

# Study the Causes of Work Related Stress Risk in Construction Sector in Afghanistan

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## ABSTRACT

This study was carried out to study the causes of stress risk in the construction sector of Afghanistan. It has become a growing concern in many sectors, not to mention the construction sector. It is important to ensure that workers can perform at their best, considering the construction industry's highly competitive demands and competition. Stress risk has been identified as an important factor influencing an organization's success, as it negatively affects the organization's productivity, professionals' health and safety, efficiency, and costs. The issue of work-related stress risk in the construction sector of Afghanistan is not commonly discussed. The objectives of this study are to find the causes of work-related stress risk. Data was collected using a questionnaire survey in Afghanistan through email from construction industry professionals such as project managers, site supervisors, project engineers, quantity surveyors, and architects. The data was analyzed using frequency analysis, the average index. For the causes of work-related stress risk, the main issues were the lack of management and control over work and increasing the employee's expectations using the standard of safety. Based on the analysis of likelihood and severity, Ninth factors were in the very high and two were neutral the high stress risk at construction site were lack management and it supports, increase in duties, lack tool and safety.

**Keywords-** stress, risk, construction, Causes, Afghanistan.

## I. INTRODUCTION

In the last few decades, the construction industry is the witness of incredible changes both institutional and organizational all over the world. The speedup and complexity of work and continuous changes in the building process as well as, the increasing demand for productivity has become a common issue in the construction industry [1].

Construction has a very important role in the global economy it facilitates the opportunity for a huge number of workers for the execution of construction projects. It's also well known that the construction employees face a lot of difficulties even though some time with severe accident and injuries [2].

All the construction industry is obligated to have like moral, legal and financial obligations to provide a very safe environment to the workforce that have zero accident at the construction site. The international labor organization (ILO) has stated that the work environment should be safe as well as the conditions do not cause damage to life and the health of the professional workers [3]. As we know that in the most construction industry they do not apply safety rules to their workers [4]. If we search about the united states construction industry the rate of injuries and death is more than compare to the other industry in the US [5].

The construction industry is one of the oldest sectors but nowadays it developed well and plays an important role in the economy of each country. It also facilitates the environment of many jobs and increases the

economic growth of the country that contributes to finding the solution for the issue of pollution and energy shortage all over the world [6].

Stress at job site belong to the workers approach on all around the place necessity which is free from a negative attitude to the existing sources [7]. Stress can be called an external force that can affect the human being and material property [8]. Despite, we cannot call stress disease, but if remain for a long time its impact would be very bad on employee and their provided environment maybe goes for serious accidents and we will be the evidence of the construction employees mental and health issues. Stress can make the demand quicker when you target a goal to perform with full achievement. Finally, when the performance and pressure reached the peak it produces stress which is very harmful to the employee and the company [9]. When job-related stress occurred it does not only slow down the industry performance but might also impact employee health like heart attack and migraine which can bring causality in case of death and serious injuries [10].

All those risks that cause to our health and our company make us do something in the reduction of stress. Excessive stress risk can minimize the performance of our work [11]. The problem is that work-related stress risk increasing day by day according to the survey, which done by full and part-time jobholders by the national institute of occupational safety and health (NIOSH) the percentage increase 37% in 2001 to 45% in 2002. This issue will increase if the organization did not take any appropriate step to the mitigation or elimination of this issue it would not damage that organization but can invite a lot of illness who are involved [12]. It is very important to have enough knowledge of work-related stress risk and should do possibly when it becoming serious to the workforces [13].

In the modern world, the work-related stress risk is one of the important and very common issues to the worker health and safety. Job stress indicates the employee's experience in the workplace. In different job sites, it affects negatively on productivity and works satisfaction. It will lead to workers' absenteeism and low morale, and high accident rates at the construction site and may affect medical expenses of organizations and impact on profitability and development of the organization. Health and Safety Executive (2002) identified that workplace stress is a direct result of a person's job. For that reason, in the last recent years the researches into job-related stress have been increased (Whetten et al., 2002).

