CHAPTER IV

CURRENT SUPERVISORS' BEHAVIOR ON SAFETY ACTIONS AT CONSTRUCTION SITE

This chapter aims to explore the current practice of supervisor's behavior on safety action at construction site and test the hypothesis about the relationship between supervisors' behavioral intention and their current behavior. Chapter starts with section 4.1 which describes the characteristic of the survey and data which used to analyze in this chapter. Next section 4.2 describes the characteristics of respondents. Following section 4.3 expresses the current status of supervisor on safety actions through their behavior. Then section 4.4 describes supervisor behavioral intention base on simulated situations. Finally, linear regression is used to test the hypothesis in section 4.5.

4.1 Descriptive Survey Data

4.1.1 General Survey Details

The research questions were developed with the intent of achieving research objectives. The questionnaires contented four main sections as discussed in chapter 3, respondents were asked to complete at the same time. Data collection took place on March and April 2010 in Vietnam. Each respondent was interviewed in person to complete questionnaire. From the survey, 800 questionnaires were distributed to supervisors who were currently working at 39 construction sites and one Cultivate Professional Supervision in Construction course in Hochiminh city, one of the most developing cities in Vietnam. Finally, 434 respondents were completed and collected, ratio respond is 54.25 percent. In other to achieve high quality and cooperated responds, each supervisor was interviewed in person associating with questionnaire checklist. It took approximately fifteen to thirty minutes for each respondent who willing to contribute opinion.

4.1.2 Statistical Analysis

Data were screened using the complete sample (N = 434) prior to the main analyses to examine for accuracy of data entry, missing values, and fit between distributions and the assumptions of necessary analyze tools. After deleting unusable cases, 403 data are used in general purpose, however only 241 data are used for behavior and behavioral intention analyze.

4.1.3 Data Screening

Prior to analyses and using the usable sample (N = 403), it is important to check for mistake initially. So data were examined for accuracy of data entry, missing values. The data screening process involves a number of steps which are first step checking for error; second step finding the error in the data file and third step correcting the error in the data file. The accuracy of the data file was checked by proofreading a random sample of 100 of the original data against a computerized listing. In addition, the Frequencies and Descriptive statistic command in SPSS Version 17 was used to detect any out of range values. None were found.

4.2 Respondent Profile

4.2.1 Educational Background

Level of education is one factor that influences the level of safety behavior of supervisor at construction site. In this study, respondent's educational background is classified into three (3) groups. The results of the analysis are shown in Table 4.1 and Figure 4.1.

The data show that 36 people or 8.9% of the respondents have high school background, 352 people or 87.3% have undergraduate qualification and 15 people or 3.7% with post graduate education. Almost all respondents have acceptable education background so they can representative for supervisor level at construction site.

Table 4.1 Supervisor educational background (N=403)

Educational Background	Frequency	Percentage	Cumulative Percentage
Completed high school	36	8.9	8.9
Undergraduate	352	87.3	96.3
Graduate	15	3.7	100.0
Total	403	100.0	

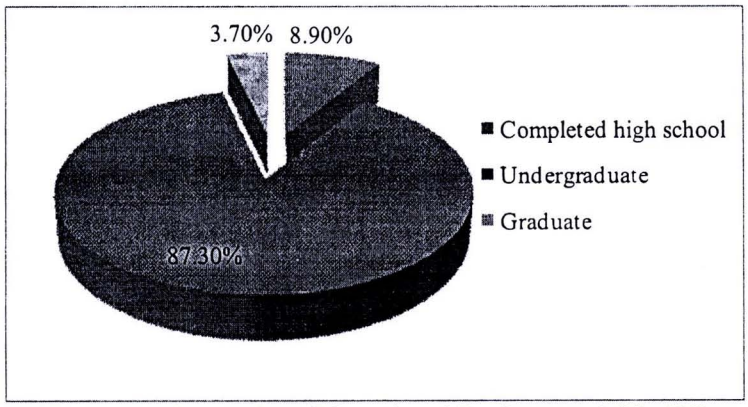

Figure 4.1 Supervisor Educational Background (N=403)

4.2.2 Respondent's Working Experience

Working experience is one important factor may influence the quality of safety behavior of supervisor. Personal experiences generally understand about their workplace in which they are working to avoid accident happen. For clearly understand about respondent's profile, this section covers respondent's working experience in two points of view including working experience in civil field, and experience as supervisor at construction site. In the research, respondents working experience arrange from 0 to 42 years in civil engineering field and from 0 to 30 for supervisor position. It is classified into three (3) groups. Result from the analysis shown in Table 4.2, Table 4.3, Figure 4.2, and Figure 4.3.

Respondents of supervisor whom participated in the research is regularly allocating in three groups. Related to experience in civil engineering field, 39.2% of respondents are having less than 2 years working experience, 31.3% of respondents having 2-5 years working experience while 29.5% having more than 5 years experience. Meanwhile rate of experience as supervisor of there groups in turn are 51.1%, 32.3% and 16.6%. In general, experience of respondents present the population of supervisor at construction site. Therefore, sampling data is available to use for further analyze.

