CHAPTER FOUR

RESULTS

This chapter presents the survey results of the six parts. Firstly personal information, the second Part Response among the officials, part three accidents during the work. The fourth, fifth and sixth part to investigate training safety procedures, regulations, policies, and accident prevention methods related to the construction projects in Khartoum.

4.1 Data analysis and hypothesis testing

This section includes initial and basic study data analysis and testing of hypotheses in the following manner:

I. Preliminary study data analysis

Preliminary data of the study include the following characteristics.
4.2 personal Information.

Figure 4.1. The distribution the sample according to gender

Participated in the questionnaire are meals and Females of the respondents in Kkartoum. 61 questionnaires have been distributed and the response rate is 73%. 8% of the sample, and the 26.2% Female.
Figure 4.2: Academic qualification

Figure (4.2) show respondents who record academic qualification as 47.5% for Bachelor and 26.2% for postgraduate and diploma.
Figure 4.3. Age in year

Figure (4.2) show respondents according to their Age as 24.6% for who are less than 25, 37.7% for who are between (26–30), and 24.6 for those in rang (31–40), 9.8% for Age between (41–50) and 3.3 for respondents more than 50.
Figure 4.4: experience in year

Figure (4.4) show respondents according to their experience in year 38% for who are less than 5 year, 28% for who are between (6-10), 21% for those in rang(11-15), 8% for Age between (15-20) and 5% for respondents more than 20 year.
4.3 Response among the Official

参与问卷调查的有两类受访者：承包商和顾问。共分发了61份问卷，顾问的响应率为64%，承包商的响应率为36%。图4.5显示了受访者的响应率。

**Figure 4.5.** Response among the Official

参与问卷的有两类受访者：承包商和顾问。共分发了61份问卷，顾问的响应率为64%，承包商的响应率为36%。图4.5显示了受访者的响应率。
4.4 Deaths in last five year:

Table 4.1: Number of Deaths in last five year

<table>
<thead>
<tr>
<th>No. of Deaths</th>
<th>Frequency</th>
<th>Percent</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>There is no</td>
<td>51</td>
<td>83.6</td>
<td>83.6</td>
</tr>
<tr>
<td>2</td>
<td>1–3</td>
<td>8</td>
<td>13.1</td>
<td>13.1</td>
</tr>
<tr>
<td>3</td>
<td>8–12</td>
<td>1</td>
<td>1.6</td>
<td>1.6</td>
</tr>
<tr>
<td>5</td>
<td>more than 12</td>
<td>1</td>
<td>1.6</td>
<td>1.6</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>61</td>
<td>100.0</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Table 4.1 shows respondents who record academic qualification as 47.5% for Bachelor and 26.2% for postgraduate and diploma.
4.5 documentation of Accidents.

![Pie chart showing 61% and 39%]

Figure 4.6. documentation of Accidents

A high percentage of the respondents said that there is no accidents documentation in construction companies, and almost of the respondents (Contractors, consultants,) in the Khatoum did not keep records of the size, nature, cause, and results of the injury just the real injuries.
4.6 Ingries in last five year.

A 52.8% percentage of the respondents believed that the number of accidents rates between (1-5) accidents on construction site.
4.7 Rate Accedance in last five year.

Figure 4.8. Rate of Accedance in last five year

A high percentage of the respondents believed that the fixed number of accidents rates on construction site in last five year, and 28% of respondents believed the accidents increased and 25% they believed the accidents decrease.
Table 4.2: The Degree of Injuries.

<table>
<thead>
<tr>
<th></th>
<th>low</th>
<th></th>
<th>medium</th>
<th></th>
<th>high</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Frequencies</td>
<td>percent</td>
<td>Frequencies</td>
<td>percent</td>
<td>Frequencies</td>
<td>percent</td>
</tr>
<tr>
<td>1</td>
<td>7</td>
<td>11.5%</td>
<td>4</td>
<td>6.6%</td>
<td>49</td>
<td>80.3%</td>
</tr>
<tr>
<td>2</td>
<td>8</td>
<td>13.1%</td>
<td>47</td>
<td>77.0%</td>
<td>6</td>
<td>9.8%</td>
</tr>
<tr>
<td>3</td>
<td>46</td>
<td>75.4%</td>
<td>10</td>
<td>16.4%</td>
<td>6</td>
<td>9.8%</td>
</tr>
<tr>
<td>total</td>
<td>61</td>
<td>100%</td>
<td>61</td>
<td>100%</td>
<td>61</td>
<td>100%</td>
</tr>
</tbody>
</table>

Types of injuries among the respondent during the last five years that highlight 75.4% of the light injuries, 16.4% partially injuries and 9.8% that caused permanent inability (permanent).
Table 4.3 Reasons of accidents:

<table>
<thead>
<tr>
<th></th>
<th>Unsafe Behavior during the work</th>
<th>Unsafe work Environment</th>
<th>Personal Reasons</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Frequencies  percent</td>
<td>Frequencies  percent</td>
<td>Frequencies  percent</td>
</tr>
<tr>
<td>1</td>
<td>8 13.1%</td>
<td>5 8.2%</td>
<td>46 75.4%</td>
</tr>
<tr>
<td>2</td>
<td>8 13.1%</td>
<td>45 73.8%</td>
<td>10 16.4%</td>
</tr>
<tr>
<td>3</td>
<td>45 73.8%</td>
<td>11 18.0%</td>
<td>5 8.2%</td>
</tr>
<tr>
<td>total</td>
<td>61 100%</td>
<td>61 100%</td>
<td>61 100%</td>
</tr>
</tbody>
</table>

Responses of accidents among the respondent during the last five years that high rate 73.8% for Unsafe Behavior during the work, 18.0% for unsafe work Environment and 8.2% for Personal Reasons.
4.8 Training and Qualification

Figure 4.9: external monitor of safety

55.7% of the respondents disagreed that there is external institution that monitor safety in construction, enlightenment of the construction employs, in applying safety legislation, or help in improving safety performance in construction sites in the Khartoum.
52.5% of the respondents disagreed that there is regular monitor for safety in construction, enlightenment of the construction employs, in applying safety legislation, or help in improving safety performance in construction sites in the Khartoum.

**Figure 4.10**: regular monitor of Safety
A high percentage of the respondents disagreed that the enough duration in construction site were due to the first management carelessness and lack of legislation and careless of the consulting.

**Figure 4.11.** Duration of safety monitor
4.9 Regulations Availability.

**Figure 4.12:** Internal systems

44.3% of the respondents disagreed that there is an internal system for safety in construction, enlightenment of the construction employs, in applying safety legislation, or help in improving safety performance in construction sites in the Khartoum.
A high percentage of the respondents (47.5%) disagreed that the internal regulations in construction companies.

**Figure 4.13:** internal regulations
A high percentage of the respondents (47.5%) disagreed that the procedures availability in construction companies.

**Figure 4.14**: procedures availability
4.10 Regulations updating

Figure 4.15: employments satisfaction

(34%) of the respondents believed that the disagreed there is the employment satisfaction, although 31% strongly agreed.
Figure 4.16: safety rule updating

(42.6%) of the respondents believed that the agreed the updating of regulation will reduce the accents.
(43.4%) of the respondents believed that the agreed the updating of regulation will reduce the accents.