must be present all the time to meet high-risks need. However, we did not find any first-aid kit at any construction site as shown in Table 2.

### *E. Safety sign boards*

Construction safety signs are important and they convey some information at site [13]. Therefore, it is necessary to have them on site to avoid any accident/incident. However, during survey, we did not find any safety signs at any construction project as shown in Table 2.

### *F. Mobile elevated working platforms (MEWP)*

MEWP are equipment's which are mostly used in construction industry for working at height [14]. Provision of MEWP at sites lead to safe working environment with no or less hazard. But no construction project was found with MEWP available (see Table 2).

### *G. Work Permit*

No work permit procedures or rules have been found on any construction projects (see Table 2). Since, it is necessary for working in confined space as it is formal written document, used to control certain work activities that involve hazards.

### *H. Accident/Incident*

From questionnaire survey, it has been found that one accident has been occurred at construction site of Makhdom plaza (see Table 2). Furthermore, to find its root cause, interview was conducted from site in charge. The worker was taking the steel rod without any PPEs and the steel rod encounter 11000 V electric wire which results in electrocution and worker died.

### *I. Training*

No training is provided to the workers of different construction projects regarding health and safe acts during work as shown in Table 2. Workers are unaware regarding health and safety measures and importance of using PPEs.

## IV. RECOMMENDATIONS

We recommend all construction companies/contractors/owners/engineers/safety officers/site in charges/workers of different construction projects to consider health and safety as a serious issue. It is the responsibility of every individual to save his/her own life and others working around them. Construction companies/contractors should strictly assign safety officer at construction site in order to provide safe working environment. Additionally, it is the sole responsibility of safety officer to give proper safety trainings to every individual involved in the project in order to avoid any accident/incident. Moreover, he/she should also make ensure that all important facilities such as first-aid box, MEWP, PPEs are available at site and everyone is using them if required. Furthermore, safety sign boards should be used wherever required and everyone should follow health and safety rules as indicated by safety officer at the site. Additionally, this study only focused on two areas of Hyderabad, therefore, we recommend to expand this study to cover entire Hyderabad city.

Table 1: Construction projects in Qasimabad and Latifabad

Project code	Project Name	Construction Company/Contractor	Category	No. of stories	Taluka
P1	New Saddar Shopping Mall	Hyderabad Builders & Developers	C & R	6	Qasimabad
P2	Hayat Residency	Blue Bell Builders	C & R	11	Qasimabad
P3	Karim Sweet apartments	Contractor - Nisar Shedi	C & R	9	Qasimabad
P4	Makhdom Plaza	Contractor - Shakeel Abro	R	3	Qasimabad
P5	Residencia Mall and Apartments	Hyderabad Builders & Developers	C & R	9	Qasimabad
P6	Abdullah Sports Tower	Osmania construction company	C & R	11	Qasimabad
P7	Zainab Bibi Apartment	Cannot determined	C & R	7	Qasimabad
P8	Burj Al Shams	Contractor -Ali Muhammad	R	8	Qasimabad
P9	Meridian Mall	Shams Builders	C	9	Latifabad
P10	Mall One	Fazal Builders	C	9	Latifabad
P11	Dawood Super Market	Meezan Builders & Developers	C	14	Latifabad
P11	Unique Shopping Mal	Contractor -Rahim Khan	C	7	Latifabad
P12	Orient Mall & Residency	Orient Builder and Developers	C & R	9	Latifabad
P13	White City Mall	Model Construction Company	C & R	13	Latifabad
P14	Hero Square	Hero Construction Company	C	7	Latifabad
P15	Hero Tower and Mall	Hero Construction Company	C	7	Latifabad
P16	Emirates Tower	Tahir Construction Company	C	9	Latifabad

C&amp;R -= Commercial &amp; Residential; C= Commercial; R = Residential

Table 2: Questionnaire Survey result -availability of facilities at different construction projects

Project code	Safety Officer	Health & Safety Rules	PPEs	Use of PPEs	First-aid facility	Safety sign boards	MEWP	Work Permit	Accident/Incident Occur	Training Provided
P1	NA	NF	NA	No	NA	NA	NA	NR	No	No
P2	NA	NF	NA	No	NA	NA	NA	NR	No	No
P3	NA	NF	NA	No	NA	NA	NA	NR	No	No
P4	NA	NF	NA	No	NA	NA	NA	NR	Yes	No
P5	NA	NF	NA	No	NA	NA	NA	NR	No	No
P6	A	NF	A	Yes/No	NA	NA	NA	NR	No	No
P7	NA	NF	NA	No	NA	NA	NA	NR	No	No
P8	NA	NF	NA	No	NA	NA	NA	NR	No	No
P9	NA	NF	A	Yes/No	NA	NA	NA	NR	No	No
P10	NA	NF	A	Yes/No	NA	NA	NA	NR	No	No
P11	NA	NF	A	Yes/No	NA	NA	NA	NR	No	No
P12	NA	NF	A	Yes/No	NA	NA	NA	NR	No	No
P13	NA	NF	A	Yes/No	NA	NA	NA	NR	No	No
P14	A	NF	A	Yes/No	NA	NA	NA	NR	No	No
P15	A	NF	A	Yes/No	NA	NA	NA	NR	No	No
P16	NA	NF	A	Yes/No	NA	NA	NA	NR	No	No

NA = Not Available; A=Available; NF = Not followed; F=Followed; NR=Not required; R=Required.

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