Several studies have shown that stress at work can be physically and mentally harmful to employees and is related to physical condition, organizational structure, interpersonal conflict, personal characteristics, and nature of work ( Skitmore et al., 2005).

A review of the literature showed that no research has examined the work-related stress risk in Afghanistan construction sector. Therefore, this study aims to reveal key causes of work-related stress risk in the Afghanistan construction sector that contribute to control

the stress risk at job site both private and government construction firms.

## II. METHODOLOGY

The analysis process used in this study will be more thoroughly explained in this research. In this section, the research methods will be covered.

In this study, data were gathered from two primary data sources and two secondary data sources. For quantitative research, a questionnaire served as the main data gathering method. A set of questionnaires was created for primary data based on earlier research that used secondary data from sources such books, journals, conference papers, and blogs.

The project manager, site supervisor, site engineer, project estimator, and architects in the construction business received the questionnaire. The Social Sciences Statistical Package (SPSS) version 12.0 software used to analyze the data obtained in order to determine the frequency and mean index value of the outcomes. Tables, pie charts, bar charts, and radar graphs used to present the survey's findings. The following five steps were involved in putting this approach into practice:

Work stress is one of the major issues among construction professionals in Afghanistan. Thus, due to the lack of data in work-related stress risk assessment in Afghanistan in the form of publish papers or people awareness. This study will highlight the major work-related stress risk causes that will contribute to the construction sector to apply the rules for overcome the cause of stress risk.

## III. DATA ANALYSIS

The primary data is gathered via a Questionnaire. The questionnaire is described as a collection of printed or written questions with a selection of answers, conceived for survey purposes. Selecting to use questionnaires as primary data, because according to the (Dunn, 2005) questionnaire, quantitative data and statistical analysis are generated strongly. This study's Questionnaire is built through the literature review to build on the previous study.

The statements on the Questionnaire were established using the Likert scale. The Likert scale offers the construction professionals the options to show their views perfectly according to the quote. For two sections of the questionnaire, the Likert scale consists of five regular choices as shown in figure 1.

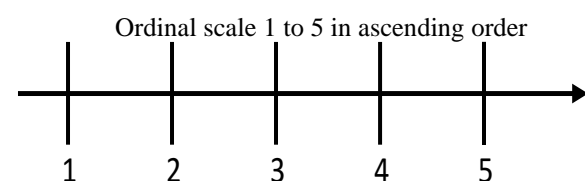


Figure 1: Likert Scale

The survey sent through email to the professionals working in the Afghan construction industry, including the project manager, project engineer, site manager, quantity surveyor, and site supervisor. The average index formula is used to estimate the data for the quantitative approach. In the fourth step, data analysis was visualized using pie charts, bar charts, radar plots, and tables to aid in understanding and result interpretation.

**3.1 Reliability Index**

The SPSS software uses Cronbach's alpha to measure the reliability and stability of the results, and the reliability index test is one of the most significant statistical tests. The following table explains what the Cronbach's alpha value means. The following Table 1 displays the Cronbach's Alpha Value and the Reliability Index. Each section of the questionnaire should undergo the Cronbach's alpha test to see whether the responder is within the acceptable range or requires any adjustments. The highest standards we should strive for are those of acceptable, good, and exceptional.

**Table 0: Detail Cronbach's alpha test**

Reliability Index	Cronbach's Alpha Value
Excellent	Reliability Coefficient > 0.9
Good	Reliability Coefficient > 0.8
Acceptable	Reliability Coefficient > 0.7
Questionable	Reliability Coefficient > 0.6
Poor	Reliability Coefficient ≥ 0.5
Unacceptable	Reliability Coefficient < 0.5

The questionnaire will be analyzed using the Average Index Method. Referring to Majid and McCaffer (1997), the average index been calculated using the following formula (3.1):

$$\text{Average Index formula} = \frac{\sum ai Xi}{Xi} \dots(3.1)$$

Where;

Ai = index of a class (1 to 5)

Xi = frequency of response

Analyzed data in a form of an average index from Part D in the questionnaire then will be classified into five classes according to a range of average index values obtained. Table 2 shows the classification of the answered questionnaire based on which range average index value was in each section. Based this Table 2 the cause of work related stress risk in construction sector in Afghanistan. The respondent average index the numbers will come in between 3-5 that later we consider the these factors as causes of work relates stress risk.

