

Introducing Emotional Intelligence to Overcome the Impacts of Negative Emotional Stress in Construction Projects

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Abstract: Emotional Intelligence is a person's mental ability to think, manage and take decisions according to the situation. Ones emotional information is used to take the required step of action depending upon the situation. The major factors which influence the emotions are studied together for better understanding. Valuable feedbacks from experienced individuals are taken to know the criticality of the negative emotional behavior. Significant variations in the results are recorded which states that the effect of the negative emotions is high in projects. The results from the analysis state the relation and the significance of various factors. Techniques and remedial measures are discussed to reduce the complications and negative emotional stress.

Index Terms: Emotional Intelligence, Negative emotions, Emotional stress, Construction projects.

I. INTRODUCTION

The concept of emotional intelligence comes from intelligence and emotion which made clear that the working together of both results in a higher success rate. Thus the emotion plays a very important role in connecting the team members with each other. Emotional intelligence and stress are related to a greater extent. High emotional intelligence is a result of lower perceived stress and is partially mediated by both adaptive and misadaptive coping styles[1]. Previously studies were done to understand the various concepts of emotional intelligence ie among coach and student etc [2]. The understanding and managing the situations in a positive way to reduce the stress, communicate effectively and take decisions correctly can be a sign of high emotional intelligence. Emotional intelligence is conceptually distinct from personality.[9]. This intelligence helps in resolving many things and therefore the personal and work satisfaction can be improved to a greater extent. Improving relationship between employees and greater success rate in work can be a sign of good emotional balance. Awareness of emotional intelligence and management of emotions helps improving the way of working to a better level.[5]. The criticality of the negative emotions and the major causes are studied to take the remedial measure to overcome the negative effect. The

organizational adaptation process involves coping with environmental uncertainty.[8]. The impact and aftereffects of the emotion related problems are studied and classified according to the various factors. Major key factors related to emotional intelligence are self awareness, self motivational, social awareness and relationship management.[6]. By considering all the major factors the required technique is selected and implemented to reduce the overall negative emotional stress for a better work environment.

II. RESEARCH METHODOLOGY

A. Pilot study

Primary study was conducted to find out the major factors affecting emotional problems in the construction industry. The main factors were discussed with the working professionals in order to make sure that the factors are relevant. It is very important to identify the role of emotional intelligence in developing communication and relational skills.[3]. The working environment, project details, place of work, people who work with, were all considered for this study.

B. Questionnaire design

By considering the conditions and the factors in the construction industry questions were selected. The questionnaire consists of 35 questions which were classified under 5 factors. The design was then finally undergone with an expert review from two different individuals who work in construction industry and academic industry.

C. Reliability test

Statistical package for social sciences (SPSS 22.0) is used for doing the reliability test of the framed questionnaires. Reliability is found out using Cronbach's Alpha value test from the software. The framed 35 questions was found reliable with an alpha of 0.923

D. Questionnaire survey

The framed questionnaire was circulated among the individuals in construction industry and the valuable responses were collected. A questionnaire sample of 160 was circulated through different construction companies and individuals from which 120 genuine feedbacks were recorded.

The survey includes type of the construction firm and their current nature of the work.

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The survey was done from all level of employees from site supervisor to project manager.

III. RESULTS

E. Analysis

The analysis of the collected samples were done with help of statistical packages for social sciences (SPSS 22.0). Mean, frequency, standard deviation were find out with the help of software.

A. Frequency

The mean and frequency values were calculated from the collected questionnaires. Table I indicates the frequency and percentage values of the total samples collected. From a total of 120 samples the type of firms were taken to find out the total number of individual, private and government firms which reacted to the set of questions.

Table I. Frequency table for type of work, nature of project, experience and designation

Firm	Frequency	Percentage
Individual	46	38.3
Private	51	42.5
Government	23	19.2
Work Type		
Residential	60	50
Commercial	60	50
Work Experience		
0-5	95	72.2
6-10	11	9.2
11-20	11	9.2
21-30	2	1.7
31-40	1	0.8
Job Position		
Site Supervisor	17	14.2
Engineer	51	42.5
Plan Manager	11	9.2
Project Manager	18	15
Quality Manager	1	0.8
Quality Controller	2	1.7
Others	20	16.7
total	120	100

B. Anova analysis

Analysis of variance is a statistical method to check the differences and the relation between two or more means. This

is also used to check the variation in mean values. In Anova (***) indicates significance at 1% level and (*) shows significance at 5% level.