Table 4.2 Respondent's experience in civil engineering field (N=403)

Experience in Civil	Frequency	Percentage	Cumulative Percentage
Less than 2 years	158	39.2	39.2
From 2 to 5 years	126	31.3	70.5
More than 5 years	119	29.5	100.0
Total	403	100.0	

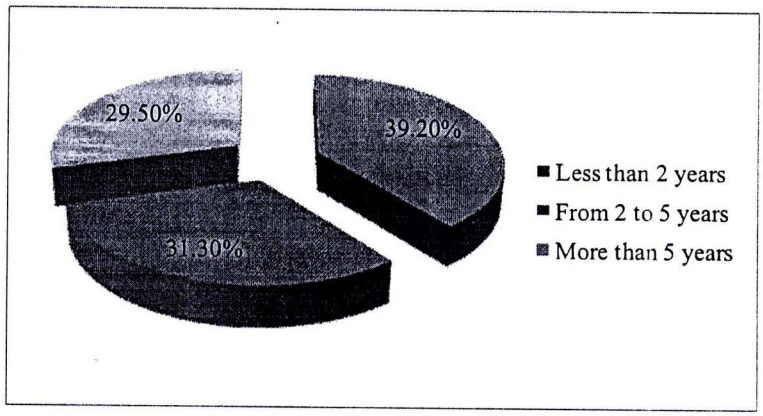

Figure 4.2 Respondent's experience in civil engineering field

Table 4.3 Respondent's experience as supervisor at site (N=403)

Experience As Supervisor	Frequency	Percentage	Cumulative Percentage
Less than 2 years	206	51.1	51.1
From 2 to 5 years	130	32.3	83.4
More than 5 years	67	16.6	100.0
Total	403	100.0	

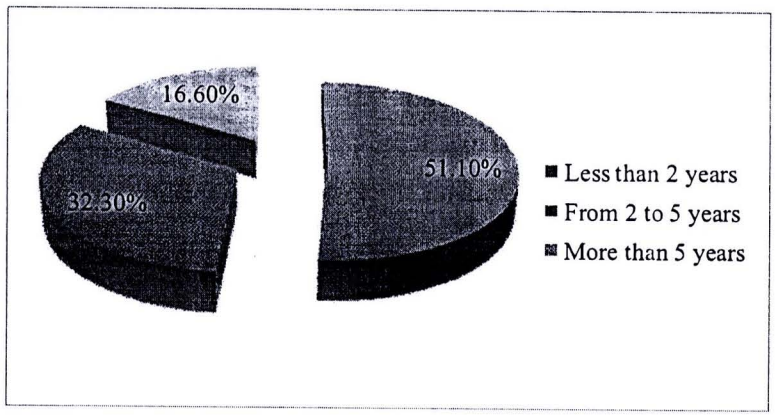

Figure 4.3 Respondent's experience as supervisor at site

4.2.3 Respondent's Safety Training

One important factor which influences the quality of safety behavior of supervisor is safety training as supervisor at construction site. It is observed from the respondent of the questionnaire, 21.8% of current supervisor at construction site have never attend any

supervisor course. This characteristic should be considered for next step of analyze. Respondent predominantly attend one time in supervisor training, about 60.5% while 17.6% attend more than 1 time. Result from the analysis shown in Table 4.4 and Figure 4.4.

Table 4.4 Respondent's times attend safety training course (N=403)

Supervisor Safety Training	Frequency	Percentage	Cumulative Percentage
Never attend any course	88	21.8	21.8
Attend 1 time	244	60.5	82.4
Attend 2 times above	71	17.6	100.0
Total	403	100.0	

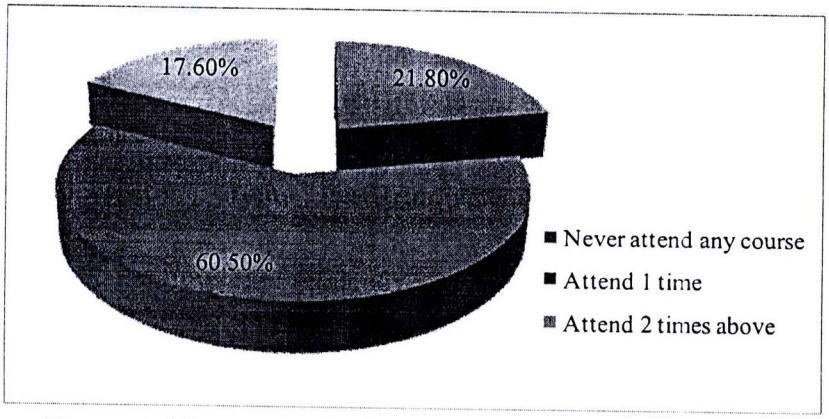

Figure 4.4 Respondent's times attend safety training course

4.2.4 Respondent's Safety Knowledge

Safety knowledge is a determining factor of supervisor safety behavior. It is a combination between personal experience, educational background and training supported from company. High level of safety knowledge can help supervisors to identify accident and avoid the damage not only for themselves but also others. In the research, respondents are required to judge themselves about their safety knowledge in three levels. The first level states that they have little knowledge about safety; second level states that they only have necessary safety information and knowledge; third level states that they can control or avoid all potential hazards at construction site. Result from the analysis is shown in Table 4.5 and Figure 4.5.

The result shows that 34% of the respondents are having little knowledge about safety. In addition, 46.2% have necessary safety information and knowledge and only 19.9% satisfy supervisor requirement, which can control or avoid all potential hazards. It is interesting to observe that most respondents are not satisfying knowledge which required for supervisor. It reflects an important feature of population characteristic, so they can representative for supervisor level at construction site.