**Table 1: Average Index Range**

Likelihood	Severity	Attribute to objective 1	Range
Inconceivable	Negligible	Strongly Disagree	(1.00 ≤ Average Index < 1.50)
Remote	Minor	Disagree	(1.50 ≤ Average Index < 2.50)
Conceivable	Medium	Neutral	(2.50 ≤ Average Index < 3.50)
Possible	Major	Agree	(3.50 ≤ Average Index < 4.50)
Most likely	Serious	Strongly Agree	(4.50 ≤ Average Index ≤ 5.00)

**IV. FINDINGS**

This study concentrate on the conclusions and the interpretation of the survey questionnaire results. To achieve the goals of the research, the questionnaires were distributed. The questionnaire is composed first section the general information about the respondent. Second the causes of work related stress risk. All 40 respondents from different sectors took part in the survey on the construction sector. The following parts demonstrate the survey's review and back round of respondent is following.

**4.1 Position of the Respondent**

Table 4.1 and Figure 4.1 indicate the number of respondents from the various professional sectors of construction.

**Table 2: Position of the Respondent**

Respondent position	Number of respondent	Percentage of respondent
Architect	5	12.5
Project Engineer	5	12.5
Project Manager	8	20.0
Quantity Surveyor	4	10.0
Site Manager	10	25.0
Site Supervisor	8	20.0
Total	40	100.0



4.2 Gender of Respondent

The Overall respondent is shown by Gender in Table 3 and Figure 2 it shows the construction industry professionals and the ratio of gender shows just 3 percent female and 97 percent male. The 4.2 table shows the construction industry professionals.

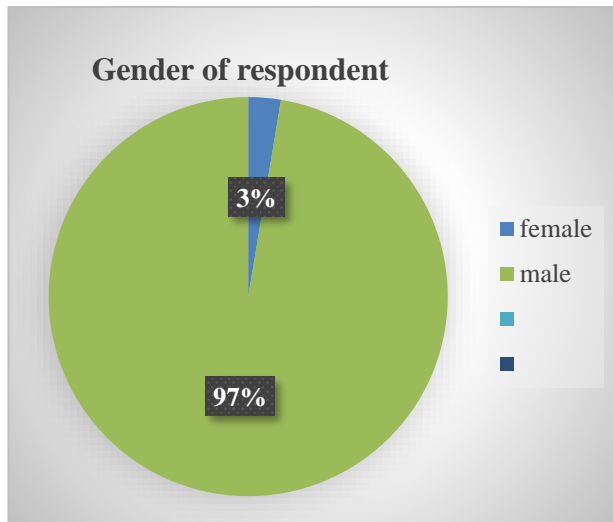


Figure 1: Gender of Respondent

Table 3: Gender of Respondent

Gender name	Number of respondents	Percentage of respondent
Female	1	2.5
Male	39	97.5
Total	40	100

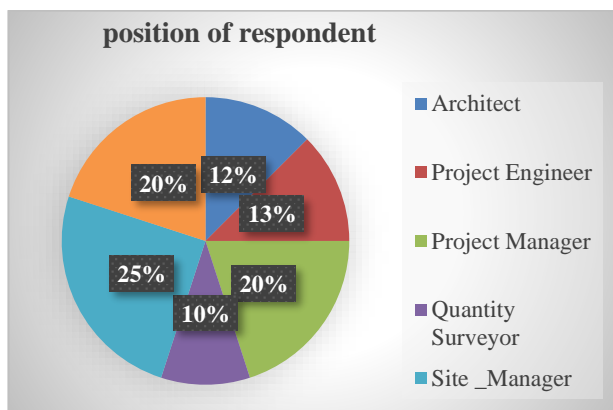


Figure 2: Position of Respondent

4.3 Year of Experience of the Respondent

The experience of respondents in the construction industry is seen in Table 4 & Figure 3. A 42.5% of respondents have 5-10 years of experience, followed by 35% for less than 5 years, 12.5% for 11-15 years, and 10% for 11-15 years. This indicates that the participants are largely experienced.

