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Study of Factors Affecting Mental Health

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Abstract: The aim of this study is to investigate the simple and multiple relationships between role ambiguity, role conflict, role overload and mental health considering the moderating role of type A personality and sense of coherence. To this end correlation and regression analysis is utilized. Research sample includes 196 personnel working in Ahvaz Pipe-production factory during year 2007. Research results revealed that there is a significant relation between role ambiguity and mental health deficiency, but no one was found between role conflict and role overload and mental health deficiency; nevertheless, higher correlation level between role stressors and mental health deficiency in low-level sense of coherence in comparison with high-level sense of coherence personnel was found. Also, a higher multiple correlations between role stressors and MH deficiency in personnel having further type A personality in comparison with personnel having not as much of mentioned group's type A personality was observed.

Key words: Role ambiguity, role conflict, role overload, type a personality, salutogenesis approach, sense of coherence, mental health

INTRODUCTION

Since long ago, stress has posed so many threats to human in a variety of ways, but contemporary to industrial revolution, it has made tremendous changes in human life and become so widespread that has been called the century malady.

At present time that great deals of human's substantial and vital activities are accomplished through organizations, a principal portion of individual's stress and psychological strain can be resulted from organizational policies or strategies. Such stress would result in job stressor factors and as a result, dissatisfaction, absenteeism, turn over and subsequently reduction in productivity and quality of products and services. Prevalently existing, it is reputed as job stress.

Job stress is defined as a reciprocal action between work conditions and employee's individual characteristics is in a way that work demands is much more than what the individual can cope with or as psychological or physiological reaction against events that sounds to be risky or threatening (Ross and Altmaier, 1994). Issue of stress has an eminent position in the organizational behavior management and its study has been considered as a matter of increasing interest during two past decades.

Existing interest in the study of job stress results from the reality that managers and employees of different levels has somehow a daily experience of stress; because psychological strain of work results in a variety of maladies such as ulcer, hypertension etc. and from psychological viewpoint, this will bring fatigue, anxiety and depression resulting in increase in absenteeism and reduction in productivity and work quality (Riggio, 1992).

Research in role stressors refers back to early 1960s. After revision of carried out research, University of Michigan's Institute for Social Research revealed that industrial environment has vigorous impact on individual's mental and physical health research on nature, reasons and consequences of two types of organizational stressors namely role conflict and role ambiguity was originated from increasing significance of organizations in individual and social life formation. Such organizational structures demanded a level of allegiance and performance stating a modern stream of management ideas concerning motivation, satisfaction and leadership. Asking workers to do much more work under conditions changing rapidly provided a context in which problems such as role ambiguity and role conflict as well as increasing role conflict and vague guidelines resulted from bureaucratic allegiance of the time (Cooper and Dewe, 2004).

There is increasing evidence in the literature that stressors in the organizational life cause role ambiguity and stressful reactions which are considered to be negative and ineffective.

Acker (2004) studied the effect of organizational conditions (role conflict, role ambiguity, opportunities for professional development and social support) on job satisfaction and intention to leave job among social workers in mental health care. Research findings revealed that both role conflict and role ambiguity had statistically significant negative correlations with job satisfaction and positive correlations with intention to leave job.

Baba *et al.* (1999) in a research studied a linear model including factors relating to role, study as well as social factors, stress, burnout, depression, absenteeism and turnover intention. Using path analysis, they showed that role conflict, role overload and social support predicted the stress. Stress along with social support predicted burnout and burnout was the sole predictor of depression. Depression also predicted both turnover and absenteeism.

Shen (2005) in a metaanalysis on the relationships between role ambiguity and role conflict and job satisfaction in information systems technicians, emphasized on the role of moderators and suggested that moderators can distinct a great amount of variance in the mentioned relationship. Hence, some researchers have revised some potential moderators (job attachment, self-esteem and sexuality) in the relationship between role stressors and job satisfaction (Igbaria *et al.*, 1994; Jex, 1998; Igbaria and Chdambaram, 1997).

Sense of coherence's moderating role in impact of undesirable work conditions has not been broadly studied and earlier findings tend to be inadequate. Additionally, most former studies have considered psychological situations in the workplace.

In both genders, an obvious negative relationship between sense of coherence score and symptoms scores was found. Lutgendorf *et al.* (1999) found out that high level of sense of coherence protect individuals against harmful impact of stress on immunity system.

According to the evidence acquired, sense of coherence scores concerns with health status. Low scores indicate potential mental health needs and sense of coherence high scores protect individuals against lifetime incidents.

