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Effectiveness of immunization programs against job stress with relaxation among the staff of Mahallat city

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ABSTRACT

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This research studies effectiveness of immunization programs against job stress with relaxation among the staffs. This study is pre-posttest quasi experimental with control groups, which conducted on 40 subjects among different offices in Mahallat City. These subjects after accomplishing inventories acquire higher score than slice point and randomly divided to two equal experimental with control groups. Interventions were consisting of immunization program against stress, in a workshop with 6 days and 3 hours during a week that was conducted for the experimental group. Data gathering tool was Krishna job stress that was applied in two steps-before intervention and after sixth session as well as follow-up session 30 days after workshop end. It is notable that higher scores indicate higher job stress. Data were performed based on 19 SPSS software and descriptive statistical analysis of covariance. Findings of recent study show that in two control and experimental groups, which were equal for job stress before intervention, after intervention job stress level significantly reduced in experimental group, and it reserved after a month. So we can conclude that employees' job stress inoculation training was effective, and it is reduced.

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1. Introduction

Today, occupational (job) stress is a common and costly problem in the working environments. Several reports indicate that many jobs with high psychological demands and low decision range contain a lot of stress. This has devastating effects on the physiological and psychological health of people. Job stress relate to workplace accidents, delays and absenteeism, and cause reduction of productivity, and organizational commitment, and finally leads to poor work quality. Although work is main source of idealism, creativity and life satisfaction; it is main factor of stress in today societies. Job stress is not a new phenomenon but it is a global problem for all countries, professionals and occupational groups. It mostly threats people health in modern society and causes many physical and family problems in millions. Now, it becomes a common and costly condition in work environments (Mitchell & Samms, 2010).The stress and its traumatogether approximately consume 30% of health care andaccidents costs;almost 0/5 to 3/5%of all damages in a year (Hall, Sparks& Cooper, 2002). Ross and Altmayer (1991) argue that though calculation the exact job cost is difficult, but finding doubtless data for this propose is possible. In fact, the simplest and most obvious effects of psychological stress emerge as job dissatisfaction. However, it is possible other psychiatric conditions appeared such as anxiety, fatigue, or behavioral symptoms such as changes in productivity, absenteeism, employee relocation, change in eating habits, smoking, poor sleep, increased speakingspeed and unrest. There is plenty of research showing that occupational stress among strong factors which is considered as a predictor of occupational accidents (Verhoef, 2009).

We can say that a person's perception of the stressor is subjective. What one person considers as a stressor may simply be assessed by someone else as a challenge. According to the Department of "Health and Safety", pressures and demands of the work environment, including long working hours, demands and pressures beyond peoplepower, and control pressurefor employee can produce stress. Research show that among factors related to personal stressors these are the most important of stress for health care centers managers: high responsibility in group, family problems, social, cultural and economic difficulties; ignorance of clients regard to social, cultural, economic norms; environmental, air, and noise pollution (Colakoglu, 2010).

According to former studies, French et al suggested that job pressure stem from lack of adjustment between people and their environment(person-environment adjustment model).Repeated and longsome jobs cause pressure among peoples.These researchers also emphasize that each individual hasits optimal level of environmental demand. Findings of other studies (Sigrist, 1992. Han, 1988. Falk, 1992), suggest that job pressure increase heart attacks and brain strokes ,and they are effective in many diseases like rheum, infections, and phobias. Aside,its personal health problems, is directly related with function and personal satisfaction and it is important as an independent variable. When a person is faced with stress, he can react with physical symptoms such as palpitations, chest pain and restlessness move(Greiner, Krause ,Regland , 1998). Stress occurs when there was no harmony between job demands and subject abilities, in turn, hygienic problems as well as economical and mental difficulties(Savi, 2010). So, knowing demands, emotions, and their management can effect in mental health.