Table 4.5 Respondent's safety knowledge

Safety Knowledge	Frequency	Percentage	Cumulative Percentage
Little knowledge about safety	137	34.0	34.0
Necessary safety information and knowledge	186	46.2	80.1
Can control or avoid all potential hazards	80	19.9	100.0
Total	403	100.0	

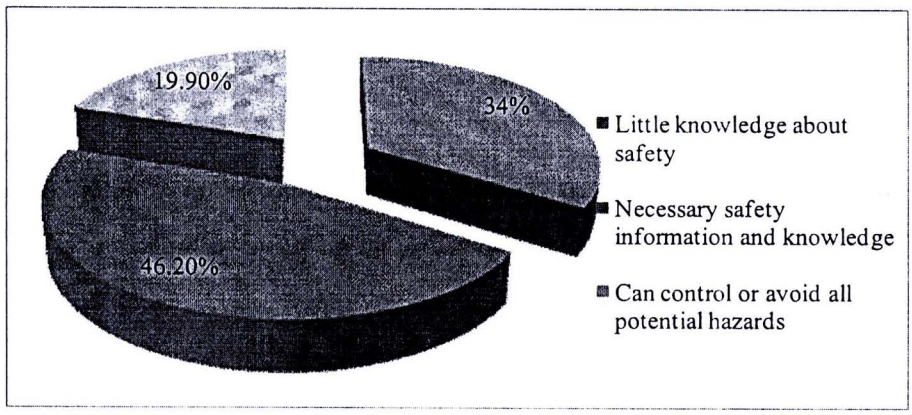

Figure 4.5 Respondent's safety knowledge

4.3 Analysis of Supervisors' Behavior in Safety Actions

4.3.1 Data Preparation for Behavior Analysis

This section describes the process of data preparation for behavior analysis. The survey data from the third and the fourth section of questionnaire are analyzed to find out the current behavior and behavioral intention of supervisor on safety actions at construction site. In addition, the relationship between them is observed. The main purpose of third section is exploring the behavioral intention though ten situations which related to working at height and electrocution hazard. The fourth section of questionnaire attempts

to explain the current behavior of supervisor by evaluating four safety responsibilities which are investigating accidents to determine causes, inspecting their area to identify hazards, coaching their people to perform better and motivating worker's aspiration to work safely.

Questionnaires were distributed and completed by 434 respondents. Some are excluded due to incomplete and inappropriate respondent data. After cleaning data process, the sample size is reduced to 241. These data are used to present and analyze current behavior of supervisor. These 241 sufficiently complete included in data analysis, producing a usable response rate of 30.12% of total distributed questionnaires. The ratio of usable data was low because all of supervisor afraid to answer the questions which related their actions. Furthermore, all of four section of questionnaire was performed at the same time, thus it can not avoid respondents tired and lazy to fulfil carefully. Consequently, 241 usable responds which complete carefully with high cooperation was used for this chapter.

Of those 241 supervisors responding, the average age was 29.46 years and cover from 20 to 68 years old. All of them were male (100%) and had experience as supervisor in construction site from beginning to 22 years experience, average 3.54 years experience. Almost all responders have acceptable education background (89.2% undergraduate) and at least 1 time attends the Cultivate Professional Supervision in Construction Course (77.2%). The data show that 34% of the respondents are having little knowledge about safety, 49.4% have necessary safety information and knowledge and only 16.6% satisfy supervisor requirement that can control or avoid all potential hazards. The characteristics of respondents cover all possible expected, so they can representative for supervisor level at construction site.

4.3.2 Reliability Analysis of Scale

The research questions section three and four were developed with the intent of exploring the current behavior in safety actions of supervisor at construction sites. Supervisors were asked to describe how often they perform their safety role. Their safety responsibilities are expressed by four main issues which are investigating accidents to determine causes, inspecting their area to identify hazards, coaching their people to perform better and motivating worker's aspiration to work safely.

To ensure that the items comprising the behavior produced reliable scales, Cronbach's alpha coefficient of internal consistency was calculated for each scale. The results are shown in Table 4.6 below. Comparing with the acceptable value of Cronbach alpha of 0.60 (Hair, Black et al., 2010), this scale was considered to be reliability with the value of

Cronbach alpha 0.802. Values from the column "Alpha if item deleted" in Table 4.6 suggested that all of 12 items representative for supervisor behavior were valid and not removed from the analysis. All of these 12 items provided the most reliability scale for measuring supervisor's behavior on safety action.

Table 4.6 Cronbach's alpha for supervisor behavior scale (N = 241)

Cronbach's Alpha = 0.802 N of Items = 12	Cronbach's Alpha if Item Deleted
Investigating injuries causes	.789
Conducting an investigation on the causes of accidents immediately	.793
Finding the contributing causes for each accident as more as possible	.779
Correcting hazards if an accident has happened	.794
Giving recommendations to prevent a similar accident	.781
Carrying out inspections for worker realize hazards on the site	.779
Inspecting workers to correct hazards	.782
Setting up meetings to coach the group of employees	.786
Orienting new employees on site	.783
Contacting employees individually to inspect them working safely	.793
Using safety materials to motivate the worker working safely	.799
Operating some attitude activity to improve your worker safety behavior	.790

4.3.3 Supervisors' Current Behavior

The behavior is described using the frequency of performing in current practice. Due to the questionnaire is designed by 5 point scales (from 0 to 4) to describe the frequency, therefore, the average score of each issue which represent safety behavior was used in order to indicate level of frequency.

The mean score were categorized into interval as follows:

Mean Scores	Description
0.00 – 1.00	Seldom Apply
1.01 – 2.00	Rarely Apply
2.01 – 3.00	Sometimes Apply
3.01 – 4.00	Often Apply

Supervisors were asked to describe behavior on safety action by expressing frequency of safety performance. The initial results were shown in Table 4.7 and Table 4.8 shows the average score of supervisors' behavior on safety action and its interpretation. The analysis of supervisors' behavior can be grouped into four groups. The first group of supervisors' behavior is the investigation of accidents to determine causes. It is sometimes applied with the low mean score. They are not quite often investigate the incident causes (mean=2.56), the value of mean score just enough exceed the average score. Under case of supervisor investigation about the accident causes, they have a better trend to conduct it immediately (mean=2.74) and investigate accidents carefully (mean=2.70).