Table 4: Experience of the Respondent

Year of experience	Respondent numbers	Percentage of respondent
11 – 15 years	4	10
5 – 10 years	17	42.5
Less than 5 years	14	35
More than 15 years	5	12.5
Total	40	100

Finding for objective one-part B: Causes of work-related stress risk at the construction sector in Afghanistan.

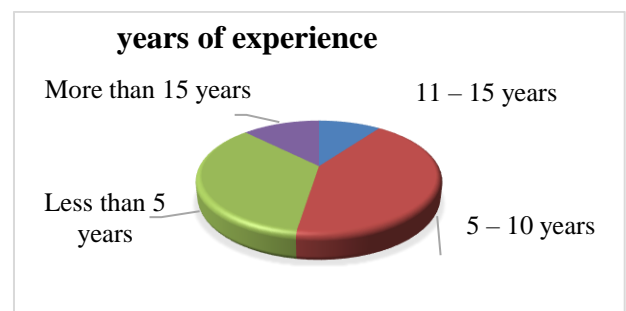


Figure 3: Years of Experience of the Respondent

Table 5: Ranking Causes of work-related stress risk

Ranking	Questions	Average index	Classification
1	Lack of management support	3.95	Agree
2	Increase in patient's expectations	3.80	Agree
3	Invasion of autonomy / lack of control over work	3.73	Agree
4	Rigidity of hierarchy	3.65	Agree
5	Increase in administrative duties	3.65	Neutral
6	Organizational confusion / "right" and "wrong" channels	3.65	Agree
7	Doing tasks below grade	3.60	Agree
8	Work / Life Balance	3.58	Agree
9	Isolation form other team members	3.50	Agree

10	Colleagues not understanding each other's roles and competencies	3.45	Neutral
11	Lack of the right tools / broken tools to do the job	3.3	Neutral

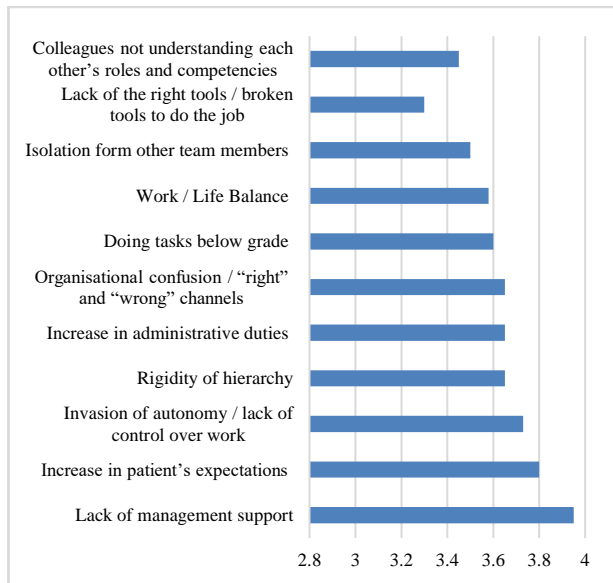


Figure 4: Average index for work-related stress risk

Table 6: Ranking of causes of work relates stress risk

Ranking	Sort of Ranking	Questions	Average index
1	9	Lack of management support	3.95
2	6	Increase in patient's expectations	3.80
3	1	Invasion of autonomy/lack of control overwork	3.73
4	3	Rigidity of hierarchy	3.65
5	7	Increase in administrative duties	3.65
6	8	Organizational confusion / "right" and "wrong" channels	3.65
7	4	Doing tasks below grade	3.60
8	2	Work / Life Balance	3.58
9	5	Isolation form other team members	3.50
10	8	Colleagues not understanding each other's roles and competencies	3.45
11	10	Lack of the right tools / broken tools to do the job	3.3