To stress, especially, to occupational stress, there are therapeutic approaches at organizational and individual level. Among them are management or stress management programs at the organizational level as well as therapeutic approaches (cognitive - behavioral), Ellis (1962) and Beck's cognitive therapy (1993). One of the most effective ways of intervening in stress is stress inoculation training (SIT), which is used by Mikenbaum. The Education is acognitive-behavioral technique consists of: teacher training, cognitive restructuring, problem solving, relaxation training, behavior exercise, self-assessment and trying to change the environment (Lazarus, 1993; Mikenbaum, 1979). In fact, there is an exact and multiple treatment intervention for stressful situations with three phases:

- 1) Conceptualization phase: In this phase, the main focus is on the collaborative relationship with clients and helps them to better understand the nature of stress.
- 2) Training and skills acquisition phase: In this phase the main emphasis is on coping skills to multiple clients. We were also used relaxation exercises.
- 3) The application and follow-up phase: an emphasis on providing opportunities for clients to gain coping skills in stressful situations.

Fried, Gilboa and Cooper (2008) in a study about effectiveness of stress inoculation training (SIT) on decreasing anxiety among students found a meaningful correlation. The results of Grewal, Levy and Kumar (2009), study entitled Effect of immunization against stress among nurses demonstrated the great impact of the strategy.

The aim of this study consists of prevention and treatment programs in clinical and non-clinical groups. Despite coping techniques were different in the SIT, but most therapists are trained to use relaxation methods. Relaxation nearly easily be learned by all clients, and has good formal validity. Different methods are used for this work but among them the most effective method is Jacobson relaxation way. This method was first developed by Edmund Jacobson in 1930, which basically involves learning to constrict the different muscles and next relaxing the body. During contraction and relaxation of muscles, feeling of the individual is important. This method has two major objectives: first, to help the individual to recognize stress levels before it becomes a severe problem Second, the ability to voluntarily reduction of stress to lower level. It is evident that this skill like other abilities need to exercise and training. Therefore, CDs were offered for complimentary results. For better conclusion, relaxation exercises should use half an hour before any predicted stressors. In this training when the participants were learnt how to contract and relax all 16 parts of their bodies, they attempted to release the each part. Training methods conducted weekly during each session subjects ambiguities were answered by trainers.

The aim of this study is to investigate the effect of stress inoculation training on reducing employee stress of Mahallat City. The method of immunization against stress is conducted during six 3-hour sessions. Content of the meetings were obtained from valid sources (Mikenbaum, 1979;relaxation techniques;Roshan and Yaghoobi) and confirmed by Payam-e-Noor specialists.

In first session, definition of stress, its consequences, the need to deal with it, and the introduction of 16 members of the body to relaxation and job stress among employees were investigated.

In second session, provided relaxation training and role of ideas in job stress was studied.

In third session, correlation between thought, feeling and behavior and role of conflicts in the field were discussed.

In fourth session, training of monology and its negative role in producing of stress was presented.

In fifth session, thinking concentration and finally in sixth session imaging and group role playing were presented.

Relaxation was performed in all sessions. In two first sessions exercise began with 16 movements; in two second sessions it began with 6 movement; and in last sessions it began with contraction and relaxation .

Considering the above, the present study focused on available literature to assess the efficacy of Immunization training with relaxation against stress. In this context, attempts to answer the following question:

- If immunization training with relaxation has meaningful effect on reduction of employees job stress?

2. Materials and methods

Low personal incomes and low levels of education were also associated with higher stress, thus we delivered such information.

This study is intervention and research method is quasi-experimental with pre post-test for control group. The tool was Krishna job stress questionnaire. The population consist all employees of Mahallat City (more than 850 people). Samples with 40 subjects were randomly selected among statistical population whose acquired scores were above cutting point in questionnaire. Next they randomly divided in two experimental and control groups (each groups with 20 subjects). Experimental group received 6 sessions of 3 hours about immunization training against stress, while the control group did not receive any intervention. Both groups simultaneously three times were evaluated (by a pre-test - post-test and follow up).

2.1. Research Tools

The Krishna job stress questionnaire was developed by Srivasta and Krishna with 5 dimensions:

1. High responsibility
2. Others responsibility
3. High pressure
4. Making decisions affecting others
5. Self-perception as not fully competent.