Some results imply that individuals having strong Sense of coherence in comparison with ones having weaker sense of coherence act in a more effective manner of coping with undesirable psychological work conditions (Albertsen *et al.*, 2001; Pritchard, 2007).

The present study aims at investigating and analyzing the relationship between role ambiguity, role conflict, role overload and mental health deficiency. Two variables of sense of coherence and type A personality have been used as moderating variables.

MATERIALS AND METHODS

Concerning the antecedents and consequences of organizational stressors, different models and approaches have been presented by researchers, during the last three decades in which a variety of variables have been considered effective in accession and intensification of job stressors. For example, Edward (1992) declares job stress as difference between employee's situation perceived and his desirable situation if such a difference seems important to him. Hence, the difference observed in comparison of individual's perception and his desires cause stress to arise. It is supposed that perception is influenced by social and physical environment, personal characteristics, individual's cognition structure of reality and social information. Difference between perception and desires (stress) affects two elements: individual's well being and coping actions. Additionally, reciprocal effects between the mentioned elements are assumed.

Osipow and Spokane (1987) assumed in role theory that different work roles in which individuals are appointed may regardless of their real job be stressful, with regard to this point that existing stress in different work roles may be stressful to all. They considered and described six work roles to be stressful regardless of individual's true job choice. These six roles are employed in the revised version of Organizational Stress Inventory and include:

- Role ambiguity
- Role insufficiency
- Role overload
- Role boundary
- Responsibility
- Physical environment (Osipow and Spokane, 1987; Osipow, 1998)

According to the model presented by Ivancevich and Mattson (1980), intro and intraorganizational psychological strain and antecedents resultant, will result in adaptational disorders finally, however, individual's constant characteristics such as behavioral, cognitive and demographic elements as moderating factors can have a significant role in stress consequences reduction. The difference between mentioned model and other ones is in making stresses distinct on the basis of analytical levels

of individuals, groups and organizations. Meantime, role ambiguity, role conflict and role overload are three types of job stressors that have attracted the highest amount of contemporary researches.

Initial studies untread to 1950s and 1960s making efforts to discover origins of fatigue and mental health in workplace resulted from World War II and reflecting changes formed in social and economic conditions which provided considerable opportunities for applied psychological research on study.

Role conflict is defined as a situation in which two or more pressures are in conflict with another and accepting one of them makes it hard to cope with the other pressures (Kahn *et al.*, 1964). In simple term, when individual confronts a situation in which he is expected to perform two or more roles which are basically in conflict and opposition, role conflict occurs. Role ambiguity is a lack of clarity about one's role, job objectives and the scope of responsibilities of one's job (Kahn *et al.*, 1964). Role overload is related to performing a given amount of work in a given period of time. Role overload is experienced when individual decides to conform to some tasks and to refuse some in a given period of time. The strain resulted from this problem and also decision making difficulties of undertaking tasks are beyond individual's abilities. Additionally, two type of role overload are considered, quantitative role overload (defined as the amount of work performed in the given period of time) and qualitative role overload (defined as job demands that are more difficult and beyond individual's skills and abilities) (Kahn *et al.*, 1964).

As in the mentioned model, some cognitive and behavioral elements have moderating role in reduction of stress consequences. One of these variables is sense of coherence.

Aaron Antonovsky introduced a new approach in relation to health for the first time at 1979. These approach was reputed as salutogenesis-oriented vs. patient-oriented approach. This approach relying upon experimental evidence provides the possibility to recognize job characteristics increasing or decreasing coping abilities and also organized programs for practical actions (Antonovsky, 1993).

Antonovsky (1979, 1987, 1993) model discloses the incompetence of patient-oriented approach and suggests resource-oriented and health-oriented approaches and also poses some questions on health retaining. Salutogenesis approach is based on sense of coherence that is defined as follows: A global orientation that expresses the extent to which one has a pervasive, enduring though dynamic feeling of confidence that (1) the stimuli deriving from one's internal and external

environments in the course of living are structured, predictable and explicable, (2) the resource are available to one to meet the demands posed by these stimuli and (3) these demands challenges, worthy of investment and engagement (Antonovsky, 1987). In other words, sense of coherence can be considered as some kind of global emotional-cognitive perception through which individual feels that has some control on his effective stimuli and recognizes the stimuli comprehensible, manageable and meaningful. He regards them as news and information not a factor of turmoil (Antonovsky, 1993).