Next the second group of supervisors' behavior is positive in inspecting area and identifying hazards. They often correct the hazards which can cause the accident with the highest mean from 12 items (mean=3.00). The current status also shows that supervisors usually prefer to correct the hazards himself rather than give the recommendation about construction site safety (mean=2.79). They sometimes carry out the inspection and make worker realize the hazards (mean=2.64). It can be pointed that their practices can prevent worker's awareness in safety behavior.

The third group of supervisors' behavior is coaching the worker. It is sometimes found that supervisors take safety action in coaching the worker. The frequency supervisor perform coaching about safety is moderately low. They are more likely to conduct the safety orientation for new workers at construction sites (mean = 2.39). Supervisors are limited in establishing the meeting for coaching workers (mean=2.07). This weakness should be modified, because supervisor coaching function is very important. It can directly impact to change the worker's safety behavior. Lack of supervisors' practice on this safety action can lead to very dangerous and should be aware.

The fourth group of supervisors' behavior involves motivation worker's aspiration to work safely. Almost accidents are triggered by unsafe behaviors; workers in developing countries have less safety culture to protect themselves. Workers seldom require the safety supporting from the company. In other words, workers have a risk on unsafe events in construction works. Thus, motivating their aspiration to work safe is an urgent mission of supervisor. But the real practice is inversed. The items in this group have the lowest mean of frequency applied (Mean = 2.10, 1.71 and 1.76). This supervisor behavior should be changed to improve the positive impact in keeping safe for construction site.

Table 4.7 Percentages supervisor applying each issue related safety

Issues related to supervisors' behavior on safety actions at construction sites	Percentage of supervisor action (%)					
	Never	Rarely	Some-times	Usually	Always	Total (%)
Investigating injuries causes	2.9	14.1	28.6	33.2	21.2	100
Conducting an investigation on the causes of accidents immediately	4.6	7.9	25.7	32.8	29.0	100
Finding the contributing causes for each accident as more as possible	3.3	8.3	28.2	35.3	24.9	100
Correcting hazards if an accident has happened	2.1	5.0	19.5	36.5	36.9	100
Giving recommendations to prevent a similar accident	1.2	7.9	24.1	44.0	22.8	100
Carrying out inspections for worker realize hazards on the site	1.7	8.7	31.1	41.1	17.4	100
Inspecting workers to correct hazards	1.2	12.4	34.0	42.3	10.0	100
Setting up meetings to coach the group of employees	7.5	20.7	39.8	21.6	10.4	100
Orienting new employees on site	5.8	14.1	29.5	36.1	14.5	100
Contacting employees individually to inspect them working safely	7.5	20.7	36.1	25.7	10.0	100
Using safety materials to motivate the worker working safely	17.0	21.2	39.0	19.5	3.3	100
Operating some attitude activity to improve your worker safety behavior	12.9	24.9	38.6	20.3	3.3	100

Table 4.8 Average score of each issue related to supervisors' behavior on safety action

Issues related to supervisors' behavior on safety actions at construction sites	Mean	SD.	Frequency
Investigating accidents to determine causes			
Investigating injuries causes	2.56	1.064	Sometimes Apply
Conducting an investigation on the causes of accidents immediately	2.74	1.100	Sometimes Apply
Finding the contributing causes for each accident as more as possible	2.70	1.038	Sometimes Apply
Inspecting their area to identify hazards			
Correcting hazards if an accident has happened	3.00	.977	Sometimes Apply
Giving recommendations to prevent a similar accident	2.79	.926	Sometimes Apply
Carrying out inspections for worker realize hazards on the site	2.64	.926	Sometimes Apply
Coaching their people to perform better			
Inspecting workers to correct hazards	2.47	.881	Sometimes Apply
Setting up meetings to coach the group of employees	2.07	1.066	Sometimes Apply
Orienting new employees on site	2.39	1.079	Sometimes Apply
Motivating worker's aspiration to work safely			
Contacting employees individually to inspect them working safely	2.10	1.076	Sometimes Apply
Using safety materials to motivate the worker working safely	1.71	1.068	Rarely Apply
Operating some attitude activity to improve worker safety behavior	1.76	1.024	Rarely Apply

Figure 4.6 shows gaps of current supervisors' behavior on safety action at construction site. The results show that the most practice of supervisors related to safety action is "Correcting hazards which can cause accident". The result shows that most of behavior has mean score above 2.00. It means that supervisors sometimes performed on safety action such as "Investigating causes of accident carefully in details", "Giving recommendations about construction site safety to prevent a similar accident" and "Orienting new employees on site". However, three lowest supervisor's behaviors have mean score nearly or less than 2.00. These are "Setting up meetings to coach the group of

employees", "Using safety materials to motivate the worker working safely" and "Operating some attitude activity to improve your worker safety behavior". These actions should be improved by supervisors in construction projects.