The questionnaire contained 25 questions with Likert five parts. Change ranges of job stress scale are between 25 to 125 which is highest range of stress. Srivasta and Krishna reported bisect coefficient equal to 0/84 for 200 subjects and in other studies with 100 participants, test-retest reliability was 0/93 . To determine the concurrent validity of the scale in a study with 75 subjects, the correlation coefficient of the scale and job responsibilities and 0/257 and mental health of 0/228 reported. Validity of the test in recent study with formal content method was verified by some specialists. Its reliability was calculated

3. Results of the study

Data were analyzed by statistical software SPSS 19 and descriptive statistics indicators such as mean, standard deviation and ... And the statistics of one-way analysis of covariance and multivariate analysis of covariance was used. Based on descriptive indicators Mean age groups were respectively 23/56 years and 1/9 years in the control group 22/19 and 22/8. In the experimental group, the male employees were 48/7%, and female employees were 51/3%. In the control group, the male employees were approximately 53/6%, and female employees were approximately 46/4%, respectively. Employees with MA degree had highest degree of education (26 per cent) in two groups. summary of descriptive statistics are reported in Table 1.

Table 1
Statistical description for scores of the study groups.

		follow-up		Post-test				Pre-test				Variables
Control	Experimental	Control	Experimental	Control	Experimental	Control	Experimental	Control	Experimental			
SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	
/11	/21	7	51/9	/29	/12	/63	/22	/11	61/2	/84	/65	Total job stress
7	69			5	69	8	50	7		6	100	
3/1	7/11	2/1	6/11	/11	7/11	/11	6/11	/17	6/28	/28	/71	High responsibility
				2		2		3		1	21	others
2/2	/12	/88	1/17	/11	/11	/82	10/7	/22	12/7	/85	/40	responsibility
	11	1		2	10	1		2		1	15	responsibility
/15	/91	/15	12/1	/10	13	/11	/70	/99	11/6	/56	/62	High Work pressure
2	10	2		2		2	11	1		2	20	pressure
/11	19/1	/69	/11	/11	21	/18	/56	/91	/11	/31	/7	Decision making
4		2	11	3		2	11	3	19	3	32	
/45	21	/79	/59	/41	24	/55	1628	/55	25/3	5/2	/11	Self-concept as an incompetent person
4		4	15	4		4		4			26	

As can be seen from Table 2 that the value of $f(1,37) = 140/11$ achieved that is significant in level ($p < 0/0001$). In other words, between post-test scores in the experimental group and the control group (by adjusting the effect of pre-test), there are significant differences. For high responsibility the value of $f(1,33) = 21/01$ achieved that is significant in level ($p < 0/0001$). So between post- test scores for high responsibility in the experimental group with the control group (by adjusting the effects of pre-test) there is significant difference, and about responsibility to others, the level of $f(1,39) = 11/32$ is estimated

which is significant in level ($p < 0 / 001$), and about working pressure $f(1,33) = 3/87$ in level of ($p < 0/001$) is significant. In making decisions affecting others, $f(1,33) = 6/81$ in the level of $0/017$ and the perception of self as an incompetent person $f(1,33) = 11/12$ was achieved and the level of ($p < 0/002$) is significant.

Table 2

Results of covariance analysis of occupational stress and its subscales Variable source of variation.

Sig	F	Ms	df	Ss	Source of variation	Variables
0/0001	70/56	1115/1	1	1115/1	Pre-test	Total job stress
0/0001	140/11	2266/3	1	2266/3	Group	
		16/31	37	701/11	Error	
0/001	13/56	39/11	1	39/11	Pre-test	High responsibility
0/0001	21/01	61/11	1	61/11	Group	
		3/11	33	115/11	Error	
0/0001	36/16	80/79	1	80/79	Pre-test	others responsibility
0/001	11/32	25/22	1	25/22	Group	
		2/11	33	79/23	Error	
0/0001	16/01	55/61	1	55/61	Pre-test	High Work pressure
0/001	3/87	14/50	1	14/50	Group	
		3/11	33	140/9	Error	
0/0001	30/88	170/99	1	170/99	Pre-test	Decision making
0/017	6/81	35/1	1	35/1	Group	
		5/12	33	219/01	Error	
0/0001	85/11	591/4	1	591/4	Pre-test	Self-concept as an incompetent person
0/002	11/12	79/7	1	79/7	Group	
		6/12	33	286/17	Error	

Table 3

Results of covariance analysis of job stress and its subscales in follow-up test.

