THE STUDY OF THE ROLE OF STRESS MANAGEMENT IN CIVIL PROJECTS' CONSTRUCTION (CASE STUDY: LORESTAN PROVINCE ROAD BUILDING PROJECTS)

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Abstract- In the present world, stress has been known as one of the calamities of human force and job stress has been considered by researchers and also World Health Organization (WHO) as an annoying phenomenon. It has been introduced as an important phenomenon in social life and a serious threat for health of labor force in the world. For this reason, researchers have conducted extensive studies in this field. In this regard, the present paper has been conducted to study role of stress management in civil projects' constructions. The most important causes of stress in road building projects were identified through literature review, field studies and interview with employers, consultants and contractors. Then, the research questionnaire was compiled by classifying these cases. By distributing the questionnaires and collecting them, the obtained information was analyzed with SPSS software. The results show that "no complete removal of the conflicts before start of the project operations" employer, consultant and contractor was the highest job stress factor which employer applies to the active forces in the project. Also, "monthly salary" was found as the most stressful factor of the working forces of employers, consultant and contractor. It was specified that "educational level" and "working experience of people" does not affect on their stress but "timely payment of wage" reduces stress and "high working volume" increases stress.

Key words- job stress, stress management, road building projects

I. INTRODUCTION

In the present world, stress has been known as one of the calamities of labor force. Destructive effects of stress on personal and social life are fully evident though application of the word "stress" has long history in psychiatry but in recent years, it has been commonly used in psychology of organizational behavior management and some of the organizational issues have been related to stress because it has been common in social life of people (Nikoeian et al., 2012).

It is important to note that considerable time of people is spent in workplace and this sometimes can cause positive and negative sensitivities and stresses. For this reason, human should continuously adapt to internal changes and changes of world around him. Conditions of job environment sometimes cause negative consequences for health of employees and workers of the administrative and particularly industrial units. In some recent decades, job stress has been considered by the researchers and World Health Organization (WHO) (NIOSH, 2008). However, job stress is one of the important phenomena in social life and a serious threat for health of labor force so that International Labor Organization=ILO expresses that the most known phenomenon which threatens health of workers is job stress. World Health Organization (WHO) emphasizes that workers under job stress experience weak motivation for life, less production and less safety in workplace and organizations of these workers are less successful than other production centers. This organization reminds again that job stress imposes high expenses on states and regards leave of absence, repetitive demands of workers for changing job and reduction of production and playing role in production as manifestations of this phenomenon (WHO, 2011). Based on definition of NIOSH (National Institute Occupational Safety and Health), person will face job stress when there is no coordination between job needs and his abilities, capabilities and demands. In this definition, capabilities of person have been also considered in addition to emphasis on lack of coordination with capabilities of person (NIOSH, 2008).

According to review of the related literature, most studies have been conducted on job stress in the nurse groups and job stress has been seldom studied among the employees in civil projects. Most of the studies conducted out of the country have investigated job stress in the fields of construction in terms of workplace, supervisor, salary and benefits, work volume and the like. In this paper, unlike the previous studies, the most important barriers and problems which cause stress in active forces in road building projects are specified and analyzed.

II. METHODOLOGY

This descriptive-inferential study has been conducted on 113 out of 160 forces of three groups including employer, consultant and contractor. To collect information relating to theoretical fundamentals of research, library sources and the articles and also field observations of students and advisors who are active in the current projects and the past experiences in performance of the civil projects will be used.

Major part of information collection has been obtained with questionnaire and through field work. The questionnaires selection has had executive limitation considering the research goals.

After meeting and interview with project managers, contactors and authorities of Department General of Road and Urban Development of Lorestan Province and also executive and workshop forces, the most important barriers and problems which cause job stress for the forces active in road building projects were specified. Then, the questions were compiled by classifying them. This questionnaire has 55 questions and its validity is corrected and confirmed by surveying opinion of the university professors and supervisors. This questionnaire was experimentally distributed among 44 persons who had experience and specialty in road building projects and after collecting them with SPSS software, version 21, its reliability was calculated and its total Cronbach's alpha was obtained as 0.93 and its reliability was confirmed. After final distribution of the questionnaires and collecting them, the descriptive statistics section including frequency, statistical diagram and mean was studied and to study the research hypotheses, Pearson Correlation coefficient was used and to determine the highest job stress factor which is created by employer, consultant and contractor, Friedman test has been used.

III. FINDINGS

The studied persons in this research were 160 among whom 34.5, 32.7 and 32.7% are employer, consultant and contractor. 3.8% of these people held associate's degree, 76% held bachelor's degree and 20.2% held master's degree. Among the studied people, 44.2% had working experience of 5-10 years. Analysis of the research shows that there is significant relationship between timely and regular payment of people's salary and high working volume and job stress ($p<0.05$) while there is no significant relationship between job stress and working experience and education ($p>0.05$).

Data analysis which was conducted with software spss with Freidman test was used. The most important problems which each of three factors of project (employer, consultant and contractor) play role in its creation were ranked and shown in figures 1 to 4.