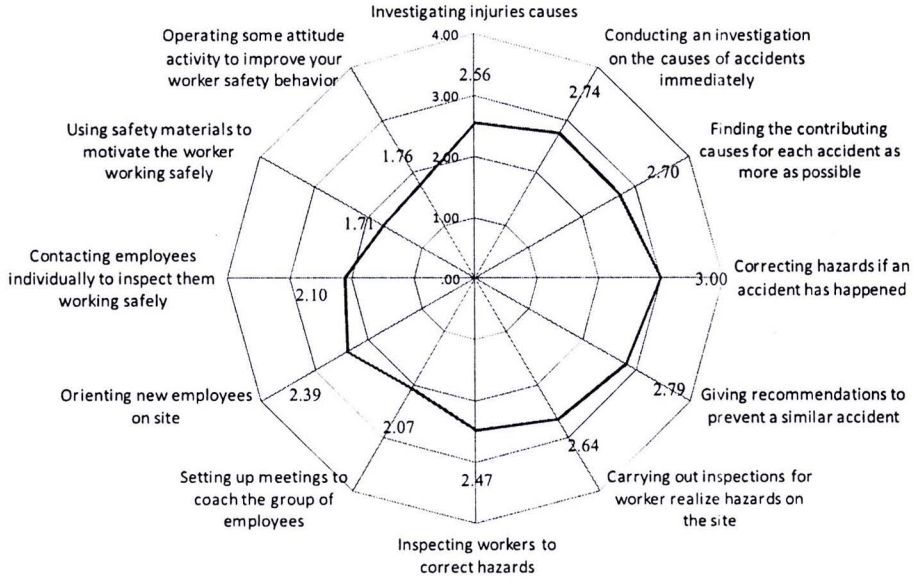

Figure 4.6 Gaps of supervisors' behavior on safety actions at construction sites

4.4 Analysis of Supervisors' Behavioral Intention on Safety Action

Behavioral intention is person's intention to perform a particular action. There should be a high relation between behavioral intention and actual performance of that behavior. Although this relationship does not always perfectly correlation but behavioral intention is the best single predictor of people's behavior. Therefore, this section is used to describe behavioral intention for explaining supervisor behavior and their relationship. This relationship is focused as a key point of the explaining model which will discussed in next chapter.

As discussing in the previous chapter, behavioral intention is measured by applying intention performance method using ten scenarios. By understanding how respondents decide in each situation given it occurring ten times, we can understand their tendency to perform that behavior. All the details of analysis are shown below.

4.4.1 Reliability Analysis of Scale

Table 4.9 Cronbach's alpha for supervisor behavioral intention scale (N = 241)

	Cronbach's Alpha = 0.924 N of Items = 10	Cronbach's Alpha if Item Deleted
Situation 1	Once one worker is ready to start his job, he climbs the scaffold up to the level he must work at but the scaffold is not totally boarded.	.917
Situation 2	Workers are ready to start his job which requires to use ladders to climb up to a higher level is not tied or secured or ladder not enough 1 meter above the landing place.	.924
Situation 3	When the workers ready to start their job on roof or high level but there are many holes still not be shield.	.916
Situation 4	Workers are working on roof or high level without edge protection and personal protections have not been provided.	.913
Situation 5	Workers are working on roof or high level in bad weather such as windy, small rain.	.915
Situation 6	Workers are using electrical equipment for their works but the electric wire quality not satisfy the technique requirement	.912
Situation 7	Workers are using electrical equipment for their works but there is a part of jumper wire touch the water on the ground.	.914
Situation 8	Workers are using handle electrical equipment for their works without any personal protections as gloves, boots.	.919
Situation 9	Workers are using electrical equipment but don't have any circuit breaker, plug pin, safety box.	.915
Situation 10	Electric line in construction is very low and interlace and there is equipment inside construction such as concrete pump, truck.	.917

The behavioral intentions are measured by 10 situations. It is necessary to ensure that these items comprise of reliable measured scale. Cronbach's alpha coefficient of internal consistency was calculated for scale. The results are shown in Table 4.9 below. In respect of the scale's reliability, this scale was also found to be reliable with very high value of

Cronbach's alpha 0.924 and above the acceptable of 0.60 (Hair, Black et al., 2010). Values from the column "Alpha if item deleted" in Table 4.9 suggested that all of these 10 items provided the most reliability scale for measuring behavioral intention. So we should not remove any items of this scale for further analysis.

4.4.2 Supervisors' Behavioral Intention

In the behavioral intention questionnaire, supervisors were asked to state the frequency of times they warn or stop worker working if each situation occurs 10 times at the construction site. It means the scale of behavioral intention from 0 to 10. For each single item measurement, the number selected is the behavioral intention score. The average score of each situation are shown in Table 4.10. The total score of all ten situations indicates their general intention behavior in safety actions at site. Descriptive analysis results are shown in detail below.

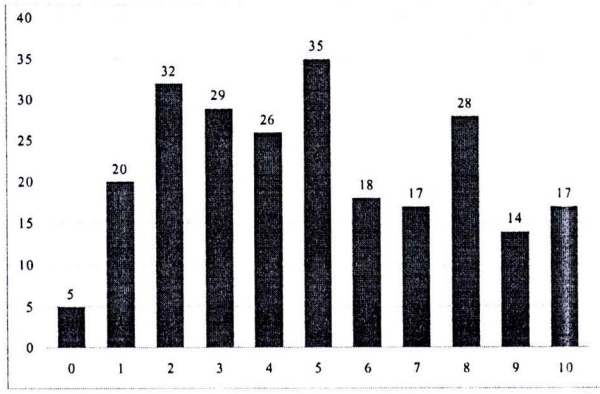

Figure 4.7 Frequency of times supervisor warn or stop worker from working at height when scaffold is not totally boarded, situation 1