Sense of coherence construct includes three dimensions: comprehensibility, manageability and meaningfulness. Comprehensibility is simply the degree of the individual's perception that the aspects of the world that he/she is concerned with make sense, as opposed to being completely random and unpredictable. Person's feeling of manageability refers to the extent to which the person believes he/she has the resources necessary to meet the demands of his/her internal and external environments. Meaningfulness is the degree of the person's motivation in life. If a person is low on the meaningfulness dimension, he/she will not be motivated to seek out resources or to continue to try to make sense out of his/her situation.

Another one of moderator variables that can have a significant role in the level of job stress consequences is type A personality. It is described as pathological syndrome or a given lifestyle that is competitive, progressivism, aggression, haste, impatience, agitation, hypervigilance, agitolalia, sense of limited time and responsibility overload. In contrast, type B personality individuals act in a relax, thoughtful and patient manner (Borman *et al.*, 2003).

Type A in comparison with type B personality employs a different method to cope with stress. They perform rather simple tasks consuming a great deal of energy and gain the control of position; even if impossible. They hardly admit their failure and blame themselves for it (Vingerhoets and Flohr, 1984).

One consequence of job stresses is reduction of mental health. Literature reviewed shows the massive content of studies carried out on the relationship between job stressors and mental health consequences. Tension, depression, exhaustion, destructed cognitive performance, psychosomatic complaints, anxiety and indifference have all been correlated with job stresses. World Health Organization defines this construct as the ability to have rhythmical and regular relations with others, change and reform the social and personal environment and solving conflict and personal desires in a logical, fair and commensurate manner. Generally,

individuals possessing MH have a positive attitude to life, are ready to cope with lifetime problems, have a positive and nice feeling about themselves and others and are responsible in their workplace and relations.

RESULTS AND DISCUSSION

The research's statistical population includes all diplomas level and beyond educated personnel of Ahvaz Pipe-production Factory during the year of 2006. Two hundred and sixty from a total of 369 employees were chosen through the random stratified sampling method. One hundred and ninety six out of 260 questionnaires distributed were returned (response rate: 75.38%) and the data extracted were saved in the Statistical Package for Social Sciences (SPSS) to be analyzed.

Amongst samples, 9.2% were between 20-29, 34.7% between 30-39, 31.6% between 40-49 and 24.5% between 50-59. Also, 49% had diploma degree, 26.5% were technicians, 21.4% BA and 3.1% MA. Their marital status also was as follows: 94.9% married and 5.1% single.

Role conflict and role ambiguity scales developed by Rizzo *et al.* (1970) were utilized to measure the conflict and ambiguity in roles in complex organizations. Scales foundation was classic organizational theory emphasizing on command chain and unity (Cockron, 2001). Tools used in the current research include items 1 to 6 of role ambiguity scale. Participants were asked to choose from a five option scale from strongly disagree (1) to strongly agree (5).

In this research, reliability coefficient of role ambiguity and role conflict through split-behalves method was determined 0.70 and 0.76 and 0.82 and 0.86 through the Cronbach alpha method which are all satisfactory.

Role overload scale developed as a part of University of Michigan's organizational assessment questionnaire was used to measure role overload. The mentioned scale, measures work overload, individual's perception of job demand or qualitative overload and nonstandard time of performing tasks. This scale includes three items and each item is responded through a seven choice Likert scale. Considered time for respondents of this questionnaire is 2 min. Total score is obtained from sum of all items' scores (after inversion of item 2 score).

Reliability coefficient of this scale through split-behalves and Cronbach alpha method was 0.53 and 0.57, respectively.

To determine criterion validity, role overload scale was correlated with general job satisfaction and results showed that the scale is negatively related to job satisfaction scale that is the more role overload level exist the less job satisfaction will occur (Amiri, 1996).

Data related to type A personality were collected through Type A Questionnaire (TAQ). TAQ scale has been constructed by factor analysis method and is used to measure type A behavioral model (Nadjarian *et al.*, 1995). TAQ includes 24 items and 2 subscales. Subscales include TAQ1 and TAQ2. TAQ1 is related to pathologic aspects (aggression, impatience, agitation, haste, anxiety, depression and low self-esteem) and includes 16 items while TAQ2 concerns with nonpathologic aspects (high self-confidence, seriousness, planner, dominant, hardworking, tendency to success and diligence) and consists 8 items.