Table II. Anova for various firms

Factors-Different firms	Firms			F-value	P-value
	Individual	Private	Government		
Progress of project	1.13	1.25	1.34	0.285	0.752
Personal progress	0.89	1.01	1.34	2.587	0.080
Environmental uncertainty	0.84 ^b	0.64 ^a	1.21 ^c	5.085	0.008**
Different work culture	1.15	0.94	1.39	2.575	0.081
Creative performance	1.10	1.03	1.43	2.140	0.122

Environmental uncertainty shows significance of 1% in the various construction fields. Table III shows the Anova values for various work types.

Table III. Anova for work type

Factors- work type	Work type		F-value	P-value
	Residential	commercial		
Progress of project	1.20	1.23	0.032	0.858
Personal progress	1.01	1.05	0.052	0.820
Environmental uncertainty	0.85	0.81	0.061	0.806
Different work culture	1.06	1.15	0.310	0.579
Creative performance	1.03	1.25	2.335	0.129

The variation shown for the factors like progress of project, personal progress, environmental uncertainty has only a minimum variation in the significance level.

Table IV. Work experience

Factors- work experience	Work Experience					F-value	P-value
	0-5	6-10	11-20	21-30	31-40		
Progress of project	1.24	0.90	1.27	0.50	3.0	1.313	0.269
Personal progress	1.10	0.54	1.09	0.0	1.0	2.152	0.079
Environmental uncertainty	0.90	0.36	0.72	0.50	1.0	1.542	0.195
Different work culture	1.18	0.72	0.90	0.50	1.0	1.287	0.279
Creative performance	1.26	0.63	0.72	0.50	1.0	3.041	0.020*

Creative performance factor rejects null hypothesis at 1% level and it indicates a very high significance level. In the table creative performance is the most affected factor and thus it has a high importance when compared with work experience. Experience in handling relationships with co-workers improves social cohesion and emotional self control. [8]

Table V. Anova for job position

FACTORS- JOB POSITION	JOB POSITION							F-value	P-value
	Site supervisor	Site engineer	Planning manager	Project manager	Quality manager	Quality controller	Others		
Progress of project	1.23	1.21	1.63	1.05	0.0	1.0	1.20	0.635	0.702
Personal progress	1.0	1.03	1.27	0.72	2.0	1.50	1.10	1.007	0.424
Environmental uncertainty	0.70	0.82	0.90	0.66	0.0	0.50	1.05	0.833	0.547
Different work culture	0.94	1.15	1.18	0.94	0.0	1.0	1.25	0.380	0.890
Creative performance	0.88	1.15	1.54	0.94	1.0	1.50	1.25	1.145	0.341

progress of project and the personal progress is having a positive relation of 40.6%.

The various construction related employees when undergone with various factors of project which affects the personal progress, environmental imbalance with different work cultures seems to have not significant when compared with all other factor.

C. Spearman’s correlation

The strength of relationship between two variables are compared with the help of correlation analysis. Emotions affecting the progress of project is showing a high variance with the personal progress factor. The correlation between



Table VI. Correlation matrix

Correlation					
Emotional factors	Progress of project	Personal progress	Environmental uncertainty	Different work culture	Creative performance
Progress of project	1.000	.406	.082	.235	.173
Personal progress	-	1.000	.081	.342	.343
Environmental uncertainty	-	-	1.000	.379	.319
Different work culture	-	-	-	1.000	.370
Creative performance	-	-	-	-	1.000

IV. CONCLUSION

The emotional intelligence is an in build quality in a person, which helps in achieving specific goals. The main aim for the project was to find out the main critical emotional factors that affects the construction industry. From the ANOVA analysis, the individual, private and government firms is most affected by environmental uncertainty. Similarly creative performance is the most affected factors among the employees with an experience of 0-5 years. It can be concluded that uneven working condition plays crucial role in mood swings and other emotional problems. It shows that low level of emotional intelligence results in professional exhaustion and burnout syndrome leading to emotional exhaustion, depersonalization and personal accomplishment [10] [4]. Therefore it can confirmed that emotional intelligence plays a very important role in achieving career growth and thus helps in taking correct solution for every problem.

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