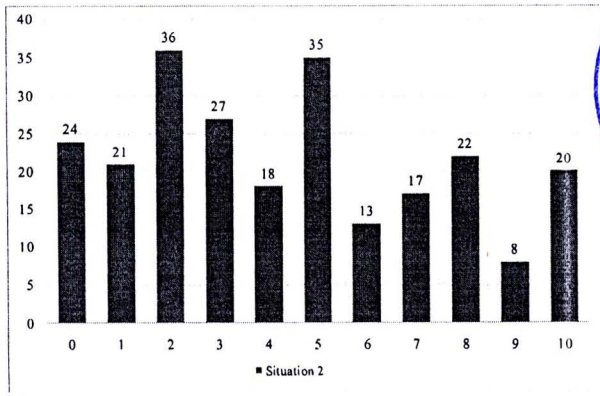

Figure 4.8 Frequency of times supervisor warn or stop worker from climbing up to a higher level with unsafe ladders, situation 2

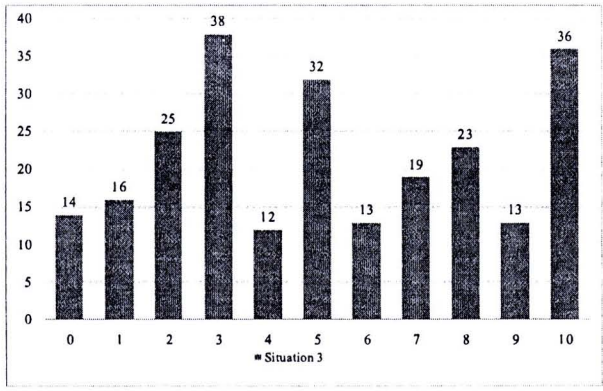

Figure 4.9 Frequency of times supervisor warn or stop worker from working on roof or high level with unsafe holes, situation 3

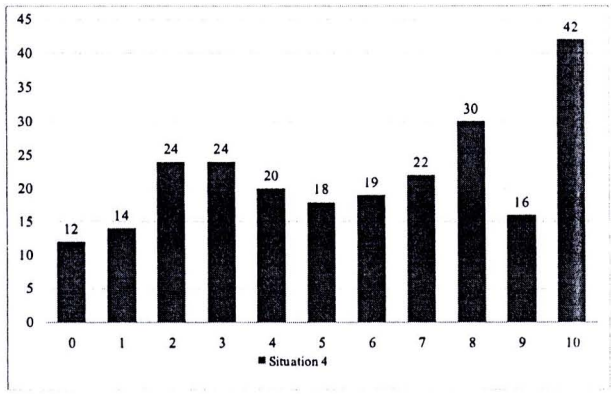

Figure 4.10 Frequency of times supervisor warn or stop worker from working on roof or high level without edge and personal protections, situation 4

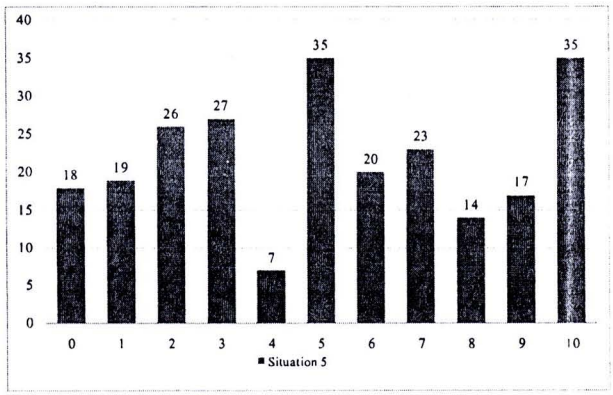

Figure 4.11 Frequency of times supervisor warn or stop worker from working on roof or high level in bad weather, situation 5

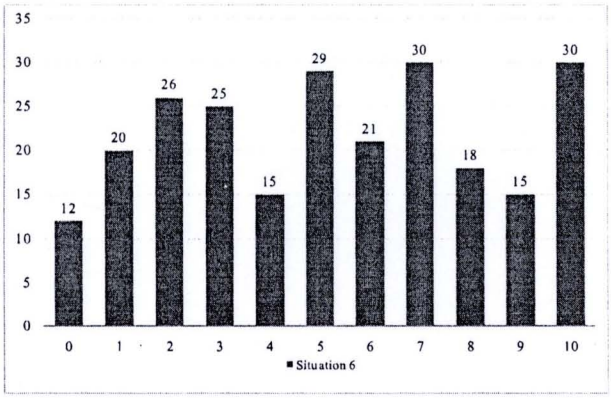

Figure 4.12 Frequency of times supervisor warn or stop worker from using unquality electric wire, situation 6

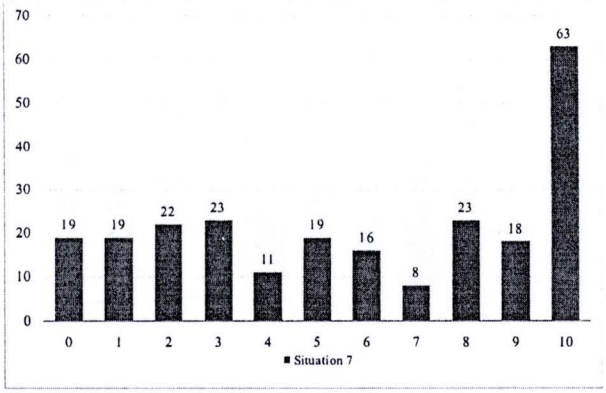

Figure 4.13 Frequency of times supervisor warn or stop worker from using electrical equipment with a part of jumper wire touch the water on the ground, situation 7