Sig	F	Ms	df	Ss	Source of variation	Variables
0/0001	53/22	1235/1	1	1235/1	Pre-test	Total job stress
0/0001	130/11	2446/3	1	2446/3	Group	
		16/31	37	701/11	Error	
0/001	15/1	41/02	1	41/02	Pre-test	High responsibility
0/0001	20/98	61/23	1	61/23	Group	
		3/11	33	115/11	Error	
0/001	29/77	80/21	1	80/21	Pre-test	others responsibility
0/0001	12/2	25/22	1	25/22	Group	
		2/11	33	79/23	Error	
0/0001	15/56	56/21	1	56/21	Pre-test	High Work pressure
0/005	4/4	14/01	1	14/01	Group	
		3/11	33	140/9	Error	
0/0001	31/3	171/12	1	171/12	Pre-test	Decision making
0/022	7/01	31/99	1	31/99	Group	
		5/12	33	219/01	Error	
0/0001	87/2	711/21	1	711/21	Pre-test	Self-concept as an incompetent person
0/005	13/3	80/16	1	80/16	Group	
		6/12	33	286/17	Error	

According to table 3 follow-up studies after a month showed that immunization training against stress had significant effect on reduction job stress and its components. In this case, $f(1,37) = 130/11$ achieved that in level of ($p < 0/0001$) is significant. ANCOVA and pre-test controlling and the impact of test potential can indicate internal validity of the study. It also shows that the differences in the post-test subject (reducing stress) were developed by the independent variables (education, immunization with relaxation, respectively). Results of the study suggest that immunization training against stress had significant effect on reduction job stress among the staff of Mahallat City.

4. Discussion

Findings of recent study show that in two control and experimental groups, which were equal for job stress before intervention, after intervention job stress level significantly reduced in experimental group, and it reserved after a month. So we can conclude that employees' job stress inoculation training was effective, and it is reduced. This study is consistent with findings of Forman (1983) Schiffrin, Rezendes and Nelson (2010), Rusan (2013), Ocak (2010) and Hoel and cooper (2002), Sicily and Forman (1990), Haan (1988), Falk, Hanson (1992). In Savi study (2010), high responsibility was the most important factor associated with occupational stress. Participating in the training workshops help to person for knowing interactional nature of stress and how to cope with it. They help to answer control and maintain stressful situations. In explaining these findings, it can be said responsibility without enough authority is always stressful. In particular take additional responsibility will be cause stress for employees. In every organization, there are two types of responsibility 1. Responsibilities to others 2. Responsibilities to objects. After educational intervention, such as teaching training, cognitive restructuring, imagery, relaxation techniques and ... the person can meet more effectively with stressors. Issues such as role conflict, conflict with colleagues, lack of assertiveness in the work environment, acceptance of responsibility for others, a sense of personal inadequacy with assigned responsibilities, lack of job satisfaction and psychological effects make personal life more stressful. In another part of recent study, results showed that the mean of job stress score because of high work pressure in both groups (experimental and control) was very intense-maybe for long pressure, irrational work time, and inadequate rest time; but stress the mean score of the experimental group than the control group showed significant difference after intervention. Kiani et al study showed that there is significant internal correlation between job stress, work pressure and rate of incidents. Job stress also directly effect on rate of incidents and indirectly effect on them by thinking about work pressure. So, reducing job stress by improving understanding of Employees about occupational stress can be effective in decrease the rate of accidents.

Hoel and cooper (2002) in a study on traffic operators showed employees who work in a high time pressure more than others developed more accidents. Stress experience in institutions whose employees have no cooperation for decision making. But after intervention, this subscale in both experimental and control groups showed significant difference. The fifth subscale (lack of self-sufficiency idea), before the intervention, there was no significant difference between the study groups which after workshops significant differences in follow-up sessions were observed. Considering the results of this study proved necessity of immunization training for decreasing costs and prevention of occupational stress.

The major limitation of this study is the use of self-report measures. Replies may be distort by deliberate and incorrect answers. To counter this threat, the participants were assured that the questionnaires and data are anonymous. Another limitation of this study is its location. It is suggested same research perform in other organization with different groups.

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