In the current research also, both Kuder-Richardson split-behalves and Cronbach alpha methods were used, coefficients determined for TAQ are 0.84 and 0.87, respectively.

Validity coefficient of this scale was calculated through Rosenmann and Friedman type A questionnaire (TABO) considering $r = 0.38$. Additionally, a significant correlation between TAQ and type A construct validity scale (TAVS) was found $r = 0.49$ and $p < 0.05$ for TAQ1 and $r = 0.59$ and $p < 0.05$ for TAQ2 (Yusefi and Attari, 2003).

In order to measure sense of coherence, sense of coherence scale was utilized. Antonovsky constructed sense of coherence scale (questionnaire of orientation to life) to experiment his Salutogenesis model implications (Antonovsky, 1987).

Main sense of coherence scale used in this research consists of 29 questions in three categories of comprehensibility (11 items), manageability (10 items) and meaningfulness (8 items) and its scoring range includes Likert's 7 point scale.

SOC-29's coefficients were determined 0.88 and 0.82 (Cronbach alpha and split-behalves), which is acceptable for SOC-29.

Also, concurrent validity coefficient of SOC-29 and SOC-3 (constructed by Lundberg and Nystrom-Peck, 1994) was determined 0.58 ($p < 0.001$). Construct validity of this scale was also calculated 0.77 ($p > 0.001$) through Brief Assessment of SOC (BASOC) (Schumann *et al.*, 2003).

Goldberg General Health Questionnaire (GHQ) was used to measure general health. General Health Questionnaire (GHQ) has been constructed by Goldberg (1973) to screen nonpsychotic disorders in treatment centers and society. This questionnaire's main form consists of 60 questions. Briefer forms of this scale including 12, 20, 28, 30 and 44 items, has also been prepared. 28 questions GHQ developed by Goldberg and Hillier (1979) was used in this research. Mentioned questionnaire includes 4 subscales consisting of 7 questions for each scale.

Table 1: Descriptive statistic or the research variables

Description	Mean	SD	Minimum of score	Maximum of score
RA	13.25	4.91	6	30
RC	24.70	6.84	8	38
RO	12.15	3.01	6	20
SOC	133.28	26.17	45	198
TAQ	52.89	8.39	34	86
MH deficiency	52.95	12.51	34	112
Physical syndrome	11.58	4.21	7	28
Anxiety syndrome	12.86	4.64	7	28
Psychopathic disorders	18.96	4.23	8	28
Depression syndrome	9.54	4.47	7	28

Table 2: Correlation coefficients between RA and MH deficiency

Description	RA	RC	RO
MH deficiency	0.57**	-0.06	-0.03
Physical syndrome	0.49**	0.01	-0.04
Anxiety syndrome	0.51**	0.12	0.05
Psychopathic disorders	-0.01	0.23**	-0.03
Depression syndrome	0.63**	-0.09	-0.08

**p<0.0001

Four subscales of GHQ are as follows: physical syndrome, anxiety syndrome and insomnia, psychopathic disorders and depression syndrome.

GHQ's reliability through Cronbach alpha and split-bhalves was determined 0.85 and 0.83 which is considered satisfactory.

Goldberg (1976) obtained a validity coefficient of 0.78 through correlating GHQ scores and psychological symptoms checklist SCL-90.

Handerson and Jonse (1987) reported a validity coefficient of 0.76 for GHQ through correlating with Present State Examination PSE scale scores. Correlating entire questions scores with a general question at the beginning of the questionnaire, the present research's validity coefficient was determined 0.76.

Statistical indices are shown for all scales and subscales in Table 1 and 2.

As in Table 2, a positive correlation between RA and MH deficiency exists that is significant at level 0.0001.

Also RA and MH subscales have significant relationships.

Nonetheless, there is no positive and significant correlation between RC and MH deficiency. Additionally, amongst MH subscales, only psychopathic disorders and RC were correlated.

Results in Table 2 shows that the relationship between RO and MH deficiency has not been confirmed. As a result, no positive and significant relationship was found between RO and MH deficiency. Other MH subscales were also not significantly related with RO.

Research results revealed that there is a significant relation between role ambiguity and mental health deficiency, but no one was found between role conflict and role overload and mental health deficiency;

nevertheless, higher correlation level between role stressors and mental Health deficiency in low-level sense of coherence in comparison with high-level sense of coherence personnel was found. Also, a higher multiple correlations between role stressors and MH deficiency in personnel having further type A personality in comparison with personnel having not as much of mentioned group's type A personality was observed.

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