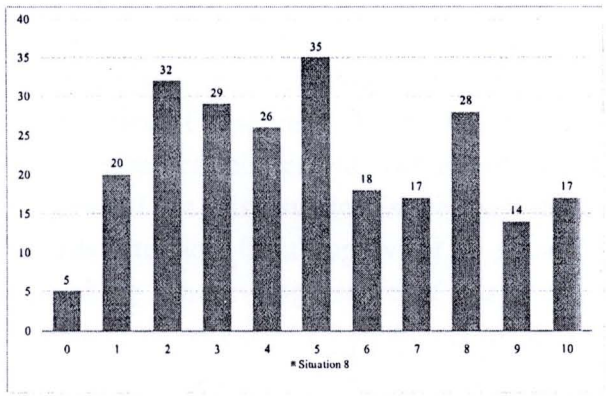

Figure 4.14 Frequency of times supervisor warn or stop worker from using handle electrical equipment without any personal protections, situation 8

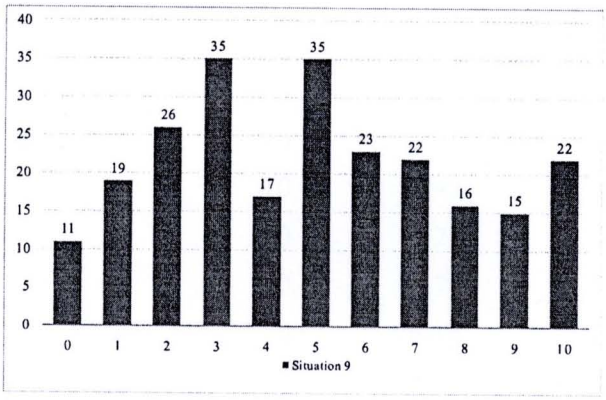

Figure 4.15 Frequency of times supervisor warn or stop worker from using electrical equipment but don't have any circuit breaker, plug pin, safety box, situation 9

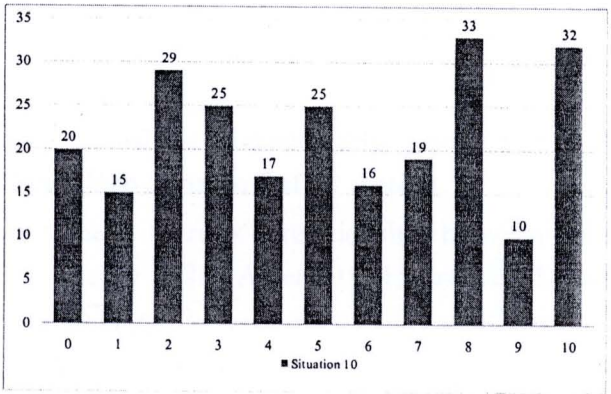

Figure 4.16 Frequency of times supervisor warn or stop worker when equipment enter construction site but electric line is very low and interlace, situation 10

According to descriptive results in Table 4.10, supervisor behavioral intention was average level. The average score of each situation ranges from 4.42 to 5.80. This score also indicated the risk perception of supervisor. The highest mean is 5.80 from situation 7, situation that worker using electrical equipment with a part of jumper wire touches the water on the ground. It pointed out this situation is the most dangerous from supervisor view. The most disregards situation from supervisor is situation 2 related to unsafe ladders when worker climbing. The average score of this situation is the lowest 4.42. From the results, the standard deviation of all situations dispersed widely (SD=2.785 – 3.214). Therefore, behavioral intention was a conformable variable in predicting the relationship between it and behavior.

Table 4.10 Average score of each situation related to behavioral intention (N=241)

Situation	Minimum	Maximum	Mean	SD.
Situation 1	0	10	5.16	3.005
Situation 2	0	10	4.42	3.036
Situation 3	0	10	5.23	3.153
Situation 4	0	10	5.71	3.174
Situation 5	0	10	5.19	3.214
Situation 6	0	10	5.26	3.059
Situation 7	0	10	5.80	3.560
Situation 8	0	10	4.97	2.785
Situation 9	0	10	4.95	2.897
Situation 10	0	10	5.16	3.202

4.5 Hypothesis Testing Positive Relationship Between Supervisors' Behavioral Intention and Their Behavior on Safety Action

Based on the literature review, there is a relationship between behavioral intention and behavior (Fishbein and Ajzen, 1975; Ajzen, 1991; Francis, Eccles et al., 2004). This section is analyzed to test the hypothesis about positive relationship between Supervisors' behavioral intention and their current behavior on safety action. This analysis is performed based on behavior score in section 4.3 and behavioral intention in section 4.4. The relationships are described through the linear regression analysis.

4.5.1 Data Preparation

From the analysis results of scale's reliability in section 4.3 and 4.4 above for measuring behavior and behavioral intention, 12 items were considered as an acceptable measurement for the supervisor behavior scale and 10 items situations for behavioral intention scale. Behavior score is the total score of these 12 items score, range from 0 to 48. The behavioral intention is described by summary score of ten situations, range from 0 to 100. The frequencies of them are shown in Figure 4.17 and Figure 4.18. From descriptive analysis, behavior score has mean=28.95, SD=6.867 and behavioral intention has mean=51.86, SD=24.005.