Management, lack of control overwork, and increase in patient's expectation. Refer to Figure 4, its show the Ranking of causes of work-related stress risk at the construction sector in Afghanistan. Average index. According to the table, 6: rating scale, (Abd Majid and Mc caffer 1997), eight questions are under the Implemented agree ( $3.50 \leq \text{Average Index} < 4.50$ ), and two questions are implemented/ Neutral ( $2.50 \leq \text{Average Index} < 3.50$ ). Thus, the eight questions having the most important role in the causes of work-related stress risk.

Figure 4 shows the causes of risk related to the stress hazards at the construction sector in Afghanistan. The following figure 4 were created based on the average index and lack management support has the key role in the causes of stress risk related.

## V. CONCLUSION

Bases on the above analysis the causes work relates stress risk at construction sector in Afghanistan Lack of management support, increase in patient's expectations, Invasion of autonomy/lack of control overwork, Doing tasks below grade and work balance have Significant role in the stress risk in Afghanistan's construction sector. According to the respondents, the biggest cause lack of management support. The administration's demands grow daily, yet they are unable to keep the building site under control.

## REFERENCES

- [1] Wong, J., M. Teo, and Y.K.F. Cheung. Cultural determinants of stress in the construction industry. in Proceedings of 2010 International Conference On Construction & Real Estate Management. 2010. China Architecture & Building Press and indexed by ISTEP and ISSHP.
- [2] Enshass, A., R.M. Choudhry, and M. Aqaad, Identifying Causes Of Safety Degradation In Construction Projects In Palestine. International Journal of Construction Project Management, 2013. 5(1): p. 3.
- [3] Thomas, H. and P. Turnbull, From horizontal to vertical labour governance: The International Labour Organization (ILO) and decent work in global supply chains. Human Relations, 2018. 71(4): p. 536-559.
- [4] Lee Larson, L., Internal auditors and job stress. Managerial Auditing Journal, 2004. 19(9): p. 1119-1130.
- [5] Konda, S., H.M. Tiesman, and A.A. Reichard, Fatal traumatic brain injuries in the construction industry, 2003- 2010. American journal of industrial medicine, 2016. 59(3): p. 212-220.
- [6] Meng, T.T., The Construction Safety Awareness Among Construction Workers in Malaysia. 2012, Universiti Teknologi Malaysia.
- [7] Ibrahim, M.S.B., Prevalence Of Workplace Violence Among Healthcare Workers In A Health District In Selangor And Its Associated Factors. 2017.

[8] Spielberger, C.D. and E.C. Reheiser, Measuring anxiety, anger, depression, and curiosity as emotional states and personality traits with the STAI, STAXI, and STPI. *Comprehensive handbook of psychological assessment*, 2003. 2: p. 70-86.

[9] Konkolewsky, H.-H., Needs and priorities in occupational safety and health for the enlarged European Union. *SJWEH Suppl*, 2005. 1: p. 68-71.

[10] Yahaya, N., et al., The Effect of various modes of occupational stress, job satisfaction, intention to leave and absenteeism companies commission of Malaysia. *Australian Journal of basic and applied sciences*, 2010. 4(7): p. 1676-1684.

[11] Mahmood, A. and L.K. Yadav, Occupational Stress, Emotional Intelligence and Demography: A study among working professionals. *International Journal of Business Insights & Transformation*, 2017. 10(2).

[12] Campbell, F., Occupational stress in the construction industry. Berkshire, UK: Chartered Institute of Building, 2006.

[13] Hamid, A.R.A., K. Yahya, and L.W. Han, Management Competencies for Preventing and Reducing Stress at Construction Site. *Built Environment Journal (UiTM)*, 2010. 7(2): p. 32-37.