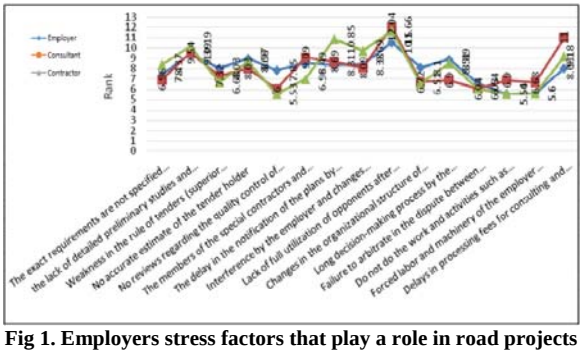


Fig 1. Employers stress factors that play a role in road projects

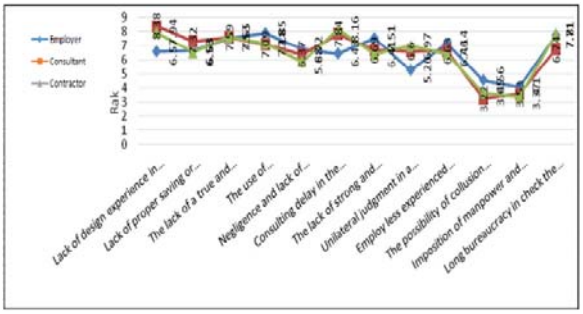


Fig 2. Consultants stress factors that play a role in road projects

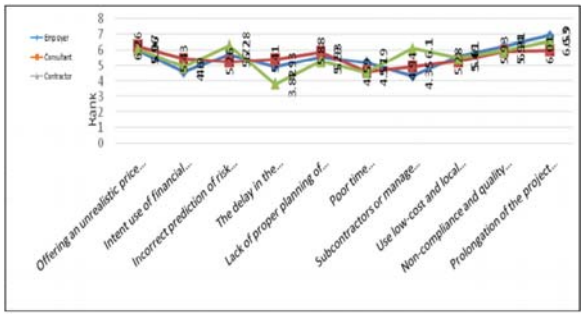


Fig 3. Contractors stress factors that play a role in road projects

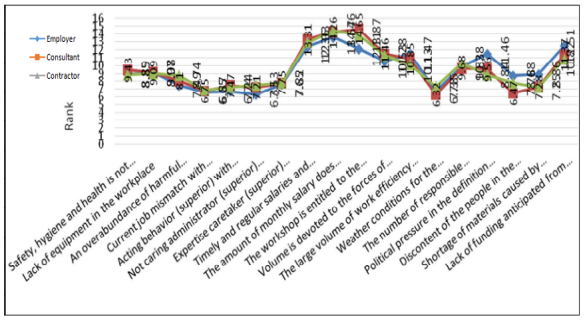


Fig 4. Other factors involved in the creation of job stress in road projects

DISCUSSION

The present research has been conducted to study role of stress management in construction of road building projects of Lorestan Province. Results of the studies indicated that timely and regular payment of salary to employees had significant relationship with job stress which are in line with research by 16. Vagg et al. (2002), Vahab (2010), Eziyi Offia et al. (2011), Danso et al (2012), Leung et al. (2012), Tiwary et al. (2013), Premkumar et al. (2015). On the other hand, these results show that high working volume increases job stress. Some researchers such as 12. Sutherland and Davidson (1989), Marilyn J. et al. (1992), Leung et al. (2005,2008,2007&2010), Vahab(2010), Tiwary et al. (2013), Bowen et al. (2014) and Premkumar et al. (2015) introduce high working volume as one of the factors affecting job stress of the forces working in the civil projects. On the other hand, results of this study indicate that education is not effective on job stress while there is significant relationship between education and job

stress in some other jobs. For example, there is significant difference between job stress and education level in level of 5% (Hassani, 2005). Results of this study show that there is no significant relationship between job stress and working experience while increase in working years of employees lowers job stress but relationship between working years and job stress is negative and increase of working years is not effective on reduction of stress rate (Hassani, 2005).

As shown in Diagram 1, no complete removal of the conflicts before start of the project operations which has been ranked as 10.50, 12.04 and 11.66 among employer, consultant and contractor is the highest job stress factor which employer applies to the active forces in the project. Considering Diagram 2, three factors of using estimate, documents and old type maps (no field studies) and no experience of designers in construction and their unfamiliarity with executive issues and delay of consultant in preparation of initial maps and potential changes during execution of project with ranks of 7.85, 8.38 and 8.16 were the highest job stressful factors which are applied by the consulting engineers to these people. The highest stress factors which contractor applies to the working employees in the road building projects include: elongation of execution of project for different reasons and removal of initial technical and economic justification and presentation of unreal price (low) at time of price offer for winning the bid which have ranks of 6.90(employer), 6.26(consultant) and 6.53(contractor) (Diagram 3).

Among other stressful factors such as workplace, supervision, salary and benefits and working volume, "monthly salary price doesn't suffice for ordinary life expenses "and "monthly salary is lower than what the workshop forces deserved "are the highest factors which apply the highest stress to the forces working in these projects and these ranks are 13.57, 14.65 and 14.46 according to employer, consultant and contractor.

Considering the above information, it can be concluded that monthly salary has the highest rank among all job stressful factors in road building profession of Lorestan Province and results of research by many researchers who were named in the previous sections confirm this subject.

CONCLUSION

Considering the issues mentioned in this research, it can be said that stress is one of the largest new problems of human societies and in case it is not managed effectively, it can leave harmful effects. Job stress in fact indicates formation of stress due to stressful factors in workplace which can be sometimes effective on activities of the entire section. Job stress may engage not only one person but also the whole project. As a result, we need to identify stressful factors with targeted management and control these factors and their effects during a strategic plan. Therefore, we should manage stress and not only reduce it. In case there is no stress, people will be unmotivated to perform their duties and their goals will not be realized. On this basis, attempt has been made in this research to manage job stress in the road building projects of Lorestan Province by identifying the highest stressful actors of consultants, employers and contactors with preventive strategy.

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