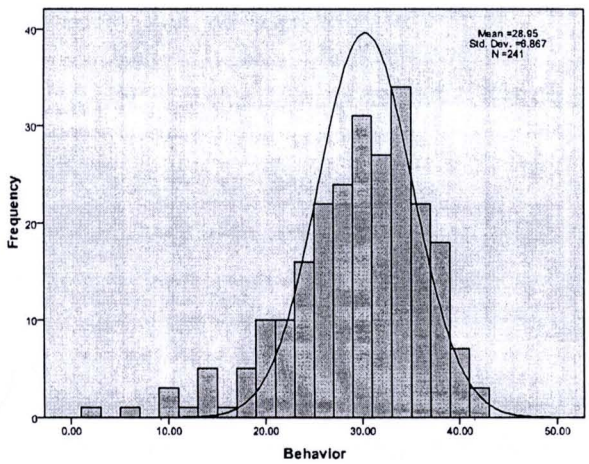

Figure 4.17 Frequency of Supervisor Behavior

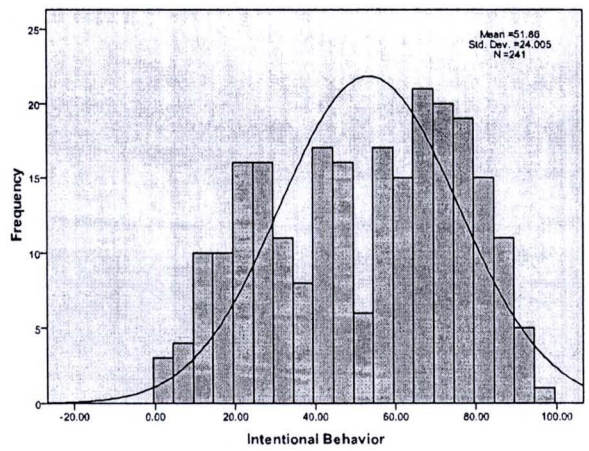

Figure 4.18. Frequency of Behavioral intention

4.5.2 Testing Hypothesis and Checking Assumptions of Linear Regression

For relationship testing between behavioral intention and behavior, linear regression is an appropriate technique. Linear regression analysis proves effective tool to exam the relationship between a single dependent variable and several independent variables (Hair, Black et al., 2010). One key important issue before using linear regression is assessing data appropriation to ensuring all key assumptions of regression models are satisfied. Any assumption violations may cause distorted and biased research results. These assumptions include *linearity, homoscedasticity, normality, multicollinearity,* and *independence of the error terms* (Hair, Black et al., 2010).

Regarding to this research, the third assumption about *multicollinearity* would not be tested because this hypothesis contents only one independent variable. The assumption regarding independence of the error terms was not considered to be relevant and it would not be tested in this thesis because this research has not used time series data or sequencing variables (Hair, Black et al., 2010).

The assumptions of *linearity, nonlinearity,* and *homoscedasticity* can be examined by using graphical tools such as scatter plots, or residual plots and/or statistical analyses which are discussed with the regression results. If no assumptions are violated, the residuals should be randomly distributed around their mean of zero (Hair, Black et al., 2010). In addition, normality was tested using normal probability plots. Normality is achieved when the graphs illustrate no tremendous departure from the diagonal line (Hair, Black et al., 2010). The results of these tests will be reported along with the results of the hypothesis testing, which are now discussed.

4.5.3 Results of Proposed Hypotheses Testing

As mentioned above, 241 respondents were sufficiently complete to be included in this analysis. The regression equations were conducted over the full sample for the proposed hypothesis to test the influence of supervisors' behavioral intention on their behavior. The results of the regression equations are reported along with the results of the test of assumptions in Table 4.11. Residual plots and normal probability plots of hypothesis are displayed in Appendices B. The discussion now turns to the results of the hypothesis testing commencing with those proposing to test the influence of supervisors' behavioral intention on their behavior.

The results summarized in Table 4.11, indicate that 6.4% of the variance in **supervisor's behavior** could be explained by their behavioral intention, this relationship was significant in this explanation at 1% significant. From the summarized results of ANOVA test, the model including this variable reaches statistical significance (Sig = .000, this really means $p<.01$). The data were then examined for whether they violated the assumptions of the regression models. The probability plots and residual plots presented in Appendices B do not indicate any serious violations. Statistically, this hypothesis was therefore accepted. **Behavioral intention** has a positive influence on **supervisors' behavior** in this sample.

Table 4.11 Linear regression analyze for hypothesis proposing the influence of behavioral intention on supervisors' behavior

	Unstandardized Coefficients		Standar-dized			Violations of Assumptions (Y=yes, N=no)		
	B	Std. Error	Beta	t	Sig.	Heterosce dasticity	Linear -ity	Norm-ality
Dependent Variable:						N	N	N
Safety Behavior								
Adjusted R square: 0.064								
F : 17.478								
Sig. F : 0.000								
Independent variable:								
Constant	25.073	1.020		24.572	.000			
Behavioral intention	0.075	.018	.261	4.181	.000			

4.6 Summary

This chapter has discussed about collected data in details and described respondent profile. Firstly, data were screened to ensure appropriate for proposed analysis tool. And then, the discussion then turned to descriptive statistics regarding the behavioral intention and behavior on safety action. The statistical results demonstrate the current issue of construction accident and site supervisors have not accomplished his safety obligation. The most frequently task performed is correcting hazards if the accident has happened (Mean=3.00). Some other tasks related to investigating accident for determining causes are sometimes applied. Site supervisors are not pay attention enough on coaching their worker to perform work safety or motivating worker's thirst for being safe (Mean <2.00).

One of factors influencing supervisors' behavior was explored, behavioral intention. Based on the results of the regression analysis, behavioral intention was found have a strong influence on Supervisors' behavior. As expected, this is positive relationship. It suggests that improving their behavioral intention may directly impact to change their behavior on safety action.